CORNING

Plug & Play[™] Systems



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Features and Benefits

Universal wired modular system components

Enable moves, adds, and changes (MACs) without polarity concerns; provides a simple migration path between two-fibre and parallel optics applications

Standard and low-loss components

Provide means of meeting increasingly stringent network performance requirements

$\operatorname{Corning}^{\scriptscriptstyle \odot}$ ClearCurve $^{\scriptscriptstyle \odot}$ OM3 and OM4 fibre offers enhanced bend performance

Allows tighter cable routing without negatively impacting system performance

100G-ready performance

Ensures product will meet the requirements of 100G Ethernet applications

Parallel optics tested to a maximum skew of 0.75 nanoseconds

Ensures operation in high-data-rate Ethernet and InfiniBand applications

MTP® PRO Connector and Push-Pull Boot

Allows for pinning and polarity change in the field while enabling easier mating and unmating in extremely dense applications

Reduced furcation size

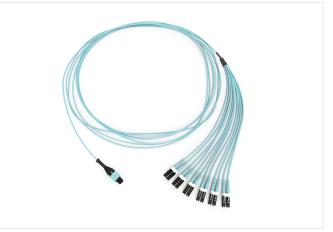
Eliminates preferential bend issues commonly associated with ribbon cables and furcation legs

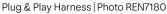




Plug & Play MTP Trunks |Photo REN8033

Plug & Play Module | Photo REN1995





Specifications

Connected Mated Pair					
	Insertion Loss OM3/OM4	Insertion Loss OS2			
LC	0.5 dB	0.5 dB			
SC	0.5 dB	0.5 dB			
MTP PRO Connector	0.5 dB	0.75 dB			

Modules/Harnesses					
	Insertion Loss OM3/OM4	Insertion Loss OS2			
LC	1.0 dB	1.25 dB			
SC	1.0 dB	1.25 dB			

Optical Distribution Frames

The Corning Four-Post Rack provides a platform to support high-density fibre management systems. The platform can be deployed in data centre, central office, and headend applications.

The rack is based on a robust steel Triple-U rail system that provides exceptional strength for an installed equipment load of up to 1,360 kg when mounted using cage nuts and centrally located in the rack front to rear. This load rating makes it suitable for a wide variety of applications supporting both passive optical patch panels as well as the heaviest of switching equipment.

The modular approach of the Corning Four-Post Rack allows for accessories such as cable managers and patch cord managers as well as doors and side panels to be added as applications require.

Features and Benefits

Modular construction

Frame can be quickly assembled by a single installer. Easily scalable to dual- or multi-frame configurations.

Accessories such as patch cord management, cable manager, doors and side panels available $% \left(\mathcal{A}_{n}^{\prime}\right) =\left(\mathcal{A}_{n}^{\prime}\right) \left(\mathcal{A}$

Scalable to any application at point of installation or in the future.

EIA 310 compliant Compliant for global use.



4-Post Rack | Photo REN3689

Optical Distribution Frames

Part Number	Product Description	
PR4DDJAB1NNNNNNNOPFWF	4-Post Rack, front and rear cable access, 19-in rack mount, 2.2 m, 23-in depth, grey	
PFCMCV1023WF	Cable Manager, vertical, top, (W x D) 25.4 x 58.42 cm, grey	
PFSJMPT22M10WF	Patch Cord Manager, single vertical, with pass-through, (H x W) 2.2 m x 25.4 cm	
PFJMDR22M10WF	Patch Cord Manager, door, vertical, (H x W) 2.2 m x 25.4 cm	
PFSJP22M1023SPWF	Side Panel, (H x W x D) 2.2 m x 25.4 cm x 58.42 cm	
BCE-KIT	Rack Accessory, Brush Cable Entry Grommet Kit	
BCE-KIT-SPLT	Rack Accessory, Split Brush Cable Entry Grommet Kit	
PFTT19WF	Rack Accessory, 19-in Rack Top Trough, grey	
PF4PRBLTCVR19WF	Rack Accessory, 4-Post Rack Base Bolt Cover, grey	La
PF4PRBKTSTRWF	Rack Accessory, Strain-Relief Side Bracket, grey	
EDGE-HM-02U	Rack Accessory, EDGE™ Horizontal Patch Cord Manager, 2U	
EDGE-HM-03U	Rack Accessory, EDGE Horizontal Patch Cord Manager, 3U	Naga and
EDGE-BRP-01U-DB	EDGE Blank Rack Panel, black, 1U	

