

EDGE™ Solutions

CORNING





Awards

The DCS awards are designed to reward the product designers, manufacturers, suppliers and providers operating in data centre area and recognise the achievements of the vendors and their business partners. The winners were selected by public vote from the installation, distribution, consultant and end user communities from around the world.





EDGE™ Solutions Introduction

Data centre operators have an exhaustive list of desirable parameters they employ to ensure the smooth and efficient operation of their facilities, and here at Corning we strive to exceed their expectations. We interviewed over 3,000 operators and the outcome remained the same – the infrastructure must be reliable, high quality, flexible, manageable, scalable, and visible to support a 24/7 year-round operation without question.

Corning award-winning EDGE Solutions are high-density pre-terminated optical cabling solutions that simplify installation and improve performance in the data centre environment. EDGE Solutions provide increased system density when compared to traditional pre-terminated systems and offer the highest port density in the market. Corning® ClearCurve® bend-optimised optical fibre is the core element ensuring reliability when designing custom-engineered components thanks to its significant reduction in macrobend loss even in the most challenging bend scenarios. This technology enables Corning to provide significantly greater density across the range combined with simple design and integration for LAN and SAN areas within the data centre, while the pre-terminated components allow for reduced installation time and faster moves, adds, and changes (MACs).

Corning factory-terminated solutions provide improved system performance, ensure component compatibility, and yield consistent high quality. EDGE Solutions consist of an extensive range of housings, trunks, modules, adapter panels, harnesses, patch cables, and accessories for extended flexibility.

The universal wired modular system components provide simplistic management for quick and easy networking MACs with none of the polarity concerns associated with special polarity-compensating components.

Deployment of a scalable optical connectivity solution allows an infrastructure to meet the requirements for current and future data rates. Scalability enables not only the physical expansion of the data centre with respect to additional servers, switches or storage devices, but also flexibility to the infrastructure to support a migration path for increasing data rates. As technology evolves and standards are completed to define data rates such as 40/100G Ethernet, Fibre Channel (32G and beyond), and InfiniBand (40G and beyond), the cabling infrastructures installed today must provide scalability to accommodate the need for more bandwidth in support of future applications.

Finally infrastructure performance management is a method of monitoring traffic being transmitted and received along a link in a network providing real-time visibility. This can be done actively via electronic devices that replicate (also called mirroring or spanning) the link's data and sends it to the monitoring device, or it can be done using passive optical taps, or port taps, that simply transmit all of the data, sending it simultaneously to both its intended recipient and to the monitoring device. The monitoring device filters the data and sends it to various software tools for analytics, where it is then sent on to application-layer software for use by network administrators. Please refer to the tap module section for further information.

Please note if you want to know more about:

40/100G parallel optic applications, please search for AO descriptions.

Port monitoring applications, please search for TAP descriptions.

Splicing and field-termination applications, please search for SE descriptions.



Contents

EDGE™ HD Housings High-Density Housings	6
EDGE FX Housings Compact housings with FiXed-Tray Housings	8
EDGE MTP® Trunks Backbone Trunks with Universal Wiring	10
EDGE Universal Modules 1x MTP® to 6x LC Duplex Modules with Universal Wiring	18
EDGE AO Modules 40G/100G Conversion Modules for MTP Base-12 Systems	21
EDGE TAP Modules Port Monitoring in LAN and SAN DC Areas	23
EDGE SE Splice Cassettes Field Termination with Pigtail Splice or Connector Termination	29
EDGE MTP Adapter Panels Pass-Through Patch Panel with MTP Adapters	33
EDGE Harnesses Introduction One MTP Connector to six LC Duplex	35
Standard EDGE Trunk Harnesses One MTP Connector to six LC Duplex	37
Standard EDGE Module Harnesses One MTP Connector to six LC Duplex	38
EDGE Tap Harness Port Monitoring in LAN and SAN DC Areas	40
MTP Connector Patch Cables For Direct-Connect or Cross-Connect Applications	41
LC Duplex Patch Cables Uniboot Design with Optional Color Coding	43
Accessories Cleaning, Trunk, Housing and Underfloor Box Accessories	46
MDA / Accessories central patch layer EDGE™ Dual Frame	50



Notes

EDGE™ HD Housings

EDGE HD housings mount in 19-in racks or cabinets and provide industry-leading ultra-high-density connectivity when combined with EDGE modules, panels, harnesses, trunks, and patch cords.

The unique design of EDGE HD housings include sliding drawers enabling module or panel installation from the front or rear of the housing. Each sliding drawer contains integrated cable routing elements to make real structured patch cable management possible whilst providing unprecedented finger access without the need for tools or any other accessories.

All EDGE HD housings come with additional side routing guides for patch cable integration to the cabinet. The adjustable mounting brackets provide flexible installation options for back-to-back or flush-mounting requirements, and the new quick-mount feature makes it quick and easy for one person to install the housing with little effort.

The mounting and removal of trunks is a simple, quick, and tool-less operation enabling rapid deployment of high-fibre-count trunks for faster moves, adds, and changes (MACs).

Labelling the housing couldn't be simpler – there is a full-size mounting area on the inside of the front door for clear and concise information to be displayed. The easily installable trunk mounting plate provides flexibility depending on your design (e.g. back to back) or application (e.g. reduced depth) concept.



EDGE HD Housings
| Photo LAN6728

EDGE™ Solutions

CORNING

Features and Benefits

Sliding drawers

Allow unprecedented finger access, easier jumper/harness routing, and port identification

Quick mounting system

Enables one-person installation and depth adjustment of the housing in the rack

Integrated strain-relief plate can rotate 90°

Makes it possible to install both EDGE™ Solutions or Plug & Play™ System cable designs in your EDGE housings

Removable top covers on the 1U and 2U housings

Provides easier access to modules and panels

Total flexibility in the same HD housing

- Accepts EDGE universal modules
- Accepts EDGE conversion modules
- Accepts EDGE tap modules
- Accepts EDGE cassettes for pigtail-splicing or direct connector termination
- Accepts EDGE 2x, 4x, and 6x MTP® adapter panels
- Accepts EDGE 6x LC duplex adapter panels

High port concentration with LC duplex and MTP Base-12 system

- 1 U EDGE Housing EDGE-01U
 - 48x LC duplex ports (96 fibre)
 - 48/72*x MTP ports (576 fibre)
- 1 U EDGE Housing EDGE-01U-SP
 - 72x LC duplex ports (144 fibre)
 - 72/108*x MTP ports (864 fibre)
- 2 U EDGE Housing EDGE-02U
 - 144x LC duplex ports (288 fibre)
 - 144/216*x MTP ports (1728 fibre)
- 4 U EDGE Housing EDGE-04U
 - 288x LC duplex ports (576 fibre)
 - 288/432*x MTP ports (3456 fibre)

*Note: Using 6x MTP adapter panel and AO conversion harness for 40GBASE-SR4.

Ordering Information

Part Number	Height Unit	Dimensions (W x D x H)	Packaging Dimensions (W x D x H)	Shipping Weight
EDGE-01U	1U	432 mm x 561 mm x 44 mm	565 mm x 657 mm x 171 mm	7.7 kg
EDGE-01U-SP	1U	432 mm x 561 mm x 44 mm	565 mm x 646 mm x 171 mm	8.2 kg
EDGE-02U	2U	432 mm x 561 mm x 88 mm	565 mm x 660 mm x 216 mm	10.9 kg
EDGE-04U	4U	432 mm x 561 mm x 177 mm	565 mm x 660 mm x 305 mm	16.8 kg



EDGE-01U
| Photo LAN1693



EDGE-01U-SP
| Photo LAN6694



EDGE-02U
| Photo LAN6659



EDGE-04U
| Photo LAN6678

EDGE™ FX Housings

EDGE FX housings mount in 19-in racks or cabinets and provide industry-leading high-density connectivity when combined with EDGE modules, panels, harnesses, trunks, and patch cords.

EDGE FX housings include a fixed, compact design providing module or panel deployment from the front or rear of the housing. The integrated cable routing elements of the housing make real structured patch cable management possible whilst providing unprecedented finger access without the need for tools or any other accessories.

All EDGE FX housings come with integrated side routing guides for patch cable integration to the cabinet. The adjustable mounting brackets provide flexible installation options for back-to-back or flush-mounting requirements. The new quick-mount feature makes it quick and easy for one person to install the housing with little effort.

The mounting and removal of trunks is a simple, quick, and tool-less operation enabling rapid deployment of high-fibre-count trunks for faster moves, adds, and changes (MACs).

Labelling the housing couldn't be simpler – there is a full-size mounting area on the inside of the front door for clear and concise information to be displayed. The easily installable trunk mounting plate provides flexibility depending on your design (e.g. back to back) or application (e.g. reduced depth) concept.



EDGE-04U-FP Housing
| Photo REN1575

Features and Benefits

Integrated routing guides
Provides easier jumper and harness routing

Quick mounting system
Allows for one-person installation

Removable strain-relief plate
Enables installation in 300 mm depth cabinets or back-to-back installation in 800 mm standard cabinets. It is possible to deploy both EDGE™ Solutions or Plug & Play™ Systems designs in your EDGE FX housings

Improved mounting brackets
Allow for depth adjustment in the rack

Removable top covers on the 1U and 2U housings
Provides easier access to modules and panels

Total flexibility in the same FX housing

- Accepts EDGE universal modules
- Accepts EDGE conversion modules
- Accepts EDGE tap modules
- Accepts EDGE cassettes for pigtail splicing or direct connector termination
- Accepts EDGE 2x, 4x, and 6x MTP® adapter panels
- Accepts EDGE 6x LC duplex adapter panels

High port concentration with LC duplex and MTP Base-12 system

- 1 U EDGE Housing EDGE-01U-FP
 - 48x LC duplex ports (96 fibre)
 - 48/72*x MTP ports (576 fibre)
- 2 U EDGE Housing EDGE-02U-FP
 - 96x LC duplex ports (192 fibre)
 - 96/144*x MTP ports (1152 fibre)
- 4 U EDGE Housing EDGE-04U-FP
 - 192x LC duplex ports (384 fibre)
 - 192/288*x MTP ports (2304 fibre)

*Note: Using 6x MTP adapter panel and AO conversion harness for 40GBASE-SR4.



EDGE-01U-FP
| Photo LAN4274



EDGE-02U-FP
| Photo REN1610

Ordering Information

Part Number	Height Unit	Dimensions (W x D x H)	Packaging Dimensions (W x D x H)	Shipping Weight
EDGE-01U-FP	1U	488 mm x 439 mm x 43 mm	584 mm x 470 mm x 152 mm	4.4 kg
EDGE-02U-FP	2U	432 mm x 434 mm x 89 mm	569 mm x 346 mm x 229 mm	6.4 kg
EDGE-04U-FP	4U	432 mm x 434 mm x 178 mm	567 mm x 346 mm x 320 mm	9.6 kg

EDGE™ MTP® Trunks

EDGE MTP® trunks are preterminated cables with 12-fibre MTP connectors or LC duplex connectors on either side. The trunks build up the major skeleton of the passive network infrastructure, and thanks to the superior design including Corning® ClearCurve® fibre, they enable rapid deployment for your campus LAN or data centre facility. All trunks are shipped with strain-relief clips that allow for the tool-less installation in both EDGE Solutions and Plug & Play™ Systems housings. These trunks conform to TIA-568 Type-B polarity.



