



SIEMON

NETWORK CABLING SOLUTIONS

# CATALOGUE

CONNECTING THE WORLD TO A HIGHER STANDARD



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# Siemon Innovation

Inspired by our past, focussed on the future

In 1903, Carl Siemon launched The Siemon Company on the strength of his own innovative plastic compounds and soon began pioneering new telecommunication technologies.

Over a century later that spirit of innovation is still at the core of everything we do at Siemon – driving us to develop the most forward-looking, high-quality line of network cabling solutions in the world.

This catalogue represents over a century of Siemon expertise, detailing the latest innovations and key products in each of Siemon's high-performance cabling systems.

New in this edition:

- ▶▶ **Easily Managed, Ultra-High Density LightStack Fibre Plug and Play Solution**
- ▶▶ **Innovative LC BladePatch Push-Pull Fibre Jumpers**
- ▶▶ **Time Saving MAX TurboTool - Multi-Pair, Single Action Termination Tool for MAX Outlets**
- ▶▶ **42U, 45U, and 48U Versions of the Feature-Rich VersaPOD, V800, and V600 Data Centre Cabinet Systems**
- ▶▶ **Ultra-Efficient IcePack Cooling-Door System for Data Centre**



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# Category 7/7<sub>A</sub>/Class F/F<sub>A</sub> Products

Exceeding ISO/IEC Category 7/7<sub>A</sub>/Class F/F<sub>A</sub> specifications, Siemon's fully shielded TERA® end-to-end cabling solution is the highest-performing, most secure twisted-pair copper cabling system available. TERA supports performance of 10Gb/s and passes stringent TEMPEST security testing.

Beyond industry best speed and best total cost of ownership, TERA's unique cable-sharing ability in support of lower speed applications results in a more "Green" solution and can also provide up-front savings through the reduction of cable counts. By combining the use of one TERA outlet dedicated for high-speed applications of 10Gb/s and another for cable sharing of lower speed voice and video applications, end-users simultaneously benefit from the highest performing and most cost effective copper solution.

The only non-RJ connector approved as a Category 7<sub>A</sub>/Class F<sub>A</sub> interface, TERA fits within a standard RJ45 footprint and is easily connected to RJ45 equipped electronics via hybrid TERA to RJ patch cords.

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# TERA® Outlet

Invented by Siemon in 1999 and subsequently chosen as an industry standard interface for Category 7/Class F and Category 7A/Class FA, the Siemon TERA outlet still is by far the highest performing twisted-pair copper connector in the world. When installed as part of a TERA solution, each pair delivers 1.2 GHz of bandwidth — exceeding Category 7A/Class FA specifications. This extra bandwidth supports demanding applications like 10GBASE-T and broadband video.

**Bend Relief** — Rear boot provides bend relief for cable exiting the plug and outlet

**Compact Design** — Slim, compact design allows outlets to be side-stacked and inserted from either the front or rear of faceplates and patch panels

**Tempest Security Tested** — The TERA system is the first and only copper system to pass TEMPEST emissions testing by an independent, NSA certified lab, Dayton T. Brown Inc.

**Shielded Termination** — Connector automatically assures proper termination of cable shield — no additional processes required for grounding cable

**Application Sharing** — TERA's ability to support multiple applications over a single 4-pair cable and outlet can save significant material and installation costs

**Quadrant Isolation** — Shielded quadrant design fully isolates pairs for optimum NEXT performance

**Fully Shielded** — Terminates fully shielded (F/FTP and S/FTP) cable - virtually eliminates alien crosstalk

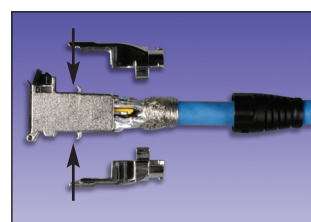
**Hinged Door** — Outlets include a hinged door to prevent exposure to dust and other contaminants



**Easy Installation**  
CPT-T tool reduces preparation and termination time.



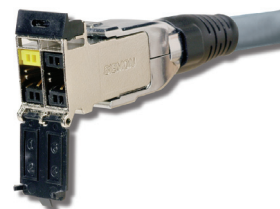
**Mounting Options**  
The TERA outlet is compatible with TERA-MAX® patch panels and all MAX series faceplates.



**Quick-Ground™ Termination**  
No additional steps required for termination. Cable shield is automatically terminated within the outlet without additional steps or tools.

## TERA® 4-Pair Outlet

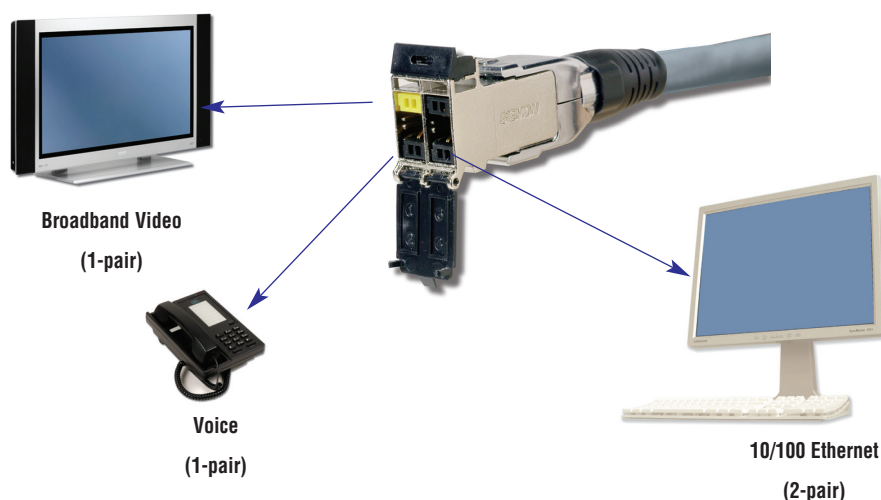
TERA outlets are the industry's highest performing network cabling connectors. Outlets accept 1-, 2- and 4-pair plugs and terminate fully shielded Category 7 and 7<sub>A</sub> cables. TERA outlets can be used in both the work area and in the telecommunications room.



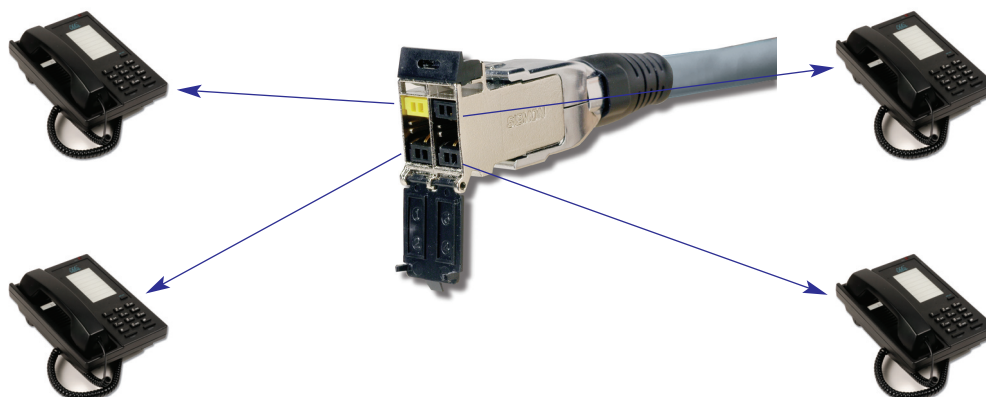
Part #	Description
T7F-01-1 . . . . .	TERA 4-pair outlet with black door, latch and boot. Compatible with 0.64-0.55mm (22-23 AWG) solid S/FTP and F/FTP cable

## TERA Cable Sharing

Up to four simultaneous applications can be served from a single 4-pair, S/FTP cable and TERA outlet, saving significant materials, labour, pathway and rack space.



One TERA replaces four 1-pair analog voice outlets — perfect for call centres.



# TERA®-MAX® Patch Panels

TERA-MAX 19 inch patch panels provide outstanding performance and reliability in a shielded, high-density modular solution. As outlets are snapped into place, resilient ground tabs assure that each outlet is properly grounded. No secondary outlet grounding operations are required, reducing overall installation time.

**Angled TERA-MAX** — Allows direct routing of cables to vertical managers, eliminating the need for horizontal cable managers



**Standard Fit** — Panels can be mounted directly on standard 19 inch relay rack or cabinet

**Durable** — High strength steel with black or metallic finish

**Port Identification** — Bold port numbering enables quick identification of outlets

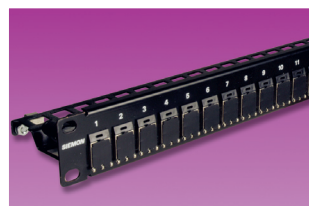


**Installation Friendly** — Individual modules snap into place, providing integrated grounding without additional steps



## Cable Management

Integral rear cable manager facilitates the orderly routing of horizontal cables as well as maintaining proper bend radius for optimum performance.



## Slim Design

Use TERA outlets in TERA-MAX patch panel for telecommunications room applications.



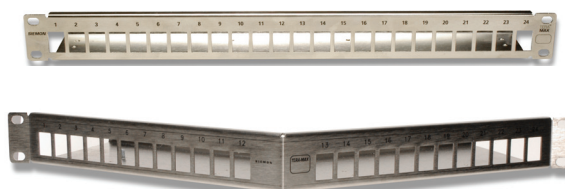
## Integrated Grounding

Panels feature integrated grounding via resilient ground tabs engaged during module insertion.

## TERA-MAX Patch Panels

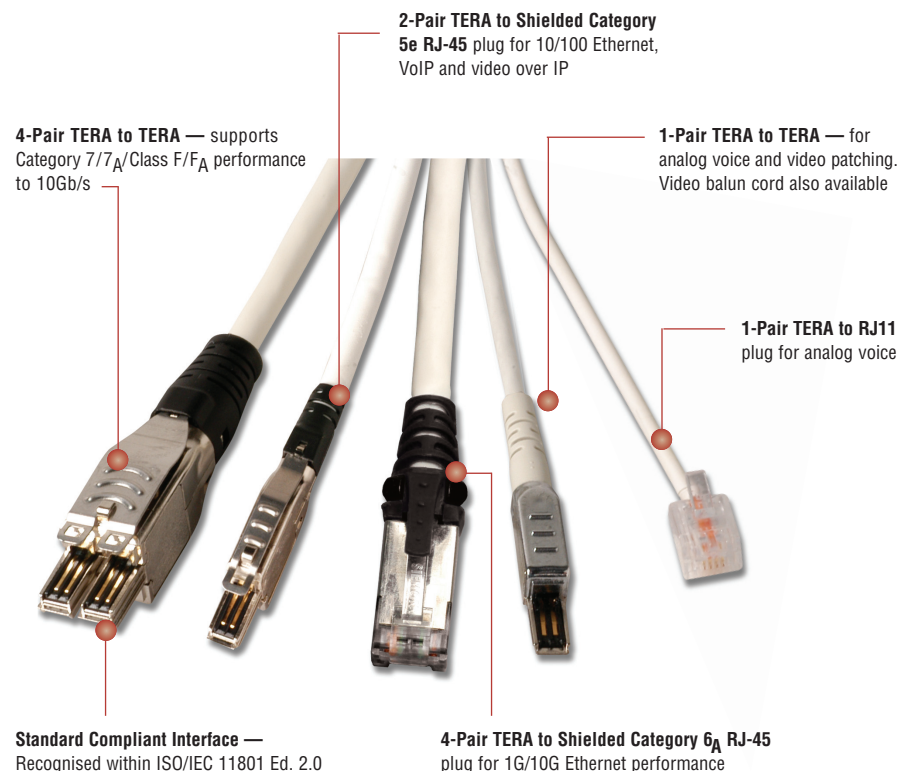
Part #	Description
TM-PNLZ-24-01 . . . . .	24-port TERA-MAX panel, black, 1U
TM-PNLZ-24 . . . . .	24-port TERA-MAX panel, metallic, 1U
TM-PNLZA-24-01 . . . . .	24-port Angled TERA-MAX panel, black, 1U
TM-PNLZA-24 . . . . .	24-port Angled TERA-MAX panel, metallic, 1U
PNLA-CVR-01 . . . . .	Angled panel cover, black

*Panels include designation labels, cable ties and mounting hardware.*  
*Note: 1U = 44.5mm*



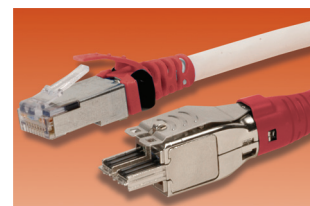
# TERA® - Patch Cords

Part of the TERA cabling solution, TERA-to-TERA patch cords exceed bandwidth of Category 7<sub>A</sub>/Class F<sub>A</sub> specifications when combined with the TERA outlet. TERA delivers up to 1.2 GHz of bandwidth per pair, providing the extra bandwidth for demanding applications like 10GBASE-T and Broadband Video. Facilitated by 1- and 2-pair patch cords, TERA's extended performance also supports cable sharing — the simultaneous convergence of video, voice and data onto a single 4-pair cable and outlet.



## Standard Footprint

ISO recognised interface allows TERA cords and outlets to fit within a standard RJ45 footprint.



## Fully Compatible With Active Electronics

TERA to RJ45 patch cords allow the TERA system to be easily connected to RJ45 equipped active electronics.



## Cable Sharing

Multiple applications can be run over one 4-pair cable and outlet, saving significant material and pathway space.

## TERA Field-Terminated Plug

TERA 4-pair plugs can be used to terminate horizontal cable into exact lengths for consolidation point applications. Plugs terminate fully shielded Category 7 and 7<sub>A</sub> solid cable.

Part #	Description
T7P4-B(XX)-1	4-pair TERA plug with coloured boot. Compatible with 0.64 – 0.55mm (22 – 23 AWG) solid S/FTP and F/FTP cable
T7P4-B(01)-2	4-pair TERA plug with black boot. Compatible with 0.48mm (26 AWG) stranded S/FTP and F/FTP cable

Use (XX) to specify boot colour: 01 = black, 02 = white, 03 = red, 05 = yellow, 06 = blue, 07 = green



# TERA® Patch Cords

## TERA Category 7<sub>A</sub> Patch Cords

Category 7<sub>A</sub> compatible, TERA to TERA, LS0H cable assembly, ivory jacket, coloured boot.

T(X)-(XX)M-B(XX)L		
Plug Type		Boot Colour
1 = 1-Pair		01 = Black
4 = 4-Pair		02 = White
		03 = Red
		05 = Yellow
		06 = Blue
		07 = Green
Cord Length		
01 = 1m		
02 = 2m		
03 = 3m		
05 = 5m		

## TERA Category 5e Compatible Patch Cords

TERA to Shielded RJ-45, or TERA to 6 position (Voice) modular plug, LS0H cable assembly, ivory jacket, coloured boot.

T(XXX)-(XX)M-B(XX)L		
Plug Type		Boot Colour
2E2 = 2-Pair, RJ-45, 10/100BASE-T		01 = Black
2UT = 2-Pair, RJ-45, Token Ring		02 = White
1SU1 = 1-Pair, UTP, 6-position, Voice		03 = Red
		05 = Yellow
		06 = Blue
		07 = Green
Cord Length		
01 = 1m		
02 = 2m		
03 = 3m		
05 = 5m		

## TERA Category 6A Patch Cords

Augmented Category 6A, TERA to Shielded RJ-45 modular plug, LS0H cable assembly, ivory jacket, coloured boot

T4(X)-S(XX)M-B(XX)L		
Plug Type		Boot Colour
A = T568B		01 = Black
T = T568A		02 = White
		03 = Red
		05 = Yellow
		06 = Blue
		07 = Green
Cord Length		
01 = 1m		
02 = 2m		
03 = 3m		
05 = 5m		

CLIP-(XX) ..... Colour coding clip, bag of 25

Clip Colour		
01 = Black	04 = Grey	07 = Green
02 = White	05 = Yellow	08 = Violet
03 = Red	06 = Blue	09 = Orange



## TERA Video Balun Cords

TERA CATV baluns provide the optimum solution for the transmission of TV or CATV signals over structured cabling systems that were historically limited to voice and data transmission. These products convert the unbalanced TV signals designed for coaxial cabling (75 Ω impedance) to balanced signals (100 Ω impedance) as required for transmission over twisted pair (balanced) cabling. The TERA CATV adapters are specified and useable to 862 MHz. The 1-pair TERA to PAL and TERA to "F" patch cords utilise an integrated balun. The 1-pair shielded TERA to shielded RJ45 patch cord allows connection to third-party RJ45 baluns.

Part #	Description
T1VC-(XX)M-B01L	1-pair TERA to PAL connector, LS0H cable assembly, grey jacket
T1VF-(XX)M-B01L	1-pair TERA to F connector, LS0H cable assembly, grey jacket
T1S4V-(XX)M-B01L	1-pair shielded TERA to RJ45 patch cord

Use (XX) to specify length: 01 = 1m, 1.5 = 1.5m, 02 = 2m, 03 = 3m, 05 = 5m



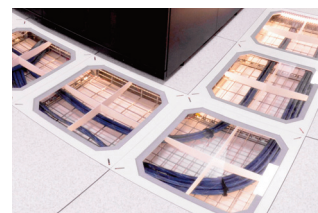
T1VF-(XX)M-B01L



T1S4V-(XX)M-B01L

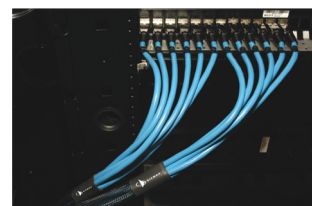
# TERA® - S/FTP Trunking Cable Assemblies

Siemon's TERA copper trunking cable assemblies provide an efficient and cost effective alternative to individual field-terminated components. Combining factory terminated and tested TERA outlets and fully shielded Siemon Category 7<sub>A</sub> cable, Siemon TERA trunking cable assemblies offer industry leading performance to 10Gb/s. Standard configurations also help maintain consistent cable layout, facilitate efficient moves, adds and changes and significantly reduce scrap versus typical field installation. Modular design, in conjunction with reduced scrap, makes trunks the most "Green" method for copper cabling installations.



## Data Centres

Ideal for data centre, raised floor and ladder rack environments enabling up to 75% faster deployment time. Well organised cable bundles improve cable management and air flow.



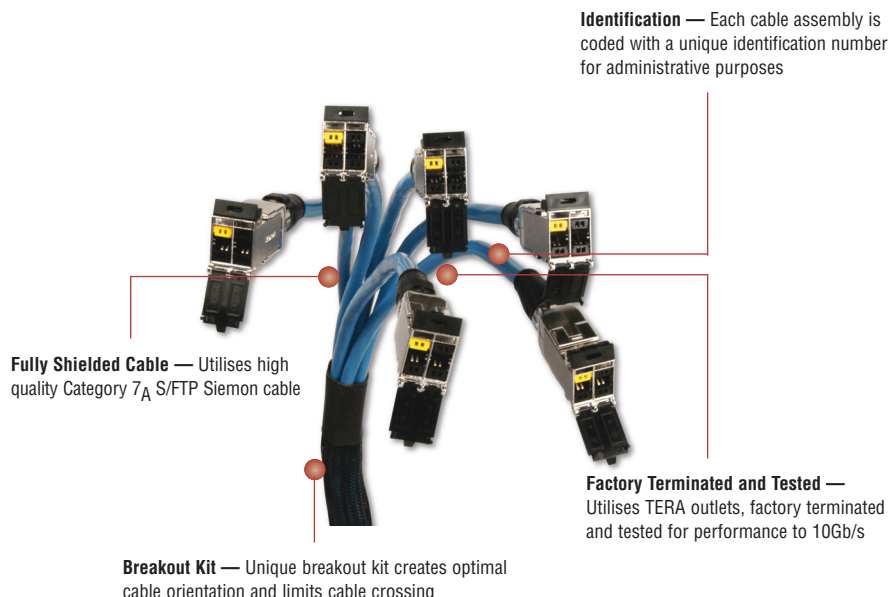
## Simple, Snap-In Installation

Straight Cut aligns TERA outlets for optimal snap in installation into TERA-MAX® patch panels and allows left, right or centre exit.



## Protective Packaging

Each assembly is packaged individually to protect factory terminations.



## TERA S/FTP Trunking Cable Assemblies

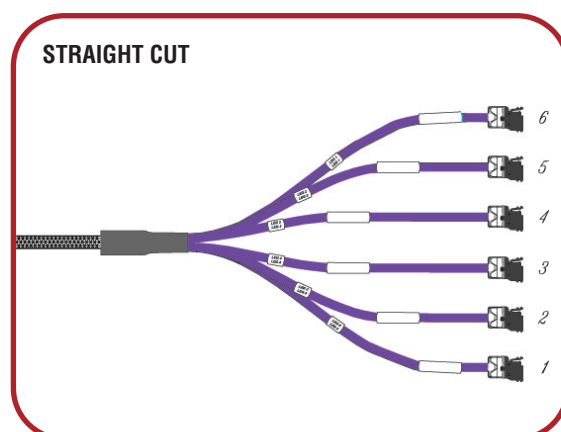
### 6 Leg Double-Ended Trunking Cable Assemblies

Part #	Description
TJLD8E-F1F1(XXX)M . . . . .	LSOH rated (IEC 60332-1), violet jacket, 1000MHz

Use (XXX) to specify length: 2.7 - 90m in increments of 1 metre

Other lengths and configurations available upon request.

Note: These products are made to order. Call for lead time and part number availability in your region.



# TERA® E6 Cable (International)

## COMPLIANCE

- ISO/IEC 11801: Ed 2.2 (Class F)
- IEC 61156-5 Ed 2.1 (Category 7)
- IEEE 802.3an
- EN 50288 • EN55022
- EN 50173 • EN55024
- LSOH: IEC 60332-1, IEC 60754, and IEC 61034

## CABLE CONSTRUCTION

- S/FTP
- Nominal jacket OD: 7.1mm
- 0.56mm solid (non-tinned) copper
- Reverse sequential measurement markings
- Pairs individually shielded
- Overall tinned-copper braid

## Ordering Information:

Part #	Description
9T7L4-E6.....	LSOH (IEC 60332-1), Violet Jacket, 305m
9T7L4-E6-5CR.....	LSOH (IEC 60332-1), Violet Jacket, 500m
9T7L4-E6-1KR.....	LSOH (IEC 60332-1), Violet Jacket, 1000m



## ELECTRICAL SPECIFICATIONS (Nominal)

DC Resistance	<7.32 2 /100m
DC Resistance Unbalance	2%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	<160 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 100-600 MHz: 100 ± 22%
NVP	72%
TCL	40-10 x log(f)dB
Delay Skew	≤25ns/100m

## PHYSICAL PROPERTIES

	LSOH
Pulling Tension (max)	80N
Bend Radius (min)	50mm
Installation Temperature	0 to 75°C
Storage Temperature	-20 to 75°C
Operating Temperature	-20 to 75°C

## TRANSMISSION PERFORMANCE

GUARANTEED WORST CASE
  SIEMON TYPICAL

Frequency (MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PSACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)	
1.0	2.1	1.8	78.0	103.7	75.0	110.0	75.9	101.9	72.9	108.2	78.0	94.8	75.0	102.3	20.0	32.7
4.0	3.7	3.4	78.0	106.8	75.0	117.2	74.3	103.4	71.3	113.8	78.0	90.5	75.0	91.8	23.0	27.4
10.0	5.8	5.3	78.0	111.6	75.0	121.1	72.2	106.3	69.2	115.8	78.0	109.0	75.0	116.2	25.0	35.9
16.0	7.3	6.8	78.0	113.9	75.0	121.9	70.7	107.0	67.7	115.1	78.0	107.0	75.0	114.5	25.0	36.6
20.0	8.2	7.6	78.0	110.2	75.0	117.4	69.8	102.5	66.8	109.7	78.0	115.7	75.0	117.7	25.0	36.4
31.25	10.3	9.7	78.0	112.4	75.0	119.5	67.7	102.7	64.7	109.8	75.4	106.8	72.4	109.8	23.6	39.2
62.5	14.6	13.9	78.0	114.0	75.0	121.6	63.4	100.1	60.4	107.7	69.4	102.4	66.4	109.8	21.5	33.6
100.0	18.5	17.7	78.0	108.3	75.0	117.5	59.5	90.6	56.5	99.8	65.3	100.8	62.3	103.0	20.1	37.8
200.0	26.5	25.2	73.9	112.5	70.9	118.7	47.4	87.3	44.4	93.6	59.3	85.9	56.3	90.9	18.0	38.9
250.0	29.7	28.3	72.4	108.6	69.4	115.0	42.7	80.3	39.7	86.8	57.3	88.2	54.3	89.5	17.3	35.2
300.0	32.7	31.1	71.2	106.2	68.2	112.2	38.6	75.1	35.6	81.1	55.8	84.7	52.8	90.1	17.3	36.9
400.0	38.0	36.1	69.4	108.0	66.4	116.9	31.4	71.9	28.4	80.8	53.3	71.9	50.3	76.8	17.3	36.2
500.0	42.8	40.4	67.9	96.1	64.9	103.4	25.2	55.7	22.2	62.9	51.3	79.6	48.3	83.6	17.3	32.8
600.0	47.1	44.4	66.7	97.0	63.7	101.8	19.6	52.5	16.6	57.4	49.7	69.9	46.7	71.7	17.3	34.8
700.0*	-	48.2	-	98.8	-	106.0	-	50.6	-	57.8	-	59.9	-	61.0	-	33.5
800.0*	-	51.8	-	94.6	-	103.7	-	42.8	-	51.9	-	60.9	-	62.9	-	29.9
850.0*	-	53.9	-	82.2	-	94.7	-	28.4	-	40.8	-	48.1	-	55.2	-	31.0

\*Values above 600 MHz are for information only.

All performance based on 100 metres

# TERA® E10 Cable (International)

## COMPLIANCE

- ISO/IEC 11801: Ed 2.2 (Class F<sub>A</sub>)
- IEC 61156-5 Ed 2.1 (Category 7<sub>A</sub>)
- IEEE 802.3an
- EN 50288 • EN55022
- EN 50173 • EN55024
- LSOH: IEC 60332-1, IEC 60754, and IEC 61034

## CABLE CONSTRUCTION

- S/FTP
- Nominal jacket OD: 7.7mm
- 0.57mm solid (non-tinned) copper
- Sequential measurement markings on jacket
- Pairs individually shielded with aluminum-polyester foil
- Overall tinned-copper braid

## Ordering Information:

Part #	Description
9T7L4-E10.....	LSOH (IEC 60332-1), Violet Jacket, 305m
9T7L4-E10-5CR.....	LSOH (IEC 60332-1), Violet Jacket, 500m
9T7L4-E10-1KR.....	LSOH (IEC 60332-1), Violet Jacket, 1000m



## ELECTRICAL SPECIFICATIONS

DC Resistance	<7.32 2 /100m
DC Resistance Unbalance	≤ 2%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	≤160 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 100-250 MHz: 100 ± 22% 250-1000 MHz: 100 ± 25%
NVP	70%
TCL	40-10 x log(f)dB
Delay Skew	25ns/100m

## PHYSICAL PROPERTIES

	LSOH
Pulling Tension (max)	110N
Bend Radius (min)	50mm
Installation Temperature	0 to 75°C
Storage Temperature	-20 to 75°C
Operating Temperature	-20 to 75°C

## TRANSMISSION PERFORMANCE



GUARANTEED WORST CASE



SIEMON TYPICAL

Frequency (MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PSACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)		Propagation Delay (ns)	
1.0*	1.9	1.6	78.0	105.0	75.0	102.0	76.1	103.0	73.1	100.0	77.0	96.0	75.0	94.0	20.0	31.0	536	512
4.0	3.5	3.0	78.0	105.0	75.0	102.0	74.6	102.0	71.6	99.0	77.0	96.0	75.0	94.0	23.0	34.0	518	494
10.0	5.4	4.9	78.0	105.0	75.0	102.0	72.6	100.0	69.6	97.0	74.0	96.0	71.0	94.0	25.0	35.0	511	487
16.0	6.8	6.3	78.0	105.0	75.0	102.0	71.2	99.0	68.2	96.0	70.0	96.0	67.0	94.0	25.0	35.0	509	485
20.0	7.5	7.0	78.0	105.0	75.0	102.0	70.3	98.0	67.4	95.0	68.0	96.0	65.0	94.0	25.0	35.0	508	484
31.25	9.6	8.9	78.0	105.0	75.0	102.0	68.5	96.0	65.5	93.0	64.0	93.0	61.0	91.0	23.6	34.0	506	482
62.5	13.7	12.8	78.0	105.0	75.0	102.0	64.3	92.0	61.3	89.0	58.0	88.0	55.0	86.0	21.5	32.0	505	481
100.0	17.5	16.5	76.0	105.0	73.0	102.0	58.5	89.0	55.5	86.0	54.0	82.0	51.0	80.0	20.1	31.0	504	480
200.0	25.3	23.5	71.0	102.0	68.0	100.0	46.2	79.0	43.2	77.0	48.0	78.0	45.0	75.0	18.0	29.0	503	479
250.0	28.5	28.2	70.0	102.0	67.0	100.0	41.5	74.0	38.5	72.0	46.0	75.0	43.0	70.0	17.3	28.0	502	502
300.0	31.5	28.9	69.0	102.0	66.0	97.0	37.3	73.0	34.3	68.0	44.0	70.0	41.0	68.0	17.3	28.0	502	478
350.0	34.3	31.5	68.0	100.0	65.0	97.0	33.6	69.0	30.6	66.0	43.0	70.0	40.0	63.0	17.3	28.0	502	478
400.0	36.9	33.1	67.0	95.0	64.0	93.0	30.1	62.0	27.1	60.0	42.0	66.0	39.0	59.0	17.3	28.0	502	478
550.0	44.1	40.2	65.0	95.0	62.0	93.0	20.8	55.0	17.8	53.0	39.0	60.0	36.0	56.0	17.3	28.0	502	478
600.0	46.3	41.7	64.0	95.0	61.0	93.0	18.0	53.0	15.0	51.0	38.0	55.0	35.0	53.0	17.3	28.0	502	478
800.0	54.5	47.6	62.0	90.0	59.0	87.0	7.9	42.0	4.9	39.0	36.0	47.0	33.0	44.0	16.1	28.0	501	477
1000.0	62.0	54.5	61.0	85.0	58.0	83.0	-1.0	31.0	-4.0	29.0	34.0	40.0	31.0	38.0	15.5	27.0	501	477
1200.0*		59.8		80.0		77.0		20.0		17.0		35.0		33.0		27.0		477

\*Values below 4 MHz are for information only.

\*\*Values for IEC 61156-5 above 1000 MHz are for information only.

All performance based on 100 metres

# TERA® E12 Cable (International)

## COMPLIANCE

- ISO/IEC 11801: Ed. 2.2 (Class F<sub>A</sub>)
- ISO/IEC 15018 BCT Channel Application
- IEC 61156-7 Ed 1.1
- IEC 61156-5 Ed 2.1 (Category 7<sub>A</sub>)
- IEEE 802.3an
- EN 50288 • EN55022
- EN 50173 • EN55024
- LSOH: IEC 60332-1, IEC 60754, and IEC 61034

## CABLE CONSTRUCTION

- S/FTP
- Nominal jacket OD: 8mm
- 0.64mm solid (non-tinned) copper
- Sequential measurement markings on jacket
- Pairs individually shielded with aluminum-polyester foil
- Overall tinned-copper braid

## ELECTRICAL SPECIFICATIONS

DC Resistance	<17.0 2/100m
DC Resistance Unbalance	2%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	<330 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 100-250 MHz: 100 ± 22% 250-1000 MHz: 100 ± 25%
NVP	80%
TCL	40-10 x log(f)dB
Delay Skew	≤25ns

## Ordering Information:

Part #	Description
9T7L4-E12	LSOH (IEC 60332.1), Violet Jacket, 305m
9T7L4-E12-5CR	LSOH (IEC 60332.1), Violet Jacket, 500m
9T7L4-E12-1KR	LSOH (IEC 60332.1), Violet Jacket, 1000m



## PHYSICAL PROPERTIES

	LSOH
Pulling Tension (max)	110N
Bend Radius (min)	50mm
Installation Temperature	0 to 75°C
Storage Temperature	-20 to 75°C
Operating Temperature	-20 to 75°C

## TRANSMISSION PERFORMANCE

GUARANTEED WORST CASE

SIEMON TYPICAL

Frequency (MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PSACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)		Propagation Delay (ns)	
1.0*	1.9	1.7	78.0	105.2	75.0	99.5	76.1	103.5	73.1	97.7	78.0	99.6	75.0	96.6	20.0	30.0	536.0	455
4.0	3.5	3.2	78.0	107.8	75.0	102.8	74.5	104.6	71.5	99.7	78.0	107.5	75.0	102.6	23.0	27.8	518.0	452
10.0	5.4	4.8	78.0	105.2	75.0	99.4	72.6	100.4	69.6	94.6	74.0	103.1	71.0	97.4	25.0	34.1	511.4	449
16.0	6.8	6.1	78.0	109.1	75.0	101.7	71.2	103.0	68.2	95.6	69.9	104.2	66.9	99.9	25.0	33.1	509.0	447
20.0	7.6	6.9	78.0	107.2	75.0	101.3	70.4	100.3	67.4	94.4	68.0	105.0	65.0	97.4	25.0	34.4	508.0	446
31.25	9.6	8.8	78.0	106.8	75.0	100.0	68.4	98.0	65.4	91.2	64.1	102.3	61.1	96.7	23.6	35.9	506.4	445
62.5	13.7	12.7	78.0	108.3	75.0	102.7	64.3	95.7	61.3	90.0	58.1	104.6	55.1	98.4	21.5	41.1	504.6	444
100.0	17.5	16.2	76.0	105.5	73.0	97.8	58.5	89.3	55.5	81.6	54.0	104.1	51.0	97.7	20.1	36.0	503.6	444
200.0	25.3	23.1	71.5	107.7	68.5	101.9	46.2	84.6	43.2	78.8	48.0	101.6	45.0	95.6	18.0	30.4	502.5	444
250.0	28.5	25.8	70.0	110.4	67.0	101.4	41.5	84.6	38.5	75.5	46.0	107.0	43.0	99.1	17.3	33.5	502.3	443
300.0	31.5	28.3	68.8	105.5	65.8	100.0	37.3	77.2	34.3	71.6	44.5	100.8	41.5	95.3	17.3	34.9	502.1	443
350.0	34.3	30.8	67.8	108.4	64.8	101.0	33.6	77.2	30.6	70.3	43.1	107.5	40.1	97.8	17.3	39.0	501.9	443
400.0	36.9	33.0	67.0	111.2	64.0	103.3	30.1	78.2	27.1	70.2	42.0	107.2	39.0	99.5	17.3	35.5	501.8	443
550.0	44.1	39.0	64.9	105.0	61.9	99.1	20.8	66.0	17.8	60.0	39.2	102.0	36.2	94.9	17.3	33.8	501.5	443
600.0	46.3	40.8	64.3	108.3	61.3	99.3	18.0	67.5	15.0	58.5	38.4	105.2	35.4	96.6	17.3	35.9	501.5	443
800.0	54.5	47.5	62.5	98.7	59.5	93.8	7.9	51.2	4.9	46.2	35.9	93.1	32.9	90.1	16.1	34.0	501.3	443
1000.0	62.0	53.7	61.0	100.2	58.0	93.9	-1.0	46.5	-4.0	40.2	34.0	83.3	31.0	77.1	15.1	25.3	501.1	443
1100.0	65.6	56.6	60.4	106.2	57.4	98.0	-5.2	49.6	-8.2	41.4	33.2	80.9	30.2	74.6	14.7	30.0	501.1	443
1200.0	65.6	61.8	59.8	100.1	56.8	92.6	-9.2	38.3	-12.2	30.8	32.4	78.1	29.4	67.4	14.3	24.8	501.1	441
1300.0*	-	62.2	-	95.2	-	87.6	-	33.0	-	25.4	-	66.1	-	59.6	-	19.7	-	445
1500.0*	-	68.4	-	101.3	-	90.4	-	32.9	-	22.0	-	37.5	-	57.5	-	19.0	=	441

\*Values below 4 MHz and above 1200 MHz are for information only.

All performance based on 100 metres

# Siemon's Z-MAX® Network Cabling Solutions

The development of the Z-MAX line began with a simple goal — design and build the best RJ-45 based cabling solution — period.

And “best” was not a vague metric. Z-MAX was built to be best across the board:

- Highest performance margins across all critical transmission parameters
- Fastest, easiest and most reliable termination process
- Superior transmission consistency
- The best customer focused usability, efficiency and ergonomic features

To meet these goals, we did what we have done for over a century — innovate.

As you explore the Z-MAX line, you'll see Siemon innovation at every turn. From our patent-pending Zero-Cross™ termination to the exclusive PCB-based smart plug technology integrated into every Z-MAX cord to our hybrid flat/angled outlets to the easy-to-use Z-TOOL™, no opportunity to improve this family was overlooked.

## Section Contents

Z-MAX Introduction .....2.1 - 2.3

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Category 6A UTP Cable .....2.21

# DON'T BLINK

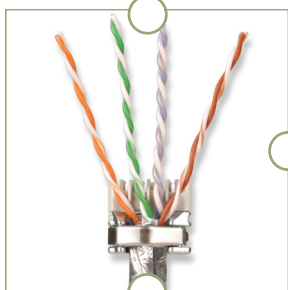
Best-in-class Category 6A performance for UTP and Shielded **in just 45 seconds.**

While average termination time including cable preparation is 60 seconds, some Siemon certified installers have set world records for Category 6A Z-MAX terminations at less than 30 seconds.



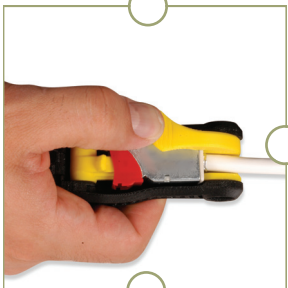
**1 0:20 sec.**

Prepare cable and place into Z-MAX's patent-pending Zero-Cross™ lacing cap. Close hinged cable retention/grounding clip.



**2 0:40 sec.**

Lace conductor pairs into colour-coded linear lacing channels and trim excess.



**3 0:45 sec.**

Insert lacing cap into Z-MAX outlet and terminate with the one-step Z-TOOL™.



**Complete!**



Watch Z-MAX termination video at [www.siemon.com/uk/zmax](http://www.siemon.com/uk/zmax)

# Siemon Innovations that make it possible. . .

## Highest-Performing Category 6A Systems

	Z-MAX 6A UTP	Z-MAX 6A F/UTP
IL	3%	3%
NEXT	3.0 dB	3.0 dB
PSNEXT	3.5 dB	3.5 dB
ACR-F	7 dB	7 dB
PSACR-F	10 dB	10 dB
RL	3 dB	3 dB
PSANEXT	1 dB	10 dB
PSAACR-F	1 dB	5 dB
ACR-N	6 dB	6 dB
PSACR-N	6.5 dB	6.5 dB

Performance based on use of 24 x 2M cords and 24 port /1U density.  
Because we continually improve our product, Siemon reserves the right to change specifications and availability without prior notice.

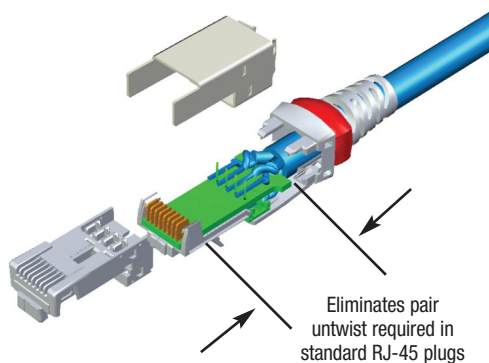
With Z-MAX, Siemon has shattered the RJ-45 barrier. We have achieved best-in-class performance through an innovative “matched” system which combines an optimally tuned plug with a higher performance outlet.

- Best UTP and F/UTP Category 6A margins
- Leading performance on all parameters, not just NEXT
- Exceptional alien crosstalk performance
- ISO channel, link and component compliant
- TIA channel, link and component compliant
- Consistent, superior performance, eliminates marginal testing (\*PASS)



## Patent-Pending Smart Plug Technology

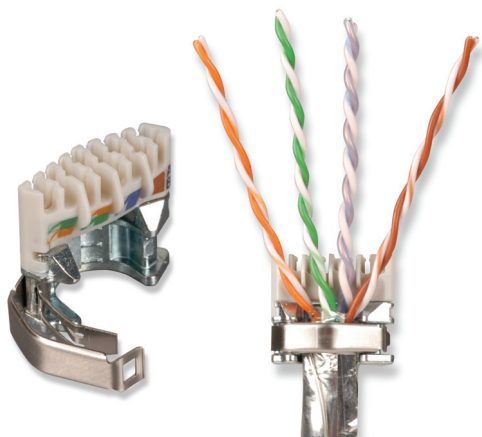
A critical element of Z-MAX systems' exceptional performance is our smart-plug technology. The Z-MAX smart plug contains a tuned printed circuit board (PCB), normally only found in outlets, to achieve high performance tuning. This advancement in miniaturisation has packaged the tuning capability and consistency of a PCB in an industry standard RJ-45 footprint, giving the Z-MAX patch cord unsurpassed performance capabilities.



- Patent pending PCB-based plug enables performance levels not possible with traditional cords
- Narrower NEXT range provides capability to tune to higher channel performance levels
- Advanced contact technology and automated assembly results in decreased performance variability compared with crimp-type plugs
- Smart-Plug is fully backwards-compatible and standards compliant
- PCB-based contacts eliminate pair-crossing condition present in traditional cords
- Solderless, press-fit contact technology ensures long-term reliability

## Zero-Cross™ Terminations

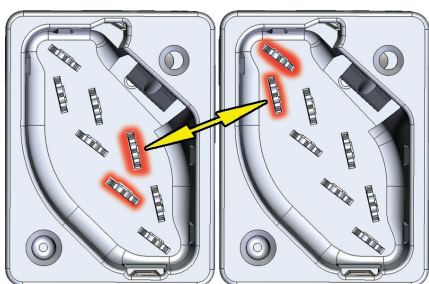
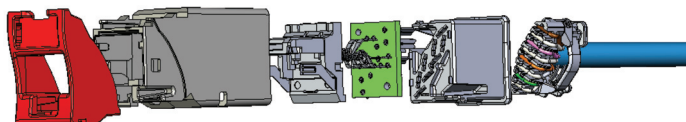
The crossing of cable pairs has long been recognised as a source of variability and performance degradation in connector systems. The linear design of the Z-MAX termination module allows conductors to feed naturally into position without the need for pair crossing.



- Linear design dramatically speeds and simplifies cable prep and conductor alignment
- Removes a significant source of crosstalk present in all other RJ-45 outlets
- Maintains and protects cable pair structure for optimised transmission performance consistency
- Intuitive cable lacing significantly minimises miswires that lead to costly reworks

## Diagonal IDC Contact Orientation

Siemon engineers thought “outside of the box” when they developed our diagonally-oriented IDC contact technology. This unique configuration places contacts on a single plane yet varies the alignment of each individual contact within the Z-MAX outlet. This design provides distinct performance benefits compared with traditional rectangular contact layouts.

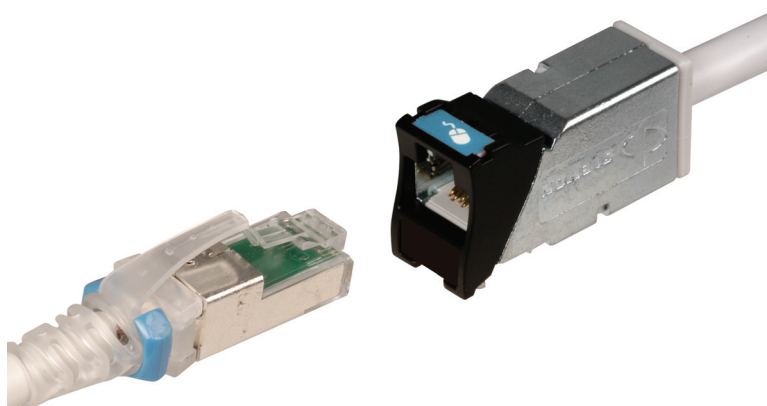


- Maximises pair-to-pair separation from adjacent outlets to minimise alien crosstalk even in the most dense Category 6A patching environments
- Enhances NEXT performance within outlets
- Limits untwist of pairs at termination to maximise cable performance
- Fully enclosed IDC's eliminates exposure of uninsulated conductors

# Z-MAX® 6A Shielded System Features and Benefits

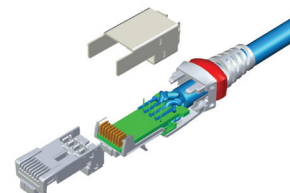
Combining consistent best-in-class performance, unparalleled usability and speed of termination with the security and robust noise immunity of a shielded cabling system, Siemon's Z-MAX 6A shielded end-to-end solution represents the cutting edge of Category 6A cabling. The Z-MAX 6A shielded system provides the highest margins on all ISO and TIA performance requirements for Category 6A/Class E<sub>A</sub>, including critical alien crosstalk parameters.

Siemon's Z-MAX 6A shielded channel consists of the shielded Z-MAX 6A outlet, Siemon Category 6A shielded cable and Z-MAX patch panels as well as stranded and solid options.



## Z-TOOL™ Termination

- Fast
- Simple
- Consistent



## PCB-based Smart Plug™

Z-MAX cords feature exclusive PCB-based smart plug specifically tuned to maximise overall system performance

## Features and Benefits

- Hybrid work area outlets mount in either flat or angled orientation
- Industry's fastest termination time accelerates project completion
- Guided, tool-based termination process enhances system quality and reliability
- Field-terminated outlets or pre-terminated trunking cables can be quickly snapped into patch panels and released to enable rapid deployment or changes
- High density 48 port, 1U options provide the flexibility to work within strict space limitations saving valuable rack and cabinet space
- Integrated Quick-Ground™ outlet shield and panel connections ensures fast and reliable grounding
- Shielded outlet and modular cord colour-coding provides the capability to code and customise your cabling system



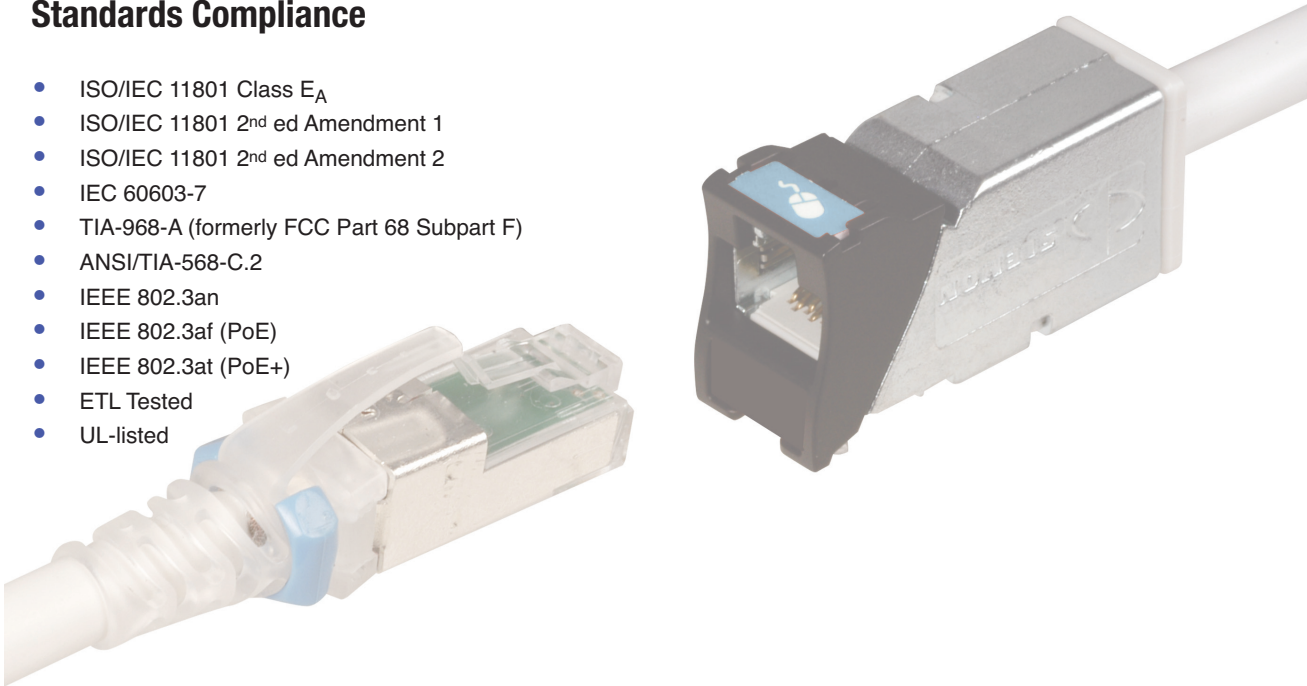
## Rapid Deployment

Modular Quick-Snap panel design speeds initial deployment and subsequent MACs

# System Performance Overview

## Standards Compliance

- ISO/IEC 11801 Class E<sub>A</sub>
- ISO/IEC 11801 2<sup>nd</sup> ed Amendment 1
- ISO/IEC 11801 2<sup>nd</sup> ed Amendment 2
- IEC 60603-7
- TIA-968-A (formerly FCC Part 68 Subpart F)
- ANSI/TIA-568-C.2
- IEEE 802.3an
- IEEE 802.3af (PoE)
- IEEE 802.3at (PoE+)
- ETL Tested
- UL-listed



## Z-MAX 6A Shielded Cable Performance

GUARANTEED 4-CONNECTOR CHANNEL MARGINS TO ISO / IEC 11801 2.1 (1 - 500 MHz)

PARAMETER	VALUE
IL	3%
NEXT	3.0 dB
PSNEXT	3.5 dB
ACR-F	7 dB
PSACR-F	10 dB
RL	3 dB
PSANEXT	10 dB
PSAACR-F	5 dB
ACR-N	6 dB
PSACR-N	6 dB

Performance based on use of 24 x 2M cords and 24 port /1U density.

# Z-MAX® 6A Shielded Outlets

The shielded Z-MAX outlet offers best-in-class performance in every critical specification, exceeding all Category 6A performance requirements, including alien crosstalk. Its innovative features not only speed and simplify termination, but remove installation variability for consistently high and repeatable performance — every termination, every time!

**High-Visibility Icon System** — Printed icons allow designation for voice / data applications and also provide an additional colour coding option

**Compact** — Slim and side-stackable for high-density applications. Supports “pass-thru” feature to mount from the front or rear of a faceplate

**Guided Termination Features** — Linear lacing channels guide correct conductor placement while 2-sided colour-coding provides wiring verification before and after lacing

**Robust Hinged Cable Retention** — Clip accommodates multiple cable diameters

**Fastest Termination Time** — Zero-Cross™ termination module and Z-TOOL™ termination process combine for best-in-class termination time

**Colour Coding Capability** — Bezel allows outlets to be colour-coded for customer identification to match faceplates and other mounting accessories



## Flexibility and Simplified Ordering

A single hybrid outlet supports both angled and flat mounting orientations.



## Enhanced Shielding Effectiveness

High level of shielded effectiveness exceeds ISO 360 degree shielding requirements via die cast housing and hinged cable retention/grounding clip.



## 100% Jack-to-Jack Plastic Isolation

Plastic bezels prevent contact between metal housings when side stacking to ensure ground quality and ANEXT performance.



## Quick-Ground™ Termination

Cable shield is automatically terminated to the outlet without additional steps.



## Spring Door Option

Minimises exposure to dust and other contaminants.

## Ordering Information:

Z6A-S(X)(XX)(X) . . . . . Shielded Z-MAX 6A outlet, T568A/B

Mounting Style	Bezel Colour	Door Option
(Blank) = Hybrid Flat/Angled	01= Black	(Blank) = No Door
K = Keystone	02= White	D = Door (Hybrid only)
	03= Red	
	04= Grey	
	05= Yellow	
	06= Blue	
	07= Green	
	09= Orange	
	20= Ivory	
	80= Light Ivory	

Outlet terminates S/FTP, F/FTP and F/UTP cable constructions with 22 – 26 AWG (0.64 – 0.51mm) solid and 26 AWG (0.48mm) stranded conductors, with up to 0.60mm diameter conductors and up to 1.48mm diameter over insulation.

Add “D” to end of part number for spring door option.

ⓑ Add “B” to end of part number for bulk project pack of 100 modules (hybrid modules include icons).

Each Z-MAX 6A hybrid outlet includes 1 printed icon set with the following colour/print options.



Front	Rear
1 - Red Data	1 - Red Voice
1 - Blue Data	1 - Blue Voice
1 - Bezel Colour-Matching Data	1 - Bezel Colour-Matching Voice
1 - White Blank	1 - Bezel Colour-Matching Blank

For more Z-MAX icon colours and options see page 9.5.

# Z-MAX® 6A Shielded Modular Cords

Combining the unparalleled performance of an exclusive PCB-based plug, noise-resistant shielded construction and a host of innovative user friendly features, the shielded Z-MAX 6A modular cords are the ultimate Category 6A cord. All cords are 100% factory-tested to ensure performance and compliance.

**High Performance Cable** — Patch cords feature Category 7 S/FTP stranded cable for optimal transmission performance while eliminating alien cross-talk

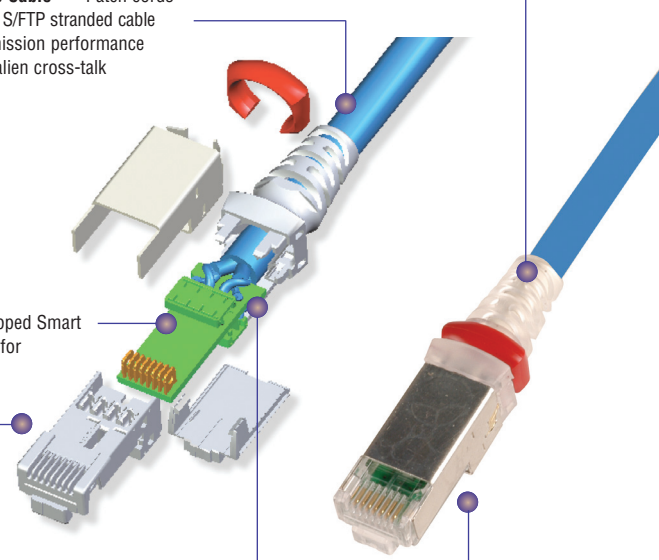
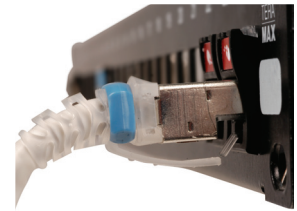
**Low Profile Boot Design** — Optimises side-stackability of patch cords and allows use in even the most dense patching environments

**Integrated PCB** — PCB equipped Smart Plug optimises signal tuning for exceptional transmission

**Fixed Front Contacts** — Ensure proper mating with outlets to eliminate the performance variability of traditional crimp-style terminations

**Superior Performance Consistency** — Rear contacts maintain cable twist to point of termination and provide robust strain relief. Solderless, press-fit contact technology ensures long-term reliability

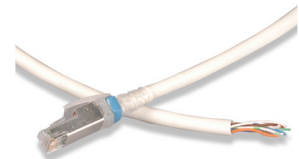
**Cantilevered Latch** — Allows latch activation from further back on the boot for superior accessibility in high density environments

**Excellent Bend Relief**  
Boot ensures proper bend relief, critical for Category 6A performance.



**Coloured Clips**  
Removable clips allow field colour coding even when cords are connected.



**Solid Cord Option**  
Solid F/UTP assemblies are available for consolidation point and equipment cord applications.

## Ordering Information:

ZM6A-S(XX)M-(XX) . . . . . Z-MAX 6A shielded (S/FTP), double-ended, stranded modular cord, clear boot, T568A/B, CM/LSOH

Length	Jacket Colour			
01 = 1m	01 = Black	04 = Grey	07 = Green	
1.5 = 1.5m	02 = White	05 = Yellow	08 = Violet	
02 = 2m	03 = Red	06 = Blue	09 = Orange	
03 = 3m				
04 = 4m				
05 = 5m				
7.5 = 7.5m				

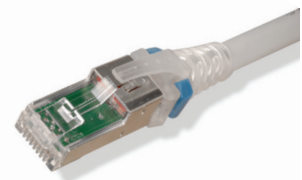
ZC6A-S(XX)M(X)L(X) . . . . . Z-MAX 6A shielded (F/UTP) solid modular cord, violet jacket, clear boot, LSOH

Length	Plugs
03 = 3m	(Blank) = Single-ended
05 = 5m	D = Double-ended (T568A/B)
10 = 10m	
15 = 15m	
20 = 20m	
	Wiring
	A = T568B
	T = T568A

ⓑ Add "B" to end of part number for bulk project pack of 100 cords.

CLIP-(XX) . . . . . Colour coding clip, bag of 25

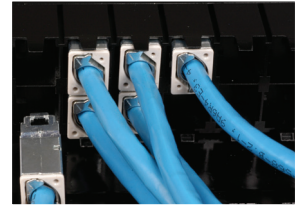
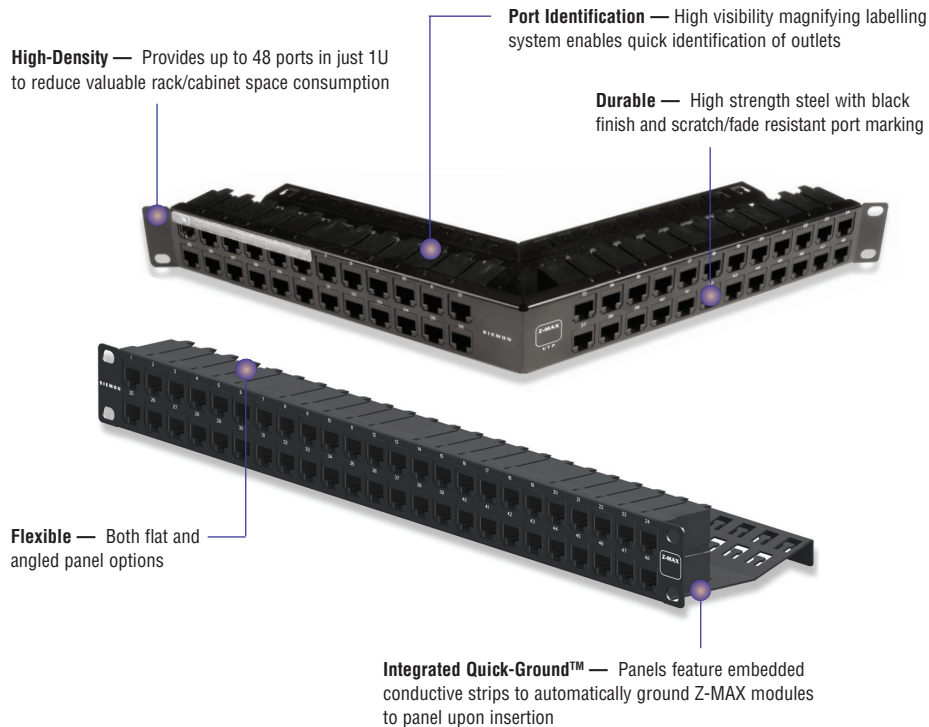
Clip Colour		
01 = Black	04 = Grey	07 = Green
02 = White	05 = Yellow	08 = Violet
03 = Red	06 = Blue	09 = Orange



# Z-MAX® 6A Shielded Patch Panels

Z-MAX patch panels provide outstanding performance and aesthetics in a shielded, high-density modular solution. The Z-MAX panels provide rapid and reliable installation by accelerating outlet mounting, grounding, and cable tie-down operations.

In addition to traditional 24 port / 1U flat and angled versions, the Z-MAX shielded panels are also available in 48 port / 1U configurations to permit high density installations.



## Installation Friendly

Quick-Snap feature allows Z-MAX panel outlets to be quickly inserted and removed.



## Trunking Applications

Ideal for Trunking applications combine Z-MAX trunk assemblies (with panel outlets) and empty Z-MAX panels for rapid data centre deployment.



## Kits

Panels available as complete kits including patch panel, Z-MAX panel outlets and all necessary accessories. Empty panels are also available for use with Z-MAX trunk assemblies.

## Ordering Information:

Part #	Description
Z6AS-PNL(X)-24K . . . . .	Z-MAX 24-Port, CAT 6A Shielded Patch Panel Kit, 1 RMS, Black, with Jacks
Z6AS-PNL(X)-U48K . . . . .	Z-MAX 48-Port, CAT 6A Shielded Patch Panel Kit, 1 RMS, Black, with Jacks
ZS-PNL(X)-24E . . . . .	Z-MAX 24-Port Shielded Patch Panel, 1RMS, Black, Empty
ZS-PNL(X)-U48E . . . . .	Z-MAX 48-Port Shielded Patch Panel, 1RMS, Black, Empty



Use (X) to specify mounting style: Blank = Flat, A = Angled

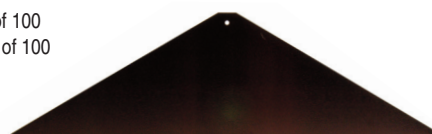
Panels include Z-TOOL\*, label / icon holders, designation labels, cable ties, grounding lugs, and mounting hardware.

Note: 1U = 44.5mm

\* included in kit only

## Panel Accessories:

Part #	Description
Z-PNL-PL24 . . . . .	Patch panel label sheet, numbered 1 to 24, bag of 100
Z-PNL-PL48 . . . . .	Patch panel label sheet, numbered 25 to 48, bag of 100
Z-PNL-P . . . . .	Patch panel label holder, bag of 25
Z6A-SP . . . . .	Z-MAX 6A shielded panel outlet
PNLA-CVR-01 . . . . .	Angled panel cover, black
Z-BL-01 . . . . .	Z-MAX panel blank, bag of 10, black



PNLA-CVR-01

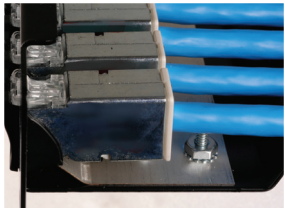
Note: Z-MAX shielded patch panels designed for use with Z-MAX shielded panel outlets only



Z-BL-01

# TERA-MAX® Patch Panels

TERA-MAX patch panels provide outstanding performance and reliability in a shielded, high-density modular solution. As outlets are snapped into place, resilient ground tabs assure that each outlet is properly grounded for maximum protection from outside interference. No secondary outlet grounding operations are required, reducing overall installation time.



**Integrated Grounding**  
Panels feature integrated grounding via resilient Quick-Ground™ tabs automatically engaged during Z-MAX® outlet insertion.



**Single Outlet Solution**  
Hybrid (flat/angled) shielded Z-MAX outlets used in the work area are required for use in TERA-MAX panels creating a common outlet solution for all locations.



**Future Flexibility**  
TERA-MAX panels also accept TERA® outlets to support potential future infrastructure upgrades.

**Angled TERA-MAX** — Allows direct routing of cables to vertical managers, eliminating the need for horizontal cable managers



**High Density** — 24 ports in 1U

**Port Identification** — Bold port numbering enables quick identification of outlets

**Durable** — High strength steel with black or metallic finish

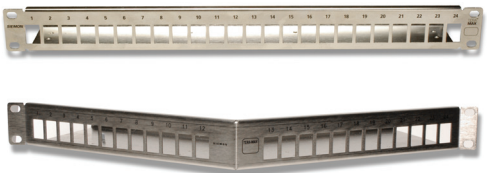
## Ordering Information:

Part #	Description
TM-PNLZ-24-01 . . . . .	24-port TERA-MAX panel, black, 1U
TM-PNLZ-24 . . . . .	24-port TERA-MAX panel, metallic, 1U
TM-PNLZA-24-01 . . . . .	24-port Angled TERA-MAX panel, black, 1U
TM-PNLZA-24 . . . . .	24-port Angled TERA-MAX panel, metallic, 1U
PNLA-CVR-01 . . . . .	Angled panel cover, black

*Panels include designation labels, cable ties, grounding lug and mounting hardware.*



*Note: TERA-MAX panels are designed for use with hybrid (flat/angled) shielded Z-MAX outlets. Also compatible with TERA outlets*



# Z-MAX® 6A Shielded Trunking Cable Assemblies

Featuring factory terminated and tested shielded Z-MAX outlets and Siemon Category 6A shielded cable, Z-MAX 6A shielded copper trunking cable assemblies were designed with data centre applications in mind, providing high-performance Category 6A performance in a quickly implemented, efficient and cost effective alternative to individual field-terminated components.

**Category 6A F/UTP Cable** — Utilises high quality Siemon Category 6A F/UTP cable

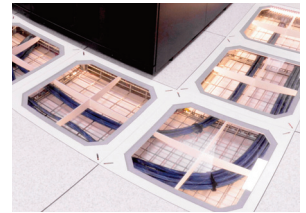
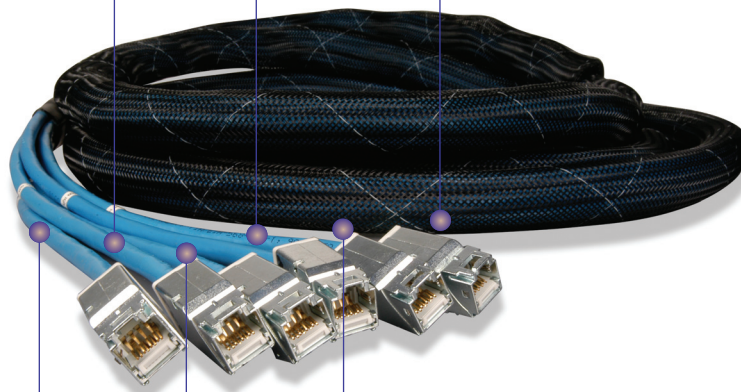
**Identification** — Each cable assembly is coded with a unique identification number for administrative purposes

**Quick-Ground™** — Shielded Z-MAX 6A outlets are automatically grounded upon insertion into Z-MAX panels

**Proper Orientation** — Each leg is labelled for proper outlet orientation

**Factory Terminated and Tested** — Utilises shielded Z-MAX outlets, factory terminated and tested for high performance

**Breakout Kit** — Unique breakout kit creates optimal cable orientation and limits cable crossing



## Data Centres

Ideal for data centres, raised floor and ladder rack environments enabling up to 75% faster deployment time.



## Simple Installation

Pre-terminated Z-MAX panel outlets utilise a Quick-Snap feature for easy installation and removal from Z-MAX panels.



## Protective Packaging

Each assembly is packaged individually to protect factory terminations.

## Ordering Information:

TELD8E-(XXXX)(XXX)M . . . . . 6 Leg Solid Cable Double-Ended Trunking Cable Assembly, LSOH, violet jacket

Length

003-090 = Indicate length in metres

Connector Types

**P7P7** = Z-MAX panel outlets for use with Z-MAX panels

**H1H1** = Z-MAX hybrid (flat/angled) outlets for use with TERA-MAX panels

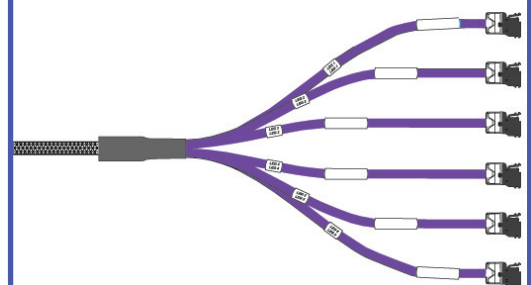
**P7J7** = Z-MAX panel outlets to Z-MAX plugs

**H1J7** = Z-MAX hybrid flat/angled outlets to Z-MAX plugs

Standard wiring is T568B. Other lengths and configurations available upon request. Keystone versions also available.

Note: These products are made to order. Call for lead time and part number availability in your region.

## STRAIGHT CUT



# Category 6A Shielded BladePatch® Modular Cords

Category 6A shielded BladePatch patch cord offers a unique Category 6A solution for high-density patching environments. It features an innovative push-pull boot design to control the latch, enabling easy access and removal of the cord in tight-fitting areas. The BladePatch cord is ideal for patching blade servers, patch panels, or any equipment with high density RJ-45 outlets.

**Snagless** — Push-pull latch design eliminates external thumb latch used in standard modular plug designs which can snag and break

**High Performance** — Cords feature Category 7 S/FTP stranded cable for optimal transmission performance while eliminating alien crosstalk

Push-Pull Boot  
Activates Latch

**Easy Access and Removal** — RJ-45 patch cord with patent-pending push-pull latch design enables easy access and removal in high density patching environments

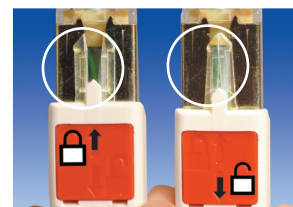
**High Density** — Ideal for high density data centre applications and today's high-density blade servers

**Low Profile Boot Design** — Optimises side-stackability of patch cords and allows use in even the most dense equipment



## Universal Compatibility

Fits within any standard RJ-45 outlet.



## Revolutionary Latch

Simply push the boot forward to latch into the outlet and pull back to release.



## High Density

The push-pull design enables easy access and removal via the push/pull boot in tight-fitting areas.

## Ordering Information:

Shielded Category 6A BladePatch LS0H, double-ended, RJ-45 modular patch cord with push-pull latching design, colour matching cord/boot, T568A/B.

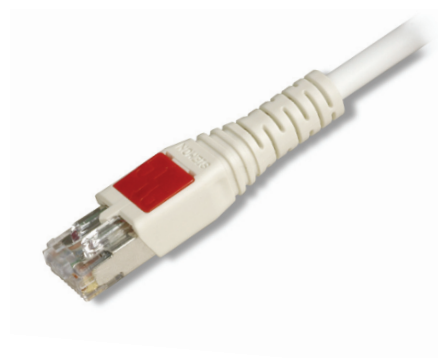
10GBPS-(XX)M-(XX)L

### Cord Length

01 = 1m  
1.5 = 1.5m  
02 = 2m  
03 = 3m  
04 = 4m  
05 = 5m

### Cord Colour

01 = Black  
02 = White  
03 = Red  
04 = Grey  
05 = Yellow  
06 = Blue  
07 = Green



The use of Category 6A shielded BladePatch modular cords will provide Category 6A channel performance if used in a Z-MAX 6A system.

*Z-MAX 6A warranty margins do not apply.*

# Siemon Category 6A F/UTP 4-Pair Cable (International)

## COMPLIANCE

- ISO/IEC 11801 (Class E<sub>A</sub>)
- IEEE 802.3an
- ANSI/TIA-568-C.2 (Category 6A)
- UL CM and IEC 60332-1
- UL CMR and CSA FT4
- LSOH: IEC 60332-1, IEC 60754, IEC 61034

## CABLE CONSTRUCTION

- F/UTP
- Nominal jacket OD: 7.4mm
- 0.57mm solid (non-tinned) copper
- Central isolation member
- Shield is an aluminum foil tape enclosing a 0.51mm (24 AWG) tinned copper drain wire

## Ordering Information:

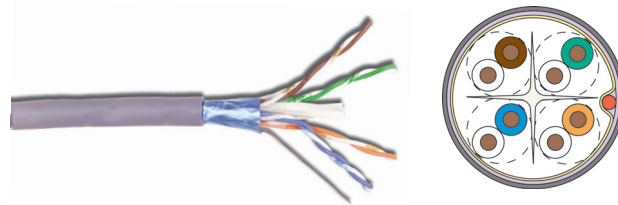
9A6(X)4-A5..... 305m Reel

Jacket Material

**M** = PVC (CM, IEC 60332-1), Grey Jacket

**R** = Riser (CMR, CSA FT4), Blue Jacket

**L** = LSOH (IEC 60332-1), Violet Jacket



## ELECTRICAL SPECIFICATIONS

DC Resistance	<8.5 /100m
DC Resistance Unbalance	5%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	<330 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 100-750 MHz: 100 ± 22%
NVP	67%
TCL	30-10 log(f/100) dB
Delay Skey	≤45ns
PoE	Suitable for PoE & PoE +

## PHYSICAL PROPERTIES

	LSOH	CM/CMR
Pulling Tension (max)	110N	110N
Bend Radius (min)	50mm	50mm
Installation Temperature	0 to 60°C	0 to 60°C
Storage Temperature	-20 to 75°C	-20 to 75°C
Operating Temperature	-20 to 75°C	-20 to 75°C

## TRANSMISSION PERFORMANCE

GUARANTEED WORSE CASE  SIEMON TYPICAL

Frequency (MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PSACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)		Propagation Delay (ns)	
1.0*	2.0	1.8	74.3	86.0	72.3	82.3	72.3	84.2	70.3	80.5	67.8	91.0	64.8	85.0	20.0	33.0	570	545
4.0	3.8	3.4	65.3	77.0	63.3	73.3	61.5	73.6	59.5	69.9	55.8	79.0	52.8	73.0	23.0	35.5	552	527
10.0	6.0	5.4	59.3	71.0	57.3	67.3	53.3	65.6	51.3	61.9	47.8	71.0	44.8	65.0	25.0	38.0	545	520
16.0	7.6	6.9	56.2	68.0	54.2	64.2	46.7	61.1	46.7	57.3	43.7	67.0	40.7	61.0	25.0	35.2	543	518
20.0	8.5	7.7	54.8	67.0	52.8	62.8	46.3	59.3	44.3	55.1	41.8	65.0	38.8	59.0	25.0	35.0	542	517
31.25	10.7	9.9	51.9	64.0	49.9	59.9	41.2	54.1	39.2	50.0	37.9	61.0	34.9	55.0	23.6	33.1	540	515
62.5	15.4	14.3	47.4	59.0	45.4	55.4	32.0	44.7	30.0	41.1	31.9	55.0	28.9	49.0	21.5	32.2	539	514
100.0	19.8	18.1	44.3	56.0	42.3	52.0	24.5	37.9	22.5	33.9	27.8	51.0	24.8	45.0	20.1	31.6	538	513
200.0	29.0	27.3	39.8	52.0	37.8	47.8	10.8	24.7	8.8	20.5	21.8	45.0	18.8	39.0	18.0	29.8	537	512
250.0	32.8	31.1	38.3	50.0	36.3	46.0	5.5	18.9	3.5	14.9	19.8	43.0	16.8	37.0	17.3	28.7	536	511
300.0	36.4	35.0	37.1	49.0	35.1	45.0	0.7	14.0	-1.3	10.0	18.3	38.0	15.3	35.0	16.8	28.0	536	511
400.0	43.0	40.0	35.3	47.0	33.3	43.0	-7.7	7.0	-9.7	3.0	15.8	36.0	12.8	33.0	15.9	27.1	536	511
500.0	48.9	42.0	33.8	47.0	31.8	42.0	-15.1	5.0	-17.1	0.0	13.8	34.0	10.8	32.0	15.2	26.0	536	510
550.0*	51.8	43.0	33.2	46.0	31.2	42.0	-18.6	3.0	-20.6	-1.0	13.0	33.0	10.0	31.0	14.9	26.0	536	510
625.0*	55.8	44.9	32.4	46.0	30.4	41.0	-23.5	1.1	-25.5	-3.9	11.9	33.0	8.9	29.0	14.5	25.0	535	505
750.0*	62.3	49.0	31.2	45.0	29.2	41.0	-31.1	-4.0	-33.1	-8.0	10.3	32.0	7.3	27.0	14.0	25.0	535	504

\*Values for frequencies above industry requirements are for information only.

All performance based on 100 metres

# Category 6A F/FTP Cable (International)

## COMPLIANCE

- ISO/IEC 11801 Ed. 2.2 (Class E<sub>A</sub>)
- IEC 61156-5
- IEEE 802.3an
- ANSI/TIA-568-C.2 (Category 6A)
- EN 50173-1/ EN 50288-5-1
- EN 50290-2-27
- LSOH: IEC 60332-1; IEC 60754-2, IEC 61034

## CABLE CONSTRUCTION

- F/FTP
- Nominal jacket OD: 7.2mm
- 0.56mm solid (non-tinned) copper
- Pairs individually shielded with aluminium/ polyester foil
- Reverse sequential numbering

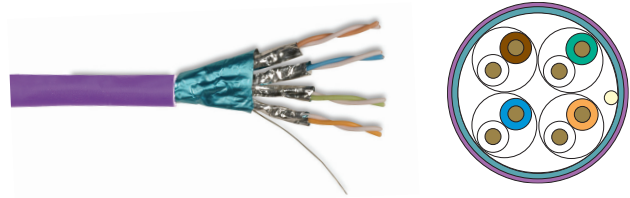
## Ordering Information:

9N6L4-A5-(XX)-AR2N . . . . . LSOH (IEC 60332-1), 500m Reel

Jacket Colour

**02** = White Jacket

**08** = Violet Jacket



## ELECTRICAL SPECIFICATIONS

DC Resistance	<72 /Km max. @20°C
DC Resistance Unbalance	2% max.
Mutual Capacitance	43 nF/km (nom.)
Capacitance Unbalance	<1500 pF/km
Characteristic Impedance (ohms)	100 ±5% @ 100 MHz
NVP	79%
TCL	40-10 log (f) dB
Coupling Attenuation	≥55 dB
Delay Skew	25ns/100m max.

## PHYSICAL PROPERTIES

	LSOH
Pulling Tension (max)	110N
Bend Radius (min)	29mm
Installation Temperature	0 to 50°C
Operating Temperature	-20 to 75°C

## TRANSMISSION PERFORMANCE

GUARANTEED WORSE CASE

SIEMON TYPICAL

Frequency (MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PSACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)		Propagation Delay (ns)	
1.0*	2.1	1.9	75.3	106.3	72.3	100.2	73.2	104.4	70.2	98.3	68.0	105.4	65.0	99.9	20.0	30.3	570	443
4.0	3.8	3.6	66.3	108.5	63.3	101.4	62.5	104.9	59.5	97.8	56.0	102.6	53.0	94.7	23.0	26.9	552	439
10.0	5.9	5.7	60.3	100.3	57.3	93.6	54.4	94.6	51.4	88.0	48.0	98.1	45.0	89.0	25.0	34.8	545	435
16.0	7.5	7.1	57.2	97.9	54.2	90.5	49.8	90.8	46.8	83.4	43.9	93.7	40.9	85.7	25.0	35.3	543	434
20.0	8.4	8.0	55.8	94.6	52.8	88.0	47.4	86.7	44.4	80.0	42.0	92.6	39.0	84.6	25.0	34.3	542	434
31.25	10.5	10.1	52.9	91.2	49.9	84.4	42.4	81.2	39.4	74.3	38.1	88.6	35.1	81.5	23.6	37.6	540	433
62.5	15.0	14.4	48.4	86.2	45.4	77.8	33.4	71.8	30.4	63.3	32.1	83.2	29.1	77.2	21.5	38.7	539	432
100.0	19.1	18.3	45.3	82.9	42.3	74.1	26.2	64.7	23.2	55.8	28.0	80.5	25.0	75.0	20.1	41.2	538	431
200.0	27.6	26.0	40.8	74.6	37.8	68.1	13.2	48.5	10.2	42.1	22.0	71.2	19.0	64.5	18.0	28.2	537	431
250.0	31.1	29.2	39.3	75.1	36.3	67.7	8.3	45.9	5.3	38.6	20.0	70.4	17.0	62.0	17.3	37.4	536	430
300.0	34.3	32.1	38.1	71.8	35.1	65.4	3.9	39.7	0.9	33.3	18.5	69.3	15.5	62.9	17.3	34.0	536	430
400.0	40.1	37.3	36.3	69.3	33.3	62.5	-3.8	32.0	-6.8	25.2	16.0	59.9	13.0	54.0	17.3	27.5	536	430
500.0	45.3	41.9	34.8	67.1	31.8	60.8	-10.4	25.2	-13.4	18.9	14.0	61.0	11.0	54.0	17.3	25.3	536	430
550.0*	47.7	44.3	34.2	66.7	31.2	60.0	-13.5	22.4	-16.5	15.7	13.2	62.1	10.2	55.9	17.3	27.6	536	430
625.0*	51.2	47.7	33.4	61.1	30.4	53.0	-17.8	13.4	-20.8	5.3	12.1	52.8	9.1	45.5	17.3	30.2	535	430
750.0*	56.7	52.6	32.2	62.5	29.2	56.3	-24.5	9.9	-27.5	3.7	10.5	50.2	7.5	44.0	17.3	25.9	535	430

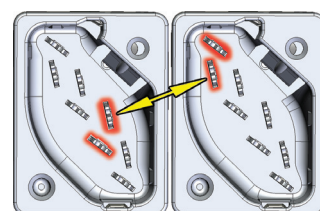
\*Values for frequencies above industry requirements are for information only.

All performance based on 100 metres

# Z-MAX® 6A UTP System Features and Benefits

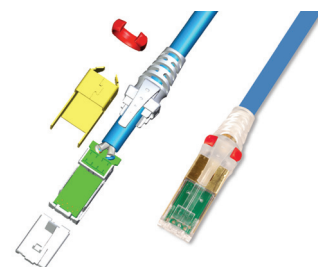
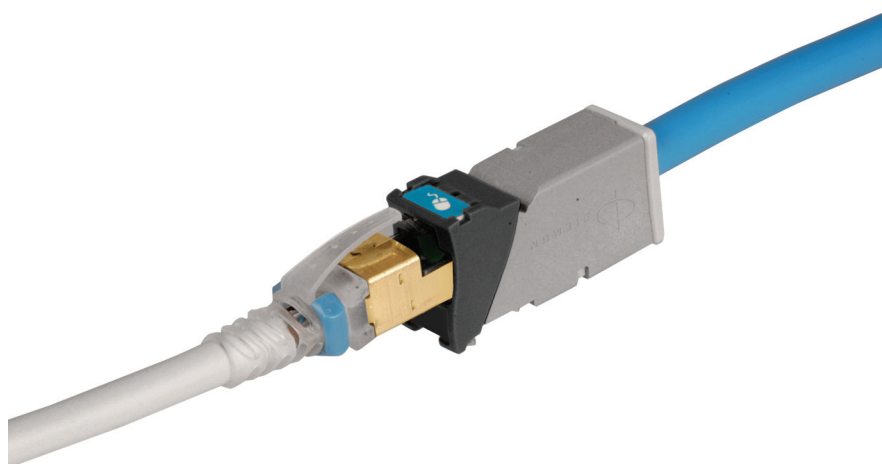
Siemon's Z-MAX 6A UTP solution was developed from the ground up with a single goal: shattering the limitations of Category 6A UTP cabling as we know it today. Combining patented PCB-based Smart Plugs, optimised outlets and high-density patch panels, the Z-MAX 6A UTP system provides outstanding margin on all ISO and TIA performance requirements for Category 6A/Class E<sub>A</sub>, including critical alien crosstalk parameters.

And, the innovative Z-TOOL™ termination process eliminates the variability of field terminations, providing faster, more user-friendly and less-error-prone Category 6A UTP installations.