Pretium[™] Connector Housings (PCH)

The rack-mountable PCH housings are available in 1U, 2U, and 4U sizes and mount in 19-in racks or cabinets. Combined with the modules, panels, harnesses, trunks, and patch cords, they provide a tip-to-tip solution for your fibre optic network.



PCH-01U | Photo LAN1226



PCH-M3-01U | Photo LAN2923





CPP-01U-PNL | Photo LAN1361



CPP-ITM-PNL | Photo LAN2927



CPP-M3-PNL | Photo LAN1362



PCH-02U | Photo LAN2814

PCH-040 | PHOLO LAN2015

Ordering Information							
Part Number	Height	Dimensions (W x D x H)	Packaging (W x D x H)	Shipping Weight	Number of Panels per Housing		
PCH-01U	1U	432 mm x 406 mm x 44.45 mm	615.9 mm x 508 mm x 120.7 mm	5 kg (11 lb)	2		
CPP-01U-PNL	1U	482.6 mm x 10.16 mm x 44.5 mm	482.6 mm x 130.3 mm x 88.9 mm	0.227 kg (0.5 lb)	2		
CPP-M3-01U	1U	482.6 mm x 10.16 mm x 44.45 mm	482.6 mm x 130.3 mm x 88.9 mm	0.227 kg (0.5 lb)	3		
PCH-M3-01U	1U	426.72 mm x 323.85 mm x 44.45 mm	511.3 mm x 438.15 mm x 120.65 mm	1.75 kg (3.85 lb)	3		
PCH-M3-ITM	1U	431.8 mm x 358.14 mm x 44.45 mm	511.30 mm x 438.15 mm x 120.65 mm	2.27 kg (5 lb)	3		
PCH-02U	2U	431.8 mm x 419.1 mm x 88.9 mm	584.2 mm x 558.8 mm x 152.4 mm	5.7 kg (12.6 lb)	4		
PCH-04U	4U	431.8 mm x 406.4 mm x 177.8 mm	562.1 mm x 482.6 mm x 279.4 mm	7.5 kg (16.5 lb)	12		

For part numbers CPP-01U-PNL and CPP-M3-01U, external strain-relief must be ordered.

Pretium[™] Wall-Mountable Housings (PWH)

PWH housings are available in 1-, 2-, 4-, 6-, and 12-panel/module sizes. Combined with the modules, panels, harnesses, trunks, and patch cords, they provide a tip-to-tip solution for your fibre optic network.



SMH-01M | Photo LAN6999



Pretium Wall-Mountable Housing, PWH-06P



Pretium Wall-Mountable Housing, PWH-02P



Pretium Wall-Mountable Housing, PWH-04P



PWH-12P | Photo LAN2938

Ordering Information						
Part Number	Dimensions (W x D x H)	Packaging (W x D x H)	Shipping Weight	Number of Panels per Housing		
SMH-01M	160 mm x 140 mm x 50 mm	196.85 mm x 171.45 mm x 54.10 mm	0.5 kg (1.0 lb)	1		
PWH-02P	444.5 mm x 101.6 mm x 238.76 mm	543.05 mm x 387.35 mm x 234.95 mm	5 kg (11 lb)	2		
PWH-04P	533.4 mm x 134.62 mm x 365.76 mm	685.8 mm x 596.9 mm x 342.9 mm	10.4 kg (23 lb)	4		
PWH-06P	533.4 mm x 134.62 mm x 365.76 mm	685.8 mm x 596.9 mm x 342.9 mm	10.4 kg (23 lb)	6		
PWH-12P	825.5 mm x 134.62 mm x 365.76 mm	977.9 mm x 596.9 mm x 342.9 mm	10.9 kg (24 lb)	12		