EDGE-02U rear side
| Photo LAN6628

Mechanical Characteristics

Fibre Count	Nominal Outer Diameter	Weight	Min. Bend Radius Installation	Min. Bend Radius Operation	Crush resistance (reversible)	Max. tensile strength for installation	Pulling Grip Outer Diameter
12	4.5 mm	20.5 kg/km	90 mm	45 mm	300 N/10 cm	400 N	41 mm
24	7.2 mm	37.8 kg/km	144 mm	72 mm	300 N/10 cm	450 N	41 mm
36	7.5 mm	42.5 kg/km	150 mm	75 mm	300 N/10 cm	450 N	56 mm
48	8.5 mm	58.0 kg/km	160 mm	85 mm	300 N/10 cm	450 N	56 mm
72	9.0 mm	69.0 kg/km	180 mm	90 mm	300 N/10 cm	450 N	56 mm
96	10.0 mm	81.0 kg/km	200 mm	100 mm	300 N/10 cm	450 N	56 mm
144	11.1 mm	102.0 kg/km	222 mm	111 mm	300 N/10 cm	450 N	56 mm

Note: Plug size information: Fibre count 12-24 = Size 1 (h = 15 mm); Fibre count 36-144 = Size 2 (h = 20 mm).



Optical Performance Multimode

	Reflectance Connector A	Reflectance Connector B	Max. Insertion Loss Connector A	Max. Insertion Loss Connector B	Operation
MTP® Trunks	≤ -20 dB	≤ -20 dB	≤ 0.25 dB	≤ 0.25 dB	-10 °C to 60 °C
MTP Extender Trunks	≤ -20 dB	≤ -20 dB	≤ 0.25 dB	≤ 0.25 dB	-10 °C to 60 °C
Hybrid MTP to LC Duplex Trunks	≤ -20 dB	≤ -20 dB	≤ 0.25 dB	≤ 0.1 dB	-10 °C to 60 °C
Hybrid MTP to LC Duplex Extender Trunks	≤ -20 dB	≤ -20 dB	≤ 0.25 dB	≤ 0.1 dB	-10 °C to 60 °C
LC Duplex to LC Duplex Trunks	≤ -20 dB	≤ -20 dB	≤ 0.1 dB	≤ 0.1 dB	-10 °C to 60 °C

Optical Performance Single-mode

	Reflectance Connector A	Reflectance Connector B	Max. Insertion Loss Connector A	Max. Insertion Loss Connector B	Operation
MTP Trunks	≤ -65 dB	≤ -65 dB	≤ 0.35 dB	≤ 0.35 dB	-10 °C to 60 °C
MTP Extender Trunks	≤ -65 dB	≤ -65 dB	≤ 0.35 dB	≤ 0.35 dB	-10 °C to 60 °C
Hybrid MTP to LC Duplex Trunks	≤ -65 dB	≤ -58 dB	≤ 0.35 dB	≤ 0.25 dB	-10 °C to 60 °C
Hybrid MTP to LC Duplex Extender Trunks	≤ -65 dB	≤ -58 dB	≤ 0.35 dB	≤ 0.25 dB	-10 °C to 60 °C
LC Duplex to LC Duplex Trunks	≤ -58 dB	≤ -58 dB	≤ 0.25 dB	≤ 0.25 dB	-10 °C to 60 °C

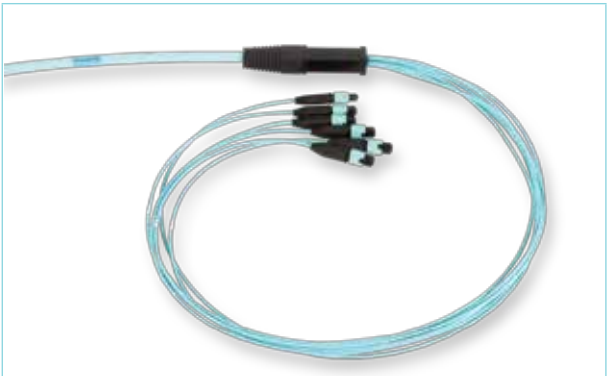
Trunk Shipping Information For All Connector Types

Reel Capacities			
Packaging Method	Reel A	Reel B	Reel C
Reel Diameter (mm)	600	600	600
Reel Width (mm)	130	310	470
Fibre Count	Capacities (m)		
12	10-330	-	-
24	10-330	-	-
36	10-264	265-330	-
48	10-264	265-330	-
72	10-148	149-330	-
96	10-132	133-330	-
144	10-99	100-264	265-330



MTP® Trunks

EDGE™ MTP® trunks provide the backbone of the EDGE Solution. With non-pinned MTP connectors on both ends of the cable, these trunks are designed to interface with the EDGE Solutions or Plug & Play™ Systems modules. All trunks are shipped with strain-relief clips that allow for the tool-less installation in both EDGE Solutions and Plug & Play Systems housings. These trunks conform to TIA-568 Type-B polarity.



EDGE MTP Trunk
| Photo LAN1550

Ordering Information

1	2	3	4	5	LZ 6	8 7	8 8	U 9	9	M
------------------------------------	------------------------------------	------------------------------------	------------------------------------	------------------------------------	--------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	------------------------------------	------------------------------------

- 1

Select grip applications.
G = Grip on first end only
(packaged outside of reel)
D = Grip on both ends (double)
Z = No grip
- 2

Select non-pinned MTP connector for first end (packaged outside reel).
75 = MTP multimode low-loss
90 = MTP APC single-mode
- 3

Select non-pinned MTP connector for second end (packaged inside reel).
Select from options in item 2
- 4

Select standard fibre count.
12 = 12 fibres 72 = 72 fibres
24 = 24 fibres 96 = 96 fibres
36 = 36 fibres E4 = 144 fibres
48 = 48 fibres
- 5

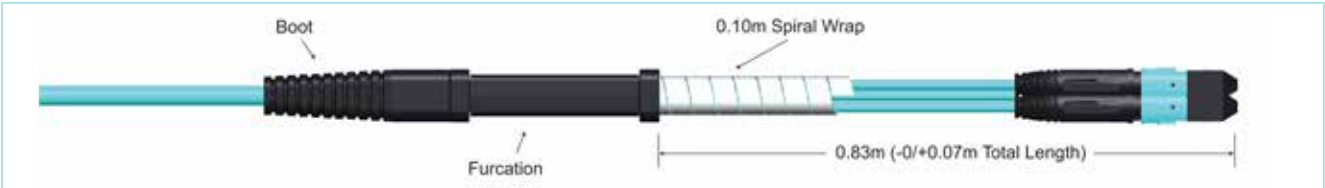
Select fibre type.
T = 50 µm multimode (OM3)
Q = 50 µm multimode (OM4)
V = 50 µm Wideband multimode (OM5)
G = Single-mode (OS2)
- 6

Defines cable type.
LZ = Low-smoke, zero-halogen, FRNC, data centre distribution cable
- 7

Defines trunk furcation leg length for first end.
8 = 840 mm (+70/-0 mm)
- 8

Defines trunk furcation leg length for second end.
8 = 840 mm (+70/-0 mm)
- 9

Select overall length in metres.
002-999
Trunk length is measured from furcation plug to furcation plug (+1/-0 m)



EDGE Solutions Trunk Cable
| Drawing ZA-3496

MTP® Extender Trunks

EDGE™ MTP extender trunks provide additional distance for the backbone of the EDGE Solution. With a non-pinned MTP connector on one end of the cable, a pinned MTP connector on the other, and a TIA-568 Type-A polarity, these trunks are designed to interface with a EDGE Solutions or Plug & Play™ Systems module and an MTP trunk. All trunks are shipped with strain-relief clips that allow for the tool-less installation in both EDGE Solutions and Plug & Play Systems housings. Most often these extender trunks will be used in a zone distribution area (ZDA). These trunks conform to TIA-568 Type-A polarity.



EDGE MTP Extender Trunk
| Photos LAN1548 and LAN1550

Ordering Information

1	2	3	4	5	6	7	8	X	9	M	

- 1** Select grip applications.
G = Grip on first end only
(packaged outside of reel)
D = Grip on both ends (double)
Z = No grip

- 2** Select pinned MTP connector first end (packaged outside reel).
93 = MTP multimode low-loss
89 = MTP APC single-mode

- 3** Select non-pinned MTP connector second end (packaged inside reel).
75 = MTP multimode low-loss
90 = MTP APC single-mode

- 4** Select standard fibre count.
12 = 12 fibres 72 = 72 fibres
24 = 24 fibres 96 = 96 fibres
36 = 36 fibres E4 = 144 fibres
48 = 48 fibres

- 5** Select fibre type.
T = 50 µm multimode (OM3)
Q = 50 µm multimode (OM4)
V = 50 µm Wideband multimode (OM5)
G = Single-mode (OS2)

- 6** Defines cable type.
LZ = Low-smoke, zero-halogen, FRNC, data centre distribution cable

- 7** Select trunk furcation leg length for first end to front of panel (packaged outside reel).
B = 1000 mm (+70/-0 mm), for Pretium EDGE 4U-RDH
C = 1500 mm (+70/-0 mm), for Pretium EDGE 1U

- 8** Defines trunk furcation leg length for second end to rear of panel (packaged inside reel).
8 = 840 mm (+70/-0 mm)

- 9** Select overall length in metres.
002-999
Trunk length is measured from furcation plug to furcation plug (+1/-0 m)



EDGE Extender Trunk Configuration
| Drawing ZA-3869



EDGE™ Hybrid MTP® and LC Duplex Uniboot Trunks

EDGE reverse polarity uniboot duplex trunk cables allow for the quick and easy conversion from a TIA-568 A-B polarity to a TIA-568 A-A polarity without exposing the fibres or needing any tools. The trunks build up the major skeleton of the passive network infrastructure, and thanks to the superior design including Corning® ClearCurve® fibre, they enable rapid deployment for your campus LAN or data centre facility. All trunks are shipped with strain-relief clips that allow for the tool-less installation in both EDGE Solutions and Plug & Play™ System housings.



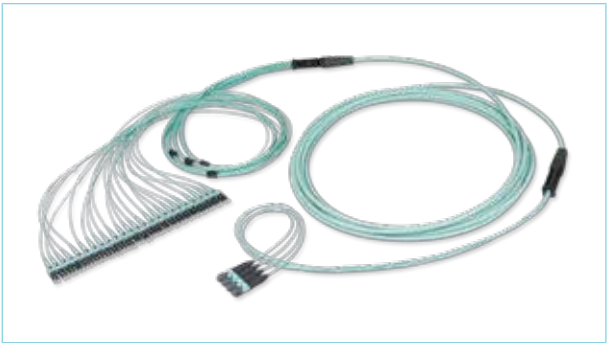
Mechanical Characteristics								
Fibre Count	Nominal Outer Diameter	Weight	Min. Bend Radius Installation	Min. Bend Radius Operation	Crush resistance (reversible)	Max. tensile strength for installation	Fire Load	Pulling Grip Outer Diameter
12	4.6 mm	18.3 kg/km	46 mm	23 mm	750 N/10 cm	400 N	0.48 MJ/m	41 mm
24	5.2 mm	37.8 kg/km	52 mm	26 mm	750 N/10 cm	450 N	0.58 MJ/m	41 mm
36 - 48	7.6 mm	57.0 kg/km	76 mm	38 mm	750 N/10 cm	450 N	0.58 MJ/m	56 mm
72	9.0 mm	69.0 kg/km	90 mm	45 mm	750 N/10 cm	450 N	0.58 MJ/m	56 mm
96	9.0 mm	81.0 kg/km	90 mm	45 mm	750 N/10 cm	450 N	0.58 MJ/m	56 mm
144	9.0 mm	102.0 kg/km	90 mm	45 mm	750 N/10 cm	450 N	0.58 MJ/m	56 mm

Note: Plug size information: Fibre count 12-24 = Size 1 (h = 15 mm); Fibre count 36-144 = Size 2 (h = 20 mm).