## Optimised For Alien Crosstalk Elimination

Diagonal IDC alignment maximises outlet to outlet pair separation to achieve AXT performance in high-density environments



## PCB-Based Smart Plug

Exclusive PCB-based Smart Plug is specifically tuned to maximise overall system performance

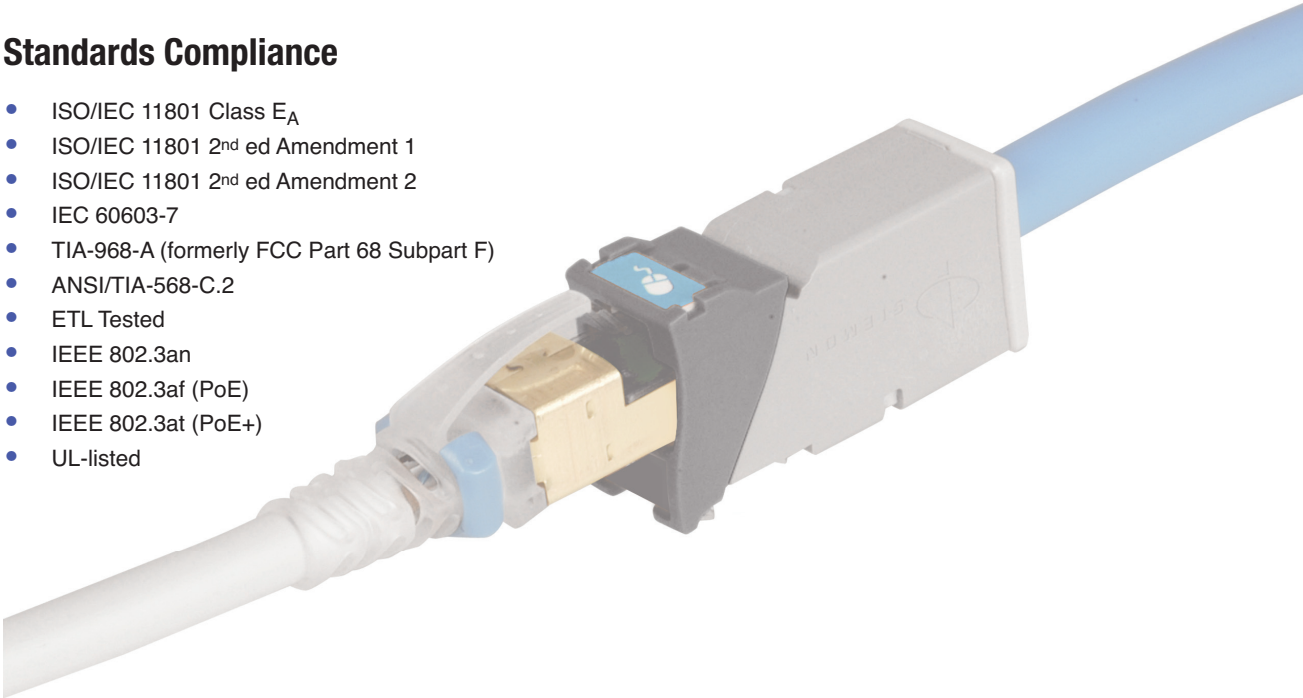
## Features and Benefits

- High density 48 port, 1U panels provide the flexibility to maximise rack/cabinet space while maintaining excellent alien crosstalk isolation
- Industry's fastest termination time accelerates project completion
- Guided, tool-based termination process enhances system quality and reliability
- Hybrid work area outlets can be mounted in either flat or angled orientation
- Field-terminated outlets or pre-terminated trunking cables can be quickly snapped into patch panels and released enabling rapid deployment or changes
- Outlet and modular cord colour-coding provides the capability to code and customise your cabling system

# System Performance Overview

## Standards Compliance

- ISO/IEC 11801 Class E<sub>A</sub>
- ISO/IEC 11801 2<sup>nd</sup> ed Amendment 1
- ISO/IEC 11801 2<sup>nd</sup> ed Amendment 2
- IEC 60603-7
- TIA-968-A (formerly FCC Part 68 Subpart F)
- ANSI/TIA-568-C.2
- ETL Tested
- IEEE 802.3an
- IEEE 802.3af (PoE)
- IEEE 802.3at (PoE+)
- UL-listed



## Z-MAX 6A UTP Performance

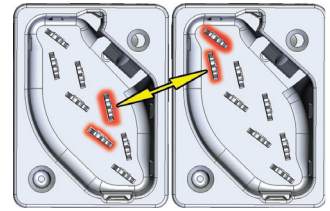
GUARANTEED 4-CONNECTOR CHANNEL MARGINS TO ISO / IEC 11801 2.1 (1 - 500 MHz)

PARAMETER	VALUE
IL	3%
NEXT	3.0 dB
PSNEXT	3.5 dB
ACR-F	7 dB
PSACR-F	10 dB
RL	3 dB
PSANEXT	1 dB
PSAACR-F	1 dB
ACR-N	6 dB
PSACR-N	6.5 dB

Performance is based on the use of 24 x 2M cords and 24 port/1U density.

# Z-MAX® 6A UTP Outlets

The Category 6A UTP Z-MAX outlet offers best-in-class performance in every critical specification, exceeding all Category 6A performance requirements, including alien crosstalk. Its innovative features not only accelerate and simplify termination, but remove installation variability for consistently high and repeatable performance — every termination, every time!



## Optimised For Alien Crosstalk Isolation

Diagonal IDC alignment maximises outlet to outlet pair separation to achieve AXT performance in high-density environments.

**Compact** — Slim and side-stackable for high-density applications. Supports "pass-thru" feature to mount from the front or rear of a faceplate



**Guided Termination Features** — Lacing channels guide correct conductor placement while 2-sided colour-coding provides wiring verification before and after lacing



**Enclosed IDC Terminations** — IDC terminations are fully enclosed in the outlet housing for robust protection

**High-Visibility Icon System** — Printed icons allow designation for voice / data applications and also provide an additional colour coding option

**Robust Hinged Cable Retention** — Hinged clip accommodates multiple cable diameters



**Fastest Termination Time** — Zero-Cross™ termination module and 2-step Z-TOOL™ termination process combine for best-in-class termination time

## Flexibility and Simplified Ordering

A single hybrid outlet supports both angled and flat mounting orientations.



## Ordering Information:

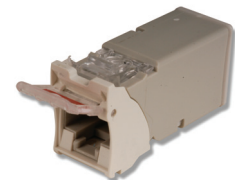
Z6A-(X)(XX)(X) . . . . . UTP Z-MAX 6A outlet, T568A/B		
Mounting Style	Bezel Colour	Door Option
		(Blank) = No Door D = Door (Hybrid only)
(Blank) = Hybrid Flat/Angled K = Keystone	01 = Black    06 = Blue 02 = White    07 = Green 03 = Red      09 = Orange 04 = Grey     20 = Ivory 05 = Yellow    80 = Light Ivory	

Outlet terminates UTP cable constructions with 23 – 26 AWG (0.64 – 0.51mm) solid and 26 AWG (0.48mm) stranded conductors, with up to 0.60mm diameter conductors and up to 1.48mm diameter over insulation.

ⓑ Add "B" to end of part number for bulk project pack of 100 modules (hybrid modules include Icons).



Z-MAX 6A UTP outlets utilise 10G MAX faceplates and cannot be side-stacked in standard MAX faceplates.



## Spring Door Option

Minimises exposure to dust and other contaminants.

Each Z-MAX 6A UTP hybrid flat/angled outlet includes 1 printed icon set with the following colour/print options.



- |                                |                                 |
|--------------------------------|---------------------------------|
| 1 - Red Data                   | 1 - Red Voice                   |
| 1 - Blue Data                  | 1 - Blue Voice                  |
| 1 - Bezel Colour-Matching Data | 1 - Bezel Colour-Matching Voice |
| 1 - White Blank                | 1 - Bezel Colour-Matching Blank |

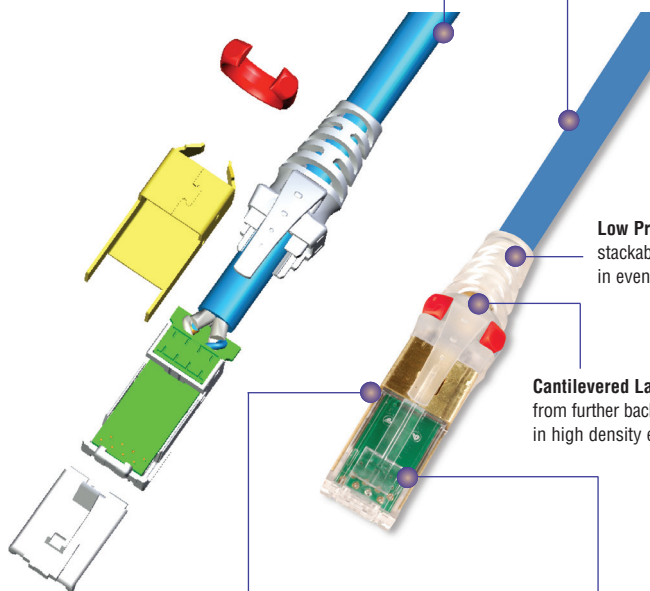
For more Z-MAX icon colours and options see page 9.5.

# Z-MAX® 6A UTP Modular Cords

Combining the unparalleled performance of an exclusive PCB-based smart plug, alien crosstalk resistant construction and a host of innovative end-user features, Z-MAX 6A UTP modular cord sets the bar for Category 6A UTP patching.

**High Performance Cable** — Z-MAX 6A UTP cords feature dual jacket construction for excellent alien crosstalk performance

**Solid Cord Option** — Solid UTP cords are available for consolidation point and equipment cord applications

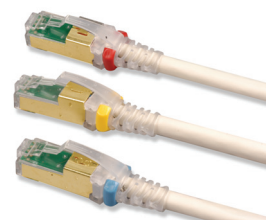


**Low Profile Boot Design** — Optimises side-stackability of modular cords and allows use in even the most dense equipment

**Cantilevered Latch Guard** — Allows latch activation from further back on the boot for superior accessibility in high density environments

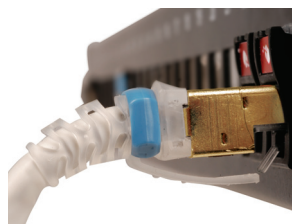
**Superior Performance Consistency** — Precision PCB-based conductor terminations eliminate the performance variability of traditional crimp-style terminations. Rear contacts maintain cable twist to point of termination and provide robust strain relief

**Integrated PCB** — PCB equipped Smart Plugs optimise signal tuning for exceptional transmission. Solderless, press-fit contact design ensures long-term reliability



## Coloured Clips

Removable clips allow field colour coding even when cords are connected.



## Excellent Bend Relief

Boot ensures proper bend relief, critical for Category 6A performance.



## Solid Cord Option

Solid F/UTP assemblies are available for consolidation point and equipment cord applications.

## Ordering Information:

ZM6A-(XX)M-(XX) ..... Z-MAX 6A UTP, double-ended, stranded modular cord, clear boot, T568A/B, CMG

Length	Jacket Colour
03 = 0.9m	01 = Black 05 = Yellow
05 = 1.5m	02 = White 06 = Blue
07 = 2.1m	03 = Red 07 = Green
10 = 3.1m	04 = Grey 09 = Orange
15 = 4.6m	
20 = 6.1m	

ZC6A-(XX)M(X)-L(X) ..... Z-MAX 6A UTP, solid modular cord, violet jacket, clear boot, LSOH

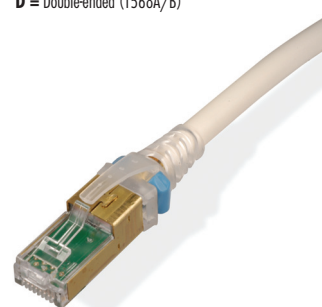
Length	Plugs
10 = 3.1m	(Blank) = Single-ended
20 = 6.1m	D = Double-ended (T568A/B)
30 = 9.1m	
40 = 12.2m	
50 = 15.2m	
60 = 18.3m	

Wiring  
A = T568B  
T = T568A

ⓑ Add "B" to end of part number for bulk project pack of 100 cords.

CLIP-(XX) ..... Colour coding clip, bag of 25

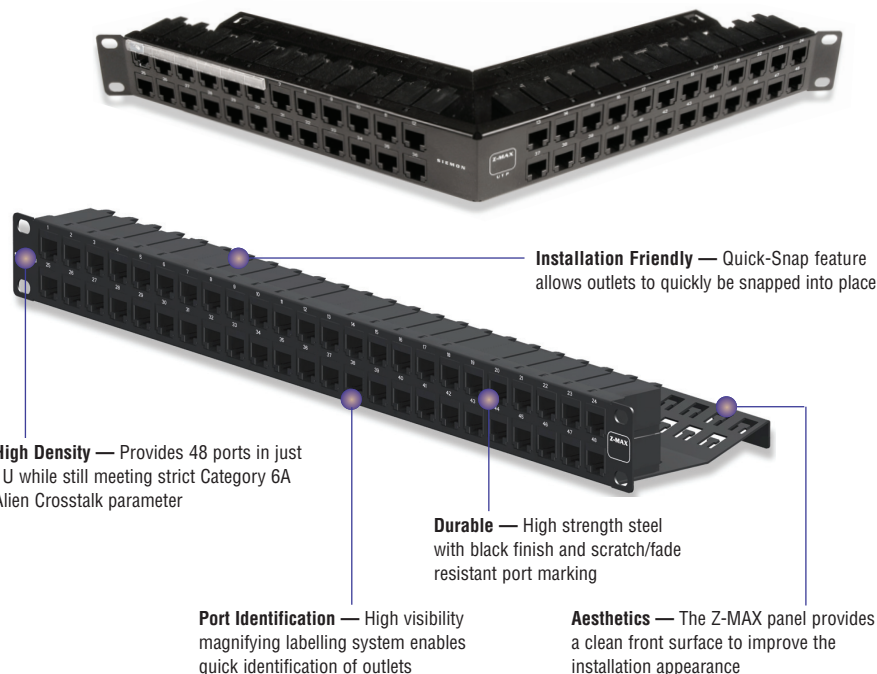
Clip Colour
01 = Black 04 = Grey 07 = Green
02 = White 05 = Yellow 08 = Violet
03 = Red 06 = Blue 09 = Orange



# Z-MAX® 6A UTP Patch Panels

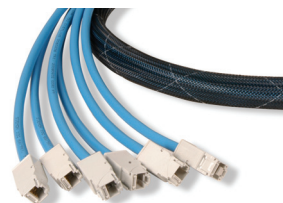
Z-MAX patch panels provide outstanding 10 Gb/s performance and aesthetics in a high-density, modular UTP solution. The Z-MAX UTP panels provide rapid and reliable installation by accelerating module mounting, and cable tie-down operations.

In addition to traditional 24 port / 1U flat and angled versions, the Z-MAX UTP panels are also available in 48 port / 1U configurations to permit high density installations.



## Kits

Panels available as complete kits including patch panel, Z-MAX panel outlets and all necessary accessories. Empty panels are also available for use with Z-MAX trunk assemblies.



## Ideal for Trunking Applications

Combine Z-MAX trunk assemblies (with preterminated panel outlets) and empty Z-MAX panels for rapid data centre deployment.



## Integrated Cable Management

Ensures proper cable management practices for all installations, critical to Category 6A performance.

## Ordering Information:

Part #	Description
Z6A-PNL(X)-24K .....	Z-MAX 24-Port, CAT 6A UTP Patch Panel, Kit, 1 RMS, Black, with Jacks
Z6A-PNL(X)-U48K .....	Z-MAX 48-Port, CAT 6A UTP Patch Panel Kit, 1 RMS, Black, with Jacks
Z-PNL(X)-24E .....	Z-MAX 24-Port UTP Patch Panel, 1RMS, Black, Empty
Z-PNL(X)-U48E .....	Z-MAX 48-Port UTP Patch Panel, 1RMS, Black, Empty

Use (X) to specify mounting style: Blank = Flat, A = Angled

Panels include Z-TOOL\*, label / icon holders, designation labels, cable ties, and mounting hardware.

Note: 1U = 44.5mm (1.75 in.)

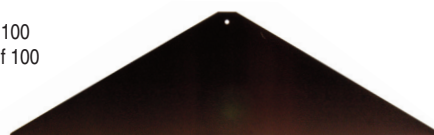
\* included in kit only

## Panel Accessories:

Part #	Description
Z-PNL-PL24 .....	Patch panel label sheet, numbered 1 to 24, bag of 100
Z-PNL-PL48 .....	Patch panel label sheet, numbered 25 to 48, bag of 100
Z-PNL-PS .....	Patch panel label holder, bag of 25
Z6A-P .....	Z-MAX 6A UTP panel outlet
PNLA-CVR-01 .....	Angled panel cover, black
Z-BL-01 .....	Z-MAX panel blank, bag of 10, black



Note: Z-MAX UTP patch panels are designed for use with Z-MAX UTP panel outlets only



PNLA-CVR-01



Z-BL-01

# Z-MAX® 6A UTP Trunking Cable Assemblies

Siemon's Z-MAX 6A UTP trunking cable assemblies provide an easily installed and cost effective alternative to individual field-terminated channels. Combining factory terminated and tested Z-MAX outlets with Siemon's Category 6A UTP cable in a high-performance modular cable assembly, Z-MAX 6A UTP trunking cable assemblies are designed to simplify the installation of Category 6A systems in data centres and other high-density high-performance environments.

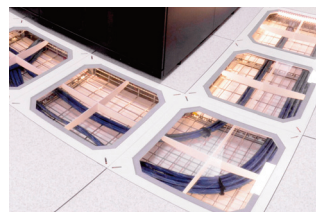
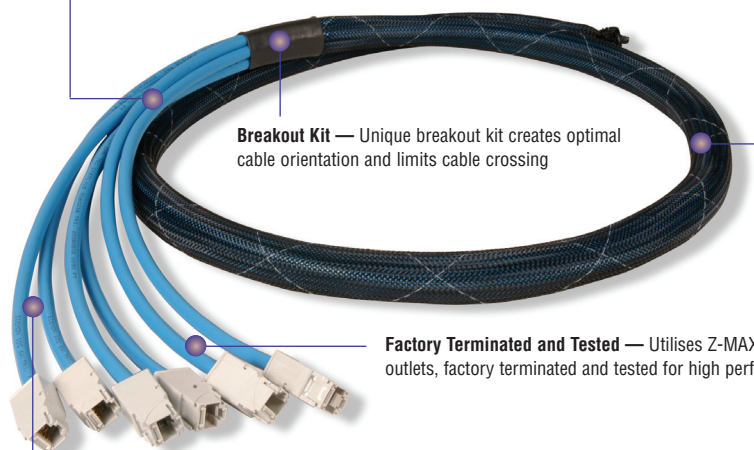
**Identification** — Each cable assembly is coded with a unique identification number for administrative purposes

**Siemon Category 6A UTP Cable** — Utilises high quality Siemon Category 6A UTP cable

**Breakout Kit** — Unique breakout kit creates optimal cable orientation and limits cable crossing

**Factory Terminated and Tested** — Utilises Z-MAX 6A UTP outlets, factory terminated and tested for high performance

**Proper Orientation** — Each leg is cut and labelled for proper module orientation



## Data Centres

Ideal for Data Centres, raised floor and ladder rack environments enabling up to 75% faster deployment time.



## Simple Installation

Pre-terminated Z-MAX panel outlets utilise a Quick-Snap feature for easy installation and removal from Z-MAX panels.



## Protective Packaging

Each assembly is packaged individually to protect factory terminations.

## Ordering Information:

TDLD8E-(XXXX)(XXX)M . . . . . 6 Leg Solid Cable Double-Ended Trunking Cable Assembly, LSOH, violet jacket

Length

001-090 = Indicate length in metres

### Connector Types

**POP0** = Z-MAX panel outlets for use with Z-MAX panels

**H1H1** = Z-MAX hybrid flat/angled outlet

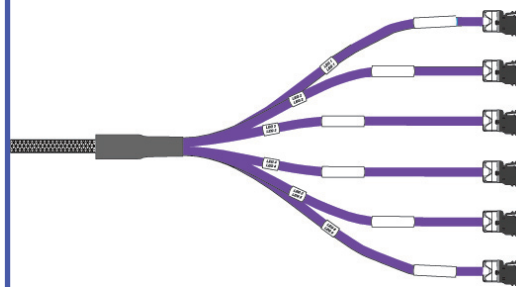
**POJO** = Z-MAX panel outlets to Z-MAX plugs

**H1JO** = Z-MAX hybrid flat/angled outlet to Z-MAX plugs

Standard wiring is T568B. Other lengths and configurations available upon request. Keystone versions also available.

Note: These products are made to order. Call for lead time and part number availability in your region.

## STRAIGHT CUT



# Category 6A UTP BladePatch® Modular Cords

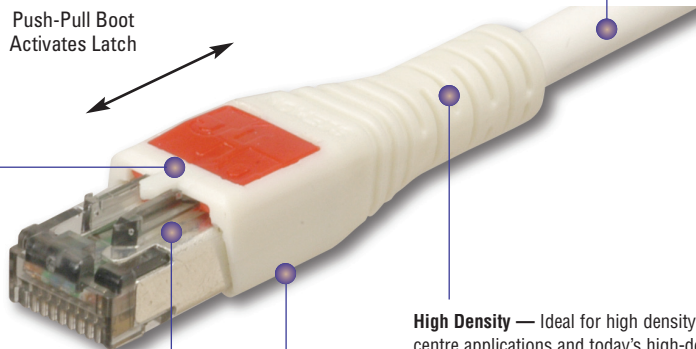
Siemon's Category 6A UTP BladePatch patch cord offers a unique Category 6A solution for high-density patching environments. It features an innovative push-pull boot design to control the latch, enabling easy access and removal of the cord in tight-fitting areas.

The BladePatch cord is ideal for patching blade servers, patch panels, or any equipment with high density RJ-45 outlets.

**Snagless** — Push-pull latch design eliminates external thumb latch used in standard modular plug designs which can snag and break

**High Performance** — Cords feature Category 7 S/FTP stranded cable for optimal transmission performance while eliminating alien crosstalk

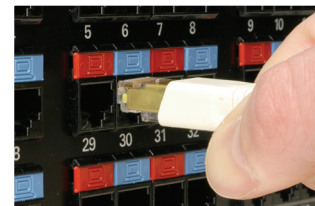
Push-Pull Boot  
Activates Latch



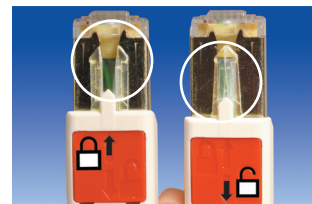
**Easy Access and Removal** — RJ-45 patch cord with patent-pending push-pull latch design enables easy access and removal in high density patching environments

**High Density** — Ideal for high density data centre applications and today's high-density blade servers

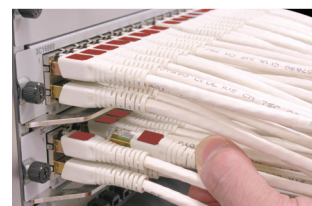
**Low Profile Boot Design** — Optimises side-stackability of patch cords and allows use in even the most dense equipment



**Universal Compatibility**  
Fits within any standard RJ-45 outlet.



**Revolutionary Latch**  
Simply push the boot forward to latch into the outlet and pull back to release.



**High Density**  
The push-pull design enables easy access and removal via the boot in tight-fitting areas.

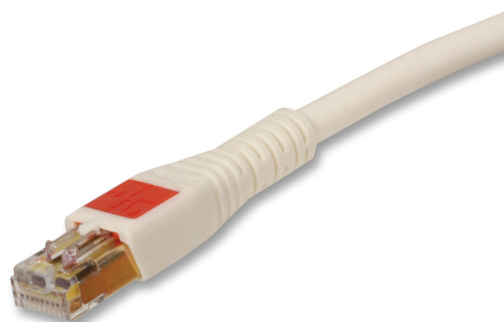
## Ordering Information:

Category 6A BladePatch double ended, 4-pair UTP stranded modular cord with push-pull latching design, colour matching cord/boot, T568A/B, CMG

BP6A-(XX)M-(XX)	
Cord Length	Cord Colour
01 = 1m	01 = Black 04 = Grey 07 = Green
1.5 = 1.5m	02 = White 05 = Yellow 08 = Violet
02 = 2m	03 = Red 06 = Blue 09 = Orange
03 = 3m	
05 = 5m	

The use of Category 6A UTP BladePatch modular cords will provide Category 6A channel performance if used in a Z-MAX 6A system.

*Z-MAX 6A warranty margins do not apply.*



# Category 6A UTP 4-Pair Cable (International)

## COMPLIANCE

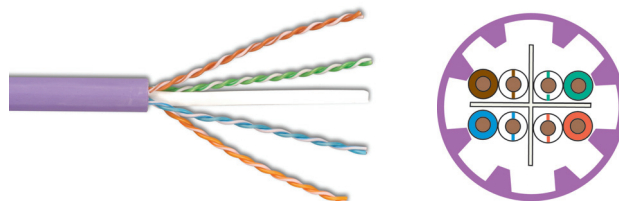
- ISO/IEC 11801 Ed. 2.2 (Class E<sub>A</sub>)
- ISO/IEC 61156-5
- IEEE 802.3an
- TIA-568-C.2 (Category 6A)
- LSOH: ISO/IEC 60332, IEC 60754, IEC 61034

## CABLE CONSTRUCTION

- UTP
- Nominal jacket OD: 9mm
- 0.58mm solid (non-tinned) copper
- Centre Isolation Member

## Ordering Information:

Part #	Description
9C6L4-A5 . . . . .	LSOH (IEC 60332-1), violet jacket, 305m Reel



## ELECTRICAL SPECIFICATIONS

DC Resistance	<9.38 /100m
DC Resistance Unbalance	5%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	<330 pF/100m
Characteristic Impedance (ohms)	1 - 250 MHz: 100 ± 15% 100 - 750 MHz: 100 ± 22%
NVP	67%
LCL	30-10 log (f/100)dB
PSANEXT	62.5-15log(f/100)dB
PSAACR-F	38.2-20log(f/100)dB
Delay Skew	≤ 45ns

## PHYSICAL PROPERTIES

	LSOH
Pulling Tension (max)	110N
Bend Radius (min)	45.7mm
Installation Temperature	0 to 60°C
Storage Temperature	-20 to 75°C
Operating Temperature	-20 to 60°C

## TRANSMISSION PERFORMANCE



GUARANTEED WORST CASE



SIEMON TYPICAL

Frequency (MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PSACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)		Propagation Delay (ns)	
1.0	2.1	1.8	75.3	96.0	72.3	92.0	73.2	94.2	70.2	90.2	68.0	92.0	65.0	85.0	20.0	29.0	570	540
4.0	3.8	3.5	66.3	89.0	63.3	83.0	62.5	85.7	59.5	79.7	56.0	80.0	53.0	73.0	23.0	32.0	552	522
10.0	5.9	5.5	60.3	83.0	57.3	77.0	54.4	77.8	51.4	71.8	48.0	72.0	45.0	65.0	25.0	36.0	545	515
16.0	7.5	6.7	57.2	80.0	54.2	74.0	49.8	73.3	46.8	67.3	43.9	68.0	40.9	61.0	25.0	36.0	543	513
20.0	8.4	7.5	55.8	79.0	52.8	73.0	47.4	71.5	44.4	65.5	42.0	68.0	39.0	59.0	25.0	36.0	542	512
31.25	10.5	9.4	52.9	76.0	49.9	70.0	42.4	66.6	39.4	60.6	38.1	62.0	35.1	55.0	23.6	34.0	540	510
62.5	15.0	13.7	48.4	71.0	45.4	65.0	33.4	57.3	30.4	51.3	32.1	56.0	29.1	49.0	21.5	34.0	539	509
100.0	19.1	17.8	45.3	68.0	42.3	62.0	26.2	50.2	23.2	44.2	28.0	52.0	25.0	45.0	20.1	33.0	538	507
200.0	27.6	25.8	40.8	64.0	37.8	58.0	13.2	38.2	10.2	32.2	22.0	46.0	19.0	39.0	18.0	31.0	537	506
250.0	31.1	29.2	39.3	62.0	36.3	56.0	8.3	32.8	5.3	26.8	20.0	44.0	17.0	37.0	17.3	31.0	536	506
300.0	34.3	31.5	38.1	61.0	35.1	55.0	3.9	29.5	0.9	23.5	18.5	42.0	15.5	35.0	17.3	29.0	536	505
400.0	37.2	33.8	37.1	60.0	34.1	54.0	-0.1	26.2	-3.1	20.2	17.1	41.0	14.1	34.0	17.3	28.0	535	505
500.0	40.1	37.9	36.38	59.0	33.3	53.0	-3.8	21.1	-6.8	15.1	16.0	40.0	13.0	33.0	17.3	27.0	535	505
550.0*	45.3	42.1	34.8	57.0	31.8	51.0	-10.4	14.9	-13.4	8.9	14.0	39.0	11.0	32.0	-	26.0	535	505
625.0*	-	44.9	-	53.0	-	50.0	-	8.1	-	5.1	-	36.0	-	29.0	-	25.0	-	505
750.0*	-	49.0	-	51.0	-	49.0	-	2.0	-	0.0	-	35.0	-	27.0	-	25.0	-	504

\*Values for frequencies above industry requirements are for information only.

All performance based on 100 metres

# Category 6 UTP

Siemon offers multiple systems levels of system performance based on our high-performance Category 6 connectivity.

- Pair Siemon System 6® UTP cable with Siemon connectivity Category 6 for an end-to-end System 6 UTP cabling solution. System 6 exhibits exceptional margin on all parameters beyond Category 6 — exceeding connecting hardware and channel performance specifications set forth for Category 6/Class E by the ISO/IEC and TIA
- When deployed with Solution 6 UTP cable, Siemon Category 6 connectivity delivers a very cost-effective, standards-compliant system designed for installations where the additional performance headroom of System 6 is not required

## Section Contents

Z-MAX® 6 UTP Outlets ..... 3.1

MAX® 6 UTP Outlets ..... 3.2

Z-MAX 6 UTP Patch Panels ..... 3.3

HD® 6 UTP Patch Panels ..... 3.4

HD Panel Accessories ..... 3.5

MAX Patch Panels ..... 3.6 - 3.7

BladePatch® 6 UTP Modular Cords ..... 3.8

MC® 6 UTP Modular Cords ..... 3.9

IC 6 Solid Single-Ended Modular Cords ..... 3.10

Category 6 UTP Trunking Cable Assemblies ..... 3.11

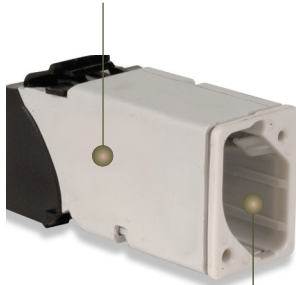
System 6® UTP Cable ..... 3.12

Solution 6™ UTP Cable ..... 3.13

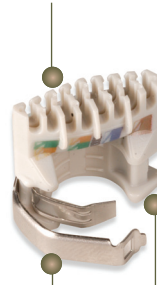
# Z-MAX® 6 UTP Outlets

The Category 6 UTP Z-MAX outlet offers best-in-class performance exceeding all Category 6 performance requirements. Its innovative features not only accelerate and simplify termination, but remove installation variability for consistently high and repeatable performance - every termination, every time! This consistency eliminates troubleshooting time due to marginal passes during field testing.

**Compact** — Slim and side-stackable for high-density applications. Supports “pass-thru” feature to mount from the front or rear of a faceplate



**Guided Termination Features** — Lacing channels guide correct conductor placement while 2-sided colour-coding provides wiring verification before and after lacing



**Enclosed IDC Terminations** — IDC terminations are fully enclosed in the outlet housing for robust protection



**High-Visibility Icon System** — Printed icons allow designation for voice / data applications and also provide an additional colour coding option

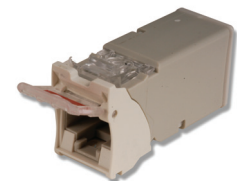
**Robust Hinged Cable Retention** — Hinged clip accommodates multiple cable diameters



**Fastest Termination Time** — Zero-Cross™ termination module and 2-step Z-TOOL™ termination process combine for best-in-class termination time



**Flexibility and Simplified Ordering**  
A single hybrid outlet supports both angled and flat mounting orientations.



**Spring Door Option**  
Minimises exposure to dust and other contaminants.

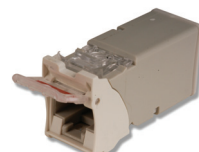
## Ordering Information:

Z6-(X)(XX)(X) . . . . . UTP Z-MAX 6 outlet, T568A/B

Mounting Style	Bezel Colour	Door Option
(Blank) = Hybrid Flat/Angled	01 = Black	(Blank) = No Door
K = Keystone	02 = White	D = Door (Hybrid only)
	03 = Red	
	04 = Grey	
	05 = Yellow	
	06 = Blue	
	07 = Green	
	09 = Orange	
	20 = Ivory	
	80 = Light Ivory	



Hybrid



Door Option



Keystone

Outlet terminates UTP cable constructions with 23 – 26 AWG (0.64 – 0.51mm) solid and 26 AWG (0.48mm) stranded conductors, with up to 0.60mm diameter conductors and up to 1.48mm diameter over insulation.

Add “D” to end of part number for spring door option. (Hybrid only)

ⓑ Add “B” to end of part number for bulk project pack of 100 modules (hybrid modules include icons).

Note: Z-MAX outlets utilise the Z-TOOL termination tool. Included with each standard pack of Z-MAX outlets.

Note: Keystone version is designed for integration with various international mounting products and is not compatible with MAX® mounting hardware.

Each Z-MAX 6 UTP hybrid flat/angled outlet includes 1 printed icon set with the following colour/print options. Additional colour options available.



Front

Rear

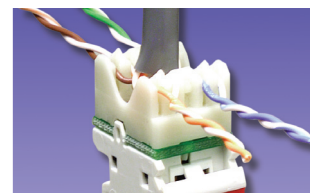
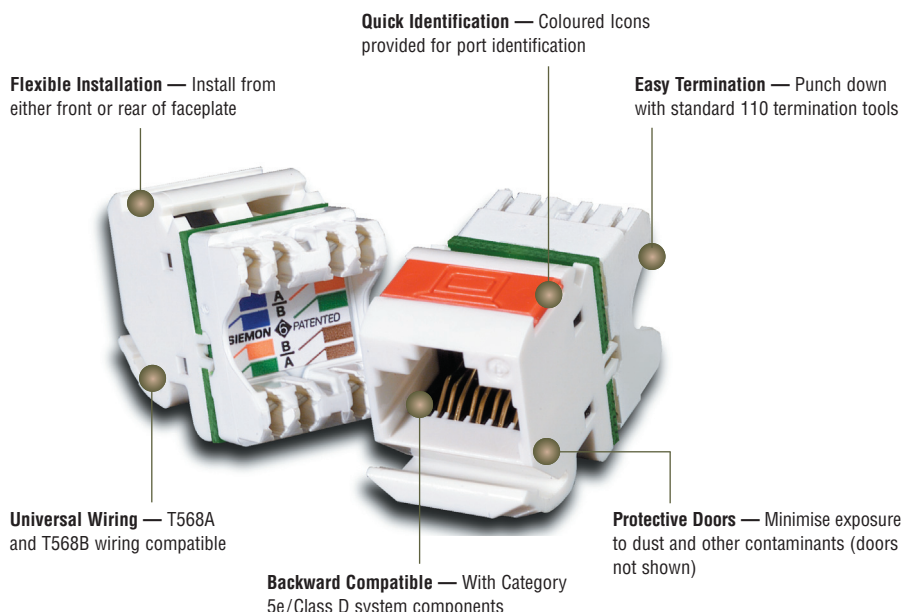
- |                                |                                 |
|--------------------------------|---------------------------------|
| 1 - Red Data                   | 1 - Red Voice                   |
| 1 - Blue Data                  | 1 - Blue Voice                  |
| 1 - Bezel Colour-Matching Data | 1 - Bezel Colour-Matching Voice |
| 1 - White Blank                | 1 - Bezel Colour-Matching Blank |

For more Z-MAX icon colours and options see page 9.5.

# MAX® 6 UTP Modules

Part of Siemon's Category 6 UTP end-to-end Cabling Solution, the MAX 6 outlet exceeds Category 6 connecting hardware performance specifications.

It's compact design is ideal for high density applications. Up to six modules can be utilised in a single gang faceplate and twelve outlets in a double gang faceplate. Also, the angled MAX module provides a gravity feed, low-profile design for the work area — greatly improving cable management in installations where front or rear clearance is at a minimum.



## Quick Installation

Pyramid wire entry system on S310 blocks separates paired conductors when lacing cables to simplify and reduce installation time.



## Termination

Siemon's Palm Guard with MAX insert (p/n: PG-MX6) assists in securing module during termination.

## MAX 6 UTP Outlets



MX6-(XX) .....  
Category 6 Angled MAX outlet, T568A/B, rear strain relief cap and protective colour-matching rubber door\*



MX6-F(XX) .....  
Category 6 Flat MAX outlet, T568A/B, rear strain relief cap



MX6-K(XX) .....  
Category 6 Keystone MAX outlet, T568A/B, rear strain relief cap

Use (XX) to specify colour: 01 = black, 02 = white, 03 = red, 04 = grey, 05 = yellow, 06 = blue, 07 = green, 09 = orange, 20 = ivory, 25 = bright white, 80 = light ivory

Angled outlets include one colour-matching, one red, and one blue icon.

\*Door colour is clear for red, yellow, blue and orange angled modules.

Flat outlets include one colour-matching, one red, and one blue icon.

ⓑ Add "B" to end of part number for bulk project pack of 100 outlets (angled and flat outlets include icons).

Add "VP" to end of part number for value pack option. Value pack is a kit of 250 outlets, doors, terms caps and colour match icons.

(Available in flat/ angled only. Door only included with angled version.)

Note: Keystone version is designed for integration with various international mounting products and is not compatible with MAX® mounting hardware.

# Z-MAX® 6 UTP Patch Panels

Z-MAX patch panels provide outstanding performance and aesthetics in a high-density, modular UTP solution. The Z-MAX UTP panels provide rapid and reliable installation by accelerating module mounting, and cable tie-down operations.

In addition to traditional 24-port / 1U flat and angled versions, the Z-MAX UTP panels are also available in 48-port / 1U configurations for ultra high density installations.



## Kits

Panels available as complete kits including patch panel, Z-MAX panel outlets, Z-TOOL™ and all necessary accessories. Empty panels are also available for use with Z-MAX trunk assemblies.



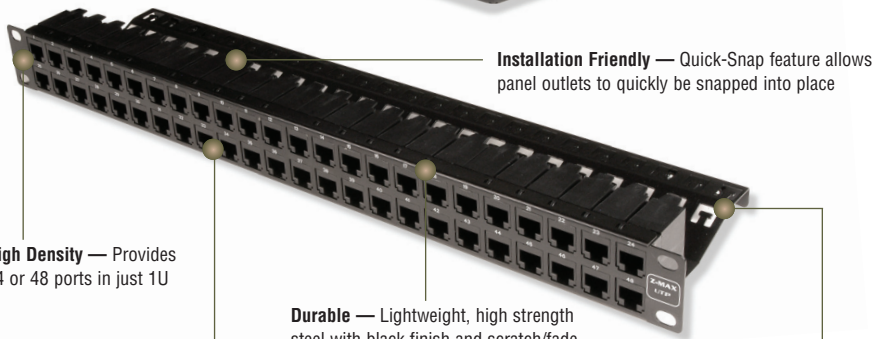
## Ideal for Trunking Applications

Combine Z-MAX trunk assemblies (with panel outlets) and empty Z-MAX panels for rapid data centre deployment.



## Integrated Cable Management

Ensures proper cable management practices for all installations.



**High Density** — Provides 24 or 48 ports in just 1U

**Port Identification** — High visibility magnifying labelling system enables quick identification of outlets

**Durable** — Lightweight, high strength steel with black finish and scratch/fade resistant port marking

**Installation Friendly** — Quick-Snap feature allows panel outlets to quickly be snapped into place

**Aesthetics** — The Z-MAX panel provides a clean front surface to improve the installation appearance

## Ordering Information:

Part #	Description
Z6-PNL(X)-24K.....	Z-MAX 24-Port, CAT 6 UTP Patch Panel, Kit, 1 RMS, Black, with Jacks
Z6-PNL(X)-U48(X).....	Z-MAX 48-Port, CAT 6 UTP Patch Panel Kit, 1 RMS, Black, with Jacks
Z-PNL(X)-24E.....	Z-MAX 24-Port UTP Patch Panel, 1RMS, Black, Empty
PNLA-CVR-01.....	Angled panel cover, black



Use (X) to specify mounting style: Blank = Flat, A = Angled

Panels include Z-TOOL, label / icon holders, designation labels, cable ties, and mounting hardware.

Note: 1U = 44.5mm

\* included in kit only



Note: Z-MAX UTP panels are designed for use with Z-MAX UTP panel outlets only

## Panel Accessories:

Part #	Description
Z-PNL-PL24.....	Patch panel label sheet, numbered 1 to 24, bag of 100
Z-PNL-PL48.....	Patch panel label sheet, numbered 25 to 48, bag of 100
Z-PNL-PS.....	Patch panel label holder, (6 port ea.) bag of 25
Z6-P.....	Z-MAX 6 UTP panel outlet
Z-BL-01.....	Z-MAX panel blank, bag of 10, black



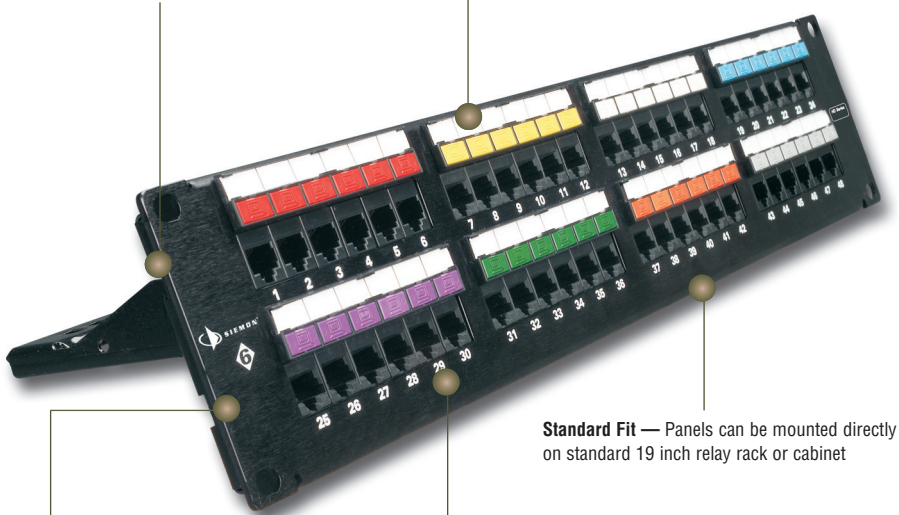
Z-BL-01

# HD® 6 UTP Patch Panels

Siemon's HD 6 patch panel was the industry's first patch panel to exceed Category 6 connecting hardware specifications for all pair combinations up to 250 MHz. Get superior performance and user-friendly termination, labelling, and cable management features with Siemon's popular Category 6 patch panel.

**Universal Wiring** — HD 6 patch panels feature universal wiring for both T568A/B compatible with standard 110 style single position punch tool.

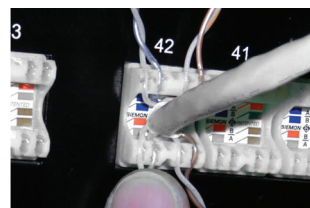
**Installer Friendly** — Icon label holders and designation labels included



**Aesthetics** — Front surface is uninterrupted by screw heads for a clean appearance

**Standard Fit** — Panels can be mounted directly on standard 19 inch relay rack or cabinet

**Port Identification** — Bold port numbering enables quick identification of outlets



## Pyramid™ Wire Entry System

Pyramid wire entry system on S310 blocks separates paired conductors when lacing cables to reduce installation time.



## Circuit Protection

Rear metal enclosure protects printed circuitry.



## Cable Management

Includes built-in cable manager to properly guide cables to point of termination.

## Ordering Information:

### HD6 UTP Patch Panels

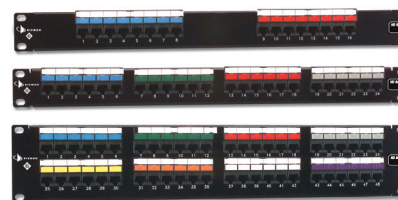
Part #	Description
HD6-16	16-port category 6 UTP HD patch panel, 1U
HD6-24	24-port category 6 UTP HD patch panel, 1U
HD6-48	48-port category 6 UTP HD patch panel, 2U
HD6-96	96-port category 6 UTP HD patch panel, 4U

Panels include rear cable manager(s), icon/label holders, designation labels, cable ties, and mounting hardware.

ⓑ Add "B" for bulk project pack of 5 panels (rear cable managers (p/n: HD-RWM) not included but can be ordered separately).

Note: 1U = 44.5mm

S310 termination blocks are not compatible with S110® multi-pair termination tools.



## HD® 6 Angled Patch Panels

Part #	Description
HD6-24A	24-port angled panel, T568A/B wiring, 1 RMS
HD6-48A	48-port angled panel, T568A/B wiring, 2 RMS
PNLA-CVR-01	Angled panel cover, black

Angled panels include one rear cable manager, designation labels, cable ties, and mounting hardware

ⓑ Add "B" for bulk project pack of 5 panels (rear cable managers not included but can be ordered separately).

Note: 1 RMS = 44.5mm



# HD Panel Accessories

Part #	Description
HD-RWM	Rear cable management bracket for HD patch panels (not compatible with HD5-S-24)
HD5-ICON6-LBL	10 sheets of labels for HD5-ICON6 for laser printing (48 labels per sheet)*
HD5-LBL-480	Adhesive strips for sequentially numbering panel ports 1 through 480 for 24-, 48-, or 96-port panels
HD5-LBL6-2	White removable designation strips in a package of eight for 24-, 48-, or 96-port panels
HD5-ICON6	Adhesive-backed strips in a package of 8 for colour-coding and port designation for 24-, 48-, or 96-port panels (icons not included)
CT-ICON-(XX)	25 coloured icon tabs (phone on one side, computer on reverse)

Use (XX) to specify colour: 00 = clear (TAB-XX only), 01 = black, 02 = white, 03 = red, 04 = grey, 05 = yellow, 06 = blue, 07 = green, 08 = violet, 09 = orange, 20 = ivory, 25 = bright white, 60 = brown, 80 = light ivory

Ⓢ Add "B" for bulk pack of 100 icons.

\*Visit our web site or contact our Technical Support Department for labelling software.



HD-RWM



HD5-LBL-480



HD5-LBL6-2



HD5-ICON6




CT-ICON

# MAX® Patch Panels

MAX patch panels provide a flexible, high density termination solution for the telecommunications room. Using the full line of Z-MAX® or MAX modules (available separately), the panel can be configured for a variety of multimedia applications. Blank modules can be used to reserve ports for future capacity.

Siemon's MAX series angled patch panels route cables directly into the vertical cable managers eliminating the need for horizontal cable management between panels.



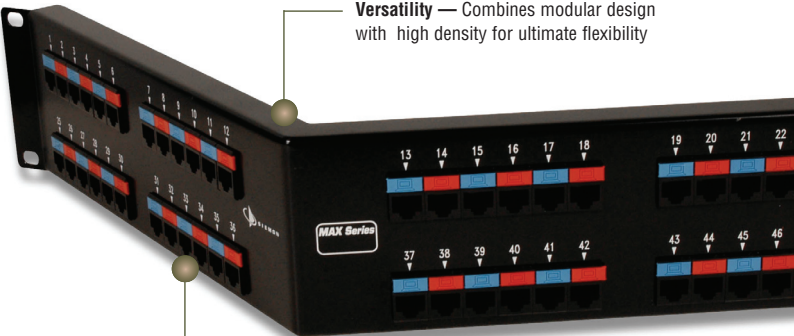
**High Density Design** — Accommodates up to 24 ports /1U and up to 72 ports /2U

**Installer Friendly** — Icon label holders and designation labels included

**Aesthetics** — Lightweight, high strength brushed aluminium with black protective finish

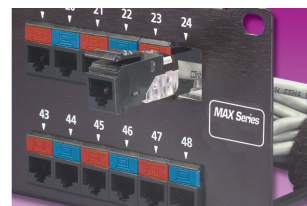
**Standard Fit** — Panels can be mounted directly on standard 19 inch relay rack or cabinet

**Port Identification** — Bold port numbering enables quick identification of outlets



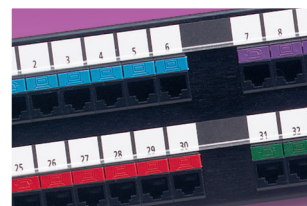
**Versatility** — Combines modular design with high density for ultimate flexibility

**Angled Panel Option** — Available in 24 and 48 ports



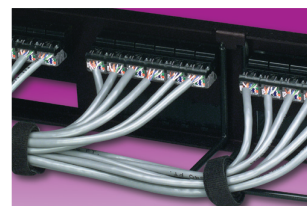
## Installation Friendly

Individual modules snap into place from front or rear of panel for added installation flexibility.



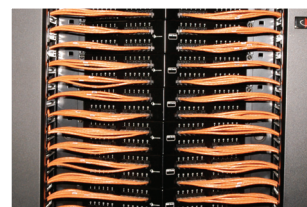
## Designation labels

Removable designation labels can be laser printed and enable proper circuit identification for each port.



## Cable Management



Rear Cable management bar included for routing horizontal cables to terminations.





## Eliminates Horizontal Cable Managers

Angled panels route patch cords directly into vertical cable managers saving valuable rack space.

# MAX® Patch Panels


Part #	Description
MX-PNL-16 . . . . .	16-port MAX patch panel, 1U
	
MX-PNL-24 . . . . .	24-port MAX patch panel, 1U
	

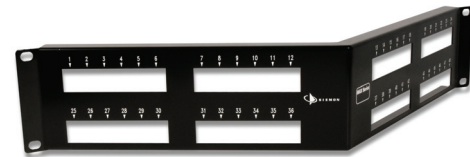
Panels include rear cable manager, designation labels, cable ties, and mounting hardware.  
MAX Panels are not compatible with shielded MAX or shielded Z-MAX® modules. Use the TERA-MAX® or Z-MAX shielded panel.  
Note: 1U= 44.5mm (1.75 in.)

Part #	Description
MX-PNL-48 . . . . .	48-port MAX patch panel, 2U
	
MX-PNL-72 . . . . .	72-port MAX patch panel, 2U
	

# Angled MAX Patch Panels

Siemon's MAX series angled patch panels route cables directly into the vertical cable managers, eliminating the need for horizontal cable management between panels.

Part #	Description
MX-PNLA-24 . . . . .	24-port angled MAX patch panel, 1U
	

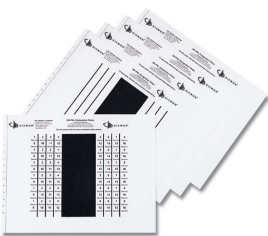
Part #	Description
MX-PNLA-48 . . . . .	48-port angled MAX patch panel, 2U
	

Part #	Description
PNLA-CVR-01 . . . . .	Angled panel cover, black

Angled MAX panels are not compatible with shielded Z-MAX or shielded MAX modules. Use the TERA-MAX or Z-MAX shielded panel.  
Angled MAX panels are not recommended for use with RS3 rack series. RS series racks with VPC vertical patching channels are recommended.  
Panels include mounting hardware. Rear cable manager not included.  
Note: 1U = 44.5mm

# MAX Panel Accessories

MX-PNL-LBL4* . . . . .
10 sheets of laser printable labels for 16-port MAX panels



MX-PNL-LBL6* . . . . .
10 sheets of laser printable labels for 24- and 48-port MAX panels



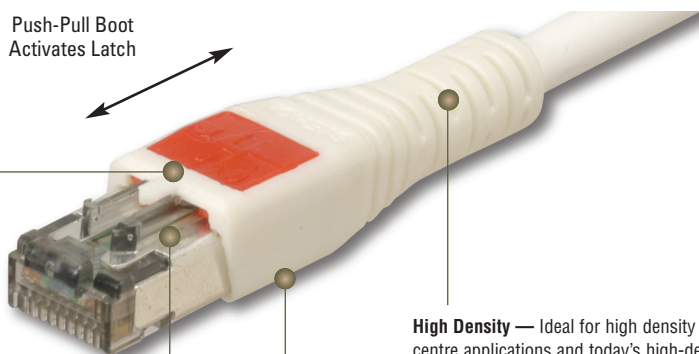
\*Visit our web site or contact our Technical Support Department for labelling software.

# BladePatch® 6 UTP Modular Cords

Siemon's BladePatch 6 offers a unique Category 6 solution for high-density patching environments. It features an innovative push-pull boot design to control the latch, enabling easy access and removal of the cord in tight-fitting areas. The BladePatch cord is ideal for patching blade servers, patch panels, or any equipment with high density RJ-45 outlets.

**Snagless** — Push-pull latch design eliminates external thumb latch used in standard modular plug designs which can snag and break

Push-Pull Boot  
Activates Latch



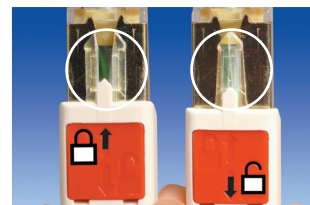
**Easy Access and Removal** — RJ-45 patch cord with patent-pending push-pull latch design enables easy access and removal in high density patching environments

**High Density** — Ideal for high density data centre applications and today's high-density blade servers

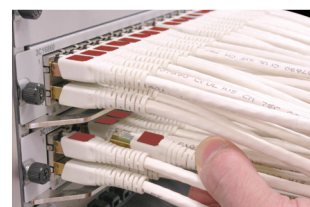
**Low Profile Boot Design** — Optimises side-stackability of patch cords and allows use in even the most dense equipment



**Universal Compatibility**  
Fits within any standard RJ-45 opening.



**Revolutionary Latch**  
Simply push the boot forward to latch into the outlet and pull back to release.

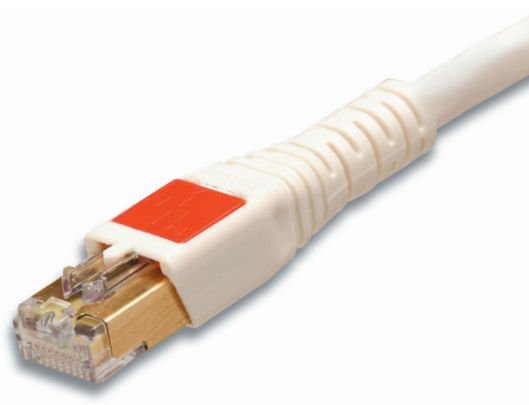


**High Density**  
The push-pull design enables easy access and removal via the boot in tight-fitting areas.

## BladePatch 6 UTP

Category 6 UTP BladePatch, double-ended, RJ-45 modular patch cord with push-pull latching design, colour matching cord/boot, T568A/B.

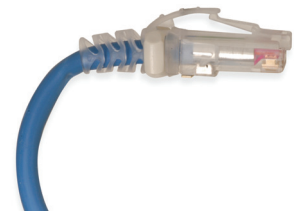
BP6-(XX)-(XX)	
Cord Length	Cord Colour
01 = 1m	01 = Black
1.5 = 1.5m	02 = White
02 = 2m	03 = Red
03 = 3m	04 = Grey
05 = 5m	05 = Yellow
7.5 = 7.5m	06 = Blue
	07 = Green
	08 = Violet
	09 = Orange



ⓑ Add "B" for bulk pack of 100 modular cords.

# MC® 6 UTP Modular Cords

Siemon's Category 6 series of modular cords are key components to ensure optimum channel performance of our Category 6 UTP systems. A variety of product enhancements contribute to the cord's superior performance — including 250 MHz rated stranded cordage, a patented crosspair isolator and an innovative 360° crimp, which provides excellent plug-to-cable strain relief without causing pair deformation.



## Excellent Bend Relief

Boot and integrated strain relief ensures proper bend relief, critical for Category 6 performance.

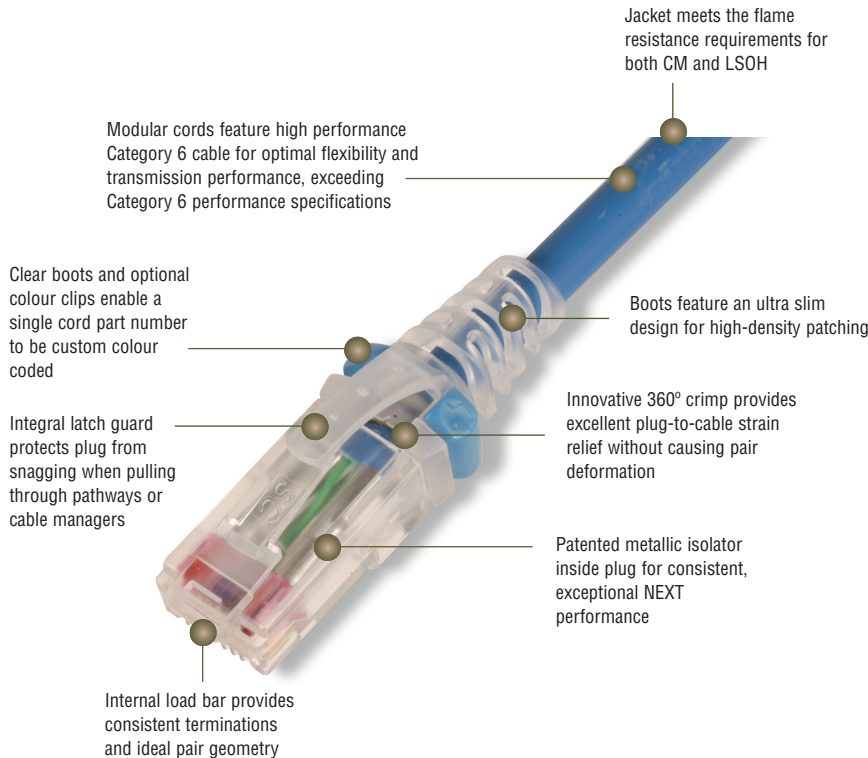


## Colour Coding

Optional coloured clips enable field colour coding and can easily be snapped into place without having to disconnect cords.

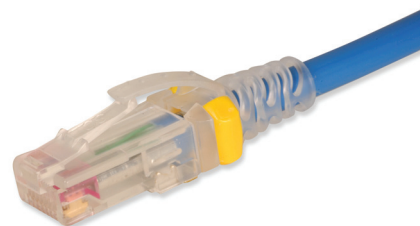
## STANDARDS COMPLIANCE

- ISO/IEC 11801
- IEC 60603-7
- ANSI/TIA-568-C.2
- TIA-968-A (formerly FCC Part 68 Subpart F)
- IEEE 802.3af (PoE)
- IEEE 802.3at (PoE+)
- UL US Listed



## MC 6 UTP Modular Cords

Category 6 MC, double-ended, 4-pair UTP stranded modular patch cord, T568A/B, clear boot.



MC6-(XX)M-(XX)	
Cord Length	Cord Colour
01 = 1m	01 = Black
1.5 = 1.5m	02 = White
02 = 2m	03 = Red
03 = 3m	04 = Grey
05 = 5m	05 = Yellow
7.5 = 7.5m	06 = Blue
	07 = Green
	08 = Violet
	09 = Orange

CLIP-(XX) . . . . . Colour coding clip, bag of 25

Clip Colour		
01 = Black	04 = Grey	07 = Green
02 = White	05 = Yellow	08 = Violet
03 = Red	06 = Blue	09 = Orange



ⓑ Add "B" for bulk pack of 100 modular cords.

# IC 6 Solid Single-Ended Cords

Siemon's Category 6 IC solid single-ended modular cords are designed for use in Category 6 applications where one end is plugged into a patch panel in a consolidation point (CP) and the other end is terminated to the back of a work area outlet or in a cross connect where one end is terminated to the back of a patch panel and the other end is plugged into equipment. The cords are 100% factory transmission tested to 250 MHz and feature the same plug construction used in Siemon's stranded Category 6 modular cords.

## System 6® IC Modular Cords

Part #	Description
IC6-8A-(XX)M-B(XX)L . . . . .	System 6 IC, single-ended, 4-pair UTP solid modular cord, violet jacket with coloured boot T568B, LSOH
IC6-8T-(XX)M-B(XX)L . . . . .	System 6 IC, single-ended, 4-pair UTP solid modular cord, violet blue jacket with coloured boot, T568A, LSOH



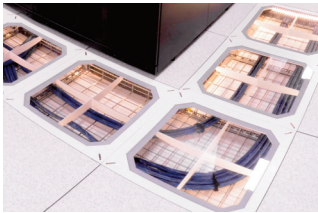
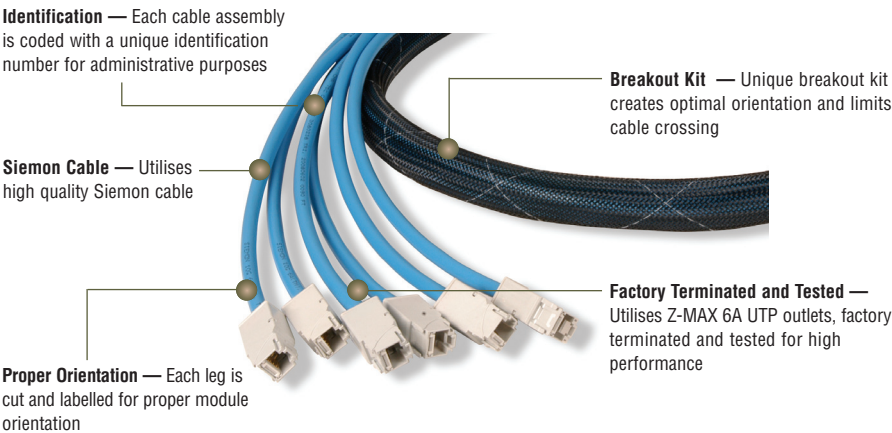
Use 1st (XX) to specify cord length: 03 = 03m, 05 = 05m, 10 = 10m, 15 = 15m, 20 = 20m

Use 2nd (XX) to specify colour of boot: 01 = black, 02 = white, 03 = red, 04 = grey, 05 = yellow, 06 = blue, 07 = green

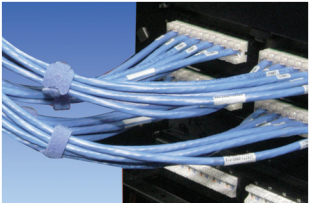
Add "D" to denote double-ended.

# Category 6 UTP Trunking Cable Assemblies

Siemon's Category 6 UTP copper trunking cable assemblies provide an efficient and cost effective alternative to individual field-terminated components. Combining factory terminated and tested UTP Z-MAX® or MAX® modules with Siemon System 6® cable, Siemon copper trunking cable assemblies were designed with data centre applications in mind. In addition to providing simple and aesthetically pleasing cable management, standard configurations also help maintain consistent cable layout and facilitate efficient moves, adds and changes. the modular design and reduced scrap of trunk assemblies make them the most "Green" method for Category 6 cabling.



**Data Centres**  
Ideal for data centres, raised floor and ladder rack environments enabling up to 75% faster deployment time. Well organised cable bundles improve cable management and air flow.



**Straight Cut**  
Typical installation utilising Straight Cut ensures each cable is terminated at the proper length and allows left, right or centre exit.



**Protective Packaging**  
Each assembly is packaged individually to protect factory terminations.

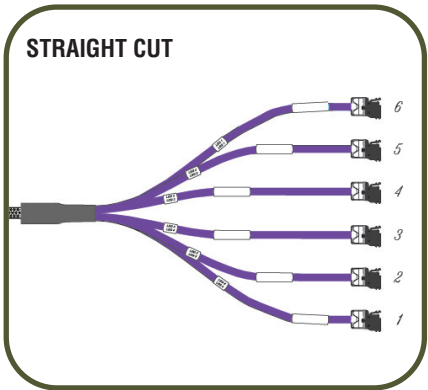
## MAX System 6 Double-Ended Trunking Cable Assemblies

Part #	Description
TCLD8E-A1A1(XXX)M . . . . .	6 Leg Solid Cable Trunking Cable Assembly, violet jacket, LSOH

## Z-MAX System 6 Double-Ended Trunking Cable Assemblies w/Panel Outlets

Part #	Description
TCLD8E-P0P0(XXX)M . . . . .	6 Leg Solid Cable Trunking Cable Assembly, violet jacket, LSOH

Use (XXX) to specify length: 003-090m in increments of 1 metre  
Standard wiring is T568B.  
Other lengths and configurations available upon request.



System 6® UTP 4-Pair Cable (International)

COMPLIANCE

- ISO/IEC 11801 Ed. 2.2 (Class E)
- IEC 61156-5:2002 (Category 6)
- IEEE 802.3
- TIA-568-C.2 (Category 6)
- UL CMR and CSA FT4
- UL CMX
- UL CM
- LSOH: IEC 60332-1, IEC 60754, and IEC 61034

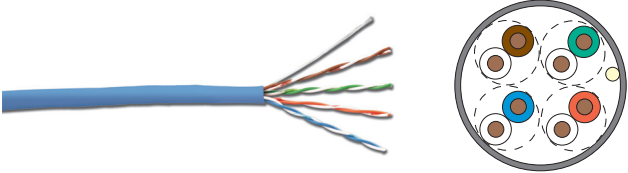
CABLE CONSTRUCTION

- UTP
- 0.57mm (23 AWG) solid bare copper
- 6.35mm maximum jacket diameter
- Central isolation member

Part #

Description

- 9C6R4-E3 ..... PVC (CMR, CSA FT4) 305m Reel-in-Box
- 9C6M4-E3 ..... CM, 305m Reel-in-Box
- 9C6L4-E3 ..... LSOH (IEC 60332-1), 305m Reel-in-Box
- 9C6H4-E3 ..... LSOH (IEC 60332-3C), 305m Reel-in-Box



ELECTRICAL SPECIFICATIONS

DC Resistance	<9.38Ω/100m
DC Resistance Unbalance	5%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	<330 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 100-550 MHz: 100 ± 22%
NVP	68%
TCL	30-10 log(#/100) dB
Delay Skew	≤35ns

PHYSICAL PROPERTIES

	LSOH	CM/CMR
Pulling Tension (max)	110N	110N
Bend Radius (min)	25mm	25mm
Installation Temperature	0 to 60°C	0 to 60°C
Storage Temperature	-20 to 75°C	-20 to 75°C
Operating Temperature	-20 to 60°C	-20 to 60°C

TRANSMISSION PERFORMANCE

GUARANTEED WORST CASE      SIEMON TYPICAL

Frequency μ(MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PS ACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)		Propagation Delay (ns)	
1.0	2.0	1.8	77.3	87.3	75.3	82.3	75.3	85.5	73.3	80.5	70.8	84.8	68.8	79.8	20.0	29.0	550	545
4.0	3.8	3.5	68.3	78.3	66.3	73.3	64.5	74.8	62.5	69.8	58.8	72.8	56.8	67.8	23.6	32.0	532	527
10.0	5.9	5.6	62.3	72.3	60.3	67.3	56.4	66.7	54.4	61.7	50.8	64.8	48.8	59.8	26.0	38.0	525	520
16.0	7.5	7.1	59.2	69.2	57.2	64.2	51.8	62.1	49.8	57.1	46.7	60.7	44.7	55.7	26.0	34.0	523	518
20.0	8.4	7.9	57.8	67.8	55.8	62.8	49.4	59.9	47.4	54.9	44.8	58.8	42.8	53.8	26.0	34.0	522	517
31.25	10.6	10.0	54.9	64.9	52.9	59.9	44.3	54.9	42.3	49.9	40.9	54.9	38.9	49.9	23.6	32.0	520	515
62.5	15.2	14.4	50.4	60.4	48.4	55.4	35.1	46.0	33.1	41.0	34.9	48.9	32.9	43.9	21.5	32.0	519	514
100.0	19.6	18.6	47.3	57.3	45.3	52.3	27.7	38.7	25.7	33.7	30.8	44.8	28.8	39.8	20.1	32.0	518	513
160.0	25.4	24.1	44.2	54.2	42.2	49.2	18.9	30.1	16.9	25.1	26.7	40.7	24.7	35.7	18.7	31.0	517	512
200.0	28.7	26.8	42.8	52.8	40.8	47.8	14.1	26.0	12.1	21.0	24.8	38.8	22.8	33.8	18.0	29.0	517	512
250.0	32.6	30.5	41.3	51.3	39.3	46.3	8.8	20.8	6.8	15.8	22.8	37.0	20.8	31.8	17.3	29.0	516	511
300.0*	36.1	33.7	40.1	50.0	38.1	45.0	4.0	16.3	2.0	11.3	21.3	36.0	19.3	30.0	16.8	27.0	516	511
400.0*	42.6	40.3	38.3	48.0	36.3	43.0	-4.3	7.7	-6.3	2.7	18.8	32.0	16.8	27.0	15.9	26.0	516	511
500.0*	48.5	39.9	36.8	48.0	34.8	42.0	-11.7	8.1	-13.7	2.1	16.8	31.0	14.8	26.0	15.2	25.0	516	511
550.0*	51.3	39.7	39.7	46.0	34.2	42.0	-15.1	6.3	-17.1	2.3	16.0	30.0	14.0	26.0	14.9	24.0	516	510

\*Values for frequencies above industry requirements are for information only.

All performance based on 100 metres.

# Solution 6™ UTP Cable

## COMPLIANCE

- ISO/IEC 11801 Ed. 2.2 (Class E)
- IEC 61156-5:2002 (Category 6)
- IEEE 802.3
- TIA-568-C.2 (Category 6)
- PVC: UL CM, IEC 60332-1
- LSOH: IEC 60332-1, IEC 60754, and IEC 61034

## CABLE CONSTRUCTION

- UTP
- Nominal jacket OD: 5.6mm
- 0.52mm solid (non-tinned) copper
- Central isolation member
- Reverse sequential numbering

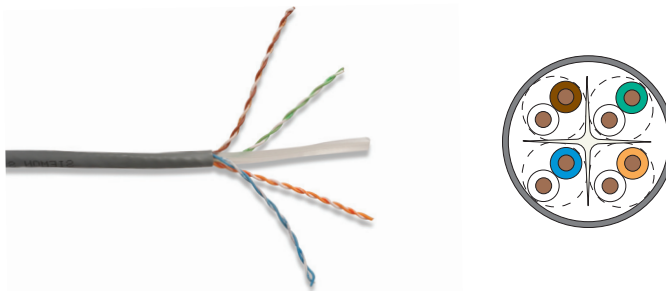
## Part #

## Description

9C6M4-E2 . . . . . CM Grey Jacket, 305m Reel-in-Box

9C6L4-E2 . . . . . LSOH, Violet Jacket, 305m Reel-in-Box

Other cable lengths also available: Add “-5CR” for 500m Reel, “-1KR” for 1000m Reel



## ELECTRICAL SPECIFICATIONS

DC Resistance	≤9.50Ω/100m
DC Resistance Unbalance	≤2.5%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	<330 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 200-250 MHz: 100 ± 22%
NVP	65%
TCL	30-10 log(#/100) dB
Delay Skew	45ns

## PHYSICAL PROPERTIES

	CM & LSOH
Pulling Tension (max)	80N
Bend Radius (min)	25mm
Installation Temperature	5 to 60°C
Storage Temperature	0 to 60°C
Operating Temperature	-10 to 60°C

## TRANSMISSION PERFORMANCE

■ GUARANTEED WORST CASE

□ SIEMON TYPICAL

Frequency μ(MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PS ACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)		Propagation Delay (ns)	
1.0	2.1	1.7	75.3	102.5	72.3	95.4	73.2	100.8	70.2	93.7	68.0	99.6	65.0	92.4	20.0	27.8	570	508
4.0	3.8	3.6	66.3	93.5	63.3	87.6	62.4	89.9	59.4	84.0	56.0	86.9	53.0	79.0	23.0	29.5	552	504
10.0	6.0	5.8	60.3	90.1	57.3	81.2	54.3	84.3	51.3	75.4	48.0	78.3	45.0	70.5	25.0	33.4	545	499
16.0	7.6	7.4	57.2	83.4	54.2	77.1	49.6	76.0	46.6	69.7	43.9	74.6	40.9	67.7	25.0	33.8	543	498
20.0	8.5	8.3	55.8	81.0	52.8	75.5	47.3	72.7	44.3	67.2	42.0	70.3	39.0	63.7	25.0	34.5	542	497
31.25	10.7	10.5	52.9	82.1	49.9	74.1	42.1	71.6	39.1	63.7	38.1	65.1	35.1	59.4	23.6	33.1	540	497
62.5	15.5	14.9	48.4	72.3	45.4	65.4	32.9	57.5	29.9	50.6	32.1	57.5	29.1	52.0	21.5	32.6	539	496
100.0	19.9	19.1	45.3	70.5	42.3	64.6	25.4	51.3	22.4	45.5	28.0	58.8	25.0	51.6	20.1	34.6	538	495
160.0	25.7	24.4	42.2	67.9	39.2	61.0	16.5	43.5	13.5	36.5	23.9	51.4	20.9	42.9	18.7	33.5	537	495
200.0	29.1	27.3	40.8	67.9	37.8	61.7	11.6	40.6	8.6	34.4	22.0	50.8	19.0	43.8	18.0	32.9	537	494
250.0	33.0	31.8	39.3	66.6	36.3	59.0	6.3	34.7	3.3	27.2	20.0	47.6	17.0	40.1	17.3	32.5	536	494

All performance based on 100 metres..

# S210 Connecting Block System

The Siemon S210 connection system provides superior Category 6 connecting block performance. The S210 block is the ideal for Voice over IP (VoIP) applications. It can be used to support existing cross-connects for standard phone systems today and enables upgrades to a Category 6 rated solution for a seamless network transition.

## Section Contents

- S210 Field Termination Kits .....3.14
- S210 Field Terminated 19 Inch Panels .....3.15
- Vertically-Mounted S210 Field Termination Kits .....3.15
- S210 Tower Kits and Accessories .....3.16
- S210 Connecting Block .....3.17
- System 6 Cross Connect Wire .....3.17
- S210 Covers .....3.17
- S210 Cable Managers .....3.18
- S210 Patch Plugs .....3.19
- S210 Cable Assemblies .....3.19
- S210 to MC Cable Assemblies .....3.20
- S210 Labels .....3.20

# S210® Connection System

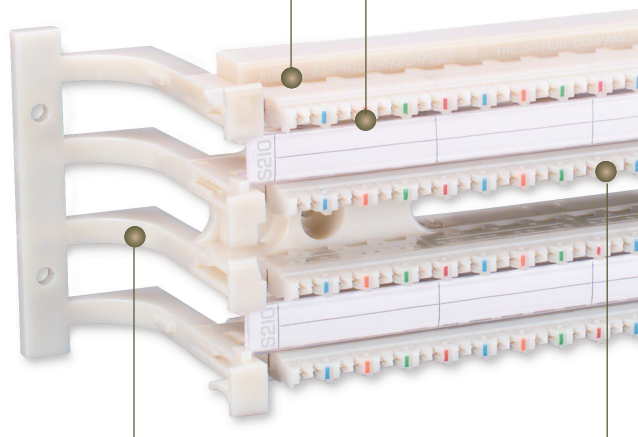
The Siemon S210 offers the best connecting block performance in the telecommunications industry. Its NEXT performance is so exceptional that it is essentially transparent when used as a consolidation point in a Category 6 channel.

**Coloured Labels** — Designation strip with interchangeable coloured labels can be mounted between each row of connecting blocks

**Easy Termination** — Utilises same termination practices as existing S110 product and is compatible with all single-position S110 termination tools as well as Siemon's S210 multi-pair termination tool

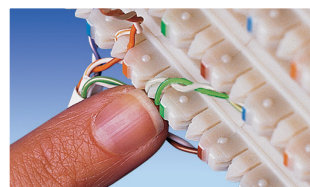
**Stand-off Legs** — Patented stand-off legs may be detached from the block before, during, or after installation on 64-pair version

**Compatibility** — Utilises same wiring base footprint as standard S110® products to be fully compatible with existing S110 mounting and cable management solutions



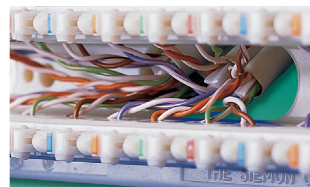
## Internal Crosstalk Barriers

Provide superior NEXT performance (13 dB NEXT margin over Category 6 specifications) via 360° pair isolation.



## Pyramid™ Wire Entry System

Separates paired conductors when lacing cables to simplify and reduce installation time.



## Patented Cable Access Openings

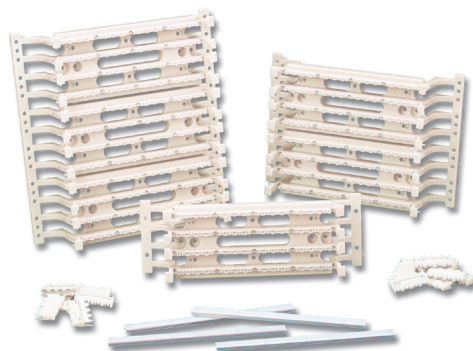
Allow cables to be routed through the rear of the block directly to the point of termination.

## S210 Field Termination Kits

Complete S210 installation kits include S210 wiring blocks with detachable legs\*, S210 connecting blocks, and label holders with white designation labels.

Part #	Description
S210AB2-64FT .....	64-pair, S210 field termination kit height: 91.4mm width: 272mm depth: 82.8mm
S210AB2-128FT .....	128-pair, S210 field termination kit height: 182.9mm width: 272mm depth: 82.8mm
S210AB2-192FT .....	192-pair, S210 field termination kit height: 275mm width: 272mm depth: 82.8mm

\*Legs detachable on 64-pair version only.

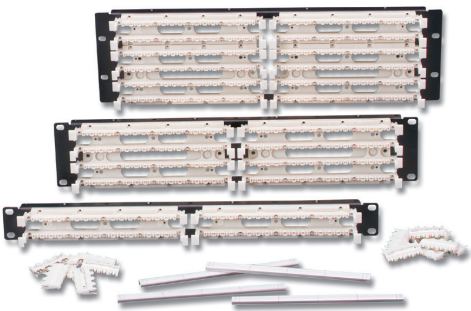


## S210® Field Terminated 19 Inch Panels

S210 panels allow wiring blocks to be mounted directly to a 19 inch rack or cabinet. Each panel includes the appropriate quantity of S210 connecting blocks, mounting hardware and label holders with white designation labels. Patented openings between rows allow horizontal cables to be routed from behind the panel and enter the block from the rear, helping to maintain cable jacket and twist up to the point of termination.

Part #	Description
S210DB2-64RFT . . . . .	64-pair, 19 inch S210 field termination kit, 1U
S210DB2-128RFT . . . . .	128-pair, 19 inch S210 field termination kit, 2U
S210DB2-192RFT . . . . .	192-pair, 19 inch S210 field termination kit, 3U

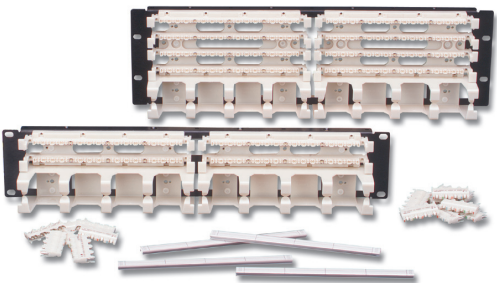
Note: 1U = 44.5mm



## S210 Field Terminated 19 Inch Panels with Cable Managers

Part #	Description
S210DB2-64RWM . . . . .	64-pair, 19 inch S210 field termination kit, 2U with cable managers and covers
S210DB2-128RWM . . . . .	128-pair, 19 inch S210 field termination kit, 3U with cable managers and covers

Note: 1U = 44.5mm  
Each kit includes adequate connecting blocks to fully populate panel.



## Vertically Mounted S210 Field Termination Kits

These 32-pair or 48-pair S210 blocks can be mounted on the same S89B or S89D brackets that hold our S66™ blocks. The high density 48-pair kit provides Category 6 performance in the same footprint as a standard M1-50 66 block. Field-termination kits include the S210 connecting blocks, designation labels and label holders.

Part #	Description
S210DB1-48FT-89 . . . . .	48-pair S210 field termination kit on an 89-type retainer*
S210DB1-32FT-89 . . . . .	32-pair S210 field termination kit on an 89-type retainer*

\*S89 Brackets are not included and must be ordered separately.



S210DB1-48FT-89



S210DB1-32FT-89

## S210® Tower Field Termination Kits

Part #	Description
S210MB2-192FT . . . . .	192-pair, S210 Tower field termination kit height: 406mm, width: 216mm, depth: 152mm
S210MB2-256FT . . . . .	256-pair, S210 Tower field termination kit height: 541mm, width: 216mm, depth: 152mm
S210MB2-320FT . . . . .	320-pair, S210 Tower field termination kit height: 676mm, width: 216mm, depth: 152mm

*Each kit includes adequate connecting blocks to fully populate tower.*



## Large-Scale Vertical Cable Managers

The S188 large scale vertical cable manager for the S110®/S210 Towers accommodates our quarter-turn RS-CH cable managers. With the RS-CH managers installed, additional vertical channels can be integrated into the main channel to segregate patch cables and cross-connect wire.

Part #	Description
S188-300 . . . . .	Large-scale vertical cable manager for use with 192-pair S210 Tower height: 406mm, width: 216mm, depth: 152mm
S188-400 . . . . .	Large-scale vertical cable manager for use with 256-pair S210 Tower height: 541mm, width: 216mm, depth: 152mm
S188-500 . . . . .	Large-scale vertical cable manager for use with 320-pair S210 Tower height: 676mm, width: 216mm, depth: 152mm



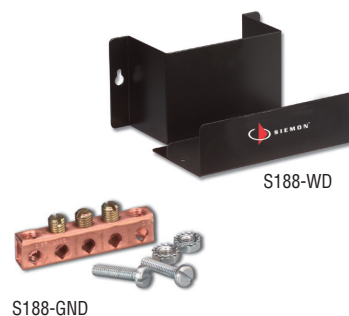
## Small-Scale Vertical Cable Managers

Part #	Description
S110M-WM-300 . . . . .	Small-scale vertical cable manager, for use with 192-pair S210 Tower height: 406mm, width: 76.2mm, depth: 152mm
S110M-WM-400 . . . . .	Small-scale vertical cable manager, for use with 256-pair S210 Tower height: 541mm, width: 76.2mm, depth: 152mm
S110M-WM-500 . . . . .	Small-scale vertical cable manager, for use with 320-pair S210 Tower height: 676mm, width: 76.2mm, depth: 152mm



## S210 Tower Optional Accessories

Part #	Description
S188-WD . . . . .	Metal duct for additional horizontal cable management at base of S210 Tower height: 114.3mm, width: 215.9mm, depth: 203.2mm
S188-GND . . . . .	Ground kit consists of one, 3-position grounding busbar height: 9.0mm, width: 50.8mm, depth: 12.3mm



S210® Connecting Block

Siemon S210 blocks terminate 22 – 26 AWG (0.64mm – 0.40mm) solid or 7-strand wires. They also incorporate markings to designate tip and ring conductors, colour-coded pairs on each block and Siemon's patent-pending Pyramid™ wire entry system to expedite lacing of pairs.

Part #	Description
S210C-4 . . . . .	4-pair, S210 connecting block



System 6® Cross-Connect Wire

Siemon's System 6 cross-connect is ideal for cross-connect applications up to 5 metres. It can be used for System 6 installations using S210® wiring blocks.