Plug & Play[™] Trunks

Plug & Play[™] trunk connections are available in fibre counts of 12 to 144 fibres with MTP[®] connectors on both ends, or terminated with MTP connectors on one end of the trunk and single or dual fibre connectors on the other end for applications requiring one end of the trunk to connect directly into system equipment or patch panels. Using the MTP connector, a 12-fibre push-pull optical connector with a footprint similar to the SC simplex connector, high density and rapid deployment with space savings and minimal error can be realised.

The MTP connector, used in conjunction with high-density loose tube cable provides a space-saving of up to 45% and three times the fibre-tray capacity over traditional bulkier cabling solutions. Cable tray weight and cooling air impediment are minimised. Optional brackets are available for mounting the furcation points into equipment racks and cabinets.



Plug & Play MTP Trunk | Photo REN8033



Plug & Play Hybrid Trunk | Photo REN8035

Plug & Play Trunk Specifications

Mechanical Characteristics						
Fibre Count	Nominal Outer Diameter	Weight	Minimum Bend Radius Installation	Minimum Bend Radius Operation	Crush Resistance (reversible)	Maximum Tensile Strength, Short Term
12	4.5 mm	20 kg/km	90 mm	45 mm	1000N/10 cm	450N
24	7.2 mm	43 kg/km	144 mm	72 mm	1000N/10 cm	450N
36	7.2 mm	43 kg/km	144 mm	72 mm	1000N/10 cm	450N
48	8.3 mm	62 kg/km	166 mm	83 mm	1000N/10 cm	450N
72	8.3 mm	62 kg/km	166 mm	83 mm	1000N/10 cm	660N
96	11.3 mm	94 kg/km	226 mm	113 mm	1000N/10 cm	660N
144	11.3 mm	94 kg/km	226 mm	113 mm	1000N/10 cm	660N

Optical Performance

Multimode				
Trunks	Reflectance Connector A	Reflectance Connector B	Max. Insertion Loss Connector A	Max. Insertion Loss Connector B
MTP UPC - MTP UPC	≤ -20 dB	≤ -20 dB	0.50 dB	0.50 dB
MTP UPC - LC/SC	≤ -20 dB	≤ -20 dB	0.50 dB	0.50 dB
Single-Mode				
MTP APC - MTP APC	≤ -65 dB	≤ -20 dB	0.75 dB	0.75 dB
MTP APC - LC/SC UPC	≤ -65 dB	≤ -35 dB	0.75 dB	0.50 dB
MTP APC- LC/SC APC	≤ -65 dB	≤ -58 dB	0.75 dB	0.50 dB

Other configurations available upon request.

Connector insertion-loss values are for reference as Corning tests the complete trunk including both connectors.

Plug & Play[™] Trunk Specifications

		Wooden Reel		
	Cardboard Box*	Reel A	Reel B	
	480 x 90 x 480 mm	600	800	Flange
Fibre Count	530 x 108 x 530 mm	415	400	Height
	574 x 128 x 572 mm	300	480	Core
	756 x 756 x 240 mm	-	-	-
12	1-100 m	100.5-250 m	250.5-999 m	-
24	1-100 m	100.5-250 m	250.5-999 m	-
36	1-100 m	100.5-250 m	250.5-999 m	-
48	1-100 m	100.5-250 m	250.5-999 m	-
72	1-100 m	100.5-250 m	250.5-999 m	-
96	1-100 m	-	100.5-999 m	-
144	1-100 m	-	100.5-999 m	-

Cardboard packaging size will depend on fibre counts and trunk lengths.

50 μm multimode fibre macrobend loss \leq 0.2 dB at 850 nm for two turns around 7.5 mm radius mandrel.

For additional information, please contact Corning Customer Care at +00 800-2676-4641 or email cc.emea@corning.com.