Hybrid MTP® to LC Duplex Uniboot Trunks

EDGE™ Hybrid MTP® to LC duplex uniboot trunks combine non-pinned MTP connectors that connect to EDGE modules and duplex uniboot LC connectors that connect directly to the electronics enabling more options for the cabling of data centres.



EDGE MTP Hybrid Trunk
| Photo LAN4858

Ordering Information

1	2	3	4	5	L Z	8 6	7	W	8	M
------------------------------------	------------------------------------	------------------------------------	------------------------------------	------------------------------------	-----	-------------------------------------	------------------------------------	---	------------------------------------	---

- 1

Select grip applications.
G = Grip on first end only
(packaged outside reel)
Z = No grip
- 2

Select non-pinned MTP connector for first end (packaged outside reel).
75 = MTP multimode low-loss
90 = MTP APC single-mode
- 3

Select LC connector second end (packaged inside reel).
79 = LC duplex, uniboot, multimode
78 = LC UPC duplex, uniboot, single-mode
- 4

Select standard fibre count.
12 = 12 fibres 72 = 72 fibres
24 = 24 fibres 96 = 96 fibres
36 = 36 fibres E4 = 144 fibres
48 = 48 fibres
- 5

Select fibre type.
T = 50 µm multimode (OM3)
Q = 50 µm multimode (OM4)
V = 50 µm Wideband multimode (OM5)
G = Single-mode (OS2)
- 6

Defines trunk furcation leg length for first end to front of panel (packaged outside of reel).
8 = 840 mm (+70/-0 mm)
- 7

Select trunk furcation leg length on the single-fibre end (2mm dual-fibre with LC uniboot (packaged inside of reel).
J = 300 mm (+70/-0 mm), available only upon special request
K = 600 mm (+70/-0 mm)
L = 1000 mm (+70/-0 mm), standard
M = 1200 mm (+70/-0 mm)
- 8

Select overall length in metres.
002-999
Trunk length is measured from furcation plug to furcation plug (+1/-0 m)



EDGE Solutions Hybrid Trunk Configuration
| Drawing ZA-3870

Hybrid MTP® to LC Duplex Uniboot Extender Trunks

EDGE™ hybrid MTP® to LC duplex uniboot trunks combine pinned MTP connectors that connect into MTP trunks and duplex uniboot LC connectors that connect directly into the electronics providing more options for the cabling of data centres. These hybrid extender trunks are most often used in a zone distribution area (ZDA).



EDGE MTP Hybrid Extender Trunk
| Photo LAN4856

Ordering Information

					L	Z			Z				M
1	2	3	4	5			6	7		8			

1 Select grip applications.

G = Grip on first end only
(packaged outside reel)
Z = No grip

2 Select pinned MTP connector first end (packaged outside reel).

93 = MTP multimode low-loss
89 = MTP APC single-mode

3 Select LC connector second end (packaged inside reel).

79 = LC duplex, uniboot, multimode
78 = LC UPC duplex, uniboot, single-mode

4 Select standard fibre count.

12 = 12 fibres 72 = 72 fibres
24 = 24 fibres 96 = 96 fibres
36 = 36 fibres E4 = 144 fibres
48 = 48 fibres

5 Select fibre type.

T = 50 µm multimode (OM3)
Q = 50 µm multimode (OM4)
V = 50 µm Wideband multimode (OM5)
G = Single-mode (OS2)

6 Defines trunk furcation leg length for first end to front of panel (packaged outside reel).

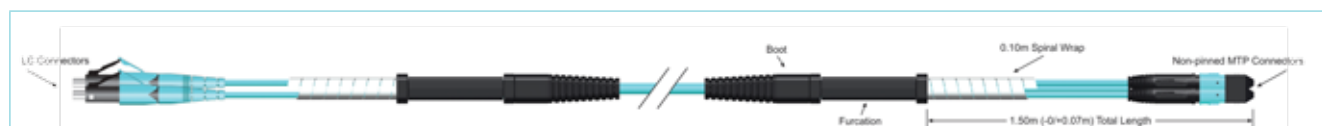
8 = 840 mm (+70/-0 mm)

7 Select trunk furcation leg length on the single-fibre end (2 mm dual-fibre with LC uniboot (packaged inside of reel).

J = 300 mm (+70/-0 mm), available only upon special request
K = 600 mm (+70/-0 mm)
L = 1000 mm (+70/-0 mm), standard
M = 1200 mm (+70/-0 mm)

8 Select overall length in metres.

002-999
Trunk length is measured from furcation plug to furcation plug (+1/-0 m)



EDGE Solutions Hybrid Extender Trunk Configuration
| Drawing ZA-3871

LC Duplex Uniboot to LC Duplex Uniboot Trunks

EDGE™ LC duplex uniboot trunks provide traditional backbone cabling for EDGE Solutions and are designed to interface with both EDGE or Plug & Play™ LC Duplex adapter panels. All trunks are shipped with strain-relief clips that allow for the tool-less installation in both EDGE Solutions and Plug & Play Systems housings.



EDGE LC Duplex Uniboot Trunk with Pulling Grip | Photo LAN7262

Ordering Information

					L	Z			C				M
1	2	3	4	5			6	7		8			

1 Select grip applications.
Z = No grip

2 Select LC connector first end (packaged outside reel).
79 = LC duplex, uniboot, multimode
78 = LC UPC duplex, uniboot, single-mode

3 Select LC connector second end (packaged inside reel).
Select from options in number 2

4 Select standard fibre count.
12 = 12 fibres 72 = 72 fibres
24 = 24 fibres 96 = 96 fibres
36 = 36 fibres E4 = 144 fibres
48 = 48 fibres

5 Select fibre type.
T = 50 µm multimode (OM3)
Q = 50 µm multimode (OM4)
G = Single-mode (OS2)

6 Select trunk furcation leg length on the single-fibre end (2 mm dual-fibre with LC uniboot (packaged inside of reel).
J = 300 mm (+70/-0 mm), available only upon special request
K = 600 mm (+70/-0 mm)
L = 1000 mm (+70/-0 mm), standard
M = 1200 mm (+70/-0 mm)

7 Select trunk furcation leg length on the single-fibre end (2 mm dual-fibre with LC uniboot (packaged inside of reel).
Select from options in number 6.

8 Select overall length in metres.
002-999
Trunk length is measured from furcation plug to furcation plug (+1/-0 m)

EDGE™ Universal Modules

EDGE modules provide the interface between the MTP® connector on the trunk and the LC duplex jumpers that will then connect directly into the electronics or as a cross-connect in the main distribution area (MDA).

The internal wiring based on universal polarity ensures the correct fibre polarity throughout the entire system independent of how many modules are implemented within the link. Low-loss connectivity enables design flexibility to permit multiple potential connections within the system (e.g. 4-module link).

All EDGE modules can be installed from the front or the rear of any EDGE Solutions housing using a simple release mechanism negating the need for any specialist tools. LC duplex adapters feature hinged 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. In addition, the shutters are visual fault locator (VFL) compatible allowing easy port identification whilst defusing the VFL light to ensure adequate eye safety.



ECM-UM12-05-93T
| Photo LAN1545

Features

- Breaks out 12-fibre MTP® terminations from the rear into LC duplex connectivity at the front
- Low-loss connectivity enables system design flexibility
- Internal wiring (universal polarity) ensures correct fibre polarity throughout the system
- Feature LC duplex adapters with translucent inward folding shutters
 - no need for dust caps
 - provide reliable dust protection
 - allow fibre identification with visual fault locator (VFL)
 - eye safety by diffusing laser light
 - single-handed LC duplex operation
 - no contact with connector end face
- Easily swappable with MTP panels to:
 - accommodate changing requirements while leaving trunk cable infrastructure in place
 - migrate to MTP ports for parallel optics
- Packaged in easy-open containers



Optical Performance

Part Number	Endface Type	Module Insertion Loss, Max	Fibre Category	Adapter Colour Front
ECM-UM12-05-93T	PC	0.5 dB	50 µm MM (OM3)	Turquoise
ECM-UM12-05-93Q	PC	0.5 dB	50 µm MM (OM4)	Turquoise
ECM-UM12-05-93Q-ULL	PC	0.35 dB	50 µm MM (OM4)	Turquoise
ECM-UM12-05-93V-ULL	PC	0.35 dB	50 µm MM (OM5)	Turquoise
ECM-UM12-04-89G	UPC	1.0 dB	SM (OS2)	Blue
ECM-UM12-18-89G	APC	1.25 dB	SM (OS2)	Green
ECM-UM12-04-89G-ULL	UPC	0.6 dB	SM (OS2)	Blue
ECM-UM12-18-89G-ULL	APC	0.6 dB	SM (OS2)	Green

Solution Configuration for EDGE Housings

Part Number	Height Unit	Number of 1/10G Ports, MM/SM	Number of 40GBase-LR4 Ports, only SM	Number of 100GBase-LR4 Ports, only SM	Number of modules	Fibre Capacity
EDGE-01U	1U	48	48	48	8	96
EDGE-01U-SP	1U	72	72	72	12	144
EDGE-02U	2U	144	144	144	24	288
EDGE-04U	4U	288	288	288	48	576
EDGE-01U-FP	1U	48	48	48	8	96
EDGE-02U-FP	2U	96	96	96	16	192
EDGE-04U-FP	4U	192	192	192	32	384
EDGE-02U-FP	2U	96	96	96	16	192
EDGE-04U-FP	4U	192	192	192	32	384

Note: 40 and 100G with single-mode application is based on cWDM with two fibres (LC duplex).

EDGE™ AO Modules

EDGE AO Solutions is a comprehensive suite of advanced optical components that enable the next level of performance in your data centre or storage area network (SAN). From network monitoring to migration to parallel optics, this advanced optical technology integrates directly into your EDGE Solutions cabling system for maximum efficiency and return on investment.

Parallel Optics

EDGE AO Solutions allow for design flexibility based on the unique requirements of your data centre by offering both module and harness components. EDGE AO Solutions delivers efficiency by ensuring 100 percent trunk fibre utilisation at 40 and 100G. The solution's conversion modules and harnesses breakout 12-fibre connectivity from the trunk into 8-fibre connectivity for mating to electronics.

Transmission at 40G is based on using eight fibres in the link – four transmitting at 10G in each direction. The anticipated 100GBASE-SR4 standard will also utilise eight fibres at 4 x 25G in each direction.

EDGE AO conversion modules have 12-fibre MTP® adapters in the rear for mating to backbone trunks and breakout to 8-fibre MTP adapters in the front for connectivity to electronics.