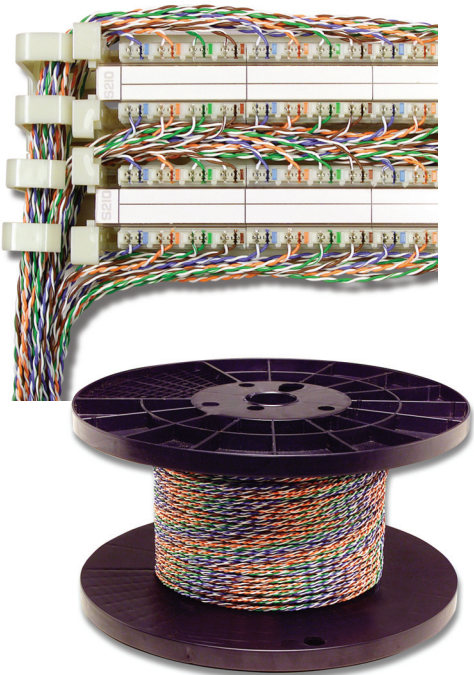
Part #	Description
CJ6-W4-1000 . . . . .	Category 6, 4-pair, 24 AWG (0.05mm), solid cross-connect wire, pair colours blue/orange/green/brown, 305mm spool

COMPLIANCE

- ISO/IEC 11801:2002 2nd Edition (Category 6)
- IEC 61156-5:2002 (Category 6)
- TIA-568-C.2 (Category 6)

CABLE CONSTRUCTION

- 0.5mm 24 AWG bare copper conductors
- 1.02mm insulation diameter nominal

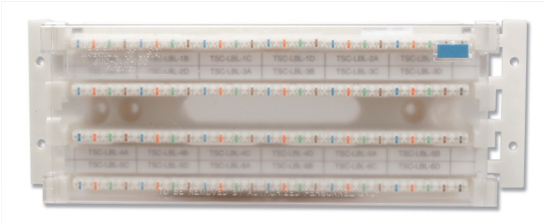


S110®/S210 Covers

The Siemon Company S110/S210 covers are available in 50- and 100-pair sizes (32- and 64-pair for S210). The cover easily snaps on and off wiring blocks and S110/S210 cable managers, and enhances the appearance of the S110/S210 installation. Removable icon tabs provide colour-coding on the front for compliance with the ANSI/TIA/EIA-606-A administration standard.

Part #	Description
S110-CVR-50-(XX) . . . . .	50-pair S110 cover/32-pair S210 cover
S110-CVR-100-(XX) . . . . .	100-pair S110 cover/64-pair S210 cover

Use (XX) to specify colour: 00 = clear, 01 = black, 20 = ivory



Clear covers protect connections yet allow full viewing of circuits and individual station ID's.

Wall Mount S110®/S210® Cable Managers

The Siemon S110/S210 cable managers are the foundation of a series of cable management products that are designed to support S110 or S210 cross-connects and patch panel applications. They can be ordered individually for field assembly in wall-mount applications. The cable managers are manufactured with high-strength, flame-retardant thermoplastic, and have been designed for easy cable insertion or withdrawal. The 2 RMS cable manager provides additional capacity for high-density patching applications.

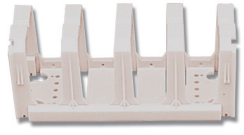


Cable Managers Without Legs

S110B1RMS .....  
1 RMS white cable manager  
without legs



S110B2RMS .....  
2 RMS white cable manager  
without legs



S110B1RMS-01 .....  
1 RMS black cable manager  
without legs

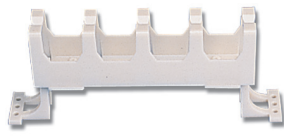


S110B2RMS-01 .....  
2 RMS black cable manager  
without legs

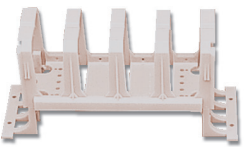


Cable Managers With Legs

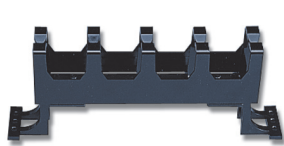
S110A1RMS .....  
1 RMS white cable manager  
with legs



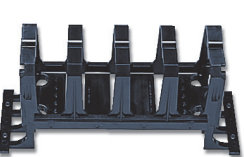
S110A2RMS .....  
2 RMS white cable manager  
with legs



S110A1RMS-01 .....  
1 RMS black cable manager  
with legs



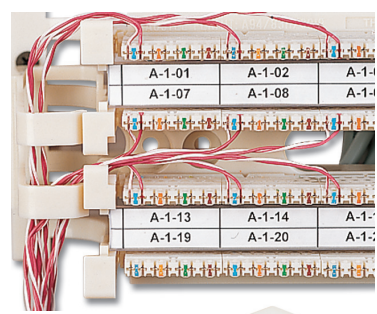
S110A2RMS-01 .....  
2 RMS black cable manager  
with legs



Note: 1 RMS = 44.5mm

S100A2 Wire Manager

The S100A2 wire manager snaps onto the legs of the S110 or S210 blocks/legs to provide a channel for routing cross-connect wire or patch cords. One S100A2 is designed to be used with each 100-/64-pair leg (2 for 200-/128-pair, 3 for 300-/192-pair) to allow space to access the wires. The S100A2 can also be mounted side-by-side. The outside edges are flared and tapered for smoother wire entry and exit and preventing damage to the conductor insulation.



Part #	Description
S100A2 .....	Snap-on S110/S210, wire manager, white
S100A2-01 .....	Snap-on S110/S210, wire manager, black



## S210® Patch Plugs

The S210 patch plug utilises internal pair isolation, pair-to-pair compensation and layered contacts to improve cross-talk performance so that the mated plug and connecting block far exceed Category 6 connecting hardware transmission requirements. The clear housing keeps the conductor colours/positions visible to aid matching termination positions on the other end.

**Proper Orientation** — Directional arrow provided to assist in proper insertion orientation

**Tapered Lacing** — Enable easy lacing of pairs for quick field termination

**Ergonomic Handle** — Aids insertion and removal of patch plug

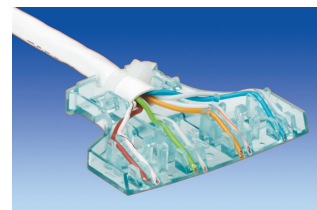
**Clear Housing** — Durable, flame-retardant, clear thermoplastic housing keeps conductors visible during and after termination

**Polarisation** — Each plug housing includes polarisation features to ensure proper orientation of the plug when connecting to the S210 block

### Technical Tip!

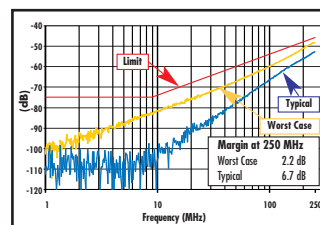
S210 to MC® 6 cable assemblies can be configured in the field. Siemon MC 6 modular cords can be purchased and cut in half. The cut end of the cord can then be field terminated to the S210P patch plug while the factory terminated and tested modular plug end remains undisturbed.

S210 patch plugs can be field-terminated to 23 – 26 AWG (0.40mm – 0.51mm) solid or 7-strand twisted-pair cable.



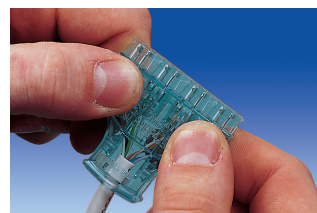
### Field Installable

Terminates 24-26 AWG (0.40mm-0.51mm) solid or 7-strand twisted-pair cable.



### NEXT Performance

The S210 4-pair plug provides unparalleled performance, with 6.7 dB NEXT (typical) and 2.2 dB NEXT (worst case) at 250 MHz.



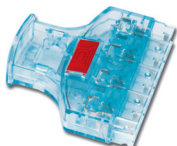
### Easy Field Termination

Simply snap the base and cover together to mass terminate all conductors.

## S210 Patch Plugs

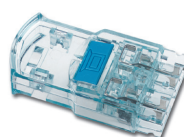
S210P4 . . . . .

4-pair, field-terminated,  
S210 patch plug



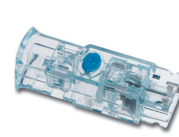
S210P2 . . . . .

2-pair, field-terminated,  
S210 patch plug



S210P1 . . . . .

1-pair, field-terminated,  
S210 patch plug



## S210 Cable Assemblies

The S210 cable assemblies utilise Siemon's S210P4 patch plugs for easy and reliable connections between S210 termination fields. These assemblies use high performance stranded cable which exceeds category 6 specifications and are 100% factory transmission tested to ensure optimum Category 6 channel performance. Coloured icons are available for colour-coding S210 plugs.

### Part #

### Description

S210P4-P4-(XX)M . . . . . 4-pair, double-ended, S210 stranded cable assembly, white jacket  
S210P2-P2-(XX)M . . . . . 2-pair, double-ended, S210 stranded cable assembly, white jacket  
S210P1-P1-(XX)M . . . . . 1-pair, double-ended, S210 stranded cable assembly, white jacket

Use (XX) to specify cord length: 01 = 1m, 1.5 = 1.5m, 02 = 2m, 03 = 3m, 05 = 5m

Custom lengths available upon request. Contact our Customer Service Department for more information.



## S210® to MC® 6 Cable Assemblies

The S210 to modular cable assemblies combine Siemon's high performing plugs for patching network equipment to S210 connecting blocks or providing test access to S210 termination fields. The combination of plugs, high performance cable and 100% factory transmission testing ensures performance is compatible with Category 6 channel specifications.

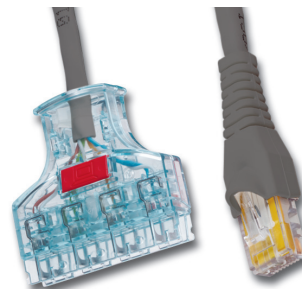
Part #	Description
S210P4A4-(XX)M-(XX) . . . . .	4-pair, S210P4 to MC 6 stranded cable assembly, colour matching jacket/boot, T568B, CMG
S210P4T4-(XX)M-(XX) . . . . .	4-pair, S210P4 to MC 6 stranded cable assembly, colour matching jacket/boot, T568A, CMG
S210P2E2-(XX)M-B(XX) . . . . .	2-pair, S210P2 to MC 6 stranded cable assembly, white jacket with coloured boot, 10/100BASE-T, CMG

Use 1st (XX) to specify cord length:

01 = 1m, 1.5 = 1.5m, 02 = 2m, 03 = 3m, 05 = 5m

Use 2nd (XX) to specify colour:

01 = black, 02 = white, 03 = red, 04 = grey, 05 = yellow, 06 = blue, 07 = green



## S210 Designation Labels

Siemon S210 wiring blocks allow for designation labels to be mounted between each row of connecting blocks. S210 designation labels feature S210 listings on the side to clearly identify the termination type, 4-pair markings and can also be used for colour-coding.

Part #	Description
S110-HLDR . . . . .	Transparent plastic label holders, bag of 6
S210-LBL-2 . . . . .	4-pair S210 marked white labels, bag of 6



## S110®/S210 Designation Label Sheets

Siemon's S110/S210 designation label sheets provide the ability to custom print labels used on S110 or S210 blocks.\*The sheets can be used to print 2-, 3-, 4-, or 5-pair labels and eliminate the need to order separate sheets for different configurations. There are 20 labels per side and both sides are marked so they can be reversed and re-printed in case of an error.

Part #	Description
S110-SHT(X) . . . . .	S110/S210 Designation label sheets, package of 6

Use (X) to specify colour: 2 = white, 3 = red, 4 = grey, 5 = yellow, 6 = blue, 7 = green, 8 = violet, 9 = orange, 60 = brown

\*Visit our web site or contact our Technical Support Department for labelling software.



# Category 5e Shielded

In addition to the excellent EMI resistance and signal security provided by its shielded construction, Siemon’s end-to-end Category 5e shielded system is guaranteed to deliver transmission performance margins in excess of industry standards for Category 5e. And thanks to the ultra-fast terminating Z-MAX® Category 5e shielded outlets and Quick-Ground™ patch panels, deploying a high-performance, noise-resistant shielded system is every bit as fast and easy as UTP.

## Section Contents

Z-MAX 5e Shielded Outlets ..... 4.1

Z-MAX 5e Shielded Patch Panels ..... 4.2

TERA®-MAX® Shielded Patch Panels ..... 4.2

BladePatch® 5e Shielded Modular Cords ..... 4.3

MC® 5 Shielded Modular Cords ..... 4.4

Premium 5e™ F/UTP Cable ..... 4.5

# Z-MAX® 5e Shielded Outlets

Combining exceptional Category 5e performance with best-in-class termination time, the Z-MAX 5e shielded outlet is a vital part of an end-to-end Z-MAX 5e shielded cabling system. The Z-MAX module exceeds all applicable industry standards, including Amendments 1 and 2 of ISO/IEC 11801 2nd ed. and TIA-568-C.2.

Terminates in as little as 45 seconds using the Z-TOOL™

Robust die cast housing optimises shielding from EMI and alien crosstalk

Zero-cross termination module accelerates lacing and eliminates pair crossing

Coloured icons provided for port identification

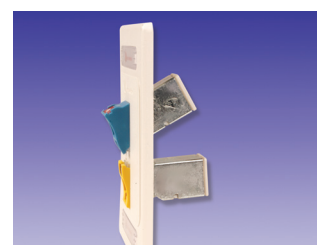
Pass-through feature allows mounting from front or rear of faceplate. Also compatible with optional outlet door.

Outlets are available in a wide range of colours and mount in MAX faceplates and accessories.

Rapid shield connection and cable jacket strain relief via integrated hinged metal clip



**User Friendly**  
The ergonomic and easy-to-use Z-TOOL ensures a fast, low force termination.



**Flexibility and Simplified Ordering**  
Hybrid design allows the same outlet to be mounted in flat or angled orientations.

## Ordering Information:

Z5-S(X)(XX)(X) . . . . . Shielded Z-MAX Category 5e outlet, T568A/B

### Mounting Style

(Blank) = Hybrid Flat/Angled  
K = Keystone

### Bezel Colour

01= Black    06= Blue  
02= White    07= Green  
03= Red    09= Orange  
04= Grey    20= Ivory  
05= Yellow    80= Light Ivory

### Door Option

(Blank) = No Door  
D = Spring Door (Hybrid only)



Hybrid



Keystone



Door

Outlet terminates S/FTP, F/FTP and F/UTP cable constructions with 22 – 26 AWG (0.64 – 0.51mm) solid and 26 AWG (0.48mm) stranded conductors, with up to 0.60mm diameter conductors and up to 1.48mm diameter over insulation.

Ⓢ Add "B" to end of part number for bulk project pack of 100 modules. (hybrid modules include icons.).



Front

Rear

1 - Red Data  
1 - Blue Data  
1 - Bezel Colour-Matching Data  
1 - White Blank

1 - Red Voice  
1 - Blue Voice  
1 - Bezel Colour-Matching Voice  
1 - Bezel Colour-Matching Blank

For more Z-MAX icon colours and options see page 8.5.

# Z-MAX® 5e Shielded Patch Panels

Z-MAX 5e shielded patch panels provide unprecedented performance and reliability in a high-density modular solution. These complete patch panel kits combine 19 inch shielded patch panels with Z-MAX 5e shielded panel outlets to offer the industry’s highest performing Category 5e patching solution.

These panels also accelerate installation through quick-snap module insertion and automatic grounding of modules via an embedded grounding conductor. The panel allows one- or two-hole ground lug connections to rack on cabinet grounding system. This complete shielded solution provides maximum protection from outside interference and superior 5e performance.



### Ordering Information:

- Z5S-PNL(X)-24K .....24 Port, Z-MAX 5e shielded patch panel kit, 1U, black
- Z5S-PNL(X)-U48K.....48 Port, Z-MAX 5e shielded patch panel kit, 1U, black
- ZS-PNL(X)-24E .....24 Port, Z-MAX shielded patch panel empty, 1U, black
- ZS-PNL(X)-U48E.....48 Port, Z-MAX shielded patch panel empty, 1U, black

Use (X) to specify Mounting Style:  
(Blank) = Flat  
(A) = Angled

### Panel Accessories

- Z-PNL-PL24 .....Patch panel label sheet, numbered 1 to 24, bag of 100
- Z-PNL-PL48 .....Patch panel label sheet, numbered 25 to 48, bag of 100
- Z-PNL-P .....Patch panel label holder (6-port each), bag of 25
- Z5-SP .....Z-MAX 5e shielded panel outlet

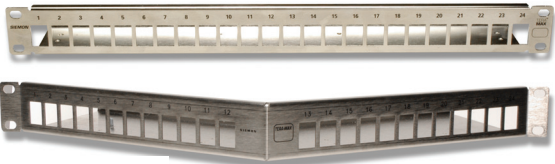


Note: Z-MAX shielded patch panels designed for use with Z-MAX shielded panel outlets only

Panels include Z-TOOL \*, label / icon holders, designation labels, cable ties, grounding lug and mounting hardware.  
Note: 1U = 44.5mm  
\* included in kit only

## TERA®-MAX® Patch Panels

Part #	Description
TM-PNLZ-24-01 . . . . .	24-port, flat, TERA-MAX panel, black, 1U
TM-PNLZ-24 . . . . .	24-port, flat, TERA-MAX panel, metallic, 1U
TM-PNLZA-24-01 . . . . .	24-port Angled TERA-MAX panel, black, 1U
TM-PNLZA-24 . . . . .	24-port Angled TERA-MAX panel, metallic, 1U
Z-BL-01 . . . . .	Z-MAX panel blank, bag of 10, black



Z-BL-01

Panels include designation labels, cable ties, grounding lug and mounting hardware.  
Note: 1U = 44.5mm



Note: TERA-MAX panels are designed for use with hybrid (flat/angled) shielded Z-MAX outlets. Also compatible with TERA outlets

# BladePatch® 5e Shielded Modular Cords

Siemon's Category 5e BladePatch cords offer a unique solution for high-density patching environments. They feature an innovative push-pull boot design to control the latch, enabling easy access and removal of the cord in tight-fitting areas. The BladePatch cords are ideal for patching blade servers, patch panels, or any equipment with high density RJ-45 outlets.

**Snagless** — Push-pull latch design eliminates external thumb latch on standard modular plug designs which can snag and break

Push-Pull Boot  
Activates Latch

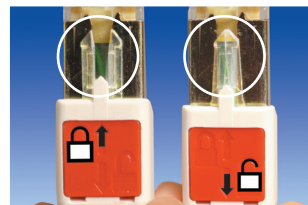
**Low Profile Boot Design** — Optimises side-stackability of patch cords and allows use in even the most dense equipment

**Universal Wiring** — Compatible with T568A/B wiring schemes

**Revolutionary Design** — Patented push-pull latch design eliminates need to defeat thumb latch used in standard modular plug designs. Enables easy access and removal in high density patching environments



**Universal Compatibility**  
Fits within any standard RJ-45 outlet.



**Revolutionary Latch**  
Simply push the boot forward to latch into the outlet and pull back to release.



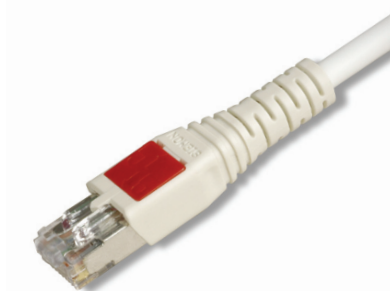
**High Density**  
The push-pull design enables easy access and removal via the boot in tight-fitting areas.

## Ordering Information:

Category 5e shielded BladePatch, double-ended modular patch cord with push-pull latching design, colour matching cord/boot, T568A/B, LSOH

BP5S-(XX)M-(XX)L

Cord Length	Cord Colour		
01 = 1m	01 = Black	04 = Grey	07 = Green
1.5 = 1.5m	02 = White	05 = Yellow	08 = Violet
02 = 2m	03 = Red	06 = Blue	09 = Orange
03 = 3.1m			
05 = 5m			
7.5 = 7.5m			

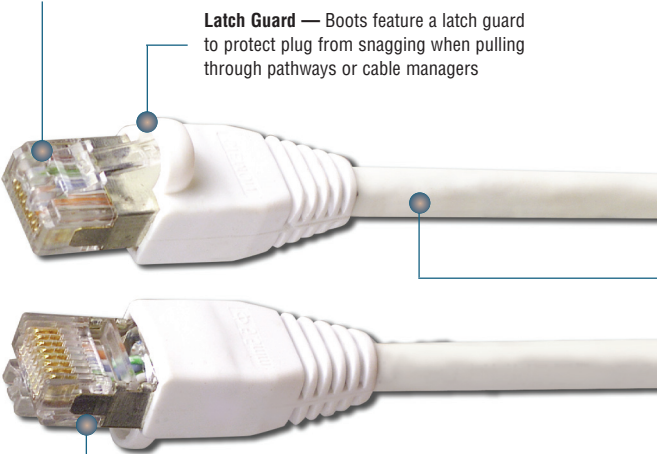


© Add "B" for bulk project pack of 100 modular cords.

# MC® 5e Shielded Modular Cords

Siemon's shielded MC 5e modular cords are manufactured using stranded shielded cable that meets all Category 5e specifications. Modular plugs have an overall shield and meet IEC 60603-7 and TIA-968-A specifications. T568A/B wired assemblies include coloured strain-relief boots and are available in a wide range of lengths.

**Universal Wiring** — Compatible with T568A/B wiring schemes



**Factory-Tested**  
Cords are factory terminated and transmission tested to ensure compliance with applicable standards requirements.

- Compliance**
- Plug geometry meets IEC 60603-7 and TIA-968-A specifications for modular plugs
  - Exceeds ISO/IEC 11801:2002 requirements for transfer impedance, coupling attenuation and shield effectiveness
  - Stranded Cable: IEC 61156-6:2002 Compliant
  - LSOH Cordage: IEC 60332-1, IEC 60754, and IEC 61034 compliant

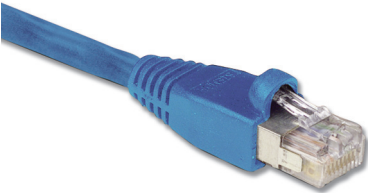


**Excellent Bend Relief**  
Boot ensures proper bend relief.

## Ordering Information:

Category 5e shielded MC, double-ended 4-pair stranded modular cord, colour matching jacket/boot, T568A/B, LSOH

MC5S-(XX)M-(XX)L			
Cord Length	Cord Colour		
01 = 1m	01 = Black	04 = Grey	07 = Green
1.5 = 1.5m	02 = White	05 = Yellow	08 = Violet
02 = 2m	03 = Red	06 = Blue	09 = Orange
03 = 3.1m			
05 = 5m			
7.5 = 7.5m			



ⓑ Add "B" to end of part number for bulk project pack of 100 cords.

# Premium 5e® F/UTP Cable (International)

## COMPLIANCE

- ISO/IEC 11801Ed 2.2 (Class D)
- IEC 61156-5 Ed 2.0 (Category 5e)
- IEEE 802.3
- TIA-568-C.2
- EN 50288
- EN 50173
- UL CM
- UL CMR and CSA FT4
- LSOH: IEC 60332-1, IEC 60754, and IEC 61034

## CABLE CONSTRUCTION

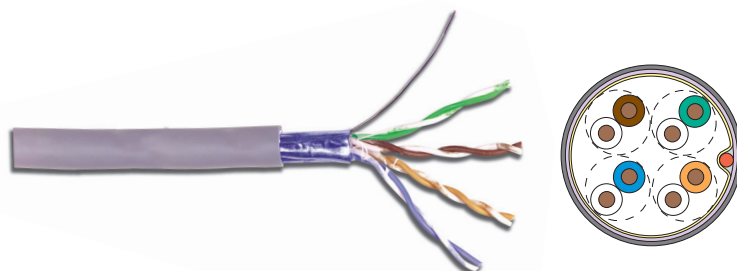
- F/UTP
- Nominal jacket OD: 6.1mm
- 0.5mm solid non-tinned copper
- 1.0mm max conductor insulation diameter
- Shield is an aluminium foil tape enclosing a 7 strand 0.6mm tinned copper drain wire
- Reverse sequential numbering

## Part #

## Description

- 9A5R4-E2 ..... PVC (CMR), Blue Jacket, 305m Reel-in-Box  
 9A5M4-E2 ..... PVC (CM, IEC 60332-1), Grey Jacket, 305m Reel-in-Box  
 9A5L4-E2 ..... LSOH (IEC 60332-1), Violet Jacket, 305m Reel-in-Box

Other cable lengths also available: Add "-5CR" for 500m Reel, "-1KR" for 1000m Reel



## ELECTRICAL SPECIFICATIONS

DC Resistance	<9.38Ω/100m
DC resistance Unbalance	5%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	<330 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 100 - 250 MHz: 100 ± 22%
NVP	65%
LCL	40-10 log(f) dB
Delay Skew	≤40ns

## PHYSICAL PROPERTIES

	LSOH	CMR/CM
Pulling Tension (max)	110N	110N
Bend Radius (min)	25mm	25mm
Installation Temperature	0 to 60°C	-36 to 60°C
Storage Temperature	-20 to 75°C	-34 to 75°C
Operating Temperature	-20 to 60°C	-34 to 60°C

## TRANSMISSION PERFORMANCE

☒ GUARANTEED WORSE CASE
 ☐ SIEMON TYPICAL

Frequency (MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PSACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)		Propagation Delay (ns)	
1.0	2.1	1.9	65.3	79.3	62.3	72.3	63.2	77.4	60.2	70.4	63.8	84.8	60.8	78.8	20.0	27.0	570	545
4.0	4.1	3.7	56.3	70.3	53.3	63.3	52.2	66.6	49.2	59.6	51.8	72.8	48.8	66.8	23.0	32.0	552	527
10.0	6.5	5.8	50.3	64.3	47.3	57.3	43.8	58.5	40.8	51.5	43.8	64.8	40.8	58.8	25.0	32.0	545	520
16.0	8.3	7.4	47.2	61.2	44.2	54.2	39.0	53.8	36.0	46.8	39.7	60.7	36.7	54.7	25.0	32.0	543	518
20.0	9.3	8.3	45.8	59.8	42.8	52.8	36.5	51.5	33.5	44.5	37.8	58.8	34.8	52.8	25.0	32.0	542	517
31.25	11.7	10.5	42.9	56.9	39.9	49.9	31.1	46.4	28.1	39.4	33.9	54.9	30.9	48.9	23.6	30.0	540	515
62.5	17.0	15.0	38.4	52.4	35.4	45.4	21.4	37.4	18.4	30.4	27.9	48.9	24.9	42.9	21.5	30.0	539	514
100.0	22.0	19.3	35.3	49.3	32.3	42.3	13.3	30.0	10.3	23.0	23.8	44.8	20.8	38.8	20.1	30.0	538	513
160.0*	28.6	25.1	32.2	46.2	29.2	39.3	3.7	21.1	0.7	14.1	19.7	40.7	16.7	34.7	18.7	28.0	537	512
200.0*	32.4	28.1	30.8	44.8	27.8	37.8	-1.6	16.7	-4.6	9.7	17.8	38.8	14.8	32.8	18.0	27.0	536	512
250.0*	36.9	31.4	29.3	43.3	26.3	36.3	-7.5	11.9	-10.5	4.9	15.8	36.8	12.8	30.8	17.3	26.0	536	511
300.0*	41.0	34.5	28.1	42.1	25.1	35.1	-12.8	7.6	-15.8	0.6	14.3	35.3	11.3	29.3	16.8	25.0	536	511
350.0*	44.9	39.4	27.1	41.1	24.1	34.1	-17.7	1.7	-20.7	-5.3	12.9	33.9	9.9	27.9	16.3	24.0	536	511

\*Values above 100 MHz are for information only.

All performance based on 100 metres

# Premium 5e<sup>®</sup> and Solution 5e<sup>™</sup> UTP

Siemon’s end-to-end Premium 5e UTP cabling solution is guaranteed to provide transmission performance margins in excess of industry standards for Category 5e/Class D parameters, and has been independently verified to perform to 160 MHz.

All components are approved for use in a Premium 5e channel unless otherwise indicated. Only Premium 5e components are eligible for use in a Premium 5e channel.

Siemon’s Solution 5e UTP system is designed for 100 MHz Category 5e/Class D installations in which additional performance margins provided by the Premium 5e solution are not required.

Components specifically designed for use in a Solution 5e channels are indicated by product title. Both Solution 5e and Premium 5e components are eligible for use in a Solution 5e channel.

## Section Contents

MAX<sup>®</sup> 5e UTP Outlets ..... 5.1

HD<sup>®</sup> 5e UTP Patch Panels ..... 5.2 - 5.3

MAX UTP Patch Panels ..... 5.4

MC<sup>®</sup> 5e UTP Modular Cords ..... 5.5

Premium 5e UTP Cable ..... 5.6

# MAX® 5e UTP Outlets

MAX 5e outlets exceed Category 5e performance with component and channel performance to 160 MHz. These outlets offer all the functional advantages of our MAX 6 modules in a variety of colour options. All outlets utilise our S310 punch-down block — making termination quick and easy.

**Easy Installation** — Install from either front or rear of faceplate

**Quick Identification** — Icons provided for port identification

**Easy Termination** — Punch-down with standard single position 110 termination tools

**Universal Wiring** — T568A and T568B wiring compatible

**Protective Doors** — Minimise exposure to dust and other contaminants

**Slim Design** — Allows jacks to be side-stacked in faceplates to provide maximum density



MX5-(XX) . . . . .  
Angled MAX outlet, T568A/B,  
rear strain relief cap and protective  
colour-matching rubber door



MX5-F(XX) . . . . .  
Flat MAX outlet, T568A/B,  
rear strain relief cap



MX5-K(XX) . . . . .  
Keystone MAX outlet, T568A/B,  
rear strain relief cap

Use (XX) to specify colour: 01 = black, 02 = white, 03 = red, 04 = grey, 05 = yellow, 06 = blue, 07 = green, 09 = orange, 20 = ivory, 25 = bright white, 80 = light ivory

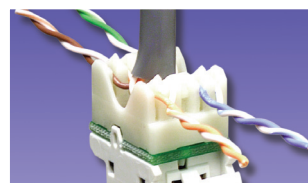
Angled outlets include one colour-matching, one red, and one blue icon.  
Door colour is clear for red, yellow, blue and orange angled outlets.

Flat modules include one colour-matching, one red, and one blue icon.

Ⓢ Add "B" to end of part number for bulk project pack of 100 outlets (angled and flat outlets include icons).

Add "VP" to end of part number for value pack option. Value pack is a kit of 250 outlets, doors, terms caps and colour match icons.  
(Available in flat/ angled only. Door only included with angled version.)

Note: Keystone version is designed for integration with various international mounting products and is not compatible with MAX mounting hardware.



## Quick Installation

Pyramid wire entry system on S310® blocks separates paired conductors when lacing cables to simplify and reduce installation time.



## Termination

Siemon's Palm Guard with MAX insert assists in securing module during termination.



## Superior Performance

Use MC or BladePatch 5e modular cords to perfectly match performance of 5e MAX outlets.

# HD® 5e UTP Patch Panels

Siemon's HD 5e series patch panels offer the most robust Category 5e patching solution in the industry. HD 5e panels feature universal T568A/B wiring and exceed Category 5e requirements with component and channel performance to 160 MHz. Compliant pin technology enables the use of multi-pair S110® punch-down tools to reduce termination time.

**Aesthetics** — Front surface is uninterrupted by screw heads for a clean appearance

**Universal Wiring** — HD 5e patch panels feature universal wiring for both T568A/B

**Port Identification** — Bold port numbering enables quick identification of outlets

**Standard Fit** — Panels can be mounted directly on standard 19 inch relay rack or cabinet

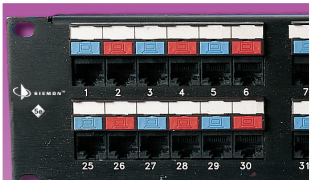
**Installer Friendly** — Panels available in 16-, 24-, 48- and 96-port configurations



**Compliant Pin Technology**  
Allows the use of Siemon's multi-pair impact tool to significantly reduce termination time. S110 termination openings on the rear are compatible with S110 patch plugs.



**Rear Cable Management**  
Integrated rear cable manager properly guides cables to and from the rear of the panel.



**Quick Identification**  
Icon and label holder kits are included with every panel.



## Ordering Information:

### HD5 UTP Patch Panels

Part #	Description
HD5-16.....	16-port Category 5e UTP HD patch panel, T568A/B, 1U
HD5-24.....	24-port Category 5e UTP HD patch panel, T568A/B, 1U
HD5-32.....	32-port Category 5e UTP HD patch panel, T568A/B, 2U
HD5-48.....	48-port Category 5e UTP HD patch panel, T568A/B, 2U
HD5-96.....	96-port Category 5e UTP HD patch panel, T568A/B, 4U

Panels include rear cable manager, icon/label holders, designation labels, cable ties, and mounting hardware.

ⓑ Add "B" for bulk project pack of 5 panels (rear cable managers (p/n: HD-RWM) not included but can be ordered separately).

Note: 1U = 44.5mm

S310 termination blocks on 16- and 32-port HD 5e panels are not compatible with S110 multi-pair termination tools.

## HD® 5 Angled Patch Panels

Part #	Description
HD5-24A.....	24-port angled panel, T568A/B wiring, 1 RMS
HD5-48A.....	48-port angled panel, T568A/B wiring, 2 RMS
PNLA-CVR-01 .....	Angled panel cover, black

Angled panels include one rear cable manager, designation labels, cable ties, and mounting hardware

ⓑ Add "B" for bulk project pack of 5 panels (rear cable managers not included but can be ordered separately).

Note: 1 RMS = 44.5mm



# HD5 Quick-Patch™ Panel\*

Simon's HD5 Quick-Patch panel provides a quick and easy Category 5 channel patching solution for 10/100BASE-T hubs with 25-pair connectors. The HD5 Quick-Patch Panel incorporates many user-friendly features and benefits, including rear connectors that are staggered to enable easy routing of 25-pair cable to the connection point and a rear metal enclosure that protects printed circuitry. The black anodised panel can be mounted directly to a standard 19 inch rack or cabinet with the mounting hardware included. Icon/label holders and designation labels included.

Part #	Description
HD5-QP-48 . . . . .	48-port 10/100BASE-T panel (Active pins 1, 2, 3 & 6 only), four 25-pair connectors (female), 2 RMS

Panel includes icon/label holders, designation labels, and mounting hardware.



Note: 1 RMS = 44.5mm

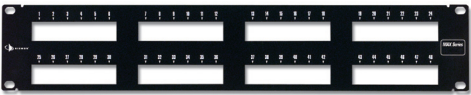

\*Not eligible for Premium 5e or Solution 5e warranty



# MAX® UTP Patch Panels

## MAX UTP Patch Panels


Part #	Description
MX-PNL-16 . . . . .	16-port MAX patch panel, 1U
	
MX-PNL-24 . . . . .	24-port MAX patch panel, 1U
	

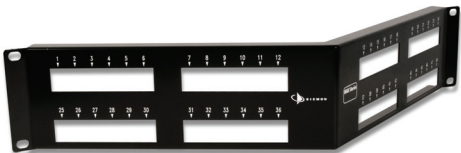
Part #	Description
MX-PNL-48 . . . . .	48-port MAX patch panel, 2U
	
MX-PNL-72 . . . . .	72-port MAX patch panel, 2U
	

Panels include rear cable manager, designation labels, cable ties, and mounting hardware.  
MAX Panels are not compatible with shielded Z-MAX® or TERA® modules. Use the TERA-MAX® or Z-MAX shielded panel.  
Note: 1U = 44.5mm

## Angled MAX UTP Patch Panels

Siemon's MAX series angled patch panels route cables directly into the vertical cable managers, eliminating the need for horizontal cable management between panels.

Part #	Description
MX-PNLA-24 . . . . .	24-port angled MAX UTP patch panel, 1U
	

Part #	Description
MX-PNLA-48 . . . . .	48-port angled MAX UTP patch panel, 2U
	

Part #	Description
PNLA-CVR-01 . . . . .	Angled panel cover, black

Angled MAX panels are not compatible with shielded Z-MAX or TERA outlets. Use the angled TERA-MAX or Z-MAX shielded panel.  
Angled MAX panels are not recommended for use with RS3 rack series. RS series racks are recommended.  
Panels include mounting hardware. Rear cable manager not included.  
Note: 1U = 44.5mm

## Optional Accessories

MX-PNL-LBL4* . . . . .
10 sheets of laser printable labels for 16-port MAX panels



MX-PNL-LBL6* . . . . .
10 sheets of laser printable labels for 24- and 48-port MAX panels



\*Visit our web site or contact our Technical Support Department for labelling software.

# MC® 5e UTP Modular Cords

Siemon uses the highest quality components combined with stringent manufacturing processes to produce the best performing, most durable modular patch cords available. The end result is a cord that exceeds all ISO/IEC and TIA/EIA component specifications for transmission performance.

**Bend Fatigue** — 24 AWG (7 strands @ 0.20mm) stranded wire for longer bend fatigue life

**High Performance** — MC 5e cords are constructed using high performance Siemon Category 5e cable



**Modular Plugs** — Exceed FCC CFR 47 part 68 subpart F and IEC 60603-7 specifications and have 50 microinches minimum of gold plating over nickel



**Factory Terminated**  
Cords are tested to consistently achieve Category 5e compatibility. Field termination is not recommended.



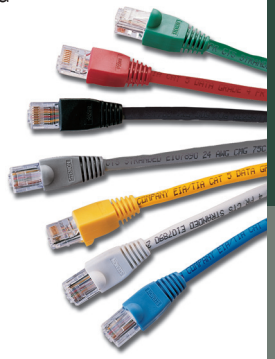
**Latch Guard**  
The MC 5e boot design incorporates a latch guard to protect the plug latch from snagging when pulling cords through pathways or cable managers.

## Ordering Information:

MC5-8T-(XX)M-B(XX)C . . . . .Category 5e UTP MC double-ended, 4-pair stranded modular cord, colour matching jacket/boot, T568A/B, CMG	
Cord Length	Cord Colour
01 = 1m	01 = Black
1.5 = 1.5m	02 = White
02 = 2m	03 = Red
03 = 3m	04 = Grey
05 = 5m	05 = Yellow
	06 = Blue
	07 = Green

MC5-8-T-(XX)M-(XX) . . . . .Category 5e UTP MC double-ended, 4-pair stranded modular cord, no boot, T568A/B, CMG	
Cord Length	Cord Colour
01 = 1m	01 = Black
1.5 = 1.5m	02 = White
02 = 2m	03 = Red
03 = 3m	04 = Grey
05 = 5m	05 = Yellow
	06 = Blue
	07 = Green

ⓑ Add "B" to end of part number for bulk project pack of 100 cords



## IC 5e Solid UTP Single-Ended Modular Cords

Siemon's solid, single-ended IC5e cable assemblies are designed for patching between the consolidation point and the back of the work area outlet or as equipment cords in cross-connect applications. These assemblies are constructed using cable that exceeds all Category 5e specifications.

IC5-8(X)-(XX)ML . . . . .Category 5e IC, single-ended UTP solid cord, violet jacket, no boot, LSOH	
Wiring	Length
A = T568B	03 = 3m
B = T568A	05 = 5m
	10 = 10m
	15 = 15m
	20 = 20m

IC5-8(X)-(XX)M-B(XX)L . . . . .Category 5e IC, single-ended UTP solid cord, violet jacket with coloured boot, LSOH	
Wiring	Boot Colour
A = T568B	01 = Black
B = T568A	02 = White
	03 = Red
	04 = Grey
	05 = Yellow
	06 = Blue
	07 = Green



Premium 5e® UTP 4-Pair Cable (International)

COMPLIANCE

- ISO/IEC 11801: Ed. 2.2 (Class D)
- IEC 61156-6-5 Ed. 2.0 (Category 5e)
- IEEE 802.3
- TIA-568-C.2 (Category 5e)
- UL CM
- UL CMR and CSA FT4
- LSOH: IEC 60332-1, IEC 60754, AND IEC 61034

CABLE CONSTRUCTION

- UTP
- Nominal jacket OD: 5mm
- 0.5mm solid (non-tinned) copper
- 1.0mm max conductor insulation diameter
- Reverse sequential numbering

Part #

Description

- 9C5R4-E2 .....PVC (CMR, CSA FT4), Blue Jacket, 305m Reelex  
9C5M4-E2 .....PVC (CM), Grey Jacket, 305m Reelex  
9C5L4-E2 .....LSOH (IEC 60332-1), Violet Jacket, 305m Reelex

Other cable lengths also available:  
Add “-5CR” for 500m Reel, “-1KR” for 1000m Reel



ELECTRICAL SPECIFICATIONS

DC Resistance	<9.38Ω/100m
DC resistance Unbalance	5%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	<330 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 100-350 MHz: 100 ± 22%
NVP	65%
Delay Skew	≤40ns

PHYSICAL PROPERTIES

	LSOH	CM/CMR
Pulling Tension (max)	110N	110N
Bend Radius (min)	25mm	25mm
Installation Temperature	0 to 60°C	0 to 60°C
Storage Temperature	-20 to 75°C	-20 to 75°C
Operating Temperature	-20 to 60°C	-20 to 60°C

TRANSMISSION PERFORMANCE

GUARANTEED WORSE CASE      SIEMON TYPICAL

Frequency (MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PSACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)		Propagation Delay (ns)	
1.0	2.1	1.9	65.3	79.3	62.3	72.3	63.2	77.4	60.2	70.4	63.8	84.8	60.8	78.8	20.0	27.0	570	545
4.0	4.1	3.7	56.3	70.0	53.3	63.3	52.2	66.6	49.2	59.6	51.8	72.8	48.8	66.8	23.0	32.0	552	527
10.0	6.5	5.8	50.3	64.3	47.3	57.3	43.8	58.5	40.8	51.5	43.8	64.8	40.8	58.8	25.0	32.0	545	520
16.0	8.3	7.4	47.2	61.2	44.2	54.2	39.0	53.8	36.0	46.8	39.7	60.7	36.7	54.7	25.0	32.0	543	518
20.0	9.3	8.3	45.8	59.8	42.8	52.8	36.5	51.5	33.5	44.5	37.8	58.8	34.8	52.8	25.0	32.0	542	517
31.25	11.7	10.5	42.9	56.9	39.9	49.9	31.1	46.4	28.1	39.4	33.9	54.9	30.9	48.9	23.6	30.0	540	515
62.5	17.0	15.0	38.4	52.4	35.4	45.4	21.4	37.4	18.4	30.4	27.9	48.9	24.9	42.9	21.5	30.0	539	514
100.0	22.0	19.3	35.3	49.3	32.3	42.3	13.3	30.0	10.3	23.0	23.8	44.8	20.8	38.8	20.1	30.0	538	513
160.0*	28.6	25.1	32.2	46.2	29.2	39.2	3.7	21.1	0.7	14.1	19.7	40.7	16.7	34.7	18.7	28.0	537	512
200.0*	32.4	28.1	30.8	44.8	27.8	37.8	-1.6	16.7	-4.6	9.7	17.8	38.8	14.8	32.8	18.0	27.0	537	512
250.0*	36.9	31.4	29.3	43.3	26.3	36.3	-7.5	11.9	-10.5	4.9	15.8	36.8	12.8	30.8	17.3	26.0	536	511
300.0*	41.0	34.5	28.1	42.1	25.1	35.1	-12.8	7.6	-15.8	0.6	14.3	35.3	11.3	29.3	16.8	25.0	536	511
350.0*	44.9	39.4	27.1	41.1	24.1	34.1	-17.7	1.7	-20.7	-5.3	12.9	33.9	9.9	27.9	16.3	24.0	536	511

\*Values above 100 MHz are for information only. All performance based on 100 metres.

# S110® Connecting Block System

Siemon's S110 connecting block systems and accessories combine Category 5e performance with user-friendly installation features.

- **Multi-application support** — Ideal for use in cross-connect and consolidation point applications
- **Durable design** — Rugged high impact, flame-retardant polycarbonate easily withstands force of impact tools
- **Full line** — Complete system includes field terminated and pre-wired blocks, connecting blocks, patch cords, cable managers and more.

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S110 Wiring Blocks . . . . .	5.9
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S110 to MC® Cable Assemblies . . . . .	5.11
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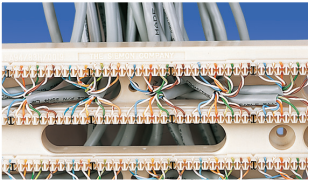
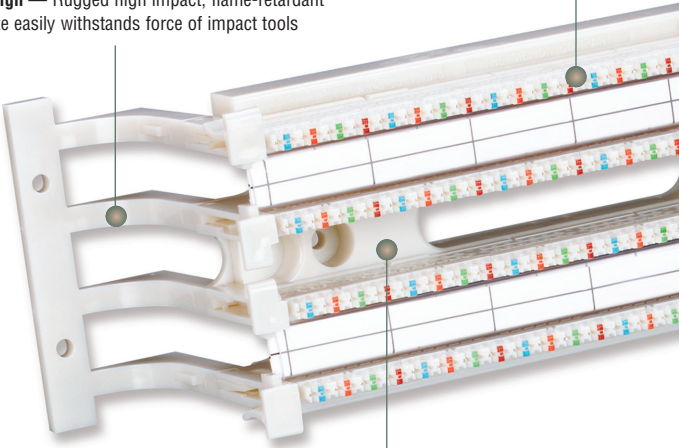
# S110® Connection System

Siemon S110 field termination kits combine Category 5e performance with unparalleled installation features. Each kit includes connecting blocks to complete each 25-pair termination strip on the S110 wiring block.

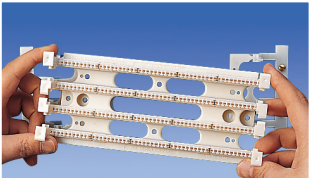
**Block Markings** — Termination strips on the base are marked in 5-pair increments. Connecting blocks are colour-coded

**Durable Design** — Rugged high impact, flame-retardant polycarbonate easily withstands force of impact tools

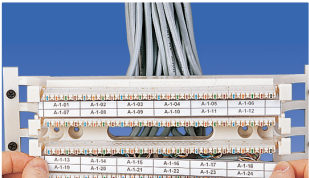
**Multi-Application Support** — Ideal for use in cross-connect and consolidation point applications



**Patented Cable Access Openings**  
Allow cables to be routed through the rear of the block directly to the point of termination.



**Detachable Blocks**  
Another patented Siemon innovation allows 50- and 100-pair wiring blocks to be detached from their mounting legs providing easy access to cables.



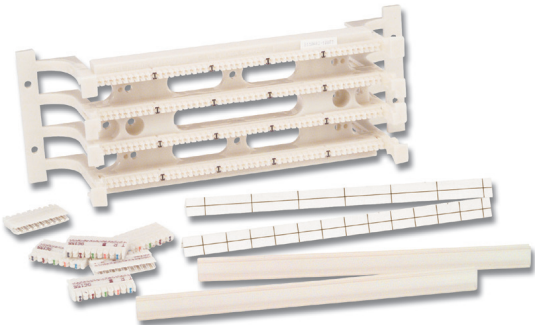
**Labelling**  
Designation strips with interchangeable coloured labels can be mounted in the centre and/or outside positions.

## S110 Field Termination Kits

Complete S110 installation kits include S110 wiring blocks with detachable legs\*, S110 connecting blocks, and label holders with white designation labels.

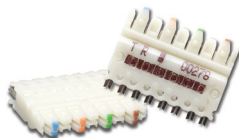
Part #	Description
S110A(X)1-50FT . . . . .	50-pair S110 field termination kit height: 45.7mm width: 272mm depth: 82.8mm
S110A(X)2-100FT . . . . .	100-pair S110 field termination kit height: 91.4mm width: 272mm depth: 82.8mm
S110A(X)2-300FT* . . . . .	300-pair S110 field termination kit height: 274mm width: 272mm depth: 82.8mm

Use (X) to specify connecting block size: A = 5-pair, B = 4-pair  
\*Legs detachable on 50- and 100-pair version only.

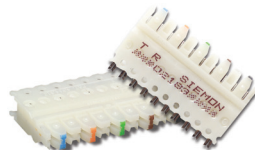


## S110® Connecting Blocks

Siemon category 5e S110C blocks terminate 22-26 AWG (0.64mm-0.40mm) solid or 7-strand wires. They also offer markings to designate tip and ring conductors and colour-coded pairs on each block and a patented single-piece, robust construction.



S110C-4.....  
4-pair connecting block,  
blue/orange/green/brown



S110C-5.....  
5-pair connecting block,  
blue/orange/green/ brown/slate

## S110 Wiring Blocks

### Wiring Blocks With Legs

S110AW1-50 .....  
50-pair, 110 wiring block with legs  
height: 45.7mm  
width: 272mm  
depth: 82.8mm

S110AW2-100 .....  
100-pair, 110 wiring block with legs  
height: 91.4mm  
width: 272mm  
depth: 82.8mm

S110AW2-200 .....  
200-pair, 110 wiring block with legs  
height: 182.9mm  
width: 272mm  
depth: 82.8mm

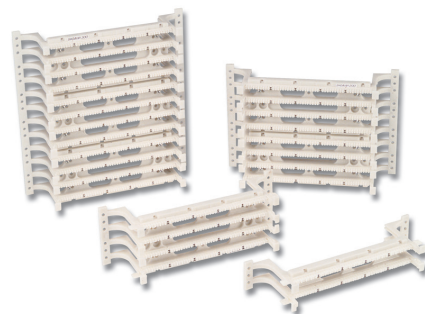
S110AW2-300 .....  
300-pair, 110 wiring block with legs  
height: 274.3mm  
width: 272mm  
depth: 82.8mm

### Wiring Blocks Without Legs

S110DW1-25 .....  
25-pair, 110 wiring block without legs  
height: 16.0mm  
width: 216mm  
depth: 35.8mm

S110DW1-50 .....  
50-pair, 110 wiring block without legs  
height: 42.4mm  
width: 216mm  
depth: 35.8mm

S110DW2-100 .....  
100-pair, 110 wiring block without legs  
height: 88.1mm  
width: 216mm  
depth: 35.8mm



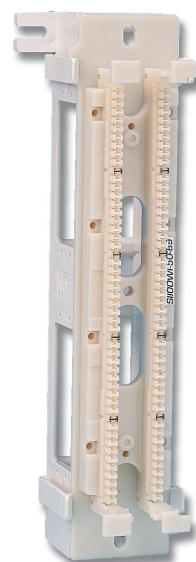
## Vertically Mounted S110 Blocks

This 50-pair S110 block can be mounted on the same S89B bracket that holds our S66™ blocks. The wiring base is available separately or as part of a field-terminated kit that includes the 4- or 5-pair connecting blocks and designation strips.

Part #	Description
S110DW1-50-89 .....	50-pair S110 wiring base on an 89-type retainer.* S110 connecting blocks are not included height: 254.0mm width: 85.9mm depth: 86.6mm (dimensions include S89 bracket)
S110D(X)1-50FT-89.....	50-pair S110 field termination kit on an 89-type retainer.* Includes S110 connecting blocks and designation strips height: 254.0mm width: 85.9mm depth: 86.6mm (dimensions include S89 bracket)

Use (X) to specify connecting blocks: A = 5-pair, B = 4-pair

\*S89 brackets are not included and must be ordered separately .

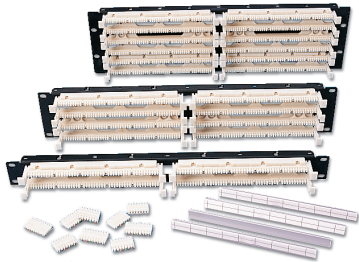


S110® 19 Inch Field Termination Panels

S110 panels allow wiring blocks to be mounted directly to a 19 inch CEA rack or cabinet. Each panel includes adequate connecting blocks to complete each 25-pair termination strip on the S110 block (e.g. S110DB1-100RFT would include five 4-pair and one 5-pair connecting block per 25-pair termination strip, or a total of twenty 4-pair and four 5-pair connecting blocks).

Part #	Description
S110D(X)1-100RFT . . . . .	100-pair, 19 inch panel, S110 field termination kit, 1U
S110D(X)1-200RFT . . . . .	200-pair, 19 inch panel, S110 field termination kit, 2U
S110D(X)1-300RFT . . . . .	300-pair, 19 inch panel, S110 field termination kit, 3U

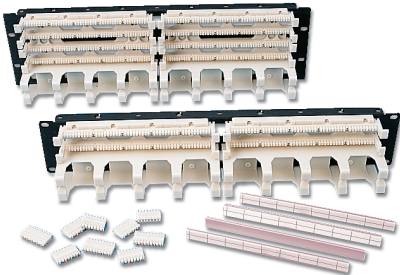
Use (X) to specify connecting block size: A = 5-pair, B = 4-pair  
Note: 1U = 44.5mm



Field Terminated S110 19 Inch Panels with Cable Managers

Part #	Description	RMS
S110D(X)2-100RWM . . . . .	100-pair, 19 inch panel, S110 field termination kit. . . . . 2 with cable managers and covers	
S110D(X)2-200RWM . . . . .	200-pair, 19 inch panel, S110 field termination kit. . . . . 3 with cable managers and covers	

Use (X) to specify the connecting blocks: A = 5-pair, B = 4-pair  
Note: 1 RMS = 44.5mm



S110 Designation Labels

Siemon S110 wiring blocks allow designation labels to be mounted between each row of connecting blocks. Each label has 2-, 3-, 4-, and 5-pair markings and may be used for colour-coding services in accordance with TIA/EIA-606-A.

Part #	Description
S110-HLDR . . . . .	Transparent plastic label holders, bag of 6
S110-LBL-(X). . . . .	2-, 3-, 4-, and 5-pair marked coloured labels, bag of 6

Use (X) to specify colour: 2 = white, 3 = red, 4 = grey, 5 = yellow, 6 = blue, 7 = green, 8 = violet, 9 = orange, 60 = brown



# S110® Patch Plugs and Cable Assemblies

## S110 Patch Plugs

Siemon S110 patch plugs are both Category 5e compliant and can be field-terminated to either solid or stranded cable. 4-pair S110 patch plugs employ a patented design to improve electrical isolation between pairs, enhancing cross-talk performance so that the mated plug and connecting block significantly exceed Category 5e transmission requirements.

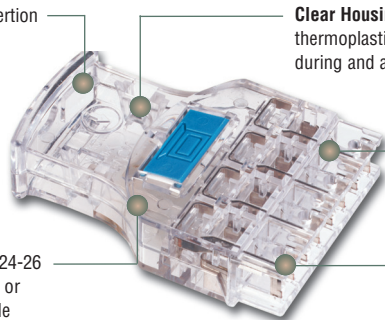
**Ergonomic Handle** — Aids insertion and removal of patch plug

**Clear Housing** — Durable, flame-retardant, clear thermoplastic housing keeps conductors visible during and after termination

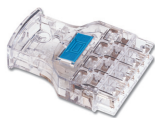
**Field Installable** — Terminates 24-26 AWG (0.40mm-0.51mm) solid or 7-strand twisted-pair UTP cable

**Easy Termination** — Simply snap the base and cover together to mass terminate all conductors

**Polarisation** — Each plug housing includes polarisation features to ensure proper tip-ring orientation during connection



S110P4 . . . . .  
4-pair, field-terminated,  
S110 patch plug



S110P2 . . . . .  
2-pair, field-terminated,  
S110 patch plug



S110P1\* . . . . .  
1-pair, field-terminated,  
S110 patch plug



ⓑ Add “-B” to end of part number for bulk project pack of 100 patch plugs.

\*S110P1 includes protective insert for use with single pair cross-connect wire.

Coloured icons are available for colour-coding 4-pair S110 plugs (sold separately)

## S110 Cable Assemblies

The S110 cable assemblies utilise Siemon's S110P4 patch plugs for easy and reliable connections between S110 termination fields. These assemblies use high performance stranded cable which exceeds Category 5e specifications and are factory transmission tested to ensure optimum Category 5e channel performance. Coloured icons are available for colour-coding 4-pair S110 plugs.

Part #	Description
S110P4-P4-(XX)M . . . . .	4-pair, double-ended stranded S110 cord, CMG
S110P2-P2-(XX)M . . . . .	2-pair, double-ended stranded S110 cord, CMG
S110P1-P1-(XX)M . . . . .	1-pair, double-ended stranded S110 cord, CMG

Use (XX) to specify length: 03 = 3m, 05 = 5m, 07 = 7m, 10 = 10m, 15 = 15m, 20 = 20m

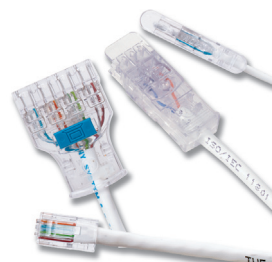


## S110 to MC® Cable Assemblies

The S110 to modular cable assemblies combine Siemon's high performance modular plugs for patching network equipment to S110 connecting blocks or providing test access to S110 termination fields. The combination of plugs, high performance cable and factory transmission testing ensures performance is compatible with Premium 5e or lower systems.

Part #	Description
S110P4-A4-(XX)M . . . . .	Category 5e, 4-pair, S110-to-modular plug, T568B, standard cable assembly, CMG
S110P4-T4-(XX)M . . . . .	Category 5e, 4-pair, S110-to-modular plug, T568A, standard cable assembly, CMG
S110P2-UT-(XX)M . . . . .	Category 5e, 2-pair, S110-to-modular 8-position plug, Token Ring, T568A, standard cable assembly, CMG
S110P2-E2-(XX)M . . . . .	Category 5e, 2-pair, S110-to-modular 8-position plug, 10/100BASE-T, T568B, standard cable assembly, CMG
S110P1-U1-(XX)M . . . . .	Category 5e, 1-pair, S110-to-modular 6-position plug, USOC, standard cable assembly, CMG
S110P1-U4-(XX)M . . . . .	Category 5e, 1-pair, S110-to-modular 8-position plug, USOC, standard cable assembly, CMG

Use 1st (XX) to specify length: 03 = 3m, 05 = 5m, 07 = 7m, 10 = 10m, 15 = 15m, 20 = 20m



# S110® Tower Kits

## S110 Tower Field Termination Kits

The S110 Tower System provides a modular high-density cross-connect cable management system. S110 Tower Systems are shipped unassembled to simplify field assembly and termination.

Part #	Description
S110M(X)2-300FT . . . . .	300-pair S110 Tower field termination kit height: 406.4mm, width: 215.9mm, depth: 152.6mm
S110M(X)2-400FT . . . . .	400-pair S110 Tower field termination kit height: 541.3mm, width: 215.9mm, depth: 152.6mm
S110M(X)2-500FT . . . . .	500-pair S110 Tower field termination kit height: 676.1mm, width: 215.9mm, depth: 152.6mm

Use (X) to specify connecting block size: A = 5-pair, B = 4-pair



## S110 Tower Optional Accessories

S188-300 . . . . .  
Large-scale vertical cable manager  
for use with 300-pair Tower  
height: 406.4mm  
width: 215.9mm  
depth: 190.5mm

S188-400 . . . . .  
Large-scale vertical cable manager  
for use with 400-pair Tower  
height: 541.3mm  
width: 215.9mm  
depth: 190.5mm

S188-500 . . . . .  
Large-scale vertical cable manager  
for use with 500-pair Tower  
height: 676.1mm  
width: 215.9mm  
depth: 190.5mm

S188-WD . . . . .  
Metal duct for additional horizontal  
cable management at base of Tower  
height: 114.3mm  
width: 215.9mm  
depth: 203.2mm

S110M-WM-300 . . . . .  
Small-scale vertical cable manager  
for use with 300-pair Tower  
height: 406.0mm  
width: 76.2mm  
depth: 153.0mm

S110M-WM-400 . . . . .  
Small-scale vertical cable manager  
for use with 400-pair Tower  
height: 541.2mm  
width: 76.2mm  
depth: 153.0mm

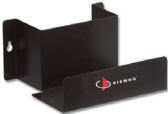
S110M-WM-500 . . . . .  
Small-scale vertical cable manager  
for use with 500-pair Tower  
height: 675.9mm  
width: 76.2mm  
depth: 153.0mm



Tower with S188



S188



S188-WD



S110M-WM

# XLBET Frame

The Siemon XLBET (Extra Large Building Entrance Terminal) frames are designed for use in large installations where space is a premium. Compatible with Siemon’s vertical patching (VPC-6) and cable management (RS-CNL) channels.

## XLBET Frame

Part #	Description
XL-(XX)00	7 ft. x 23 in. XLBET frame. Includes rack, wire management and mounting hardware. S110® wiring blocks not included height: 2133.6mm width: 617.5mm depth: 406.4mm

Use (XX) to specify pair count: 36 = 3600-pair, 72 = 7200-pair

## XLBET Frame with S110 Wiring Blocks

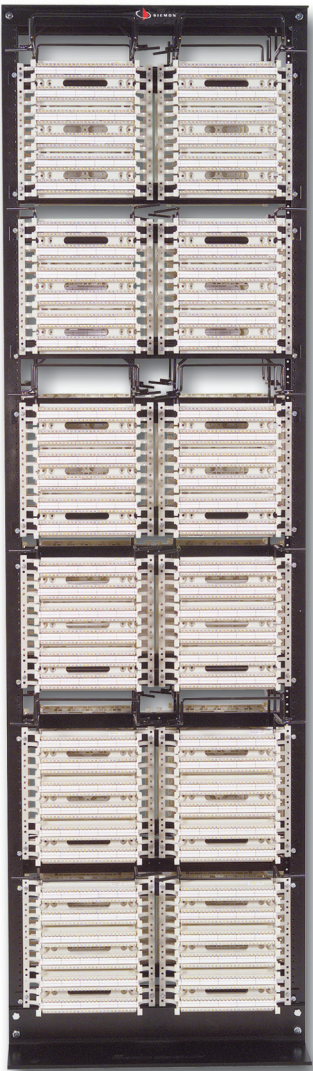
Part #	Description
XL-(XX)00-W	7 ft. x 23 in. XLBET frame. Includes rack, wire management, S110 wiring blocks, clear designation holders, labels, and mounting hardware (S110 connecting blocks not included)

Use (XX) to specify pair count: 36 = 3600-pair, 72 = 7200-pair

## Optional Accessories

Part #	Description
XL-CK	Concrete mounting kit. Includes hardware to secure one 23 or 35 inch XLBET frame to a concrete floor
XL-(X)-3600	S110 connecting block kit. Includes the appropriate number of 4- or 5-pair connecting blocks to fully populate a 3600-pair frame. Two kits can be ordered for 7200-pair frames
XL-K23	23 in. (.58m) rack conversion kit. Converts one side of a standard 23 inch rack to an XLBET frame. Two kits are required to utilise both sides of a 23 inch rack. Includes wire managers, mounting bars and mounting hardware. Rack, S110 wiring blocks, clear designation holders and labels not included

Use (X) to specify connecting blocks: A = 5-pair, B = 4-pair





**Siemon's LightHouse® line of high-performance fibre optic cable and connectivity delivers a comprehensive solution set to meet nearly any network infrastructure need:**

- A complete line of rapidly-deployed, high-density Plug and Play solutions supporting up to 40 and 100Gb/s speeds - Including the innovative LightStack™ ultra high-density Plug and Play system
- Comprehensive family of fibre enclosures, supporting up to 1152 fibre ports per enclosure
- High-performance, factory tested jumpers and pigtails including Siemon's innovative push-pull LC BladePatch®
- Field-terminated connectivity — multiple LC, SC and ST configurations
- Preterminated and tested trunking cable assemblies available in custom lengths, fibre counts and configurations
- Fibre Cable — Multimode OM1 62.5/125, OM2, OM3 and OM4 50/125, and Singlemode OS1/OS2
- End-to-end line of fusion splice solutions

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# LightStack™

## Siemon's Ultra High Density Fibre Plug & Play System

### The Perfect Combination...

Siemon's LightStack system combines superior performance and ultra high density with unmatched accessibility - all packaged in a sleek, modern 1U enclosure that manages fibre cabling like never before.

LightStack was specifically designed for advanced data centres, network and storage area environments, while providing a seamless migration to 40 and 100 gigabit applications.



**Ultra High Density**  
Elegantly designed enclosures facilitate up to 144 fibres (LC) and 864 fibres (MTP) within 1U

**Superior Jumper Management**  
Unlatch and swing open clips for complete access to any jumper with ample capacity to route all jumpers in one direction

**Unmatched Accessibility**  
Divider is there when you need it and gone when you don't. Slides inward for complete access to all connectivity at the rear of stacked enclosures

**Low Loss Connectivity**  
Highest performing Plug and Play Modules and Adapters can be single-handedly installed and removed from the front or rear

To learn more about LightStack including its innovative labelling system and full range of preterminated trunks visit: [www.siemon.com/lightstack](http://www.siemon.com/lightstack)

# LightStack™ Enclosures

Siemon's LightStack ultra high density fibre Plug and Play enclosure offers superior density, port access and cable management in a sleek, modern enclosure that easily supports today's advanced data centre and storage area network environments.



**Cable Management Clips** — Unlatch and swing open for full access to any jumper

**Innovative Labelling Solution** — Drop-down label strip holder for high visibility

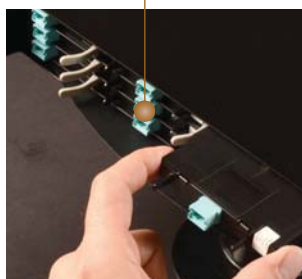
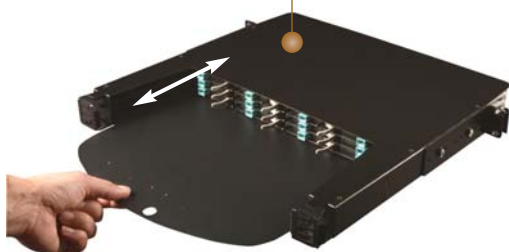
**Innovative Magnetic Door** — Opens and closes easily. Eliminates pinch points

**Sliding Bottom Rear Divider** — Acts as a rear cable divider between stacked enclosures (in the out position). Pushes inward to provide complete access to connectivity at the rear of stacked enclosures

**Module Insertion and Removal** — Can be quickly and easily installed or removed from the front or rear of the enclosure

**Mounting Options** — Rack mounting brackets can be attached at any of 3 horizontal positions

**Strain Relief** — Swivel tie down allows for simplistic approach for anchoring trunks and eliminating pinch points



## Ordering Information:

Part #	Description
LS-1U-01	1U Enclosure, 144 LC fibres or 864 MTP fibres, mounts in 19 in. racks or cabinets
LS-4U-01	4U Enclosure, up to 576 LC fibres or 3456 MTP fibres, mounts in 19 in. racks or cabinets



1U Enclosure



4U Enclosure

# LightStack™ Modules

LightStack LC-to-MTP Low Loss Plug and Play modules deliver a quick and efficient way to deploy high-performance fibre cabling in a low-profile, high density package. Up to 12 of these ultra-slim modules can be installed in a single 1U LightStack enclosure, seamlessly providing up to 144 easily-managed LC fibre ports. Available in OM4 Multimode and Singlemode configurations, these modules offer industry leading loss performance of just 0.35dB.

**Ultra Slim Design** — LightStack modules have an ultra slim design to achieve maximum fibre density

**High Fibre Count** — Up to 12 fibre count per module

**Standard Interfaces** — LC to MTP interface. Available in OM4 and SM

**Low Loss Options** — Low loss performance (0.35dB per Multi-mode module)

**Multiple Adapter Configurations** — Aqua LC and MTP adapters for OM4; Blue LC adapters and black MTP adapters for SM

**Rear Module Handles** — Handles in the rear of module help facilitate removal from the back of the enclosure

## Ordering Information:

Part #	Description
LS-12-LC5V-01	Module, 12 LC-to-MTP fibres, OM4, XGLO 550, Aqua LC and MTP adapters
LS-12-LCSM-01	Module, 12 LC-to-MTP fibres, Singlemode, Blue LC adapters, Black MTP adapters

## PERFORMANCE SPECIFICATIONS

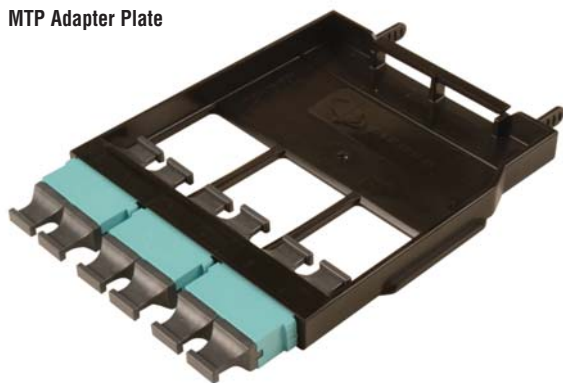
	Insertion Loss (dB)	Return Loss (dB)	Insertion Loss (dB)	Return Loss (dB)
	Multimode		Singlemode	
MTP	0.20	20	0.60	65
LC	0.15	30	0.40	60
MTP to LC	0.35	20	1.00	60

Reference Siemon's White Paper titled: "The Need for Low-Loss Multifibre Connectivity in Today's Data Center" for information and guidance on design options, channel models and distances for 10, 40, 100Gb Ethernet and Fibre Channel applications.

# LightStack™ Adapter Plates

Fully ready to support 40 and 100 gigabit applications, LightStack low-loss 0.2dB MTP pass-through adapters are available in 2, 4 and 6-port designs supporting up to 72 fibres per adapter and are offered in both aligned and opposed key orientation to accommodate all polarity methods. In addition, LightStack also offers industry exclusive 12-fibre LC pass-through adapter plates for current 10 gigabit Ethernet or Fibre Channel SAN applications.

MTP Adapter Plate



## LightStack MTP Adapter Plates

- Ultra slim design to achieve maximum fibre density
- Up to 72 fibre count
- Handles in the rear of module helps facilitate removal from the back of the enclosure

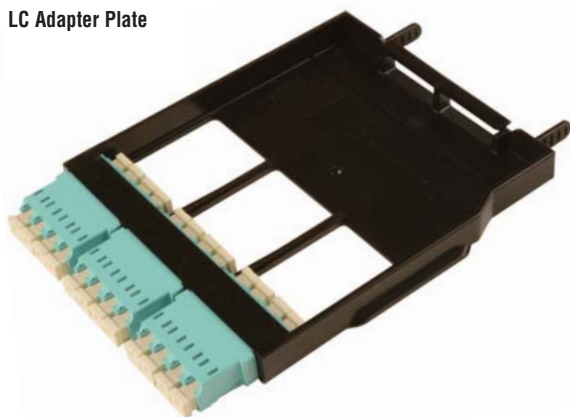
### Ordering Information:

LS-MP(X)-01(X)(XX)		
MTP Port Count		Adapter Colour
2 = 2 MTP Ports		<b>AQ</b> = Aqua**
4 = 4 MTP Ports		<b>BK</b> = Black**
6 = 6 MTP Ports		<b>GR</b> = Grey*
		Key Orientation
		<b>B</b> = Aligned (key up to key up)
		<b>C</b> = Opposed (key up to key down)

\* Key Orientation B Only

\*\* Key Orientation C Only

LC Adapter Plate



## LightStack LC Adapter Plates

- Used in conjunction with LC BladePatch® RazorCore™ trunks for rear connections only (see page 6.17)
- Available in beige and aqua (MM) and blue (SM)
- 12 LC fibres

### Ordering Information:

LS-LC12-01C-(XX)	
	Adapter Colour
	<b>AQ</b> = Aqua Multimode
	<b>BG</b> = Beige Multimode
	<b>BL</b> = Blue Singlemode

# Rack Mount Interconnect Centre (RIC3)

The RIC3 provides the best overall value for exceptional fibre management. The RIC3 enclosure offers superior fibre density without sacrificing fibre protection and accessibility. Features include a fully removable tray, improved labelling, standard front and rear door locks, and single-finger door latches. With superior cable management, port identification, fibre accessibility and security, the RIC3 is the best way to protect mission critical fibre connections.

**Superior Design** — Top and bottom access holes located at the rear of the enclosure allow fibres to be routed between tandem enclosures without having to run fibres outside of the enclosure

**Complete Access** — Management tray has a positive stop in both front and rear working positions providing complete access for moving, adding, changing, or cleaning of fibre connections

**Enhanced Labelling** — Label virtually any port configuration with our hinged labels. The labels hang on the front door for improved visibility. When the door is opened, labels flip down allowing ready viewing of the label and corresponding ports



**Rotating Grommets** — Patented rotating grommets facilitate loading and retention of jumpers and fibre while minimising microbending stress when using the sliding tray

**Quick-Release Hinges** — Spring loaded quick-release hinges enable easy opening and removal of front and rear doors for complete access to fibre connections

**Maximum Capacity** — The RIC3 enables a maximum amount of fibres to be patched or patched and spliced in a 2, 3, and 4U enclosure without compromising accessibility. This allows more efficient utilisation of rack space



## Removable Tray

The RIC3 cable management tray is fixed in place, but can be removed from the front or rear of the enclosure and moved to a work table for greater convenience.



## Latching and Locking

The RIC3 features a single-finger latch on both front and rear doors. Front and rear doors include a lock for added security.



## Quick-Pack® Adapter Plates

Siemon Quick-Pack adapter plates can be inserted or removed with a single-finger latch for quick and easy access to fibre connections.

# Rack Mount Interconnect Centre (RIC3)

Siemon RIC3 enclosures are designed for enhanced fibre management and ease of use. They are compatible with an array of Siemon fibre Quick-Pack® and MTP adapter plates for your choice of fibre adapters and port density.



Part #	Description
RIC3-24-01	24- to 96-fibre (384 fibres with MTP adapter plates) Rack Mount Interconnect Centre, accepts (4) Quick-Pack adapter plates, 2U, black height: 86.6mm width: 432mm depth: 380mm



Part #	Description
RIC3-36-01	36- to 144-fibre (up to 576 fibres with MTP adapter plates) Rack Mount Interconnect Centre, accepts (6) Quick-Pack adapter plates, 2U, black height: 86.6mm width: 432mm depth: 380mm



RIC3-48-01	48- to 192-fibre (up to 768 fibres with MTP adapter plates) Rack Mount Interconnect Centre, accepts (8) Quick-Pack adapter plates, 3U, black height: 133mm width: 432mm depth: 380mm
------------	--



RIC3-72-01	72- to 288-fibre (up to 1152 fibres with MTP adapter plates) Rack Mount Interconnect Centre, accepts (12) Quick-Pack adapter plates, 4U, black height: 178mm width: 432mm depth: 380mm
------------	--

Note: 1U = 44.5mm

Note: All RIC products include laser-printable labels\*, cable ties, rack-mounting hardware, and pre-installed fibre management clips.

\*Visit [www.siemon.com](http://www.siemon.com) for labelling software.

## MAXIMUM RIC3 FIBRE CAPACITY

# Fibres per Quick-Pack	Adapter Options	RIC24	RIC36	RIC48	RIC72
6	ST, SC	24	36	48	72
8	ST, SC	32	48	64	96
12	ST, SC, LC	48	72	96	144
16	LC	64	96	128	192
24	LC	96	144	192	288
96	MTP	384	567	768	1152

## MAXIMUM SPLICING CAPACITY

Splice Type	RIC24	RIC36	RIC48	RIC72
Fusion	96	96	96	144

# Wall Mount Interconnect Centre (SWIC3)

The Wall Mount Interconnect Centre (SWIC3) is a cost-effective fibre enclosure designed to manage and protect up to 192 fibres using SC, ST or LC adapter plates and up to 768 with MTP adapter plates. The low-profile, compact design makes it ideal for telecommunications rooms or other installation areas where wall space is a premium. The adapter mounting method is based on Siemon's Quick-Pack® adapter plates also used in our family of Rack Mount Interconnect Centres (RIC3).

**Door Options** — Doors on enclosure and jumper guard can be ordered with independent key lock or latching options

**Convenient Labelling** — Convenient labelling system includes removable clear label holders for storing and protecting fibre documentation on each door

**Available with Quick-Pack Adapter Plates** — Quick-Pack adapter plates are available with SC, ST, LC or MTP adapters

**Fibre Jumper Guard** — Integrated hinged fibre guard provides independent protection and management for fibre jumpers

**Accessories** — Dust-proofing grommets included

**Optional Splice Tray Bracket** — Optional bracket available for mounting multiple splice trays (not shown)

**Patented rotating grommets** — Facilitate loading and retention of jumpers for extended SWIC only (SWIC3G-E)



## Easy Access

Doors on enclosures and jumper guard swing open a full 180° to provide complete front and side access.



## Dual-Level Fibre Managers

Incorporates two independent levels of storage to enable the fibre to be routed at levels that correspond to the adapters.



## Snap-In Adapter Plates

Utilises same Quick-Pack adapter plates as RIC3 enclosures with integrated latches for snap-in installation and single-finger removal.

## Ordering Information:

Part #	Description
SWIC3-M-01*	Mini Wall Mount Interconnect Centre, black, accepts 2 Quick-Pack® adapter plates height: 218.4mm (8.6 in.), width: 185.4mm (7.3 in.), depth: 82.6mm (3.25 in.)
<i>Use (X) to specify type of latch door: A = key lock, C = thumb-turn latch</i> <i>*Does not accept splice trays</i>	
SWIC3-(X)-01	Wall Mount Interconnect Centre, black. Includes dual-level fibre managers, port designation labels and removable pocket, dust-proofing grommets, strain relief hardware, cable ties, and mounting hardware, accepts 4 Quick-Pack adapter plates height: 311mm (12.25 in.) width: 311mm (12.25 in.) depth: 82.6mm (3.25 in.)
SWIC3G-(X)(X)-01	Wall Mount Interconnect Centre with integrated jumper guard, black. Includes dual-level fibre managers, port designation labels and removable pocket, stick-on port designation labels for guard, dust-proofing grommets, strain relief hardware, cable ties, and mounting hardware, accepts 4 Quick-Pack adapter plates height: 311mm (12.25 in.) width: 406mm (16 in.) depth: 82.6mm (3.25 in.)
SWIC3G-E-(X)(X)-01	Wall Mount Interconnect Centre with integrated jumper guard, black. Includes dual-level fibre managers, port designation labels and stick on holder for front and rear dust-proofing grommets, strain relief hardware, cable ties and mounting hardware, accepts 8 Quick-Pack adapter plates height: 350mm (13.75 in.) width: 515mm (20.28 in.) depth: 160mm (6.32 in.)

*Use 1st (X) to specify type of lock on the enclosure (left) door:*

*A = key lock, C = thumb-turn latch*

*Use 2nd (X) to specify type of lock on the guard (right) door:*

*A = key lock, C = thumb-turn latch*



## Accessories

### Fibre Splice Tray Brackets

Part #	Description
TRAY-B-01	Bracket for mounting splice trays to SWIC3 base
TRAY-EB-01	Bracket for mounting splice trays to SWIC3G-E base



### Fibre Splice Trays

Part #	Description
TRAY-M-3	Mini splice tray for up to 12 fusion splices with sleeve protection

## MAXIMUM SWIC3 FIBRE CAPACITY

# Fibres per Quick-Pack	Adapter Options	SWIC3-M	SWIC3	SWIC3G-E
6	ST, SC	12	24	48
8	ST, SC	16	32	64
12	ST, SC	24	48	96
16	LC	32	64	128
24	LC	48	96	192
96	MTP	192	384	768

## MAXIMUM SPLICING CAPACITY

Splice Type	SWIC3	SWIC3G-E
Fusion	48	96

# Fibre Connect Panel (FCP3)

Siemon's popular Fibre Connect Panels (FCP3-DWR and FCP3-RACK) economically connect, protect, and manage up to 72 fibres in 1U (up to 288 fibres with MTP to MTP adapters). It accepts Siemon's Quick-Pack® adapter plates with patented single-finger access. The FCP3-DWR makes access to the connections easy via a fixed tray that can be released and slid out of the front or rear of the enclosure.

**Lanced Tabs** — Provide convenient cable anchor points for incoming jacketed fibre cable

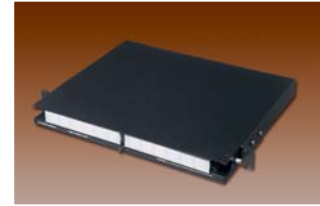
**Up to 3 Optional Splice Trays** — Can be mounted to manage and protect either mechanical or fusion splices



**Label Holder** — Protects fibre jumpers and is readily removable via release of factory-installed snap-latches

**Rear Fibre Clips** — Manage cable slack while maintaining minimum bend radius requirements

**Front Fibre Clips** — Manage up to 36 duplex fibre jumpers (72 fibres total) or 24-, 12-fibre MTP trunks



## High Density

FCP3 enclosures accommodate up to 72 fibres (288 with MTP adapter plates) in only 1U on a 19 inch rack.



## Sliding Tray

The FCP3-DWR (drawer version) features a tray that slides out from the front or rear, providing easy access to fibre connections. The entire tray can be removed and placed on a work table for more convenience.

## MAXIMUM FCP3 FIBRE CAPACITY

# Fibres per Quick-Pack	Adapter Options	FCP3
6	ST, SC	18
8	ST, SC	24
12	ST, SC, LC	36
16	LC	48
24	LC	72
96	MTP	288

## MAXIMUM SPLICING CAPACITY

Splice Type	FCP3
Fusion	72

## Fibre Connect Panel (FCP3)

Part #	Description
FCP3-DWR .....	6- to 72-fibre (up to 288 fibres with MTP adapter plates) Fibre Connect Panel with sliding tray, accepts (3) Quick-Pack® adapter plates, 1U, black. Includes mounting brackets, housing/tray, fibre managers, grommets, label holders, and labels <i>height: 43.2mm, width: 482.6mm, depth: 355.6mm</i>
FCP3-RACK .....	6- to 72-fibre (up to 288 fibres with MTP adapter plates) Fibre Connect Panel with fixed tray, accepts (3) Quick-Pack adapter plates, 1U, black. Includes mounting brackets, housing/cover, fibre managers and grommet <i>height: 43.2mm, width: 482.6mm, depth: 241.3mm</i>

Note: 1U = 44.5 mm



FCP3-DWR



FCP3-RACK

## Compression Fittings

Compression fittings are utilised as an enhanced method for securing cables to FCP3 fibre enclosures. Acme threads on the body prevent skipping, allowing for faster installations of lock-nuts.

Part #	Description
CF-(XX) .....	Compression fitting

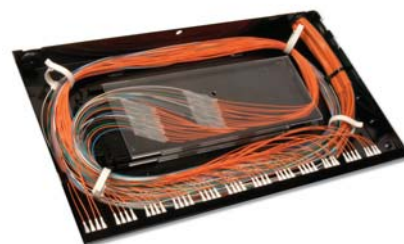
Use (XX) to specify fibre diameter:  
40 = 5.8 – 13.9mm,  
51 = 11.4 – 18.0mm  
60 = 15.0 – 25.4mm



## Splice Trays (XGLO® and LightSystem®)

These aluminium trays come with a clear, snap-on polycarbonate cover and can be stacked for high-density applications. The standard tray holds up to 24 splices. The mini-tray for use with the SWIC3, accommodates up to 12 splices.

Part #	Description
TRAY-3 .....	Standard splice tray for up to 24 fusion splices with sleeve protection. For use with RIC3 and FCP3 fibre enclosures
TRAY-M-3 .....	Mini splice tray for up to 12 fusion splices with sleeve protection.