MTP[®] PRO Trunks

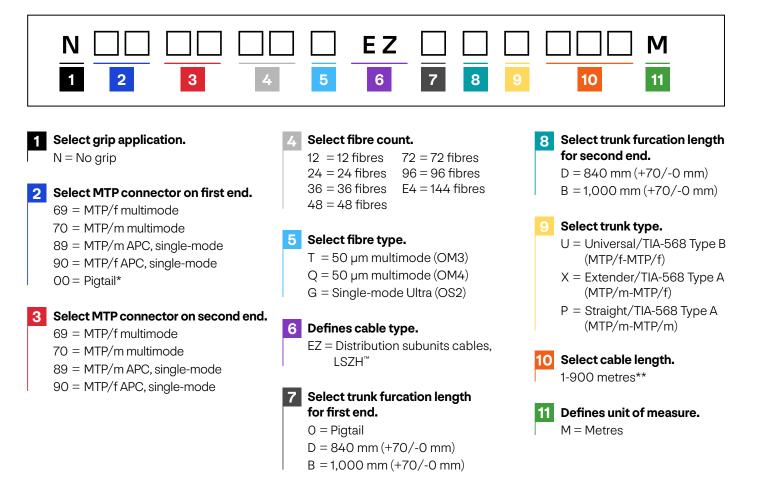
Plug & Play[™] MTP[®] PRO trunks provide the backbone of the Plug & Play structured cabling. With MTP PRO connectors with push-pull boot on both ends of the cable, these trunks are designed to interface with the Plug & Play modules.

MTP PRO connectors with push-pull boot enable a simple one-step, colour-coded polarity change without the need to remove the the connector housing along with the capability for field-friendly pin changes while allowing easy mating and unmating connections in extremely dense applications.



Plug & Play MTP Trunks | Photo REN8033 and REN8034

Ordering Information



*Pigtail available on straight polarity only.

**Trunk length is measured from furcation point to furcation point.

MTP[®] PRO Hybrid Trunks

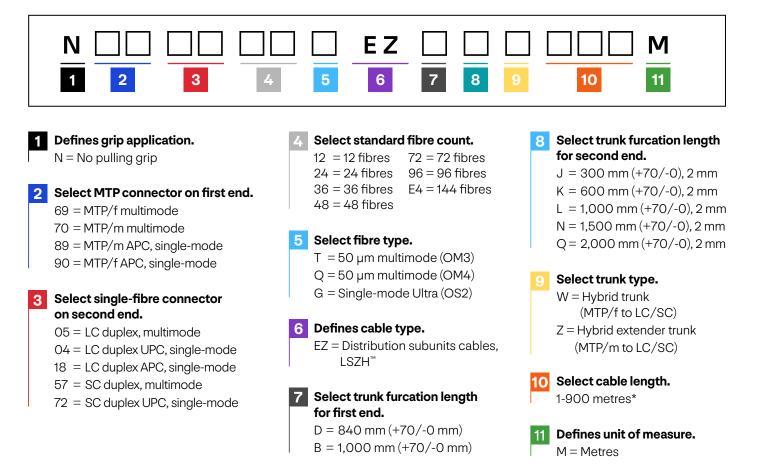
Plug & Play[™] MTP[®] PRO hybrid trunks are terminated with an MTP PRO connector with push-pull boot on one end of the trunk and LC or SC connectors on the other end for applications requiring one end of the trunk to connect directly into system equipment or patch panels.

MTP PRO connectors with push-pull boot enable a simple one-step, colour-coded polarity change without the need to remove the the connector housing along with the capability for field-friendly pin changes while allowing easy mating and unmating connections in extremely dense applications.