The conversion modules fully utilise all fibres in each Base-12 set in the trunk by breaking out Base-12 MTP adapters at the rear of the module into a proportionate number of Base-8 MTP adapters at the front.

EDGE AO conversion modules are available in two configurations – 2x3 (two 12-fibre MTP adapters in the rear and three 8-fibre MTP adapters in the front) and 4x6 (four adapters in the rear and six in the front).

These modules come from the factory as a TIA-568 Type-B component. However, EDGE AO conversion modules also offer on-site

MTP connectivity changes to manage field polarity. Every EDGE AO conversion module features translucent shuttered adapters that eliminate the need for separate dust caps.



AO Module
| Photo LAN1606

Features and Benefits

Conversion modules transition connectivity from 12 to eight fibres
Ensures 100 percent utilisation of trunks at 40 and 100G

Conversion modules offer the industry's best rack density for parallel optics
72 MTP® ports per 1U enable higher revenue generation per rack unit

Reversible MTP adapters allow on-site polarity changes
Reduced risk of installation delays or errors during commissioning of new devices

Utilises existing EDGE Solutions hardware and back-bone cabling
Higher return on investment and reduced capitalisation and installation costs

Corning® ClearCurve® fibre-enabled components create smaller form factor, more rugged cabling
Reduced congestion within and between racks for improved airflow; less risk of downtime due to pinched or bent cables



EDGE AO 2x3 Conversion Module
| Photo LAN4155

Optical Performance

	Module Insertion Loss, Max	Operating Temperature
EDGE AO Module	0.5 dB	-10 °C to 60 °C

Ordering Information

Part Number	Adapter Type Front	Adapter Colour Front	Adapter Type Back	Fibre Category
ECM-UM24-93-93Q	Shuttered MTP 3x8f	Turquoise	MTP 2x12F	50 µm MM (OM4)
ECM-UM48-93-93Q	Shuttered MTP 6x8f	Turquoise	MTP 4x12f	50 µm MM (OM4)

Solution Configuration for EDGE Housings

Part Number	Height Unit	Number of 40G/100G Ports, MTP to MTP 2x3	Number of 40G/100G Ports, MTP to MTP 4x6	Number of modules
EDGE-01U	1U	24	48	8
EDGE-01U-SP	1U	36	72	12
EDGE-02U	2U	72	144	24
EDGE-04U	4U	144	288	48
EDGE-01U-FP	1U	24	48	8
EDGE-02U-FP	2U	48	96	16
EDGE-04U-FP	4U	96	192	32

Note: 100G is based on the upcoming standard 100GBASE-SR4 with 4x25G VCSEL with eight fibres.

EDGE™ Tap Modules

EDGE tap modules, part of EDGE Solutions for data centres and storage area networks (SAN), enable passive optical tapping of the network while reducing downtime and link loss, and increasing rack space utilisation and density compared to other optical tap options.

Unlike other passive optical taps that must be added as separate devices in the network link, the EDGE tap module integrates the coupler technology for passive optical tapping into a structured cabling component – the module. Monitored ports can be added without disrupting the system's live traffic, and elimination of the tap as a separate device reduces insertion loss in the link.

EDGE tap modules use an advanced splitter technology for multimode to reduce insertion loss compared to traditional splitter technology.

Featuring the EDGE Solutions high-density module footprint, EDGE tap modules enable up to 72 monitored links per one rack unit, and they fit seamlessly into EDGE Solutions hardware for maximum cable management and better utilisation of rack space.



EDGE Tap Modules
| Photo LAN3724

Features and Benefits

Integrates tap splitters directly into the structured cabling infrastructure

Eliminates network downtime associated with changing monitored ports in a live system

Rear-exiting, MTP® connector-based tap ports do not require additional rack space

Zero-rack-space impact results in higher revenue generation per rack unit; allows separation of live and tap ports into different cabinet locations

Utilises advanced splitter technology

Maintains equal modal power distribution, reducing insertion loss for increased link reach

EDGE™ Solutions-based footprint

Integrates seamlessly into an existing EDGE Solutions infrastructure

Universal polarity management

Eliminates the frustration of needing to flip connector pairs or modules

Application-defined split ratio

Provides 50/50 split ratio for Ethernet (DC LAN) and 70/30 split ratio for Fibre Channel (DC SAN) environments



Solution Configuration for EDGE Housings

Part Number	Height Unit	Number of Ports/ Fibres MTP to LC	Number of Ports/ Fibres MTP to MTP	Number of Ports/ Fibres LC to LC	Number of modules
EDGE-01U	1U	48 / 96	8 / 96	16 / 32	8
EDGE-01U-SP	1U	72 / 144	12 / 144	24 / 48	12
EDGE-02U	2U	144 / 288	24 / 288	48 / 96	24
EDGE-04U	4U	288 / 576	48 / 576	96 / 192	48
EDGE-01U-FP	1U	48 / 96	8 / 96	16 / 32	8
EDGE-02U-FP	2U	96 / 192	16 / 192	32 / 64	16
EDGE-04U-FP	4U	192 / 384	32 / 384	64 / 128	32

MTP® to LC Duplex Tap Modules

EDGE™ tap MTP connector to LC modules provide one pinned MTP adapter labelled live and one pinned red MTP adapter labelled tap on the rear side which enables monitoring of the six live LC duplex ports on the application side.

Features

- Designed for Parallel Optic infrastructure solution
- For Ethernet Duplex application up to 10G
- For Fibre Channel Duplex application up to 16G
- MTP on the rear side for easy TAP Link integration to the infrastructure

Optical Performance MTP to LC Tap Module

	Split Ratio Live/Tap	Max. Insertion Loss Live Link/Tap Link MM-850 nm SM-1310 nm
Tap Module OM4 DC LAN	50/50	4.3 dB / 4.3 dB
Tap Module OM4 DC SAN	70/30	2.3 dB / 7.1 dB
Tap Module OS2 DC LAN	50/50	4.9 dB / 4.9 dB
Tap Module OS2 DC SAN	70/30	3.3 dB / 7.3 dB

Ordering Information

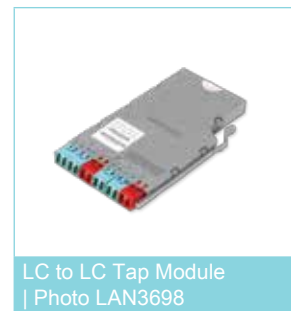
Part Number	Product Description	Units Per Delivery
ETM-5B-Q	EDGE Tap Module, 50 µm multimode (OM4), 50/50 split ratio (live/tap)	1/1
ETM-7B-Q	EDGE Tap Module, 50 µm multimode (OM4), 70/30 split ratio (live/tap)	1/1
ETM-5B-G	EDGE Tap Module, single-mode (OS2), 50/50 split ratio (live/tap)	1/1
ETM-7B-G	EDGE Tap Module, single-mode (OS2), 70/30 split ratio (live/tap)	1/1



LC Duplex to LC Duplex Tap Modules

EDGE™ tap module for traditional LC Duplex systems enables the customer to manage the monitoring access points via the patch cord infrastructure zone at the front of the cabinets.

EDGE tap module with two red LC Duplex adapters for tap, four blue LC Duplex adapters.
 Port 1 (BU) = In; Port 2 (BU) = Out; Port 3 (RD) = Tap
 Port 4 (BU) = In; Port 5 (BU) = Out; Port 6 (RD) = Tap
 The red LC adapter enables monitoring on the application side.



Features

- Designed for Duplex based infrastructure solutions
- For Ethernet Duplex application up to 10G
- For Fibre Channel Duplex application up to 16G
- All LC Ports on the front for simple TAP Links to the monitoring equipment

Optical Performance LC to LC

	Split Ratio Live/Tap	Max. Insertion Loss Live Link/Tap Link MM-850 nm SM-1310 nm
Tap Module OM4 DC LAN	50/50	4.1 dB / 4.1 dB
Tap Module OM4 DC SAN	70/30	2.1 dB / 6.9 dB
Tap Module OS2 DC LAN	50/50	4.6 dB / 4.6 dB
Tap Module OS2 DC SAN	70/30	3.0 dB / 7.0 dB

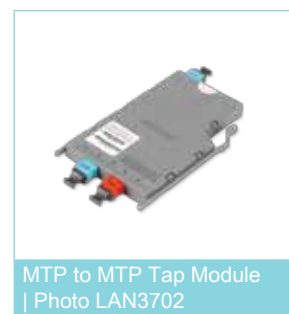
Ordering Information

Part Number	Product Description	Units Per Delivery
ETM-5A-Q	EDGE LC to LC Tap Module, 50 µm multimode (OM4), 50/50 split ratio (live/tap)	1/1
ETM-7A-Q	EDGE LC to LC Tap Module, 50 µm multimode (OM4), 70/30 split ratio (live/tap)	1/1
ETM-5A-G	EDGE LC to LC Tap Module, single-mode (OS2), 50/50 split ratio (live/tap)	1/1
ETM-7A-G	EDGE LC to LC Tap Module, single-mode (OS2), 70/30 split ratio (live/tap)	1/1

MTP® to MTP Connector Tap Front Modules

EDGE™ tap MTP to MTP connector modules provide two options to connect the monitoring equipment from the front or rear of the rack to support duplex or parallel optic deployments.

With one pinned MTP adapter labelled live and one pinned red MTP adapter labelled tap on the front and one pinned MTP adapter labelled live on the rear, this option enables simple patch management of the monitoring links via the patching zone at the front of the rack.



Features

- Designed for Parallel Optic infrastructure solution
- Ethernet to support 40G and 100G applications
- Fibre Channel for 32G and beyond
- MTP on the front side for simple TAP Links to the monitoring equipment

Optical Performance MTP to MTP Tap Module

	Split Ratio Live/Tap	Max. Insertion Loss Live Link/Tap Link MM-850 nm SM-1310 nm
Tap Module OM4 DC LAN	50/50	4.5 dB / 4.5 dB
Tap Module OM4 DC SAN	70/30	2.5 dB / 7.3 dB
Tap Module OS2 DC LAN	50/50	5.1 dB / 5.1 dB
Tap Module OS2 DC SAN	70/30	3.5 dB / 7.5 dB

Ordering Information

Part Number	Product Description	Units Per Delivery
ETM-5C-Q	EDGE MTP to MTP Tap Module, 50 µm multi-mode (OM4), 50/50 split ratio (live/tap)	1/1
ETM-7C-Q	EDGE MTP to MTP Tap Module, 50 µm multi-mode (OM4), 70/30 split ratio (live/tap)	1/1
ETM-5C-G	EDGE MTP to MTP Tap Module, single-mode (OS2), 50/50 split ratio (live/tap)	1/1
ETM-7C-G	EDGE MTP to MTP Tap Module, single-mode (OS2), 70/30 split ratio (live/tap)	1/1

MTP® to MTP Connector Tap Rear Modules

EDGE™ tap MTP to MTP connector modules provide two options to connect the monitoring equipment from the front or rear of the rack to support duplex or parallel optic deployments.

With one pinned MTP adapter labelled live at the front and one pinned MTP adapter labelled live and one pinned red MTP adapter labelled tap on the rear, you can connect the monitoring equipment that could be bundled in a secure main monitoring area (MMA) away from the main data centre infrastructure.