TRAY-3



TRAY-M-3

### Standard Tray Dimensions

*height: 103mm,  
width: 298mm,  
depth: 8.13mm*

### Mini Tray Dimensions

*height: 103mm,  
width: 179mm,  
depth: 8.13mm*

## Heat Shrink Sleeves

Heat shrink sleeves provide a safe and efficient method for protecting fusion splices on either 250 or 900 micron coated fibres. Heat shrink sleeves are threaded on to fibres prior to fusion splicing and then positioned directly over splice and heated via an oven or heat gun.\*

Part #	Description
HT-40	40mm heat shrink sleeve
HT-60	60mm heat shrink sleeve

\*Heating times may vary depending on heat source.



## Quick-Pack® Adapter Plates

Siemon's patented Quick-Pack adapter plates feature an integrated latch, which provides single-finger access to fibre even in fully populated enclosures.

### XGLO® & LightSystem®

RIC-F-SC6-01 .....  
3 duplex SC adapters  
(6 fibres)



RIC-F-SC8-01 .....  
4 duplex SC adapters  
(8 fibres)



RIC-F-SC12-01 .....  
6 duplex SC adapters  
(12 fibres)



RIC-F-SC6Q-01 .....  
3 duplex SC adapters  
(6 fibres), aqua adapters (not shown)

RIC-F-SC8Q-01 .....  
4 duplex SC adapters  
(8 fibres), aqua adapters (not shown)

RIC-F-SC12Q-01 .....  
6 duplex SC adapters  
(12 fibres), aqua adapters (not shown)

RIC-F-LC12-01C .....  
6 duplex LC adapters  
(12 fibres), beige adapters



RIC-F-LC16-01C .....  
4 quad LC adapters  
(16 fibres), beige adapters



RIC-F-LC24-01C .....  
6 quad LC adapters  
(24 fibres), beige adapters



RIC-F-LCU12-01C .....  
6 duplex LC adapters  
(12 fibres), blue adapters (not shown)

RIC-F-LCU16-01C .....  
4 quad LC adapters  
(16 fibres), blue adapters (not shown)

RIC-F-LCU24-01C .....  
6 quad LC adapters  
(24 fibres), blue adapters (not shown)

RIC-F-LC12Q-01C .....  
6 duplex LC adapters  
(12 fibres), aqua adapters (not shown)

RIC-F-LC16Q-01C .....  
4 quad LC adapters  
(16 fibres), aqua adapters (not shown)

RIC-F-LC24Q-01C .....  
6 quad LC adapters  
(24 fibres), aqua adapters (not shown)

### LightSystem®

RIC-F-SA6-01 .....  
3 duplex ST adapters  
(6 fibres)



RIC-F-SA8-01 .....  
4 duplex ST adapters  
(8 fibres)



RIC-F-SA12-01 .....  
6 duplex ST adapters  
(12 fibres)



*Only recommended for push-pull ST connectors due to access constraints*

RIC-F-BLNK-01 .....  
Blank adapter plate



Each adapter plate with icon pockets includes red, blue, black, and clear icons with paper labels. All SC and ST adapters are "universal" to support Multimode and Singlemode.

## Fibre Management Tray (FMT)

The Siemon Fibre Management Tray (FMT) is an economical solution for managing fibre cable slack and splice trays. The management tray has been designed to easily retrofit any standard 1 RMS CT® or MAX® Series Patch Panel and can organise up to 32 fibres. The tray is only 254mm deep, allowing it to readily fit into cabinet enclosures. Each enclosure can accept up to two fibre splice trays.

Part #	Description	RMS
CT-FMT-16	Fibre tray for 1 RMS CT or MAX Panel	1

Note: 1 RMS = 44.5mm



# Plug and Play Modules and Adapter Plates

## Siemon Plug and Play Modules

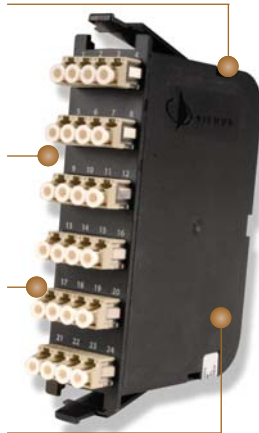
Siemon LC to MTP® and SC to MTP Plug and Play modules provide a quick and efficient way to deploy up to 24 LC or 12 SC fibres in a single module. These factory terminated and tested ports are protected within the housing for reliable high performance and simply connected via 12-strand MTP ports. Modules are available in Multimode (62.5/125, standard 50/125 and XGLO® laser optimised 50/125 OM3/OM4) and Singlemode cable.

**Compact Housing** — Reduces mounting depth for greater cable management space within enclosures

**Optimised Adapter Spacing** — Enables easy finger access to fibre jumper connector latches in high density patching environments

**Durable and Lightweight** — High-impact moulded plastic body with single-finger access

**Multimode and Singlemode Modules** — Utilise zirconia ceramic sleeves for optimum performance



**Recessed Base** — Allows cable to be fit under the modules for added cable management space when installed in the horizontal orientation (i.e. within FCP drawer)



**Compatible with Existing Siemon Enclosures** — Fits within RIC, FCP and SWIC Siemon fibre enclosures and VersaPOD® vertical patch panels

PP2-12-(XX)(X)-01(X) . . . . . 12 Fibre P&P Module with 1 MTP port, black

**Interface**  
LC = LC  
SC = SC

**Configuration**  
L = Low Loss  
Blank = Standard Loss

**Fibre Type**  
6 = OM1, 62.5/125 Multimode  
5 = OM2, 50/125 Multimode  
5L = OM3, XGLO 300 50/125 Multimode  
5V = OM4, XGLO 550 50/125 Multimode  
SM = OS1/OS2, Singlemode

PP2-24-LC(X)-01(X) . . . . . 24 Fibre LC P&P Module with 2 MTP ports, black

**Configuration**  
L = Low Loss  
Blank = Standard Loss

**Fibre Type**  
6 = OM1, 62.5/125 Multimode  
5 = OM2, 50/125 Multimode  
5L = OM3, XGLO 300 50/125 Multimode  
5V = OM4, XGLO 550 50/125 Multimode  
SM = OS1/OS2, Singlemode

## MTP to MTP Adapter Plates

Siemon MTP Adapter Plates offer a user friendly “pass-through” option for MTP connectors. Fitting within Siemon’s fibre enclosures and VersaPOD vertical patch panels, these plates secure MTP connectors, allowing efficient implementation of MTP to MTP reels and extenders as well as MTP to LC Trunks for direct equipment and patching connections.



### High Density

Supports up to 96 fibres per adapter plate - providing up to 1152 fibres in 4U

### Flexible Configurations

1, 2, 4, 6 and 8 port versions available, supporting both Singlemode and Multimode

### 40 Gb/s and 100 Gb/s Ready

Enables simple upgrade path to future 40 Gb/s and 100 Gb/s applications over Multimode 50/125 laser optimised fibre

### Popular RIC Adapter Footprint

Fits within RIC, FCP and SWIC Siemon fibre enclosures and VersaPOD vertical patch panels



RIC-F-MP(XX)(X)-01 . . . . . MTP Adapter Plate, black

Fibre Count	Adapter Colour
12 = 12 (1 MTP adapter)	Blank = Black
24 = 24 (2 MTP adapters)	Q = Aqua
48 = 48 (4 MTP adapters)	
72 = 72 (6 MTP adapters)	
96 = 96 (8 MTP adapters)	

# Copper/Fibre Combo Panel

Siemon's Copper/Fibre Combo Panel provides users with exceptional versatility and robustness. The Combo Panel allows copper outlets to be mixed in the same rack mount space as fibre plug and play modules. The compact 1U design offers integrated cable management features and supports Category 5e to 7A and all Multimode and Singlemode fibre applications.

**Aesthetics** — Lightweight high strength steel with black finish

**Plug & Play** — Panel accepts up to 4 Plug & Play Modules or adapter plates

**Installer Friendly** — Individual UTP or shielded copper modules easily snap into place, providing integral grounding without additional steps

**Copper Adapter Plate** — Accepts 6 copper outlets with port identification on adapter plate

**ANSI/EIA 310-D Compliant** — Panels can be mounted directly on standard 19 inch rack or cabinet

**Convenient Labelling** — Panel labelling area provided allows unique panel identifiers to be added

**Installer Friendly** — Panels feature an integrated grounding strip to ensure proper ground path from copper outlets to grounding point

**Cable Management** — Built in cable manager provides ability to secure cables for proper strain relief

**Plug & Play** — Panels utilise the Plug & Play adapter modules that utilise NY-LATCH (push-pull adapters) for ease of installation

## Ordering Information:

Part #	Description	Part #	Description
PPM-SPNL4-01.....	PNL, high density, shielded copper/fibre combo, 1U, black	PPM-SMX6-01.....	Copper Adapter Plate, 6-port, black



Panels include tie-wraps, grounding kit, and mounting screws

# High Density 1U Fibre Connect Panel System

## High-Density FCP3 Fibre Connect Panel

Economically connect, protect and manage up to 96 fibres within 1 rack mount space. Designed to integrate with high-density FCP3 fibre Plug and Play modules.



### High Density

Supports up to 96 fibres in just 1U

### Enhanced Accessibility

Fibre drawer slides to the front and rear for maximum access to fibre connections

### Bend Radius Management

Recessed modules provide a high-capacity jumper management zone that helps maintain proper fibre bend radius



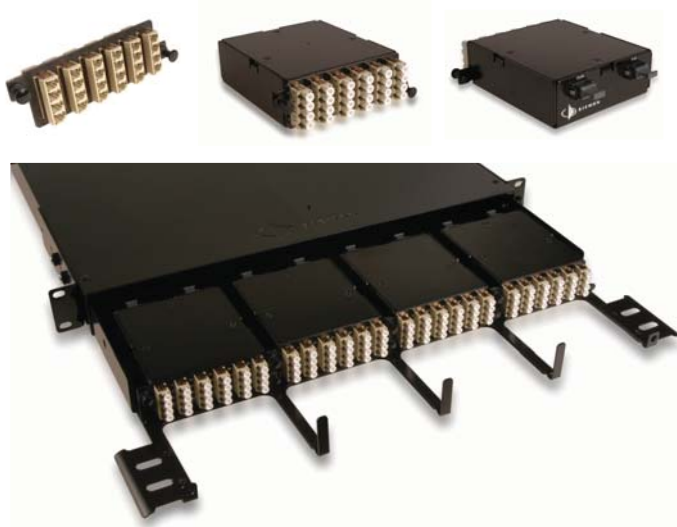
### Part #

### Description

FCP3-DWR-4	High-density FCP3 Fibre Enclosure, black
PPM-BLNK	High-density FCP3 Blank Panel Filler, black

## High-Density Combo Panel FCP3 Plug and Play Modules and Adapter Plates

Siemon LC to MTP® FCP3 Plug and Play modules and LC adapter plates are designed for simple, snap-in deployment within the high density FCP3 fibre connect panel. Providing 24 LC fibres per module, the factory terminated and tested modules are available in OM3 and OM4 Multimode and Singlemode configurations. The LC adapter plates provide a simple way to integrate traditional LC to LC connectivity within the ultra-high density FCP3 enclosure.



### High Density

Modules provide 24 LC fibres per module, supporting up to 96 ports within the 1U FCP3 fibre connect panel

### Fast Deployment

Snap-in mounting and multi-fibre MTP connectivity offers ultra-fast deployment of high-performance fibre channels

### Compact Housing

Reduces mounting depth for greater cable management space within enclosures

### Optimised Adapter Spacing

Enables easy finger access to fibre jumper connector latches in high density patching environments

### Multimode and Singlemode Modules

Utilises zirconia ceramic sleeves for optimum performance

## Ordering Information:

PPM-(XX)-LC(XX)-01 . . . . . High-density LC to MTP Module, black

Fibre Count	Fibre Type
12 = 12 Fibre	6 = OM1, 62.5/125 Multimode
24 = 24 Fibre	5 = OM2, 50/125 Multimode
	5L = OM3, XGLO 300 50/125 Multimode
	5V = OM4, XGLO 550 50/125 Multimode
	SM = OS1/OS2, Singlemode

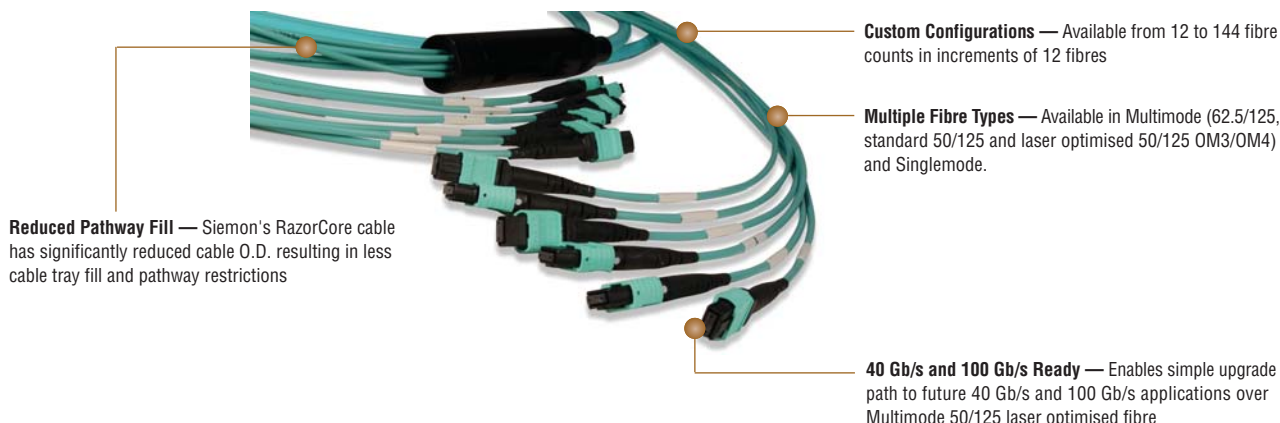
PPM-F-LC(X)(XX)-01 . . . . . High-density FCP3 LC Adapter plates

Fibre Type	Fibre Count
Blank = Biege MM	12 = 12 Fibre
U = Blue SM	24 = 24 Fibre

# Plug and Play Cable Assemblies

## MTP® to MTP Reels and Extenders

Combining Siemon's reduced-diameter RazorCore™ cable with 12-fibre MTP connectors, Plug and Play Reels are designed to be quickly pulled and connected to Siemon Plug and Play Modules and MTP Adapter Plates. Custom configurable to precise application requirements, these reels efficiently put high-performance, high-density fibre connections exactly where you need them. Extenders offer Male MTP Connectors on one end and female MTP adapters on the other to allow field extension of MTP Reels.



### Ordering Information: Non-Armoured

F(X)(XX)-(XX)(X)(XXX)(X)-(X) . . . . Fibre Plug & Play Cable Assembly, 12 Fibre MTP Connectors	
<b>Configuration</b>	<b>Polarity Method</b> (Per TIA-568-C.O)
<b>R</b> = Standard Loss	<b>A</b> = Method A
<b>L</b> = Low Loss	<b>B</b> = Method B
<b>E*</b> = Standard Loss Extender	<b>C</b> = Method C
<b>B*</b> = Low Loss Extender	<b>Blank</b> = Fibre Extender (FE and FB)
<b>Fibre Count</b>	<b>Length Unit</b>
<b>12</b> = 12	<b>F</b> = Feet
<b>24</b> = 24	<b>M</b> = Metres
<b>36</b> = 36	
<b>48</b> = 48	<b>Length**</b>
<b>72</b> = 72	Length must be 3 digits
<b>96</b> = 96	Example: <b>003</b> = 3m
<b>144</b> = 144	<b>010</b> = 10 ft.
<b>Fibre Type</b>	<b>Jacket Rating</b>
<b>6</b> = OM1, 62.5/125 Multimode	<b>R</b> = Riser
<b>5</b> = OM2, 50/125 Multimode	<b>P</b> = Plenum
<b>5L</b> = OM3, XGLO 300 50/125 Multimode	<b>L</b> = LSOH
<b>5V</b> = OM4, XGLO 550 50/125 Multimode	
<b>SM</b> = OS1/OS2, Singlemode	

### Ordering Information: Armoured

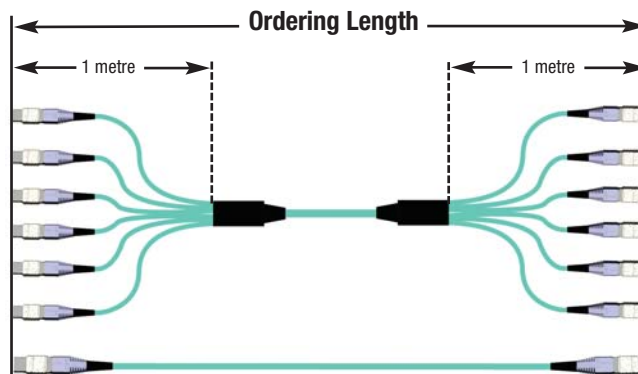
F(X)(XX)-(XX)(XX)(XXX)(X)-(X) . . . . Armoured Fibre Plug & Play Cable Reel Assembly, 12 Fibre MTP Female Connectors	
<b>Configuration</b>	<b>Polarity Method</b> (Per TIA-568-C.O)
<b>R</b> = Standard Loss	<b>A</b> = Method A
<b>L</b> = Low Loss	<b>B</b> = Method B
	<b>C</b> = Method C
	<b>Blank</b> = Fibre Extender (FE and FB)
<b>Fibre Count</b>	<b>Length Unit</b>
<b>12</b> = 12	<b>F</b> = Feet
<b>24</b> = 24	<b>M</b> = Metres
<b>36</b> = 36	
<b>48</b> = 48	<b>Length**</b>
<b>72</b> = 72	Length must be 3 digits
<b>96</b> = 96	Example: <b>003</b> = 3m
<b>144</b> = 144	<b>010</b> = 10 ft.
<b>Fibre Type</b>	<b>Jacket Rating</b>
<b>6</b> = OM1, 62.5/125 Multimode	<b>AR</b> = Armoured Riser
<b>5</b> = OM2, 50/125 Multimode	<b>AP</b> = Armoured Plenum
<b>5L</b> = OM3, XGLO 300 50/125 Multimode	
<b>5V</b> = OM4, XGLO 550 50/125 Multimode	
<b>SM</b> = OS1/OS2, Singlemode	

Note: LSOH versions available. Contact Customer Service for details.

See performance details on page 6.18.

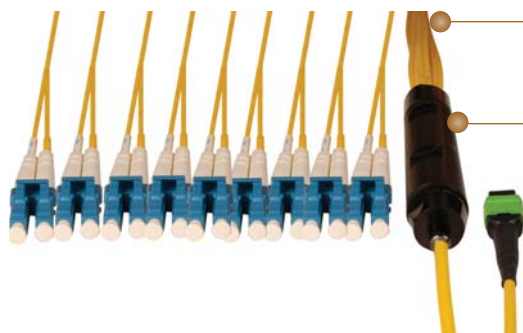
\* Fibre Extenders ship with MTP Adapter for quick transition.

\*\* Order length is measured connector tip to connector tip. Multi-leg versions offered with standard 1 metre legs. Minimum order length is 1 metre for 12 strand and 3 metres for 24 strands or greater (See diagram at right)



# Plug and Play MTP® to LC Trunks

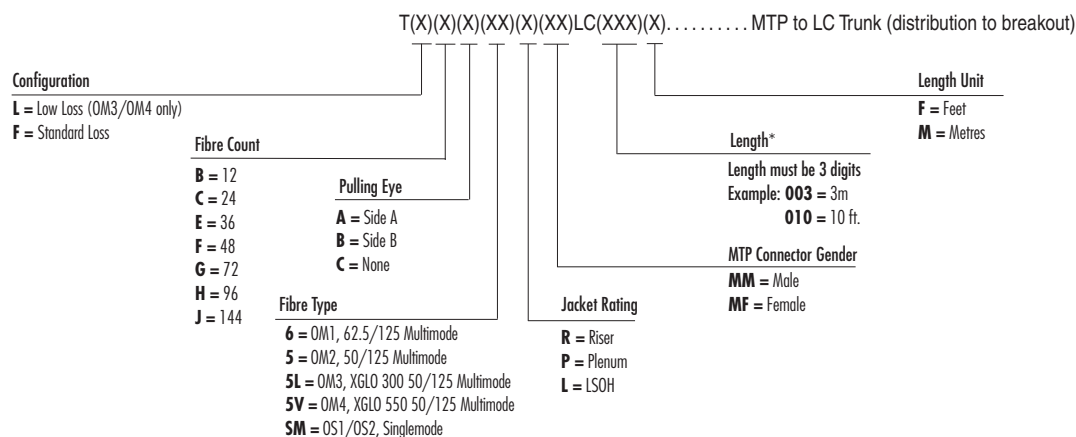
Utilising high quality Siemon RazorCore™ cable, MTP to LC Trunks offer a connectivity transition from 12-fibre MTP connectors to duplex LC connectors. These may be implemented using Siemon's MTP to MTP Adapter Plates to provide direct MTP to LC patching options over a wide range of distances and infrastructure configurations.



**Custom Configurations** — Available from 12 to 144 fibre counts in increments of 12 fibres

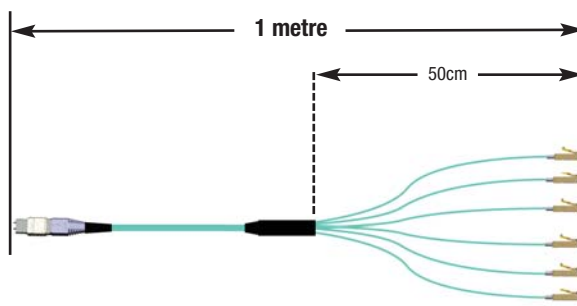
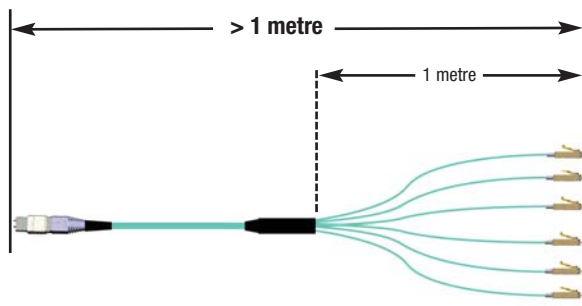
**Multiple Fibre Types** — Available in Multimode (62.5/125, standard 50/125 and laser optimised 50/125 OM3/OM4) and Singlemode.

## Ordering Information:



See performance details on page 6.18.

\* Minimum order length is 1 metre  
Order length is measured connector tip to connector tip.  
Jacketed duplex LC legs offered in standard 1 metre length  
for trunk lengths greater than 1 metre  
(See diagram below)



## Next Generation MTP Trunks

Siemon's Next Generation MTP to MTP trunks are redesigned to achieve 45kg pull strength to handle more aggressive pathway environments. They come with a foamed zipper pulling eye for quick removal saving on installation time and are reusable if relocation of a trunk is required after the initial installation. They are available in 12/24 fibre counts and Low Loss options only.

- OM3/OM4 Bend Insensitive Fibre (BIF)
- SM Non-Bend Insensitive Fibre
- 12 and 24 Fibre strand counts
- Polarity methods A, B and C options
- Low Loss performance (0.20dB for Multimode MTP and 0.60dB for Singlemode MTP)
- Integrated breakout and zipper pulling eye work together to achieve
  - 45kg tensile pull strength
- Zipper pulling eye allows for quicker installs
  - Allows pulling eyes to be reused when relocating trunks

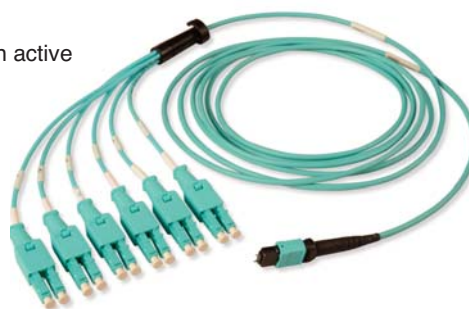


### Ordering Information:

FR2-(X)-(X)(X)(XXX)(X)(X)	
<b>Strand Count</b> B = 12 C = 24	<b>Polarity Method</b> (Per TIA-568-C.0) A = Method A B = Method B C = Method C
<b>Fibre Type</b> L = OM3, XGLO 300, 50/125 Multimode V = OM4, XGLO 550, 50/125 Multimode A = OS1/OS2, Singlemode	<b>Length Unit</b> F = Feet M = Metres
<b>Cable Type</b> P = Plenum R = Riser L = LSOH	<b>Length</b> Length must be 3 digits Example: 003 = 3m 010 = 10 ft.

## LC BladePatch® to MTP Hybrid Trunks

- LC BladePatch with push pull latch further improves accessibility
- Designed to facilitate an interconnect or cross connect point between active equipment
- OM3/OM4 Bend Insensitive Fibre (BIF)
- SM Non-Bend Insensitive
- 12 Fibre strand count
- Specific staggered lengths to active equipment
  - Nexus, Cisco MDS, Brocade and No stagger
- Low Loss performance 0.15 dB for LC and 0.20 dB for Multimode MTP
- Standard Loss performance 0.25 dB for LC and 0.60 dB for Singlemode MTP
- Integrated cable manager on breakout



### Ordering Information:

T(X)2(X)(X)(X)(X)(X)(X)(XX)(XXX)(X)	
<b>Performance</b> L = Low Loss (OM3/OM4 Only) F = Standard Loss (SM Only)	<b>Length Unit</b> F = Feet M = Metre
<b>Strand Count</b> B = 12 Strand	<b>Length*</b> Length must be 3 digits Example: 003 = 3m 010 = 10 ft.
<b>Pulling Eye Option</b> A = MTP Side (Only available for length > 5M) C = None	<b>LC BP Connector</b> LB = RFP (OM3, OM4, SM/UPC) BL = CFP (OM3, OM4, SM/UPC)
<b>Fibre Type</b> L = OM3 XGLO 300 50/125 Multimode V = OM4 XGLO 550 50/125 Multimode A = OS1/OS2 Singlemode	<b>Stagger Type</b> 1 = No Stagger 2 = Cisco 9512 & 9412 3 = Cisco NEXUS 4 = Brocade
<b>Jacket Rating</b> P = Plenum R = RISER L = LSOH	<b>MTP Gender</b> M = MTP Male F = MTP Female

# Plug and Play Fibre System Optical Performance

## STANDARD MODULES AND ASSEMBLIES

Fibre Type		MAX Insertion (dB)		MAX Return Loss (dB)		Performance Class
		MTP	LC	MTP	LC	
5L-MM	50/125 (OM3)	0.4	0.25	20	30	XGLO® 300
5V-MM	50/125 (OM4)	0.4	0.25	20	30	XGLO 550
SM-LWP	SM (OS1/OS2)	0.6	0.40	55	55	XGLO

## LOW LOSS MODULES AND ASSEMBLIES

Fibre Type		MAX Insertion (dB)		MAX Return Loss (dB)		Performance Class
		MTP	LC	MTP	LC	
5L-MM	50/125 (OM3)	0.20	0.15	20	30	XGLO 300
5V-MM	50/125 (OM4)	0.20	0.15	20	30	XGLO 550
SM-LWP	SM (OS1/OS2)	0.60	0.40	55	55	XGLO

## Fibre Cleaning Tools

Simple to use and highly effective at removing contaminants that can degrade the optical performance of critical fibre connections, these dry cloth cleaning tools are specially designed to clean multi-fibre MTP® connectors as well as LC and SC fibre connectors. The MTP version cleans both male MTP connectors in Plug and Play modules and female connectors in adapter plates. LC and SC versions clean installed connectors as well as unmated connectors via an innovative dustcap/adaptor.

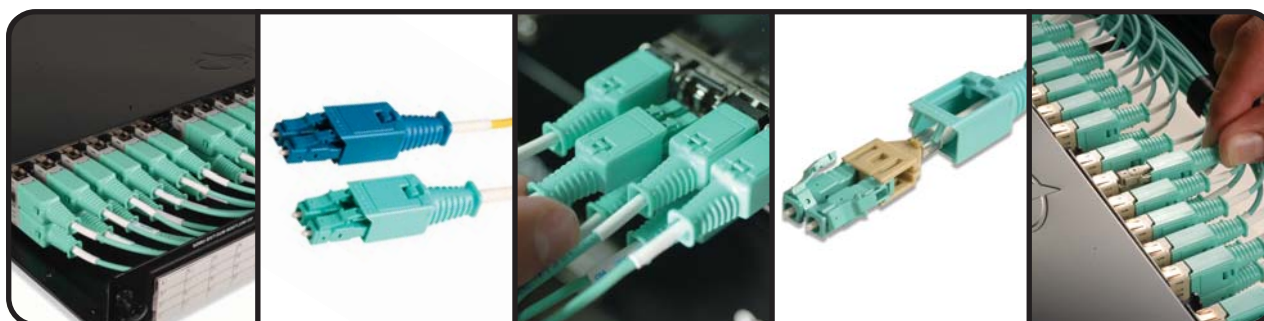
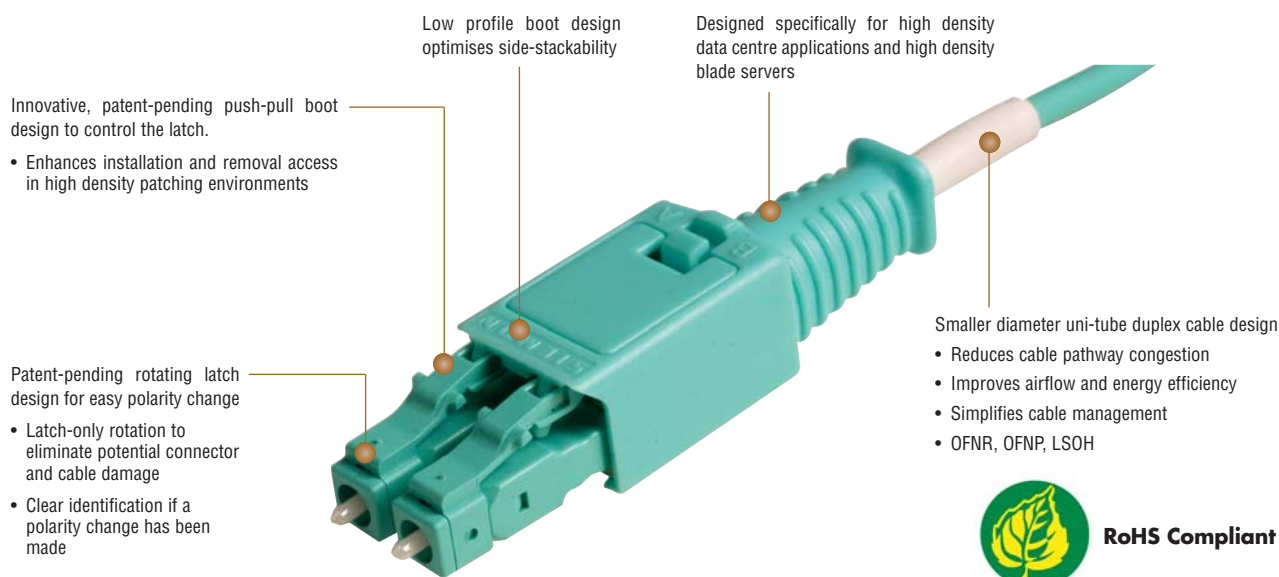


### Ordering Information:

Part #	Description
PP-CT-MP	MTP multi-fibre connector cleaning tool
PP-CT-LC	LC simplex fibre connector cleaning tool
PP-CT-SC	SC simplex fibre connector cleaning tool

# LC BladePatch®

Siemon's LC BladePatch duplex jumper offers a unique solution for high-density fibre optic patching environments. It features a revolutionary and innovative push-pull boot design to control the latch, enabling easy access and removal in tight-fitting areas. The LC BladePatch utilises a smaller diameter uni-tube cable design which reduces cable pathway congestion improving air flow and increasing energy efficiency while simplifying overall cable management. The LC BladePatch provides low-loss performance for Multimode and Singlemode supporting the precise optical performance requirements for high speed networks and improving network performance. The LC BladePatch is ideal for patching high density blade servers, patch panels and equipment.



Low profile boot design optimises side-stackability

OM3 and OM4 50/125 Multimode and OS1/OS2 Singlemode (UPC)

Fits within any standard LC adapter opening or LC SFP module (not compatible with internally shuttered LC adapters)

Rotating latch design eliminates potential fibre damage during polarity changes

The push-pull design enables easy access and removal via the boot in tight-fitting areas

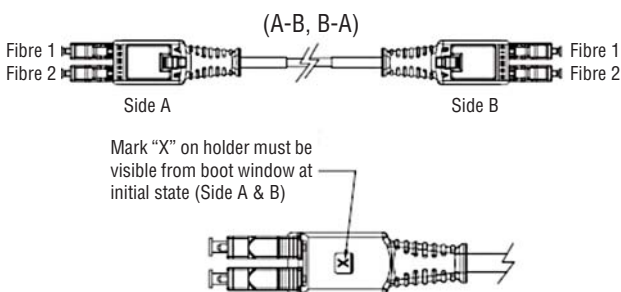
# Product Information

## PERFORMANCE SPECIFICATIONS

	OM3 50/125µm Multimode			OM4 50/125µm Multimode			OS1/OS2 Singlemode
Wavelength (nm)	850	1300	850*	850	1300	850*	1310/1550nm
Min. Cable Bandwidth (MHz*km)	1500 (OFL)	500 (OFL)	2000 (EMB)	3500 (OFL)	500 (OFL)	4700 (EMB)	N/A
Max. Insertion Loss (dB)	0.15 (0.10 Typical)			0.15 (0.10 Typical)			0.25 (0.10 Typical)
Min. Return Loss (dB)	30 (35 Typical)			30 (35 Typical)			55 (60 Typical)

\*Laser Bandwidth

### Polarity Option - RFP (Reverse Fibre Position)



### Ordering Information:

#### RFP (Reverse Fibre Position)

##### XGLO 300, 50/125µm Multimode, OM3

Part #	Jacket Rating
FBP-LCLC5L-(XX)AQ	OFNR
FBP-LCLC5L-(XX)AP	OFNP
FBP-LCLC5L-(XX)AH	LSOH

##### XGLO 550, 50/125µm Multimode, OM4

Part #	Jacket Rating
FBP-LCLC5V-(XX)AQ	OFNR
FBP-LCLC5V-(XX)AP	OFNP
FBP-LCLC5V-(XX)AH	LSOH

##### XGLO Singlemode, OS1/OS2 (UPC)

Part #	Jacket Rating
FBP-LCULCUL-(XX)	OFNR
FBP-LCULCUL-(XX)P	OFNP
FBP-LCULCUL-(XX)H	LSOH

Use (XX) to specify length: 01=1m, 02 = 2m, 03 = 3m, 05 = 5m

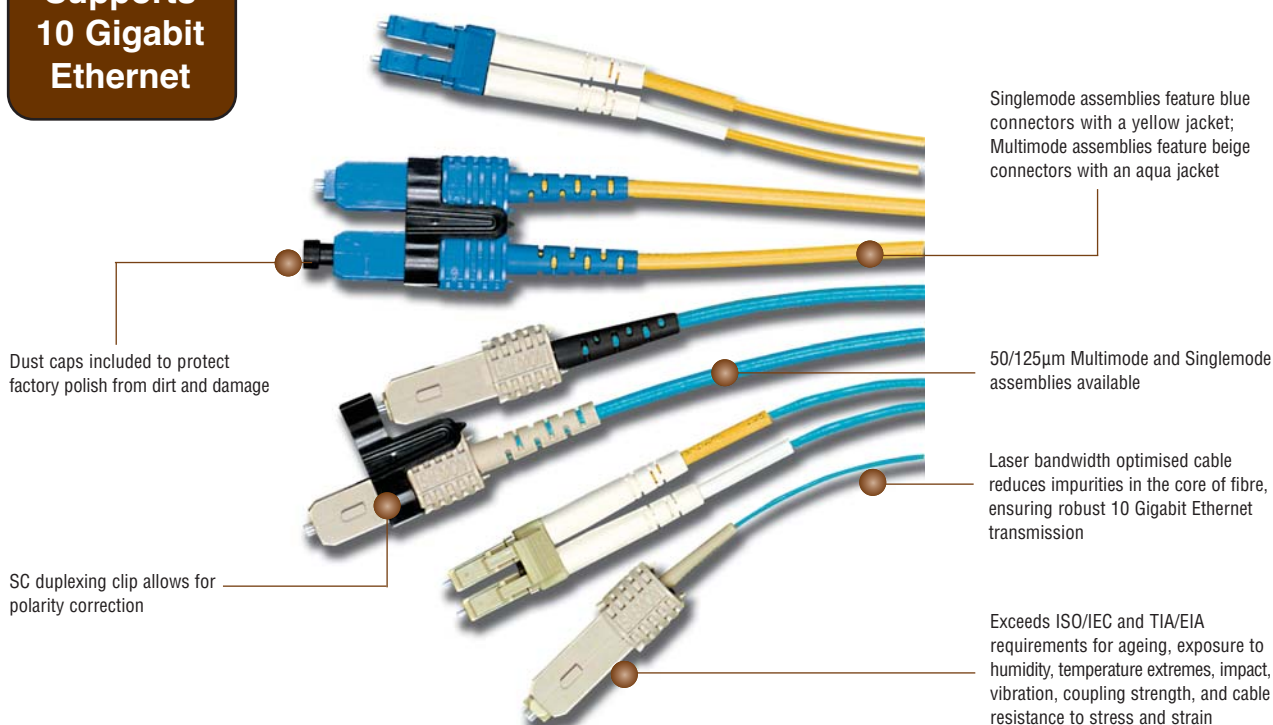
Note: Polarity CFP (Continuous fibre position) is available as an option.  
Remove the first dash \*-\* and add C to the end of the RFP part number.  
Example: FBPLCLC5L-(XX)AQC

# XGLO® Jumper & Pigtails

XGLO fibre optic cable assemblies are ideal for supporting 10 Gigabit fibre applications over extended distances and next-generation backbones. XGLO cable assemblies feature premium fibre that meets IEEE 802.3 10 Gigabit Ethernet Standard as well as IEC-60793-2-10 and TIA-492AAAC (OM3), TIA-492AAAD (OM4) specifications for laser bandwidth Differential Mode Delay (DMD) specifications. In addition, these assemblies offer a superior connector polish that meets stringent Telcordia and ISO/IEC specifications for end-face geometry and exceeds all ISO/IEC and ANSI/TIA insertion loss and return loss requirements.

These precision cable assemblies are warranted for 20 years and ensure optimum applications support for 10 Gigabit Ethernet serial transmission when installed in a qualified XGLO system. 100% factory inspection ensures superior performance and quality.

**Supports  
10 Gigabit  
Ethernet**



## PERFORMANCE SPECIFICATIONS

	OM3 50/125µm Multimode			OM4 50/125µm Multimode			OS1/OS2 Singlemode
<b>Wavelength (nm)</b>	850	1300	850*	850	1300	850*	1310/1550nm
<b>Min. Cable Bandwidth (MHz*km)</b>	1500 (OFL)	500 (OFL)	2000 (EMB)	3500 (OFL)	500 (OFL)	4700 (EMB)	N/A
<b>Max. Insertion Loss (dB)</b>	0.25 (0.10 Typical)			0.25 (0.10 Typical)			0.40 (0.10 Typical)
<b>Min. Return Loss (dB)</b>	30 (35 Typical)			30 (35 Typical)			55 (60 Typical)

\*Laser Bandwidth

**Ordering Information:****OFNR****XGLO® 300, 50/125µm Multimode, OM3****Duplex Jumpers:**

FJ2-SCSC5L-(XX)AQ .....SC to SC aqua duplex jumper  
 FJ2-LCLC5L-(XX)AQ .....LC to LC aqua duplex jumper  
 FJ2-LCSC5L-(XX)AQ .....LC to SC aqua duplex jumper  
 FJ2-SASA5L-(XX)AQ .....ST to ST aqua duplex jumper  
 FJ2-SASC5L-(XX)AQ .....ST to SC aqua duplex jumper  
 FJ2-LCSA5L-(XX)AQ .....LC to ST aqua duplex jumper

**Simplex Pigtailed - 900 micron buffered**

FP1B-SC5L-(XX)AQ .....SC simplex pigtail, aqua  
 FP1B-LC5L-(XX)AQ .....LC simplex pigtail, aqua  
 FP1B-SA5L-(XX)AQ .....ST simplex pigtail, aqua

**XGLO 550, 50/125µm Multimode, OM4****Duplex Jumpers:**

FJ2-SCSC5V-(XX)AQ .....SC to SC aqua duplex jumper  
 FJ2-LCLC5V-(XX)AQ .....LC to LC aqua duplex jumper  
 FJ2-LCSC5V-(XX)AQ .....LC to SC aqua duplex jumper

**Simplex Pigtailed - 900 micron buffered**

FP1B-SC5V-(XX)AQ .....SC simplex pigtail, aqua  
 FP1B-LC5V-(XX)AQ .....LC simplex pigtail, aqua

**XGLO Singlemode, OS1/OS2 (UPC)****Duplex Jumpers:**

FJ2-SCUSCUL-(XX) .....SC to SC yellow duplex jumper  
 FJ2-LCULCUL-(XX) .....LC to LC yellow duplex jumper  
 FJ2-LCUSCUL-(XX) .....LC to SC yellow duplex jumper  
 FJ2-SAUSCUL-(XX) .....ST to ST yellow duplex jumper  
 FJ2-LCUSCUL-(XX) .....LC to ST yellow duplex jumper  
 FJ2-SAUSCUL-(XX) .....ST to SC yellow duplex jumper

**Simplex Pigtailed - 900 micron buffered**

FP1B-SCUL-(XX) .....SC simplex pigtail, yellow  
 FP1B-LCUL-(XX) .....LC simplex pigtail, yellow  
 FP1B-SAUL-(XX) .....ST simplex pigtail, yellow

Use (XX) to specify length: 01=1m, 02 = 2m, 03 = 3m, 05 = 5m

**LSOH (IEC 60332-3C)****XGLO 300, 50/125µm Multimode, OM3****Duplex Jumpers:**

FJ2-SCSC5L-(XX)AH .....SC to SC aqua duplex jumper  
 FJ2-LCLC5L-(XX)AH .....LC to LC aqua duplex jumper  
 FJ2-LCSC5L-(XX)AH .....LC to SC aqua duplex jumper  
 FJ2-SASA5L-(XX)AH .....ST to ST aqua duplex jumper  
 FJ2-SASC5L-(XX)AH .....ST to SC aqua duplex jumper  
 FJ2-LCSA5L-(XX)AH .....LC to ST aqua duplex jumper

**Simplex Pigtailed - 900 micron buffered**

FP1B-SC5L-(XX)AH .....SC simplex pigtail, aqua  
 FP1B-LC5L-(XX)AH .....LC simplex pigtail, aqua  
 FP1B-SA5L-(XX)AH .....ST simplex pigtail, aqua

**XGLO 550, 50/125µm Multimode, OM4****Duplex Jumpers:**

FJ2-SCSC5V-(XX)AH .....SC to SC aqua duplex jumper  
 FJ2-LCLC5V-(XX)AH .....LC to LC aqua duplex jumper  
 FJ2-LCSC5V-(XX)AH .....LC to SC aqua duplex jumper

**Simplex Pigtailed: 900 micron buffered**

FP1B-SC5V-(XX)AH .....SC simplex pigtail, aqua  
 FP1B-LC5V-(XX)AH .....LC simplex pigtail, aqua

**XGLO Singlemode, OS1/OS2 (UPC)****Duplex Jumpers:**

FJ2-SCUSCUL-(XX)H .....SC to SC yellow duplex jumper  
 FJ2-LCULCUL-(XX)H .....LC to LC yellow duplex jumper  
 FJ2-LCUSCUL-(XX)H .....LC to SC yellow duplex jumper  
 FJ2-SAUSCUL-(XX)H .....ST to ST yellow duplex jumper  
 FJ2-LCUSCUL-(XX)H .....LC to ST yellow duplex jumper  
 FJ2-SAUSCUL-(XX)H .....ST to SC yellow duplex jumper

**Simplex Pigtailed - 900 micron buffered**

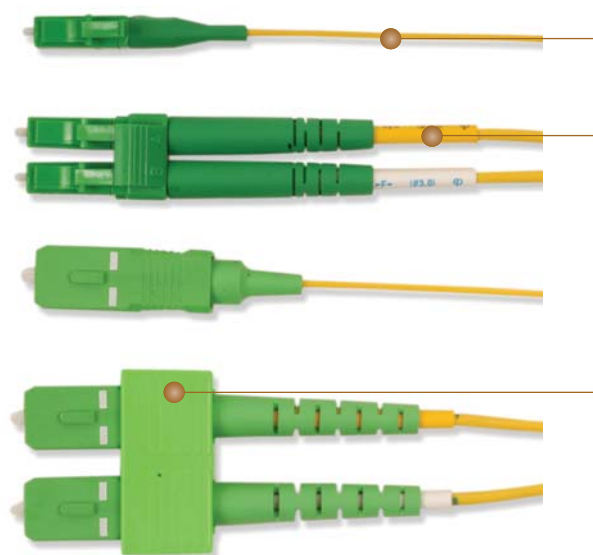
FP1B-SCUL-(XX)H .....SC simplex pigtail, yellow  
 FP1B-LCUL-(XX)H .....LC simplex pigtail, yellow  
 FP1B-SAUL-(XX)H .....ST simplex pigtail, yellow

Custom lengths and jacket colours are available upon request.  
 Contact our Customer Service Department for more information.

# XGLO® Singlemode LC & SC, APC Jumper & Pigtails

XGLO Singlemode LC and SC angled polish (APC) fibre optic cable assemblies are ideal for supporting high speed telecommunication network fibre applications such as FTXX, PON, POL, CATV, LAN, and WAN. XGLO APC cable assemblies feature premium fibre with a superior connector polish. The assemblies meet stringent TIA/EIA, Telcordia and ISO/IEC specifications for end-face geometry, mechanical, insertion loss and return loss requirements.

These precision cable assemblies are warranted for 20 years when installed in a qualified XGLO system. 100% inspection ensures superior performance and quality.



The Singlemode bend insensitive fibre provides supreme bending performance compared to traditional Singlemode fibre. The Singlemode fibre conforms to ITU-T G.657 A2, ITU-T G.657 B2 (edition 2009) and ITU-T G.652.D industry specifications

XGLO fibre optic cable assemblies meet all Telcordia and ISO/IEC specifications for ferrule end face geometry – including radius of curvature, apex offset, and spherical undercut. Compliance ensures minimum Return Loss, thereby reducing back reflection of laser energy which could degrade transmission performance or damage transceivers

APC assemblies feature green connectors with a yellow jacket

## PERFORMANCE SPECIFICATIONS

Singlemode (OS1/OS2)	
Wavelength (nm)	1310 / 1550
Max. Insertion Loss (dB)	0.40 (0.15 Typical)
Min. Return Loss (dB)	65 (70 Typical)

## STANDARDS COMPLIANCE

- TIA/EIA-568-C.3
- IEC 60874
- ISO/IEC 11801
- TELCORDIA GR-326-CORE issue 4

\*Tested in accordance with the Service Life requirements of Telcordia GR-326-CORE issue 4.

\*LC 900um simplex pigtails are TIA/EIA and ISO/IEC compliant.

## Ordering Information:

### OFNR

#### XGLO® Singlemode OS2 (APC)

##### Duplex Jumpers:

FJ2-SCASCAL-(XX) .....SC to SC yellow duplex jumper  
FJ2-LCALCAL-(XX) .....LC to LC yellow duplex jumper  
FJ2-LCASCAL-(XX) .....LC to SC yellow duplex jumper

##### Simplex Pigtails - 900 micron buffered

FP1B-SCAL-(XX) .....SC simplex pigtail, yellow  
FP1B-LCAL-(XX) .....LC simplex pigtail, yellow

Use (XX) to specify length: 01=1m, 02 = 2m, 03 = 3m, 05 = 5m

### LSOH (IEC 60332-3C)

#### XGLO Singlemode OS2 (APC)

##### Duplex Jumpers:

FJ2-SCASCAL-(XX)H .....SC to SC yellow duplex jumper  
FJ2-LCALCAL-(XX)H .....LC to LC yellow duplex jumper  
FJ2-LCASCAL-(XX)H .....LC to SC yellow duplex jumper

##### Simplex Pigtails - 900 micron buffered

FP1B-SCAL-(XX)H .....SC simplex pigtail, yellow  
FP1B-LCAL-(XX)H .....LC simplex pigtail, yellow

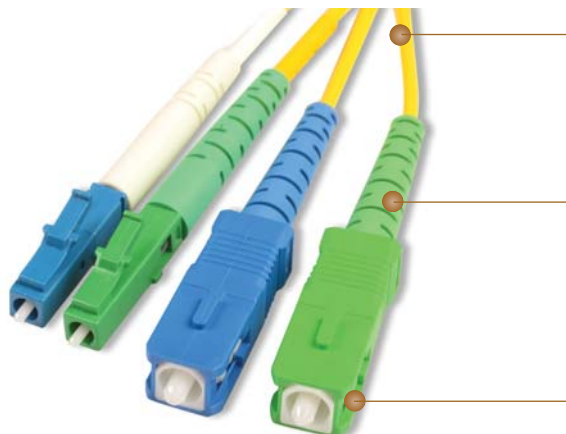
Custom lengths and jacket colours are available upon request.

Contact our Customer Service Department for more information.

# XGLO® Singlemode LC and SC, APC and UPC Simplex Jumpers

XGLO Singlemode LC and SC Simplex angled polish (APC) and ultra polish (UPC) fibre optic cable assemblies are ideal for supporting high speed telecommunication network fibre applications such as FTXX, PON, POL, CATV, LAN, and WAN. The cable assemblies feature Singlemode bend insensitive fibre with a superior connector polish. The assemblies meet stringent TIA/EIA, Telcordia and ISO/IEC specifications for endface geometry, mechanical, insertion loss and return loss requirements.

These precision cable assemblies are warranted for 20 years when installed in a qualified XGLO system. 100% inspection ensures superior performance and quality.



XGLO fibre optic cable assemblies meet all Telcordia and ISO/IEC specifications for ferrule end face geometry – including radius of curvature, apex offset, and spherical undercut. Compliance ensures minimum Return Loss, thereby reducing back reflection of laser energy which could degrade transmission performance or damage transceivers

The Singlemode bend insensitive fibre provides supreme bending performance compared to traditional singlemode fibre. The Singlemode fibre conforms to ITU-T G.657 A2, ITU-T G.657 B2 (edition 2009) and ITU-T G.652.D industry specifications

APC assemblies feature green connectors with a yellow jacket

UPC assemblies feature blue connectors with a yellow jacket

## PERFORMANCE SPECIFICATIONS

Singlemode (OS1/OS2)	APC	UPC
Wavelength (nm)	1310 / 1550	
Max. Insertion Loss (dB)	0.40 (0.15 Typical)	0.40 (0.10 Typical)
Min. Return Loss (dB)	65 (70 Typical)	55 (60 Typical)

## STANDARDS COMPLIANCE

- TIA/EIA-568-C.3
- IEC 60874
- ISO/IEC 11801
- ITU-T G.652 D
- ITU-T G.657 A2 , ITU-T G.657 B2 (2009)
- TELCORDIA GR-326-CORE issue 4

\*Tested in accordance with the Service Life requirements of Telcordia GR-326-CORE issue 4.

## Ordering Information:

### LSOH (IEC 60332-3C)

#### XGLO Singlemode OS1/OS2

FJ1-LCASCAL-(XX)H.....LC APC to LC APC yellow simplex jumper  
 FJ1-SCASCAL-(XX)H.....SC APC to SC APC yellow simplex jumper  
 FJ1-LCASCAL-(XX)H.....LC APC to SC APC yellow simplex jumper  
 FJ1-LCULCUL-(XX)H.....LC UPC to LC UPC yellow simplex jumper  
 FJ1-SCUSCUL-(XX)H.....SC UPC to SC UPC yellow simplex jumper  
 FJ1-LCUSCUL-(XX)H.....LC UPC to SC UPC yellow simplex jumper  
 FJ1-LCASCUL-(XX)H.....LC APC to LC UPC yellow simplex jumper  
 FJ1-LCASCUL-(XX)H.....LC APC to SC UPC yellow simplex jumper  
 FJ1-LCUSCAL-(XX)H.....LC UPC to SC APC yellow simplex jumper  
 FJ1-SCUSCAL-(XX)H.....SC UPC to SC APC yellow simplex jumper

### RISER (OFNR)

#### XGLO Singlemode OS1/OS2

FJ1-LCASCAL-(XX).....LC APC to LC APC yellow simplex jumper  
 FJ1-SCASCAL-(XX).....SC APC to SC APC yellow simplex jumper  
 FJ1-LCASCAL-(XX).....LC APC to SC APC yellow simplex jumper  
 FJ1-LCULCUL-(XX).....LC UPC to LC UPC yellow simplex jumper  
 FJ1-SCUSCUL-(XX).....SC UPC to SC UPC yellow simplex jumper  
 FJ1-LCUSCUL-(XX).....LC UPC to SC UPC yellow simplex jumper  
 FJ1-LCASCUL-(XX).....LC APC to LC UPC yellow simplex jumper  
 FJ1-LCASCUL-(XX).....LC APC to SC UPC yellow simplex jumper  
 FJ1-LCUSCAL-(XX).....LC UPC to SC APC yellow simplex jumper  
 FJ1-SCUSCAL-(XX).....SC UPC to SC APC yellow simplex jumper

### PLENUM (OFNP)

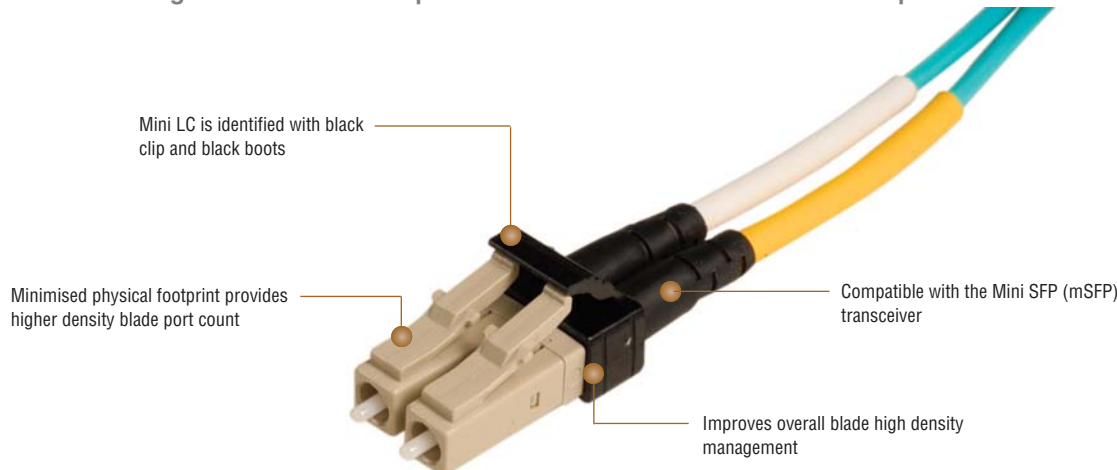
#### XGLO Singlemode OS1/OS2

FJ1-LCASCAL-(XX)H.....LC APC to LC APC yellow simplex jumper  
 FJ1-SCASCAL-(XX)H.....SC APC to SC APC yellow simplex jumper  
 FJ1-LCASCAL-(XX)H.....LC APC to SC APC yellow simplex jumper  
 FJ1-LCULCUL-(XX)H.....LC UPC to LC UPC yellow simplex jumper  
 FJ1-SCUSCUL-(XX)H.....SC UPC to SC UPC yellow simplex jumper  
 FJ1-LCUSCUL-(XX)H.....LC UPC to SC UPC yellow simplex jumper  
 FJ1-LCASCUL-(XX)H.....LC APC to LC UPC yellow simplex jumper  
 FJ1-LCASCUL-(XX)H.....LC APC to SC UPC yellow simplex jumper  
 FJ1-LCUSCAL-(XX)H.....LC UPC to SC APC yellow simplex jumper  
 FJ1-SCUSCAL-(XX)H.....SC UPC to SC APC yellow simplex jumper

Use (XX) to specify length: 01=1m, 02 = 2m, 03 = 3m, 05 = 5m  
 Custom lengths and jacket colours are available upon request.  
 Contact our Customer Service Department for more information.

# XGLO® Mini-LC Duplex Fibre Cable Assemblies

Mini-LC duplex Multimode cable assemblies are designed to operate with the Mini SFP (mSFP) transceiver and enable a higher density deployment of active devices. The Mini-LC has a reduced centreline pitch of 5.25mm compared to a standard LC pitch of 6.25mm. The smaller pitch minimises the physical footprint and provides higher-density port count for data centre network equipment. Black colour duplex latch clips and boots are used to distinguish the Mini-LC Duplex connectors from the standard LC Duplex.



## PERFORMANCE SPECIFICATIONS

	50/125 µm Multimode (OM3)			50/125 µm Multimode (OM4)		
Wavelength (nm)	850	1300	850*	850	1300	850*
Min. Cable Bandwidth (MHz•km)	1500 (OFL)	500 (OFL)	2000 (EMB)	3500 (OFL)	500 (OFL)	4700 (EMB)
Max. Insertion Loss (dB)	0.25 (0.10 Typical)			0.25 (0.10 Typical)		
Min. Return Loss (dB)	30 (35 Typical)			30 (35 Typical)		

\*Laser Bandwidth

## Ordering Information:

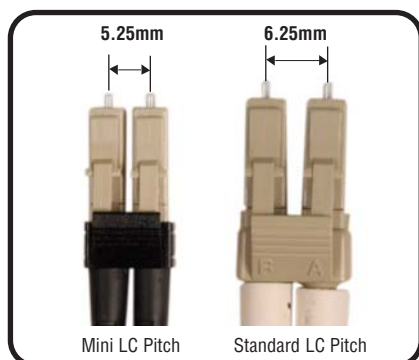
### XGLO 300 50/125µm Multimode OM3 OFNR

Part #	Description
FJ2-LCMLC5L-(XX)A	Mini LC to Standard LC aqua duplex jumper
FJ2-LCMLCM5L-(XX)A	Mini LC to Mini LC aqua duplex jumper

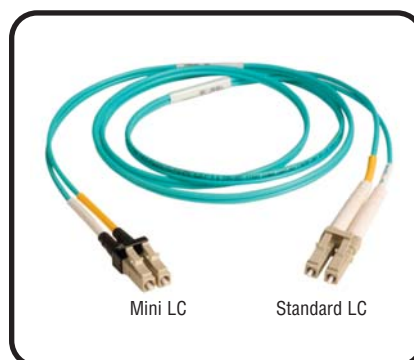
### XGLO 550 50/125µm Multimode OM4 OFNR

Part #	Description
FJ2-LCMLC5V-(XX)A	Mini LC to Standard LC aqua duplex jumper
FJ2-LCMLCM5V-(XX)A	Mini LC to MINI LC aqua duplex jumper

Use (XX) to specify length: 01 = 1m, 02 = 2m, 03 = 3m, 05 = 5m



Reduced centreline pitch minimises the physical footprint



Mini LC to Standard LC jumpers are available to connect Mini LC equipment to a standard channel

# LightSystem® Jumper & Pigtails

Siemon offers a comprehensive line of Multimode fibre jumpers and pigtails available in standard lengths of 1m, 2m, 3m, 5m, and custom lengths. Each and every terminated connector is optically tested to assure that 100% of the Siemon-built cable assemblies meet stringent performance specifications.

## PERFORMANCE SPECIFICATIONS

	OM1 62.5/125µm Multimode		OM2 50/125µm Multimode	
Wavelength (nm)	850	1300	850	1300
Min. Cable Bandwidth (MHz·km)	200	500	500	500
Max. Insertion Loss (dB)	0.50 (0.15 Typical)			
Min. Return Loss (dB)	25 (30 Typical)			

## Ordering Information:

### OFNR

#### LightSystem Multimode Duplex Jumpers

FJ2-SCSC(X)MM-(XX) .....SC to SC orange duplex jumper  
 FJ2-SASA(X)MM-(XX) .....ST to ST orange duplex jumper  
 FJ2-SASC(X)MM-(XX) .....ST to SC orange duplex jumper  
 FJ2-LCLC(X)MM-(XX) .....LC to LC orange duplex jumper  
 FJ2-LCSC(X)MM-(XX) .....LC to SC orange duplex jumper  
 FJ2-LCSA(X)MM-(XX) .....LC to ST orange duplex jumper

#### LightSystem Multimode Simplex Pigtails - 900 micron buffered

FP1B-SC(X)MM-(XX) .....SC simplex pigtail, orange  
 FP1B-SA(X)MM-(XX) .....ST simplex pigtail, orange  
 FP1B-LC(X)MM-(XX) .....LC simplex pigtail, orange

### LSOH (IEC 60332-3C)

#### LightSystem Multimode Duplex Jumpers

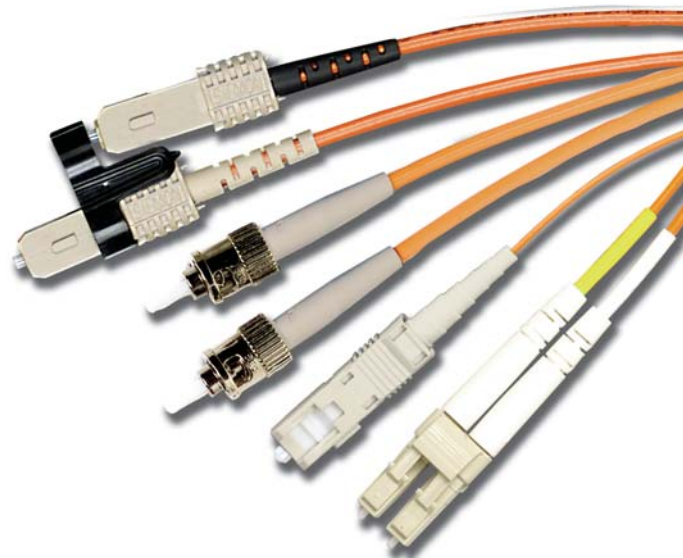
FJ2-SCSC(X)MM-(XX)H .....SC to SC orange duplex jumper  
 FJ2-SASA(X)MM-(XX)H .....ST to ST orange duplex jumper  
 FJ2-SASC(X)MM-(XX)H .....ST to SC orange duplex jumper  
 FJ2-LCLC(X)MM-(XX)H .....LC to LC orange duplex jumper  
 FJ2-LCSC(X)MM-(XX)H .....LC to SC orange duplex jumper  
 FJ2-LCSA(X)MM-(XX)H .....LC to ST orange duplex jumper

#### LightSystem Multimode Simplex Pigtails - 900 micron buffered

FP1B-SC(X)MM-(XX)H .....SC simplex pigtail, orange  
 FP1B-SA(X)MM-(XX)H .....ST simplex pigtail, orange  
 FP1B-LC(X)MM-(XX)H .....LC simplex pigtail, orange

Use (X) to specify fibre type: 6 = 62.5/125µm (OM1); 5 = 50/125µm (OM2)  
 Use (XX) to specify length: 01 = 1m, 02 = 2m, 03 = 3m, 05 = 5m

Custom lengths and jacket colours are available upon request.  
 Contact our Customer Service Department for more information.



# ValuLight™ Jumpers and Pigtails

ValuLight jumpers and pigtails provide exceptional value at a very competitive price. ValuLight fibre cable assemblies meet ISO/IEC 11801 and TIA-568-C.3 specifications for insertion loss and return loss. They are ideal for commercial cabling data applications up to and including 1 Gigabit.

## PERFORMANCE SPECIFICATIONS

	OM1 62.5/125µm Multimode		OM2 50/125µm Multimode		OS1/OS2 Singlemode
Wavelength (nm)	850	1300	850	1300	1310/1550
Min. Cable Bandwidth (MHz•km)	200	500	500	500	N/A
Max. Insertion Loss (dB)	0.75 (0.15 Typical)				0.75 (0.25 Typical)
Min. Return Loss (dB)	20 (25 Typical)				50 (55 Typical)

## Ordering Information:

### Multimode Duplex Jumpers

Part #	Description
J2-SCSC(X)-(XX)	SC to SC orange duplex jumper, OFNR
J2-SASA(X)-(XX)	ST to ST orange duplex jumper, OFNR
J2-SASC(X)-(XX)	ST to SC orange duplex jumper, OFNR
J2-LCLC(X)-(XX)	LC to LC orange duplex jumper, OFNR
J2-LCSC(X)-(XX)	LC to SC orange duplex jumper, OFNR
J2-LCSA(X)-(XX)	LC to ST orange duplex jumper, OFNR

### Multimode Pigtails

Part #	Description
P1B-SC(X)-(XX)	SC orange simplex pigtail, 900 micron, buffered
P1B-SA(X)-(XX)	ST orange simplex pigtail, 900 micron, buffered
P1B-LC(X)-(XX)	LC orange simplex pigtail, 900 micron, buffered

Use (X) to specify fibre type: 6 = 62.5/125µm (OM1); 5 = 50/125µm (OM2)

Use (XX) to specify length: 01 = 1m, 02 = 2m, 03 = 3m, 05 = 5m

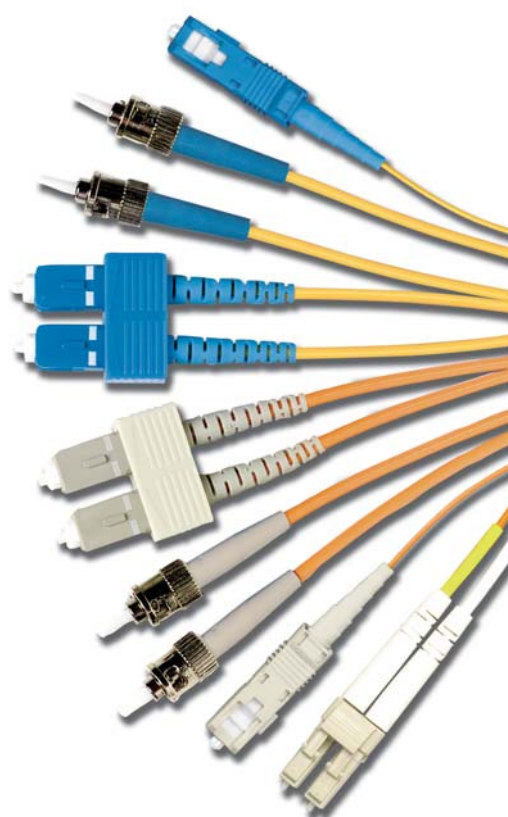
### Singlemode OS2 Duplex Jumpers

Part #	Description
J2-SCSCP(XX)	SC to SC yellow duplex jumper, OFNR
J2-SASAP(XX)	ST to ST yellow duplex jumper, OFNR
J2-SASCP(XX)	ST to SC yellow duplex jumper, OFNR
J2-LCLCP(XX)	LC to LC yellow duplex jumper, OFNR
J2-LCSCP(XX)	LC to SC yellow duplex jumper, OFNR
J2-LCSAP(XX)	LC to ST yellow duplex jumper, OFNR

### Singlemode OS2 Pigtails

Part #	Description
P1B-SCP(XX)	SC yellow simplex pigtail, 900 micron, buffered
P1B-SAP(XX)	ST yellow simplex pigtail, 900 micron, buffered
P1B-LCP(XX)	LC yellow simplex pigtail, 900 micron, buffered

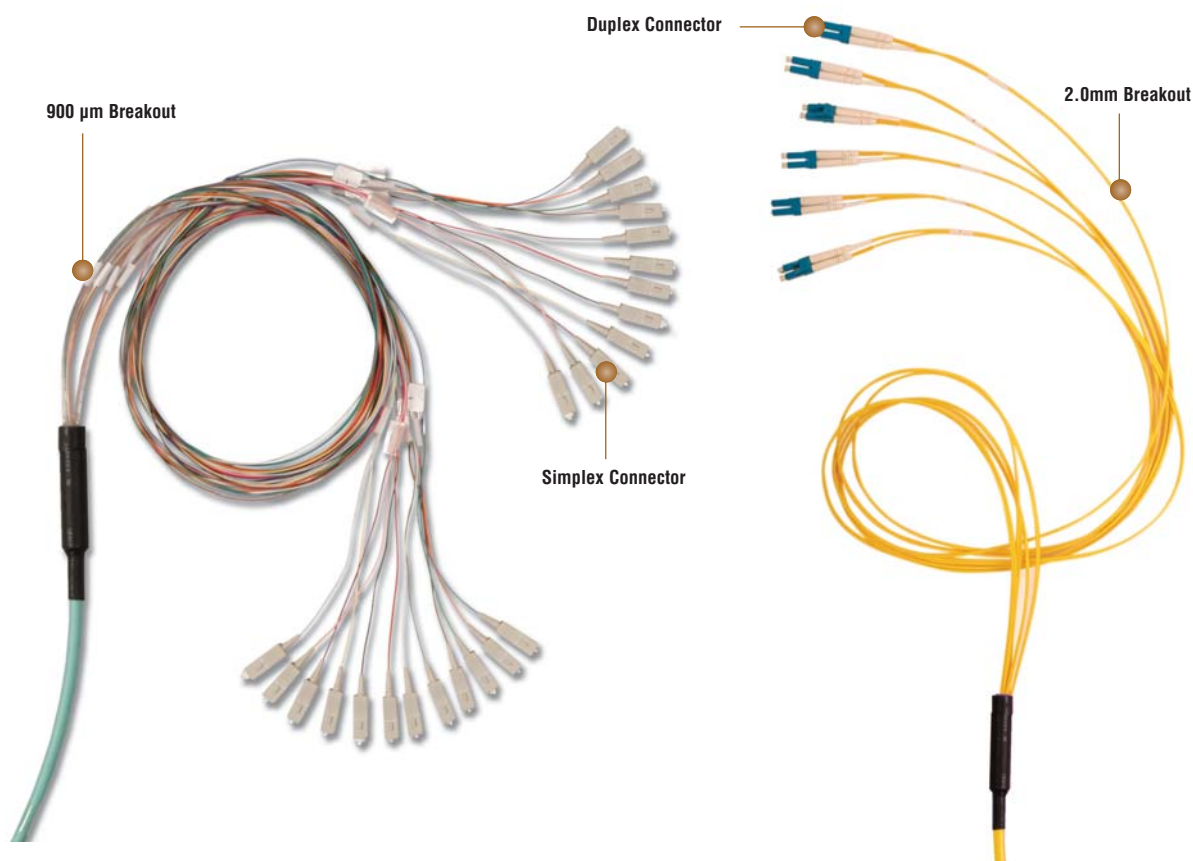
Use (XX) to specify length: 01 = 1m, 02 = 2m, 03 = 3m, 05 = 5m



Custom lengths and jacket colours are available upon request. Contact our Customer Service Department for more information.

# XGLO® Fibre Trunking RazorCore™ Cable Assemblies

Siemon's RazorCore fibre trunking cable assemblies provide an efficient and cost effective alternative to individual field-terminated components. Combining factory terminated connectors with Siemon RazorCore reduced O.D. cable in a high-performance cable assembly, Siemon RazorCore fibre trunking cable assemblies were designed with Local Area Networks (LAN), Data Centres and Storage Area Networks (SAN) applications in mind. These assemblies allow up to 75% faster field installation times. Standard configurations also help maintain consistent cable layout and facilitate efficient moves, adds and changes. These precision cable assemblies are 100% inspected ensuring superior performance and quality. SC, LC and SC-LC hybrids available.



## Reduced Pathway Fill —

Siemon's RazorCore cable has significantly reduced cable O.D. resulting in less cable tray fill and pathway restrictions

## Proper Orientation —

Each leg is designated for proper connector orientation

## Multiple Fibre Types —

Available in OM3 and OM4 Multimode 50/125 laser optimised and OS1/OS2 Singlemode. Jacket ratings in riser, plenum and LSOH

## Custom Configurations —

Available in 12, 24, 36 and 48 fibre counts

## Factory Terminated and Tested —

Every fibre cable assembly is factory terminated and tested for premium performance

## FIBRE CONNECTIVITY, ENCLOSURES AND CABLE

## 6.29

# XGLO® Fibre Trunking RazorCore™ Cable Assemblies

## CABLE — Optical and Physical Specifications

	Multimode		Singlemode
Cable Type	**XGLO® OM3 50/125 µm (850/1300 nm)	**XGLO OM4 50/125 µm (850/1300 nm)	XGLO OS1/OS2 Singlemode (1310/1550 nm)
Fibre Cable Attenuation, Max (dB/km)	3.0/1.0	3.0/1.0	0.4/0.4/0.3*
LED Bandwidth, min (MHz•km)	1500/500	3500/500	N/A
Effective Modal Bandwidth, min (MHz•km)	2000	4700	N/A
Cable Outer Jacket Colour (Per TIA-598-C)	Aqua	Aqua	Yellow

\*XGLO Singlemode fibre meets Low Water Peak specifications per ITU-T G.652.C/D

\*\*XGLO Multimode cable premium fibre that meets IEEE 802.3 10 Gigabit Ethernet Standard as well as IEC-60793-2-10 and TIA-492AAAC (OM3) TIA-492AAAD (OM4) specifications for laser bandwidth Different Mode Delay (DMD) specifications.

## CONNECTORS — Optical Specifications

Fibre Type	Performance Class	Max Insertion Loss (dB)	Min Return Loss (dB)
OM3 10G 50/125 µm Multimode	XGLO 300	0.25	30
OM4 10G 50/125 µm Multimode	XGLO 500	0.25	30
OS1/OS2 Singlemode (UPC)	XGLO	0.40	55

## CONNECTORS — Physical Specifications

Connector Type	IEC Intermateability Compliance	TIA Intermateability Compliance	Housing Colour		Boot Colour	
			SM (UPC)	MM	SM (UPC)	MM
SC	IEC 60874-14	TIA/EIA-604-3	Blue	Beige	Blue	Beige
LC	IEC 61754-20	TIA/EIA-604-10	Blue	Beige	White	White

## CABLE OUTSIDE DIAMETER COMPARISON

Strand Count	RazorCore Cable mm	Traditional Distribution mm	% Reduction using RazorCore
12	3.0	5.8	48%
24	3.8	8.8	57%
36	8.7	16.5	47%
48	8.7	16.5	46%

## CABLE & PULLING EYE ASSEMBLY

Fibre Strand Count	Cable Diameter mm	Min Pulling Eye Bend Radius mm	Max Pulling Eye Diameter mm	*Required Duct Diameter mm	Max Pull Force kg
12	3.0	380	44.5	69.9	18.1
24	3.8	380	44.5	69.9	18.1
36	8.7	915	63.5	69.9	18.1
48	8.7	915	63.5	88.9	18.1

\* Pulling eye assembly shall be capable of passing through these minimum duct diameter requirements during product installation

# XGLO® & LightSystem® Fibre Trunking Cable Assemblies

Siemon's fibre trunking cable assemblies provide an efficient and cost effective alternative to individual field-terminated components. Combining factory terminated connectors with Siemon cable in a high-performance cable assembly, Siemon fibre trunking cable assemblies were designed with Local Area Networks (LAN), Data Centres and Storage Area Networks (SAN) applications in mind. These assemblies allow up to 75% faster field installation times.

**Custom Assembly** — Fibre assemblies can be created to custom lengths and configurations based on a flexible part number scheme for performance options to best suit each installation

**Factory Terminated and Tested** — Every fibre cable assembly is factory terminated and tested for premium performance

**Siemon Cable** — Utilises high quality Siemon cable in both armoured and non-armoured choice of construction

**Identification** — Each cable assembly is coded with a unique identification number for administrative purposes

**Proper Orientation** — Each leg is designated for proper connector orientation

**Superior Design** — Each cable assembly utilises an epoxy breakout with spiral wrap to protect the fibres when entering an enclosure



## Pulling Eye

An optional encapsulated protection sleeve with cable pulling eye protects the factory terminations during installation.



## Enclosure Compatibility

Siemon fibre trunking assemblies are compatible with all Siemon fibre enclosures.



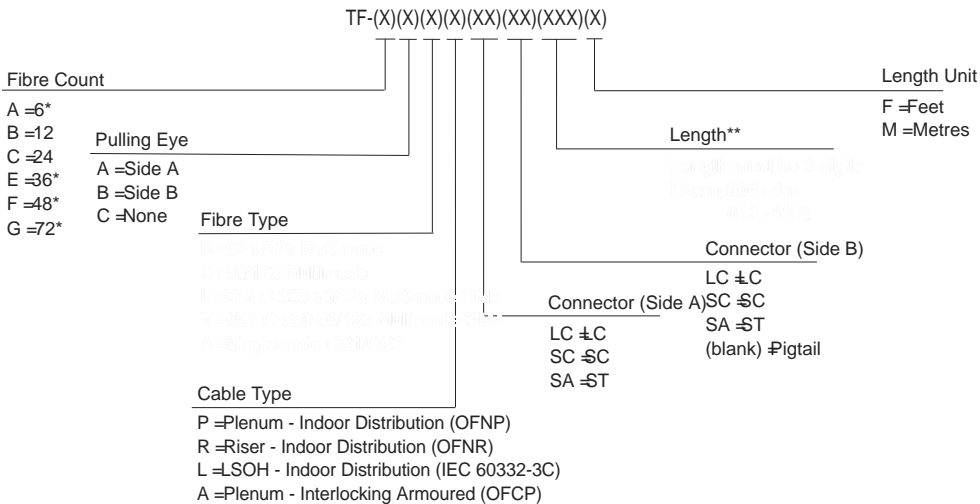
## Protective Packaging

Dual shelf reel keeps unprotected connectivity from harm during payout

*See ordering information next page*

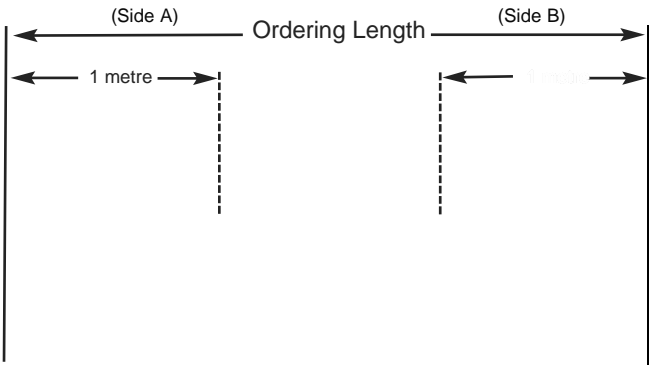
# Fibre Trunking Cable Assemblies

## Ordering Information:



\* Non-armoured only

\*\* Ordering length is measured connector tip to connector tip.  
900 micron, buffered, 1m breakout. Minimum order length is 4 metres.



Note: These products are made to order. Call for lead time and availability.











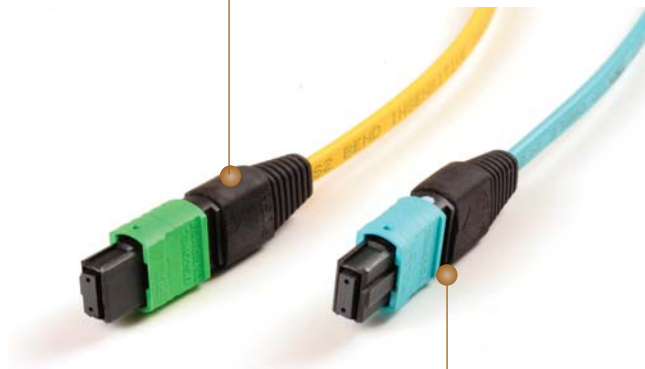





# Fusion Splice Solutions - MTP Pigtails

Siemon's fusion splice solutions include an MTP pigtail option which can be connected to a RIC MTP adapter plate or plug and play module and then mass fusion spliced within the fibre enclosures. MTP pigtails are the ideal solution when field-installing an MTP interface for a 40/100G application.


**MTP Connector Gender** —  
Options for both male or female



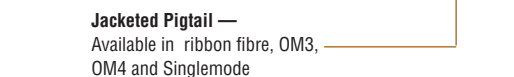
**Identification** —Pigtails are serialised for easy identification and reference to test data that ships with every pigtail



**Performance** —  
All MTP pigtails are manufactured to Low Loss specifications



**Jacketed Pigtail** —  
Available in ribbon fibre, OM3, OM4 and Singlemode



## MTP PIGTAIL OPTICAL SPECIFICATIONS

Fibre Type	Performance Class	Max. Insertion Loss (db)	Min. Return Loss (db)
5L	OM3 XGLO 300 Low Loss	0.20	20
5V	OM4 XGLO 500 Low Loss	0.20	20
SM-LWP	OS1/OS2 XGLO Singlemode	0.75	55

## Ordering Information

FP12-(X)-(XX)(XX)(X)-(XX)(X)

**Cable Jacket**  
A = Ribbon Jacket

**MTP Gender**  
MM = MTP Male  
MF = MTP Female

**Fibre Type**  
5L = OM3 XGLO 300 62.5/125 Multimode  
5V = OM4 XGLO 550 50/125 Multimode  
SM = OS1/OS2 Singlemode

**Length Unit**  
F = Feet  
M = Metre

**Length\***  
Length must be 3 digits  
Example: 003 = 3m  
010 = 10 ft.

**Cable Jacket Rating**  
P = Plenum  
L = LSOH



### MTP Pigtail

The MTP pigtail allows for field installable MTP connectivity using ribbon cable and mass fusion splice installation practices

# Fusion Splice Solutions - Expanded RIC Enclosure

Siemon's Rack Mount Interconnect Centre provides superior fibre density without sacrificing protection and accessibility. Key features include extending the depth of the enclosure to allow added space for fusion splicing and cable slack storage. With superior cable management, port identification, fibre accessibility and security, the Expanded RIC is the best way to protect mission critical fibre connections.