Plug & Play Hybrid Trunks | Photo REN8035

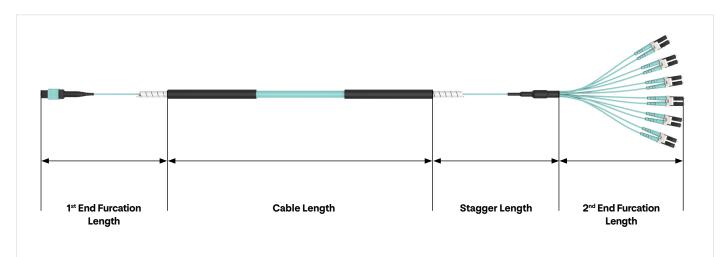
Ordering Information



*Trunk length is measured from furcation point to furcation point.

MTP[®] PRO Hybrid Trunks

Staggering Information



Plug & Play[™] Hybrid Trunks - Top View | Photo REN7174

Total product length = 1^{st} end furcation length + cable length + stagger length + 2^{nd} end furcation length. Staggering depends on the fibre count.

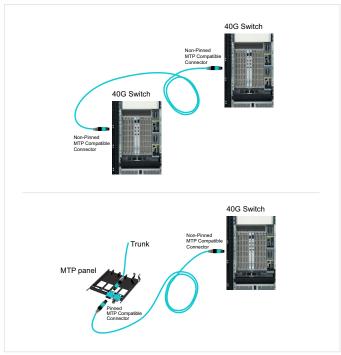
Stagger Scheme						
Leg Groups	12 Fibres	24-36 Fibres	48-72 Fibres	96 Fibres	144 Fibres	
1-3	-	22 cm	32 cm	42 cm	52 cm	
4-6	-	-	22 cm	32 cm	42 cm	
7-9	-	-	-	22 cm	32 cm	
10-12	-	-	-	-	22 cm	

MTP[®] PRO Patch Cords

MTP[®] PRO patch cords allow for the seamless migration to higher data rates for multimode systems in the data centre when used in conjunction with our universal trunks. The patch cords are based around pinned or non-pinned 12-fibre MTP connectors. Pictured here are the most common applications for this type of patch cord to make ordering easier.

The MTP assemblies have the same connector size and cable footprint as duplex LC patch cords used today. The density, airflow, and cable management advantages are preserved as you migrate to higher data rates.

MTP PRO connectors with push-pull boot enable a simple one-step, colour-coded polarity change without the need to remove the the connector housing along with the capability for field-friendly pin changes while allowing easy mating and unmating connections in extremely dense applications.

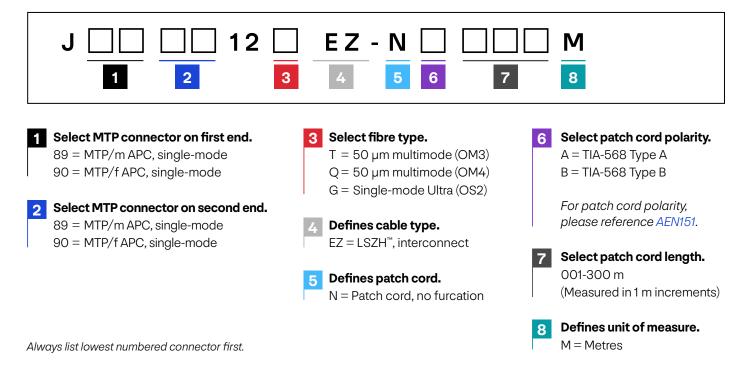


MTP PRO Patch Cords | Drawings ZA-3866 and ZA-3868



MTP PRO Patch Cords | Photos REN8032 and REN8031

Ordering Information

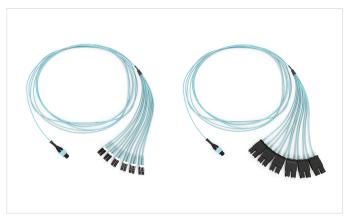


Plug & Play[™] Harnesses

A harness is an ultra-slim 12-fibre (2.0 mm) pre-terminated fibre cable with an MTP® PRO connector with push-pull boot on one end and 12 simplex LC/SC or six duplex LC/SC connectors on the other end. The majority of the harness is a single cable which breaks out into six or 12 legs to enable connectivity to the switch ports.