Features

- Designed for Parallel Optic infrastructure solution
- Ethernet to support 40G and 100G applications
- Fibre Channel for 32G and beyond
- MTP on the rear side for simple TAP Link integration to the infrastructure

Optical Performance MTP to MTP Tap Module

	Split Ratio Live/Tap	Max. Insertion Loss Live Link/Tap Link MM-850 nm SM-1310 nm
Tap Module OM4 DC LAN	50/50	4.5 dB / 4.5 dB
Tap Module OM4 DC SAN	70/30	2.5 dB / 7.3 dB
Tap Module OS2 DC LAN	50/50	5.1 dB / 5.1 dB
Tap Module OS2 DC SAN	70/30	3.5 dB / 7.5 dB

Ordering Information

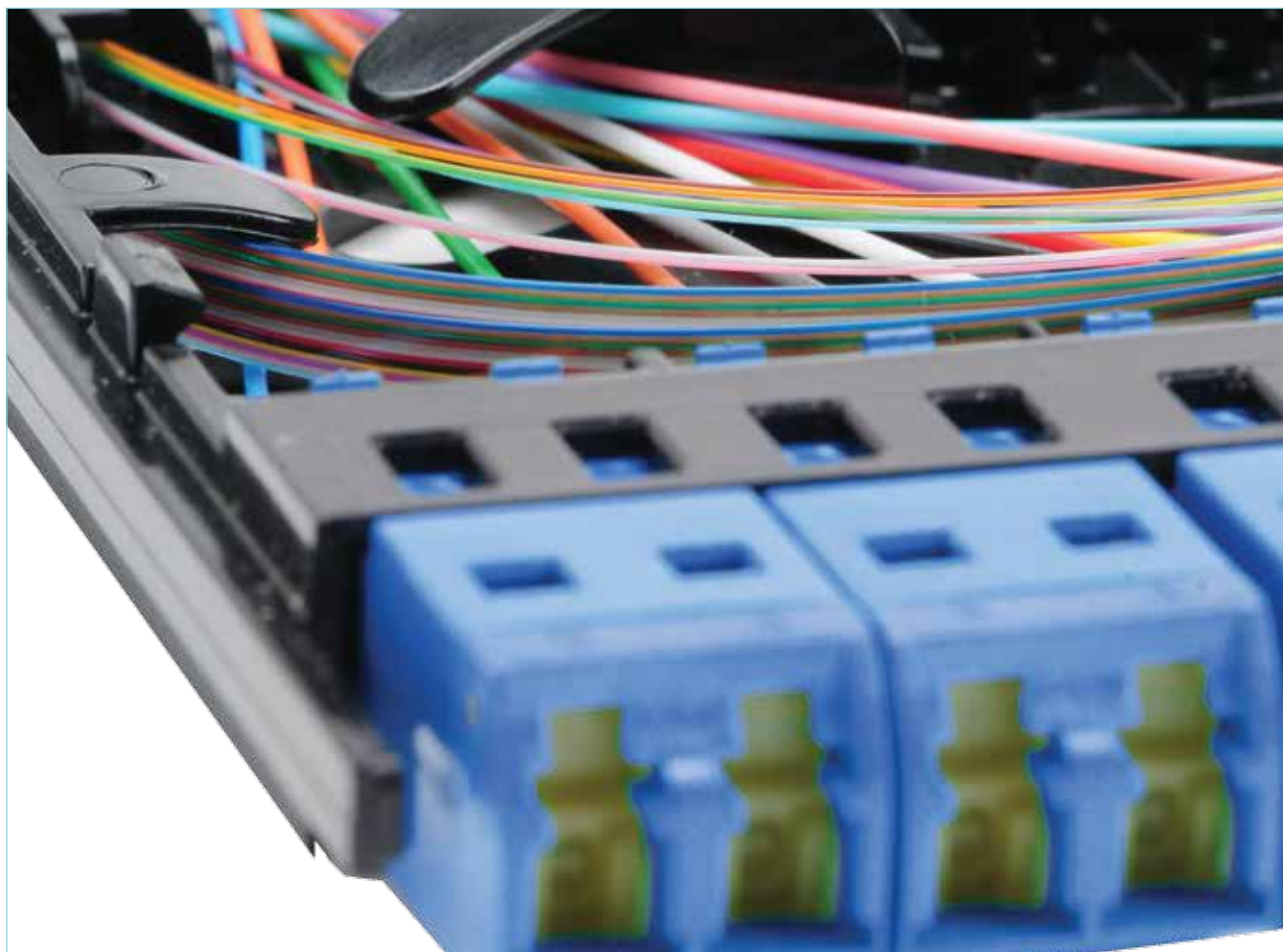
Part Number	Product Description	Units Per Delivery
ETM-5C-Q-R	EDGE Tap Module, 50 µm multimode (OM4), 50/50 split ratio (live/tap)	1/1
ETM-7C-Q-R	EDGE Tap Module, 50 µm multimode (OM4), 70/30 split ratio (live/tap)	1/1
ETM-5C-G-R	EDGE Tap Module, single-mode (OS2), 50/50 split ratio (live/tap)	1/1
ETM-7C-G-R	EDGE Tap Module, single-mode (OS2), 70/30 split ratio (live/tap)	1/1

EDGE™ SE Splice Cassettes

The EDGE SE Solution is an innovative field-termination addition to the award-winning EDGE Solution for high-density data centre cabling infrastructure systems. The integral termination cassette allows for a wide range of fibre termination options without sacrificing any of the density, cable management, or ease of handling of the broader EDGE Solutions family.

The EDGE SE Solution can accommodate fusion splicing or direct termination. The cassette features LC duplex adapters with integrated dust caps which provide protection for the internal connectors and a translucent finish for ease of fibre identification. The cable entry in the rear of the cassette allows for multiple cable options from loose tube cable designs to tight-buffered cables. Combining the adapters, strain-relief, and splice organisers all together in the cassette allows for superior fibre handling and safety of terminated fibres giving greater flexibility and confidence in Day two moves, adds, and changes (MACs).

With the ability to add fibres in convenient building blocks of 12 fibres, the modular nature of the EDGE Solution with EDGE SE cassettes make it the perfect solution for “pay-as-you-grow” applications where fibres are continually added to the system through the lifetime of the product or data centre such as colocation meet-me rooms or customer access points.



EDGE Splice Cassette, 12 Fibres, LC Duplex, OS2
| Photo LAN4219

Multi-Splice Cassettes

Features

- Preloaded multi-splice cassette with 12 coloured LC pigtails according to the Telcordia polarity scheme for termination of multiple fibre optic cable types
- Accommodates fusion splicing and comes with heat-shrink or crimp splice organisers
- Accepts loose tube or tight-buffered cables
- Low-loss connectivity enables system design flexibility
- Integrated LC duplex adapters across the front with translucent inward-folding shutters providing reliable dust protection without dust caps
- Allow fibre identification with visual fault locator (VFL)
- Eye safety by diffusing laser light through the shutters
- Single-handed LC duplex operation
- No contact with connector end face
- Install quickly from the front or rear of the housing, all steps can be performed from one side of a cabinet row (cable attach, buffer tube routing, module insertion)
- Enable pay-as-you-grow approach



Splice Cassette, 12 F, LC Duplex, OM4
| Photo LAN4849

Optical Performance

	Module Insertion Loss, Max	Operating Temperature
SE cassette	0.5 dB	-20 °C to 60 °C

Ordering Information

Part Number	Polarity	Adapter Type Front	Adapter Colour Front	Fibre Category	Splice Protection
EDGE-CS12-AD-P00QE	Telcordia	Shuttered LC	Turquoise	50 µm MM (OM4)	Heat-shrink
EDGE-CS12-AE-P00RE	Telcordia	Shuttered LC	Blue UPC	SM (OS2)	Heat-shrink
EDGE-CS12-AF-P00RE	Telcordia	Shuttered LC	Green APC	SM (OS2)	Heat-shrink
EDGE-CS12-AD-P00QE-CSP	Telcordia	Shuttered LC	Turquoise	50 µm MM (OM4)	Crimp
EDGE-CS12-AE-P00RE-CSP	Telcordia	Shuttered LC	Blue UPC	SM (OS2)	Crimp
EDGE-CS12-AF-P00RE-CSP	Telcordia	Shuttered LC	Green APC	SM (OS2)	Crimp

Trunk Splice Cassettes

Features

- Preloaded trunk splice cassette with 12 coloured LC pigtails according to the universal polarity scheme for EDGE™ trunk termination
- Accommodates fusion splicing and comes with heat-shrink or crimp splice organisers
- Accepts loose tube or tight-buffered cables
- Low-loss connectivity enables system design flexibility
- Integrated LC duplex adapters across the front with translucent inward-folding shutters providing reliable dust protection without dust caps
- Allow fibre identification with visual fault locator (VFL)
- Eye safety by diffusing laser light through the shutters
- Single-handed LC duplex operation
- No contact with connector end face
- Install quickly from the front or rear of the housing, all steps can be performed from one side of a cabinet row (cable attach, buffer tube routing, module insertion)
- Enable pay-as-you-grow approach



Splice Cassette, 12 F, LC Duplex, OS2 APC
| Photo LAN4852

Optical Performance

	Module Insertion Loss, Max	Operating Temperature
SE cassette	0.5 dB	-20 °C to 60 °C

Ordering Information

Part Number	Polarity	Adapter Type Front	Adapter Colour Front	Fibre Category	Splice Protection
EDGE-CS12-AD-P00QU	Universal	Shuttered LC Duplex	Turquoise	50 µm MM (OM4)	Heat-shrink
EDGE-CS12-AE-P00RU	Universal	Shuttered LC Duplex	Blue UPC	SM (OS2)	Heat-shrink
EDGE-CS12-AF-P00RU	Universal	Shuttered LC Duplex	Green APC	SM (OS2)	Heat-shrink
EDGE-CS12-AD-P00QM-CSP	Universal	Shuttered LC Duplex	Turquoise	50 µm MM (OM4)	Crimp
EDGE-CS12-AE-P00RM-CSP	Universal	Shuttered LC Duplex	Blue UPC	SM (OS2)	Crimp
EDGE-CS12-AF-P00RM-CSP	Universal	Shuttered LC Duplex	Green APC	SM (OS2)	Crimp

SE Field-Term Cassettes (empty)

Features

- Simplified for and increased confidence in handling terminated fibres through the integration of cable strain-relief
- Accommodates UniCam or anaerobic connectors for direct connector termination
- Low-loss connectivity enables system design flexibility
- Integrated LC duplex adapters across the front with translucent inward-folding shutters providing reliable dust protection without dust caps
- Allow fibre identification with visual fault locator (VFL)
- Eye safety by diffusing laser light through the shutters
- Single-handed LC duplex operation
- Install quickly from the front or rear of the housing, all steps can be performed from one side of a cabinet row (cable attach, buffer tube routing, module insertion)
- Enable pay-as-you-grow approach



Ordering Information

Part Number	Adapter Type Front	Adapter Colour Front	Fibre Category
EDGE-CS12-AD	Shuttered LC	Turquoise	50 µm MM (OM4)
EDGE-CS12-AE	Shuttered LC	Blue UPC	SM (OS2)
EDGE-CS12-AF	Shuttered LC	Green APC	SM (OS2)

Solution Configuration for EDGE Housings

Part Number	Height Unit	Number of 1/10G Ports, MM/SM	Number of 40GBase-LR4 Ports, only SM	Number of 100GBase-LR4 Ports, only SM	Number of modules	Fibre Capacity
EDGE-01U	1U	48	48	48	8	96
EDGE-01U-SP	1U	72	72	72	12	144
EDGE-02U	2U	144	144	144	24	288
EDGE-04U	4U	288	288	288	48	576
EDGE-01U-FP	1U	48	48	48	8	96
EDGE-02U-FP	2U	96	96	96	16	192
EDGE-04U-FP	4U	192	192	192	32	384

MTP® Adapter Panels

EDGE™ adapter panels are pass-through patch panels with a single row of MTP adapters. The backbone trunks connect at the rear of the adapters, and then various options are possible at the front, from end-to-end links with patch cable or harness solutions or as a cross-connect used in MDA. The MTP adapter panel is the easiest way to implement parallel optic applications in your data centre whilst retaining the existing hardware.