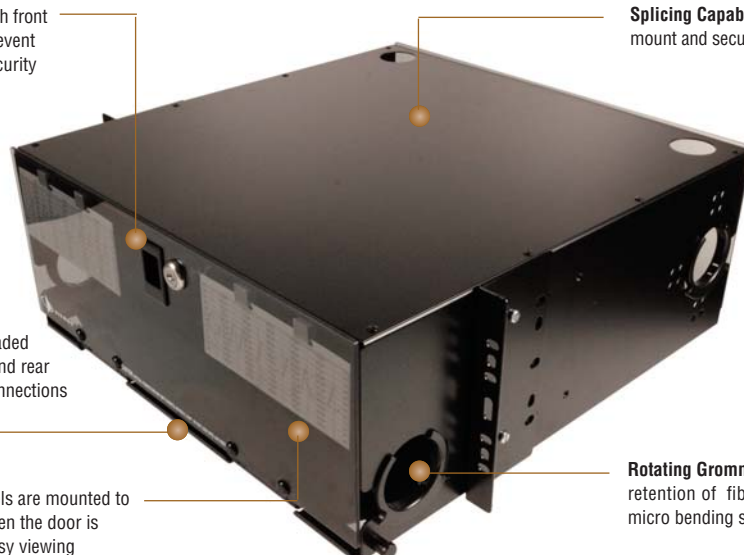
**Security** — Single finger latch on both front and rear doors. Included key locks prevent unauthorised access for enhanced security

**Splicing Capability** — Extra space provided to mount and secure multiple splice trays in position

**Quick Release Hinges** — Spring loaded hinges enable easy removal of front and rear doors for complete access to fibre connections

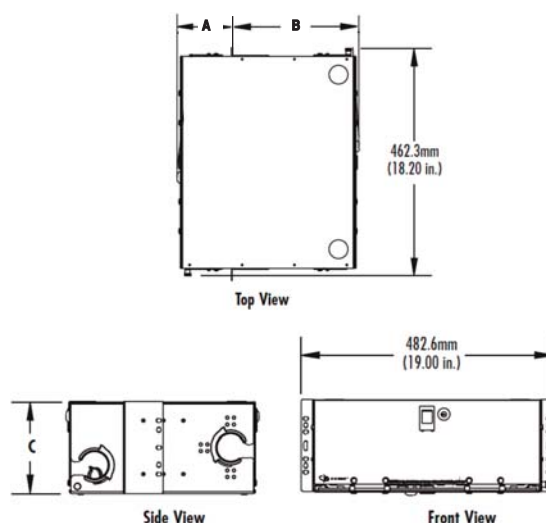
**Port Identification** — Hinged labels are mounted to the front door for full visibility. When the door is opened, the labels flip down for easy viewing

**Rotating Grommets** — Facilitate loading and retention of fibre jumpers while minimising micro bending stress when using the sliding tray



## EXPANDED RIC ENCLOSURE DIMENSIONS

Expanded RIC Part #	Mounting Bracket Position	A	B	C
		mm	mm	mm
RIC3-E-24-01	1	109.7	360.4	85.7
	2	147.8	322.3	85.7
	3	185.9	284.2	85.7
RIC3-E-36-01	1	109.7	360.4	85.7
	2	147.8	322.3	85.7
	3	185.9	284.2	85.7
RIC3-E-48-01	1	109.7	360.4	130.2
	2	147.8	322.3	130.2
	3	185.9	284.2	130.2
RIC3-E-72-01	1	109.7	360.4	174.6
	2	147.8	322.3	174.6
	3	185.9	284.2	174.6



## FUSION SPLICE MAX CAPACITY

Solution)	Splice Type	FCP3	RIC3-24	RIC3-36	RIC3-48	RIC3-72
MTP Pigtail	Fusion Ribbon	216	288	288	288	432
	Fusion 900m	72	96	144	192	288
Fibre Splice Module	Fusion Ribbon	72	96	96	96	144
	Fusion 900m	72	96	96	96	144

RIC3-E-(XX)-01 . . . . .Expanded RIC Enclosures

### Enclosure Size

**24** = 2RMS Enclosure with 4 adapter/module mounting spaces

**36** = 2RMS Enclosure with 6 adapter/module mounting spaces

**48** = 3RMS Enclosure with 8 adapter/module mounting spaces

**72** = 4RMS Enclosure with 12 adapter/module mounting spaces

## Fibre Connect Panel

The Fibre Connect Panel is a rack-mounted fibre enclosure that can be fitted with hard-mount adapters. It is designed to connect, protect, and manage up to 48 fibres in a low profile 1U rack space. The FCP3-R can be supplied empty (FCP3-R-01) or fully-loaded — and populated to provide terminations for 24 fibres in SC and 48 fibres in the LC version.

Part #	Description
FCP3-R-01 .....	Fixed patch panel, 1U, C/W 12 blanks, Fibre management, black
FA2-SCSC-01 .....	Fibre adapter, SC duplex, MM or SM, PB**
FA4-LCLC-06C .....	Fibre adapter, LC quad, SM, PB sleeve, blue**
FA4-LCLC-80C .....	Fibre adapter, LC quad, MM, PB sleeve, beige**
FA-BLANK .....	Fibre adapter Blank, black**

\*\* ⓘ Add "B" to the end of part number for bulk pack of 48.

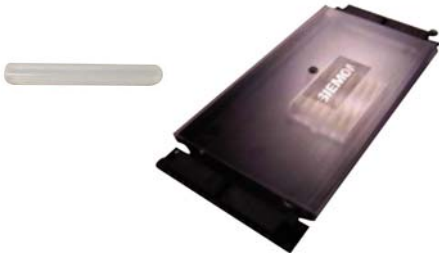
FCP3-RACK .....	6- to 72-fibre (up to 288 fibre with MTP adapter plates) Fibre Connect Panel with fixed tray, accepts (3) Quick-Pack adapter plates, 1U, black. Includes mounting brackets, housing/cover, fibre managers and grommet
	height: 43.2mm,
	width: 482.6mm,
	depth: 241.3mm

Note: 1U = 44.5 mm



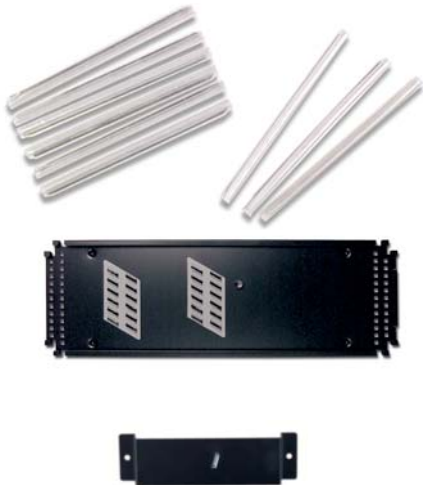
## Mass Fusion Splice Accessories

Part #	Description
HT-MFS .....	40mm mass fusion heat shrink sleeve for ribbon fibre
TRAY-4-R-MFS .....	Mass fusion splice tray for up to (6) 12 fibre splices with sleeve protection holder



## Single Fibre Fusion Splice Accessories

Part #	Description
HT-40 .....	40mm single fibre heat shrink sleeve
HT-60 .....	60mm single fibre heat shrink sleeve
*Heating times may vary depending on heat source.	
TRAY-3 .....	Standard splice tray for up to 24 fusion splices with sleeve protection. For use with Expanded RIC and FCP3 fibre enclosures
TRAY-M-3 .....	Mini splice tray for up to 12 fusion splices with sleeve protection



# XGLO™ Indoor Ribbon Fibre Cable (Global)

Siemon indoor ribbon fibre cables are ideal for data centres, campus and building backbones. Ribbon cables enable the migration to high fibre count systems required to support high bandwidth applications including 10, 40 and 100Gb/s. These cables contain 12-fibre ribbon units inside a central tube with dielectric strength members for tensile strength and colour coded fibres with individual ribbon unit ID numbers for clear identification. Siemon fibre optic cables are offered in XGLO configurations supporting high-speed, applications such as Gigabit Ethernet, 10 Gigabit Ethernet, Gigabit ATM and Fibre Channel.

## Ordering Information

**XGLO Multimode Laser Optimised 50/125 OM3 and OM4 (Aqua Jacket), Singlemode OS1/OS2 (Yellow Jacket)**

Part #	Fibre Count	Construction
9BR(X)(X)012G-(XXXX)(Y)	12	1 ribbon with 12 fibres
9BR(X)(X)024G-(XXXX)(Y)	24	2 ribbons with 12 fibres
9BR(X)(X)036G-(XXXX)(Y)	36	3 ribbons with 12 fibres
9BR(X)(X)048G-(XXXX)(Y)	48	4 ribbons with 12 fibres

Part #	Fibre Count	Construction
9BR(X)(X)072G-(XXXX)(Y)	72	6 ribbons with 12 fibres
9BR(X)(X)096G-(XXXX)(Y)	96	8 ribbons with 12 fibres
9BR(X)(X)144G-(XXXX)(Y)	144	12 ribbons with 12 fibres
9BR(X)(X)216G-(XXXX)(Y)	216	18 ribbons with 12 fibres
9BR(X)(X)288G-(XXXX)(Y)	288	24 ribbons with 12 fibres

Use first (X) to specify fibre type: 5 = 50/125µm, 8 = Singlemode

Use second (X) to specify fibre jacket type: R = Riser OFNR, P = Plenum OFNP, H = LSOH

Use (XXXX) to specify class performance: T312 = OM3 50µm Laser Optimised, T512 = OM4 50µm Laser Optimised, E205 = OS1/OS2 Singlemode

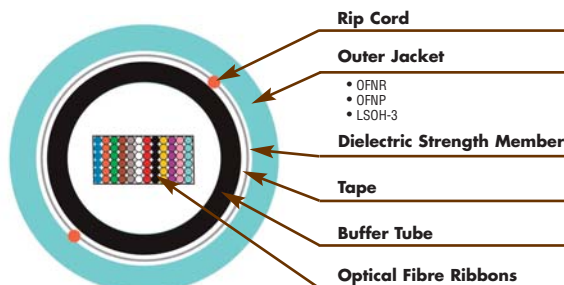
Use (Y) to specify unit of measure: A = feet for North America, M = metre for International

Note: 288 strand count is only available in a Riser (OFNR) jacket.



### HIGHLIGHTS

- 12 fibre ribbon design
- Central tube design
- Precision fibre and ribbon geometries
- Colour coded per TIA-598-C



### XGLO 300 OM3 Multimode 50/125

#### STANDARDS COMPLIANCE

- ISO/IEC 11801:2002 OM3
- ANSI/TIA/EIA-568-C.3
- ANSI/TIA-598-C
- ANSI/TIA-492 AAAC
- Telcordia GR-409-CORE
- OFNR: Communications Type OFNR (ETL) and CSA FT4 (ETL)
- OFNP: Communications Type OFNP (ETL) and CSA FT6 (ETL)
- IEC 60332-3
- IEC 60332-1-2 (Single strand)
- IEC 60754-2 (Acid gas)
- IEC 61034-2 (Smoke density)

#### APPLICATIONS SUPPORT

APPLICATION	DISTANCE (m)
10GBASE-SX (850 nm)	300
10GBASE-LX4 (1300 nm)	300
1000BASE-SX (850 nm)	1000
1000BASE-LX (1300 nm)	600
Fibre Channel 266 (1300 nm)	1,500
ATM 622 (1300 nm)	500
ATM 155 (1300 nm)	2,000
ATM 52 (1300 nm)	3,000
FDD1 (Original-1300 nm)	2,000
100BASE-FX (1300 nm)	2,000

### XGLO 550 OM4 Multimode 50/125

#### STANDARDS COMPLIANCE

- ISO/IEC 11801:2002 OM3
- ISO/IEC 11801:2002 Amendment 2 OM4
- ANSI/TIA/EIA-568-C.3
- ANSI/TIA-598-C
- ANSI/TIA-492 AAAD
- IEC 60793-2-10 Fibre Type A1a.3
- Telcordia GR-409-CORE
- OFNR: Communications Type OFNR (ETL) and CSA FT4 (ETL)
- OFNP: Communications Type OFNP (ETL) and CSA FT6 (ETL)
- IEC 60332-3
- IEC 60332-1-2 (Single strand)
- IEC 60754-2 (Acid gas)
- IEC 61034-2 (Smoke density)

#### APPLICATIONS SUPPORT

APPLICATION	DISTANCE (m)
10GBASE-SX (850 nm)	550
10GBASE-LX4 (1300 nm)	300
1000BASE-SX (850 nm)	1100
1000BASE-LX (1300 nm)	600
Fibre Channel 266 (1300 nm)	1,500
ATM 622 (1300 nm)	500
ATM 155 (1300 nm)	2,000
ATM 52 (1300 nm)	3,000
FDD1 (Original-1300 nm)	2,000
100BASE-FX (1300 nm)	2,000

### XGLO OS1/OS2 Singlemode

#### STANDARDS COMPLIANCE

- ISO/IEC 11801:Ed 2.0 Amendment:1:2008
- ANSI/TIA/EIA-568-C.3
- ANSI/TIA-598-C
- Telcordia GR-409-CORE
- ITU-T G.652 C/D
- OFNR: Communications Type OFNR (ETL) and CSA FT4 (ETL)
- OFNP: Communications Type OFNP (ETL) and CSA FT6 (ETL)
- IEC 60332-3
- IEC 60332-1-2 (Single strand)
- IEC 60754-2 (Acid gas)
- IEC 61034-2 (Smoke density)

#### APPLICATIONS SUPPORT

APPLICATION	DISTANCE (m)
10GBASE-L (1310 nm)	8,000
10GBASE-E (1550 nm)	30,000
10G Fibre Channel (Serial-1310 nm)	10,000
10G Fibre Channel (WDM-1310 nm)	10,000
1000BASE-LX (1300 nm)	5,000
Fibre Channel 266/1062 (1300 nm)	10,000
ATM 52/155/622 (1300 nm)	15,000

# XGLO® Indoor Ribbon Fibre Cable (Global)

## Minimum Performance Parameters for XGLO 50/125µm Multimode Fibre

Fibre Type	Guaranteed Gigabit Transmission Distance (m)		Guaranteed 10 Gigabit Transmission Distance (m)		Minimum Bandwidth (MHz•km)		Maximum Attenuation (dB/km)		Group Index of Refraction	
	850 nm	1300 nm	850 nm†	1300 nm††	850 nm	1300 nm	850 nm	1300 nm	850 nm	1300 nm
50/125 (OM3)	1000	600	300	300	RML - 2000 OFL - 1500	OFL - 500	3.0	1.0	1.483	1.479
50/125 (OM4)	1100	600	550	300	RML - 4700 OFL - 3500	OFL - 500	3.0	1.0	1.483	1.479

† 10GBASE-S †† 10GBASE-LX4

## Minimum Performance Parameters for XGLO Singlemode Fibre

Fibre Type	Wavelength (nm)	Maximum Attenuation (dB/km)	Zero Dispersion Wavelength (nm)	Zero Dispersion Slope (nm²•km)	Index of Refraction
Singlemode (OS1/OS2)	1310	0.40	1317	≤0.092	1.468
	1300 - 1324	0.40	1317	≤0.092	1.468
	1383	0.40	1317	≤0.092	1.468
	1550	0.30	1317	≤0.092	1.468

## PHYSICAL SPECIFICATIONS (All Values Are Nominal)

Fibre Count	Nominal Cable Diameter mm	Maximum Pulling Tension Newtons		Maximum Net Weight kg/km		
		Installation	Long Term			
	OFNR/ OFNP/ LSOH	OFNR/ OFNP/ LSOH	OFNR/ OFNP/ LSOH	OFNR	OFNP	LSOH
12, 24, 36	9.7	1320	400	88	99	93
72, 96	12.4			140	156	147
144, 216	15.2			184	220	193
288	20.1 (OFNR only)			309	n/a	n/a

Fibre Count	Maximum Crush Resistance (N/mm)	Maximum Flex Resistance (N/mm)	Operating Temperature °C			Installation Temperature °C			Storage Temperature °C			Minimum Bend Radius (cm)	
			OFNR	OFNP	LSOH	OFNR	OFNP	LSOH	OFNR	OFNP	LSOH	Installation	Long Term
12, 24, 36, 48	100	25	-20 to 70	0 to 70	-40 to 70	-10 to 60	0 to 60	-30 to 60	-40 to 70	-40 to 70	-40 to 70	9.6	14.4
72, 96												12.4	18.6
144, 216												15.5	22.8
288			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	21.0	31.7

Custom lengths are available upon request. Contact our Customer Service Department for more information.

Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.

XGLO® and LightSystem® are trademarks of Siemon

# XGLO® & LightSystem® Indoor Tight Buffer (International)

Siemon indoor tight buffer cables are ideal for data centres, campus and building backbones. Siemon fibre optic cables are offered in XGLO and LightSystem configurations supporting high-speed applications such as Gigabit Ethernet, 10 Gigabit Ethernet, Gigabit ATM and Fibre Channel.

## Ordering Information

**LightSystem: Multimode 62.5/125 OM1, Multimode 50/125 OM2 (Orange Jacket)**

**XGLO: Multimode 50/125 OM3 and OM4 (Aqua Jacket), Singlemode OS1/OS2 (Yellow Jacket)**

Part #	Fibre Count	Construction
9F(X)B(X)-2F(XXXX)	2	1 tube of 2 fibres
9F(X)B(X)-4A(XXXX)	4	1 tube of 4 fibres
9F(X)B(X)-6B(XXXX)	6	1 tube of 6 fibres
9F(X)B(X)-8C(XXXX)	8	1 tube of 8 fibres
9F(X)B(X)-12D(XXXX)	12	1 tube of 12 fibres
9F(X)B(X)-16K(XXXX)	16	1 tube of 16 fibres
9F(X)B(X)-24L(XXXX)	24	1 tube of 24 fibres
9F(X)B(X)-48D(XXXX)	48	4 tubes of 12 fibres
9F(X)B(X)-72D(XXXX)	72	6 tubes of 12 fibres

Part #	Fibre Count	Construction
9F(XX)B(X)-2F(XXXX)	2	1 tube of 2 fibres
9F(XX)B(X)-4A(XXXX)	4	1 tube of 4 fibres
9F(XX)B(X)-6B(XXXX)	6	1 tube of 6 fibres
9F(XX)B(X)-8C(XXXX)	8	1 tube of 8 fibres
9F(XX)B(X)-12D(XXXX)	12	1 tube of 12 fibres
9F(XX)B(X)-16K(XXXX)	16	1 tube of 16 fibres
9F(XX)B(X)-24L(XXXX)	24	1 tube of 24 fibres
9F(XX)B(X)-48D(XXXX)	48	4 tubes of 12 fibres
9F(XX)B(X)-72D(XXXX)	72	6 tube of 12 fibres

Use first (X) to specify fibre type: 6 = OM1 62.5/125µm, 5 = OM2 50/125µm  
 Use second (X) to specify cable rating: 1 = Riser OFNR, 2 = Plenum OFNP, 3 = LSOH  
 Use (XXXX) to specify length in kilometre. Use 4 characters including decimal point

Use (XX) to specify fibre type: 5L = OM3 50/125µm Laser Optimised, 5V = OM4 50/125µm Laser Optimised, 8L = OS1/OS2 Singlemode  
 Use (X) to specify cable rating: 1 = Riser OFNR, 2 = Plenum OFNP, 3 = LSOH  
 Use (XXXX) to specify length in kilometre. Use 4 characters including decimal point

For orders less than kilometre first "X" must be zero.

Example p/n: 9F5LB1-12D1.50: (1.5 kilometres [1500 metres] of 50/125µm laser optimised 12-strand riser rated fibre optic cable)

For orders of less than 1km, the first "X" must be zero (0).

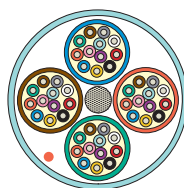
Example: 9F5LB1-12D0.55 (.550 kilometres [550 metres] of 50/125µm laser optimised 12-strand riser rated fibre optic cable)

### HIGHLIGHTS

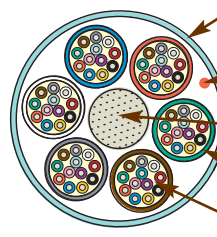
- 900µm tight buffer
- 250µm coated optical fibre
- Length markings in 2 ft. increments
- Colourcode per TIA-598-C



2-24 Fibre



48 Fibre



72 Fibre

### Jacket (Aqua)

- Material:  
OFNR - PVC  
OFNP - FRPVC  
LSOH - LSOH Compound

### Rip Cord

- Applied longitudinally under cable jacket

### Central Strength Member

- Light-weight solid dielectric  
• 48, 72 Strand

### Aramid Yarn

- Water blocking swellable yarn

### Identification

- Colour-coded fibres  
• Colour-coded buffer tubes

### LIGHTSYSTEM OM1 Multimode 62.5/125 OM2 Multimode 50/125

#### STANDARDS COMPLIANCE

- ISO/IEC 11801:2002 OM1 (62.5/125)
- ISO/IEC 11801:2002 OM2 (50/125)
- ANSI/TIA/EIA-568-C.3
- ANSI/TIA-598-C
- ANSI/TIA-492 AA4B
- Telcordia GR-409-CORE
- ISOH IEC 60332-3

#### APPLICATIONS SUPPORT

APPLICATION	DISTANCE (m)
10GBASE-SX (850 nm)	N/A
50/125µm	82
62.5/125µm	26
1000BASE-SX (850 nm)	N/A
50/125µm	550
62.5/125µm	275
1000BASE-LX (1300 nm)	550
Fibre Channel 266 (1300 nm)	1,500
ATM 622 (1300 nm)	500
ATM 155 (1300 nm)	2,000
ATM 52 (1300 nm)	3,000
FDDI (Original-1300 nm)	2,000
100BASE-FX (1300 nm)	2,000

### XGLO 300 OM3 Multimode 50/125

#### STANDARDS COMPLIANCE

- ISO/IEC 11801:2002 OM3
- ANSI/TIA/EIA-568-C.3
- ANSI/TIA-598-C
- ANSI/TIA-492 AA4C
- Telcordia GR-409-CORE
- ISOH IEC 60332-3

#### APPLICATIONS SUPPORT

APPLICATION	DISTANCE (m)
10GBASE-SX (850 nm)	550
10GBASE-LX4 (1300 nm)	300
1000BASE-SX (850 nm)	1100
1000BASE-LX (1300 nm)	600
Fibre Channel 266 (1300 nm)	1,500
ATM 622 (1300 nm)	500
ATM 155 (1300 nm)	2,000
ATM 52 (1300 nm)	3,000
FDDI (Original-1300 nm)	2,000
100BASE-FX (1300 nm)	2,000

### XGLO 550 OM4 Multimode 50/125

#### STANDARDS COMPLIANCE

- ISO/IEC 11801:2002 OM3
- ISO/IEC 11801:2002 Amendment 2 OM4
- ANSI/TIA/EIA-568-C.3
- ANSI/TIA-598-C
- ANSI/TIA-492 AA4D
- IEC 60793-2-10 Fibre Type A1a.3
- Telcordia GR-409-CORE
- ISOH IEC 60332-3

#### APPLICATIONS SUPPORT

APPLICATION	DISTANCE (m)
10GBASE-SX (850 nm)	300
10GBASE-LX4 (1300 nm)	300
1000BASE-SX (850 nm)	1000
1000BASE-LX (1300 nm)	600
Fibre Channel 266 (1300 nm)	1,500
ATM 622 (1300 nm)	500
ATM 155 (1300 nm)	2,000
ATM 52 (1300 nm)	3,000
FDDI (Original-1300 nm)	2,000
100BASE-FX (1300 nm)	2,000

### XGLO OS1/OS2 Singlemode

#### STANDARDS COMPLIANCE

- ISO/IEC 11801:Ed 2.0 Amendment:1:2008
- ANSI/TIA/EIA-568-C.3
- ANSI/TIA-598-C
- Telcordia GR-409-CORE
- ITU-T G.652 C/D
- ISOH IEC 60332-3

#### APPLICATIONS SUPPORT

APPLICATION	DISTANCE (m)
10GBASE-L (1310 nm)	8,000
10GBASE-E (1550 nm)	30,000
10G Fibre Channel (Serial-1310 nm)	10,000
10G Fibre Channel (WDM-1310 nm)	10,000
1000BASE-LX (1300 nm)	5,000
Fibre Channel 266/1062 (1300 nm)	10,000
ATM 52/155/622 (1300 nm)	15,000

# XGLO® & LightSystem® Indoor Tight Buffer (International)

## LightSystem® Gigabit Ethernet Fibre Optic Cable

### Minimum Performance Parameters for LightSystem 62.5/125µm & 50/125µm Multimode Fibre

Fibre Type	Wavelength nm	Maximum Attenuation (dB/km)	Minimum Modal Bandwidth (MHz•km)	Guaranteed Gigabit Transmission Distance (Metres)	Index of Refraction
62.5/125 (OM1)	850	3.5	200	275	1.495
	1300	1.0	500	550	1.490
50/125 (OM2)	850	3.5	500	550	1.483
	1300	1.0	500	550	1.479

\*The protocol pertinent to the transmission distance as noted is Gigabit Ethernet per IEEE 802.3:2005.

### Minimum Performance Parameters for XGLO 50/125µm Multimode Fibre

Fibre Type	Guaranteed Gigabit Transmission Distance (m)		Guaranteed 10 Gigabit Transmission Distance (m)		Minimum Bandwidth (MHz•km)		Maximum Attenuation (dB/km)		Group Index of Refraction	
	850 nm	1300 nm	850 nm†	1300 nm††	850 nm	1300 nm	850 nm	1300 nm	850 nm	1300 nm
50/125 (OM3)	1000	600	300	300	RML - 2000 OFL - 1500	OFL - 500	3.0	1.0	1.483	1.479
50/125 (OM4)	1100	600	550	300	RML - 4700 OFL - 3500	OFL - 500	3.0	1.0	1.483	1.479

† 10GBASE-S †† 10GBASE-LX4

### Minimum Performance Parameters for XGLO Singlemode Fibre

Fibre Type	Wavelength (nm)	Maximum Attenuation (dB/km)	Zero Dispersion Wavelength (nm)	Zero Dispersion Slope (nm²•km)	Index of Refraction
Singlemode (OS1/OS2)	1310	≤0.40	1312 ± 10	≤0.093	1.468
	1550	≤0.40	1312 ± 10	≤0.093	1.468
	1300 - 1324	≤0.30	1312 ± 10	≤0.093	1.468

## XGLO and LightSystem Indoor Tight Buffer (International) Physical Specifications

### PHYSICAL SPECIFICATIONS (All Values Are Nominal)

Fibre Count	Nominal Cable Diameter mm	Maximum Pulling Tension Newtons				Nominal Net Weight kg/km	
		Installation		Long Term			
	OFNR/ LSOH/ OFNP	OFNR/ LSOH	OFNP	OFNR/ LSOH	OFNP	OFNR/ LSOH	OFNP
2	4.8	400	400	120	120	17	20
4	4.8	660	440	198	132	19	22
6	4.8	660	440	198	132	22	25
8	5.8	900	560	270	168	28	31
12	5.8	900	560	270	168	32	36
16	7.8	1320	660	396	198	49	52
24	8.8	1320	660	396	198	61	65
48	16.0	2700	1000	810	300	200	207
72	19.6	2700	1000	810	300	310	322

Fibre Count	Maximum Crush Resistance (N/mm)	Maximum Crush Resistance (N/mm)	Operating Temperature °C	Storage Temperature °C	Minimum Bend Radius	
					Installation	Long Term
2-24	22	25/ 100	-20 to 70	-40 to 70	15 x DIA.	10 x DIA.
48-72	22	25/ 100	-20 to 70	-40 to 70	20 x DIA.	10 x DIA.

Custom lengths and jacket colours are available upon request. Contact our Customer Service Department for more information.

Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.

LightSystem® & XGLO® are trademarks of Siemon

# XGLO® & LightSystem® Indoor/Outdoor Tight Buffer (EMEA)

Siemon LSOH (IEC 60332-1) indoor/outdoor tight buffer cables are ideal for data centres, campus and building backbones. Siemon fibre optic cables are offered in XGLO and LightSystem configurations supporting high-speed applications such as Gigabit Ethernet, 10 Gigabit Ethernet, Gigabit ATM and Fibre Channel.

## Ordering Information

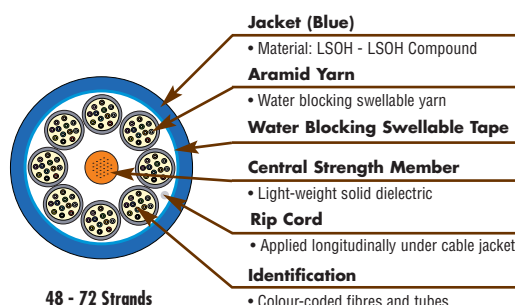
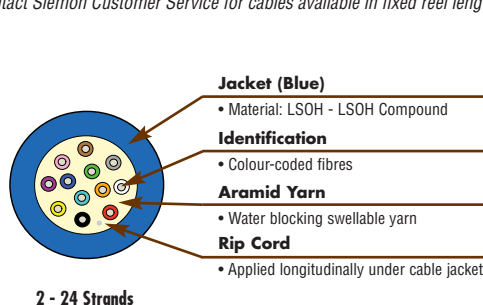
LightSystem Multimode 62.5/125 OM1, Multimode 50/125 OM2, XGLO Multimode 50/125 OM3 and OM4, Singlemode OS1/OS2

Part #	Fibre Count	Construction	Part #	Fibre Count	Construction
9GD(X)L002B-(XXXX)M	2	1 tube of 2 fibres	9GD(X)L016K-(XXXX)M	16	1 tube of 16 fibres
9GD(X)L004C-(XXXX)M	4	1 tube of 4 fibres	9GD(X)L024L-(XXXX)M	24	1 tube of 24 fibres
9GD(X)L006D-(XXXX)M	6	1 tube of 6 fibres	9GD(X)L048D-(XXXX)M	48	8 tubes of 6 fibres
9GD(X)L008E-(XXXX)M	8	1 tube of 8 fibres	9GD(X)L072G-(XXXX)M	72	6 tubes of 12 fibres
9GD(X)L012G-(XXXX)M	12	1 tube of 12 fibres			

Use 1st (X) to specify fibre type: 5 = 50/125µm, 6 = 62.5/125µm, 8 = Singlemode

Use (XXXX) to specify class performance: G101 = OM1 62.5µm, T101 = OM2 50µm, T301 = OM3 50µm Laser Optimised, T501 = OM4 50µm Laser Optimised, E201 = OS1/OS2 Singlemode  
M= metres

Note: Contact Siemon Customer Service for cables available in fixed reel lengths.



<div><div>LIGHTSYSTEM OM1 Multimode 62.5/125</div><div>OM2 Multimode 50/125</div><div>STANDARDS COMPLIANCE</div><div><ul style="list-style-type: none"><li>• ISO/IEC 11801:2002 OM1 (62.5/125)</li><li>• ISO/IEC 11801:2002 OM2 (50/125)</li><li>• ANSI/TIA/EIA-568-C.3</li><li>• ANSI/TIA-598-C</li><li>• ANSI/TIA-492 AAAB</li><li>• Telcordia GR-409-CORE</li><li>• IEC 60332-1-2 (Single strand)</li><li>IEC 60754-1-2 (Non Halogens)</li><li>IEC 60754-2 (Acid gas)</li><li>IEC 61034-2 (Smoke density)</li></ul></div><div>APPLICATIONS SUPPORT</div><table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-SX (850 nm)</td><td>N/A</td></tr><tr><td>50/125µm</td><td>82</td></tr><tr><td>62.5/125µm</td><td>26</td></tr><tr><td>1000BASE-SX (850 nm)</td><td>N/A</td></tr><tr><td>50/125µm</td><td>550</td></tr><tr><td>62.5/125µm</td><td>275</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>550</td></tr><tr><td>Fibre Channel 266 (1300 nm)</td><td>1,500</td></tr><tr><td>ATM 622 (1300 nm)</td><td>500</td></tr><tr><td>ATM 155 (1300 nm)</td><td>2,000</td></tr><tr><td>ATM 52 (1300 nm)</td><td>3,000</td></tr><tr><td>FDDI (Original-1300 nm)</td><td>2,000</td></tr><tr><td>100BASE-FX (1300 nm)</td><td>2,000</td></tr></table></div>	APPLICATION	DISTANCE (m)	10GBASE-SX (850 nm)	N/A	50/125µm	82	62.5/125µm	26	1000BASE-SX (850 nm)	N/A	50/125µm	550	62.5/125µm	275	1000BASE-LX (1300 nm)	550	Fibre Channel 266 (1300 nm)	1,500	ATM 622 (1300 nm)	500	ATM 155 (1300 nm)	2,000	ATM 52 (1300 nm)	3,000	FDDI (Original-1300 nm)	2,000	100BASE-FX (1300 nm)	2,000	<div><div>XGLO 300 OM3 Multimode 50/125</div><div>STANDARDS COMPLIANCE</div><div><ul style="list-style-type: none"><li>• ISO/IEC 11801:2002 OM3</li><li>• ANSI/TIA/EIA-568-C.3</li><li>• ANSI/TIA-598-C</li><li>• ANSI/TIA-492 AAAC</li><li>• Telcordia GR-409-CORE</li><li>• IEC 60332-1-2 (Single strand)</li><li>IEC 60754-1-2 (Non Halogens)</li><li>IEC 60754-2 (Acid gas)</li><li>IEC 61034-2 (Smoke density)</li></ul></div><div>APPLICATIONS SUPPORT</div><table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-SX (850 nm)</td><td>300</td></tr><tr><td>10GBASE-LX4 (1300 nm)</td><td>300</td></tr><tr><td>1000BASE-SX (850 nm)</td><td>1000</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>600</td></tr><tr><td>Fibre Channel 266 (1300 nm)</td><td>1,500</td></tr><tr><td>ATM 622 (1300 nm)</td><td>500</td></tr><tr><td>ATM 155 (1300 nm)</td><td>2,000</td></tr><tr><td>ATM 52 (1300 nm)</td><td>3,000</td></tr><tr><td>FDD1 (Original-1300 nm)</td><td>2,000</td></tr><tr><td>100BASE-FX (1300 nm)</td><td>2,000</td></tr></table></div>	APPLICATION	DISTANCE (m)	10GBASE-SX (850 nm)	300	10GBASE-LX4 (1300 nm)	300	1000BASE-SX (850 nm)	1000	1000BASE-LX (1300 nm)	600	Fibre Channel 266 (1300 nm)	1,500	ATM 622 (1300 nm)	500	ATM 155 (1300 nm)	2,000	ATM 52 (1300 nm)	3,000	FDD1 (Original-1300 nm)	2,000	100BASE-FX (1300 nm)	2,000	<div><div>XGLO 550 OM4 Multimode 50/125</div><div>STANDARDS COMPLIANCE</div><div><ul style="list-style-type: none"><li>• ISO/IEC 11801:2002 OM3</li><li>• ISO/IEC 11801:2002 Ammdement 2 OM4</li><li>• ANSI/TIA/EIA-568-C.3</li><li>• ANSI/TIA-598-C</li><li>• ANSI/TIA-492 AAAD</li><li>• IEC 60793-2-10 Fibre Type A1a.3</li><li>• Telcordia GR-409-CORE</li><li>• IEC 60332-1-2 (Single strand)</li><li>IEC 60754-1-2 (Non Halogens)</li><li>IEC 60754-2 (Acid gas)</li><li>IEC 61034-2 (Smoke density)</li></ul></div><div>APPLICATIONS SUPPORT</div><table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-SX (850 nm)</td><td>550</td></tr><tr><td>10GBASE-LX4 (1300 nm)</td><td>300</td></tr><tr><td>1000BASE-SX (850 nm)</td><td>1100</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>600</td></tr><tr><td>Fibre Channel 266 (1300 nm)</td><td>1,500</td></tr><tr><td>ATM 622 (1300 nm)</td><td>500</td></tr><tr><td>ATM 155 (1300 nm)</td><td>2,000</td></tr><tr><td>ATM 52 (1300 nm)</td><td>3,000</td></tr><tr><td>FDD1 (Original-1300 nm)</td><td>2,000</td></tr><tr><td>100BASE-FX (1300 nm)</td><td>2,000</td></tr></table></div>	APPLICATION	DISTANCE (m)	10GBASE-SX (850 nm)	550	10GBASE-LX4 (1300 nm)	300	1000BASE-SX (850 nm)	1100	1000BASE-LX (1300 nm)	600	Fibre Channel 266 (1300 nm)	1,500	ATM 622 (1300 nm)	500	ATM 155 (1300 nm)	2,000	ATM 52 (1300 nm)	3,000	FDD1 (Original-1300 nm)	2,000	100BASE-FX (1300 nm)	2,000	<div><div>XGLO OS1/OS2 Singlemode</div><div>STANDARDS COMPLIANCE</div><div><ul style="list-style-type: none"><li>• ISO/IEC 11801:Ed 2.0 Amendment:1:2008</li><li>• ANSI/TIA/EIA-568-C.3</li><li>• ANSI/TIA-598-C</li><li>• Telcordia GR-409-CORE</li><li>• ITU-T G.652 C/D</li><li>• IEC 60332-1-2 (Single strand)</li><li>IEC 60754-1-2 (Non Halogens)</li><li>IEC 60754-2 (Acid gas)</li><li>IEC 61034-2 (Smoke density)</li></ul></div><div>APPLICATIONS SUPPORT</div><table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-L (1310 nm)</td><td>8,000</td></tr><tr><td>10GBASE-E (1550 nm)</td><td>30,000</td></tr><tr><td>10G Fibre Channel (Serial-1310 nm)</td><td>10,000</td></tr><tr><td>10G Fibre Channel (WDM-1310 nm)</td><td>10,000</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>5,000</td></tr><tr><td>Fibre Channel 266/1062 (1300 nm)</td><td>10,000</td></tr><tr><td>ATM 52/155/622 (1300 nm)</td><td>15,000</td></tr></table></div>	APPLICATION	DISTANCE (m)	10GBASE-L (1310 nm)	8,000	10GBASE-E (1550 nm)	30,000	10G Fibre Channel (Serial-1310 nm)	10,000	10G Fibre Channel (WDM-1310 nm)	10,000	1000BASE-LX (1300 nm)	5,000	Fibre Channel 266/1062 (1300 nm)	10,000	ATM 52/155/622 (1300 nm)	15,000
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FDD1 (Original-1300 nm)	2,000																																																																																										
100BASE-FX (1300 nm)	2,000																																																																																										
APPLICATION	DISTANCE (m)																																																																																										
10GBASE-SX (850 nm)	550																																																																																										
10GBASE-LX4 (1300 nm)	300																																																																																										
1000BASE-SX (850 nm)	1100																																																																																										
1000BASE-LX (1300 nm)	600																																																																																										
Fibre Channel 266 (1300 nm)	1,500																																																																																										
ATM 622 (1300 nm)	500																																																																																										
ATM 155 (1300 nm)	2,000																																																																																										
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FDD1 (Original-1300 nm)	2,000																																																																																										
100BASE-FX (1300 nm)	2,000																																																																																										
APPLICATION	DISTANCE (m)																																																																																										
10GBASE-L (1310 nm)	8,000																																																																																										
10GBASE-E (1550 nm)	30,000																																																																																										
10G Fibre Channel (Serial-1310 nm)	10,000																																																																																										
10G Fibre Channel (WDM-1310 nm)	10,000																																																																																										
1000BASE-LX (1300 nm)	5,000																																																																																										
Fibre Channel 266/1062 (1300 nm)	10,000																																																																																										
ATM 52/155/622 (1300 nm)	15,000																																																																																										

# XGLO® & LightSystem® Indoor/Outdoor Tight Buffer (EMEA)

## LightSystem® Gigabit Ethernet Fibre Optic Cable

### Minimum Performance Parameters for LightSystem 62.5/125µm & 50/125µm Multimode Fibre

Fibre Type	Wavelength nm	Maximum Attenuation (dB/km)	Minimum Modal Bandwidth (MHz•km)	Guaranteed Gigabit Transmission Distance (Metres)	Index of Refraction
62.5/125 (OM1)	850	3.5	200	275	1.495
	1300	1.0	500	550	1.490
50/125 (OM2)	850	3.5	500	550	1.483
	1300	1.0	500	550	1.479

\*The protocol pertinent to the transmission distance as noted is Gigabit Ethernet per IEEE 802.3:2005.

### Minimum Performance Parameters for XGLO 50/125µm Multimode Fibre

Fibre Type	Guaranteed Gigabit Transmission Distance (m)		Guaranteed 10 Gigabit Transmission Distance (m)		Minimum Bandwidth (MHz•km)		Maximum Attenuation (dB/km)		Group Index of Refraction	
	850 nm	1300 nm	850 nm†	1300 nm††	850 nm	1300 nm	850 nm	1300 nm	850 nm	1300 nm
50/125 (OM3)	1000	600	300	300	RML - 2000 OFL - 1500	OFL - 500	3.0	1.0	1.483	1.479
50/125 (OM4)	1100	600	550	300	RML - 4700 OFL - 3500	OFL - 500	3.0	1.0	1.483	1.479

† 10GBASE-S †† 10GBASE-LX4

### Minimum Performance Parameters for XGLO Singlemode Fibre

Fibre Type	Wavelength (nm)	Maximum Attenuation (dB/km)	Zero Dispersion Wavelength (nm)	Zero Dispersion Slope (nm²•km)	Index of Refraction
Singlemode (OS1/OS2)	1310	0.40	1312 ± 10	≤0.089	1.468
	1550	0.30	1312 ± 10	≤0.089	1.468
	1310 - 1625	<0.40	1312 ± 10	≤0.089	1.468

## XGLO and LightSystem Indoor/Outdoor Tight Buffer (EMEA) Physical Specifications

### PHYSICAL SPECIFICATIONS

Fibre Count	Nominal Cable Diameter mm	Maximum Pulling Tension Newtons		Nominal Net Weight kg/km
		Installation	Long Term	
2	4.9	1500	750	15
4	5.3	1500	750	22
6	5.5	1500	750	23
8	5.8	1500	750	26
12	6.6	1500	750	32
16	7.8	1500	750	40
24	8.0	1500	750	48
48	15	4200	1400	260
72	20	5400	1800	420

Fibre Count	Maximum Crush Resistance (N/mm)	Operating Temperature °C	Storage Temperature °C	Minimum Bend Radius	
				Installation	Long Term
2-24	5	-20 to 70	-40 to 70	20 x DIA.	10 x DIA.
48-72	30	-20 to 70	-20 to 70	20 x DIA.	10 x DIA.

Custom lengths and jacket colours are available upon request. Contact our Customer Service Department for more information.

Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.

LightSystem® & XGLO® are trademarks of Siemon

# XGLO® & LightSystem Indoor/Outdoor LooseTube (EMEA)

Siemon LSOH (IEC 60332-3) indoor/outdoor loose tube cables are ideal for campus and building backbones. Siemon fibre optic cables are offered in XGLO and LightSystem configurations supporting high-speed, applications such as Gigabit Ethernet, 10 Gigabit Ethernet, Gigabit ATM and Fibre Channel.

## Ordering Information

LightSystem Multimode 62.5/125 OM1, Multimode 50/125 OM2, XGLO Multimode 50/125 OM3 and OM4, Singlemode OS1/OS2

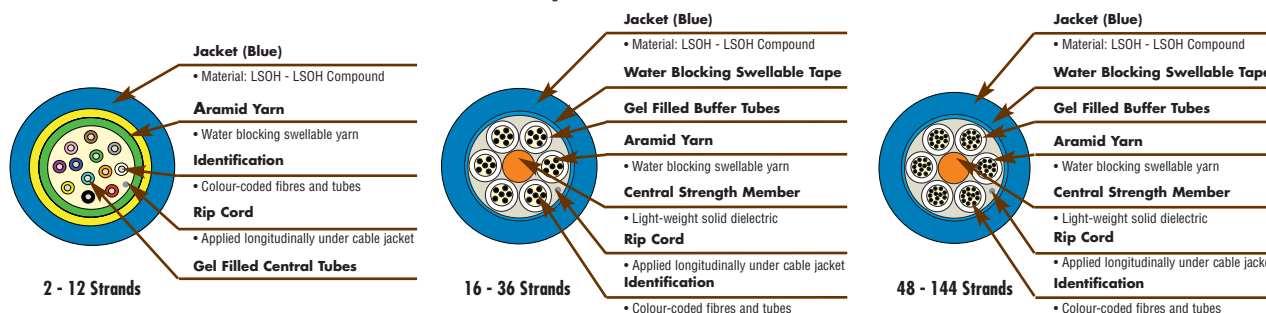
Part #	Fibre Count	Construction	Part #	Fibre Count	Construction
9GG(X)H002B-(XXXX)M	2	1 tube of 2 fibres	9GG(X)H024D-(XXXX)M	24	4 tubes of 6 fibres
9GG(X)H004C-(XXXX)M	4	1 tube of 4 fibres	9GG(X)H036G-(XXXX)M	36	6 tubes of 6 fibres
9GG(X)H006D-(XXXX)M	6	1 tube of 6 fibres	9GG(X)H048G-(XXXX)M	48	4 tubes of 12 fibres
9GG(X)H008E-(XXXX)M	8	1 tube of 8 fibres	9GG(X)H072G-(XXXX)M	72	6 tubes of 12 fibres
9GG(X)H012G-(XXXX)M	12	1 tube of 12 fibres	9GG(X)H096G-(XXXX)M	96	8 tubes of 12 fibres
9GG(X)H016D-(XXXX)M	16	2 tubes of 6 fibres 1 tube of 4 fibres	9GG(X)H144G-(XXXX)M	144	12 tubes of 12 fibres

Use 1st (X) to specify fibre type: 6 = 62.5/125µm, 5 = 50/125µm, 8 = Singlemode

Use (XXXX) to specify class performance: G101 = OM1 62.5µm, T101 = OM2 50µm, T301 = OM3 50µm Laser Optimised, T501 = OM4 50µm Laser Optimised, E201 = OS1/OS2 Singlemode

M= metres

Note: Contact Siemon Customer Service for cables available in fixed reel lengths.



Note: The 2-12 strand rodent resistant cables feature a glass yarn design with a high tensile strength and degree of rodent protection which is effective in many cases. The function of glass yarns differs from the other rodent protection materials such as a 100% metallic armor protection. The glass yarns provide a degree of protection because it is disagreeable and unpleasant for most rodents to gnaw the glass yarns.

### LIGHTSYSTEM OM1 Multimode 62.5/125

#### OM2 Multimode 50/125

##### STANDARDS COMPLIANCE

- ISO/IEC 11801:2002 OM1 (62.5/125)
- ISO/IEC 11801:2002 OM2 (50/125)
- ANSI/TIA/EIA-568-C.3
- ANSI/TIA-598-C
- ANSI/TIA-492 AAAB
- Telcordia GR-409-CORE
- IEC 60332-1-2 (Single strand)
- IEC 60754-1-2 (Non Halogens)
- IEC 60754-2 (Acid gas)
- IEC 61034-2 (Smoke density)

##### APPLICATIONS SUPPORT

APPLICATION	DISTANCE (m)
10GBASE-SX (850 nm)	N/A
50/125µm	82
62.5/125µm	26
1000BASE-SX (850 nm)	N/A
50/125µm	550
62.5/125µm	275
1000BASE-LX (1300 nm)	550
Fibre Channel 266 (1300 nm)	1,500
ATM 622 (1300 nm)	500
ATM 155 (1300 nm)	2,000
ATM 52 (1300 nm)	3,000
FDDI (Original-1300 nm)	2,000
100BASE-FX (1300 nm)	2,000

### XGLO 300 OM3 Multimode 50/125

#### STANDARDS COMPLIANCE

- ISO/IEC 11801:2002 OM3
- ANSI/TIA/EIA-568-C.3
- ANSI/TIA-598-C
- ANSI/TIA-492 AAAC
- Telcordia GR-409-CORE
- IEC 60332-1-2 (Single strand)
- IEC 60754-1-2 (Non Halogens)
- IEC 60754-2 (Acid gas)
- IEC 61034-2 (Smoke density)

##### APPLICATIONS SUPPORT

APPLICATION	DISTANCE (m)
10GBASE-SX (850 nm)	300
10GBASE-LX4 (1300 nm)	300
1000BASE-SX (850 nm)	1000
1000BASE-LX (1300 nm)	600
Fibre Channel 266 (1300 nm)	1,500
ATM 622 (1300 nm)	500
ATM 155 (1300 nm)	2,000
ATM 52 (1300 nm)	3,000
FDDI (Original-1300 nm)	2,000
100BASE-FX (1300 nm)	2,000

### XGLO 550 OM4 Multimode, 50/125

#### STANDARDS COMPLIANCE

- ISO/IEC 11801:2002 OM3
- ISO/IEC 11801:2002 Amendment 2 OM4
- ANSI/TIA/EIA-568-C.3
- ANSI/TIA-598-C
- ANSI/TIA-492 AAAD
- IEC 60793-2-10 Fibre Type A1a.3
- Telcordia GR-409-CORE
- IEC 60332-1-2 (Single strand)
- IEC 60754-1-2 (Non Halogens)
- IEC 60754-2 (Acid gas)
- IEC 61034-2 (Smoke density)

##### APPLICATIONS SUPPORT

APPLICATION	DISTANCE (m)
10GBASE-SX (850 nm)	550
10GBASE-LX4 (1300 nm)	300
1000BASE-SX (850 nm)	1100
1000BASE-LX (1300 nm)	600
Fibre Channel 266 (1300 nm)	1,500
ATM 622 (1300 nm)	500
ATM 155 (1300 nm)	2,000
ATM 52 (1300 nm)	3,000
FDDI (Original-1300 nm)	2,000
100BASE-FX (1300 nm)	2,000

### XGLO OS1/OS2 Singlemode

#### STANDARDS COMPLIANCE

- ISO/IEC 11801:Ed 2.0 Amendment:1:2008
- ANSI/TIA/EIA-568-C.3
- ANSI/TIA-598-C
- Telcordia GR-409-CORE
- ITU-T G.652 C/D
- IEC 60332-1-2 (Single strand)
- IEC 60754-1-2 (Non Halogens)
- IEC 60754-2 (Acid gas)
- IEC 61034-2 (Smoke density)

##### APPLICATIONS SUPPORT

APPLICATION	DISTANCE (m)
10GBASE-L (1310 nm)	8,000
10GBASE-E (1550 nm)	30,000
10G Fibre Channel (Serial-1310 nm)	10,000
10G Fibre Channel (WDM-1310 nm)	10,000
1000BASE-LX (1300 nm)	5,000
Fibre Channel 266/1062 (1300 nm)	10,000
ATM 52/155/622 (1300 nm)	15,000

# XGLO® & LightSystem Indoor/Outdoor LooseTube (EMEA)

## LightSystem® Gigabit Ethernet Fibre Optic Cable

### Minimum Performance Parameters for LightSystem 62.5/125µm & 50/125µm Multimode Fibre

Fibre Type	Wavelength nm	Maximum Attenuation (dB/km)	Minimum Modal Bandwidth (MHz•km)	Guaranteed Gigabit Transmission Distance (Metres)	Index of Refraction
62.5/125 (OM1)	850	3.5	200	275	1.495
	1300	1.0	500	550	1.490
50/125 (OM2)	850	3.5	500	550	1.483
	1300	1.0	500	550	1.479

\*The protocol pertinent to the transmission distance as noted is Gigabit Ethernet per IEEE 802.3:2005.

### Minimum Performance Parameters for XGLO 50/125µm Multimode Fibre

Fibre Type	Guaranteed Gigabit Transmission Distance (m)		Guaranteed 10 Gigabit Transmission Distance (m)		Minimum Bandwidth (MHz•km)		Maximum Attenuation (dB/km)		Group Index of Refraction	
	850 nm	1300 nm	850 nm†	1300 nm††	850 nm	1300 nm	850 nm	1300 nm	850 nm	1300 nm
50/125 (OM3)	1000	600	300	300	RML - 2000 OFL - 1500	OFL - 500	3.0	1.0	1.483	1.479
50/125 (OM4)	1100	600	550	300	RML - 4700 OFL - 3500	OFL - 500	3.0	1.0	1.483	1.479

† 10GBASE-S †† 10GBASE-LX4

### Minimum Performance Parameters for XGLO Singlemode Fibre

Fibre Type	Wavelength (nm)	Maximum Attenuation (dB/km)	Zero Dispersion Wavelength (nm)	Zero Dispersion Slope (nm²•km)	Index of Refraction
Singlemode (OS1/OS2)	1310	0.40	1312 ± 10	≤0.089	1.468
	1550	0.30	1312 ± 10	≤0.089	1.468
	1310 - 1625	<0.40	1312 ± 10	≤0.089	1.468

## XGLO and LightSystem Indoor/Outdoor LooseTube (EMEA) Physical Specifications

### PHYSICAL SPECIFICATIONS (All Values Are Nominal)

Fibre Count	Nominal Cable Diameter mm	Maximum Pulling Tension Newtons		Nominal Net Weight kg/km
		Installation	Long Term	
2	7.5	1500	700	55
4	7.5	1500	700	55
6	7.5	1500	700	55
8	7.5	1500	700	55
12	7.5	1500	700	60
16	10.5	1800	1200	90
24	10.5	1800	1200	90
36	10.5	1800	1200	90
48	10.5	1800	1200	90
72	10.5	1800	1200	90
96	12.0	1800	1200	125
144	15.0	1800	1200	190

Fibre Count	Maximum Crush Resistance (N/mm)	Operating Temperature °C	Storage Temperature °C	Minimum Bend Radius	
				Installation	Long Term
2-12	20	-30 to 70	-40 to 70	20 x DIA.	10 x DIA.
16-144	30	-30 to 60	-40 to 70	20 x DIA.	10 x DIA.

Custom lengths and jacket colours are available upon request. Contact our Customer Service Department for more information.

Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.

LightSystem® & XGLO® are trademarks of Siemon

# XGLO® & LightSystem® Indoor/Outdoor Tight Buffer (International)

Siemon LSOH (IEC 60332-3) indoor/outdoor tight buffer cables are ideal for data centres, campus and building backbones. Siemon fibre optic cables are offered in XGLO and LightSystem configurations supporting high-speed applications such as Gigabit Ethernet, 10 Gigabit Ethernet, Gigabit ATM and Fibre Channel.

## Ordering Information

LightSystem Multimode 62.5/125 OM1, Multimode 50/125 OM2, XGLO Multimode 50/125 OM3 and OM4, Singlemode OS1/OS2

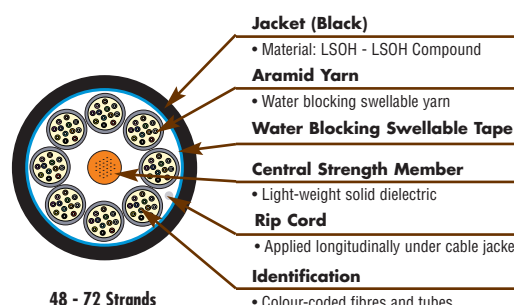
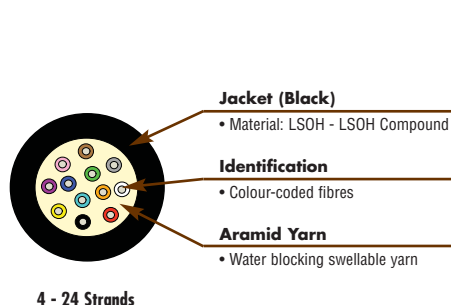
Part #	Fibre Count	Construction	Part #	Fibre Count	Construction
9GD(X)H004C-(XXXX)M	4	1 tube of 4 fibres	9GD(X)H016K-(XXXX)M	16	1 tube of 16 fibres
9GD(X)H006D-(XXXX)M	6	1 tube of 6 fibres	9GD(X)H024L-(XXXX)M	24	1 tube of 24 fibres
9GD(X)H008E-(XXXX)M	8	1 tube of 8 fibres	9GD(X)H048G-(XXXX)M	48	4 tubes of 12 fibres
9GD(X)H012G-(XXXX)M	12	1 tube of 12 fibres	9GD(X)H072G-(XXXX)M	72	6 tubes of 12 fibres

Use 1st (X) to specify fibre type: 5 = 50/125µm, 6 = 62.5/125µm, 8 = Singlemode

Use (XXXX) to specify class performance: G101 = OM1 62.5µm, T101 = OM2 50µm, T301 = OM3 50µm Laser Optimised, T501 = OM4 50µm Laser Optimised, E201 = OS1/OS2 Singlemode

M= metres

Note: Contact Siemon Customer Service for cables available in fixed reel lengths.



<div><div>LIGHTSYSTEM OM1 Multimode 62.5/125</div><div>OM2 Multimode 50/125</div><div>STANDARDS COMPLIANCE</div><div><ul style="list-style-type: none"><li>ISO/IEC 11801:2002 OM1 (62.5/125)</li><li>ISO/IEC 11801:2002 OM2 (50/125)</li><li>ANSI/TIA/EIA-568-C.3</li><li>ANSI/TIA-598-C</li><li>ANSI/TIA-492 AAAB</li><li>Telcordia GR-409-CORE</li><li>IEC 60332-3</li></ul></div><div><div>IEC 60332-1-2 (Single strand)</div><div>IEC 60754-2 (Acid gas)</div><div>IEC 61034-2 (Smoke density)</div></div><div><div>APPLICATIONS SUPPORT</div><table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-SX (850 nm)</td><td>N/A</td></tr><tr><td>50/125µm</td><td>82</td></tr><tr><td>62.5/125µm</td><td>26</td></tr><tr><td>1000BASE-SX (850 nm)</td><td>N/A</td></tr><tr><td>50/125µm</td><td>550</td></tr><tr><td>62.5/125µm</td><td>275</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>550</td></tr><tr><td>Fibre Channel 266 (1300 nm)</td><td>1,500</td></tr><tr><td>ATM 622 (1300 nm)</td><td>500</td></tr><tr><td>ATM 155 (1300 nm)</td><td>2,000</td></tr><tr><td>ATM 52 (1300 nm)</td><td>3,000</td></tr><tr><td>FDDI (Original-1300 nm)</td><td>2,000</td></tr><tr><td>100BASE-FX (1300 nm)</td><td>2,000</td></tr></table></div></div>	APPLICATION	DISTANCE (m)	10GBASE-SX (850 nm)	N/A	50/125µm	82	62.5/125µm	26	1000BASE-SX (850 nm)	N/A	50/125µm	550	62.5/125µm	275	1000BASE-LX (1300 nm)	550	Fibre Channel 266 (1300 nm)	1,500	ATM 622 (1300 nm)	500	ATM 155 (1300 nm)	2,000	ATM 52 (1300 nm)	3,000	FDDI (Original-1300 nm)	2,000	100BASE-FX (1300 nm)	2,000	<div><div>XGLO 300 OM3 Multimode 50/125</div><div>STANDARDS COMPLIANCE</div><div><ul style="list-style-type: none"><li>ISO/IEC 11801:2002 OM3</li><li>ANSI/TIA/EIA-568-C.3</li><li>ANSI/TIA-598-C</li><li>ANSI/TIA-492 AAAC</li><li>Telcordia GR-409-CORE</li><li>IEC 60332-3</li></ul></div><div><div>IEC 60332-1-2 (Single strand)</div><div>IEC 60754-2 (Acid gas)</div><div>IEC 61034-2 (Smoke density)</div></div><div><div>APPLICATIONS SUPPORT</div><table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-SX (850 nm)</td><td>300</td></tr><tr><td>10GBASE-LX4 (1300 nm)</td><td>300</td></tr><tr><td>1000BASE-SX (850 nm)</td><td>1000</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>600</td></tr><tr><td>Fibre Channel 266 (1300 nm)</td><td>1,500</td></tr><tr><td>ATM 622 (1300 nm)</td><td>500</td></tr><tr><td>ATM 155 (1300 nm)</td><td>2,000</td></tr><tr><td>ATM 52 (1300 nm)</td><td>3,000</td></tr><tr><td>FDDI (Original-1300 nm)</td><td>2,000</td></tr><tr><td>100BASE-FX (1300 nm)</td><td>2,000</td></tr></table></div></div>	APPLICATION	DISTANCE (m)	10GBASE-SX (850 nm)	300	10GBASE-LX4 (1300 nm)	300	1000BASE-SX (850 nm)	1000	1000BASE-LX (1300 nm)	600	Fibre Channel 266 (1300 nm)	1,500	ATM 622 (1300 nm)	500	ATM 155 (1300 nm)	2,000	ATM 52 (1300 nm)	3,000	FDDI (Original-1300 nm)	2,000	100BASE-FX (1300 nm)	2,000	<div><div>XGLO 550 OM4 Multimode 50/125</div><div>STANDARDS COMPLIANCE</div><div><ul style="list-style-type: none"><li>ISO/IEC 11801:2002 OM3</li><li>ISO/IEC 11801:2002 Ammdment 2 OM4</li><li>ANSI/TIA/EIA-568-C.3</li><li>ANSI/TIA-598-C</li><li>ANSI/TIA-492 AAAD</li><li>IEC 60793-2-10 Fibre Type A1a.3</li><li>Telcordia GR-409-CORE</li><li>IEC 60332-3</li></ul></div><div><div>IEC 60332-1-2 (Single strand)</div><div>IEC 60754-2 (Acid gas)</div><div>IEC 61034-2 (Smoke density)</div></div><div><div>APPLICATIONS SUPPORT</div><table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-SX (850 nm)</td><td>550</td></tr><tr><td>10GBASE-LX4 (1300 nm)</td><td>300</td></tr><tr><td>1000BASE-SX (850 nm)</td><td>1100</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>600</td></tr><tr><td>Fibre Channel 266 (1300 nm)</td><td>1,500</td></tr><tr><td>ATM 622 (1300 nm)</td><td>500</td></tr><tr><td>ATM 155 (1300 nm)</td><td>2,000</td></tr><tr><td>ATM 52 (1300 nm)</td><td>3,000</td></tr><tr><td>FDDI (Original-1300 nm)</td><td>2,000</td></tr><tr><td>100BASE-FX (1300 nm)</td><td>2,000</td></tr></table></div></div>	APPLICATION	DISTANCE (m)	10GBASE-SX (850 nm)	550	10GBASE-LX4 (1300 nm)	300	1000BASE-SX (850 nm)	1100	1000BASE-LX (1300 nm)	600	Fibre Channel 266 (1300 nm)	1,500	ATM 622 (1300 nm)	500	ATM 155 (1300 nm)	2,000	ATM 52 (1300 nm)	3,000	FDDI (Original-1300 nm)	2,000	100BASE-FX (1300 nm)	2,000	<div><div>XGLO OS1/OS2 Singlemode</div><div>STANDARDS COMPLIANCE</div><div><ul style="list-style-type: none"><li>ISO/IEC 11801:Ed 2.0 Amendment:1:2008</li><li>ANSI/TIA/EIA-568-C.3</li><li>ANSI/TIA-598-C</li><li>Telcordia GR-409-CORE</li><li>ITU-T G.652 C/D</li><li>ISO/IEC 60332-3</li></ul></div><div><div>IEC 60332-1-2 (Single strand)</div><div>IEC 60754-2 (Acid gas)</div><div>IEC 61034-2 (Smoke density)</div></div><div><div>APPLICATIONS SUPPORT</div><table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-L (1310 nm)</td><td>8,000</td></tr><tr><td>10GBASE-E (1550 nm)</td><td>30,000</td></tr><tr><td>10G Fibre Channel (Serial-1310 nm)</td><td>10,000</td></tr><tr><td>10G Fibre Channel (WDM-1310 nm)</td><td>10,000</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>5,000</td></tr><tr><td>Fibre Channel 266/1062 (1300 nm)</td><td>10,000</td></tr><tr><td>ATM 52/155/622 (1300 nm)</td><td>15,000</td></tr></table></div></div>	APPLICATION	DISTANCE (m)	10GBASE-L (1310 nm)	8,000	10GBASE-E (1550 nm)	30,000	10G Fibre Channel (Serial-1310 nm)	10,000	10G Fibre Channel (WDM-1310 nm)	10,000	1000BASE-LX (1300 nm)	5,000	Fibre Channel 266/1062 (1300 nm)	10,000	ATM 52/155/622 (1300 nm)	15,000
APPLICATION	DISTANCE (m)																																																																																										
10GBASE-SX (850 nm)	N/A																																																																																										
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10GBASE-SX (850 nm)	300																																																																																										
10GBASE-LX4 (1300 nm)	300																																																																																										
1000BASE-SX (850 nm)	1000																																																																																										
1000BASE-LX (1300 nm)	600																																																																																										
Fibre Channel 266 (1300 nm)	1,500																																																																																										
ATM 622 (1300 nm)	500																																																																																										
ATM 155 (1300 nm)	2,000																																																																																										
ATM 52 (1300 nm)	3,000																																																																																										
FDDI (Original-1300 nm)	2,000																																																																																										
100BASE-FX (1300 nm)	2,000																																																																																										
APPLICATION	DISTANCE (m)																																																																																										
10GBASE-SX (850 nm)	550																																																																																										
10GBASE-LX4 (1300 nm)	300																																																																																										
1000BASE-SX (850 nm)	1100																																																																																										
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Fibre Channel 266 (1300 nm)	1,500																																																																																										
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APPLICATION	DISTANCE (m)																																																																																										
10GBASE-L (1310 nm)	8,000																																																																																										
10GBASE-E (1550 nm)	30,000																																																																																										
10G Fibre Channel (Serial-1310 nm)	10,000																																																																																										
10G Fibre Channel (WDM-1310 nm)	10,000																																																																																										
1000BASE-LX (1300 nm)	5,000																																																																																										
Fibre Channel 266/1062 (1300 nm)	10,000																																																																																										
ATM 52/155/622 (1300 nm)	15,000																																																																																										

# XGLO® & LightSystem® Indoor/Outdoor Tight Buffer (International)

## LightSystem® Gigabit Ethernet Fibre Optic Cable

### Minimum Performance Parameters for LightSystem 62.5/125µm & 50/125µm Multimode Fibre

Fibre Type	Wavelength nm	Maximum Attenuation (dB/km)	Minimum Modal Bandwidth (MHz•km)	Guaranteed Gigabit Transmission Distance (Metres)	Index of Refraction
62.5/125 (OM1)	850	3.5	200	275	1.495
	1300	1.0	500	550	1.490
50/125 (OM2)	850	3.5	500	550	1.483
	1300	1.0	500	550	1.479

\*The protocol pertinent to the transmission distance as noted is Gigabit Ethernet per IEEE 802.3:2005.

### Minimum Performance Parameters for XGLO 50/125µm Multimode Fibre

Fibre Type	Guaranteed Gigabit Transmission Distance (m)		Guaranteed 10 Gigabit Transmission Distance (m)		Minimum Bandwidth (MHz•km)		Maximum Attenuation (dB/km)		Group Index of Refraction	
	850 nm	1300 nm	850 nm†	1300 nm††	850 nm	1300 nm	850 nm	1300 nm	850 nm	1300 nm
50/125 (OM3)	1000	600	300	300	RML - 2000 OFL - 1500	OFL - 500	3.0	1.0	1.483	1.479
50/125 (OM4)	1100	600	550	300	RML - 4700 OFL - 3500	OFL - 500	3.0	1.0	1.483	1.479

† 10GBASE-S †† 10GBASE-LX4

### Minimum Performance Parameters for XGLO Singlemode Fibre

Fibre Type	Wavelength (nm)	Maximum Attenuation (dB/km)	Zero Dispersion Wavelength (nm)	Zero Dispersion Slope (nm²•km)	Index of Refraction
Singlemode (OS1/OS2)	1310	0.40	1312 ± 10	≤0.089	1.468
	1550	0.30	1312 ± 10	≤0.089	1.468
	1310 - 1625	<0.40	1312 ± 10	≤0.089	1.468

## XGLO and LightSystem Indoor/Outdoor Tight Buffer (International) Physical Specifications

### PHYSICAL SPECIFICATIONS (All Values Are Nominal)

Fibre Count	Nominal Cable Diameter mm	Maximum Pulling Tension Newtons		Nominal Net Weight kg/km
		Installation	Long Term	
4	5.3	1500	495	23
6	5.3	1500	495	25
8	5.8	1500	495	30
12	6.2	1500	495	35
16	7.8	1500	495	49
24	8.8	1500	495	61
48	18.3	4200	1400	255
72	21.9	5400	1800	384

Fibre Count	Maximum Crush Resistance (N/mm)	Operating Temperature °C	Storage Temperature °C	Minimum Bend Radius	
				Installation	Long Term
4-12	5	-40 to 70	-40 to 70	20 x DIA.	10 x DIA.
16-72	10	-20 to 70	-20 to 70	20 x DIA.	10 x DIA.

Custom lengths and jacket colours are available upon request. Contact our Customer Service Department for more information.

Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.

LightSystem® & XGLO® are trademarks of Siemon

# XGLO® & LightSystem® Indoor/Outdoor LooseTube (International)

Siemon LSOH (IEC 60332-3) indoor/outdoor loose tube cables are ideal for campus and building backbones. Siemon fibre optic cables are offered in XGLO and LightSystem configurations supporting high-speed, applications such as Gigabit Ethernet, 10 Gigabit Ethernet, Gigabit ATM and Fibre Channel.

## Ordering Information

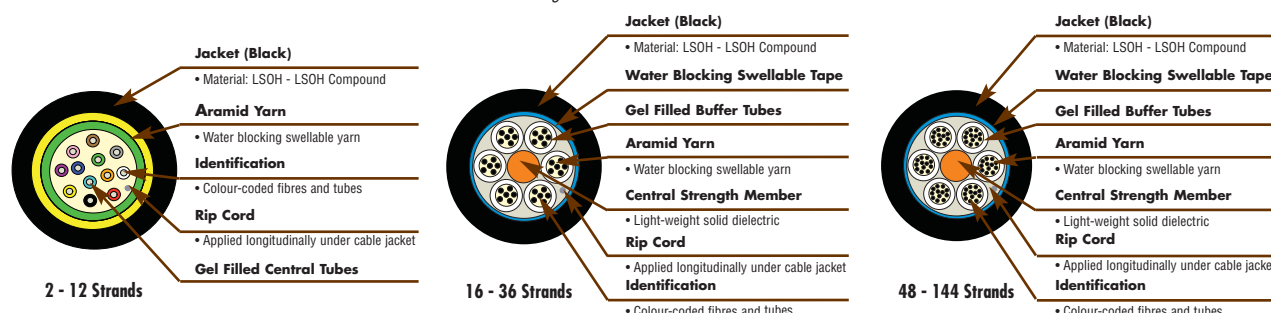
LightSystem Multimode 62.5/125 OM1, Multimode 50/125 OM2, XGLO Multimode 50/125 OM3 and OM4, Singlemode OS1/OS2

Part #	Fibre Count	Construction	Part #	Fibre Count	Construction
9GG(X)H002B-(XXXX)M	2	1 tube of 2 fibres	9GG(X)H024D-(XXXX)M	24	4 tubes of 6 fibres
9GG(X)H004C-(XXXX)M	4	1 tube of 4 fibres	9GG(X)H036G-(XXXX)M	36	6 tubes of 6 fibres
9GG(X)H006D-(XXXX)M	6	1 tube of 6 fibres	9GG(X)H048G-(XXXX)M	48	4 tubes of 12 fibres
9GG(X)H008E-(XXXX)M	8	1 tube of 8 fibres	9GG(X)H072G-(XXXX)M	72	6 tubes of 12 fibres
9GG(X)H012G-(XXXX)M	12	1 tube of 12 fibres	9GG(X)H096G-(XXXX)M	96	8 tubes of 12 fibres
9GG(X)H016D-(XXXX)M	16	2 tubes of 6 fibres 1 tube of 4 fibres	9GG(X)H144G-(XXXX)M	144	12 tubes of 12 fibres

Use 1st (X) to specify fibre type: 6 = 62.5/125µm, 5 = 50/125µm, 8 = Singlemode

Use (XXXX) to specify class performance: G101 = OM1 62.5µm, T101 = OM2 50µm, T301 = OM3 50µm Laser Optimised, T501 = OM4 50µm Laser Optimised, E201 = OS1/OS2 Singlemode  
M= metres

Note: Contact Siemon Customer Service for cables available in fixed reel lengths.



Note: The 2-12 strand rodent resistant cables feature a glass yarn design with a high tensile strength and degree of rodent protection which is effective in many cases. The function of glass yarns differs from the other rodent protection materials such as a 100% metallic armor protection. The glass yarns provide a degree of protection because it is disagreeable and unpleasant for most rodents to gnaw the glass yarns.

<div>LIGHTSYSTEM OM1 Multimode 62.5/125</div> <div>OM2 Multimode 50/125</div> <div>STANDARDS COMPLIANCE</div> <div><ul style="list-style-type: none"><li>ISO/IEC 11801:2002 OM1 (62.5/125)</li><li>ISO/IEC 11801:2002 OM2 (50/125)</li><li>ANSI/TIA/EIA-568-C.3</li><li>ANSI/TIA-598-C</li><li>ANSI/TIA-492 AAAB</li><li>Telcordia GR-409-CORE</li><li>IEC 60332-3</li></ul><div>IEC 60332-1-2 (Single strand)</div><div>IEC 60754-2 (Acid gas)</div><div>IEC 61034-2 (Smoke density)</div></div> <div>APPLICATIONS SUPPORT</div> <table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-SX (850 nm)</td><td>N/A</td></tr><tr><td>50/125µm</td><td>82</td></tr><tr><td>62.5/125µm</td><td>26</td></tr><tr><td>1000BASE-SX (850 nm)</td><td>N/A</td></tr><tr><td>50/125µm</td><td>550</td></tr><tr><td>62.5/125µm</td><td>275</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>550</td></tr><tr><td>Fibre Channel 266 (1300 nm)</td><td>1,500</td></tr><tr><td>ATM 622 (1300 nm)</td><td>500</td></tr><tr><td>ATM 155 (1300 nm)</td><td>2,000</td></tr><tr><td>ATM 52 (1300 nm)</td><td>3,000</td></tr><tr><td>FDD1 (Original-1300 nm)</td><td>2,000</td></tr><tr><td>100BASE-FX (1300 nm)</td><td>2,000</td></tr></table>	APPLICATION	DISTANCE (m)	10GBASE-SX (850 nm)	N/A	50/125µm	82	62.5/125µm	26	1000BASE-SX (850 nm)	N/A	50/125µm	550	62.5/125µm	275	1000BASE-LX (1300 nm)	550	Fibre Channel 266 (1300 nm)	1,500	ATM 622 (1300 nm)	500	ATM 155 (1300 nm)	2,000	ATM 52 (1300 nm)	3,000	FDD1 (Original-1300 nm)	2,000	100BASE-FX (1300 nm)	2,000	<div>XGLO 300 OM3 Multimode 50/125</div> <div>STANDARDS COMPLIANCE</div> <div><ul style="list-style-type: none"><li>ISO/IEC 11801:2002 OM3</li><li>ANSI/TIA/EIA-568-C.3</li><li>ANSI/TIA-598-C</li><li>ANSI/TIA-492 AAAC</li><li>Telcordia GR-409-CORE</li><li>IEC 60332-3</li></ul><div>IEC 60332-1-2 (Single strand)</div><div>IEC 60754-2 (Acid gas)</div><div>IEC 61034-2 (Smoke density)</div></div> <div>APPLICATIONS SUPPORT</div> <table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-SX (850 nm)</td><td>300</td></tr><tr><td>10GBASE-LX4 (1300 nm)</td><td>300</td></tr><tr><td>1000BASE-SX (850 nm)</td><td>1000</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>600</td></tr><tr><td>Fibre Channel 266 (1300 nm)</td><td>1,500</td></tr><tr><td>ATM 622 (1300 nm)</td><td>500</td></tr><tr><td>ATM 155 (1300 nm)</td><td>2,000</td></tr><tr><td>ATM 52 (1300 nm)</td><td>3,000</td></tr><tr><td>FDD1 (Original-1300 nm)</td><td>2,000</td></tr><tr><td>100BASE-FX (1300 nm)</td><td>2,000</td></tr></table>	APPLICATION	DISTANCE (m)	10GBASE-SX (850 nm)	300	10GBASE-LX4 (1300 nm)	300	1000BASE-SX (850 nm)	1000	1000BASE-LX (1300 nm)	600	Fibre Channel 266 (1300 nm)	1,500	ATM 622 (1300 nm)	500	ATM 155 (1300 nm)	2,000	ATM 52 (1300 nm)	3,000	FDD1 (Original-1300 nm)	2,000	100BASE-FX (1300 nm)	2,000	<div>XGLO 550 OM4 Multimode, 50/125</div> <div>STANDARDS COMPLIANCE</div> <div><ul style="list-style-type: none"><li>ISO/IEC 11801:2002 OM3</li><li>ISO/IEC 11801:2002 Ammendment 2 OM4</li><li>ANSI/TIA/EIA-568-C.3</li><li>ANSI/TIA-598-C</li><li>ANSI/TIA-492 AAAD</li><li>IEC 60793-2-10 Fibre Type A1a.3</li><li>Telcordia GR-409-CORE</li><li>IEC 60332-3</li></ul><div>IEC 60332-1-2 (Single strand)</div><div>IEC 60754-2 (Acid gas)</div><div>IEC 61034-2 (Smoke density)</div></div> <div>APPLICATIONS SUPPORT</div> <table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-SX (850 nm)</td><td>550</td></tr><tr><td>10GBASE-LX4 (1300 nm)</td><td>300</td></tr><tr><td>1000BASE-SX (850 nm)</td><td>1100</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>600</td></tr><tr><td>Fibre Channel 266 (1300 nm)</td><td>1,500</td></tr><tr><td>ATM 622 (1300 nm)</td><td>500</td></tr><tr><td>ATM 155 (1300 nm)</td><td>2,000</td></tr><tr><td>ATM 52 (1300 nm)</td><td>3,000</td></tr><tr><td>FDD1 (Original-1300 nm)</td><td>2,000</td></tr><tr><td>100BASE-FX (1300 nm)</td><td>2,000</td></tr></table>	APPLICATION	DISTANCE (m)	10GBASE-SX (850 nm)	550	10GBASE-LX4 (1300 nm)	300	1000BASE-SX (850 nm)	1100	1000BASE-LX (1300 nm)	600	Fibre Channel 266 (1300 nm)	1,500	ATM 622 (1300 nm)	500	ATM 155 (1300 nm)	2,000	ATM 52 (1300 nm)	3,000	FDD1 (Original-1300 nm)	2,000	100BASE-FX (1300 nm)	2,000	<div>XGLO OS1/OS2 Singlemode</div> <div>STANDARDS COMPLIANCE</div> <div><ul style="list-style-type: none"><li>ISO/IEC 11801:Ed 2.0 Amendment:1:2008</li><li>ANSI/TIA/EIA-568-C.3</li><li>ANSI/TIA-598-C</li><li>Telcordia GR-409-CORE</li><li>ITU-T G.652 C/D</li><li>IEC 60332-3</li></ul><div>IEC 60332-1-2 (Single strand)</div><div>IEC 60754-2 (Acid gas)</div><div>IEC 61034-2 (Smoke density)</div></div> <div>APPLICATIONS SUPPORT</div> <table><tr><th>APPLICATION</th><th>DISTANCE (m)</th></tr><tr><td>10GBASE-L (1310 nm)</td><td>8,000</td></tr><tr><td>10GBASE-E (1550 nm)</td><td>30,000</td></tr><tr><td>10G Fibre Channel (Serial-1310 nm)</td><td>10,000</td></tr><tr><td>10G Fibre Channel (WDM-1310 nm)</td><td>10,000</td></tr><tr><td>1000BASE-LX (1300 nm)</td><td>5,000</td></tr><tr><td>Fibre Channel 266/1062 (1300 nm)</td><td>10,000</td></tr><tr><td>ATM 52/155/622 (1300 nm)</td><td>15,000</td></tr></table>	APPLICATION	DISTANCE (m)	10GBASE-L (1310 nm)	8,000	10GBASE-E (1550 nm)	30,000	10G Fibre Channel (Serial-1310 nm)	10,000	10G Fibre Channel (WDM-1310 nm)	10,000	1000BASE-LX (1300 nm)	5,000	Fibre Channel 266/1062 (1300 nm)	10,000	ATM 52/155/622 (1300 nm)	15,000
APPLICATION	DISTANCE (m)																																																																																										
10GBASE-SX (850 nm)	N/A																																																																																										
50/125µm	82																																																																																										
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# XGLO® & LightSystem® Indoor/Outdoor LooseTube (International)

## LightSystem® Gigabit Ethernet Fibre Optic Cable

Minimum Performance Parameters for LightSystem 62.5/125µm & 50/125µm Multimode Fibre

Fibre Type	Wavelength nm	Maximum Attenuation (dB/km)	Minimum Modal Bandwidth (MHz•km)	Guaranteed Gigabit Transmission Distance (Metres)	Index of Refraction
62.5/125 (OM1)	850	3.5	200	275	1.495
	1300	1.0	500	550	1.490
50/125 (OM2)	850	3.5	500	550	1.483
	1300	1.0	500	550	1.479

\*The protocol pertinent to the transmission distance as noted is Gigabit Ethernet per IEEE 802.3:2005.

Minimum Performance Parameters for XGLO 50/125µm Multimode Fibre

Fibre Type	Guaranteed Gigabit Transmission Distance (m)		Guaranteed 10 Gigabit Transmission Distance (m)		Minimum Bandwidth (MHz•km)		Maximum Attenuation (dB/km)		Group Index of Refraction	
	850 nm	1300 nm	850 nm†	1300 nm††	850 nm	1300 nm	850 nm	1300 nm	850 nm	1300 nm
50/125 (OM3)	1000	600	300	300	RML - 2000 OFL - 1500	OFL - 500	3.0	1.0	1.483	1.479
50/125 (OM4)	1100	600	550	300	RML - 4700 OFL - 3500	OFL - 500	3.0	1.0	1.483	1.479

† 10GBASE-S †† 10GBASE-LX4

Minimum Performance Parameters for XGLO Singlemode Fibre

Fibre Type	Wavelength (nm)	Maximum Attenuation (dB/km)	Zero Dispersion Wavelength (nm)	Zero Dispersion Slope (nm²•km)	Index of Refraction
Singlemode (OS1/OS2)	1310	0.40	1312 ± 10	≤0.089	1.468
	1550	0.30	1312 ± 10	≤0.089	1.468
	1310 - 1625	<0.40	1312 ± 10	≤0.089	1.468

## XGLO and LightSystem Indoor/Outdoor LooseTube (International) Physical Specifications

PHYSICAL SPECIFICATIONS (All Values Are Nominal)

Fibre Count	Nominal Cable Diameter mm	Maximum Pulling Tension Newtons		Nominal Net Weight kg/km
		Installation	Long Term	
2	7.7	1000	500	67
4	7.7	1000	500	67
6	7.7	1000	500	67
8	7.7	1000	500	67
12	7.7	1000	500	67
16	10.1	1800	1200	103
24	10.1	1800	1200	103
36	10.1	1800	1200	103
48	10.8	1800	1200	115
72	10.8	1800	1200	115
96	12.0	1800	1200	139
144	12.0	1800	1200	139

Fibre Count	Maximum Crush Resistance (N/mm)	Operating Temperature °C	Storage Temperature °C	Minimum Bend Radius	
				Installation	Long Term
2-12	10	-40 to 60	-40 to 60	20 x DIA.	10 x DIA.
16-144	22	-40 to 60	-40 to 60	20 x DIA.	10 x DIA.

Custom lengths and jacket colours are available upon request. Contact our Customer Service Department for more information.

Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.

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# XGLO® & LightSystem® Outside Plant Loose Tube (International)

Siemon outside plant (OSP) fibre optic cables are ideal for campus, building-to-building interconnections, lashed aerial, duct or underground conduits. These cables are designed to tolerate the installation and stresses in cables exposed to the external environment. Siemon fibre optic cables are offered in XGLO and LightSystem configurations supporting high-speed, applications such as Gigabit Ethernet, 10 Gigabit Ethernet, Gigabit ATM and Fibre Channel.

## Ordering Information

**LightSystem: Multimode 62.5/125 OM1, Multimode 50/125 OM2, XGLO OM3 and OM4 Multimode 50/125, Singlemode OS1/OS2**

Part #	Fibre Count	Construction
9F(XX)(X)4-2F(XXXX)	2	1 tube of 2 fibres
9F(XX)(X)4-4A(XXXX)	4	1 tube of 4 fibres
9F(XX)(X)4-6B(XXXX)	6	1 tube of 6 fibres
9F(XX)(X)4-8C(XXXX)	8	1 tube of 8 fibres
9F(XX)(X)4-12D(XXXX)	12	1 tube of 12 fibres
9F(XX)(X)4-16A(XXXX)	16	2 tubes of 6 fibres 1 tube of 4 fibres

Use 1st (XX) to specify fibre type: 6 = OM1 62.5/125µm, 5 = OM2 50/125µm Laser Optimised, 8L = OS2 Singlemode

Use (X) to specify Non Armour or Armour: D = Non Armour, E = Armour

Use (XXXX) to specify length in kilometre. Use 4 characters including decimal point.