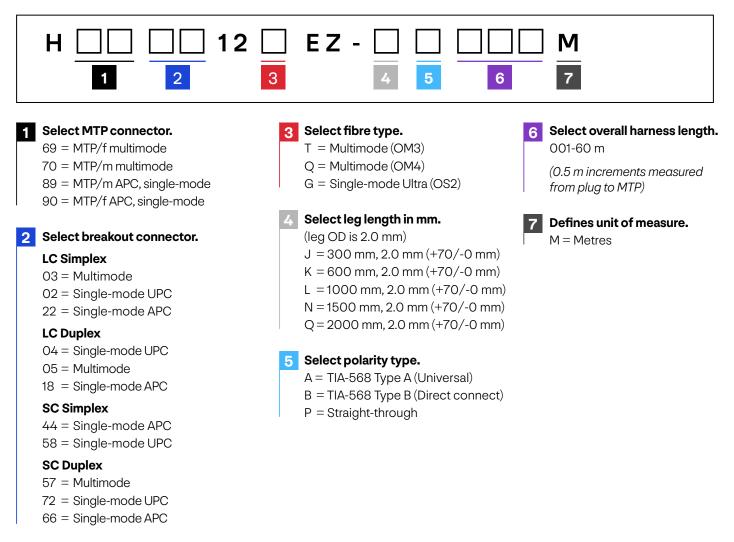
Advanced optical harnesses with high-fibre-count MTP PRO connectors are designed to enable parallel optic conversion for 40 and 100G applications.

MTP PRO connectors with push-pull boot enable a simple one-step, colour-coded polarity change without the need to remove the the connector housing along with the capability for field-friendly pin changes while allowing easy mating and unmating connections in extremely dense applications.



Plug & Play[™] Harnesses | Photos REN7180 and REN7177

Ordering Information



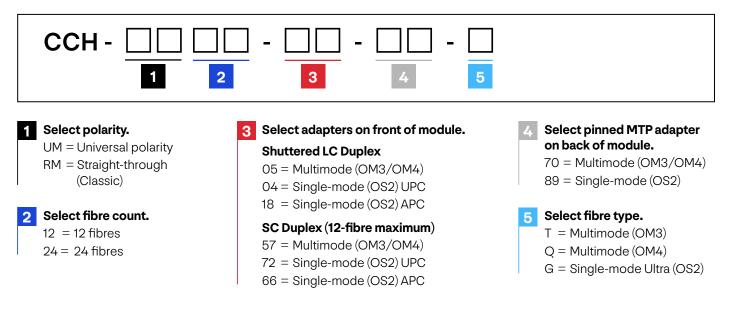
Plug & Play[™] Modules

Plug & Play[™] universal systems modules are used to break out the 12-fibre MTP[®] connectors on trunk cables into LC or SC duplex connectors to facilitate patching into system equipment ports, patch panels, or work area outlets. LC duplex adapters feature hinged VFL-compatible shutters that move up and out of the way when the connector is inserted. Specially designed indents in the shutters ensure that the end faces of the connectors are never touched. These shutters replace the standard dust caps that typically, once removed, are never replaced, exposing the interior end faces to dust particles and possible damage.



Plug & Play Module | Photo LAN1797

Ordering Information



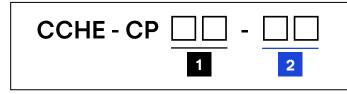
MTP® Adapter Panels

Plug & Play[™] MTP adapter panels are used in applications where the pre-terminated cables are routed directly from the equipment to the piece of interconnect hardware. This provides an efficient way to securely mate two or more connectors: They are a simple interface to connect trunk harnesses to trunks, standard trunks to extender trunks, or can facilitate the use of 40G electronics.