All EDGE adapter panels can be installed from the front or rear of any EDGE hardware using a simple release mechanism negating the need for any specialist tools.

EDGE MTP adapter panels are available with two, four, or six 12-fibre adapters for multimode and single-mode applications. The 6-port panel features unique shuttered MTP reversible adapters at the front of the panel for on-site changes to manage field polarity, and the shutters are visual fault locator (VFL) compatible allowing easy port identification whilst defusing the VFL light to ensure adequate eye safety.

EDGE LC adapter panels are available with six 2-fibre LC duplex shuttered adapters for extended hybrid solutions with multimode and single-mode applications.



AO Adapter Panel
| Photo LAN4741

Features

- Provide MTP® connector or LC duplex connection points between trunks and harnesses or extender trunks
- All can be installed or removed from the front or rear of a housing
- MTP adapter panels facilitate simple upgrades to parallel optics
- Low-loss connectivity enables system design flexibility
- Single-handed MTP connector or LC operation
- No contact with connector end face
- Enable pay-as-you-grow approach
- Packaging packaged in easy-open containers
- Translucent shutters diffuse VFL light
- No need for dust caps, provide reliable dust protection



Adapter Panel, MTP, 24 F, OM4/OM3 | Photo LAN6424



Adapter Panel, MTP, 24 F, OS2 | Photo LAN6424



Adapter Panel, MTP, 48 F, OM3/OM4 | Photo LAN4848



Adapter Panel, MTP, 48 F, OS2 | Photo LAN4848



Adapter Panel, LC, 12 F, OM3/OM4 | Photo LAN4853



Adapter Panel, LC, 12 F, OS2 | Photo LAN4855

Ordering Information

Part Number	Fibre Category	Connector Type	Adapter housing colour	Number of adapters per panel
EMOD-CP12-AD	50 µm MM (OM3/OM4/OM5)	LC Duplex	Turquoise	6
EDGE-CP24-E3	50 µm MM (OM3/OM4/OM5)	MTP	Turquoise	2
EDGE-CP48-E3	50 µm MM (OM3/OM4/OM5)	MTP	Turquoise	4
EDGE-CP72-U3	50 µm MM (OM3/OM4/OM5)	MTP	Turquoise	6
EMOD-CP12-AE	SM (OS2)	LC Duplex	Blue	6
EDGE-CP24-90	SM (OS2)	MTP	black	2
EDGE-CP48-90	SM (OS2)	MTP	black	4
EDGE-CP72-U1	SM (OS2)	MTP	black	6

EDGE™ Harnesses

One of the critical challenges facing data centre owners, operators, and maintenance personnel in high-density (HD) computing areas is how to provide high-port-concentration deployments to support the latest generation of high-speed switches without losing them under a mass of patch cables.

A harness is an ultra-slim 12-fibre (2.0 mm) pre-terminated fibre cable with an MTP® connector on one end and typically four or six LC duplex connectors on the opposite end. The majority of the harness is a single cable which breaks out into six, 2-fibre legs to enable connectivity to the switch ports which are staggered to replicate the specific switch ports to save on excess cable length.

Specially designed harnesses are available for distribution switches for various Cisco Nexus Series or Brocade DCX switches using SFP+ (LC interfaces) for 10/40Gig Ethernet or 8Gig Fibre Channel with duplex transmission or port mirroring, aggregation, fabric, or tap applications.

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

The ultimate high-density solution for port hot spots in data centres.



EDGE Harness connected with Cisco 9506
| Photo LAN3933

Features

- Break out 12-fibre MTP® terminations into LC duplex connectors
- Plug into dual-fibre electronics ports with LC uniboot duplex connectors
- Occupy less space than six duplex jumpers
- Improve airflow for cooling efficiency
- Enable higher density in equipment patch panels
- Easy handling of cable connections on high-fibre-count SAN directors and switch blades
- Feature custom-engineered taper to match electronics port pitch
- Facilitate neat routing through unique snap-on features



Optical Performance

MTP to LC Trunk, Module, Aggregation, and Fabric Harness

	Harness Insertion Loss, Max.	Fibre Category
Harness OM3	0.35 dB	50 µm MM (OM3)
Harness OM4	0.35 dB	50 µm MM (OM4)
Harness OM5	0.35 dB	50 µm MM (OM5)
Harness OS2	0.6 dB	SM (OS2)

MTP to MTP Conversion Harness

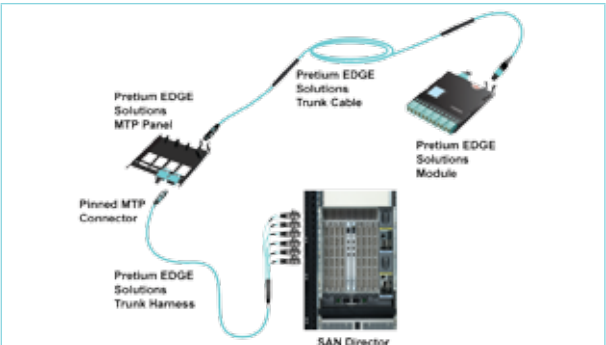
	Harness Insertion Loss, Max.	Fibre Category
Harness OM4	0.50 dB	50 µm MM (OM4)

MTP to LC Tap Harness

	Harness Insertion Loss, Max.	Fibre Category
Harness OS2	0.6 dB	SM (OS2)
Harness OM4	0.75 dB	50 µm MM (OM4)

Standard EDGE™ Trunk Harnesses

The EDGE™ trunk harness is designed to facilitate an interconnect point when the electronics are located in a separate area than the cross-connect or patching field. This is possible with duplex LC connectors to interface with the electronics and a pinned MTP® connector to connect into a trunk. This can be used in an equipment distribution area (EDA).



EDGE Trunk Harness
| Drawing ZA-3643

Ordering Information

H 1 2 L Z - A M

1 2 3 4 5 6 7

1 Select MTP connector.

93 = MM trunk harness
89 = SM trunk harness

2 Select the breakout connector type.

79 = LC uniboot, low-loss MM
78 = LC uniboot SM

3 Select fibre type.

Q = 50 µm multimode (OM4)
V = 50 µm Wideband multimode (OM5)
G = Single-mode (OS2)

4 Defines cable type.

LZ = LSZH, harness

5 Select stagger type or leg length in mm (leg OD is 2.0 mm).

1 = Type 1 stagger
2 = Type 2 stagger
3 = Type 3 stagger
4 = Type 4 uniform
5 = Type 5 stagger

For harness stagger type, reference AEN157.

Uniform leg length is 150 mm. For longer lengths, please select from the following:

J = 300 mm (+70/-0 mm) N = 1500 mm (+70/-0 mm)
K = 600 mm (+70/-0 mm) P = 1800 mm (+70/-0 mm)
L = 900 mm (+70/-0 mm) R = 2500 mm (+70/-0 mm)
M = 1200 mm (+70/-0 mm)

Furcation legs are colour-coded by fibre type.

6 Defines harness polarity.

A = Polarity A

Note: For harness polarity, reference AEN156.

7 Select harness length.

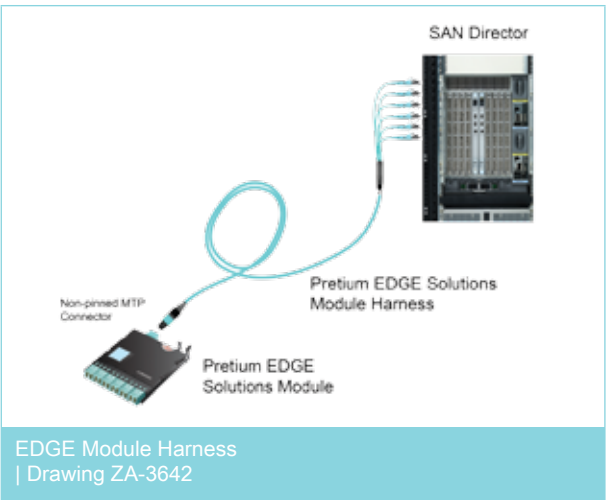
001-006 metres

Note: Measured in 1 m increments from plug to MTP; does not include LC stagger.

Note: Optical performance is shown on page 35

Standard EDGE™ Module Harnesses

The EDGE™ module harness is designed to create a cross-connect point near the electronics by enabling port replication. This is possible with duplex LC connectors to interface with the electronics and a non-pinned MTP® connector to connect into the back of a module. With port replication, your installation will look the same even after multiple moves, adds, and changes (MACs). This can be used in a horizontal distribution area (HDA).



Ordering Information

H 1 2 L Z - B M

1 2 3 4 5 6 7

1 Select MTP connector.

75 = MM Module harness
90 = SM Module harness

2 Select the breakout connector type.

79 = LC uniboot, low-loss MM
78 = LC uniboot SM

3 Select fibre type.

Q = 50 µm multimode (OM4)
V = 50 µm Wideband multimode (OM5)
G = Single-mode (OS2)

4 Defines cable type.

LZ = LSZH, harness

5 Select stagger type or leg length in mm (leg OD is 2.0 mm).

1 = Type 1 stagger
2 = Type 2 stagger
3 = Type 3 stagger
4 = Type 4 uniform
5 = Type 5 stagger

For harness stagger type, reference AEN157.

Uniform leg length is 150 mm. For longer lengths, please select from the following:

J = 300 mm (+70/-0 mm) N = 1500 mm (+70/-0 mm)
K = 600 mm (+70/-0 mm) P = 1800 mm (+70/-0 mm)
L = 900 mm (+70/-0 mm) R = 2500 mm (+70/-0 mm)
M = 1200 mm (+70/-0 mm)

Furcation legs are colour-coded by fibre type.

6 Defines harness polarity.

B = Universal polarity (Type B)

Note: For harness polarity, reference AEN156.

7 Select harness length.

001-006 metres

Note: Measured in 1 m increments from plug to MTP, does not include LC stagger.

Note: Optical performance is shown on page 35



EDGE™ AO Conversion Harnesses

EDGE™ AO conversion harness is a LS0H-rated pre-terminated harness that, like the EDGE AO module, provides the conversion from 12- to 8-fibre connectivity for full-fibre utilisation. It is offered as a 2x3 MTP® harness (two 12-fibre MTP connectors on one end, three 8-fibre MTP connectors on the other) for connection to electronics with MPO-style ports.