Part #	Fibre Count	Construction
9F(XX)(X)4-24B(XXXX)	24	4 tubes of 6 fibres
9F(XX)(X)4-36D(XXXX)	36	6 tubes of 6 fibres
9F(XX)(X)4-48D(XXXX)	48	4 tubes of 12 fibres
9F(XX)(X)4-72D(XXXX)	72	6 tubes of 12 fibres
9F(XX)(X)4-96D(XXXX)	96	8 tubes of 12 fibres
9F(XX)(X)4-144D(XXXX)	144	12 tubes of 12 fibres

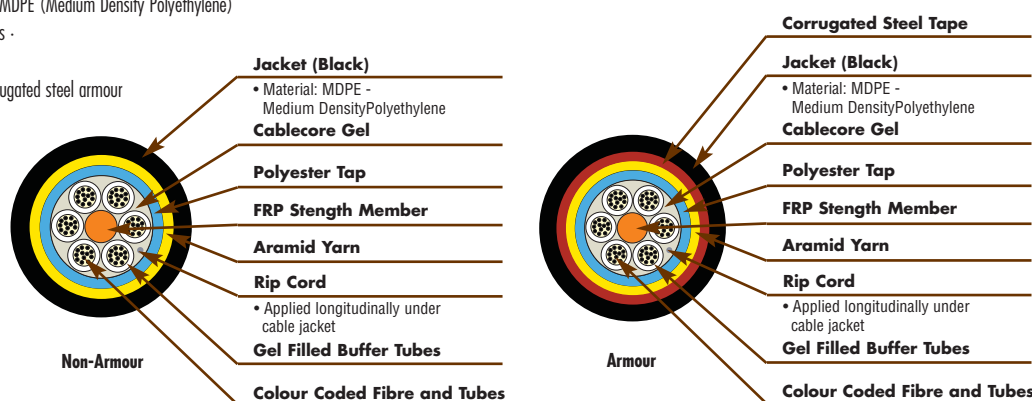
Example p/n: 9F5LB1-12D1.50: (1.5 kilometres [1500 metres] of 50/125µm laser optimised 12-strand)

For orders of less than 1km, the first "X" must be zero (0).

Example: 9F5LB1-12D0.55 (.550 kilometres [550 metres] of 50/125µm laser optimised 12-strand)

## CONSTRUCTION/FEATURES

- Outer jacket is a UV resistant black MDPE (Medium Density Polyethylene)
- Water blocking, gel-filled loose tubes
- Non-Armour and Armour versions
- Armour version utilises a robust corrugated steel armour
- No central strength member for 2-12 strands
- Central strength member for 16-144 strands



These cables provide a degree of rodent protection effective in many cases. The non-armour cable has a PE sheath which has a hard surface and provides a degree of rodent protection because it is disagreeable and unpleasant for most rodents to gnaw on. The armour cable has a PE sheath and corrugated steel tape which provides 100% rodent protection.

LIGHTSYSTEM OM1 Multimode 62.5/125 OM2 Multimode 50/125		XGLO 300 OM3 Multimode 50/125		XGLO 550 OM4 Multimode 50/125		XGLO OS1/OS2 Singlemode	
STANDARDS COMPLIANCE		STANDARDS COMPLIANCE		STANDARDS COMPLIANCE		STANDARDS COMPLIANCE	
<ul style="list-style-type: none"> <li>ISO/IEC 11801:2002 OM1 (62.5/125)</li> <li>ISO/IEC 11801:2002 OM2 (50/125)</li> <li>ANSI/TIA/EIA-568-C.3</li> <li>ANSI/TIA-598-C</li> <li>ANSI/TIA-492 AAAB</li> <li>Telcordia GR-409-CORE</li> </ul>		<ul style="list-style-type: none"> <li>ISO/IEC 11801:2002 OM3</li> <li>ANSI/TIA/EIA-568-C.3</li> <li>ANSI/TIA-598-C</li> <li>ANSI/TIA-492 AAAC</li> <li>Telcordia GR-409-CORE</li> </ul>		<ul style="list-style-type: none"> <li>ISO/IEC 11801:2002 OM3</li> <li>ISO/IEC 11801:2002 Amendment 2 OM4</li> <li>ANSI/TIA/EIA-568-C.3</li> <li>ANSI/TIA-598-C</li> <li>ANSI/TIA-492 AAAD</li> <li>IEC 60793-2-10 Fibre Type A1a.3</li> <li>Telcordia GR-409-CORE</li> </ul>		<ul style="list-style-type: none"> <li>ISO/IEC 11801:Ed 2.0 Amendment:1:2008</li> <li>ANSI/TIA/EIA-568-C.3</li> <li>ANSI/TIA-598-C</li> <li>Telcordia GR-409-CORE</li> <li>ITU-T G.652 C/D</li> </ul>	
APPLICATIONS SUPPORT		APPLICATIONS SUPPORT		APPLICATIONS SUPPORT		APPLICATIONS SUPPORT	
APPLICATION	DISTANCE (m)	APPLICATION	DISTANCE (m)	APPLICATION	DISTANCE (m)	APPLICATION	DISTANCE (m)
10GBASE-SX (850 nm)	N/A	10GBASE-SX (850 nm)	300	10GBASE-SX (850 nm)	550	10GBASE-L (1310 nm)	8,000
50/125µm	82	10GBASE-LX4 (1300 nm)	300	10GBASE-LX4 (1300 nm)	300	10GBASE-E (1550 nm)	30,000
62.5/125µm	26	1000BASE-SX (850 nm)	1000	1000BASE-SX (850 nm)	1100	10G Fibre Channel (Serial-1310 nm)	10,000
1000BASE-SX (850 nm)	N/A	1000BASE-LX (1300 nm)	600	1000BASE-LX (1300 nm)	600	10G Fibre Channel (WDM-1310 nm)	10,000
50/125µm	550	Fibre Channel 266 (1300 nm)	1,500	Fibre Channel 266 (1300 nm)	1,500	1000BASE-LX (1300 nm)	5,000
62.5/125µm	275	ATM 622 (1300 nm)	500	ATM 622 (1300 nm)	500	Fibre Channel 266/1062 (1300 nm)	10,000
1000BASE-LX (1300 nm)	550	ATM 155 (1300 nm)	2,000	ATM 155 (1300 nm)	2,000	ATM 52/155/622 (1300 nm)	15,000
Fibre Channel 266 (1300 nm)	1,500	ATM 52 (1300 nm)	3,000	ATM 52 (1300 nm)	3,000		
ATM 622 (1300 nm)	500	FDD1 (Original-1300 nm)	2,000	FDD1 (Original-1300 nm)	2,000		
ATM 155 (1300 nm)	2,000	100BASE-FX (1300 nm)	2,000	100BASE-FX (1300 nm)	2,000		
ATM 52 (1300 nm)	3,000						
FDD1 (Original-1300 nm)	2,000						
100BASE-FX (1300 nm)	2,000						

# XGLO® & LightSystem® Outside Plant Loose Tube (International)

## LightSystem® Gigabit Ethernet Fibre Optic Cable

### Minimum Performance Parameters for LightSystem 62.5/125µm & 50/125µm Multimode Fibre

Fibre Type	Wavelength nm	Maximum Attenuation (dB/km)	Minimum Modal Bandwidth (MHz•km)	Guaranteed Gigabit Transmission Distance (Metres)	Index of Refraction
62.5/125 (OM1)	850	3.5	200	275	1.495
	1300	1.0	500	550	1.490
50/125 (OM2)	850	3.5	500	550	1.483
	1300	1.0	500	550	1.479

\*The protocol pertinent to the transmission distance as noted is Gigabit Ethernet per IEEE 802.3:2005.

### Minimum Performance Parameters for XGLO 50/125µm Multimode Fibre

Fibre Type	Guaranteed Gigabit Transmission Distance (m)		Guaranteed 10 Gigabit Transmission Distance (m)		Minimum Bandwidth (MHz•km)		Maximum Attenuation (dB/km)		Group Index of Refraction	
	850 nm	1300 nm	850 nm†	1300 nm††	850 nm	1300 nm	850 nm	1300 nm	850 nm	1300 nm
50/125 (OM3)	1000	600	300	300	RML - 2000 OFL - 1500	OFL - 500	3.0	1.0	1.483	1.479
50/125 (OM4)	1100	600	550	300	RML - 4700 OFL - 3500	OFL - 500	3.0	1.0	1.483	1.479

† 10GBASE-S †† 10GBASE-LX4

### Minimum Performance Parameters for XGLO Singlemode Fibre

Fibre Type	Wavelength (nm)	Maximum Attenuation (dB/km)	Zero Dispersion Wavelength (nm)	Zero Dispersion Slope (nm²•km)	Index of Refraction
Singlemode (OS1/OS2)	1310	0.40	1312 ± 10	≤0.089	1.468
	1550	0.30	1312 ± 10	≤0.089	1.468
	1310 - 1625	<0.40	1312 ± 10	≤0.089	1.468

## XGLO and LightSystem Outside Plant-Loose Tube (International) Physical Specifications

### PHYSICAL SPECIFICATIONS (All Values Are Nominal)

Fibre Count	Nominal Cable Diameter mm		Maximum Pulling Tension Newtons				Maximum Net Weight kg/km	
			Installation		Long Term			
	Non Armour	Armour	Non Armour	Armour	Non Armour	Armour	Non Armour	Armour
2	8.5	10.7	1500	2700	450	810	55	109
4	8.5	10.7	1500	2700	450	810	55	109
6	8.5	10.7	1500	2700	450	810	55	109
8	8.5	10.7	1500	2700	450	810	55	109
12	8.5	10.7	1500	2700	450	810	55	109
16	11.0	10.8	1500	2700	450	810	99	118
24	11.0	11.4	1500	2700	450	810	97	131
36	11.2	12.3	1500	2700	450	810	100	152
48	11.2	12.3	1500	2700	450	810	100	152
72	11.2	12.3	1500	2700	450	810	100	152
96	12.7	13.8	1500	2700	450	810	126	186
144	15.7	16.8	1500	2700	450	810	189	263

Fibre Type	Minimum Crush Resistance		Operating Temperature °C	Storage Temperature °C	Minimum Bend Radius	
	Non Armour	Armour			Installation	Long Term
2 - 144	1000	1100	-30 to 60	-40 to 70	20 x DIA.	10 x DIA.

Custom lengths are available upon request. Contact our Customer Service Department for more information.

Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.

XGLO® and LightSystem® are trademarks of Siemon



# MapIT® G2 Infrastructure Management

Take your network management to the next level. The MapIT G2 system integrates a powerful combination of innovative Smart Patch Panels, user-friendly Master Control Panels and Siemon’s EagleEye™ Connect software to provide real-time tracking and reporting of network-wide physical layer activity. The system continuously monitors your network — 24/7, by increasing physical layer security by tracking changes in device connectivity, detecting potential security threats such as unauthorised connections and devices, providing instant alerts and reducing downtime. All such activity is automatically updated in the system database, ensuring 100% accuracy of your infrastructure documentation. With these advantages in documentation, security, uptime and asset management, most customers see ROI in less than 2 years.

Available in:

- Flat and Angled Copper Smart Patch Panels (SPP) Options — Angled panels eliminate the need for horizontal cable managers, greatly improving patching density
- Standard Fibre and MTP Plug and Play Smart Enclosures — Providing a standard and angled panel option. Angled panels eliminate the need for horizontal cable managers, greatly improving patching density
- Siemon’s Innovative MapIT G2 Interconnect Module — Enables direct monitoring of patching to network switches

## Section Contents

MapIT G2 Control Panels . . . . . 7.1 – 7.2

Optional Accessories . . . . . 7.2

MapIT G2 Interconnect Module . . . . . 7.3

MapIT G2 Copper Systems . . . . . 7.4 – 7.6

MapIT G2 Fibre Systems . . . . . 7.7 – 7.9



# MapIT® G2 Master and Distribution Control Panels

The MapIT G2 Master Control Panel (MCP) collects all network infrastructure data provided by the Smart Patch Panels and Fibre Enclosures, monitoring up to 2880 ports in just 1 rack mount space (1U). The MCP and DCP features an integrated LCD display and keypad, which provide technicians access to critical network architecture and diagnostic information. By providing this interactive interface locally within the patching zone, the MapIT G2 system virtually eliminates the need for technicians to carry PDAs or directly access the software server. This user interface allows full end-to-end graphic circuit traces for any channel in the system and can perform diagnostic tasks on any component or port.



## Superior Density —

Low profile 1U design increases density and reduces usage of costly rack and cabinet space in data centres and telecommunication rooms

## Reduced Power Consumption —

75% lower power consumption compared to traditional intelligent patching systems for monitoring equipment. This power savings decreases operating expenses and provides a more environmentally friendly solution

## Excellent Thermal Efficiency —

The MCP and DCP's combination of ultra low heat generation and a low profile design helps to maximise cooling efficiency in data centre environments

## Simple, Multi-Functional User Interface —

Large graphic LCD and keypad enables technicians to view circuit traces, patch cord traces, perform work orders, diagnostics and more, improving efficiency in maintenance and MAC work

## Ease of Implementation —

Simple design and straightforward implementation and setup reduces the time and technician skill required to design and install the system



MCP Graphic LCD



Redundant power and Ethernet



Field-terminated control connections  
(RJ45 Front or S310 Rear)

# MapIT® G2 Master and Distribution Control Panels

## Ordering Information:

M-MCP..... MapIT Master Control Panel, 1U, black\*  
M-DCP..... MapIT Distribution Control Panel, 1U, black\*

\*Includes mounting hardware (1) probe pen, (1) power supply with adapters for various regions, rear cable manager, cable ties, S310 stuffer caps and ground lug  
Note: 1U = 44.5mm



## Optional Accessories

### Second Power Supply

M-PS.....6.0V, 3.0A power supply for MCP or DCP

### Replacement Probe Pen

M-PEN.....MapIT pen probe, 7.62m cord

### Category 5e Shielded Cable for Control Connections

9A5M4-E2.....PVC (CM, IEC 60332-1), Grey Jacket, 305m Reel-in-Box  
9A5L4-E2.....LS0H (IEC 60332-1), Violet Jacket, 305m Reel-in-Box

### PS-8-8 Shielded RJ45 Plugs

PS-8-8.....8-position shielded modular plug with 8 contacts (compatible with Siemon and Tyco crimp tools)

### S110® Patch Plugs

S110P4.....4-pair, field-terminated S110 patch plug (coloured icons not included)  
LL-05.....LockIT Outlet Lock, bag of 10, includes 1 LockIT Universal Key  
LKEY-05.....LockIT Universal Key, bag of 10  
LL-LC-05.....LockIT LC Adapter Lock, bag of 10, includes 1 LockIT Universal Key



## EagleEye™ Connect Software



Siemon's EagleEye Connect software manages, monitors and documents your network infrastructure through Siemon's MapIT G2 connectivity. For more information on EagleEye Connect software, including features, capabilities and system requirements, please visit [www.siemon.com/eagleeye](http://www.siemon.com/eagleeye).

# MapIT® G2 Interconnect Solution

The MapIT G2 interconnect solution enables tracking of direct MapIT G2 connectivity between a switch and a single Smart Patch Panel (SPP) — without the need for an additional SPP required in a cross-connect configuration. The interconnect topology (see diagram below) can increase rack density, cut installation costs and reduce installation time. Compatible with existing Siemon MapIT G2 copper connectivity, simply use the Interconnect Module (M-ICM) to unlock the design flexibility of an interconnect topology.

Deployment is simple - just plug a MapIT G2 patch cord into the switch and plug the other end into the Interconnect Module, which discovers the switch port and relays the information to the MapIT G2 system. Then, remove the cord from the module, plug it into the SPP and the link is detected.



## Reduced Costs —

The interconnect solution requires half the number of patch panels versus an intelligent cross connect installation, cutting both material and installation labour costs

## Faster Deployment —

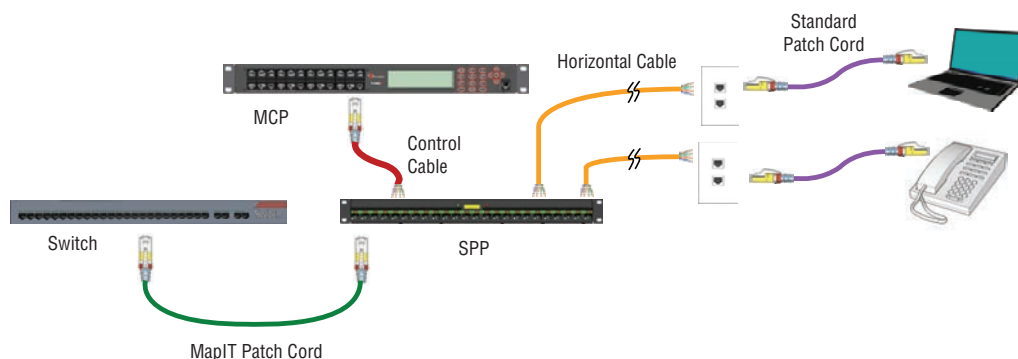
By reducing the number of patch panels and associated connectivity, installation and testing time is dramatically reduced

## Increased Density —

As the interconnect topology uses half the number of patch panels versus cross-connect, cabinet/rack density is greatly improved. For even greater density, use the angled version of Siemon's SPP

## User-Friendly Module —

Simple, single-button functionality combined with on-board LCD display that provides technicians with clear instructions and status information allows intelligent links to be deployed in seconds



## MapIT G2 Interconnect Module

The MapIT G2 Interconnect Module is used to create a link between the switch and Smart Patch Panel port connections during initial installation or during moves, adds and changes.

M-ICM .....MapIT G2 Interconnect Module



# MapIT® G2 Smart Patch Panel

The MapIT G2 Smart Patch Panel (SPP) is an industry first in intelligent infrastructure management. The panel features on-board intelligence and a combination of LEDs and a backlit LCD to guide technicians. The LCD can be used to display patch cord trace and connectivity diagnostic information. It can also be used to troubleshoot network issues, which can drastically reduce downtime and increase productivity. Also, since it is actively connected to your database, the LCD could be used as a virtual label, dynamically displaying panel and port information directly from Siemon EagleEye™ Connect software.



**Smart** — on panel intelligence tracks patch cord connections and drives LCD/LEDs for technician guidance

**High Density** — 24 ports in a compact design, angled version also available

**Green** — MapIT G2 uses up to 78% less power than competing systems



**Robust** — Single piece construction integrates outlet retention and cable management. Panel includes Quick-Ground technology for shielded systems

**Reliable** — Panels have been tested to 20-years MTBF. All active components are field serviceable

**Simple** — Control connections to the MCP or DCP are made on the back of the patch panel with Category 5e solid shielded cable



Trace patch cord connections

With a touch of the probe pen a complete end-to-end circuit trace is shown on-screen at the MCP or DCP

Custom system cables are a thing of the past. Now, Category 5e solid shielded cable can be terminated in the field for all Control connections

Ordering Information:

MapIT® G2 Smart Patch Panel

M-SPP(X)-K24E-NS .....MapIT G2 24-port modular Smart Patch Panel, accepts Siemon shielded and unshielded Z-MAX® Keystone outlets or unshielded MAX keystone outlets (sold separately)  
Includes mounting hardware, labels, (24) cable ties and panel ground lug



MapIT G2-Ready Patch Panel

M-SPP(X)-K24E-001 .....MapIT G2-Ready 24-port modular Patch Panel, accepts Siemon shielded and unshielded Z-MAX Keystone outlets or unshielded MAX keystone outlets (sold separately)  
Includes mounting hardware, labels, (24) cable ties and panel ground lug

M-SPP(X)-PCBA-24 .....MapIT G2 Upgrade Kit for MapIT G2 Ready Patch Panels. (Upgrade kit includes PCB with built-in sensor pads, LED's and LCD display, new front panel cover, additional mounting hardware & components with instructions), Siemon EagleEye™ Connect software sold separately

Use (X) to specify panel type: Blank = Flat, A = Angled

Optional Accessories

Siemon Keystone Outlets

Z6A-SK(XX) .....Keystone shielded Z-MAX 6A outlet, MX6-K01  
Z6A-K(XX) .....Keystone unshielded Z-MAX 6A outlet, MX6-K01  
Z6-K(XX) .....Keystone unshielded Z-MAX 6 outlet, MX6-K01  
MX6-K01 .....Keystone unshielded MAX 6 outlet, black

Use (XX) to specify colour:  
01 = black, 02 = white, 03 = red, 04 = grey, 05 = yellow, 06 = blue, 07 = green,  
09 = orange, 20 = ivory, 25 = bright white, 80 = light ivory



Shielded Keystone  
Z-MAX



Unshielded Keystone  
Z-MAX

# MapIT® G2 Copper Systems

## MapIT G2 Patch Cords

These advanced cords also feature a 9th wire and sensor pin contained in a robust over-moulded boot.

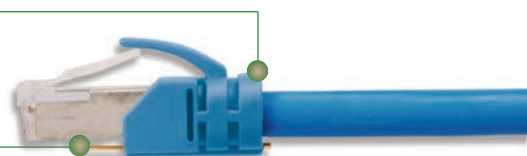
This embedded sensor technology enables tracking of connections between Smart Patch Panel ports.

**Supports Siemon's High-Performance Systems —**  
Category 6A shielded, Category 6A UTP and Category 6 UTP

**Robust Strain Relief —** Over-moulded boots provide plug to cable strain relief and retention of sensor pin. 100% transmission testing ensures component and channel performance

**Reliable Integrated Sensor Connections —** Sensor pins feature 50 microinches gold plating for long-term contact reliability and resistance to corrosion

**Simple Testing Features —** Sensor pin is accessible at the rear of the boot for test and mapping purposes



### Ordering Information:

M-10GMCS-(XX)M(XX)L . . . . . MapIT G2 Category 6A shielded, double-ended, stranded modular cord, colour-matching boot, T568A/B, LS0H

Length	Jacket Colour
01 = 1m	02 = White
02 = 2m	04 = Grey
03 = 3m	06 = Blue
05 = 5m	

M-10GMC-(XX)-(XX) . . . . . MapIT G2 Category 6A UTP, double-ended, stranded modular cord, colour-matching boot, T568A/B, CMG

Length	Jacket Colour
03 = 0.91m	02 = White
05 = 1.52m	04 = Grey
07 = 2.13m	06 = Blue
10 = 3.05m	
15 = 4.57m	
20 = 6.10m	

M-MC6-(XX)-(XX) . . . . . MapIT G2 Category 6 UTP, double-ended, stranded modular cord, colour-matching boot, T568A/B, CMG

Length	Jacket Colour
03 = 0.91m	02 = White
05 = 1.52m	04 = Grey
07 = 2.13m	06 = Blue
10 = 3.05m	
15 = 4.57m	
20 = 6.10m	

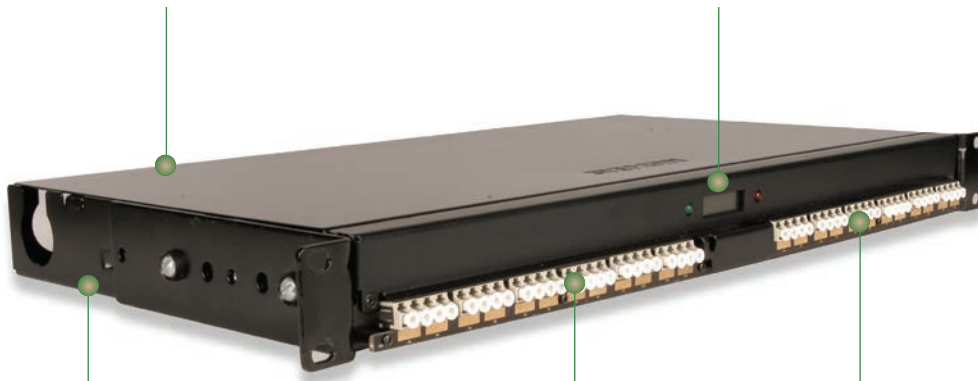


# MapIT® G2 Smart Fibre Enclosure

The MapIT G2 Smart Fibre Enclosures are an industry first in intelligent infrastructure management. Available in both MTP to LC Plug and Play and LC to LC field terminated versions, the enclosures feature on panel intelligence and a combination of LEDs and a backlit LCD to guide technicians. The LCD can be used to display patch cord trace and connectivity diagnostic information. It can also be used to troubleshoot network issues, which can drastically reduce downtime and increase productivity. Also, since it is actively connected to your database, you could even use it as a virtual label, dynamically displaying panel and port information directly from the Siemon's EagleEye™ Connect software.

**High Performance** — Available in 40 and 100Gb/s-ready OM4 MTP Plug and Play versions as well as Multimode and Singlemode LC field-terminated connectivity

**Smart** — on panel intelligence tracks fibre jumper connections and drives LCD/LEDs for tech guidance

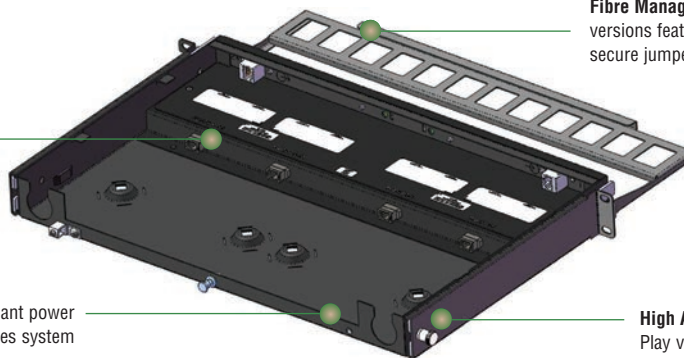


**Green** — MapIT G2 uses up to 78% less power than competing systems and run cool for reduced heat generation

**High Density** — Up to 48 fibres in a single 1U space

**Scalable** — MapIT G2 Smart Enclosures can support systems ranging from small, two enclosure remote sites to large 1000 + panel data centres

**Plug and Play** — Multi-fibre MTP connectivity provides ultra-fast deployment in mission-critical data centres



**Fibre Management** — MTP Plug and Play versions feature integrated fibre managers for secure jumper routing

**Reliable** — Resilient redundant power and communications increases system reliability

**High Accessibility** — Plug and Play versions feature sliding drawer for easy access to connectivity

## MapIT® G2 Smart Fibre Enclosures

### MTP to LC Plug and Play Fibre Enclosure - SMTP

M-SMTP-LC5V48(XX) .....	MapIT G2 LC 48-fibre MTP to LC Smart Fibre Enclosure, black, Multimode, OM4 Includes 2 MTP adapters, 24 duplex MM, LC adapters, cable ties, panel ground lug, fibre management clips, front management bar, label holder and labels
M-SMTP-LCSM48(XX) .....	MapIT G2 LC 48-fibre MTP to LC Smart Fibre Enclosure, black, Singlemode, OS2 Includes 2 MTP adapters, 24 duplex SM, LC adapters, cable ties, panel ground lug, fibre management clips, front management bar, label holder and labels

### LC to LC Fibre Enclosure - SFE

M-SFE-LC48-01 .....	MapIT G2 LC 48-fibre Smart Fibre Enclosure, black, Multimode Includes 24 duplex MM, LC adapters, cable ties, panel ground lug, fibre management clips, label holder and labels
M-SFE-LC48-01C .....	MapIT G2 LC 48-fibre Smart Fibre Enclosure, black, Singlemode Includes 24 duplex SM, LC adapters, cable ties, panel ground lug, fibre management clips, label holder and labels



## MapIT G2-Ready Fibre Enclosures

### MTP to LC Plug and Play Fibre Enclosure

M-MTP-LC5V48-01 .....	MapIT G2-Ready MTP to LC Enclosure, black, Multimode, OM4 Includes 2 MTP adapters, 24 duplex MM/LC adapters, cable ties, panel ground lug, fibre management clips, front management bar, label holder and labels
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### LC to LC Fibre Enclosure

M-FE-LC48-01* .....	MapIT G2-Ready Enclosure, black, Multimode* Includes 24 duplex LC adapters, cable ties, panel ground lug, fibre management clips, label holder and labels
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### Upgrade Kit for MapIT G2-Ready Fibre Enclosures

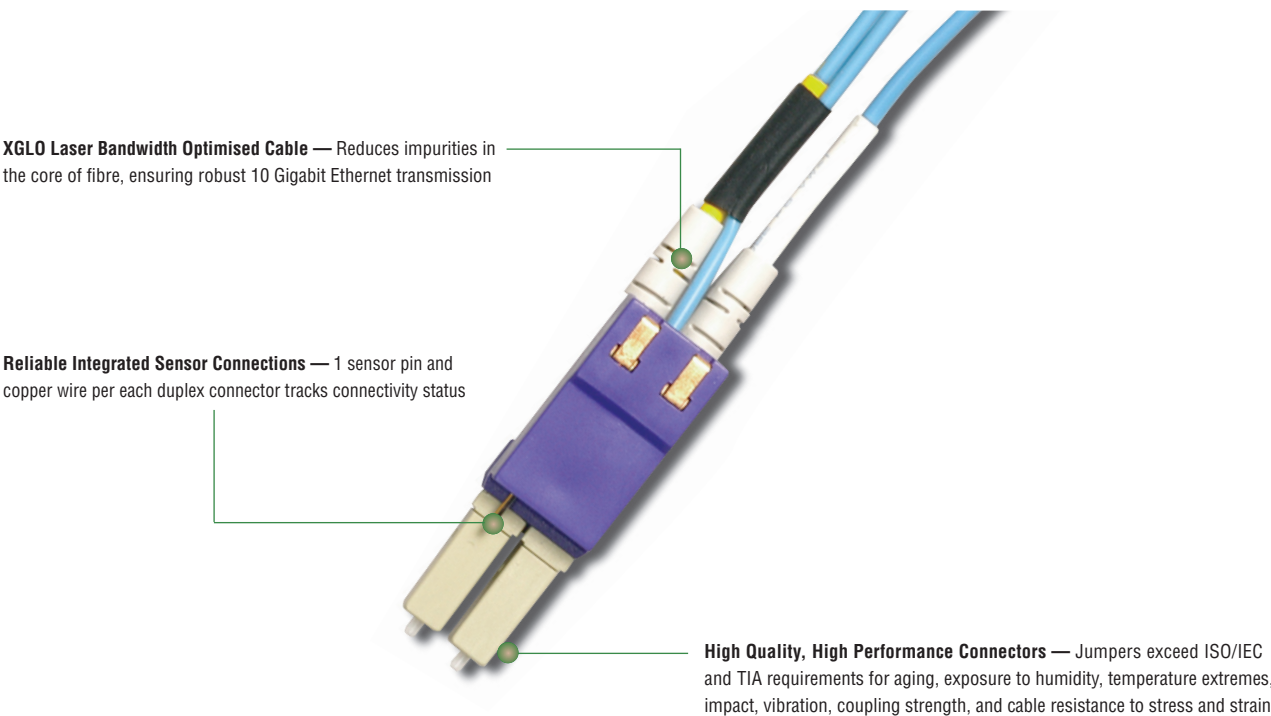
M-SFE-PCBA-24 .....	MapIT G2 Upgrade Kit for MapIT G2 Ready Fibre Enclosure (Upgrade kit includes PCB with built-in sensor pads, LED's and LCD display, new front panel cover, additional mounting hardware and components with instructions), Siemon EagleEye™ Connect software sold separately
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\*Singlemode available, contact Customer Service for more information

# MapIT® G2 Fibre Systems

## MapIT G2 XGLO® Jumpers

XGLO MapIT G2 jumpers are built to be the best. These assemblies are constructed with premium fibre that meets IEEE, IEC and TIA specifications for 10 Gigabit Ethernet serial transmission. These advanced cords feature patented MapIT sensor technology — gold-plated sensor pins retained in robust molded connector clips. These jumpers enable tracking of port connections between MapIT G2 fibre enclosures and LAN equipment.



### Ordering Information

**MapIT G2 XGLO Multimode Duplex Jumpers:**

M-J2-LCLC(XX)-(XX) . . . . . LC-LC duplex jumper, MapIT G2 XGLO 50/125 laser optimised Multimode fibre, aqua jacket

Fibre Type	Length
5L = OM3	01 = 1 m
5V = OM4	03 = 3 m
	05 = 5 m

**MapIT G2 XGLO Singlemode Duplex Jumpers:**

M-J2-LCULCUL-(XX) . . . . . LC-LC duplex jumper, MapIT G2 XGLO OS1/OS2 Singlemode fibre, yellow jacket

Length
01 = 1 m
03 = 3 m
05 = 5 m

# Faceplates, Mounting Boxes and Accessories

Siemon’s line of faceplates and mounting accessories provide cabling professionals with an extensive list of unique, problem solving options for deploying network connectivity exactly where it is needed.

## Section Contents

LockIT™ .....8.1 – 8.2

10G MAX® Faceplates .....8.3 – 8.4

MAX Faceplates and Accessories .....8.4 – 8.6

Surface Mount Boxes .....8.7 - 8.8

Surface Pack™ Box .....8.9 – 8.10

Multi-User Telecommunications Outlet Assembly (MUTOA) .....8.11

MAX Zone Unit Enclosure .....8.12

MAX Fibre Adapter Outlets .....8.12

Coax MAX Outlets .....8.13

MAX Audio/Video Outlets .....8.13

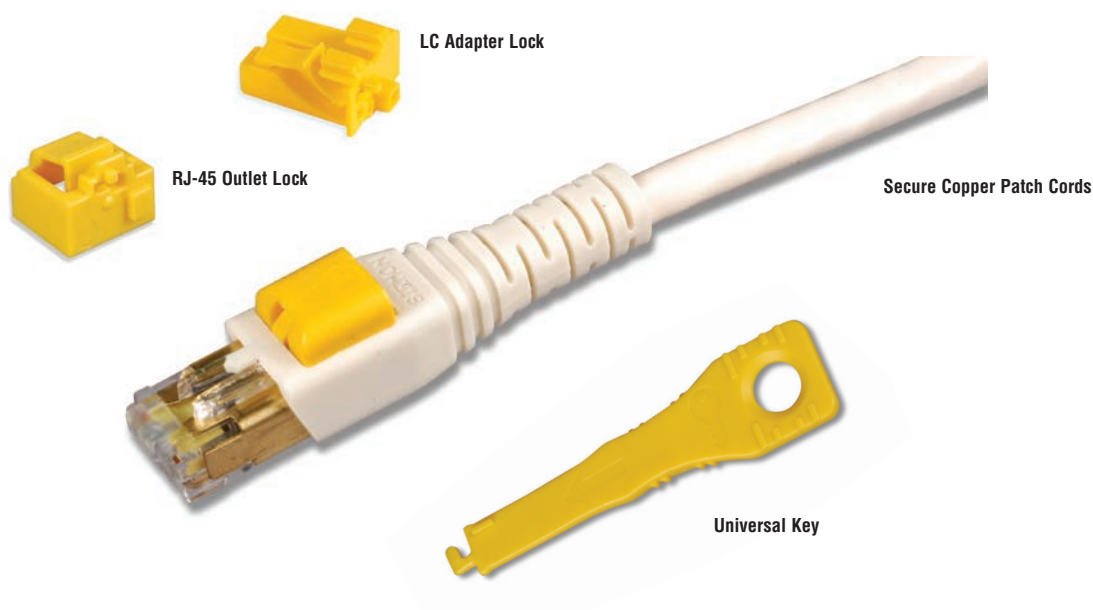
CT® Faceplates and Accessories .....8.14

Modular Adapters and Splitters .....8.15

# LockIT™ Secure Connectivity System

The LockIT solution is comprised of two primary elements: the RJ-45 Outlet/LC Adapter Lock and the Secure Patch Cord. The Lock protects a RJ-45 copper outlet or LC fibre adapter from the insertion of cords or foreign objects. The Secure RJ-45 Patch Cord deters unintended or unauthorised disconnection of the cord. Each of these components requires the LockIT universal key for removal, but may be freely inserted into an outlet to secure the connection. All LockIT components are brightly coloured in yellow to easily identify secured connectivity.

The LockIT products are compatible with any standards compliant RJ-45 outlet, or LC fibre port. This versatile system can be used in a variety of applications. This flexibility makes LockIT a perfect choice for use in public areas such as schools, retail stores, banks, airports and waiting areas. LockIT is also an ideal solution to protect mission-critical networks such as data centres, health care environments and government systems.



LockIT can protect copper and fibre work area outlets in public areas from tampering or unwanted access



Patch panel and fibre ports may be protected in the work area, wiring closets and data centres



LockIT is ideal to secure active equipment ports against unintended or unauthorised connections or disconnections

Outlet Locks

- LockIT RJ-45 Outlet Lock:  
LL-05 .....LockIT RJ-45 Outlet Lock, bag of 10, includes 1 LockIT Universal Key
- LockIT LC Module Lock:  
LL-LC-05 .....LockIT LC Adapter Lock, bag of 10, includes 1 LockIT Universal Key
- LockIT Universal Key:  
LKEY-05.....LockIT Universal Key, bag of 10



Secure Category 6A Shielded Patchcords

Shielded Category 6A, double ended, 4-pair, stranded LockIT secure patchcord, T568A/B, colour matching jacket/boot, LSOH/CM

LP6A-S(XX)M-(XX)L	
Cord Length	Cord Colour
01 = 1m	01 = Black
1.5 = 1.5m	02 = White
02 = 2m	03 = Red
03 = 3m	04 = Grey
04 = 4m	05 = Yellow
05 = 5m	06 = Blue
	07 = Green

Secure Category 6A UTP Patchcords

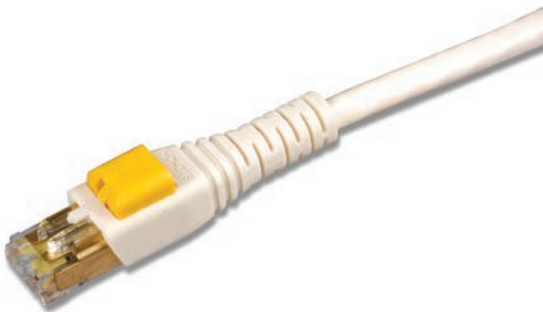
UTP Category 6A, double ended, 4-pair, stranded LockIT secure patchcord, T568A/B, colour matching jacket/boot, CMG

LP6A-(XX)M-(XX)	
Cord Length	Cord Colour
01 = 1m	01 = Black
1.5 = 1.5m	02 = White
02 = 2m	03 = Red
03 = 3m	04 = Grey
04 = 4m	05 = Yellow
05 = 5m	06 = Blue
	07 = Green

Secure Category 6 Patchcords

UTP Category 6, double ended, 4-pair, stranded LockIT secure patchcord, T568A/B, colour matching jacket/boot, LSOH/CM

L(X)6-(XX)M-(XX)	
Plug Configuration	Cord Colour
P = LockIT to LockIT	01 = Black
M = LockIT to MC6	02 = White
B = LockIT to BladePatch 6	03 = Red
	04 = Grey
	05 = Yellow
	06 = Blue
	07 = Green
Cord Length	
01 = 1m	
1.5 = 1.5m	
02 = 2m	
03 = 3m	
04 = 4m	
05 = 5m	



# MAX® International Faceplates

The MAX series modular faceplates combine high capacity with aesthetic enhancements that provide a fresh new look to match today's technologies. The faceplate offers pressure-release designation label covers which eliminate the need for a probe-pic or screwdriver when installing faceplate labels. The faceplates are designed to be used with Z-MAX®, TERA®, and both angled and flat MAX outlets. Its durable finish masks minor scuffs that may occur during daily usage.

**Labels** — Sheets of designation labels can be ordered for use with printers

**Variety** — A variety of faceplates and adapters are available



**Application Flexibility** — Complete multimedia support

**Multiple Colour Options** — Faceplates available in black, white, bright white, alpine white, ivory, light ivory



## Installation Flexibility

Flexible mounting tab on MAX outlets allows installation from front or rear of faceplate.



## Reduced Mounting Depth

Siemon's angled faceplate adapters provides a secure mounting solution for use in trunking systems, faceplates and floor boxes while reducing depth needs.



## Labelling

Most faceplates include pressure-release designation label covers for quick, tool-less removal.

## 10G MAX British Faceplates

Siemon's 10G MAX British faceplates are designed to provide the optimal outlet separation necessary to reduce alien crosstalk (ANEXT) between Z-MAX 6A UTP modules. They are also ideal for use with Siemon's shielded Z-MAX 6A modules. MAX British faceplates are compatible with British standards (85mm x 85mm).

10GMX-BFP-02-02 .....  
2-port single gang 10G faceplate  
for Z-MAX, MAX or TERA outlets,  
white



10GMX-BFP-04-02 .....  
4-port single gang 10G faceplate  
for Z-MAX, MAX or TERA  
outlets, white



Faceplates include designation labels, clear label covers, and M3.5x0.6x25 mounting screws.

Ⓢ Add "B" to end of part number for bulk project pack of 100 faceplates.

10G MAX® Horizontal Faceplates (International)

Siemon's 10G single gang horizontal faceplate for Z-MAX®, TERA® or MAX outlets, (Australian/ Italian)

10GMX-HFPZ-(XX)-(XX)	
Ports	Colour
01 = 1 Port	02 = White
02 = 2 Port	20 = Ivory
03 = 3 Port	80 = Light Ivory
04 = 4 Port	



Ⓢ Add "B" to end of part number for bulk project pack of 100 faceplates.

MAX British Faceplates

MAX British faceplates are compatible with British standards (85mm x 85mm). The faceplate is designed to accept up to six Z-MAX, MAX or TERA outlets.



MX-BFP-S-01-02 .....  
1-port single gang faceplate  
for a Z-MAX, MAX or TERA  
outlet, white



MX-BFP-S-02-02\* .....  
2-port single gang faceplate  
for Z-MAX, MAX or TERA  
outlets, white



MX-BFP-S-03-02\* .....  
3-port single gang faceplate  
for Z-MAX, MAX or TERA  
outlets, white



MX-BFP-S-04-02\* .....  
4-port single gang faceplate  
for Z-MAX, MAX or TERA  
outlets, white



MX-BFP-S-06-02\* .....  
6-port single gang faceplate  
for Z-MAX, MAX or TERA  
outlets, white

Faceplates include designation labels, clear label cover(s), and M3.5x 0.6x25 mounting screws

\*Not compatible with shielded MAX outlets

MAX British Double Layer Faceplates

Designed for markets that use British mounting standards (85mm x 85mm), these faceplates offer improved aesthetics via snap-on mounting screw covers. Faceplates include designation labels, clear label covers, and M3.5 x 0.6x25 mounting screws.



MX-BFPL-01-02 .....  
1-port single gang faceplate  
for a Z-MAX, MAX or TERA  
outlet, white



10GMX-BFPL-02-02 .....  
2-port single gang 10G  
faceplate for Z-MAX, MAX or  
TERA outlets, white



MX-BFPL-02-02\* .....  
2-port single gang faceplate  
for Z-MAX, MAX or TERA  
outlets, white



MX-BFPL-03-02\* .....  
3-port single gang faceplate  
for Z-MAX, MAX or TERA  
outlets, white



MX-BFPL-04-02\* .....  
4-port single gang faceplate  
for Z-MAX, MAX or TERA  
outlets, white

Add "M" to end of part number for M4 x 0.7x25 mounting screws. Faceplates include designation label, clear label covers, and M3.5 x 0.6x25 mounting screws.

\*Not compatible with shielded MAX outlets

Note: Alpine white colour option available (replace -02 with -82)

## MAX® Horizontal Faceplates (International)

Siemon's single gang horizontal faceplate for Z-MAX®, TERA® or MAX outlets (Australian/ Italian)

MX-HFPZ-(XX)-(XX)

Ports

01 = 1 Port

02 = 2 Port

03 = 3 Port

04 = 4 Port

Colour

02 = White

20 = Ivory

80 = Light Ivory



Note: Screws, designation label and clear label cover included.

## British 6C Flexyoke and Danish Faceplate



FY-MXZ-(XX) .....

1-port 37mm x 22mm MAX  
British Flexyoke housing for a  
MAX, Z-MAX or TERA outlet



MX-DFP-02-02\* .....

2-port 71mm x 47mm Danish  
faceplate for MAX outlets or  
TERA outlets, white

Use (XX) to specify colour: 02 = white, 25 = bright white

\*Not compatible with shielded MAX outlets

## TERA-MAX Faceplate



T50-(XX) .....

2-port 50mm x 50mm faceplate  
for MAX, Z-MAX or TERA  
outlets

Use (XX) to specify colour: 02 = white, 80 = light ivory, 82 = alpine white

## Z-MAX® Icon Cards

All Cards include:

- Red and blue icons with voice and data symbols
- Supplemental/colour-matched icon with voice, data, and blank designation
- 1 white blank icon for field designation
- Fully recyclable material

Z-ICON-(XX)B. .... Z-MAX Icon Card, bag of 100

Primary Colour

01 = Black

03 = Red

05 = Yellow

07 = Green

20 = Ivory

02 = White

04 = Grey

06 = Blue

09 = Orange

80 = Light Ivory

Front

Rear



MAX® and CT® Icons

CT-ICON-(XX) . . . . . 25 coloured icon tabs (phone on one side, computer on reverse)



Use (XX) to specify colour: 01 = black, 02 = white, 03 = red, 04 = grey, 05 = yellow, 06 = blue, 07 = green, 08 = violet, 09 = orange, 20 = ivory, 25 = bright white, 60 = brown, 80 = light ivory

ⓑ Add "B" for bulk pack of 100 icons or tabs.

MAX Labelling and Accessories

Part #	Description
CT-FP-LBL-104*	10 sheets of labels for faceplates that will fit any standard 8.5 x 11 printer, 104 labels/sheet
MX-FP-CVR-00	Bag of 100 clear label covers for MAX faceplates

\*Visit our web site or contact our Technical Support Department for labelling software.

ⓑ Add "B" for bulk pack of 100 icons or tabs.

MAX Outlet Blanks

Blank inserts for unused ports and future growth.

MX-BL-(XX) . . . . .

Blank outlet, bag of 10



Use (XX) to specify colour: 00 = clear (MX-AD-XX only), 01 = black, 02 = white, 04 = grey, 20 = ivory, 25 = bright white, 80 = light ivory

## Surface Mount Boxes

Surface mount boxes feature a sleek compact, easy-to-install design. UTP, shielded, fibre, video, and coax MAX® modules, Z-MAX® or TERA® outlets can be quickly installed into the base. Multiple cable management features provide a high performance and well organised installation.

**Cable/Raceway Entry** — Breakouts on three sides and bottom

**Label Cover** — Conceals screw for added security if desired

**Snap-on Cover with Designation Areas** — For colour-coded icons/tabs and write-on labels

**Cable Management** — Built-in cable management features ensure proper bend radius for copper or fibre

**MAX Bezels Included** — Allows flat MAX outlets to be secured in place

**Optional Spring-loaded Shutter Doors** — Shutter doors offer added protection from dust and other contaminants

**Cable Tie Anchor Points** — Facilitates strain relief for cable

## Z-MAX Surface Mount Boxes

MX-SMZ(X)-(XX)-(X) . . . . . Z-MAX Surface mount box with cover base, 2 port multimedia bezel, cable ties, adhesive tape and mounting screws





Ports	Options
1 = 1 port	(Blank) = n/a
2 = 2 port*	M = magnets
4 = 4 port*	
6 = 6 port*	
Colour	
01 = Black	
02 = White	
20 = Ivory	
80 = Light Ivory	

\* Includes designation labels and label covers

Also for use with single-port flat and duplex LC adapter modules and TERA outlets.

## MX-SM Surface Mount Boxes

Field-assembled surface mount boxes with MAX® bezels. Accepts flat single port MAX modules ordered separately.

	<p>MX-SM1-(XX) . . . . .</p> <p>1-port box with cover, base, one single port MAX bezel, cable ties, adhesive tape and mounting screws</p>		<p>MX-SM2-(XX) . . . . .</p> <p>2-port box with cover, base, one (2-port) MAX bezel, cable ties, adhesive tape, mounting screws, and designation labels</p>
	<p>MX-SM4-(XX) . . . . .</p> <p>4-port box with cover, base, two (2-port) MAX bezels, cable ties, adhesive tape, mounting screws, designation labels and label covers</p>		<p>MX-SM6-(XX) . . . . .</p> <p>6-port box with cover, base, three (2-port) MAX bezels, cable ties, adhesive tape, mounting screws, designation labels and label covers</p>

Use (XX) to specify colour: 01 = black, 02 = white, 20 = ivory, 80 = light ivory

Add “-D” for optional spring shutter doors.

Add “-M” for optional magnets.

Add “-MD” for optional doors and magnets.

MAX bezels are compatible with all single port, flat MAX outlets. For LC, SC duplex fibre adapters, Z-MAX® and TERA® options, see MX-SM multimedia bezels below.

## MX-SM Multimedia, SC Bezels and Blanks

 <p>MX-SMB-MM-(XX) . . . . .</p> <p>2-port multimedia bezel</p>	 <p>MX-SMB-SC-(XX) . . . . .</p> <p>2-port bezel with one duplex SC adapter*</p>	 <p>MX-SM-BLNK-(XX) . . . . .</p> <p>1-port blank insert for MAX bezels</p>
--	---	--

Use (XX) to specify colour: 01 = black, 02 = white, 20 = ivory, 80 = light ivory.

\*SC adapters are “universal” to support both Multimode and Singlemode.

Note: Multimedia bezel accommodates Z-MAX, TERA outlets and flat MAX duplex LC adapters.

They are also compatible with all other single port flat MAX modules, but require the use of icons to secure modules into bezel.

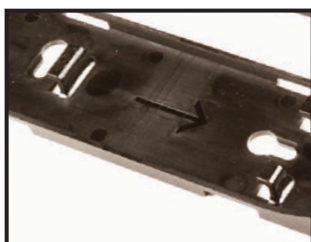
# Surface Pack™ Box

Siemon's Surface Pack Box is best described as a compact, lightweight box often utilised in high density work area environments that require rapid deployment of cabling systems. Typically deployed in buildings with a raised floor system, environments range from call centers to trading floors.

The box supports rapid deployment by allowing connectivity to be pre-terminated and stored away while construction is finalised. Cables can be routed within flexible conduit (not supplied), secured to the box and terminated to outlets. The small overall footprint allows the box and connectivity to be stored under a raised floor and then passed through standard size floor grommets for efficient deployment to the work station.

Surface Pack Boxes are available in 3 port and 6 port versions. Both boxes are the same size and compatible with MAX®, Z-MAX® and TERA® outlets allowing customers to support Category 5e, 6, 6A and 7A installations. The outlets are presented at an angle to allow patch cords to dress less prominently off the face of the box. Blanks may be used to accommodate port count variants and allow for expansion in the future. Ample labelling is provided for both the box and ports.

Two mounting options are available. One method features a mounting bracket that can be secured to a fixed location and allows the box to be clipped into the bracket via a one touch latch. For additional security, the box can be mounted without the use of the bracket by securing the base directly to the work area surface.



**Pre-mountable Bracket** — Allows box to be quickly installed at the work area location



**Cable Tie Down Point** — Within box secures cables for proper strain relief



**Easy Access** — All terminations and cables are contained within the box cover allowing easy access to terminations

# Product Information

## PERFORMANCE SPECIFICATIONS

Mechanical Properties		
	3 Port	6 Port
Part Number	SP-3-01	SP-6-01
Conduit Opening	26 mm	32 mm
Dimensions		
Length	192 mm	
Width	54 mm	
Height	61 mm	
Weight	181 grams	
Material	Polycarb / ABS	
Flammability Rating	UL 94 V-0	
Operating Temperature	-10° C to +60° C	
Relative Humidity	Up to 95%, non-condensing	
Storage Temperature	-40° C to +70° C	
Outlet Compatibility	TERA®, Z-MAX® Hybrid UTP or Shielded, MAX Flat UTP Outlets, MAX Blanks	
Colour	Black	

## Ordering Information

Part #	Description
SP-3-01	3 Port Surface™ Pack Box, Modular, Black
SP-6-01	6 Port Surface Pack Box, Modular, Black



SP-3-01

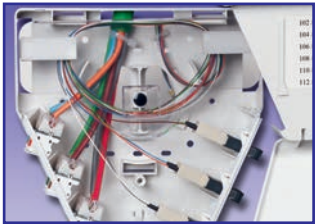


SP-6-01

- Box Includes:**
- 3 - Port identification labels and covers
  - 1- Box label and cover
  - 1 - (203mm) Tie-wrap
  - 1 - Screw for securing cover to the base of the box

# Multi-User Telecommunications Outlet Assembly (MUTOA)

This low-profile multi-user/multimedia surface mount box is unsurpassed in features and flexibility, and is ideal for use as a Multi-user Telecommunications Outlet Assembly (MUTOA) as specified in TIA-568-C.1. It provides storage area for up to 12m of buffered optical fibre cable using our optional fibre management tray and at least 2m of 4-pair twisted pair cable in the base, while maintaining a minimum bend radius of 30mm.



**Fibre Management**  
Optional fibre management trays enable isolation and proper routing of optical fibre cabling.



**Innovative Labelling**  
Hideaway labelling system flips down to reveal a designation area that utilises standard size faceplate designation labels.

**US and European Compatible** — Compatible with any standard single or double gang electrical box including European standards

**Storage Capacity** — Provides TIA compliance for cable slack while maintaining minimum bend radius requirements

**Versatility** — MAX® MUTOA accommodates any combination of up to 18 ports of mixed media or up to 36 fibre ports  
CT® MUTOA accommodates any combination up to 6 CT couplers

## MUTOA Ordering Information

Type	Part #	Description
	(XX)-MMO-(XX)	Multi-user/telecommunications outlet box with cable ties, mounting screw and adhesive tape
MX = for use with MAX modules	Colour	height: 200.2mm
CT = for use with CT couplers	02 = White	width: 200.2mm
	20 = Ivory	depth: 57.0mm
	80 = Light Ivory	

Optional fibre management tray sold separately (see below).

Use (XX) to specify colour: 02 = white, 20 = ivory, 80 = light ivory



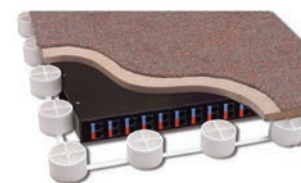
## Accessories

Part #	Description
CT-MMO-MAG	Set of 3 magnets for mounting MUTOA
FMT	Clear fibre management tray for MUTOA

## MAX® Zone Unit Enclosure

The MAX zone unit enclosure is an economical, high-density solution designed for use with low-profile sub-floor applications including Flexspace Cablefloor® and Haworth Nexus™. Enclosures are available to accommodate up to 48 ports of media using flat MAX, Z-MAX® and TERA® series modules and feature a 44.5 x 101.6mm opening for cable entry. Cable tie anchor points (hook and loop cable managers included) and fibre managers are conveniently located within the enclosure for proper routing and securing of cabling.

The enclosures are constructed of durable 16 gauge steel and feature a simple two piece design with a base and cover secured by four #6-32 screws. There are four mounting holes in the base for securing the enclosure to a mounting surface. The 48-port version includes internal support posts to provide additional structural support.



Part #	Description
ZU-MX-48 . . . . .	48-port MAX zone unit enclosure height: 44.5mm width: 254.0mm depth: 377.8mm
ZU-MX-24-0515 . . . . .	24-port MAX zone unit enclosure height: 44.5mm width: 114.3mm depth: 377.8mm

## MAX Fibre Adapter Outlets

Siemon MAX fibre adapter modules are compatible with all MAX series faceplates, modular furniture adapters, surface mount boxes and patch panels. All fibre adapters are "universal" to support either Multimode or Singlemode fibre connections.

MX-F1-LC(X)-(XX)C . . .  
Flat outlet  
with 1 duplex LC  
adapter (2 fibres)



MX-F1S-LC(X)-(XX) . . .  
Flat outlet  
with 1 simplex LC  
adapter (1 fibre)



Use (X) to specify LC adapter colour:  
blank = beige, U = blue, Q = aqua

Use (X) to specify LC adapter colour:  
U = blue, G = green

MX-F-S2(X)-(XX) . . . . .  
Flat outlet  
with 1 duplex ST  
adapter (2 fibres)



MX-S2(X)-(XX) . . . . .  
Angled outlet  
with 1 duplex ST  
adapter (2 fibres)



MX-F-SC(X)-(XX) . . . . .  
Flat outlet  
with 1 duplex SC  
adapter (2 fibres)



MX-SC(X)-(XX) . . . . .  
Angled outlet  
with 1 duplex SC  
adapter (2 fibres)



MX-F1-SC(X)-(XX) . . . . .  
Flat outlet  
with 1 simplex SC  
adapter (1 fibre)



Use (X) to specify ST or SC adapter colour: blank = black, Q = aqua

Use (X) to specify SC adapter colour:  
U = blue, G = green

MX-F-SA(XX)\* . . . . .  
Flat outlet  
with 1 simplex ST  
adapter (1 fibre)



MX-SA(XX) . . . . .  
Angled outlet  
with 1 simplex ST  
adapter (1 fibre)



MX-F-MP(XX) . . . . .  
Flat outlet  
with 1 MTP adapter



Use (XX) to specify colour: 01 = black, 02 = white, 04 = grey, 20 = ivory, 25 = bright white, 80 = light ivory

Outlets include dust caps, one colour-matching, one red, and one blue icon per port.

\*Compatible with SM® boxes.

## Coax MAX Outlets

For terminating coaxial cables at the work area or telecommunications room, Siemon's coax MAX modules are available with both BNC and F-type adapters. The F-type is available in both flat and angled while the BNC is available in flat only. They each include a space for using colour coded icons to identify type of service.

MX-FA-(XX) . . . . .

Angled outlet with 1  
F-type adapter, 75 ohms,  
2 GHz



MX-F-FA-(XX)\* . . . . .

Flat outlet with 1 F-type  
adapter, 75 ohms, 2 GHz



MX-F-BA-(XX)\* . . . . .

Flat outlet with 1 BNC adapter,  
75 ohms



Use (XX) to specify colour: 01 = black, 02 = white, 04 = grey, 20 = ivory, 80 = light ivory

Outlets include one colour-matching, one red, and one blue icon.

\*Compatible with SM® boxes.

## MAX Audio/Video Outlets

Siemon audio/video MAX outlets provide connectivity for a wide range of applications. Available media types include RCA, SVHS and HD15.

MX-F-RC-(XX)\* . . . . .

Flat outlet with 1 RCA  
connector with solder tail



MX-RC-(XX) . . . . .

Angled outlet with 1 RCA  
connector with solder tail



Use (XX) to specify colour: 01 = black, 02 = white,  
04 = grey, 20 = ivory, 80 = light ivory

RCA Outlets include one colour-matching, one red, and one blue icon.

\*Compatible with SM boxes.

CT® British Faceplates

The CT series British faceplates are compatible with British standards (85mm x 85mm).

CTE2-FP-02 . . . . .  
Single gang  
British style faceplate  
for one CT adapter, white



CTE4-FP-02 . . . . .  
Double gang  
British style faceplate  
for two CT adapters, white



Faceplates include designation labels, clear label cover and M3.5x0.6x25 mounting screws

CT International Faceplates

CT2-HFPZ-02 . . . . .  
1-port horizontal Australian/Italian  
faceplate for a CT adapter, white



TERA®-MAX® Adapters for CT Faceplates

Designed for use in standard CT faceplates or adapters, adapters feature angled bezel orientation to reduce mounting depth requirements for Z-MAX®, TERA and flat MAX outlets and facilitates gravity feed installation design.



CTE-MXA-01-02 . . . . .  
Angled CT adapter for  
one MAX, Z-MAX or  
TERA outlet, white



CTE-MXA-02-02 . . . . .  
Angled CT adapter for  
two MAX, Z-MAX or  
TERA outlets, white



CTE-HZA-02-(XX) . . . . .  
Horizontal CT adapter for  
two MAX, Z-MAX or  
TERA outlets

Use (XX) to specify colour: 01 = black, 02 = white

Faceplate Accessories

Part #	Description
CT-FP-LBL-104*	10 sheets of labels for faceplates that will fit any standard 8.5 x 11 printer, 104 labels per sheet
CT-FP-CVR	Bag of 100 clear label covers for CT faceplates

\*Visit our web site or contact our Technical Support Department for labelling software.

## Modular Y-Adapters

Y-Adapters are available as "splitters" which convert one 4-pair jack into two jacks. The Y-Adapters utilise Simon's patented UP-2468 plug which allows adapters to be used in 6- or 8-position jacks. The adapter body can be rotated 180° to view either the coloured icons or the Y-Adapter pinouts, which are printed on the opposite side.

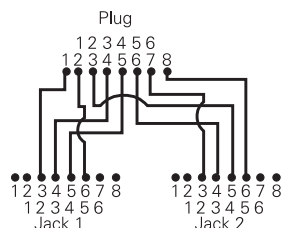


YU4-U2-U2 . . . . .

Splits a 4-pair USOC jack for Token Ring or voice applications at either jack

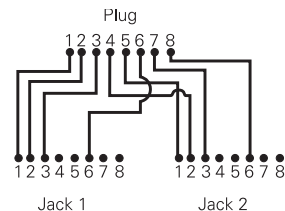
YA4-U2-U2 . . . . .

Splits a 4-pair T568B jack for Token Ring or voice applications at either jack



YT4-E2-E2 . . . . .

Splits a 4-pair T568A/B jack for 10BASE-T applications at either jack

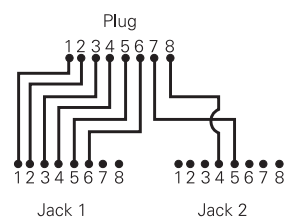


YT4-U2-U2 . . . . .

Splits a 4-pair T568A jack for Token Ring or voice applications at either jack

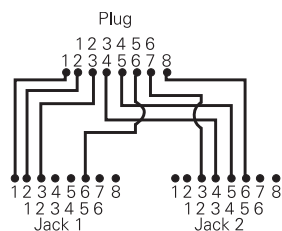
YA4-A3-U1 . . . . .

Splits a 4-pair T568B jack for 1-, 2- or 3-pair voice and 1-pair voice/modem



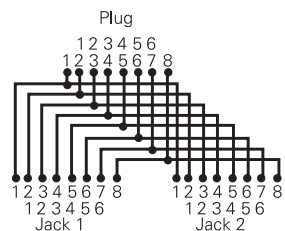
YT4-E2-U2 . . . . .

Splits a 4-pair T568A/B jack for 10BASE-T and Token Ring or voice applications



Y-BRIDGE . . . . .

Bridges all jack pairs. Compatible with any jack wiring. Provides an additional 4-pair jack with the same wiring.

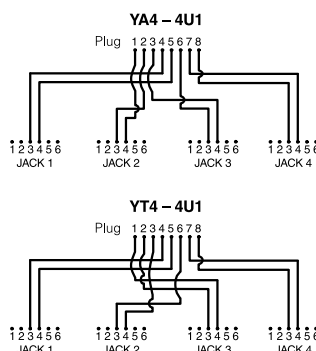


## Modular 4-Way Splitter

Simon's modular 4-way splitter provides access to each individual pair of a 4-pair modular outlet. The splitter converts a single 4-pair outlet to 4 individual 1-pair, 6-position outlets to enable four unique modular connections. The universal plug design enables compatibility with both 6- and 8-position outlets.

YA4-4U1 . . . . . Modular 4-way splitter, T568B

YT4-4U1 . . . . . Modular 4-way splitter, T568A



*Note: These modular adapters meet Category 3 transmission specifications.*

# Racks and Cable Management

Siemon’s line of open racks and cable management solutions covers nearly any network infrastructure need: 4-post and 2-post racks, exclusive rack-mount vertical cable managers, 19 inch horizontal managers, cable tray and much more.

## Section Contents

VersaPOD® 4-Post Rack ..... 9.1 – 9.2

RS3 Cable Management Rack System ..... 9.3 – 9.4

RS Rack System ..... 9.5 – 9.6

Rack Accessories ..... 9.7

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Stand-Off Brackets ..... 9.15

Thermal Blanking Panels ..... 9.15

19 Inch Equipment Shelf ..... 9.15

RWM Series Horizontal Cable Managers ..... 9.16

S110®/S210® Horizontal Cable Managers ..... 9.16

Rear Cable Managers ..... 9.16

# VersaPOD® 4-Post Rack

Siemon's adjustable-depth, VersaPOD 4-Post Rack provides a stable platform for mounting extended depth/size active equipment. It is ideal for use in both Telecommunications Rooms and central patching areas within Data Centre environments.

In addition to providing compatibility with Siemon's stand alone vertical cable managers, the 4-post rack is fully compatible with the 45U Zero-U panels used in Siemon's VersaPOD cabinets. This compatibility allows for mounting of patch panels or cable management between bayed racks or at end of rows.

The headers, vertical rails and depth adjustment brackets all feature symmetrical designs to eliminate orientation errors during assembly. They also work in conjunction to self-square the rack during assembly saving valuable installation time. The result is a rack that can be field assembled in less than 20 minutes.

**Field Adjustable Depth** — Rack depth can be field adjusted in 25mm increments to accommodate a range of equipment depths

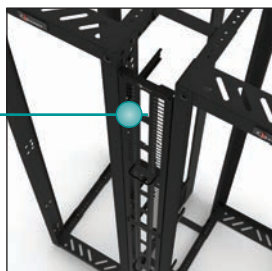
**Slotted Mounting Holes** — Provide a flexible securing point for ladder or wire basket trays mounted perpendicular or parallel to rack

**Stamped U Space Indications** — Provide ready visual indication of proper panel alignment

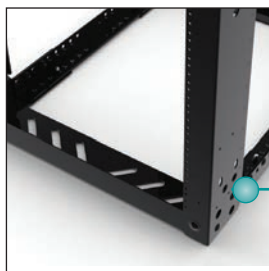
**In-Facing Headers and Footers** — Maximise floor space while maintaining full load capabilities



In addition to Siemon's stand alone vertical cable managers, the VersaPOD 4-Post Rack is compatible with Siemon's Zero-U patching and cable management panels



Eight (8) ground post locations (4 on top, 4 on bottom) provide ready accessible ground attachment points



# VersaPOD® 4-Post Rack

## Ordering Information:

Part #	Description
RSQ1-07-S.....	VersaPOD 4-post rack, 560-915mm, Steel, Black, 45U, #12-24
RSQ1-07C-S.....	VersaPOD 4-post rack, 560-915mm, Steel, Black, 45U, Cage nuts*
RSQ-BAY-VPP.....	VersaPOD 4-post rack baying bracket for Zero-U Panels, set of 4

Zero-U baying brackets are required to ensure proper operation of Zero-U panels.  
\*Includes bag of 50 M6 cage nuts.



External Dimensions:  
height: 2.13m  
width: 560mm  
depth: 558 -915mm  
  
1U = 44.5mm

## VersaPOD 4-POST RACK SPECIFICATIONS:

U Space	45
Colour	Black
Packaging	Ships unassembled in a single carton
Standard Compliance	CEA-310-E, UL 60950, RoHS
Compatibility	RS-CNL, RS-CNL3, VPCA-6, VPCA-12, Zero-U VersaPOD Panels
Weight	48 kgs, Full weight with packaging
Load Rating	907 kgs Static load, evenly distributed

## Cable Managers

The VersaPOD 4-Post Rack is compatible with the following Siemon cable management products:

- RouteIT™ vertical managers and accessories
- Vertical cable management channels
- RouteIT horizontal cable managers, HCM-(X)-(X)U
- WM series horizontal cable managers
- RWM series horizontal cable managers
- S110 horizontal managers
- Vertical patching channels

# RS3 Cable Management Rack System

Siemon's RS3 series cable management rack system provides integral, high capacity cable management for routing of both horizontal/backbone cabling and patch cords. Vertical channels with hinged cable manager covers conceal and route patch cables for a clean, professional installation.

**High Capacity** — 76mm x 152mm front vertical managers provide capacity for approximately 190 Category 6 patch cords

**Cable Tray Compatibility** — Header bars incorporate unique slotted holes for securing cable trays routed perpendicular or parallel to RS3 racks

**Deeper Channels** — 116.8mm x 152.4mm vertical side rails provide higher cable capacity over standard rack designs

**Side Stackable** — RS3 design allows racks to be side-stacked without interference between adjacent racks

**Flexible Management** — Side rails compatible with Siemon's quarter-turn hook and loop cable managers for proper management of cable bundles

**Cable Access Holes** — Access holes on side rails allow cables to be routed between adjacent racks

**Power Strip Compatibility** — Mounting holes on rear of RS3 accommodate Siemon's vertical power strip (p/n RS-P04) and intelligent PDUs (see Section 12) to provide power to active equipment mounted in rack

**Anchoring** — Mounting holes provided for anchoring racks to floor



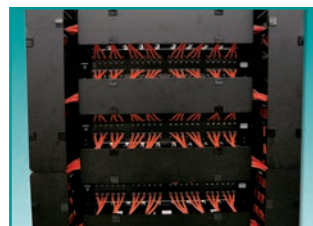
## Hinged Front Covers

Front covers fully conceal all vertical patch cord routing through an easy to use, modular design. Each section can be individually hinged in either direction to facilitate quick and easy changes. Covers include positive securing snap latches for trouble-free fastening.



## Rounded Managers

The individual managers on the vertical channels are rounded to allow patch cords to seamlessly enter and exit the managers without risk of cable deformation.



## Matching Horizontal Managers

Siemon's RS3 series horizontal cable managers provide a fully integrated appearance and same hinging design for comprehensive management of patch cords.

## RS3 Cable Management Rack System

Part #	Description
RS3-07.....	Aluminium enhanced cable management rack system, 45U. Includes rack assembly hardware, vertical cable management channels with hinged covers, and ground lug
	height: 2.1m width: 685.0mm depth: 457.2mm

Add "S" for steel.

Note: Aluminium racks (RS3-07) are available and intended for use with connecting hardware and cable managers only. For mounting of active equipment, steel racks are recommended.

Note: 1U = 44.5mm

See Cable Management Capacity Table in the Cable Management Section of our E-Catalogue on our Website



## Cable Managers

The RS3 Cable Management Rack is compatible with the following Siemon rack-mounted cable management products:

- RouteIT™ horizontal cable managers, HCM-(X)-(X)U
- WM series horizontal cable managers
- RWM series horizontal cable managers
- S110 horizontal cable managers
- Vertical patching channels

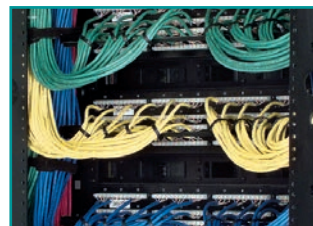
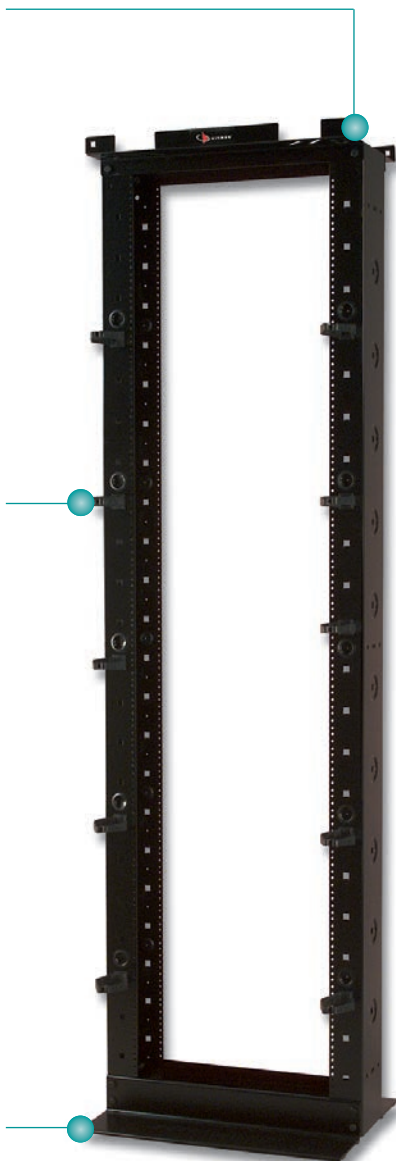
# RS Rack System

Siemon's RS series cable management rack system combines a 2.1m x 0.48m (19 inch) black rack with cable management accessories to provide a complete cable management solution. Ideal for all size installations, the rack features fully usable 45U capacity.

**Cable Tray Compatibility** — Header bars incorporate unique slotted holes for securing cable trays routed perpendicular to or parallel with RS racks

**Twist-Lock Cable Managers** — High capacity twist-lock cable managers lock into place quickly without use of screws or mounting tools and can be easily located in many positions on the front, side, back, and within channel to provide customised cable management

**Anchoring** — Mounting holes provided for anchoring rack to floor



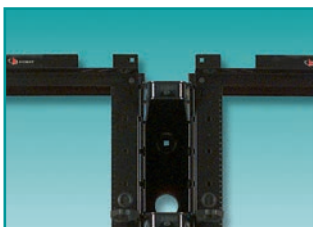
## High Capacity Side Rails

76 x 152mm vertical side rail channels on rack provide large area for routing high volumes of horizontal or backbone cables.



## Complete Management System

Comprehensive cable management can be created using Siemon's RouteIt™ Vertical Cable Managers (VCM-(XX) and VCM-(XX)D), Vertical Patching Channels (VPCA-(X) and RS Series Horizontal Cable Managers.



## Optional Vertical Cable Channels

Optional vertical cable management channels (RS-CNL and RS-CNL3) and Vertical Patching Channels (VPCA-(X) allow a high volume of patch cords to be routed between two racks or within a single rack.

RS Rack System

Part #	Description
RS-07-S .....	Steel cable management rack system, 45U. Includes: rack assembly hardware, 10 high-capacity cable managers, 10 hook and loop cable managers, grommets, and ground lug  height: 2.1m width: 609.6mm depth: 457.2mm

*Note: Aluminium racks are available (P/N: RS-07) and intended for use with connecting hardware and cable managers only. For mounting of active equipment, steel racks are recommended.*

See Cable Management Capacity Table in the Cable Management Section of our E-Catalogue on our Website



Extended Depth RS Rack System

Siemon has developed a rack for managing extra large volumes of horizontal cables. The extended depth rack features vertical channels which are 0.37m deep. These channels include multiple mounting holes allowing the user to configure Siemon's twist-lock hook and loop cable managers for properly managing large individual bundles of cables. The footers have also been designed to retain the 0.61m overall footprint.

Part #	Description
RS-07E .....	2.1 x 0.48m (19 inch) aluminium extra-deep cable management rack system, 45U. Includes rack assembly hardware, 10 high-capacity cable managers, 10 hook and loop managers, grommets and ground lug  height: 2.1m width: 604mm depth: 600mm

*Note: Aluminium racks are intended for use with connecting hardware and cable managers only. For mounting of active equipment, steel racks such as RS-07-S are recommended.*

See Cable Management Capacity Table in the Cable Management Section of our E-Catalogue on our Website



Cable Managers

The RS Rack System is compatible with the following Siemon cable management products:

- RouteIT™ vertical managers and accessories
- Vertical cable management channels
- RouteIT horizontal cable managers with extended covers, HCME-(X)-(X)U
- WM series horizontal cable managers
- RWM series horizontal cable managers
- S110 horizontal cable managers
- Vertical patching channels

## Rack Accessories

Siemon offers a full range of accessories to allow further customisation of Siemon racking systems.

RS-VCM.....

Quarter-turn hook and loop cable managers includes roll of (10) 457mm hook and loop black cable managers and (10) quarter-turn mounting clips



RS-CH.....

Quarter-turn cable managers



SCREW-1224.....

#12-24 Slotted head screws with washers, black, bag of 100



RS-CNL-MGR.....

Channel retainers for use with RS-CNL and RS-CNL3



PH-3.....

3U panel access hinge includes integral 1U panel with 5 removable cable managers and accepts one 2U or two 1U patch panels



VP-SPL.....

Quarter-turn Fiber Management Spool, bag of five (can be installed in VP-VPC and VP-VWM panels)



*Note: 1U = 44.5mm*

### Technical Tip!

For information on Siemon's Power Distribution Units (PDUs) see Power and Cooling Section 12.0.

## Rack Hinge

Siemon rack hinges are designed to allow rack mounted patch panels to swing out (horizontally) from the rack. The hinges are available in 2 and 3U sizes which can be combined to mount 4 and 6U panels. The 2U hinge is capable of mounting one 2U or two 1U panels.

Part #	Description	U
RHNG-2.....	Rack hinge.....	2
RHNG-3.....	Rack hinge.....	3

*Note: 1U = 44.5mm*



## Vertical Cable Management Channels

Siemon's single-sided vertical cable management channels provide an economic solution for managing large cable bundles between adjacent racks. They feature an open design with six easily configured dual-hinge managers (additional managers available separately) that enable customised management of patch cords. Cable access holes allow cords to be routed between the front and rear of the channel. Mounting holes within the channel accommodate Siemon's quarter-turn cable managers (p/n RS-CH) and quarter-turn hook and loop cable managers (p/n RS-VCM) for further customisation of cable routing. The channels are available in both 76mm and 152mm depths for use with standard 76mm racks or 152mm deep cable management racks such as Siemon's RS-07. Alternately, the 76mm deep channels can be stacked back to back with the deeper cable management racks such as Siemon's RS-07E to optimise management of cables on both sides of the channel.

RS-CNL.....

vertical cable management channel for mounting between 152mm deep racks (includes mounting hardware)

height: 2.1m  
width: 152.4 mm  
depth: 224.8 mm



RS-CNL3.....

vertical cable management channel for mounting between 76mm deep racks (includes mounting hardware)

height: 2.1m  
width: 152.4 mm  
depth: 148.6 mm

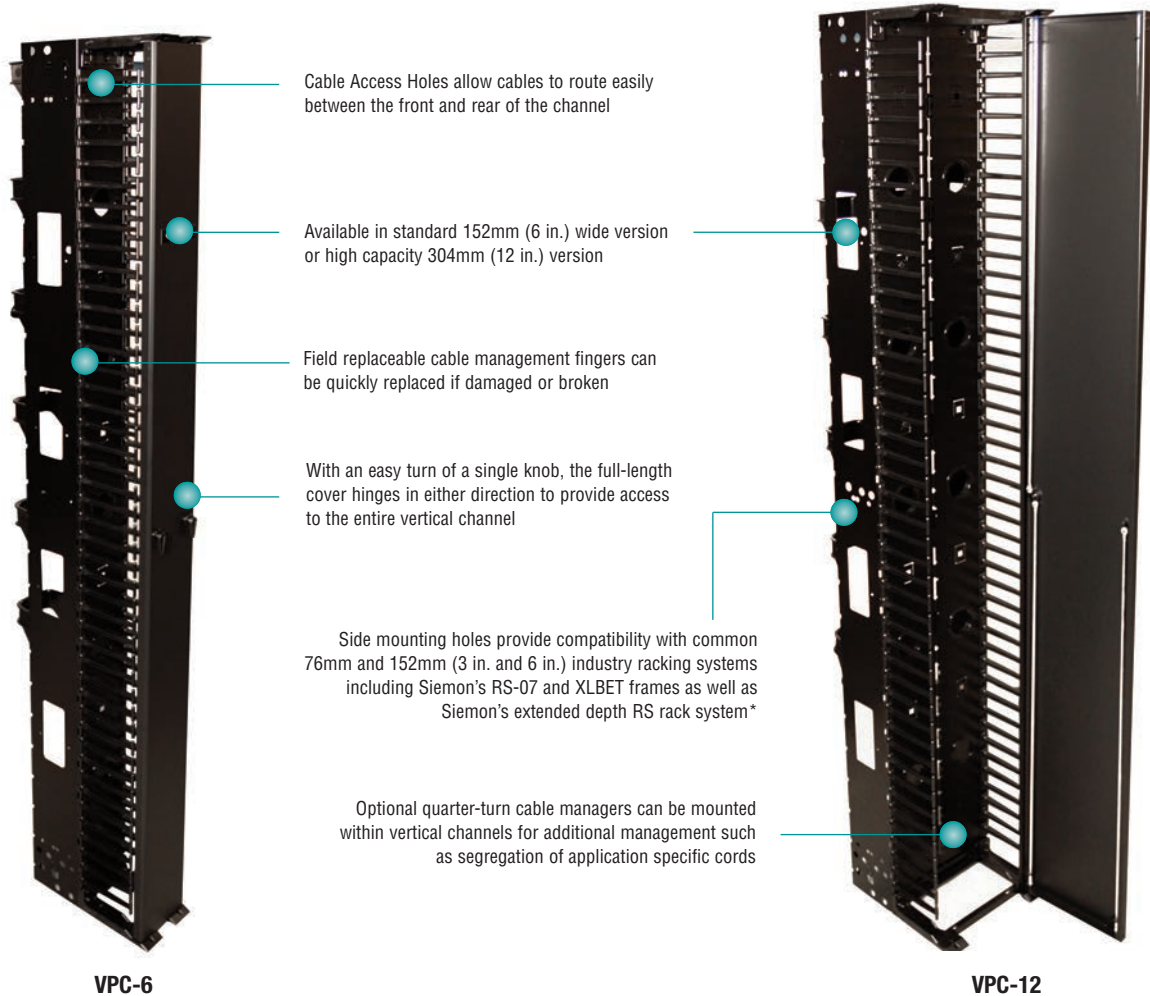


Two RS-07's shown with three RS-CNL's

See Cable Management Capacity Table in the Cable Management Section of our E-Catalogue on our Website

# Vertical Patching Channel (VPC)

Siemon's enhanced Vertical Patching Channel (VPC) sets a new standard for cable management systems by improving appearance, accessibility and cable routing on both the front and rear of the rack. Designed as a stand-alone manager to be mounted between adjacent racks the VPC features a full length, hinged door on the front to conceal patch cord routing. The rear manager is open for ready routing of large bundles of horizontal/backbone cabling. With its easy access design, high capacity and professional appearance, the VPC is ideal for both installers and end users alike.



Rear channel retainers can be hinged in either direction and are removable enabling relocation to any position along the rear vertical channel



The VPC is fully side stackable for use in ultra high density environments. The doors can be individually opened 60° or adjacent doors can be removed for full access



All of the cable routing points on the vertical channels are rounded to allow patch cords to seamlessly enter and exit the managers without risk of cable deformation

*\*When used with extended depth rack, rear channel is used for mounting purposes only.*

## 152mm Enhanced Vertical Patching Channel

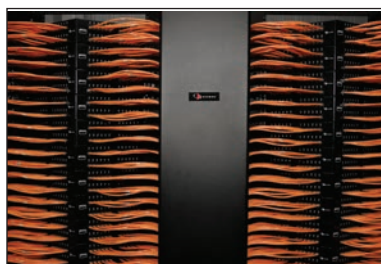
Part #	Description
VPCA-6	2.1m x 152mm vertical patching channel. Includes front cover, 6 rear channel retainers and mounting hardware <i>height: 2.1m</i> <i>width: 152.4mm</i> <i>depth: 304.8mm</i>



Comprehensive cable management can be created using Siemon's RS-07 and HCM Series horizontal cable managers

## 305mm Enhanced Vertical Patching Channel

Part #	Description
VPCA-12	2.1m x 305mm vertical patching channel. Includes front cover, 12 rear channel retainers and mounting hardware <i>height: 2.1m</i> <i>width: 304.8mm</i> <i>depth: 304.8mm</i>



VPCA-12 shown with two RS-07 racks and angled patch panels



### CABLE MANAGER CAPACITY TABLE

Part Number	Cable Diameter											
	3.30	3.81	4.32	4.83	5.33	5.84	6.35	6.86	7.37	7.87	8.38	8.89
VPCA-6 (Front)	683	513	399	319	261	218	184	158	137	120	106	94
VPCA-6 (Rear)	1059	795	619	495	405	338	286	245	212	186	164	146
VPCA-12 (Front)	1464	1100	856	685	561	467	396	339	294	257	227	202
VPCA-12 (Rear)	2118	1591	1238	991	811	676	572	491	425	372	328	293

Cable capacities reflect a calculated fill rate of 40% which is intended to reflect 100% fill during actual use due to side cable entry

## VPC Accessories

Part #	Description
VCM-FGR-6	152mm Vertical Cable Manager Replacement Fingers, 9U, Set of 2



Part #	Description
VCM-DR(XX)	Replacement Door

Use (XX) to specify width:  
6 = 152mm  
12 = 304mm



# RoutelT™ Cable Managers

Siemon's RoutelT vertical and horizontal cable managers are specifically designed to readily manage the challenges proposed by today's high volume, high density cabling systems. Available in multiple sizes, these versatile cable managers provide a system solution for ready routing and protection of both horizontal cables and patch cords.