MTP Adapter Panel | Photo LAN3017

Ordering Information



1 Select fibre count.

36 = 36 fibres, 3 MTP adapters

72 = 72 fibres, 6 MTP adapters

96 = 96 fibres, 8 MTP adapters

E4 = 144 fibres, 12 MTP adapters

2 Select fibre type.

E3 = Multimode (OM3, OM4)

90 = Single-mode (OS2)

Duplex Patch Cords

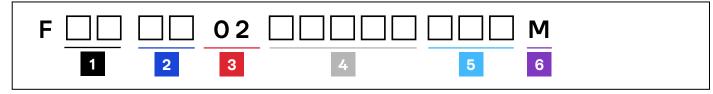
Corning offers the most comprehensive line of connectors and factory-terminated cables, including patch cords to meet or exceed all industry standards for reflectance and insertion loss.

Cable assemblies are a basic component for any network infrastructure projects you may have. Corning's pre-terminated assemblies use only high-quality Corning optical fibres to ensure total performance quality.



LC Duplex Patch Cord | Photo F050502T2Z20xxxM

Ordering Information



1 Select connector on first end.

Single-Mode

- UA = LC Duplex Uniboot APC
- UU = LC Duplex Uniboot UPC
- PA = LC Duplex Uniboot Pull-Tab APC
- PU = LC Duplex Uniboot Pull-Tab UPC
- 18 = LC Duplex APC
- 04 = LC Duplex UPC
- YA = SC Duplex Uniboot APC
- YU = SC Duplex Uniboot UPC
- 66 = SC Duplex APC
- 72 = SC Duplex UPC

Multimode

- UM = LC Duplex Uniboot
- PM = LC Duplex Uniboot Pull-Tab
- 05 = LC Duplex
- YM = SC Duplex Uniboot
- 57 = SC Duplex

2 Select connector on second end. See selection under 1.

Determines fibre count. 0.0 = 0.0 fibres

02 = 2 fibres

Select cable code based on desired construction.

Please see table below for 2-fibre duplex LSZH[™]/FRNC cables.

Fibre Type	ОМЗ	OM4	OS2 Ultra
Fibre Code		Q	G
Uniboot 1.6 mm	TNZ16	QNZ16	GNZ16
Uniboot 2.0 mm	TNZ20	QNZ20	GNZ20
Zipcord 1.6 mm	T2Z16	Q2Z16	G2Z16
Zipcord 1.8 mm	T2Z18	Q2Z18	G2Z18
Zipcord 2.0 mm	T2Z20	Q2Z20	G2Z20



Select cable length.

001-199 (tip-to-tip)

Defines unit of measure.

M = Metres

Other configurations available upon request.

Select connector code based on the type of adapter used at the patch panel and the electronic interface connector.

Always use the lowest code first when constructing the part number; numbers go before letters.

Letter codes follow alphabetical order.

Optical Performance

Multimode				
Connector	Reflectance Connector A	Reflectance Connector B	Max. Insertion Loss Connector A	Max. Insertion Loss Connector B
LC	≤ -40 dB	≤ -40 dB	0.60 dB	0.60 dB
SC	≤ -40 dB	≤ -40 dB	0.60 dB	0.60 dB
Single-Mode				
LC UPC	≤ -45 dB	≤ -45 dB	0.25 dB	0.25 dB
LC APC	≤ -60 dB	≤ -60 dB	0.25 dB	0.25 dB
SC UPC	≤ -45 dB	≤ -45 dB	0.25 dB	0.25 dB
SC APC	≤ -60 dB	≤ -60 dB	0.25 dB	0.25 dB

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Housing Accessories			
Part Number	Product Description	Units per Delivery	
RBC-02P	Plug & Play [™] Systems Accessory Bracket, frame-mountable, holds 2 CCH connector panels or modules	1/1	
PC1-BKT-23	EDGE [™] Extension and Flush-Mount Bracket for mounting 1U housings into 23-in racks or cabinets	1/1	
PC2-BKT-23	EDGE Extension and Flush-Mount Bracket for mounting 2U housings into 23-in racks or cabinets	1/1	• • • • • • • • • • • • • • • • • • •
PC4-BKT-23	EDGE Solutions Mounting Bracket for mounting 4U housings into 23-in racks or cabinets	1/1	
PC1-BKT-FLSH	PCH Flush-Mount Brackets, PCH-01U (one set)	1/1	
PC2-BKT-FLSH	PCH Flush-Mount Brackets for PCH-02U (one set)	1/1	R LL CLLC
PC4-BKT-FLSH	PCH Flush-Mount Brackets PCH-04U (one set)	1/1	
PC1-LOCK-KIT	Door Lock Kit; can be installed on the front and/or back door(s) of the PCH-01U; comes with one lock and two keys	1/1	
HDWR-LOCK-KIT	Lock Kit for front door of housing; contains one lock with two keys	1/1	