EDGE AO harnesses are a TIA-568 Type-A component.



Solution Configuration for EDGE Housings

Part Number	Height Unit	Number of 40/100G Ports/ Fibres with 2x MTP Panel	Number of 40/100G Ports/ Fibres with 4x MTP Panel	Number of 40/100G Ports/ Fibres with 6x MTP Panel	Number of Panels per Housing
EDGE-01U	1U	24 / 192	48 / 384	72 / 576	8
EDGE-01U-SP	1U	36 / 288	72 / 576	108 / 864	12
EDGE-02U	2U	72 / 576	144 / 1152	216 / 1728	24
EDGE-04U	4U	144 / 1152	288 / 2304	432 / 3456	48
EDGE-01U-FP	1U	24 / 192	48 / 384	72 / 576	8
EDGE-02U-FP	2U	48 / 384	96 / 768	144 / 1152	16
EDGE-04U-FP	4U	96 / 768	192 / 1536	288 / 2304	32

Ordering Information

H937524QLZ

1

2

3

1

Select the 12-fibre MTP connector leg length in metres (leg OD is 2.5 mm).
K = 600 mm (+70/-0 mm)
L = 1000 mm (+70/-0 mm)

2

Select the 8-fibre MTP connector leg length in metres (leg OD is 2.5 mm).
K = 600 mm (+70/-0 mm)
L = 1000 mm (+70/-0 mm)

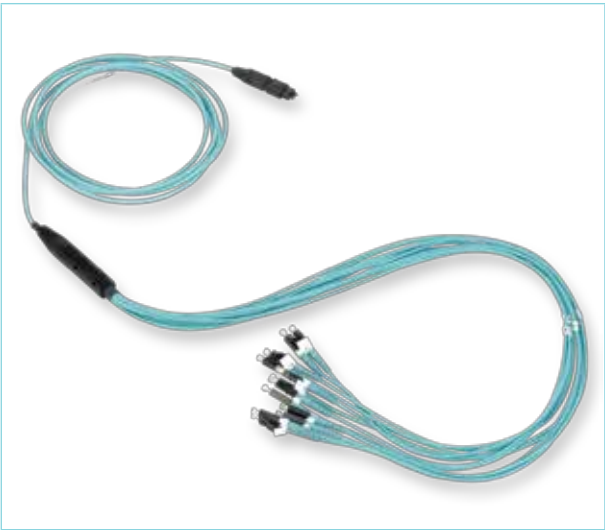
3

Select the harness length in metres (does not include leg length).
001-060

EDGE™ Tap Harnesses

The EDGE tap harness is used to break out the 12-fibre MTP® tap port at the rear of the EDGE tap module into LC duplex connectors. These duplex connectors then can be easily separated into simplex connectors to plug into monitoring electronics.

The use of harnesses provides a solution that occupies less space than traditional patch cables, as the cable end of the harness is much smaller than the size of equivalent patch cables. This reduced cabling bulk improves airflow for increased cooling and facilitates easier moves, adds, and changes (MACs).



EDGE Tap Harness
| Photo LAN802

Ordering Information

H 1 2 E Z - W M

1 2 3 4 5

1 Select non-pinned MTP connector.
90 = Single-mode (OS2)
75 = 50 µm multimode (OM4)

2 Select the LC connector type.
03 = 50 µm multimode (OM4)
02 = Single-mode (OS2)

3 Select fibre type.
Q = 50 µm multimode (OM4)
G = Single-mode (OS2)

4 Select leg length in mm (leg OD is 2.0 mm).
J = 300 mm N = 1500 mm
K = 600 mm P = 1800 mm
L = 1000 mm Q = 1950 mm
M = 1200 mm R = 2450 mm
See Note 1.

5 Select overall harness length (includes the break-out connector leg lengths).
002-300

Note: Furcation legs are colour coded by fibre type: Q = Turquoise; G = Yellow.
For additional information and part numbers for non-tap EDGE solutions components for your system, contact a Corning Customer Care Representative.

The EDGE tap module is compatible with Virtual Instruments' protocol-level performance monitoring solutions. For more information on Virtual Instruments, visit www.virtualinstruments.com.
Note: Optical performance is shown on page 35

MTP® Connector Patch Cables

EDGE™ 40G multimode patch cables allow for the seamless migration to higher data rates in the data centre when used in conjunction with our universal trunks. This patch cable is based around pinned or non-pinned 12-fibre MTP connectors.

Features

- Feature slim round 12-fibre interconnect cable
- Improved handling in high-density applications
- Low-loss connectivity enables system design flexibility
- Enabled by bend-insensitive Corning® ClearCurve® multimode or single-mode fibres
- Dielectric, therefore no ground loop or potential equalisation issues
- MTP connector: to ANSI HIPPI-6400, IEC 61754-7, TIA/EIA-604-5 (FOCIS)

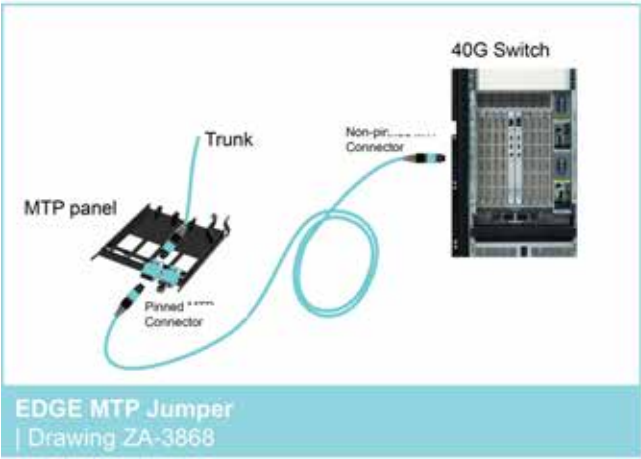
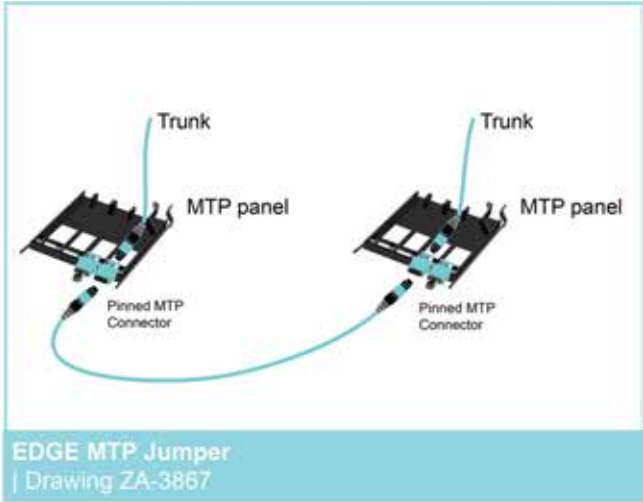
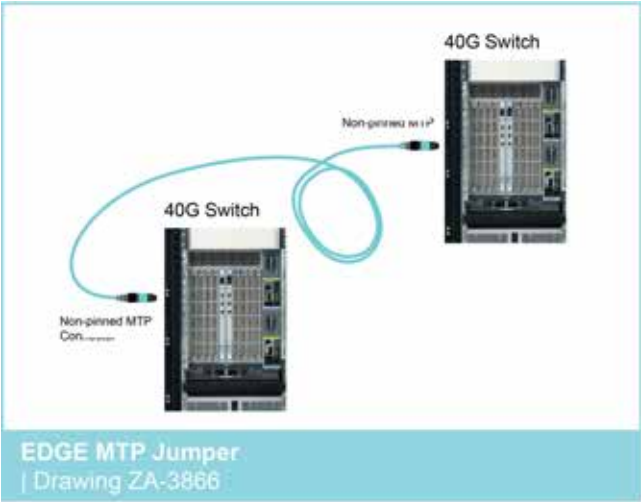


Optical Performance

	MTP® Connector Insertion Loss	Reflectance
MTP Patch cable OM3, OM4, OM5	0.25 dB	≤ -20 dB
MTP Patch cable OS2	0.35 dB	≤ -65 dB

Solution Configuration for EDGE Housings

Part Number	Height Unit	Number of 40/100G Ports/ Fibres MM/SM, 2x MTP Panel with AO Patch Cable	Number of 40/100G Ports/ Fibres MM/SM, 4x MTP Panel with AO Patch Cable	Number of 40/100G Ports/ Fibres MM/SM, 6x MTP Panel with AO Patch Cable	Number of Panels per Housing
EDGE-01U	1U	16 / 192	32 / 384	48 / 576	8
EDGE-01U-SP	1U	24 / 288	48 / 576	72 / 864	12
EDGE-02U	2U	48 / 576	96 / 1152	144 / 1728	24
EDGE-04U	4U	96 / 1152	192 / 2304	288 / 3456	48
EDGE-01U-FP	1U	16 / 192	32 / 384	48 / 576	8
EDGE-02U-FP	2U	32 / 384	64 / 768	96 / 1152	16
EDGE-04U-FP	4U	64 / 768	128 / 1536	192 / 2304	32



Ordering Information

J12EZ - NBM

1

2

3

4

1 Select MTP® connector one.

- 75 = Non-pinned (OM3/OM4/OM5)
- 93 = Pinned (OM3/OM4/OM5)
- 89 = Pinned (OS2)
- 90 = Non-pinned (OS2)

2 Select MTP connector two.

- 75 = Non-pinned (OM3/OM4/OM5)
- 93 = Pinned (OM3/OM4/OM5)
- 89 = Pinned (OS2)
- 90 = Non-pinned (OS2)

3 Select fibre type.

- T = 50 µm multimode (OM3)
- Q = 50 µm multimode (OM4)
- V = 50 µm Wideband multimode (OM5)
- G = Single-mode (OS2)

4 Select distance.

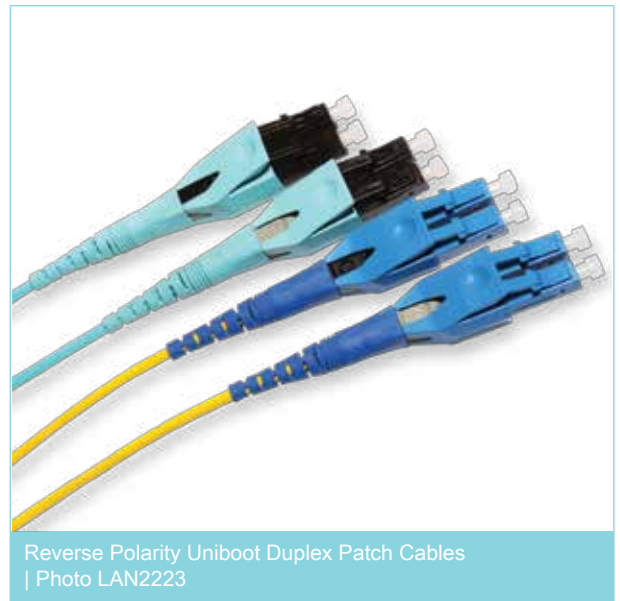
001-305

LC Duplex Uniboot Patch Cables

Reverse polarity uniboot duplex patch cables allow for the quick and easy conversion from a TIA-568 A-B polarity to a TIA-568 A-A polarity without exposing the fibres or needing any tools. This patch cable comes with a straight-through polarity from the factory, but you can convert it to a flipped cable with no tools. This uniboot design allows one cable to carry both fibres, reducing the cable bulk when routing.