Full length, dual hinge doors protect and conceal cabling providing a premium appearance capable of supporting today's high speed network cabling systems.

**Field Replaceable Cable Management Fingers** — Can be quickly replaced if damaged or broken without detaching the managers from adjacent racks – even while populated

**Finger Radius** — Prevents deformation of cable jackets for cables entering/exiting the vertical managers

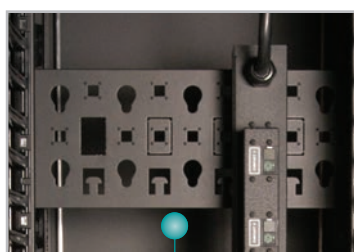
**Single Finger Latch Door Operation** — Allows for quick opening and closing of doors at a single point

**152mm Central Frame Depth** — Optimised to match rail depth of cabling purposed racks for maximum capacity

**High Capacity Fingers** — Accommodate over 48 Category 6A cables to match high density horizontal patch panels or switch blades

**Dual Hinge Doors** — Provide access from both sides or can be easily removed to provide open access during initial loading

**Free Standing Design** — Enables staging and positioning of managers prior to attachment to open racks



**PDU Ready** — Multiple attachment points available for optional tool-less button mounting of PDUs within double-sided managers or on rear of single-sided managers



**Diverse Mounting Points** — Allow for mounting of optional Siemon quarter-turn management accessories and cable ties

## Vertical Managers – Ordering Information



VCM-(XX) .....  
RouteIT™ Single-sided Vertical Cable Manager

height: 2.1m  
depth: 357mm

Use (XX) to specify width:  
6 = 152mm,  
10 = 254mm,  
12 = 305mm,  
16 = 406mm



VCM-(XX)D .....  
RouteIT Double-sided Vertical Cable Manager

height: 2.1m  
depth: 562mm

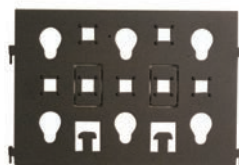
Use (XX) to specify width:  
6 = 152mm,  
10 = 254mm,  
12 = 305mm,  
16 = 406mm

## Vertical Managers – Accessories



VCM-S .....  
2.13m x 457mm Side Panel Kit for RouteIT Double-sided Vertical Cable Managers

*Note: Side panel kit is a two piece design comprised of one top and one bottom piece and includes mounting hardware*



VCM-(XX)D-RB .....  
Vertical Dividers for RouteIT Double-sided / Vertical Cable Managers, Set of 3

Use (XX) to specify width:  
6 = 152mm,  
10 = 254mm,  
12 = 305mm,  
16 = 406mm



VCM-FGR-6 .....  
152mm Vertical Cable Manager Replacement Fingers, 9U, Set of 2

## Horizontal Managers – Ordering Information



HCM-4-(X)U .....  
RouteIT Horizontal Cable Manager w/ 102mm Fingers



HCME-4-(X)U .....  
RouteIT Horizontal Cable Manager w/ 102mm Fingers and Extended Length Cover



HCM-6-(X)U .....  
RouteIT Horizontal Cable Manager w/ 152mm Fingers



HCME-6-(X)U .....  
RouteIT Horizontal Cable Manager w/ 152mm Fingers and Extended Length Cover

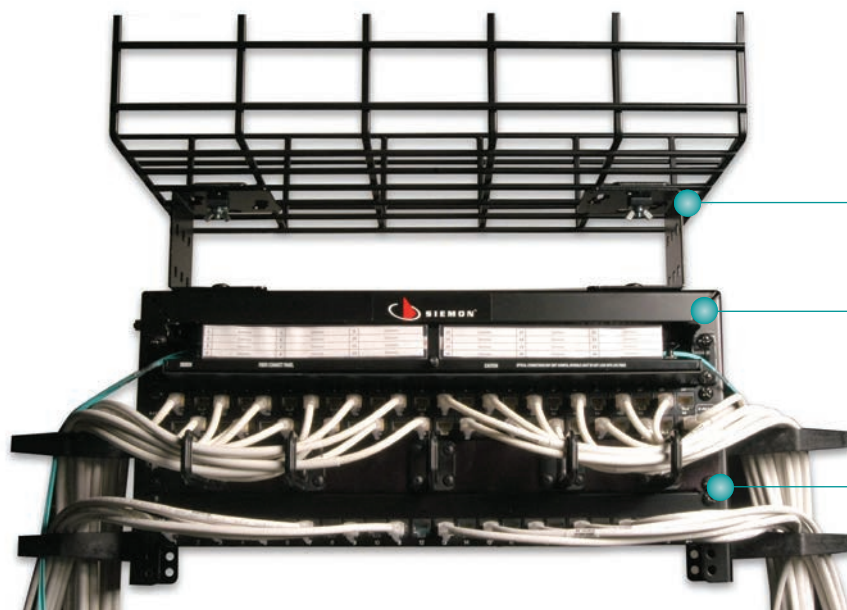
Use (X) to specify height: 1 = 1U, 2 = 2U, 4 = 4U  
Add “-D” to end of part number for double-sided version (2U only)



HCM(E)-CVR-(X)U .....  
RouteIT Horizontal Cable Manager Replacement Cover

# Cable Tray Rack

Designed to mount directly to overhead ladder rack or cable tray, Siemon's Cable Tray Rack delivers 4U of easily installed and accessible 19 inch rack mount space above cabinets and racks without consuming additional floor space, making it ideal for use as a Zone Distribution Area (ZDA) or Equipment Distribution Area (EDA) in data centres. Used with copper patch panels or fibre enclosures, the cable tray rack can increase cabling density, improve cable routing, simplify moves, adds and changes and provide pre-cabled connectivity for rapid deployment of new cabinets, racks and equipment.



## Improved Thermal Efficiency —

Helps improve airflow by managing patching fields and cabling above cabinets and racks, minimising obstruction of equipment cooling features.

## Rapid Data Centre Deployment —

Can be used in conjunction with Siemon's pre-terminated copper and fibre solutions to reduce installation time.

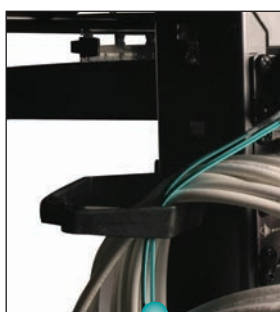
## Open Compatibility —

Rack mount solution attaches to all common overhead cable tray and ladder rack systems.



## Flexible Mounting —

Unique design can be mounted below, flush or above cable tray in both parallel and perpendicular configurations.



## Flexible Cable Routing —

High capacity quarter-turn twist-lock cable managers lock into place quickly without use of screws or mounting tools and can be easily located to provide customised cable management.



## Floor Space Maximisation —

Provides 4U of standard 19 inch rack mount space above cabinets and racks to maximise cabling density/ minimise data centre floor space needs.

## MAJOR PRODUCT FEATURES:

- 4U size
- CEA-310-E compliant mounting holes
- Robust 12 gauge steel construction
- Smooth black powder coat finish
- Mounting hardware and cable management included
- 267 N load rating

### Ordering Information:

CTR-(XX)-01 . . . . .	Cable Tray Rack, Black, #12-24. Includes mounting hardware, 1/4 turn cable managers, ground lugs
Size	
02 = 2U	
04 = 4U	
06 = 6U	

*\*Add "C" to end of part number for cage nut version (includes M6 cage nuts)*

CTR-LRK . . . . .	Ladder Rack Mounting Kit for Cable Tray Rack
-------------------	--



### Mounting Examples:



**Perpendicular to Tray  
(Below)**



**Parallel to Tray  
(Flush)**



**Parallel to Ladder Rack  
(Below)**

*Other sizes available. Contact Customer Service for more information.*

WM Series Horizontal Cable Managers

The WM series cable managers provide increased strength and do not interfere with panels mounted above or below. They are a popular and economical solution for providing a clean and simple means of organising small-to-large bundles of cables and patch cords.

Part #	Description
WM-143-5	Horizontal cable manager with five S143 hangers 1U
WM-144-5	Horizontal cable manager with five S144 hangers, 2U
WM-145-5	Horizontal cable manager with five S145 hangers, 2U

Note: 1U = 44.5mm



Cable Hangers

The cable hanger design features structural integrity and sleek appearance. These cable hangers are ideal for routing small to very large quantities of cables. The durable plastic design ensures reliability for any application.

Part #	Height	Width	Depth
S143*	44mm	38mm	89mm
S144*	87mm	57mm	74mm
S145*	87mm	57mm	125mm
S146	151mm	63mm	130mm
S147	254mm	63mm	130mm

\*Add “-A” for optional adhesive backing.



Reusable Hook and Loop Cable Managers

These cable managers are simple, yet extremely effective when used to bundle cables. To accommodate different sized bundles, they are available in 152mm, 305mm, or 457mm lengths. They can be easily loosened and removed to service cable and then tightened and reinstalled when the cables are rebundled. The handy dispenser rolls/spools are neat, convenient and quick. Adjustable tension prevents “over-cinched” conditions. A mounting hole in each hook and loop manager enables the manager to be mounted to a wall or rack.

Part#	Description
VCM-25-(XX)-01	Roll of 25 cable managers
VCM-250-(XX)-01	Spool of 250 cable managers

Use 1st (XX) to specify length:  
 06 = 152mm, holds 51mm diameter cable bundle  
 12 = 305mm, holds 102mm diameter cable bundle  
 18 = 457mm, holds 153mm diameter cable bundle



Wrap-around cable managers offer a simplified approach to cable management. secure it to a single cable and then wrap it around the entire bundle.



Hook and Loop cable managers have a large head for added strength and a mounting hole is included for securing to a wall or rack.

Technical Tip!

Hook and loop cable managers are recommended as an alternate to plastic cable ties for the reduction of alien crosstalk in Category 6A UTP installations.

## Stand-Off Brackets

Siemon hinged stand-off brackets can be mounted to a wall with the hinge on either side for convenient access to the back of the panel. The sides of the brackets will accept our S144 or S145 cable hangers for external cable management. The brackets accept any combination of Siemon patch panels and rack-mount cable management. Mounting hardware included.



**Part #**  
SBH-2 ..... 2U

**Part #**  
SBH-3 ..... 3U

**Part #**  
SBH-4 ..... 4U

**Part #**  
SBH-6\* ..... 6U



height: See U information, width: 483mm, depth: 152mm

\*Add -2 for (3) independent 2U hinges (instead of a single 6U hinge).  
Note: 1U = 44.5mm

## Thermal Blanking Panels

Blank filler panels are ideal for installations where open or expansion rack space is to be covered. Aluminium panels are blank on one side and feature the Siemon logo on the other side.

Part #	Description
PNL-TBLNK010-1S .....	SnapFit™ Thermal blanking panel for 19 inch rack, 1U, square holes, black, plastic, package of 10
PNL-TBLNK100-1S .....	SnapFit™ Thermal blanking panel for 19 inch rack, 1U, square holes, black, plastic, box of 100
PNL-BLNK-(X) .....	Blank filler panel for 19 inch rack



Use (X) to specify rack mount space height of panel:  
1 = 1U, 2 = 2U, 3 = 3U, 4 = 4U  
Note: 1U = 44.5mm

## 19 Inch Equipment Shelf

Siemon's double-sided 19 inch equipment shelf is designed to support heavy equipment loads up to 68.1 kg. The shelf is designed for use with any 152mm deep rack and is secured to the front and rear of the rack channels. Shelf accommodates equipment up to 432mm wide.

Part #	Description
SH-D19-01 .....	Double-sided equipment shelf for 152mm deep racks, solid, 3U height: 133mm width: 483mm depth: 457mm

Single sided solid and vented equipment shelves are ideal for mounting devices in standard 19 inch racks and cabinets. Supports equipment up to 22.7kg in weight and 438mm in width.

SH-S19-01 .....	Single Sided Equipment Shelf - Solid -3U
SH-S19V-01 .....	Single Sided Equipment Shelf - Vented -3U height: 133mm width: 483mm depth: 381mm

Note: 1U = 44.5mm



SH-D19-01



SH-S19V-01

## RWM Series Horizontal Cable Managers

The multi-access horizontal cable managers are designed to provide both front and rear cable management in a compact, 1U space. The managers feature high capacity slots for entering and exiting cables, removable covers to conceal patch cords, and an innovative cable retention design to prevent patch cords from falling out when the covers are removed. The rear of the RWM-1 features attachments for using Siemon's hook and loop cable managers.

Part #	Description
RWM-1 . . . . .	Single-sided horizontal cable manager with cover
RWM-1DS . . . . .	Double-sided horizontal cable manager with covers

Note: 1U = 44.5mm

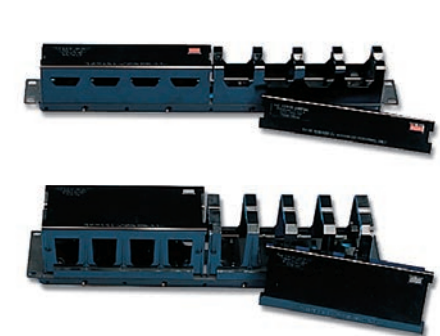


## S110®/S210® Horizontal Cable Managers

The S110/S210 cable managers provide an economical, superior cable management solution in a compact space. 1U and 2U size and large capacity provide excellent cable management for 19 inch rack mount installations.

Part #	Description
S110-RWM-01 . . . . .	S110/S210 horizontal cable manager with covers, black, 1U
S110-RWM2-01 . . . . .	S110/S210 horizontal cable manager with covers, black, 2U

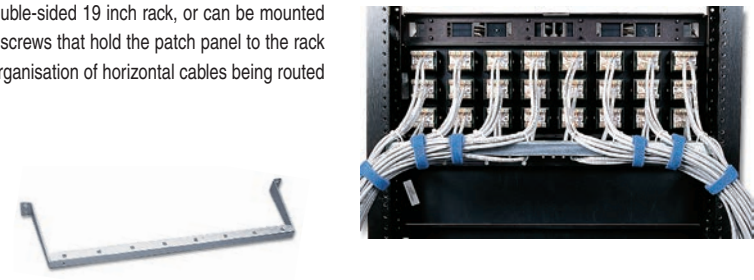
Note: 1U = 44.5mm



## Rear Cable Manager

Siemon rear cable manager can be mounted to the back side of a double-sided 19 inch rack, or can be mounted between a patch panel and the front face of the rack, using the same screws that hold the patch panel to the rack and the hex nuts provided. It provides strain relief anchor points and organisation of horizontal cables being routed to the back of the patch panel.

WM-BK. . . . .	Rear cable manager with mounting screws and hex nuts
----------------	--





# VersaPOD® and V800™/V600™ Cabinets

Including both the innovative VersaPOD family of data centre solutions, V800 (800mm) and V600 (600mm) cabinets, Siemon’s comprehensive line of cabinets deliver the design flexibility and options to deploy the physical infrastructure you need.

In addition to the space saving, flexible VersaPOD and its Zero-U vertical cable management, patching and power distribution accessories, be sure to check out the additional innovations appearing in this section:

- SidePOD™ and Baffle — Unique VersaPOD accessories designed to support thermally efficient airflow for side-venting equipment such as the Cisco Nexus 7018 Series switches
- Vertical Exhaust Ducts (Chimneys) — Compatible with VersaPOD (VP2), V800 (V82) and V600 (V62) cabinets, these chimneys bring VersaPOD’s thermal capacity to 13kW
- 42U Options — Full-featured VersaPOD cabinets are available in 42U and 45U sizes, and V800/V600 cabinets are available in 42U, 45U and 48U versions

## Section Contents

VersaPOD Features and Benefits . . . . . 10.1

VersaPOD Cabinet Base Unit . . . . . 10.2

Cabinet Doors and Panels . . . . . 10.2

Vertical Exhaust Duct . . . . . 10.2

VersaPOD ZERO-U Sliding Patch Panels . . . . . 10.3

VersaPOD Cable Management . . . . . 10.4

VersaPOD End-of-Row Vertical Panels . . . . . 10.5

VersaPOD Zero-U Accessories . . . . . 10.6

Cabinet Accessories . . . . . 10.7

VersaPOD SidePOD™ and Thermal Baffle . . . . . 10.8 - 10.9

V800 Cabinet and Accessories . . . . . 10.10 - 10.13

V600 Cabinet and Accessories . . . . . 10.14- 10.15



# VersaPOD® Features and Benefits

Siemon's VersaPOD enables a completely new and efficient approach to your physical data centre infrastructure. By leveraging the vertical space between bayed cabinets and at the end of row for patching, power distribution and cable management, the VersaPOD frees critical horizontal space for active equipment, providing improved air flow while optimising data centre floor space.

The VersaPOD's innovative Zero-U vertical patch panels (VPP's) dramatically simplify even the most dense patching needs while its vertical patching channels (VPC) offer a clean, orderly and easy method of high-density cable routing.

All of the VersaPOD's unique features are integrated into a full-featured modular enclosure that is equally effective as a standalone cabinet or in a multi-unit bayed configuration, offering a simple, scalable expansion path in any data centre.

**Cable Management** — Vertical cable management fingers can be mounted alongside each VPP or VPC to facilitate routing of copper or fibre jumpers between patching fields as well as cabinet to cabinet connections

**Vertical Patching** — Vertical copper and fibre patch panels provide up to 24U (12U at front and 12U at rear) of Zero-U vertical patching space between every two cabinets. These panels conveniently slide forward providing access to the connections at the rear of the panel

**End of Row** — End of row vertical panels offer additional cable management channels or up to 8U additional Zero-U mounting space (4U in front and 4U in back at each end)

**Integration** — In addition to patching, the VersaPOD's Zero-U vertical space can be leveraged with integrated cable management options and dual-hinged door to offer a high capacity and concealable pathway for cable routing and slack management

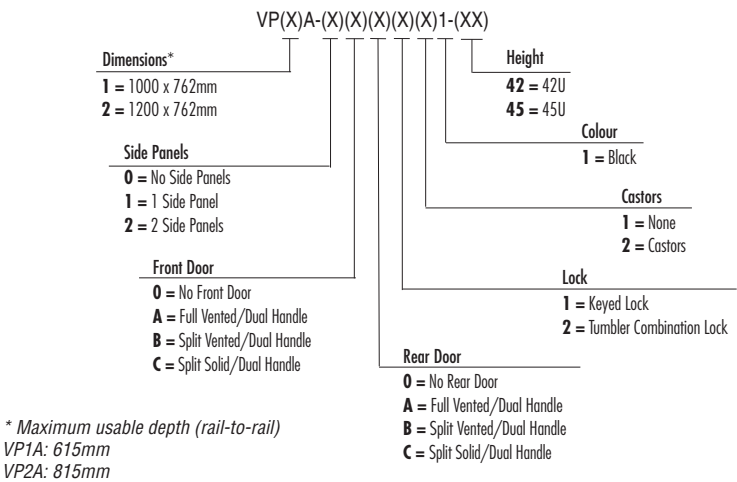
**Dual Hinged Doors** — Dual hinged front and quad hinged rear doors open from either the left or right and are easily removed. Rear split doors can be hinged open in either direction providing direct access to vertical spaces. For standalone cabinets or end units, side panels can be removed for full side access



# VersaPOD® Cabinets

The VersaPOD cabinet is designed to integrate with Siemon's comprehensive assortment of Zero-U vertical and horizontal cable management accessories, Zero-U vertical patch panels and thermal management products, offering multiple top and bottom cable access points and mounting provisions for fans, brush-guards and vertical exhaust ducts\*. The VersaPOD cabinet is available in both 42U and 45U sized and in 1000mm and 1200mm depths and a wide array of door, side panel and lock options.

\*Vertical exhaust ducts compatible with VP2 only.



Includes: 4 levelling feet, 50 cage nuts and 4 stabilising brackets



## VersaPOD Cabinet Doors and Panels

Part #	Description
VPA-DRA-1-(XX)	Full vented door, dual handle with standard keyed lock
VPA-DRB-1-(XX)	Split vented door, dual handle with standard keyed lock, (Set of 2)
VPA-DRC-1-(XX)	Split solid door, dual handle with standard keyed lock, (Set of 2)
VP1A-S-1-(XX)	1000mm locking side panel kit
VP2A-S-1-(XX)	1200mm locking side panel kit

Use (XX) to specify height. 42 = 42U, 45 = 45U

## Vertical Exhaust Duct (Chimney)

Part #	Description
VP-DUCT1	Vertical Exhaust Duct, 523 x 653 x 516-923mm, Black
VP-DUCT2	Vertical Exhaust Duct, 523 x 653 x 912-1320mm, Black

Note: Chimney compatible with 1200mm VersaPOD (VP2), V800 (V82) and V600 (V62) cabinets only. Solid doors recommended for use with chimneys.



# VersaPOD® Zero-U Sliding Patch Panels

## 42U Triplex Zero-U Sliding Vertical Patch Panels



VP-VP3U-1-42

VP-VPTM-1-42



VP-VP3U-1-42

VP-VPTM-1-42

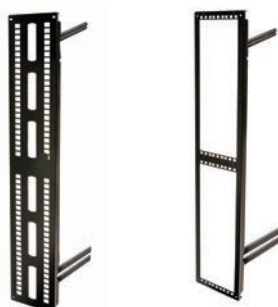
Part#	Description
VP-VP3U-1-42.....	Vertical 19 inch Panel, 3U Mounts up to 3U of standard 19 inch panels or PDUs in vertical orientation
VP-VPTM-1-42 .....	TERA®-MAX® Vertical Patch Panel 48 ports, supports all Category 5e and Category 6 MAX and Z-MAX®, Category 6A UTP and shielded Z-MAX, TERA outlets and MAX fibre adapters (port spacing compatible for Z-MAX 6A UTP)
VP-VPTMR-1-42.....	TERA-MAX-RIC Vertical Patch Panel 48 Ports, supports all Category 5e and Category 6 MAX and Z-MAX, Category 6A shielded Z-MAX outlets TERA® outlets and MAX fibre adapters (port spacing not compatible for Z-MAX 6A UTP) - 4 fibre RIC adapter mounting spaces for mounting RIC adapter plates or fibre Plug and Play modules
VP-VP3R-1-42 .....	RIC Vertical Patch Panel 12 RIC adapter mounting spaces for mounting RIC fibre adapter plates or fibre Plug and Play modules

*Note:*

(3) VPPs/VPCs can be mounted vertically at the front and/or rear of 2 bayed cabinets or between a VersaPOD cabinet and SidePOD®

(3) VPPs/VPCs are required to fully populate 42U Zero-U space

## 45U Duplex Zero-U Sliding Vertical Patch Panels



VP-VPP-TMRIC

VP-VPP-6U



VP-VPP-TM

Part#	Description
VP-VPP-6U.....	Vertical 19 inch Panel, 6U Mounts up to 6U of standard 19 inch panels in Zero-U vertical orientation
VP-VPP-TM .....	TERA-MA Patch Panel 96 Ports, supports all Category 5e Category 6, Category 6A UTP MAX and Z-MAX outlets, Category 6A shielded Z-MAX, TERA outlets and MAX fibre adapters (Port spacing compatible with Z-MAX 6A UTP)
VP-VPP-TMRIC .....	TERA-MAX-RIC Vertical Patch Panel 96 Ports, supports all Category 5e and Category 6 UTP MAX and Z-MAX, Category 6A shielded Z-MAX outlets, TERA® outlets an MAX fibre adapters. (Not for use w/Z-MAX 6A UTP) 6 fibre RIC adapter mounting spaces for mounting RIC adapter plates or fibre Plug and Play modules



*Note:*

(2) VPPs/VPCs can be mounted vertically at the front and/or rear of 2 bayed cabinets or between a VersaPOD cabinet and SidePOD

(2) VPPs/VPCs are required to fully populate 45U Zero-U space

# VersaPOD® Zero-U Cable Management


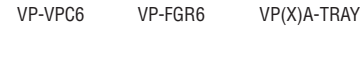
## 42U Triplex Zero-U Vertical Cable Management

	Part #	Description
	VP-VPC6-1-42	Vertical Patching Channel includes back plate, 152mm cable management fingers and cover
	VP-FGR6-1-42	152mm Vertical Cable Management Fingers (set of 2) Can be mounted alongside each VPP and/or VPC to facilitate routing of copper and fibre jumpers between patching fields as well as cabinet to cabinet connections
	VP-CVR-1-42	Vertical Cover Hinged cover used in conjunction with Vertical Cable Management fingers to conceal patching areas
	VP1A-TRAY-1-42	Vertical Cable Management Tray for 42U VP1A Cabinets Manages/secures cable between cabinets, use 4 trays to isolate airflow between VP1A cabinets
	VP2A-TRAY-1-42	Vertical Cable Management Tray for 42U VP2A Cabinets Manages/secures cable between cabinets, use 4 trays to isolate airflow between VP2A cabinets

*Note:*  
(3) VPP's/VPCs can be mounted vertically at the front and/or rear of 2 bayed cabinets or between a VersaPOD cabinet and SidePOD  
(3) VPPs/VPCs are required to fully populate 42U Zero-U space

VP-CVR-1-42    VP-FGR6-1-42    VP(X)A-TRAY

## 45U Duplex Zero-U Vertical Cable Management

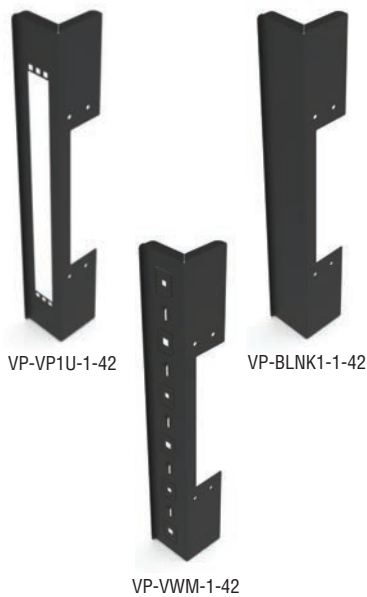
	Part #	Description
	VP-VPC6-1-45	Vertical Patching Channel includes back plate, 152mm cable management fingers and cover
	VP-FGR6-1-45	152mm Vertical Cable Management Fingers, (set of 2) Can be mounted alongside each VPP and/or VPC to facilitate routing of copper and fibre jumpers between patching fields as well as cabinet to cabinet connections
	VP-CVR	Vertical Cover Hinged cover used in conjunction with Vertical Cable Management fingers to conceal patching areas
	VP1A-TRAY-1-45	Vertical Cable Management Tray for 45U VP1A Cabinets Manages/secures cable between cabinets, use 4 trays to isolate airflow between VP1A cabinets
	VP2A-TRAY-1-45	Vertical Cable Management Tray for 45U VP2A Cabinets Manages/secures cable between cabinets, use 4 trays to isolate airflow between VP2A cabinets

*Note:*  
(2) VPP's/VPCs can be mounted vertically at the front and/or rear of 2 bayed cabinets or between a VersaPOD cabinet and SidePOD  
(2) VPPs/VPCs are required to fully populate 45U Zero-U space

VP-VPC6    VP-FGR6    VP(X)A-TRAY

# VersaPOD® End-of-Row Vertical Panels

## 42U Triplex End of Row Zero-U Panels



Part #	Description
VP-VP1U-1-42	Vertical 19 inch Panel, 1U Mounts 1U of standard 19 inch rack mount products
VP-VWM-1-42	Vertical Wire Manager Panel Includes cable management lances as well as features to allow use of Siemon's ¼-turn cable management accessories
VP-BLNK1-1-42	Vertical Blanking Panel Used to block off unused spaces to prevent re-circulation of air

3 Vertical Panels can be mounted vertically at the front and/or rear on each side of a single cabinet or at each end of multiple bayed cabinets.

## 45U Duplex End of Row Zero-U Panels

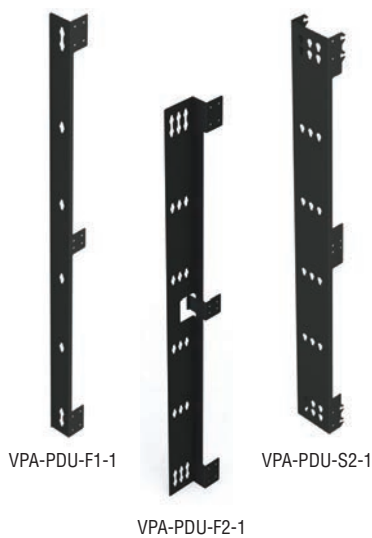


Part #	Description
VP-VPP-2U	Vertical 19 inch Panel, 3U Mounts up to 3U of standard 19 inch rack mount products
VP-VWM	Vertical Wire Manager Panel, end-of-row Includes cable management lances as well as features to allow use of Siemon's ¼-turn cable management accessories
VP-BLNK1	Vertical Blanking Panel, end-of-row Used to block off unused spaces to prevent re-circulation of air

2 Vertical Panels can be mounted vertically at the front and/or rear on each side of a single cabinet or at each end of multiple bayed cabinets.

# VersaPOD® Zero-U Accessories

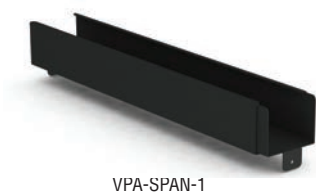
## Full Height Zero-U PDU Mounting Brackets



Part #	Description
VPA-PDU-F1-1	Front-facing, Single PDU Mounting Bracket Supports mounting of (1) front-facing PDU in full height Zero-U spaces for end of row applications
VPA-PDU-F2-1	Front-facing, Dual PDU Mounting Bracket Supports mounting of (2) front-facing PDU's in full height Zero-U spaces between bayed cabinets
VPA-PDU-S2-1	Side-facing, Dual PDU Mounting Bracket. Supports mounting of (2) side-facing PDU's. Can be used in either end of row or in full height Zero-U spaces between bayed cabinet

*Note: Compatible with 42U and 45U VersaPODs.*

## Zero-U PDU Cable Trough



Part #	Description
VPA-SPAN-1	Adjustable Depth Cable Trough Used to route cables between the front and rear of cabinets. Mounts between Vertical Patching channels mounted to front and rear of cabinets

## Zero-U Blanking Panels



Part #	Description
VP-BLNK-1-42	Vertical Blanking Panel Used to isolate airflow in unused Zero-U spaces within 42U cabinets
VP-BLNK	Vertical Blanking Panel Used to isolate airflow in unused Zero-U spaces within 45U cabinets

*Note:*  
(2) VPP's/VPCs can be mounted vertically at the front and/or rear of 2 bayed cabinets or between a VersaPOD cabinet and SidePOD  
(2) VPP's/VPCs are required to fully populate 45U Zero-U space

Accessories



Part #	Description
VPA-R-1-(XX)	VersaPOD Equipment Mounting Rails (set of 2), Black Use (XX) to specify height. 42 = 42U, 45 = 45U
VP-FAN	Top-Mount Cooling Fan Panel - 3 Fans x 110CFM, 120VAC w/ NEMA 5-15P plug
VP-FAN-220	Top-Mount Cooling Fan Panel - 3 Fans x 110CFM, 220VAC w/ C13 plug
VP-T3	Brush Guard, Large - For large centre top panel cable openings
VP-BRUSH	Brush Guard, Small - For small perimeter top panel cable openings
VP-BAY2	VersaPOD Baying Kit - Secures (2) VersaPOD cabinets together
VA-VPA-BAY-1	VersaPOD-to-V600/V800 Baying Kit - Secures (1) VersaPOD cabinet to (1) V600 or V800 cabinet
VP-GRD	Grounding Kit - Includes ground bar, ground wire, mounting hardware and accessories (capacity to support all required grounding connections for a single cabinet)
RS-VCM	¼-turn Hook and Loop Cable Managers (box of 10) Can be installed in Vertical Cable Management Tray, Vertical Patching Channel and End of Row Vertical Wire Manager
VP-SPL	¼-Turn Fibre Management Spool (bag of 5) Can be installed in Vertical Patching Channel and End of Row Vertical Wire Manager
VP-143	¼-Turn D-Ring Cable Manager (box of 10) 88.9x44.5mm. Can be installed in Vertical Cable Management Trays only
VP-145	¼-Turn D-Ring Cable Manager (box of 10), 127.0x88.9mm. Can be installed in Vertical Management Trays only
HCM-4-(X)U	RouteIT™ 19 inch Horizontal Cable Manager w/4 in. (102mm) Fingers Use (X) to specify height: 1 = 1U, 2 = 2U, 4 = 4U
HCM-6-(X)U	RouteIT 19 inch Horizontal Cable Manager w/6 in.(152mm) Fingers Use (X) to specify height: 1 = 1U, 2 = 2U, 4 = 4U
PNL-TBLNK010-1S	19 inch SnapFit Thermal Blanking Panel, 1U (box of 10)
PNL-TBLNK100-1S	19 inch SnapFit™ Thermal Blanking Panel, 1U (box of 100)
PNL-BRSH-1	19 inch Brush Guard Panel, 1U

# VersaPOD® (VP2A) SidePOD™ and Thermal Baffle

Siemon's SidePOD and Thermal Baffle solution are designed to support side-to-side ventilated active equipment such as the Cisco Nexus® 7018 Series Switches. The SidePOD is an optional add on to Siemon's 1200mm deep VersaPOD (VP2A) cabinets and creates the necessary clearance for proper airflow to the switch. Optional baffles may be mounted within the SidePOD to properly route cold air from the front of the cabinet to the input side of the switch as well as route exhaust from the output side of the switch to be vented into the hot aisle. The baffles can also be mounted in the Zero-U space between adjacent, bayed VP2A cabinets.

In addition to providing a cooling platform, the SidePOD allows full size Zero-U panels to be used in End of Row applications. This includes up to 12U of vertical patching and high capacity vertical cable management with hinged covers.

**Shared Use of VP2A Side Panels** — The SidePOD is compatible with VP2A side panels allowing VersaPOD panels to be transitioned to the SidePOD when added to end of row installations

**Cable Access Openings** — Multiple openings in the lid accept optional brush guards to provide cable access to the Zero-U space from overhead distribution systems

**Single Finger Door Operation** — The SidePOD door features a single, lockable slam latch that allows the door to be opened or closed with a single finger



**End of Row Capacity Increases** — When using the SidePOD, cable management and patching options are increased allowing full size Zero-U accessories

**Reversible Baffle Design** — Baffles can be installed in either orientation to properly route either cold air input or hot air exhaust

**Split Baffle Design** — Allows the baffles to be nested in the Zero-U space enabling placement of side venting equipment in adjacent cabinets



**Zero-U Modularity** — Even with a baffle installed, the balance of Zero-U space can be fully utilised for patching or cable management

## Ordering Information:

### SidePOD™

Part #	Description
VP2A-SPAA1-(XX)	VP2A SidePOD with 2 Vented Doors, Black Includes 2 levelling feet, 2 sets of baying brackets, 1 bonding conductor and assembly hardware (ships unassembled)
VP2A-SPAC1-(XX)	VP2A SidePOD with 1 Vented Door and 1 Solid Door, Black Includes 2 levelling feet, 2 sets of baying brackets, 1 bonding conductor and assembly hardware (ships unassembled)

Use (XX) to specify height. 42 = 42U, 45 = 45U

### Zero-U Baffle

Part #	Description
VP2A-BFL-S	Zero-U Baffle, Black Includes mounting hardware
VP2A-BFP-1-42	Zero-U Baffle Filler Panel, Black Blank panel used to fill gap between baffle and adjacent triplex Zero-U space on 42U cabinets



VP2A-SPAA1-(XX)

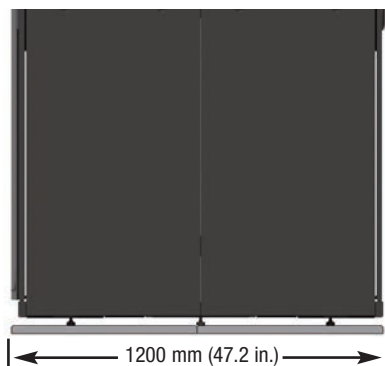
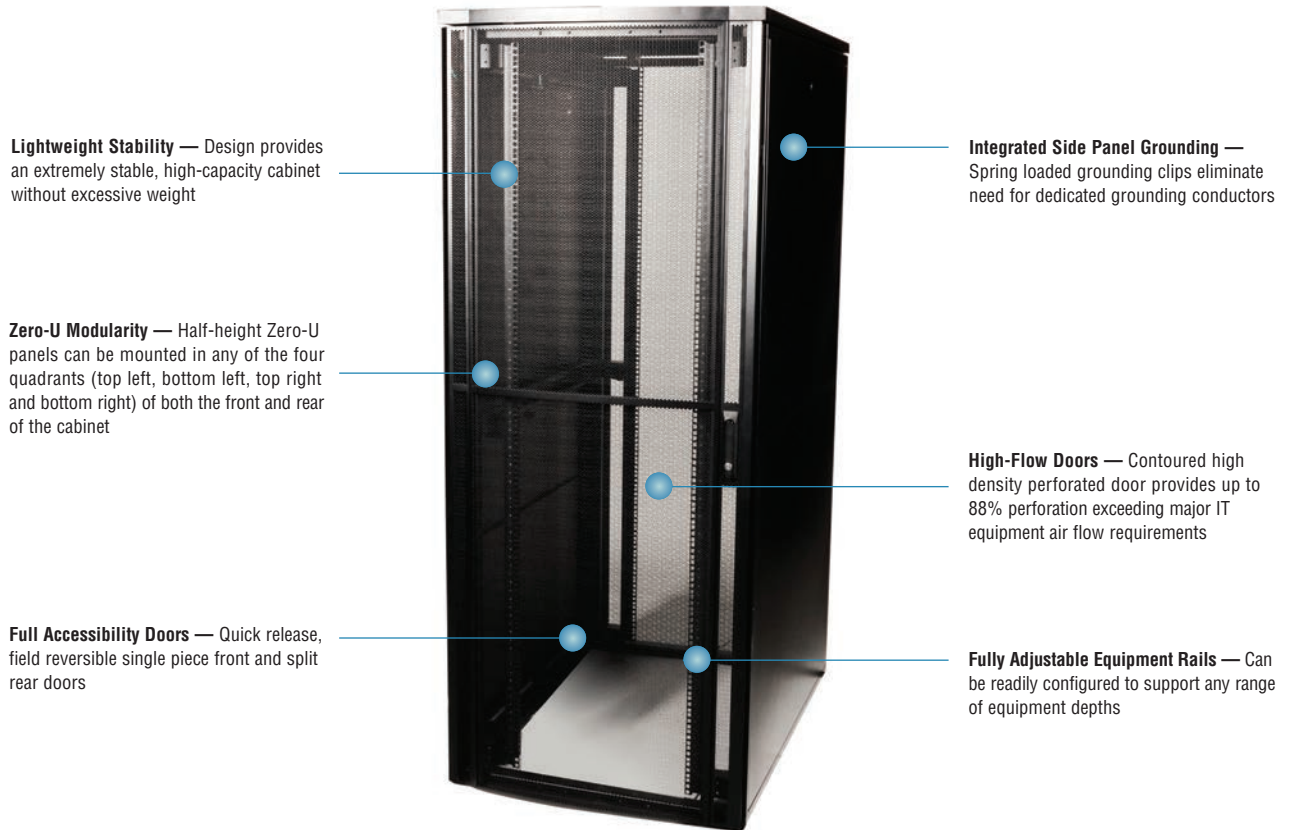
VP2A-BFL-S-1

## SidePOD Product Specifications

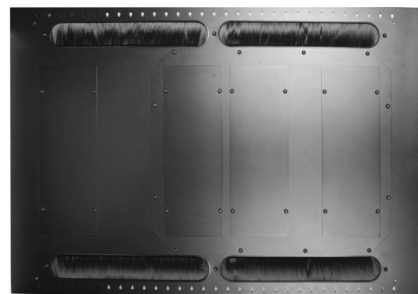
Height	42U: 2016mm 45U: 2150mm
Width	140mm
Depth	1200mm
Weight	26.2 kg
Base Type	Open
Colour	Black (RAL 9005)
Front Doors	Perforated, keyed lock
Rear Doors	Perforated, keyed lock
% Door Perforation	71%
Material	CRS of varying thickness
Finish	Textured powder coat
Standard Compliance	UL 60950-1 Ed2.0, CSA C22.2 NO. 60950-1-07
Top Cable Access Openings	3 openings, 280 x 45mm

## V800™ Cabinet

Siemon's V800 cabinets provide a robust, cost-effective enclosure solution that provides valuable Zero-U space on each side of the equipment rails for cable management, PDU mounting or connectivity on both the front and rear of the cabinet. The V800 cabinet is ideal for high-density data centre environments, enabling increased cabling and equipment density while providing excellent accessibility and thermal efficiency. All of these features are integrated into a full-featured modular enclosure that is equally effective as a standalone network and server cabinet or in a multi-unit bayed configuration, offering a simple, scalable expansion path in any data centre.



The V82A cabinet is exactly 1200mm deep, allowing for full access to adjacent tiles immediately in front or in back of placed cabinets and provides full 1.2m aisle spacing as specified within ISO/IEC 14763-2 and EN 50600-2-4



The cabinet lid includes four integrated brush guards for cables to enter the cabinet without compromising thermal integrity

## Ordering Information:

V8(X)A-(X)(X)(X)(X)(X)1-(XX).....V800™ Cabinet, Black

<b>Cabinet Depth</b>		<b>Cabinet Height</b>
1 = 1000mm		42 = 42U
2 = 1200mm		45 = 45U
	<b>Castor Option</b>	48 = 48U
	1 = No Casters	
	2 = Casters	
<b>Side Panels</b>		
0 = No Side Panels		
1 = 1 Side Panel		
2 = Side Panels		
<b>Front Door</b>	<b>Lock Type</b>	
A = Full Vented	1 = Key Lock	
B = Split Vented	2 = Tumbler Lock	
C = Split Solid		
	<b>Rear Door</b>	
	A = Full Vented	
	B = Split Vented	
	C = Split Solid	



Includes: 4 levelling feet, 50 M6 cage nuts and 2 stabilising brackets

## V800 Cabinet Product Specifications

<b>Height*</b>	42U: 2013mm 45U: 2146mm 48U: 2280mm
<b>Width</b>	800mm
<b>Depth</b>	V81A: 1000mm V82A: 1200mm
<b>Weight**</b>	42U V81A: 111kg/ V82A: 126kg 45U V81A: 116kg/ V82A: 131kg 48U V81A: 121kg/ V82A: 136kg
<b>Load Rating</b>	Static: 1361kg Dynamic: 1021kg
<b>Base Type</b>	Open
<b>Colour</b>	Black
<b>% Door Perforation</b>	Single door: 88%, Split door: 85%
<b>U Space Identification</b>	Yes (bottom-to-top)
<b>Lid Cable Access Openings</b>	V81A: 3 large; (4) 63x406mm integrated brush guards V82A: 4 large; (4) 63x406mm integrated brush guards
<b>Material</b>	CRS of varying thickness
<b>Finish</b>	Textured powder coat
<b>Standards Compliance</b>	UL 60950-1 Ed2.0, CEA-310-E, CSA C22.2 NO. 60950-1-07

\* Nominal height with stabilising brackets

\*\* Does not include packaging - add 33kg for packaging

## V800™ Cabinet Zero-U Accessory Ordering Information



V8A-VPC4-1-(XX) .....  
Half-height Zero-U Vertical  
Patching Channel with 4 in.  
(102mm) Fingers and Cover



V8A-VPC6-1-(XX) .....  
Half-height Zero-U Vertical  
Patching Channel with 6 in.  
(152mm) Fingers and Cover



V8A-VPC145-1-(XX) .....  
Half-height Zero-U Vertical  
Patching Channel with  
D-Ring Managers



V8A-BRSH-1-(XX) .....  
Half-height Zero-U Vertical  
Brush Guard Panel



V8A-VPP2U-1-(XX) .....  
Half-height Zero-U Vertical  
Patch Panel, 2U

Mounts 2U of standard 19 in.  
panels in vertical orientation

Includes (8) M6 cage nuts



V8A-PDU-F1-1-(XX) .....  
Full-height Zero-U Vertical PDU  
Panel

Full length brackets support  
tool-less mounting of one (1)  
vertical rack mount PDU with a  
maximum width of 86.4mm and  
1.24m, 1.56m or 1.65m O.C.  
mounting buttons



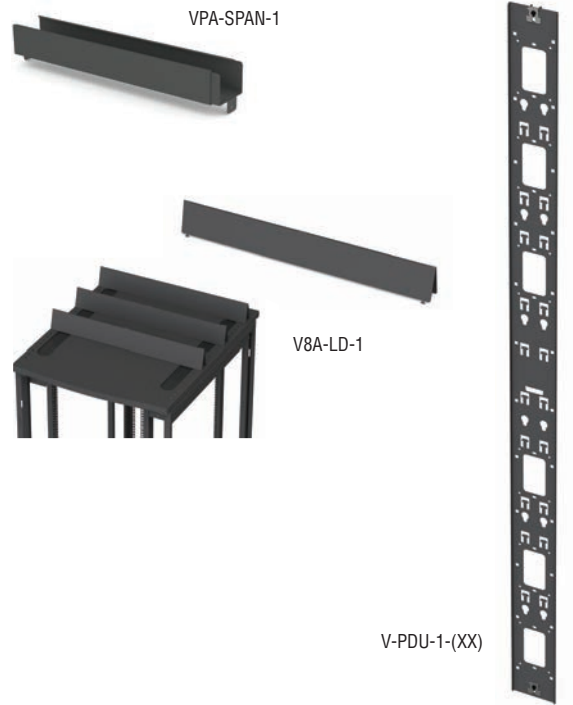
V8A-BLNK-1-(XX) .....  
Half-height Zero-U Vertical  
Blanking Panel

Used to block unused Zero-U  
spaces to prevent re-circulation  
of air

Use (XX) to specify cabinet height: 42 = 42U, 45 = 45U, 48 = 48U

## Cabinet Accessory Ordering Information

Part #	Description
VPA-SPAN-1 . . . . .	Adjustable Depth Cable Trough, Extends from 555mm to 911mm, 81mm wide; 65mm high, Used to route cables between the front and rear of cabinets. Mounts between Vertical Patching Channels mounted to front and rear of cabinets
V8A-LD-1 . . . . .	V800 Lid Divider Panel, set of 2, 107mm high, Used to create cable pathways on top of bayed cabinets
V-PDU-1-(XX) . . . . .	Vertical PDU/Cable Management Bracket, set of 2, Full height brackets support tool-less mounting of up to two (2) vertical rack mount PDUs with maximum widths of 55.9mm and 311mm, 622mm, 933mm, 1.24m or 1.56m O.C. mounting buttons.  In contrast to the Zero-U PDU panels, these brackets mount to the sides of the cabinet in the space between the equipment rails and the cabinet frame posts



Use (XX) to specify cabinet height: 42 = 42U, 45 = 45U, 48 = 48U

V8A-DRA-1-(XX) . . . . .	V800 Full Vented Door, Black
V8A-DRB-1-(XX) . . . . .	V800 Split Vented Doors, Black, set of 2
V8A-DRC-1-(XX) . . . . .	V800 Split Solid Doors, Black, set of 2
V1A-S-1(XX) . . . . .	V600/V800 1000mm Split Side Panels, Black, set of 2
V2A-S-1(XX) . . . . .	V600/V800 1200mm Split Side Panels, Black, set of 2
V8A-R-1-(XX) . . . . .	V800 Equipment Mounting Rail, Black, set of 2



Use (X) to specify cabinet height: 42 = 42U, 45 = 45U, 48 = 48U

# V600 Cabinet

The V600 cabinet provides a robust, cost-effective enclosure solution that is ideal for use in conjunction with VersaPOD® or V800 data centre cabinets. While not compatible with VersaPOD or V800 Zero-U vertical patching and cable management accessories, it shares a common appearance for standard cabinet applications and is ideal for use as a server cabinet.



**Lightweight Stability** — Design provides an extremely stable, high-capacity cabinet without excessive weight

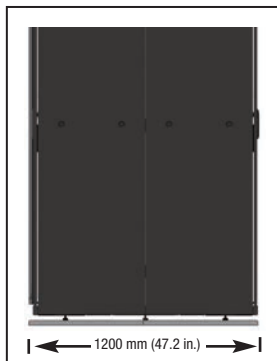
**High-Flow Doors** — Contoured high density perforated door provides up to 86% perforation exceeding major IT equipment air flow requirements

**Enhanced Side Access** — Split level side panels provide convenient access to installed equipment

**Full Accessibility Doors** — Quick release, field reversible single piece front and split rear doors



**Flexible Mounting Options** — Fully adjustable mounting rails can be readily configured to support any range of equipment depths



**Consistent Aesthetics** — The V62A cabinet is exactly 1200mm deep, allowing for full access to adjacent tiles immediately in front or in back of placed cabinets



**Thermally Efficient** — Compatible with VersaPOD thermal management options including exhaust fans and brush guards. V62A cabinet is compatible with VersaPOD Vertical Exhaust Ducts

# V600 Cabinet Accessories

## Ordering Information:

V6(X)A-(X)(X)(X)(X)(X)1-(XX) . . . . .V600 Cabinet, black

<b>Depth</b>		<b>Height</b>
1 = 1000mm		42 = 42U
2 = 1200mm		45 = 45U
	<b>Castors</b>	48 = 48U
	1 = none	
	2 = Castors	
<b>Side Panels</b>		<b>Lock Type</b>
0 = No Panels		1 = Key Lock
2 = 2 Panels		2 = Tumbler Combination Lock
<b>Front Door</b>	<b>Rear Door</b>	
A = Full Vented	A = Full Vented	
B = Split Vented	B = Split Vented	
C = Split Solid	C = Split Solid	

Includes 4 levelling feet,  
(50) M6 cage nuts,  
(50) M6 cage screws  
and 2 stabilising brackets



## V600 Cabinet Specifications

<b>Height*</b>	42U: 2016mm 45U: 2150mm 48U: 2280mm
<b>Width</b>	600mm
<b>Depth</b>	V61A: 1000mm V62A: 1200mm
<b>Weight**</b>	42U V61A: 117kg/ V62A: 129kg 45U V61A: 125kg/ V62A: 138kg 48U V61A: 107kg/ V62A: 122kg
<b>Load Rating</b>	Static: 1361kg Dynamic: 1021kg
<b>Base Type</b>	Open
<b>Colour</b>	Black (RAL 9011)
<b>% Door Perforation</b>	Single door: 86%, Split door: 80%
<b>U Space Identification</b>	Yes
<b>Lid Cable Access Openings</b>	V61A: 4 (small); 1 (large) V62A: 3 (small); 3 (large)
<b>Material</b>	CRS of varying thickness
<b>Finish</b>	Textured powder coat
<b>Standards Compliance</b>	UL 60950-1 Ed2.0, CEA-310-E, CSA C22.2 NO. 60950-1-07

\* Nominal height with adjustable levelling feet or castors

\*\* Does not include packaging - add 10kg (33 lbs.) for packaging

## V600 Cabinet Accessories

Part #	Description
V1-VP1-BAY . . . . .	V1 to VP1 Baying Kit
V2-VP2-BAY . . . . .	V2 to VP2 Baying Kit
VP-FAN . . . . .	Top-Mount Cooling Fan Panel - 3 Fans x 110CFM, 120VAC w/ NEMA 5-15P plug
VP-T3 . . . . .	Brush Guard 127 x 444mm (for main top panel opening)
VP-BRUSH . . . . .	Brush Guard 413 x 279mm (for perimeter top panel openings)
VP-DUCT1* . . . . .	VersaPOD® Vertical Exhaust Duct, 523mm x 653mm x 516-923mm, Black
VP-DUCT2* . . . . .	VersaPOD Vertical Exhaust Duct, 523mm x 653mm x 912-1320mm, Black
V-PDU-1-42 . . . . .	V600 Vertical PDU/Cable Management Bracket, 42U, Black, (set of 2) Supports toolless mounting of up to (2) vertical rack mount PDUs
V-PDU-1-45 . . . . .	V600 Vertical PDU/Cable Management Bracket, 45U, Black (set of 2) Supports toolless mounting of up to (2) vertical rack mount PDUs
V-PDU-1-48 . . . . .	V600 Vertical PDU/Cable Management Bracket, 48U, Black (set of 2) Supports toolless mounting of up to (2) vertical rack mount PDUs
V6A-R-1-42 . . . . .	V600 Mounting Rails (set of 2), 42U, Black
V6A-R-1-45 . . . . .	V600 Mounting Rails (set of 2), 45U, Black
V6A-R-1-48 . . . . .	V600 Mounting Rails (set of 2), 48U, Black
VP-FAN-220 . . . . .	Top-Mount Cooling Fan Panel, 3 Fans x 110CFM, 220VAC w/ C13 plug
VA-VPA-BAY-1 . . . . .	VersaPOD-to-V600 Baying Kit Secures (1) VersaPOD cabinet to (1) V600 cabinet
VP-GRD . . . . .	Grounding Kit - Includes ground bar, ground wire, mounting hardware, and accessories (capacity to support all required grounding connections for a single cabinet)
V-W . . . . .	V600 Castor Wheels, set of 4
V1A-S-1-42 . . . . .	V600/V800 1000mm Split Side Panels (set of 2), 42U, Black
V2A-S-1-42 . . . . .	V600/V800 1200mm Split Side Panels (set of 2), 42U, Black
V1A-S-1-45 . . . . .	V600/V800 1000mm Split Side Panels (set of 2), 45U, Black
V2A-S-1-45 . . . . .	V600/V800 1200mm Split Side Panels (set of 2), 45U, Black

\*Vertical exhaust ducts are compatible with V62A cabinets only. Solid doors should be specified for cabinets using exhaust ducts.

# Data Centre Power and Cooling

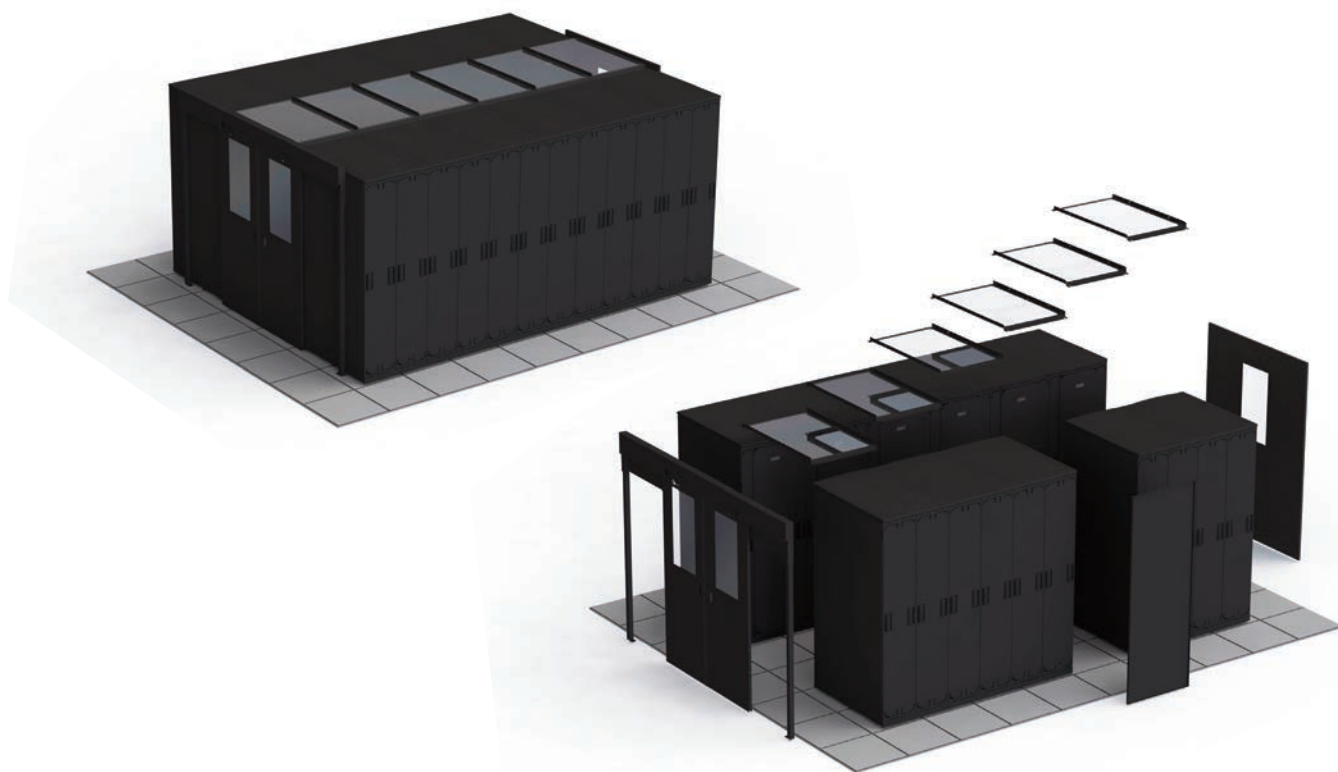
With power costs continuing to rise, the ability to maximise a data centre's energy efficiency has rapidly become one of the most critical considerations for network infrastructure professionals. To meet this growing challenge, Siemon has developed a solution set that addresses energy efficiency from two key angles — cooling and power distribution:

## Section Contents

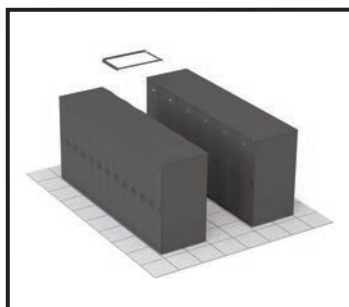
Cold Aisle Containment System . . . . .	11.1 - 11.2
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# Cold Aisle Containment System

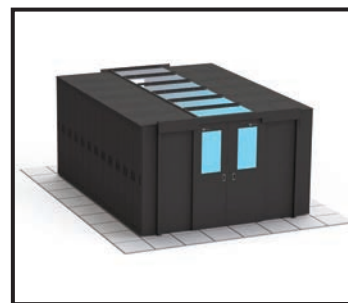
The Cold Aisle Containment System is a passive cooling solution which can be easily applied to improve the efficiency or expand the capacity of a data centre with minimal incremental cost. By containing the cold air supply and isolating it from the rest of the room, cold aisle containment prevents mixing of cold and hot air. The room's perimeter cooling system can now operate more efficiently because it does not have to compensate for the detrimental impact of mixed airflow. This allows the cooling system to operate at higher temperatures while still sufficiently and safely cooling the equipment. Higher temperatures reduce energy costs through lower fan speeds, higher chilled water temperatures, and more frequent use of free cooling. This efficiency also provides additional capacity to cool greater heat densities with the existing cooling system without investing in more costly active supplemental cooling products.



**Easy to Install** — Quickly and easily attaches to VersaPOD®, V600 and V800 cabinets



**Retrofittable** — Leverages existing perimeter cooling system and hot aisle / cold aisle arrangement



**Thermal Isolation** — Robust seals and self-closing doors ensure optimal isolation between hot and cold air

# Product Information

## PERFORMANCE SPECIFICATIONS

<b>Material – Windows</b>	Polycarbonate 4mm
<b>Material – Metal Components</b>	CRS
<b>Finish</b>	Textured powder coat
<b>Colour</b>	Black (RAL 9011)
<b>Light Transmission</b>	87%

## Ordering Information:

### Roof Panels

1200mm wide top frame panels with window

Part #	Description
VC-RP-V6N-A12B .....	V600
VC-RP-V8N-A12B .....	V800
VC-RP-VPN-A12B .....	VersaPOD®
VC-RP-VPS-A12B .....	SidePOD™



### End Panels

1200mm wide end panel with window to fill aisle space opposite the door

Part #	Description
VC-EP-B12B .....	End panel, 42U
VC-EP-A12B .....	End panel, 45U
VC-EP-C12B .....	End panel, 48U



### Accessories

Part #	Description
VC-WM-V6N-AB .....	Wall mount bracket, V600
VC-WM-V8N-AB .....	Wall mount bracket, V800
VC-WM-VPN-AB .....	Wall mount bracket, VersaPOD
VC-WM-VPS-AB .....	Wall mount bracket, SidePOD
VC-RB-V6N-AB .....	Riser bracket, 3U, V600
VC-RB-V8N-AB .....	Riser bracket, 3U, V800
VC-RB-VPN-AB .....	Riser bracket, 3U, VersaPOD
VC-RB-VPS-AB .....	Riser bracket, 3U, SidePOD

### Door Kits

Solid doors with window(s), no lock

Part #	Description
VC-DR-SSL-AB .....	Single self closing left, 45U
VC-DR-SSN-AB .....	Single self closing right, 45U
VC-DR-SML-AB .....	Single manual closing left, 45U
VC-DR-SMR-AB .....	Single manual closing right, 45U
VC-DR-DSN-AB .....	Double self closing, 45U
VC-DR-DMN-AB .....	Double manual closing, 45U
VC-DR-SAB-CB .....	Single door adjustment bracket, 48U
VC-DR-DAB-CB .....	Double door adjustment bracket, 48U



### Filler Panels

Solid filler panels to fill spaces where cabinets are not present, such as where columns or other obstructions exist

Part #	Description
VC-FP-V6N-BB .....	V600, 42U
VC-FP-V6N-AB .....	V600, 45U
VC-FP-V6N-CB .....	V600, 48U
VC-FP-V8N-BB .....	V800, 42U
VC-FP-V8N-AB .....	V800, 45U
VC-FP-V8N-CB .....	V800, 48U
VC-FP-VPN-BB .....	VersaPOD, 42U
VC-FP-VPN-AB .....	VersaPOD, 45U
VC-FP-VPS-BB .....	SidePOD, 42U
VC-FP-VPS-AB .....	SidePOD, 45U



# Intelligent Power Distribution Units

Siemon's line of intelligent PDUs provide valuable energy consumption data while reliably delivering power to critical IT equipment. Each of our PDU families deliver real-time power information with varying degrees of intelligent functionality ranging from basic Metered units to full-featured Managed PDUs — providing multiple options based on the level of data and control requirements, Siemon's intelligent PDUs may be used as stand-alone units, or they can communicate with third-party software through common open networking protocols. All of our network-capable intelligent PDUs also have the capacity to connect environmental sensors, allowing temperature, airflow, and humidity to be measured to further troubleshoot and optimise data centre efficiency.



## PDU Families

- Metered
- Monitored
- Smart
- Switched
- Managed

FUNCTION	METERED	MONITORED	SMART	SWITCHED	MANAGED
Built-In Display for Local Use	✓	✓	✓	✓	✓
PDU-Level Monitoring	✓	✓	✓	✓	✓
Remote Monitoring via Ethernet Port		✓	✓	✓	✓
Environmental Sensor Ports		✓	✓	✓	✓
Locking Outlets			✓	✓	✓
Outlet-Level Monitoring			✓		✓
Outlet-Level Switching/ Control				✓	✓

## Configurations

- Various plug inputs
- Single and 3-phase voltages
- Horizontal and Zero-U vertical styles
- 3m cords (other lengths available on request)
- Test data included with each unit



## Mounting

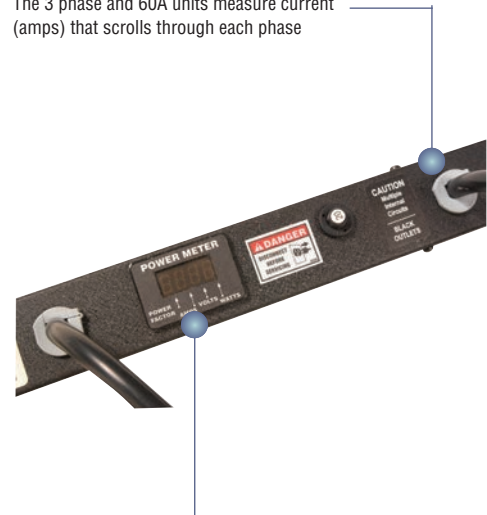
- Vertical PDUs mount via toolless button attachments and include a mounting bracket for additional flexibility
- Horizontal PDUs mount to standard EIA 19 in. configurations



# Metered PDUs

Metered PDUs provide local visual monitoring capability through a built-in LED meter that displays real-time consumption data. Metered PDUs are a cost-effective alternative to monitored or switched PDUs when remote monitoring is not desired, while providing a more intelligent alternative to basic PDUs.

The 3 phase and 60A units measure current (amps) that scrolls through each phase



Single-phase PDUs measure power by scrolling through power factor, amps, volts and watts

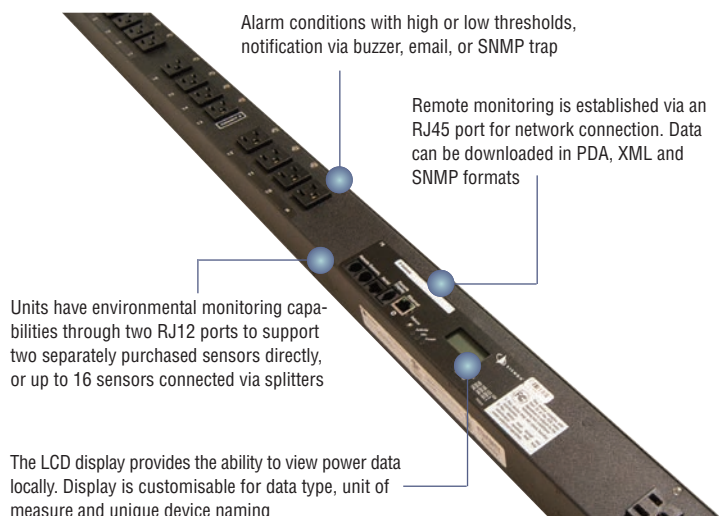


## Ordering Information

Mounting	Input Current	Input Voltage	Power	Input Plug	Output Receptacles	Output Receptacles	Length	Part Number
Metered								
International								
Horizontal 1U	32A	230V	7.3kW	IEC 309 2P+E	IEC C13 (12)	-	432mm	7TH22-BA12Z-K1A
Vertical	16A	230V	3.6kW	IEC 309 2P+E	IEC C13 (24)	IEC C19 (6)	1683mm	7TV20-BA24E-K1A
Vertical	32A	230V	7.3kW	IEC 309 2P+E	IEC C13 (24)	IEC C19 (6)	1683mm	7TV22-BA24E-K1A

# Monitored and Smart PDUs

Building on the functionality of the Metered family, Monitored and Smart PDUs enable different levels of remote monitoring of power consumption.

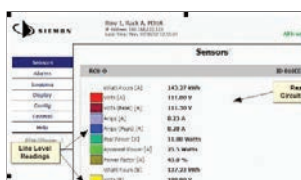


## Monitored PDUs

Monitored PDUs collect data at an aggregate, device-level, generating a smaller quantity of information to simplify management.

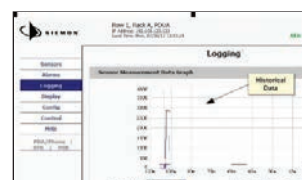
## Smart PDUs

Smart PDUs offer the highest level of monitoring by providing outlet-level data collection.



The browser-based interface is used to view charts and logs without the need for additional software

The unit provides remote and local alarms and utilisation logging



## Ordering Information

Mounting	Input Current	Input Voltage	Power	Input Plug	Output Receptacles	Output Receptacles	Length	Part Number
<b>Monitored</b>								
International								
Horizontal 1U	16A	230V	3.6kW	IEC C20	IEC C13 (12)	-	432mm	7MH33-BA12Z-K1A
Vertical	16A	230V	3.6kW	IEC 309 2P+E	IEC C13 (24)	IEC C19 (6)	1683mm	7MV20-BA24E-K1A
Vertical	32A	230V	7.3kW	IEC 309 2P+E	IEC C13 (24)	IEC C19 (6)	1683mm	7MV22-BA24E-K1A
Vertical	16A	230/400V WYE	11kW	IEC 309 3P+N+E	IEC C13 (24)	IEC C19 (6)	1683mm	7MV26BA24E-K1A
Vertical	32A	230/400V WYE	22kW	IEC 309 3P+N+E	IEC C13 (24)	IEC C19 (6)	1683mm	7MV27-BA24E-K1A
<b>Smart</b>								
International								
Vertical	16A	230V	3.6kW	IEC 309 2P+E	IEC C13 (18)	IEC C19 (6)	1683mm	7NV20-BA18E-K1A
Vertical	32A	230V	7.3kW	IEC 309 2P+E	IEC C13 (18)	IEC C19 (6)	1829mm	7NV22-BA18E-K1A
Vertical	16A	230/400V WYE	11kW	IEC 309 3P+N+E	IEC C13 (18)	IEC C19 (6)	1683mm	7NV26-BA18E-K1A
Vertical	32A	230/400V WYE	22kW	IEC 309 3P+N+E	IEC C13 (18)	IEC C19 (6)	1829mm	7NV27-BA18E-K1A

# Switched and Managed PDUs

In addition to power monitoring, switched and managed PDUs enable users to remotely control individual receptacles by allowing equipment to be restarted or remotely shut down.

## Switched PDUs

Switched PDUs combine total PDU power monitoring with port-level switching. They are the ideal solution when port control is needed but only aggregate consumption data is desired.

## Managed PDUs

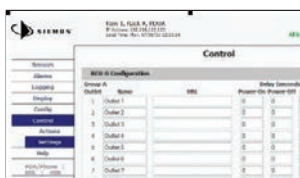
Managed PDUs offer the highest level of control and monitoring by providing outlet-level monitoring and outlet-level switching.

Units have environmental monitoring capabilities through two RJ12 ports to support two separately purchased sensors directly, or up to 16 sensors connected via splitters

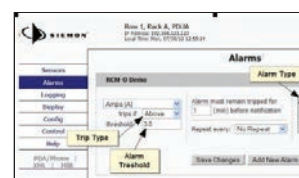
Remote monitoring is established via an RJ45 port for network connection. Data can be downloaded in PDA, XML and SNMP formats

User definable URL for each outlet

The LCD display provides the ability to view power data locally. Display customisable data type, unit of measure and data outlet status



Sequential start up and shut down to manage loads



The browser-based interface is used to access charts, logs, and alarms

## Ordering Information

Mounting	Input Current	Input Voltage	Power	Input Plug	Output Receptacles	Output Receptacles	Length	Part Number
<b>Switched</b>								
<b>International</b>								
Vertical	16A	230V	3.6kW	IEC 309 2P+E	IEC C13 (21)	IEC C19 (3)	1683mm	7SV20-BA21C-K1A
Vertical	32A	230V	7.3kW	IEC 309 2P+E	IEC C13 (20)	IEC C19 (4)	1778mm	7SV22-BA20D-K1A
Vertical	16A	230/400V WYE	11kW	IEC 309 3P+N+E	IEC C13 (21)	IEC C19 (3)	1683mm	7SV26-BA21C-K1A
Vertical	32A	230/400V WYE	22kW	IEC 309 3P+N+E	IEC C13 (21)	IEC C19 (3)	1829mm	7SV27-BA21C-K1A
<b>Managed</b>								
<b>International</b>								
Horizontal 1U	32A	230V	7.3kW	IEC 309 2P+E	IEC C13 (8)	-	432mm	7WH22-BA08Z-K1A
Vertical	16A	230V	3.6kW	IEC 309 2P+E	IEC C13 (21)	IEC C19 (3)	1683mm	7WV20-BA21C-K1A
Vertical	32A	230V	7.3kW	IEC 309 2P+E	IEC C13 (20)	IEC C19 (4)	1778mm	7WV22-BA20D-K1A
Vertical	16A	230/400V WYE	11kW	IEC 309 3P+N+E	IEC C13 (21)	IEC C19 (3)	1683mm	7WV26-BA21C-K1A
Vertical	32A	230/400V WYE	22kW	IEC 309 3P+N+E	IEC C13 (21)	IEC C19 (3)	1829mm	7WV27-BA21C-K1A

## Accessories

### Environmental Sensors



7ENS-TEMP .....  
Temperature Sensor



7ENS-TEMPHAF .....  
Temperature/ Airflow/ Humidity  
Sensor



7ENA-SPLIT-5 .....  
Splitter RJ12 x 5 way



7ENS-WATER .....  
Water Sensor



7ENS-WKIT .....  
Water Sensor Cable

### SPECIFICATIONS

General	
Safety Compliance	CE (International PDUs only)
Emissions	FCC Part 15 Class A
Cord Length	3m
Circuit breakers	32A units
Outlet Colour Coding	On 3 phase units for load balancing
Material	18 Gauge Steel
Finish	Black powder coat
Warranty	3 Years
Environmental	
Operating Temperature	10 to 40°C
Storage Temperature	-25 to 65°C
Operating Humidity	5% to 95% (non-condensing)
Storage Humidity	5% to 95% (non-condensing)
Operating Elevation	0 to 2000m
Storage Elevation	0 to 15240m
Networking	(not applicable to metered units)
Networking Protocols	HTTP, HTTPS (SSL/TLS), SMTP, POP3, ICMP, DHCP, TCP/IP, NTP, Telnet, Syslog
Ethernet Link Speed	10 Mbit; half-duplex
Data Formats	HTML, SNMP, CSV/Plain Text, XML

# High Speed Interconnects

Siemon has developed a full offering of interconnect assemblies for ultra high-speed point-to-point applications. Supporting speeds up to 56Gb/s across an array of application standards, the line features QSFP+, SFP+, and CXP interfaces, as well as hybrid assemblies. Independently tested to be interoperable with most major equipment manufacturers, Siemon interconnects deliver cost-effective, flexible support for your high-speed, direct attach equipment connections.

## Section Contents

SFP+ Copper Cable Assemblies .....12.1 - 12.2

Cisco Compatible SFP+ Twinax Copper Cables .....12.3 - 12.4

QSFP+ Passive Copper Assemblies .....12.5 - 12.6

QSFP+ FDR Passive Copper Assemblies .....12.7 - 12.8

QSFP+ to 4 SFP+ Passive Copper Assemblies .....12.9 - 12.10

CXP Copper Cable Assemblies .....12.11 - 12.12

CXP to 3 QSFP+ Breakout Passive Copper Cable Assemblies ....12.13 - 12.14

40Gb/s QSFP+ Active Optical Cable Assemblies .....12.15 - 12.16

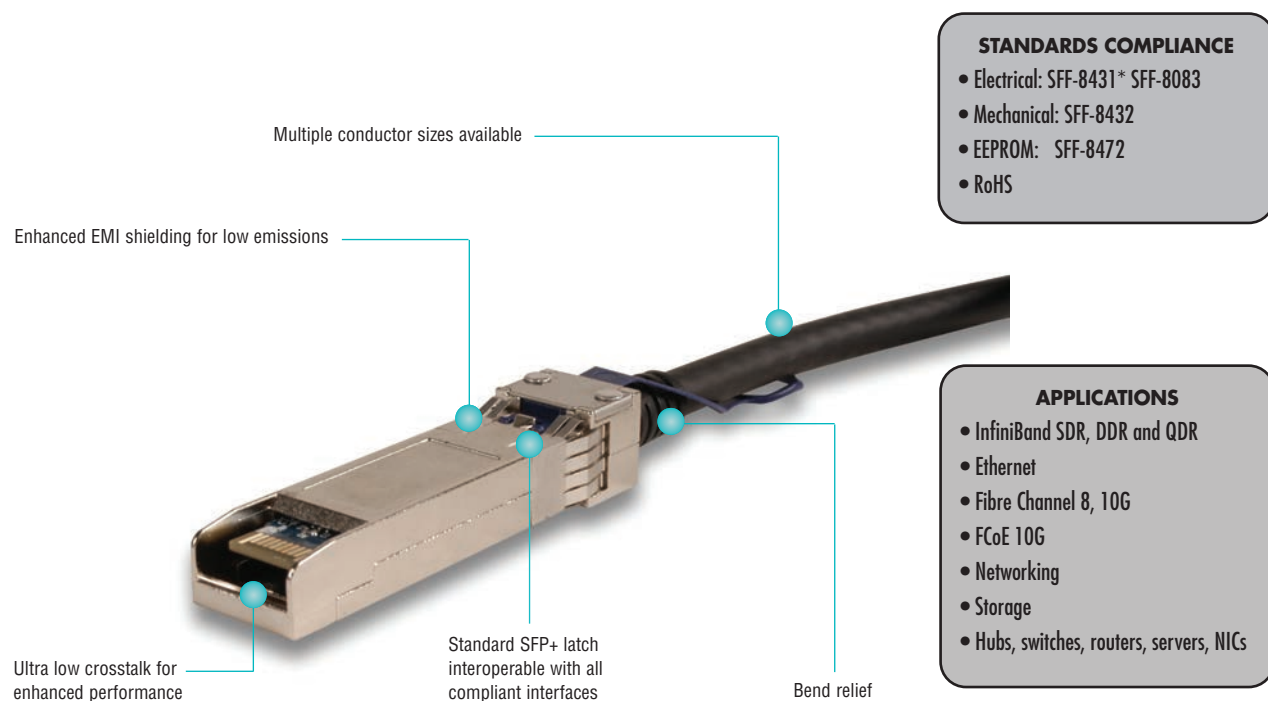
56Gb/s QSFP+ Active Optical Cable Assemblies .....12.17 - 12.18



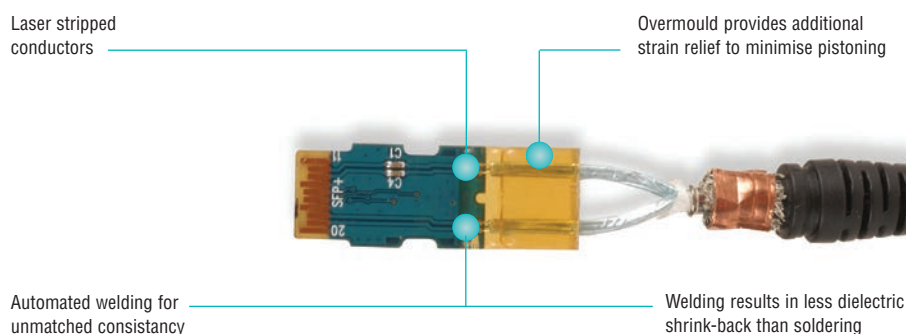
# SFP+ Copper Cable Assemblies

SFP+ copper cable assemblies from Siemon were developed specifically as a cost-effective and lower-power alternative to optical modules for short reach links in high-speed interconnect applications such as high-performance computing (HPC), enterprise networking and network storage markets. These assemblies support data transfer rates up to 10+ Gb/s per lane, meeting or exceeding current standards specifications.

These SFP+ fully-shielded assemblies combine twin-axial shielded cable configuration with robust die cast housings for enhanced support of high frequency data rates. These SFP+ assemblies are impedance matched to ensure interoperability and minimise EMI leakage through their fully-shielded design.



## PCB Termination



# Product Information

## PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	-10 to 70°C
Flammability Rating	UL 94 V-0
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part#, Date Code



Plug	
Backshell Material	Nickel-Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Latch	Positive Latching w/ Pull
Insertion Force	30N Max
Withdrawal Force	20N Max
Retention Force	90N Max
Durability	50 Cycles Min
Cable	
Conductor	Solid
Wire Gauge	30 AWG to 24 AWG
Impedance	100± 5 ohms
Construction	Twinaxial
Cable OD	30 AWG = 4.5mm
	28 AWG = 4.7mm
	26 AWG = 5.2mm
	24 AWG = 6.2mm
Jacket Type	PVC
Bend Radius	5X Cable OD

## Ordering Information:

SFP+ Passive Copper Cable Assembly, Double-ended, Black

Part Number	Length	Gauge
SFPP30-01	1m	30
SFPP30-02	2m	30
SFPP30-03	3m	30
SFPP28-05	5m	28
SFPP24-07	7m	24

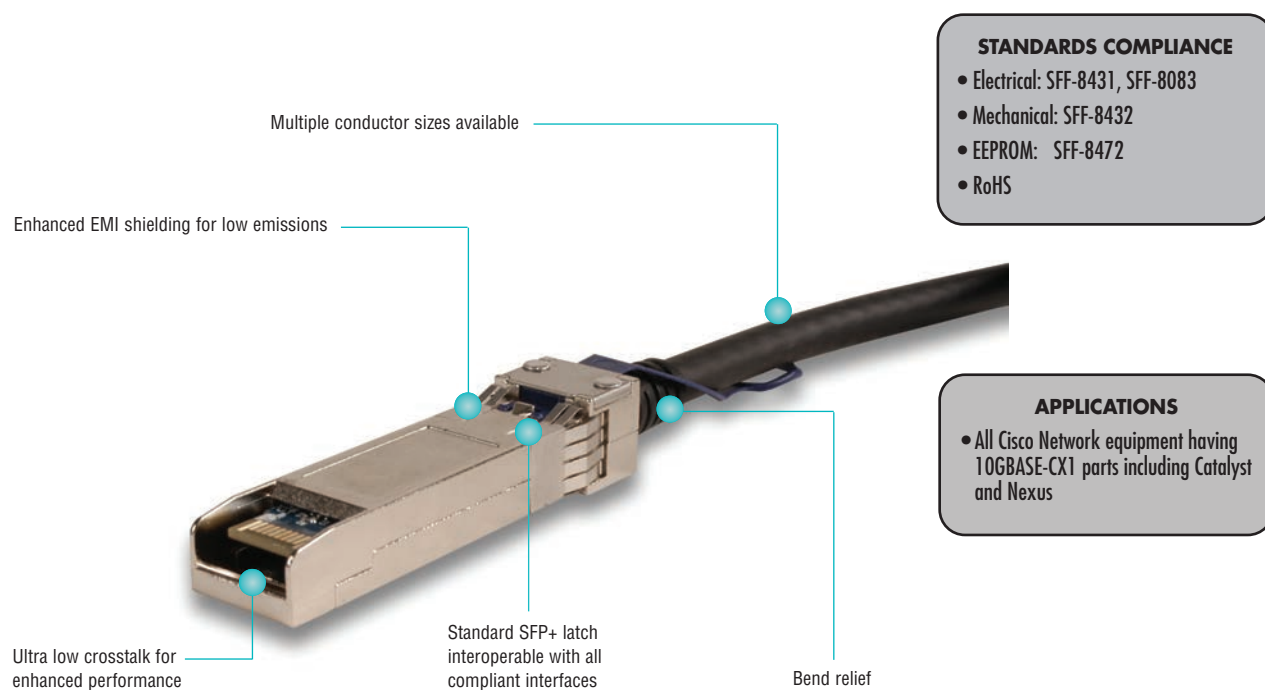
*Note: Contact Customer Service for additional lengths and wire gauges.*

# Cisco Compatible SFP+ Twinax Copper Cables

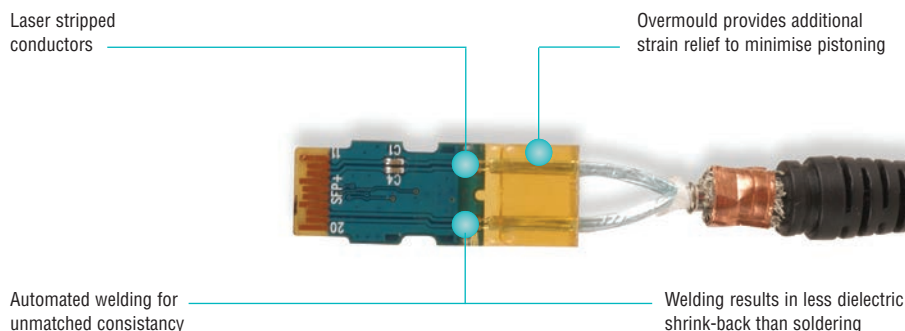
Cisco Compatible SFP+ Copper Twinax direct-attach cables (DAC's) are programmed specifically to work with Cisco equipment. When these cables are plugged into Cisco equipment they will not trigger the error message that a non-Cisco transceiver has been detected. These cables do not violate Cisco's warranty.