Housing Accessories			
Part Number	Product Description	Units per Delivery	
CJP-01U-P	Pretium [™] Patch cord Management Panel 1U; provides patch cord management in a 1.75-in rack space	1/1	E Contractor of the
CJP-02U-P	Pretium Patch cord Management Panel 2U; provides patch cord management in a 3.5-in rack space	1/1	
PC2-STRN	PCH Strain-Relief Bracket; PCH-02U accepts up to two UCC kits (UCC-001)	1/1	
PC4-RJ-STRN	PCH U-Clip Bracket, 3x U-Clip for PCH-04U (pack of two)	1/1	
PC4-RJ-PLT	PCH 4U Strain-Relief Rear Plate, dark metallic grey, for U-clip mounting	1/1	
CDF-RJ-BKT	CDF Frame-Mount Bracket for one U-clip	1/1	
EDGE-CDF-RJ04- BKT	EDGE [™] Solutions Strain-Relief Bracket, accommodating four EDGE Solutions clip parking positions	1/1	
EDGE-CDF-RJ08- BKT	EDGE Solutions Strain-Relief Bracket, accommodating eight EDGE Solutions clip parking positions	1/1	, - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -
EDGE-CDF-RJ12- BKT	EDGE Solutions Strain-Relief Bracket, accommodating 12 EDGE solutions clip parking positions	1/1	- - - - - - - - - - - - - - - - - - -
EDGE-CCHBKT-1	Bracket to hold one EDGE solutions module that fits into Plug & Play [™] housings	1/1	
EDGE-CCHBKT-2	Bracket to hold two EDGE solutions module that fits into Plug & Play housings	1/1	

Housing Accessories			
Part Number	Product Description	Units per Delivery	
EDGE-BKT-LR-2RU	Ladder Rack-Mounting Bracket for up to 2U of housing mounting space	1/1	
EDGE-BKT-LR-4RU	Ladder Rack-Mounting Bracket for up to 4U of housing mounting space	1/1	
EDGE-BKT-WT-2RU	Wire Tray Mounting Bracket for up to 2U of housing mounting space	1/1	
EDGE-BKT-WT-4RU	Wire Tray Mounting Bracket for up to 4U of housing mounting space	1/1	

Cleaning Accessories			
Part Number	Product Description	Units per Delivery	
CLEANER-PORT-LC	Single-Fibre Port Cleaner for LC, keyed LC, and MU connector end faces for both UPC and APC polishes	1/1	
2104466-01	Fibre Optic Cleaning Tool used to clean MTP [®] connector end faces as well as MTP connectors installed in a module	1/1	

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MTP [®] PRO Accessories			
Part Number	Product Description	Units per Delivery	
MTPPRO-TOOL	Field tool to perform pinning and polarity changes of MTP [®] PRO connectors	1/1	
MTPPRO-PEX-MME-NO PINS	MTP PRO Pin Exchanger Kit, MM MTP Elite, empty (without pins)	1/1	ALL
MTPPRO-PEX-MME-PINS	MTP PRO Pin Exchanger Kit, MM MTP Elite, loaded (with pins)	1/1	ALL
MTPPRO-PEX-SME-NO PINS	MTP PRO Pin Exchanger Kit, SM MTP Elite, empty (without pins)	1/1	anna anna anna anna anna anna anna ann
MTPPRO-PEX-SME-PINS	MTP PRO Pin Exchanger Kit, SM MTP Elite, loaded (with pins)	1/1	AND

CORNING

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