Features

- Slim round 2-fibre interconnect cable
- Uniboot style duplex connectors
- Improved handling in high-density applications
- Low-loss connectivity enables system design flexibility
- Enabled by bend-insensitive Corning® ClearCurve® multimode or single-mode fibres
- Designed to withstand tight bends and challenging cable routes
- Dielectric, therefore no ground loop or potential equalisation issues



Optical Performance

	LC Connector Insertion Loss	Reflectance
LC Patch Cable OM3, OM4, OM5	0.1 dB	≤ -20 dB
LC Patch Cable OS2	0.25 dB	≤ -58 dB

Solution Configuration for EDGE Housings

Part Number	Height Unit	Number of 1/10G Ethernet Ports/ Fibres MM, 6x LC Duplex Panel	Number of 1/10/40/100G Ethernet Ports/ Fibres SM, 6x LC Duplex Panel	Number of 4/8/10/16/32G FC Ports/Fibres SM, 6x LC Duplex Panel	Number of Panels per Housing
EDGE-01U	1U	48 / 96	48 / 96	48 / 96	8
EDGE-01U-SP	1U	72 / 144	72 / 144	72 / 144	12
EDGE-02U	2U	144 / 288	144 / 288	144 / 288	24
EDGE-04U	4U	288 / 576	288 / 576	288 / 576	48
EDGE-01U-FP	1U	48 / 96	48 / 96	48 / 96	8
EDGE-02U-FP	2U	96 / 192	96 / 192	96 / 192	16
EDGE-04U-FP	4U	192 / 384	192 / 384	192 / 384	32

Ordering Information

E 0 2 N Z 2 0 M

1
2
3
4

1 Select connector one type.

57 = SC duplex multimode (OM3/OM4/OM5)
 79 = LC duplex multimode (OM3/OM4/OM5)
 78 = LC duplex single-mode (OS2)

2 Select connector two type.

79 = LC duplex multimode (OM3/OM4/OM5)
 78 = LC duplex single-mode (OS2)

3 Select fibre type.

T = 50 µm multimode (OM3)
 Q = 50 µm multimode (OM4)
 V = 50 µm Wideband multimode (OM5)
 G = Single-mode (OS2)

4 Select cable length in metres.

Standard lengths are 001, 002, 003, 004, 005, 006, 007, and 010

Note: Additional lengths and plenum-rated jackets are available upon request.

Reverse Polarity LC Duplex Clips

All reverse polarity uniboot LC duplex connectors come with a clip that is removable. We offer a total of 10 colours to allow for easy link identification or fabric segmentation.



Ordering Information

TRIGGER - B P - U ☐
1

1 Select colour.

- N = Blue
- R = Red
- E = Orange
- B = Black
- G = Green
- Y = Yellow
- K = Beige
- P = Rose
- C = Slate
- A = Turquoise

Note: Must order in multiples of 100.



Cleaning Accessories

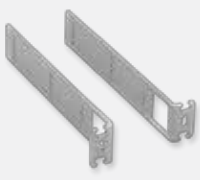
Part Number	Product Description	Units Per Delivery	
CLEANER-PORT-LC	Single-fibre Port Cleaner for LC, keyed LC, and MU connector end faces for both UPC and APC polishes	1/1	
2104466-01	Fibre Optic Cleaning Tool used to clean MTP® connector end faces as well as MTP Connectors installed in a module	1/1	

Housing Accessories

Part Number	Product Description	Units Per Delivery	
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	
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	



Trunk Accessories

Part Number	Product Description	Units Per Delivery	
EDGE-CDF-RJ04-BKT	EDGE™ Solutions Strain-Relief Bracket, CDF, accommodating four EDGE solutions clip parking positions	1/1	
EDGE-CDF-RJ08-BKT	EDGE™ Solutions Strain-Relief Bracket, CDF, accommodating eight EDGE solutions clip parking positions	1/1	
EDGE-CDF-RJ12-BKT	EDGE™ Solutions Strain-Relief Bracket, CDF, accommodating 12 EDGE solutions clip parking positions	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	
EDGE-01U-FLSH-BKT	EDGE™ Extension and Flush-Mount Bracket for EDGE-01U	1/1	



Housing and Box Accessories

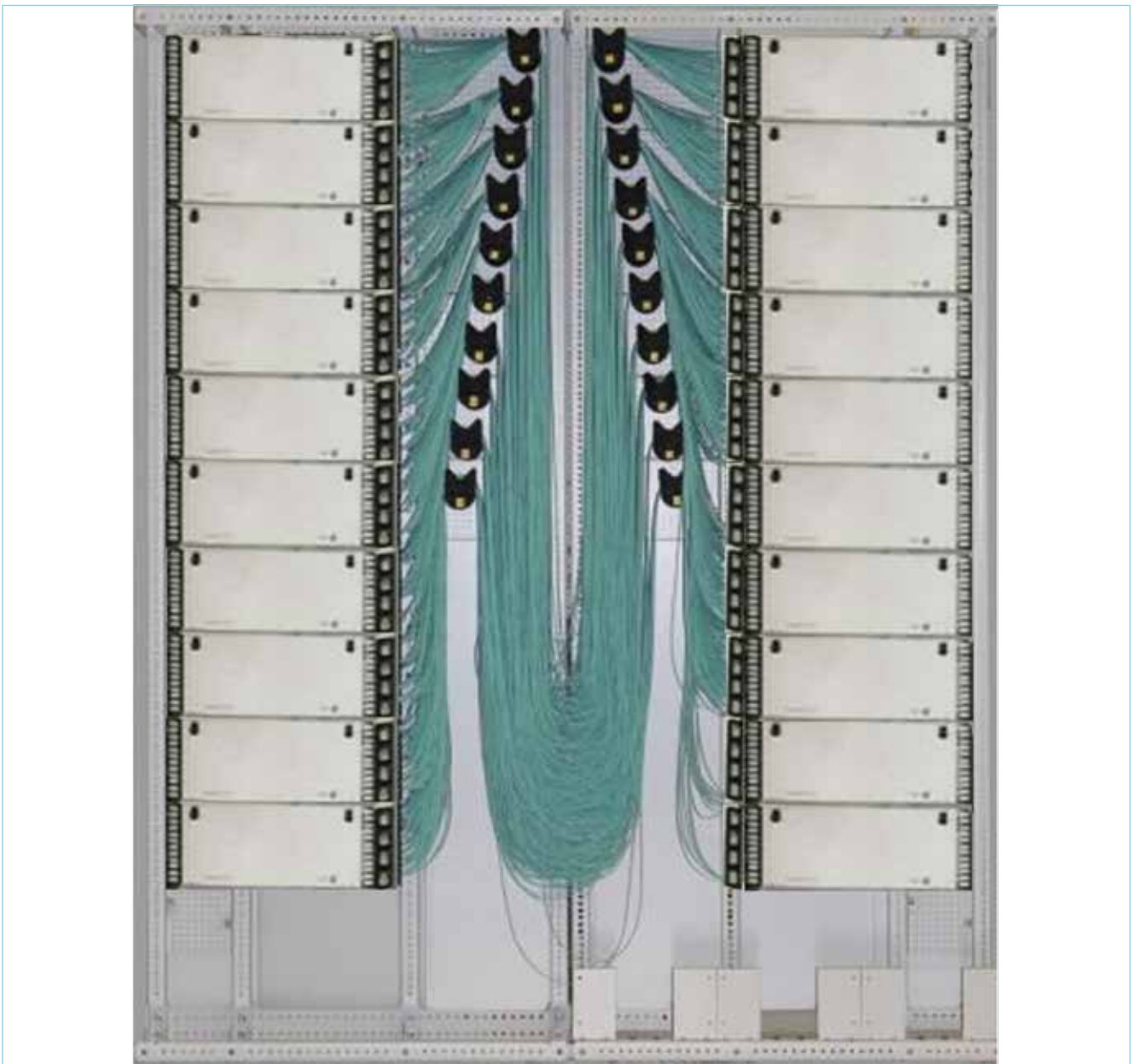
Part Number	Product Description	Units Per Delivery	
EDGE-FZB-04U	EDGE™ Solutions Housing, fixed, fibre zone box, four rack units, holds 32 EDGE modules or panels	1/1	
EDGE-01U-EMOD	EDGE™ Solutions Mounting Bracket, accommodates up to eight EDGE modules and/or panels within a one rack unit space	1/1	
EDGE-CZB	EDGE™ Zone Box, anodized silver, for up to 24 EDGE LC modules or MTP® adapters	1/1	
EDGE-10U-PRH	EDGE™ Port Replication Housing, 10 rack units, holds up to 11 EDGE-CP8B-PRH or EDGE-BLNK-PRH panels	1/1	
EDGE-CPCVR-PRH	EDGE™ Port Replication Housing Accessory, module panel blank-out, covers/blanks 2 module slots	11/1	
EDGE-CP8B-PRH	EDGE™ Port Replication Housing Accessory, module panel, holds up to 8 EDGE modules	1/1	
EDGE-BLNK-PRH	EDGE™ Port Replication Housing Accessory, blank panel	1/1	

MDA/Cross-Connect Accessories

Part Number	Product Description	Units Per Delivery	
EDG-CAB2-R2218NNRAB	EDGE™ Optical Distribution Dual-Frame Door 2200 mm (H) x 1800 mm (W) x 600 mm (D)	1/1	
CAB4KT2218PGN	EDGE™ Optical Distribution Dual-Frame Door and Side Wall Kit, 2200 mm (H) x 1800 mm (W) x 600 mm (D)	1/1	
EDG-CAB-R2209NNRAB	EDGE™ Optical Distribution Frame Single Left Cable Management 2,200 mm (H) x 900 mm (W) x 600 mm (D)	1/1	
EDG-CAB-R2209NNLAB	EDGE™ Optical Distribution Frame Single Right Cable Management 2,200 mm (H) x 900 mm (W) x 600 mm (D)	1/1	
CABRKT2209PGNA	EDGE™ Optical Distribution Frame Single Door and Side Wall Kit (Left or Right)	1/1	

EDGE™ Dual Frame

Designed with simplicity in mind the EDGE Dual Frame can support up to 5,760 LC Duplex or MTP Ports. The system works by using one cable hub per 4U housing but there is no need to order multiple lengths of patch cables as the system has been designed to use just one, 4 m patch cable. The gravity free loop created by the multiple patches supports the installation or removal of a single cable in less than 2 minutes irrespective of cable route. Several cable entry options and trunk & cable slack storage options on the rear the frame supports Ultra-High-Density deployments in a compact footprint and additional accessories compliment the frame including cable routing channels, doors and side panels for improved containment and security.





Corning Optical Communications GmbH & Co. KG · Leipziger Strasse 121 · 10117 Berlin, GERMANY

00 800 2676 4641 · FAX: +49 30 5303 2335 · www.corning.com/opcomm/emea

A complete listing of the trademarks of Corning Optical Communications is available at

www.corning.com/opcomm/emea/trademarks. Corning Optical Communications is ISO 9001 and ISO 14001 certified.

© 2017 Corning Optical Communications. All rights reserved.