Cisco Compatible SFP+ DAC's from Siemon were developed specifically as a cost-effective and lower-power alternative to optical modules for short reach links in high-speed interconnect applications such as high-performance computing (HPC), enterprise networking including top-of-rack switching and network storage markets. The assemblies support data transfer rates up to 10+Gb/s per lane, meeting or exceeding current standards specifications.

These SFP+ fully-shielded assemblies combine twin-axial shielded cable configuration with robust die cast housings for enhanced support of high frequency data rates. These SFP+ assemblies are impedance matched to ensure interoperability and minimize EMI leakage through their fully-shielded design.



## PCB Termination



*"Cisco" is a registered trademark of Cisco and/or its affiliates.*

# Product Information

## PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	-10 to 70°C
Flammability Rating	UL 94 V-0
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part#, Date Code



Plug	
Backshell Material	Nickel-Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Latch	Positive Latching w/ Pull
Insertion Force	30N Max
Withdrawal Force	20N Max
Retention Force	90N Max
Durability	50 Cycles Min
Cable	
Conductor	Solid
Wire Gauge	30 AWG to 24 AWG
Impedance	100± 5 ohms
Construction	Twinaxial
Cable OD	30 AWG = 4.5mm
	24 AWG = 6.2mm
Jacket Type	PVC
Bend Radius	5X Cable OD

## Ordering Information:

SFP+ Passive Copper Cable Assembly, Double-ended, Black

Part Number	Length	Gauge
SFPH10GBCU1MS	1m	30
SFPH10GBCU1.5MS	1.5m	30
SFPH10GBCU2MS	2m	30
SFPH10GBCU2.5MS	2.5m	30
SFPH10GBCU3MS	3m	30
SFPH10GBCU5MS	5m	24

Note: Contact Customer Service for additional lengths and wire gauges.

# QSFP+ Passive Copper Assemblies

Siemon QSFP+ Copper Cable assemblies were developed for high-density applications, offering a cost-effective, low-power option for high-speed data centre interconnects. The QSFP+ form factor (Quad SFP+) can replace up to four standard SFP+ connections, providing greater density and reduced system cost. The direct-attach assemblies support emerging 40Gb/s applications and are available in standard lengths up to 6 metres with longer custom lengths available.

Multiple conductor sizes available

Positive retention pull-release latch system

High-Density QSFP+ connector

Ultra low crosstalk for enhanced performance

## STANDARDS COMPLIANCE

- Electrical: IBTA V2 Revision 1.2.1
- IEEE 802.3ba
- EEPROM: SFF-8436
- RoHS

## APPLICATIONS

- InfiniBand 4X SDR, DDR, QDR
- Ethernet 10G, 40G
- Fibre Channel 10G, 40G, SAN
- RapidIO
- Myrinet 40G
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Networking
- Storage
- Hubs, switches, routers, servers

## PCB Termination

Laser stripped conductors

Overmould provides additional strain relief to minimise pistoning

Automated welding for unmatched consistency

Welding results in less dielectric shrink-back than soldering



Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	0 to 70° C
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part#, Date Code

Ordering Information:

QSFP+ to QSFP+ Passive Copper Cable Assemblies

Part Number	Length	Gauge
QSFP30-00.5	0.5m	30
QSFP30-01	1m	30
QSFP30-01.5	1.5m	30
QSFP30-02	2m	30
QSFP30-02.5	2.5m	30
QSFP30-03	3m	30
QSFP26-05	5m	26
QSFP24-06	6m	24

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Plastic Material	PA66
Latch	Positive Latching w/Pull Tab
Insertion Force	40N Max
Withdrawal Force	30N Max
Retention Force	90N Min
Durability	250 Cycles
Tightest Recommended Vertical Spacing (Belly to Belly)	11.80 mm Centre to Centre
Tightest Recommended Vertical Spacing (Stacked)	17.50 mm Centre to Centre
Cable	
Conductor	Solid
Wire Gauge	30 AWG to 24 AWG
Impedence	100 +/- 5 ohms
Construction	Twinaxial
Cable OD	30 AWG = 6.50mm
	28 AWG = 7.49mm
	26 AWG = 8.61mm
	24 AWG = 9.70mm
Jacket Type	PVC
Bend Radius	5X Cable OD - Single 10X Cable OD - Repeated

Maximum Lengths

Gauge	IBTA DDR	IBTA QDR <sup>1</sup>	IEEE 802.3ba
30	5m	3m	3m
28	7m	4m	4m
26	8m	5m	5m
24	10m	6m	n/a

1 Per IBTA cable MOI V0.69: -13dB @5GHz  
2 May not meet IBTA QDR insertion loss limits but is acceptable for most InfiniBand and all Ethernet applications.

Note: Contact Customer Service for additional lengths.

# QSFP+ FDR Passive Copper Assemblies

Siemon QSFP+ FDR Copper Cable assemblies provide 56Gb/s of bandwidth (4 X 14Gb/s). These QSFP+ (SFF-8436) cables exceed industry standards to support DDR, QDR, FDR and emerging 4x16Gb/s applications. Siemon's QSFP+ Fourteen Data Rate assemblies are a high-density, cost-effective, low-power option for leading edge 56Gbs high-speed data centers, available in standard lengths up to 3 meters with longer custom lengths available upon request.

Multiple conductor sizes available

Positive retention pull-release latch system

High-Density QSFP+ connector

Ultra low crosstalk for enhanced performance

## STANDARDS COMPLIANCE

- Electrical: IBTA V2 Revision 1.3
- IEEE 802.3ba
- EEPROM: SFF-8436
- RoHS

## APPLICATIONS

- InfiniBand 4X SDR, DDR, QDR
- Ethernet 10G,40G
- Fibre Channel 10G,40G, SAN, 4x16G
- RapidIO
- Myrinet 40G
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Networking
- Storage
- Hubs, switches, routers, servers

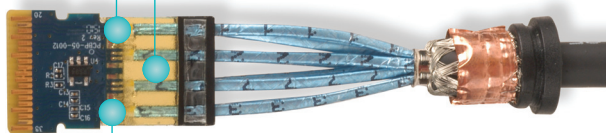
## PCB Termination

Laser stripped conductors

Overmould provides additional strain relief to minimise pistoning

Automated welding for unmatched consistency

Welding results in less dielectric shrink-back than soldering



# Product Information

## PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	0 to 70° C
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part#, Date Code

## Ordering Information:

QSFP+ to QSFP+ FDR Passive Copper Cable Assemblies

Part Number	Length	Gauge
QSFPFDR30-0.5	0.5m	30
QSFPFDR30-01	1m	30
QSFPFDR30-02	2m	30
QSFPFDR28-03	3m	28

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Plastic Material	Nylon
Latch	Positive Latching w/Pull Tab
Insertion Force	40N Max
Withdrawal Force	30N Max
Retention Force	90N Min
Durability	250 Cycles
Tightest Recommended Vertical Spacing (Belly to Belly)	11.80 mm Centre to Centre
Tightest Recommended Vertical Spacing (Stacked)	17.50 mm Centre to Centre
Cable	
Conductor	Solid
Wire Gauge	30 AWG to 24 AWG
Impedence	100 +/- 5 ohms
Construction	Twinaxial
Cable OD	30 AWG = 6.1mm
	28 AWG = 8.7mm
Jacket Type	PVC
Bend Radius	5X Cable OD - Single 10X Cable OD - Repeated

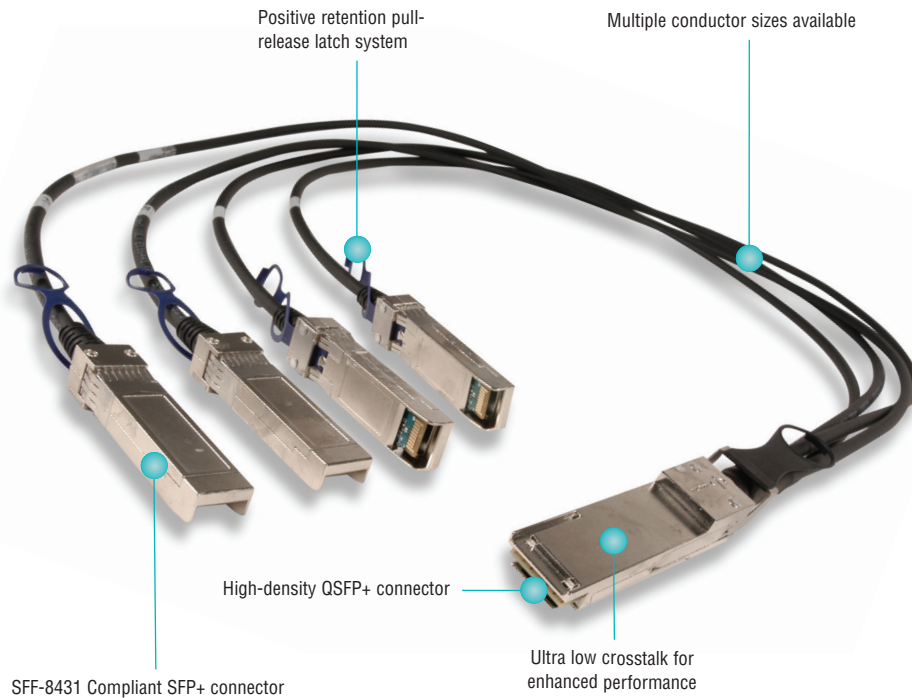
## Maximum Lengths

Gauge	IBTA DDR	IBTA QDR	IEEE 802.3ba	IBTA FDR
30	5m	3m	3m	2m
28	7m	4m	4m	3m

Note: Contact Customer Service for additional lengths.

# QSFP+ to 4 SFP+ Passive Copper Assemblies

Siemon hybrid cables allow users to connect SFP+ and QSFP+ equipment. They offer a cost-effective, low-power option for high-speed data centre interconnects. The direct-attach assemblies support 4 lanes of 10Gb/s (40Gb/s composite) and are available in standard lengths up to 5 metres with longer custom lengths available.



## STANDARDS COMPLIANCE

### QSFP+ End

- SFF-8436
- Electrical: IBTA Volume 2 Revision 1.2.1

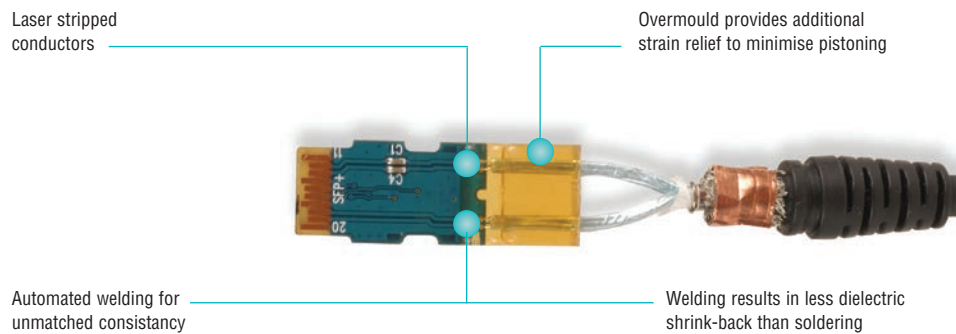
### SFP+ End

- SFF-8431
- SFF-8432
- SFF-8472
- RoHS

## APPLICATIONS

- InfiniBand SDR, DDR
- Ethernet 1G, 10G
- Fibre Channel
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Networking
- Storage
- Hubs, switches, routers, servers

## PCB Termination



\* Proposed IBTA return loss limit (used at latest plugfest)

# Product Information

## PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	0 to 70° C
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part#, Date Code



Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Latch	Positive Latching w/Pull Tab
Insertion Force	QSFP+: 40N Max SFP+ 30N Max
Withdrawal Force	QSFP+: 30N Max SFP+ 20N Max
Retention Force	90N Min
Durability	QSFP+: 250 Cycles Min SFP+ 50 cycles Min
Cable	
Conductor	Solid
Wire Gauge	30 AWG and 28 AWG
Impedence	100 +/- 5 ohms
Construction	Twinaxial
Jacket Type	PVC
Bend Radius	5X Cable OD -Single 10X Cable OD - Repeated

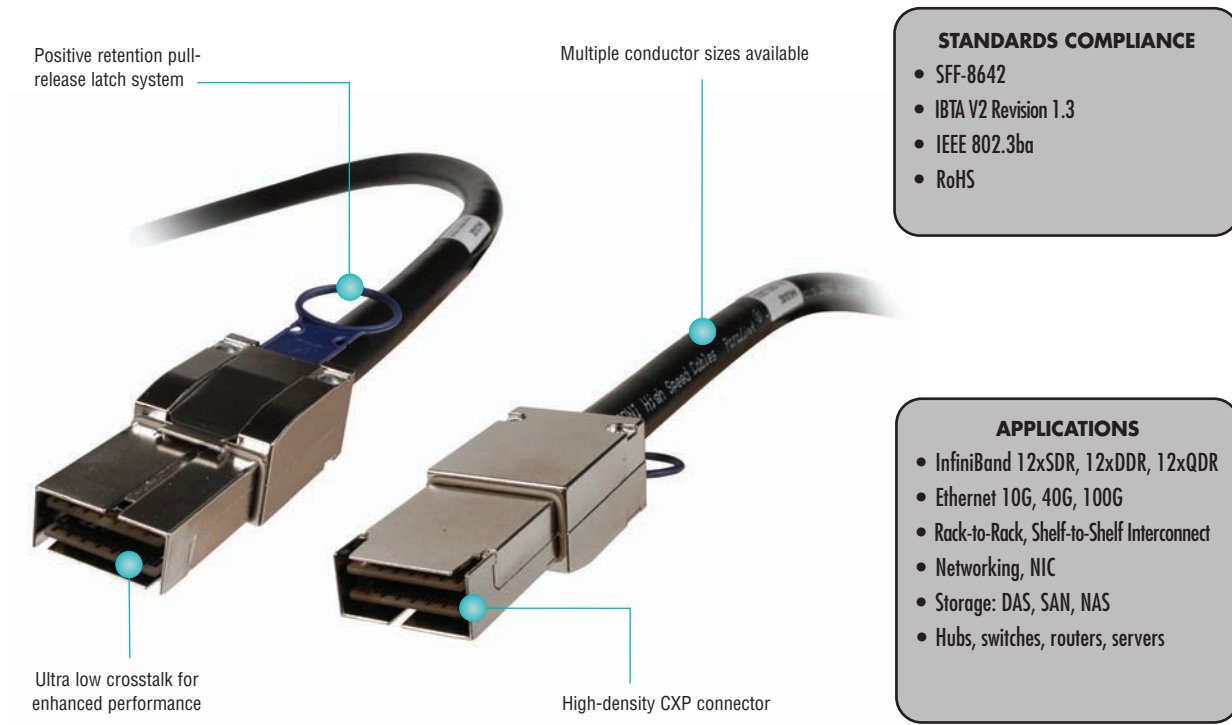
## Ordering Information:

QSFP+ to SFP+ Passive Copper Cable Assemblies

Part Number	Length	Gauge
SFPPQSFP30-00.5	0.5m	30
SFPPQSFP30-01	1m	30
SFPPQSFP30-02	2m	30
SFPPQSFP28-03	3m	28
SFPPQSFP28-05	5m	28

# CXP Passive Copper Assemblies

Siemon CXP Copper Cable assemblies were developed for high-density applications, offering a cost-effective, low-power option for high-speed data center interconnects. The CXP form factor can replace up to three standard QSFP+ connections, providing greater density and reduced system cost. These direct attached assemblies support 12 channels of 10Gb/s (QDR) for 120Gb/s InfiniBand, or 10 channels of 10Gb/s for 100Gb/s (IEEE 802.3ba) and are available in standard lengths up to 4 meters with longer custom lengths available.



# Product Information

## PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	0 to 70° C
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part#, Date Code

## Ordering Information:

CXP to CXP Passive Copper Cable Assemblies

Part Number	Length	Gauge
CXP30-01	1m	30
CXP30-02	2m	30
CXP28-03	3m	28
CXP27-04	4m	27

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Plastic Material	Nylon
Latch	Positive Latching w/Pull Tab
Insertion Force	150N Max
Withdrawal Force	30N Max
Durability	250 Cycles
Tightest Recommended Vertical Spacing (Belly to Belly)	27.00mm Centre to Centre
Tightest Recommended Vertical Spacing (Stacked)	16.50mm Centre to Centre
Cable	
Conductor	Solid
Wire Gauge	30 AWG, 28 AWG and 27 AWG
Impedence	100 +/- 5 ohms
Construction	Twinaxial
Cable OD	30 AWG = 9.5mm
	28 AWG = 11mm
	27 AWG = 13.8mm
Jacket Type	PVC
Bend Radius	5X Cable OD -Single 10X Cable OD - Repeated

## Maximum Lengths

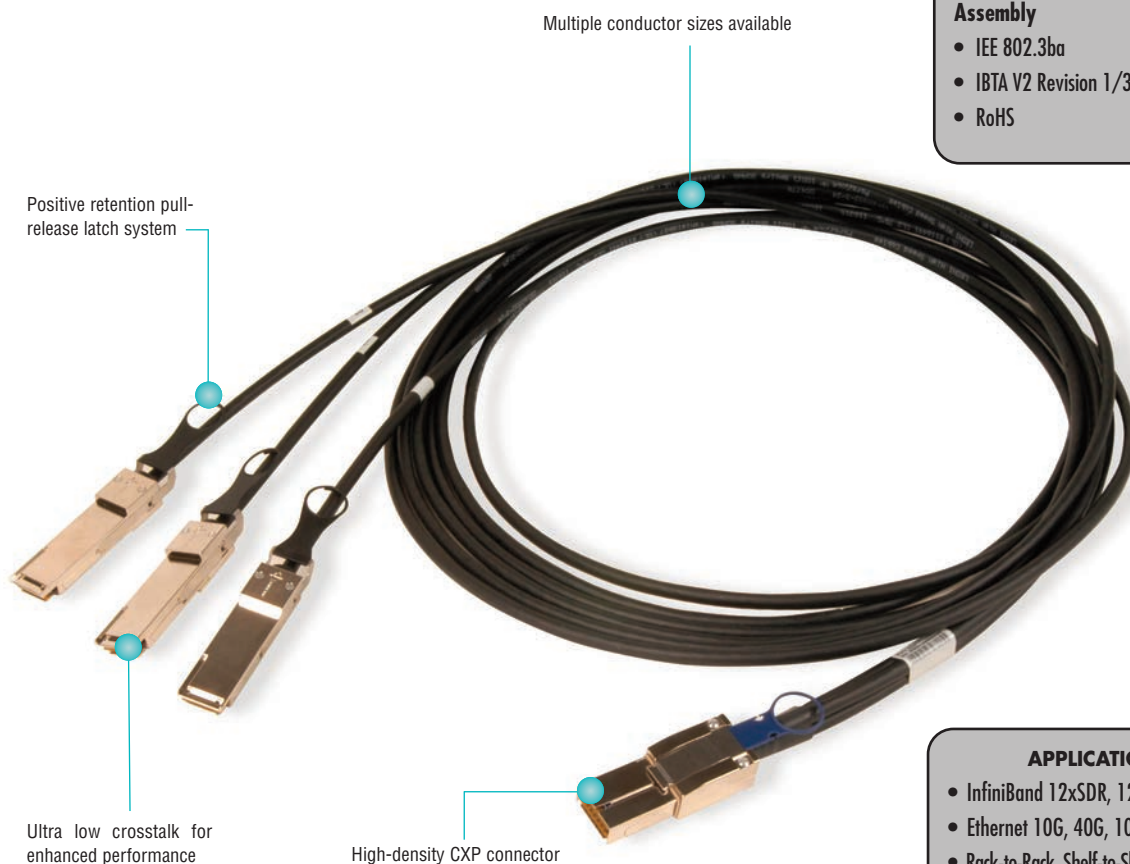
Gauge	IBTA DDR	IBTA QDR	IEEE 802.3ba
30	4m	2m	2m
28	7m	3m	3m
27	7m	3m	3m

CXP27-04 is not guaranteed to meet IBTA QDR or IEEE 802.3ba inserstion loss requirements.

Note: Contact Customer Service for additional lengths.

# CXP to 3 QSFP+ Breakout Passive Copper Assemblies

Siemon CXP to 3 QSFP+ Copper Cable assemblies allow users to connect CXP and QSFP+ equipment together. Compliant with both CXP and QSFP+ specifications, this breakout cable provides a cost effective, low-power option for high density high-speed data center interconnects. The CXP form factor can replace up to three standard QSFP+ connections, providing greater density and reduced system cost. The direct-attach assemblies support emerging 100Gb/s applications and are available in standard lengths up to 3 meters with longer custom lengths available.



## STANDARDS COMPLIANCE

### QSFP+ End

- SFF-8436

### CXP End

- SFF-8642

### Assembly

- IEE 802.3ba
- IBTA V2 Revision 1/3
- RoHS

## APPLICATIONS

- InfiniBand 12xSDR, 12xDDR, 12xQDR
- Ethernet 10G, 40G, 100G
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Networking, NIC
- Storage: DAS, SAN, NAS
- Hubs, switches, routers, servers

# Product Information

## PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	0 to 70° C
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part#, Date Code

## Ordering Information:

CXP to QSFP+ Passive Copper Cable Assemblies

Part Number	Length	Gauge
CXPQSFP30-01	1m	30
CXPQSFP30-02	2m	30
CXPQSFP28-03	3m	28

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Plastic Material	Nylon
Latch	Positive Latching w/Pull Tab
Insertion Force	CXP: 150N Max: QSFP+ 40 N Max.
Withdrawal Force	CXP: 50N Max: QSFP+ 30 N Max.
Durability	250 Cycles
CXP Tightest Recommended Horizontal Spacing	27.00mm Centre to Centre
CXP Tightest Recommended Vertical Spacing (Stacked)	16.50mm Centre to Centre
Cable	
Conductor	Solid
Wire Gauge	30 AWG to 26 AWG
Impedence	100 +/- 5 ohms
Construction	Twinaxial
Cable OD	30AWG = 9.5mm
	28AWG = 11mm
Jacket Type	PVC
Bend Radius	5X Cable OD -Single 10X Cable OD - Repeated

## Maximum Lengths

Gauge	IBTA DDR	IBTA QDR	IEEE 802.3ba
30	4m	2m	2m
28	6m	3m	3m

CXP27-04 is not guaranteed to meet IBTA QDR or IEEE 802.3ba inserstion loss requirements.

# 40Gb/s QSFP+ Active Optical Cable Assemblies

Siemon 40Gb/s Low Power Active Optical Cable assemblies offer a cost-effective, extended reach option for high-speed data center interconnects. These AOC assemblies incorporate integrated opto-electronics with four fiber optic transceivers per end, each operating at data rates from 1 to 10.5 Gb/s and supporting a reach up to 100 meters. The cable is available in a number of standard lengths up to 100 meters.

AOC's offer customers the flexibility of traditional optical modules by interfacing to systems via a standard QSFP+ MSA, SFF-8436 connector. The cable is electrically compliant with the SFP+ interface supporting InfiniBand, Ethernet, Fibre Channel and other applications. The QSFP+ connector includes the Digital Diagnostic Monitoring Interface (DDMI).

High Strength Pull Tab (60N)

Ultra-flexible multi mode fibre

## STANDARDS COMPLIANCE

- SFF-8436
- SFF-8438
- RoHS-6 (lead free)
- Class 1 laser product per IEC 60825-1
- IEEE 802.3ba

Ethernet and InfiniBand electrical compliance

High-density QSFP+ connector

4-Channel full-duplex active optic cable transceiver

## APPLICATIONS

- InfiniBand SDR, DDR, QDR
- Ethernet 40G BASE-SR4
- Fibre Channel 4G, 8G, 10G
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Proprietary Cluster Interconnect
- Networking
- Storage
- Hubs, switches, routers, servers

# Product Information

## PERFORMANCE SPECIFICATIONS

Electrical	
Supply Voltage	3.1 to 3.6V
Power Consumption Per End	0.8W typical, 1.2W Max
General	
Operating Temperature	0 to 70° C
Storage Temperature	-25 to 75° C
Channels	4 channels, bi-directional
Connector (each end)	QSFP+

Cable	
Type	OFNP (PVC)
Minimum Bend Radius	15xDIA - Dynamic 10xDIA - Static
Minimum Cable Assembly Bend Radius	Cable and Connector: 56mm
Cross Section (without connector)	3mm OD
Channel Parameters	
Channels	4 Lanes, bi-directional
Date Rate	10.5 Gbps/ channel Max.
Operating Optical Wavelength	850nm

## Ordering Information:

QSFP+ to QSFP+ Active Optical Cable Assemblies

Part Number	Length
QSFP-FB-005	5m
QSFP-FB-010	10m
QSFP-FB-015	15m
QSFP-FB-020	20m
QSFP-FB-030	30m
QSFP-FB-050	50m
QSFP-FB-100	100m

*Note: Contact Customer Service for additional lengths.*

# 56Gb/s QSFP+ Active Optical Cable Assemblies

Siemon 56Gb/s Low Power Active Optical Cable assemblies offer a cost-effective, extended reach option for high-speed data center interconnects. These AOC assemblies incorporate integrated opto-electronics with four fiber optic transceivers per end, each operating at data rates from 1 to 14 Gb/s and supporting a reach up to 100 meters. The cable is available in a number of standard lengths up to 100 meters.

AOC's offer customers the flexibility of traditional optical modules by interfacing to systems via a standard QSFP+ MSA, SFF-8436 connector. The cable is electrically compliant with the SFP+ interface supporting InfiniBand, Ethernet, Fibre Channel and other applications. The QSFP+ connector includes the Digital Diagnostic Monitoring Interface (DDMI).

High Strength Pull Tab (60N)

Ultra-flexible multi mode fibre

## STANDARDS COMPLIANCE

- SFF-8436
- SFF-8438
- RoHS-6 (lead free)
- Class 1 laser product per IEC 60825-1
- IEEE 802.3ba

Ethernet and InfiniBand electrical compliance

High-density QSFP+ connector

4-Channel full-duplex active optic cable transceiver

## APPLICATIONS

- InfiniBand SDR, DDR, QDR
- Ethernet 40G BASE-SR4
- Fibre Channel 16 GFC
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Proprietary Cluster Interconnect
- Networking
- Storage
- Hubs, switches, routers, servers

# Product Information

## PERFORMANCE SPECIFICATIONS

Electrical	
Supply Voltage	3.1 to 3.6V
Power Consumption Per End	0.8W typical, 1.2W max
General	
Operating Temperature	0 to 70° C
Storage Temperature	-25 to 75° C
Channels	4 channels, bi-directional
Connector (each end)	QSFP+

Cable	
Type	OFNP (PVC)
Minimum Bend Radius	15xDIA - Dynamic 10xDIA - Static
Minimum Cable Assembly Bend Radius	Cable and Connector: 56mm
Cross Section (without connector)	3mm OD
Channel Parameters	
Channels	4 Lanes, bi-directional
Date Rate	14.025 Gbps/ channel Max.
Operating Optical Wavelength	850nm

## Ordering Information:

QSFP to QSFP Active Optical Cable Assemblies

Part Number	Length
QSFPFDR-F-005	5m
QSFPFDR-F-010	10m
QSFPFDR-F-015	15m
QSFPFDR-F-020	20m
QSFPFDR-F-030	30m
QSFPFDR-F-050	50m
QSFPFDR-F-100	100m

*Note: Contact Customer Service for additional lengths.*



# Ruggedised/Industrial Connectivity

Siemon’s line of ruggedised/industrial connectivity allows cabling professionals to deliver high-performance copper and fibre cabling in harsh environments that would damage standard connectivity. Including sealed and vibration-resistant outlets, couplers, cords and mounting accessories for twisted-pair copper and fibre systems, Siemon’s ruggedised connectivity is ideal for industrial, outdoor and other harsh environments.

## Section Contents

- Ruggedised Z-MAX® and MAX® Copper Connectivity .....13.1
- Ruggedised Category 6/6A Outlets ..... 13.2
- Ruggedised Category 5e Outlets ..... 13.2
- Ruggedised Category 5e Plugs ..... 13.2
- Ruggedised Category 6/6A Modular Patch Cords ..... 13.3
- Ruggedised Category 5e Modular Patch Cords ..... 13.3
- Outlet to Plug Assemblies ..... 13.3
- Ruggedised Dust Caps ..... 13.4
- Ruggedised Surface Mount Boxes ..... 13.4
- Ruggedised Stainless Steel Faceplates ..... 13.4
- Ruggedised LC Fibre Connectivity ..... 13.5
- Ruggedised LC Fibre Plug and Outlet ..... 13.6
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- Ruggedised LC Fibre Upgrade Kit ..... 13.6

# Ruggedised Z-MAX® and MAX® Copper Connectivity

Siemon is well-known for its industry leading high performance connectivity. The same high performance copper products are available with our patented Ruggedised Z-MAX and MAX housings. These outlets and modular patch cords provide an IP66/IP67-rated seal, protecting plug and outlet contacts from dust, moisture, vibration, and common cleaning chemicals. Siemon's Ruggedised Connectivity solution is ideal for protecting valuable connections in laboratory environments, hospitals, food processing plants and other harsh environments.

**Ensures Proper Seal** — Bayonet-style mating ensures proper plug depth into the outlet and an IP66/IP67 rated seal

**Flexible Applications** — Outlets terminate cable constructions with 23 - 26 AWG (0.64 - 0.51mm) solid and 26 AWG (0.48mm) stranded conductors, with up to 0.60mm diameter conductors and up to 1.48mm diameter over insulation

**Universal Wiring** — Each outlet is compatible with both T568A and T568B wiring options

**Compatibility** — Outlets are compatible with all Siemon Ruggedised Surface Mount Boxes, Stainless Steel Faceplates and Patch Cords

**Standardised Interface** — Siemon's Ruggedised Connector has been recognised by the Open DeviceNet Vendor Association (ODVA), TIA TR 42.9 and IEC 61076-3-106

**Easy Termination** — Available in Siemon's ultra fast Z-MAX configuration in all categories as well as standard 110 punch down MAX in Category 5e and 6 UTP



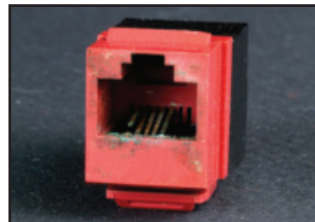
## Meets Harsh Demands of the Environment

Specially designed Z-MAX 6A Shielded and MAX 5e and 6 connectors can withstand humidity, dust and vibration.



## Vibration Causes Pitting In Typical Outlets

Seen under a microscope after exposure to extreme vibration, contact between a typical modular plug and outlet can pit the contact pins, causing intermittent transmission problems.



## Humidity Affects Typical Outlets

Humidity corrodes contact pins inside typical outlets. Repeated exposure can eventually destroy the contact pins, rendering the outlet unusable. Siemon's Ruggedised outlet's special housing prevents this corrosion.

## Ruggedised Category 6/6A Outlets

Ruggedised outlet features a Z-MAX® or MAX® module housed in a protective shell. The outlet's outer housing is made of durable, chemical-resistant, industrial-grade thermoplastic and features Siemon's patented bayonet-style mating design. Category 6 or 6A performance is guaranteed in harsh environments.

The industrial connector's bayonet-style mating prevents over-tightening which could damage contact pins inside the outlet or under-tightening which prevents a proper seal.

Part #	Description
X6	Category 6 UTP, Ruggedised MAX outlet, T568A/B
XG2-Z6	Ruggedised G2 Z-MAX outlet, Category 6, Unshielded, T568A/B
XG2-Z6A	Ruggedised G2 Z-MAX outlet, Category 6A, Unshielded, T568A/B
XG2-Z6AS	Ruggedised G2 Z-MAX outlet, Category 6A, Shielded, T568A/B



## Ruggedised Category 5e Outlets

The outlet's outer housing is made of durable, chemical-resistant, industrial-grade thermoplastic and features Siemon's patented bayonet-style mating design. Guaranteed Category 5e performance to 160 MHz even in the most punishing environments.

Part #	Description
X5	Category 5e UTP, Ruggedised MAX outlet, T568A/B
X5-X5S	Category 5e Shielded, Ruggedised bulkhead coupler (outlet to outlet)
XG2-Z5S	Ruggedised G2 Z-MAX outlet, Category 5e, Shielded, T568A/B



## Ruggedised 5e Plugs

Siemon's Ruggedised Plug features a Category 5e modular plug contained in Siemon's industrial-grade housing with patented bayonet-style mating design. The plug can be terminated in the field, allowing custom lengths to be assembled quickly on site in the event a cable is cut or damaged. It terminates twisted-pair cable with 22 – 26 AWG (0.64 – 0.40mm) solid or 7-strand conductors with an insulated conductor diameter of 0.86 – 0.99mm.

Part #	Description
XP85	Category 5e UTP, Ruggedised plug, 8-position, 8-contacts
XP85S	Category 5e Shielded, Ruggedised plug, 8-position, 8-contacts



# Ruggedised Category 6A Shielded Patch Cords

These cable assemblies provide the final component necessary to construct a category 6A shielded channel solution for harsh environments when used in conjunction with Siemon's category 6A shielded cable and category 6A compatible shielded Ruggedized outlets.

Part #	Description
XC6A-S(XX)M-B05 . . . . .	Category 6A Patch Cord, Shielded (S/FTP), Ruggedised-to-Modular, Ivory w/Yellow boot, CM/LSOH

Use (XX) to specify length: 01 = 1m, 1.5 = 1.5m, 02 = 2m, 03 = 3m, 05 = 5m, 7.5 = 7.5m



# Ruggedised Category 6 Modular Patch Cords

Industrial modular patch cords combine the high performance and quality that Siemon cords are known for with a protective industrial-grade plug housing. These assemblies feature standard MC® 6 cordage with a MC 6 plug on one end and an industrial plug on the other.

Part #	Description
XC6-(XX)M . . . . .	Category 6 UTP, Ruggedised plug-to-Ruggedised plug
XC6-(XX)M-B05 . . . . .	Category 6 UTP, Ruggedised plug-to-modular RJ-45 plug, yellow boot

Use (XX) to specify length: 01 = 1m, 1.5 = 1.5m, 02 = 2m, 03 = 3m, 05 = 5m, 7.5 = 7.5m



# Ruggedised Category 5e Modular Patch Cords

Designed to withstand the rigors of a factory floor environment, our Ruggedised Category 5e stranded cordage is petroleum and UV resistant, is not effected by common chemicals and water, operates in a wider temperature range and provides a longer flex life. Available in three industrial jacket types to meet various environmental requirements.

Part #	Description
XC5-(XX)M(X) . . . . .	Category 5e UTP, Ruggedised plug-to-Ruggedised plug
XC5-(XX)M-B05(X) . . . . .	Category 5e UTP, Ruggedised plug-to-modular RJ-45 plug, yellow boot
XC5S-(XX)M(X) . . . . .	Category 5e Shielded (SF/UTP) Ruggedised plug-to-Ruggedised plug
XC5S-(XX)M-B05(X) . . . . .	Category 5e Shielded (SF/UTP) Ruggedised plug-to-modular RJ-45 plug, yellow boot

Use (XX) to specify length: 01 = 1m, 1.5 = 1.5m, 02 = 2m, 03 = 3m, 05 = 5m, 7.5 = 7.5m

Use (X) to specify jacket type: Blank = Polyvinyl Chloride (PVC), U = Polyurethane (PUR), T = Thermoplastic Elastomer (TPE)

PVC and PUR jacket colour is teal. TPE jacket colour is black.



# Ruggedised Outlet To Plug Assemblies

Siemon's outlet to plug assemblies provide an avenue to connect to active components mounted within an enclosure. These protected environments allow the use of standard cordage and are available in both UTP and Shielded construction.

Part #	Description
X5-MC5-(XX)-B05 . . . . .	Category 5e UTP, Ruggedised outlet-to-modular RJ-45 plug, yellow boot, CMX
X5S-MC5S-(XX)B05L . . . . .	Category 5e Shielded (F/UTP), Ruggedised outlet-to-modular RJ-45 plug, yellow boot, LSOH

Use (XX) to specify length: 01 = 1m, 1.5 = 1.5m, 02 = 2m, 03 = 3m, 05 = 5m, 7.5 = 7.5m



## Ruggedised Dust Caps

The Ruggedised dust caps are the ideal way to protect your investment in your Ruggedised cabling system. Outlet dust caps can be used to protect unused outlets or to seal an outlet during wash down periods when the outlet and plug may be disconnected. Plug dust caps protect Ruggedised patch cords from exposure to elements or accidental damage when not mated to an outlet.

Dust caps are constructed of industrial-grade thermoplastic for superior protection and durability. Additionally, outlet and plug dust caps feature a retention tether, which prevents them from being misplaced when not in use.



XP-CAP2 .....  
Ruggedised plug dust cap  
with metal retention tether



X-CAP .....  
Ruggedised MAX outlet dust  
cap with metal retention tether



XG2-CAP .....  
Ruggedised plug dust cap with  
nylon retention tether

## Ruggedised MAX Surface Mount Boxes

The Siemon Ruggedised Surface Mount Box (IBOX) mounts either Siemon copper or fibre Ruggedised outlets. Boxes provide an IP66/IP67 (NEMA 4X) seal and can be mounted on virtually any flat surface. Available in 1, 2, 3, and 4-port versions. Compression fittings provided for cable entry.



X-IBOX-01 .....  
Ruggedised surface mount box,  
1-port, supplied with 1 cable  
entry compression fitting



X-IBOX-02 .....  
Ruggedised surface mount box,  
2-port, supplied with 2 cable  
entry compression fittings



X-IBOX-03 .....  
Ruggedised surface mount box,  
3-port, supplied with 3 cable  
entry compression fittings



X-IBOX-04 .....  
Ruggedised surface mount box,  
4-port, supplied with 4 cable  
entry compression fittings

*Note: Compression fittings accommodate cable diameters from 4.1–7.9mm*

### Technical Tip!

Contact Technical Support for punch tool to create Ruggedised knockouts for custom mounting.

# Ruggedised LC Fibre Connectivity

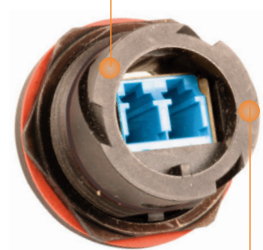
The Siemon Ruggedised LC Fibre solution provides a robust fibre connection with an IP66/IP67-rated seal and is ideal for protecting fibre connections in laboratory environments, hospitals, food processing plants and other harsh environments.

The Siemon Ruggedised Fibre solution is ideal for installations requiring extended distances, in close proximity to heavy sources of EMI, or where fibre active equipment is used.

**Robust Design** — Protects fibre connections in virtually any harsh environment

**Specialised Bend Relief** — Compression fitting provides a superior rear seal and ensures fibre meet minimum bend radius requirements

**Proper Seal** — Bayonet-style mating ensures proper fibre alignment and an IP66/IP67 rated seal



**High Performance** — Meets TIA-568-C.3 and, ISO/IEC 11801 Ed 2.0 specifications for Multimode and Singlemode components

**Field-Termination** — Plug includes two industrial qualified Multimode or Singlemode LC connectors that accepts 2 strand, round, breakout style fibre optic cable



Rear of adapter accepts standard LC connectors



## Precision Performance

R&D labs develop, design and implement rigorous testing programs using sophisticated instrumentation. The Industrial LC provides reliability with leading edge technology for applications where highly accurate performance is critical.



## Robust and Reliable

Industrial Fibre connections help to streamline operations and reduce costs in manufacturing environments by avoiding regular replacement of standard connectors that cannot withstand these environments.



## Meets Harsh Demands of the Environment

The Ruggedised LC connector is ideal in areas where chemicals, corrosive gases and liquids are commonplace.

## Ruggedised LC Fibre Plug and Outlet

### Ruggedised Multimode

Part #	Description
XPLC2-MM	Ruggedised LC fibre plug, Multimode, duplex. Includes two Multimode LC connectors, beige
XLC-MM	Ruggedised LC fibre adapter, Multimode, duplex, beige



### Ruggedised Singlemode

Part #	Description
XPLC2-SM	Ruggedised LC fibre plug, Singlemode, duplex. Includes two Singlemode LC connectors, blue
XLC-SM	Ruggedised LC fibre adapter, Singlemode, duplex, blue



*Note: Ruggedised LC fibre plug accepts 2 strand, round, breakout style fibre optic cable with O.D. ranges from 5 – 8mm with two 2.4 – 3.0mm jacketed sub-units.*

## Field-Installable LC Fibre Connector

Siemon LC buffered connectors have been qualified for use in Siemon's Ruggedised fibre system. Use these connectors to terminate 62.5/125 or 50/125 micron Multimode or Singlemode fibre and plug into the rear of the Ruggedised LC outlet.

Part #	Description
FC1-LC-MM-B80	LC simplex connector, Multimode, buffered fibre beige boot
FC2-LC-MM-J80	LC duplex connector, Multimode, jacketed fibre beige boot
FC1-LC-SM-B02	LC simplex connector, Singlemode, buffered fibre, white boot
FC2-LC-SM-J02	LC duplex connector, Singlemode, jacketed fibre, white boot



## Ruggedised LC Fibre Kit

Use the Ruggedised LC Kit with Siemon's *LightSpeed*® Termination Kit for Ruggedised LC connector terminations. The kit contains a dual LC polishing puck, which decreases polish time by 50%.

Part #	Description
FTERM-XLC	Ruggedised LC fibre termination kit used in conjunction with FTERM-L2 includes dual polishing puck
FT-LC2PUCK	Dual LC polishing puck
FT-MSLC2HEAD	Dual LC microscope adapter





# Tools and Testers

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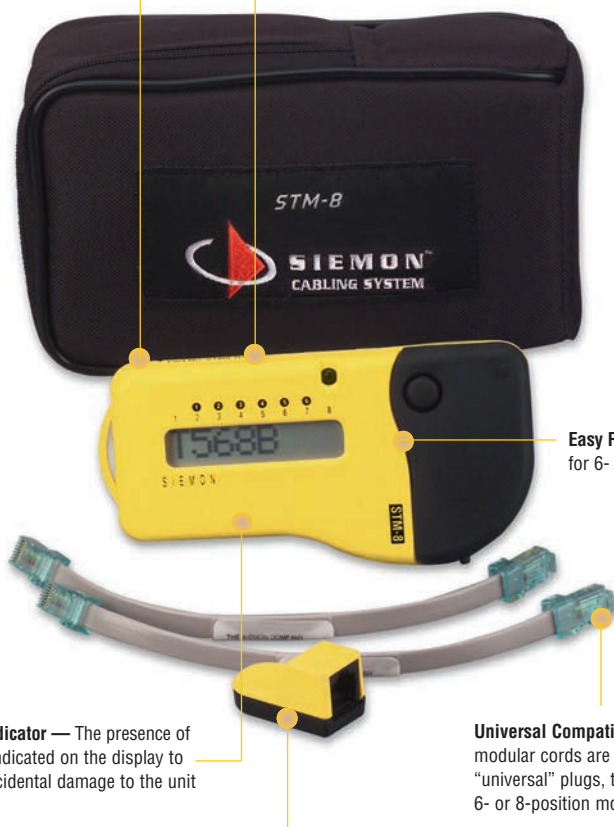
PT-908 Crimp Tool ..... 14.9

# STM-8

The STM-8 is an economical and versatile hand-held tester designed for the testing of UTP and shielded cabling for opens, shorts, reversals, miswires, split pairs and cable length. Its rugged, state-of-the-art construction, easy-to-read LCD display and multiple remotes allow one person to quickly test and identify up to four different cable runs from one location.

**Extended Battery Life** — A low battery status indication is provided, as well as automatic shut-off

**Long Length Testing** — Test cable runs up to 900m



**Line Voltage Indicator** — The presence of line voltage is indicated on the display to help prevent accidental damage to the unit

**Easy Reference** — Indications for 6- and 8-position jacks

**Universal Compatibility** — The UTP modular cords are equipped with patented "universal" plugs, that fit into any standard 6- or 8-position modular jack

**Multi-Location Testing** — Additional remotes can be purchased separately



## Tests All Wiring Configurations

Tests T568A, T568B, USOC, 10BASE-T, Token Ring, and TP-PMD wiring configurations.



## Determines Unknown Wiring

In FIND mode, the STM-8 will detect and identify which wiring scheme is present in the cabling being tested.



## Determines Cable Length

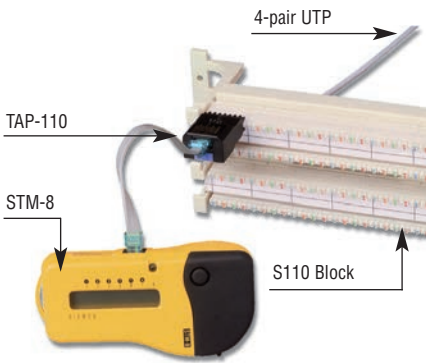
In the LENGTH mode, the STM-8 will determine the distance measurements on any given cable link up to 900m. This feature may be used with all four identifiable remotes.

# STM-8 and STM-8-S

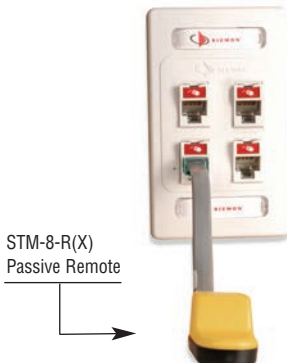
Part #	Description
STM-8	UTP (unshielded, twisted-pair) tester. Includes carrying case, remote "A", two universal plug-ended modular cords, wiring guide, 9V alkaline battery, instructions, and warranty card
MC-8-005	Universal plug-ended modular replacement cord

## Horizontal Cross-Connect

The S110® Test Adapter can be used to test horizontal cabling that is terminated on 110-type connecting blocks

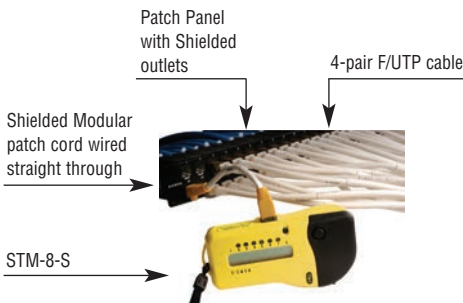


## Work Area Outlet

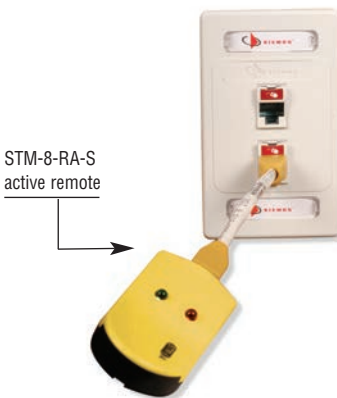


STM-8-S	Shielded twisted-pair tester. Includes carrying case, active remote, two screened modular cords, wiring guide, 9V alkaline battery, instructions, and warranty card
MC5-S-8-005	Shielded modular replacement cord

## Horizontal Cross-Connect



## Work Area Outlet



# Accessories

Siemon's active remote utilises a shielded jack for testing both UTP and shield continuity of F/UTP cabling. LEDs on remote indicate test results after each test cycle; solid green LED flash for pass and solid red LED flash for fail. Identifiable passive remotes are also available for testing multiple locations.

STM8-RA-S  
Active remote for UTP or F/UTP with two shielded modular cords, instructions, 3V lithium battery, and warranty card



STM8-R(X)  
Additional identifiable UTP passive remotes  
Use (X) to specify remote identity:  
A = remote A,  
3 = kit of remotes B, C, and D



## MT-5000

The MT-5000 is a versatile, hand-held tester — it is fast, reliable, and durable. It tests opens, shorts, and miswires from 1- to 25-pairs and can accommodate a combination of 25-pair and modular jack terminations. For instance, using the 25-pair test adapter, the remote unit can be attached to a 66 block that is connected to multiple horizontal cable runs in the equipment closet. Then, using the modular jack in the master unit, one person can test up to six 4-pair station cables in the work area. Cable runs of up to 762m can be tested with accuracy.

The MT-5000 tests individual conductors, not pairs. This allows testing of all wiring configurations including USOC, T568A, and T568B.

The MT-5000 consists of a master and a remote unit. The master controls all of the test functions, so one person can perform testing. Test results are reported on a large, easy-to-read LCD display. Each unit has both male and female 25-pair connectors, one 6-position (1-, 2- or 3-pair) modular jack, and one 8-position (4-pair) keyed modular jack. The unit also features a low-battery status indicator, a power input jack, and a power saving auto-off switch. It comes in a padded, nylon carrying case with batteries included.



Part #	Description
MT-5000 . . . . .	Cable tester (master and remote) with case and two universal plug-ended modular cords
MC-8-005 . . . . .	Universal plug-ended modular replacement cord, 152 mm

## 25-Pair Test Adapters

Siemon 25-pair test adapters are designed for accessing all 25 pairs on a 66M connecting block. A positive connection ensures accurate testing with easy installation and removal. They can also be used to field-connect 66M blocks. Available with either male or female 25-pair connectors.

Part #	Description
TAP-50F . . . . .	25-pair S66™ test adapter with female connector
TAP-50M . . . . .	25-pair S66 test adapter with male connector

See page 9.23 for 25-pair cable assemblies.

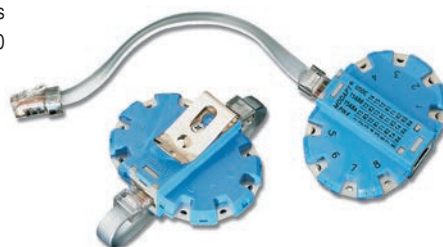


TAP-50

## MODAPT®

This modular adapter allows in-line testing for any plug/jack combination. It includes two 4-pair jacks plus a 152mm modular cord terminated with our patented 4-pair “universal” plug for accessing any standard 6- or 8-position jack. Individual conductors are broken out by pin number and correspond to eight separate test pads. Test equipment can be securely attached to the test pads using alligator clips. For quick reference in the field, USOC, T568A, and T568B wiring charts are printed right onto the MODAPT body. When used with Siemon’s TESTAR® adapter and S110® test adapter, the MODAPT can be used to test connections on S66M and S110 blocks.

Part #	Description
MODAPT . . . . .	Test adapter with one 152mm 4-pair universal plug-ended modular cord
MC-8-005 . . . . .	Universal plug-ended modular replacement cord, 152 mm



## TESTAR®

The TESTAR creates easy test access to 66 quick clips. It plugs directly onto S66M blocks, establishing a positive connection and providing a 4-pair modular jack for plugging in test equipment. The body is moulded in blue plastic and has moulded-in finger grips for easy handling.

Part #	Description
TESTAR-8T-C5	Category 5e compatible, 4-pair, 8-position, TESTAR, T568A
TESTAR-8A-C5	Category 5e compatible, 4-pair, 8-position, TESTAR, T568B



## Other TESTARs

The positive connection made by the TESTAR eliminates possible problems associated with handling alligator clips or test probes such as accidental shorting across terminals or intermittent test connections. Test equipment is inserted into the TESTAR through a 1-, 2-, 3-, or 4-pair modular jack. To utilise equipment requiring alligator clips, our MODAPT® adapter can be plugged into the TESTAR.

Part #	Description
TESTAR-2	1-pair, 6-position, TESTAR, USOC
TESTAR-4	2-pair, 6-position, TESTAR, USOC
TESTAR-6	3-pair, 6-position, TESTAR, USOC
TESTAR-8R1	4-pair, 8-position, TESTAR, USOC
TESTAR-8	4-pair, 8-position, TESTAR, T568B
TESTAR-8T	4-pair, 8-position, TESTAR, T568A

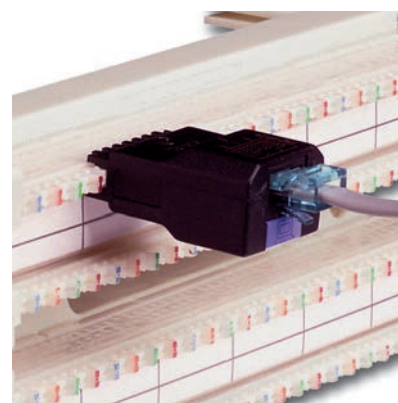


## S110® Test Adapters

Siemon's 4-pair S110 test adapters provide a convenient way to test 110-type connecting blocks. These adapters plug directly onto any 110-type connecting block and provide a modular jack for connection to test equipment or patch cords. It is the only 110 style test adapter that can be attached to both terminated and unterminated 110 connecting blocks. The adapters are end-stackable, and are polarised to prevent incorrect insertion.

The adapters have an area for a coloured icon (a blue and red icon are included) for additional identification. They are available in T568A and T568B wiring configurations and are Category 5e compatible.

Part #	Description
TAP-110-T4	Category 5e compatible, 4-pair, 8-position, S110 test adapter, T568A
TAP-110-A4	Category 5e compatible, 4-pair, 8-position, S110 test adapter, T568B



### Technical Tip!

The adapters utilise a unique, spring-loaded contact design to ensure a reliable connection without disturbing existing cross-connect terminations. This also extends the life-cycle of the test adapter.



4-pair

# Termination Tools

## Z-TOOL™

The Z-TOOL is an integral part of the exclusive Z-MAX® termination process and is used with both UTP and shielded Z-MAX modules. This easy-to-use and ergonomic designed tool is used both to secure the cable retention/grounding clip and to fully enage the termination module into the back of the outlet.

**Alignment Aids** — Keyed guide ensures correct outlet insertion during termination

**Ergonomic** — Minimal hand strain, limited pressure and zero-impact for comfortable repeatability

**Attachment Point** — For key ring or lanyard and rack-mount capability

**One-Handed Activation** — Allows final Z-MAX termination step to be accomplished with one hand for operation space-restricted areas

**Retention Clip Locking** — Additional function closes and locks hinged cable retention/grounding clip

**Slim Profile** — To fit in a pocket or toolbox

**Ordering Information:**

Part #	Description
Z-TOOL	Z-MAX Termination Tool

## S110®/S210® Multi-Pair Termination Tools

The Siemon S110/S210 multi-pair termination tool is a versatile impact tool designed to terminate and cut UTP cable, and seat connecting blocks. The impact mechanism and termination blades have been designed to reliably terminate and cut UTP cable the first time, every time. The tool features an easy to hold, ergonomically designed handle that helps reduce fatigue when trimming wire or seating connecting blocks to the wiring base.

S788J4-210 .....  
4-pair S210 termination tool

S788J4B-210 .....  
4-pair S210 replacement cutting blade and insertion assembly

S788J4H-210 .....  
4-pair S210 replacement head for impact tool, including housing, cutting blade and insertion assembly

S788J4 .....  
4-pair S110 termination tool

S788J4B .....  
4-pair S110 replacement cutting blade and insertion assembly

S788J4H .....  
4-pair S110 replacement head for impact tool, including housing, cutting blade and insertion assembly

S788J5 .....  
5-pair S110 termination tool

S788J5B .....  
5-pair S110 replacement cutting blade and insertion assembly

S788J5H .....  
5-pair S110 replacement head for impact tool, including housing, cutting blade and insertion assembly

MAX® TurboTool™

Siemon's new MAX TurboTool significantly reduces the time associated with the termination of Category 5e and 6 UTP MAX outlets. In contrast to single conductor punchdown tools which require eight individual termination cycles for each outlet, the MAX TurboTool seats and cuts all 8 conductors with a single action.

**Durable Construction** — 13 gauge CRS ensures reliable operation through daily handling

**Definitive Ratcheting Action** — Provides positive audible and tactile feedback indicating that the termination process is complete

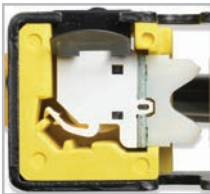
**Established Platform** — The tool shares the same proven core ratcheting platform as Siemon's PT-908 crimp tool which has been in the market for nearly 20 years

**High Contrast Colours** — Provide optimal visibility to prevent tool from inadvertently being left behind in low light areas

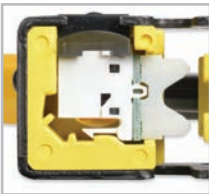


**Replaceable Termination Cartridges** — Allows the wearable part of the tool to be readily replaced

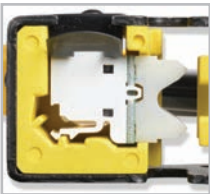
**Retention Clip** — Ensures outlets are fully seating prior to termination



Angled

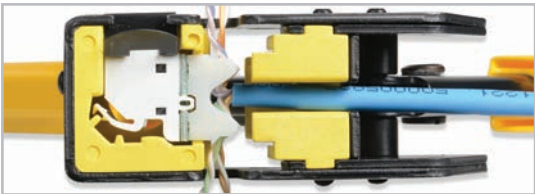


Keystone



Flat

The tool supports termination of all Category 5e and 6 MAX outlets – flat, angled and keystone



The rear cable channel provides cable access for the full range of Category 5e and 6 UTP cable sizes while the side slots provide clearance for laced twisted-pair conductors

Ordering Information:

Part #	Description
MAX-TT	MAX TurboTool



Part #	Description
MAX-TTREP	Replacement MAX TurboTool Cartridge Kit - Includes outlet nesting die, termination die, attachment hardware and Allen wrench



## S814 Impact Tool

The S814 impact tool terminates wires on 66 and 110 clips. The tool is spring-loaded and fully adjustable; a helpful feature when working with wires of varying thicknesses. The bayonet-style mount allows the blades to be changed quickly and easily, and a compartment in the handle stores an extra blade.



Part #	Description
S814	Tool body only
S814-66	Tool body with 66 termination blade
S814-110	Tool body with 110 termination blade
S81401-66	.66 termination blade
S81401-110-88	.110 termination blade

### Technical Tip!

Termination blades for Siemon punch down tools are reversible — one end terminates and cuts off the excess wire, the other end terminates without cutting.

## Palm Guard

The Siemon palm guard has been ergonomically designed to provide a safe and convenient means of terminating our flat or angled CT couplers and MAX® modules. The palm guard absorbs the impact of termination while securing the connector to prevent movement. Includes an adjustable elastic strap and a removable insert, which can be used to hold MAX modules while terminating on flat surfaces.

Part #	Description
PG	Palm guard with MAX insert
PG-MX6	MAX Insert



## CI-KIT

The CI-KIT provides all the tools that a telecommunications technician needs for day-to-day activities. Included in the kit is an S814 impact tool with 66 and 110 termination blades, a probe pic, electrician's scissors, mini flathead screwdriver, and a CPT-WEB cable preparation tool. These tools are stored in a handy, lightweight clip-on pouch which allows the installer to cut, strip, and terminate cabling without having to carry separate tools or larger tool kits.

Part #	Description
CI-KIT	Clip-on tool kit with S814 impact tool (with 66 and 110 termination blades), probe pic, electrician's scissors, mini flathead screwdriver, and CPT-WEB tool
CI-POUCH	Clip-on CI-KIT tool pouch only



## CI-KIT2

Siemon's CI-KIT2 includes all the components of the standard CI-KIT, with the addition of our popular AllPrep™ cable preparation tool in place of the CPT-WEB tool. Also, a "D-Ring" has been added to carry additional tools. These tools are stored in a handy, lightweight, clip-on pouch which allows the installer to cut, strip and terminate cabling without having to carry separate tools or larger tool kits.

Part #	Description
CI-KIT2	Clip-on tool kit with S814 impact tool (with 66 and 110 termination blades), probe pic, electrician's scissors, mini flathead screwdriver, and AllPrep cable preparation tool
CI-POUCH2	Clip-on CI-KIT2 tool pouch only

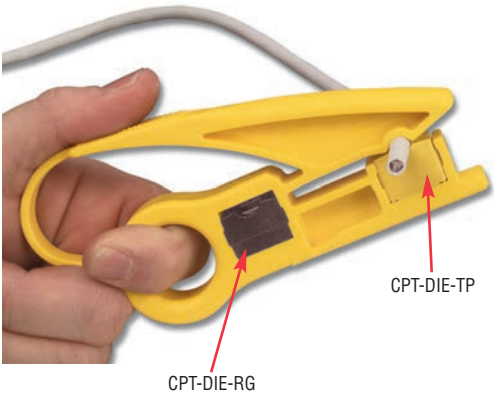


"D-Ring"

AllPrep™ Cable Preparation Tool

The AllPrep cable preparation tool provides a robust and reliable method of preparing both coaxial and twisted-pair cable for termination. The tool features two colour-coded dies that are interchangeable for each media type. The coaxial die strips RG59 and RG6 coaxial cable and the twisted-pair die strips a wide variety of UTP, shielded and fibre cables.

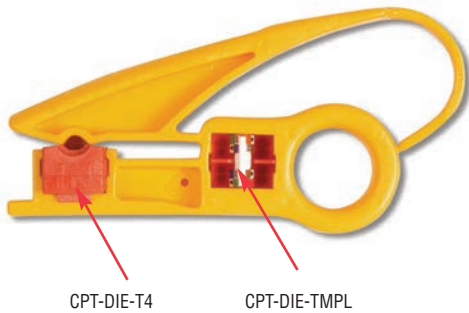
Part #	Description
CPT-RGTP	AllPrep cable preparation tool for coax/twisted pair cables
CPT-DIE-RG	Replacement coax die (black)
CPT-DIE-TP	Replacement twisted-pair die (yellow)
CPT-DIE-6A	Green die
CPT-DIE-XX	White die
CPT-DIE-EZ	Blue die



TERA® Cable Preparation Tool

The TERA cable preparation tool significantly reduces the time required to prepare fully shielded (S/FTP) cable. The tool includes an insert die with a blade, which is specifically designed to accurately strip the jacket and foil from 4-pair fully shielded cable without damaging the conductors. A template is also included to pre-align cable pairs and ensure proper pair positioning during termination.

Part #	Description
CPT-T	TERA preparation tool. Includes CPT-DIE-T4 and TERA cable preparation template
CPT-DIE-T4	Replacement TERA cable die (red)
CPT-DIE-TMPL	Replacement TERA wiring guide (red)



CPT

The CPT provides a simple and effective method to remove the outer cable jacket from 2-, 3-, or 4-pair cables without damaging the inner conductor insulation. The CPT is recommended for use with any round cable with an exterior diameter from 2.54 – 6.35mm and an outer jacket thickness from 0.380 – 0.635mm.

Part #	Description
CPT	Cable preparation tool



CPT-WEB

The CPT-WEB is designed to easily strip the outer cable jacket, flatten and separate the webbed conductors of Siemon's Category 5e cross-connect jumper wire and other UTP cable with webbed conductor pairs.

Part #	Description
CPT-WEB	Webbed cable preparation tool



## PT-908 Crimp Tool

This 3-in-1 ratchet-style crimp tool cuts, strips, and crimps modular plugs on either round or flat cables. The parallel action design maintains accurate alignment of the die with the plug for a precision crimp every time. The PT-908 comes with a padded carrying case which includes a storage compartment for carrying spare dies, replacement stripper blades, and modular plugs, and will attach to a technician's belt.

### PT-908 .....

Crimp tool with built-in round cable cutter/stripper, 8-position die set and padded nylon carrying case



### PT-908-D .....

Crimp tool with built-in round cable cutter/stripper, 8-position die set packaged in a clear plastic display case



### PT-DIE-8 .....

Replacement 8-position die set



### PT-DIE-6 .....

6-position die set



#### Technical Tip!

Siemon does not recommend field termination of modular cords. We recommend the use of factory-terminated and tested modular cords for any Category 5e or higher application.

# Glossary

**Alien Crosstalk:** Noise or interference caused by electromagnetic coupling from one cable to another cable, expressed in decibels.

**Attenuation:** See Insertion Loss.

**Attenuation to Crosstalk Ratio (ACR):** The difference between insertion loss and crosstalk measured in decibels.

**Attenuation to Crosstalk Ratio, Far-end (ACR-F):** Crosstalk measured at the opposite end from which the disturbing signal is transmitted, normalized by the insertion loss of the cable or cabling.

**Backbone Cabling:** Alternate name for Cabling Subsystem 2 or Cabling Subsystem 3 in a typical commercial building environment.

**Balance:** An indication of signal voltage equality and phase polarity on a conductor pair. Perfect balance occurs when the signals across a twisted-pair are equal in magnitude and opposite in phase with respect to ground.

**Balanced Signal Transmission:** Two voltages, equal and opposite in phase with respect to each other, across the conductors of a twisted-pair (commonly referred to as tip and ring).

**Balun:** An impedance matching transformer used to convert unbalanced signals to balanced signals and vice versa.

**Bandwidth:** A range of frequencies, usually the difference between the upper and lower limits of the range, typically expressed in megahertz (MHz). Bandwidth may also be used to describe the information-carrying capacity of a medium, for example optical fiber bandwidth is specified in megahertz kilometers (MHz.km).

**Bonding:** The permanent joining of metallic parts to form an electrically conductive path that will assure electrical continuity and the capacity to conduct safely any current likely to be imposed on it.

**Bridged Tap:** The multiple appearances of the same cable pair or optical fiber at several distribution points. Also known as parallel connections.

**Bridging:** A means of providing through connections between conductors or pairs that are terminated on connecting blocks. These through connections are commonly provided by means of individual metallic "bridging" clips or multiple "bridging" clips that are housed in a plastic insulator.

**Building Distributor (BD):** The international term for intermediate cross-connect; the location where the building backbone cable(s) terminates and at which connections to the campus backbone cable(s) may be made.

**Bundled Cable:** An assembly of two or more cables continuously bound together to form a single unit prior to installation (sometimes referred to as loomed, speed-wrap or whip cable constructions).

**Cabling:** A combination of cables, wire, cords and connecting hardware used in the telecommunications infrastructure.

**Cabling Subsystem 1:** Cabling from the equipment outlet to Distributor A, Distributor B, or Distributor C.

**Cabling Subsystem 2:** Cabling between Distributor A and either Distributor B or Distributor C (if Distributor B is not implemented).

**Cabling Subsystem 3:** Cabling between Distributor B and Distributor C.

**Campus Backbone:** Cabling between buildings that share telecommunications facilities.

**Campus Distributor (CD):** The international term for main cross-connect; the location where the campus backbone cabling begins.

## Category:

**1. ANSI/TIA/568-C family of Standards:** These North American standards define mechanical and electrical performance of balanced twisted-pair cabling and components by a category of performance (i.e. category 3, category 5e, category 6, category 6A, and category 8).

**2. ISO/IEC 11801 2nd edition and addenda:** These international standards define mechanical and electrical performance of telecommunications cabling by a class of performance (class C, class D, class E, class EA, class F, and class FA) and components by a category or performance (i.e. category 3, category 5, category 6, category 6A, category 7, and category 7A).

**Channel:** The end-to-end transmission path connecting any two points between application specific equipment. Equipment and work area cords, with the exception of the modular interface connecting to equipment, are included in the channel.

**Class:** See category.

**Common Mode Transmission:** A transmission scheme where voltages appear equal in magnitude and phase across a conductor pair with respect to ground; may also be referred to as longitudinal mode.

**Consolidation Point (CP):** A connection facility within Cabling Subsystem 1 for interconnection of cables extending from building pathways to the equipment outlet.

**Cord:** An assembly of cord cable with a plug on one or both ends used to connect telecommunications equipment to horizontal or backbone cabling.

**Cross-connect:** A facility enabling the termination of cables as well as their interconnection or cross-connection with other cabling or equipment; also known as a distributor.

**Cross-connection:** A connection scheme between cabling runs, subsystems and equipment using patch cords or jumpers that attach to connecting hardware on each end.

**Crosstalk:** Noise or interference caused by electromagnetic coupling from one signal path to another. Crosstalk performance is generally expressed in decibels.

**Data center:** A building or portion of a building whose primary function is to house a computer room and its support areas.

**Decibel (dB):** A standard unit for expressing transmission gain or loss as derived from a ratio of signal voltages or power.

**Delay Skew:** The difference in propagation delay between the fastest and slowest pair in a cable or cabling system.

**Demarcation Point (DP):** A point where operational control or ownership changes.

**Differential Mode Transmission:** A transmission scheme where voltages appear equal in magnitude and opposite in phase across a twisted-pair with respect to ground; may also be referred to as balanced mode.

**Distributor A:** Optional connection facility that is cabled between the equipment outlet and Distributor B or Distributor C in a hierarchical star topology; representing the horizontal cross-connect (HC) in a typical commercial building environment.

**Distributor B:** Optional intermediate connection facility that is cabled to Distributor C in a hierarchical star topology; representing the intermediate cross-connect (IC) in a typical commercial building environment.

**Distributor C:** Central connection facility in a hierarchical star topology; representing the main cross-connect (MC) in a typical commercial building environment.

**Electromagnetic Compatibility (EMC):** The ability of a system to minimize radiated emissions and maximize immunity from external noise sources.

**Electromagnetic Interference (EMI):** The interference in signal transmission or reception caused by the radiation of electrical and magnetic fields.

**Entrance Facility (EF):** The location where both public and private network telecommunications services (e.g. cables, antennae, etc.) enters into a building and/or where backbone pathways linking to other buildings in a campus environment are located. The entrance facility may contain public network interface devices as well as telecommunications equipment. Entrance facilities are often used to house electrical protection equipment and connecting hardware for the transition between outdoor and indoor cable.

**Entrance Point, Telecommunications:** The point of emergence of telecommunications conductors through an exterior wall, a concrete floor slab, or from a rigid metal conduit or intermediate metal conduit.

**Equipment Outlet (EO):** Outermost connection facility in a hierarchical star topology; representing the telecommunications outlet/connector (TO) in a typical commercial building environment.

**Equipment Room (ER):** A centralized space for telecommunications equipment that serves the occupants of the building or multiple buildings in a campus environment. An equipment room is considered distinct from a telecommunications room because it is considered to be a building or campus serving (as opposed to floor serving) facility and because of the nature or complexity of the equipment that it contains.

**Equipment Room, Telecommunications:** A centralized space for telecommunications equipment that serves the occupants of the building. An equipment room is considered distinct from the telecommunications room because of the nature and complexity of the equipment it houses.

**Ethernet:** A family of copper and optical fiber communications technologies for local area networks (LANs).

**Far-end Crosstalk (FEXT):** Crosstalk measured at the opposite end from which the disturbing signal is transmitted.

**Fiber Optic Transmission:** See Optical Fiber Transmission.

**Fibre Channel:** A high-speed network communications technology (commonly running at 2, 4, 8, or 16 Gb/s speeds) that can be deployed over optical fiber or twisted-pair cabling and is primarily used for storage networking.

**Floor Distributor (FD):** The international term for horizontal cross-connect; the distributor used to connect between the horizontal cable and other cabling subsystems or equipment.

**Fully Shielded twisted-pair (S/FTP):** A balanced twisted-pair cable containing balanced twisted-pair conductors that are individually foil shielded, surrounded by an overall metallic braid, and bound in a single cable sheath.

**Ground:** A conducting connection, whether intentional or accidental, between an electrical circuit (telecommunications) or equipment and earth, or to some conducting body that serves in place of the earth.

**Hertz (Hz):** A measure of frequency as defined in units of cycles per second.

**Horizontal Cabling:** Alternate name for Cabling Subsystem 1 in a typical commercial building environment.

**Horizontal Cross-connect (HC):** A cross-connect of horizontal cabling to other cabling, e.g., horizontal, backbone, or equipment.

**Hybrid Cable:** An assembly of two or more cables, of the same or different types or categories, covered by one overall sheath.

**InfiniBand:** A switched network communications technology featuring point-to-point bidirectional serial links connecting I/O networks such as storage area networks (SAN) or processors with high-speed peripheral devices such as disks.

#### Insertion loss:

1. In a copper twisted-pair system, the voltage loss resulting from the insertion of a connector into a transmission line.

2. In an optical fiber system, the loss of optical power caused by inserting a component, such as a connector, coupler or splice, into a previously continuous optical path.

**Insulation Displacement Connection (IDC):** A wire connection device that penetrates the insulation of a copper wire when it is being inserted (punched-down) into a metal contact, allowing an electrical connection to be made.

**Interbuilding Backbone:** Telecommunications cable(s) that is part of the campus subsystem that connects one building to another.

**Interconnection:** A connection scheme that provides direct access to the cabling infrastructure and the ability to make cabling system changes using equipment cords.

**Intermediate Cross-Connect (IC):** The connection point between a backbone cable that extends from the main cross-connect (first-level backbone) and the backbone cable from the horizontal cross-connect (second-level backbone).

**Intrabuilding Backbone:** Telecommunications cable(s) that are part of the building /subsystem that connect one equipment room to another.

**Jumper:** An assembly of twisted-pairs without connectors on either end used to join telecommunications links at a cross-connect.

**Laser Optimized:** A multimode optical fiber with a refractive index profile optimized for use with laser light sources such as a vertical-cavity surface-emitting laser, or VCSEL.

**Link:** An end-to-end transmission path provided by the cabling infrastructure. Cabling links include all cables and connecting hardware that comprise the horizontal or backbone subsystems. Equipment and work area cables are not included as part of a link.

**Local Area Network (LAN):** A geographically limited data communications system for a specific user group consisting of a group of interconnected computers, sharing applications, data, and peripheral devices such as printers and CD-ROM drives intended for the local transport of data, BAS services, video, and voice.

**Longitudinal Conversion Loss (LCL):** A measure (in dB) of the differential voltage induced on a conductor pair as a result of subjecting that pair to longitudinal voltage. LCL is a measure of circuit balance.

**Main Cross-connect (MC):** A cross-connect for first level backbone cables, entrance cables, and equipment cables.

**Modular Jack:** A telecommunications outlet/connector for wire or cords as defined in the FCC Part 68 Subpart F. Modular jacks can have 4, 6 or 8 contact positions, but not all the positions need be equipped with contacts.

**Modular Plug:** A telecommunications connector for wire or cords as defined in the FCC Part 68 Subpart F. Modular plugs can have 4, 6 or 8 contact positions, but not all the positions need be equipped with contacts.

**Multimode Optical Fiber:** An optical fiber that will allow multiple modes of light to propagate. The fiber may be either a graded-index or step-index fiber. Multimode optical fibers have a much larger core than singlemode fibers.

**Multi-user Telecommunications Outlet Assembly (MuTOA):** A grouping in one location of several telecommunications/outlet connectors.

**Nanosecond (ns):** One billionth of a second (10<sup>-9</sup> seconds).

**Near-end Crosstalk (NEXT Loss):** The undesired coupling of a signal from one pair of wires to another. Signal distortion as a result of signal coupling from one pair to another at various frequencies.

**Network Demarcation Point:** The point of interconnection between the local exchange carrier's telecommunication facilities and the telecommunications systems wiring and equipment the end user's facility. This point shall be located on the subscriber side of the telephone company's protector or the equivalent thereof in cases where a protector is not required.

**Open Office Cabling:** The cabling that distributes from the telecommunications closet to the open office area utilizing a consolidation point or multi-user telecommunications outlet assembly.

**Optical Fiber Transmission:** A communications scheme whereby electrical data is converted to light energy and transmitted through optical fibers.

**Outlet/Connector, Telecommunications:** A connecting device in the work area on which horizontal cable terminates.

**Patch Cord:** A length of cable with connectors on one or both ends used to join telecommunications links at a cross-connect.

**Patch Panel:** Connecting hardware that typically provides means to connect horizontal or backbone cables to an arrangement of fixed connectors that may be accessed using patch cords or equipment cords to form cross-connections or interconnections.

**Pathway:** A facility (i.e. conduit) for the placement and protection of telecommunications cables. Same as raceway or ducting.

**Plenum:** A compartment or chamber to which one or more air ducts are connected and that forms part of the air distribution system.

**Private Branch Exchange (PBX):** A private switching system usually serving an organization, such as a business, located on the customer's premises. It switches calls both inside a building or premises and outside to the telephone network, and can sometimes provide access to a computer from a data terminal.

**Propagation Delay:** The amount of time that passes between when a signal is transmitted and when it is received at the opposite end of a cable or cabling.

**Punch Down:** A method for securing wire to a quick clip in which the insulated wire is placed in the terminal groove and pushed down with a special tool. As the wire is seated, the terminal displaces the wire insulation to make an electrical connection. The punch down operation may also trim the wire as it terminates.

**Return Loss:** Noise or interference caused by impedance discontinuities along the transmission line at various frequencies; may be called echo. Return loss is expressed in decibels.

**Shielded twisted-pair (F/UTP):** A balanced twisted-pair cable surrounded by foil (screen) and bound in a single cable sheath.

**Shielded twisted-pair (F/FTP):** A balanced twisted-pair cable where each twisted pair is surrounded by an individual foil, and all four pairs are surrounded by an overall foil (screen), bound in a single cable sheath.

**Singlemode Optical Fiber:** An optical fiber that will allow only one mode of light to propagate; this fiber is typically a step-index fiber.

**Small Form Factor:** An optical fiber connector and adapter that provide for two strands of fiber in a footprint similar to an unshielded twisted-pair (RJ-style) plug and socket.

#### Star Topology:

1. A method of cabling each telecommunications outlet/connector directly to a cross-connect in a horizontal cabling subsystem.
2. A method of cabling each cross-connect (HC and IC) to the main cross-connect (MC) in a backbone cabling subsystem.

**Surge:** A rapid rise in current or voltage, usually followed by a fall back to a normal level; also referred to as a transient.

**Telecommunications:** Any transmission, emission or reception of signs, signals, writings, images, sounds or information of any nature by cable, radio, visual, optical or other electromagnetic systems.

**Telecommunications Room (TR):** An enclosed space for housing telecommunications equipment, cable terminations, and cross-connect cabling used to serve work areas located on the same floor. The telecommunications room is the typical location of the horizontal cross-connect and is considered distinct from an equipment room because it is considered to be a floor serving (as opposed to building or campus serving) facility.

**Topology:** The physical or logical layout of links and nodes in a network. These include star, ring, and bus configurations.

**Transfer Impedance:** A measure (in milliohms/meter) of shield effectiveness.

**Trunk:** A communication line between two switching systems. The term "switching systems" typically includes equipment in a central office (the telephone company) and PBXs. A tie trunk connects PBXs. Central office trunks connect a PBX to the switching system at the central office.

**Unshielded Twisted-Pair (UTP):** A balanced twisted-pair cable bound in a single cable sheath.

**Work Area:** A space, typically in a commercial building, where the occupants interact with telecommunications equipment.

**Work Area Cord:** See Cord.

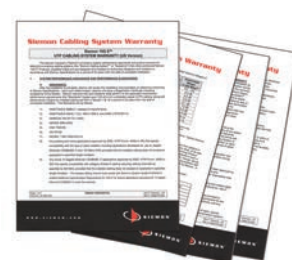
## Acronyms & Abbreviations

ACR	Attenuation-to-crosstalk ratio
ANSI	American National Standards Institute
AWG	American wire gauge
BAS	Building Automation System
BD	Building distributor
BER	Bit Error Rate
CD	Campus distributor
CP	Consolidation point
CSA	Canadian Standards Association
dB	Decibel
DA	Distributor A
DB	Distributor B
DC	Distributor C
EF	Entrance facility
EMC	Electromagnetic compatibility
EMI	Electromagnetic interference
EO	Equipment Outlet
ER	Equipment room
FCC	Federal Communications Commission
FD	Floor distributor
ft	Feet
FEXT	Far-end crosstalk
F/UTP	Shielded or screened twisted-pair
Gb/s	Gigabit per second
GHz	Gigahertz
HC	Horizontal cross-connect
HDA	Horizontal Distribution Area (same as Zone Distributor in ISO)
HVAC	Heating, ventilation and air conditioning
IC	Intermediate cross-connect
IDA	Intermediate Distribution Area
IDC	Insulation displacement connection
IEC	International Electrotechnical Commission
IEEE®	Institute of Electrical and Electronic Engineers®
ISO	International Standards Organisation
Kb/s	Kilobit per second
Km	Kilometer
LAN	Local area network
lbf	Pounds force
LED	Light emitting diode
m	Meter
µm	Micron; one millionth of a metre (0.000001); also micrometer
Mb/s	Megabits per second
MC	Main cross-connect
MDA	Main Distribution Area (same as Main Distribution in ISO)
MPO	Multi-fiber push on
MTP®	Registered trademark of US Connec MPO-Style Connector
MHz	Megahertz
MHz.km	Megahertz kilometer
mm	Millimeter
MuTOA	Multi-user Telecommunications Outlet Assembly
NAS	Network Attached Storage
NEXT	Near-end crosstalk
nm	Nanometer
POE	Power over Ethernet
PBX	Private branch exchange
PDU	Power Distribution Unit
RF	Radio frequency
RMS	Rack mount space
SAN	Storage Area Network
SC	Subscriber connector
S/FTP	Fully shielded twisted-pair
TIA	Telecommunications Industry Association
TO	Telecommunications outlet/connector
UL®	Underwriters Laboratories Inc.®
UPS	Uninterruptible power supply
USOC	Universal Service Order Code
UTP	Unshielded twisted-pair
Vrms	Volts root mean square
WA	Work area
ZDA	Zone Distribution Area (same as Local Distribution Point in ISO)

# Warranty

Siemon delivers a range of product and system warranties:

- A one (1) year repair or replace warranty on Tools and Testers and active electronics (ie MapIT G2)
- A five (5) year repair or replace warranty for all Siemon Products (cabling system connecting hardware) when not installed in a certified Siemon Cabling System®
- An extended Siemon Cabling System Warranty covering application assurance, product, quality and performance margins when designed and installed by a Siemon Certified Installer<sup>SM</sup> and registered with Siemon.



\*Please contact your local Siemon Company sales office or visit Siemon's website for more information.

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Siemon warrants its products to be free from defects in material and workmanship. Should any product fail to conform, Siemon will, upon written notice from Distributor of such non-conforming product, within five (5) years after date of purchase, either replace it F.O.B. original point-of-delivery, or refund the purchase price, at Siemon's option, and shall have the right to require Distributor to return the defective product to Siemon's plant unless such return is impracticable. The remedies provided herein shall be Buyer's sole and exclusive remedies, and no statement or recommendation not contained herein shall have any force or effect unless in writing and signed by an authorized officer of Siemon. Siemon makes no warranty, expressed or implied, as to merchantability or fitness for a particular purpose of any product sold. In no event will Siemon be liable for any special incidental, or consequential damages, where asserted in contract, tort, or otherwise. This warranty applies only to those cabling products that are used to terminate or cross-connect telecommunications cabling. Warranty terms for other categories of cabling products (e.g., tools, test equipment, protection apparatus, etc.) may vary.

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