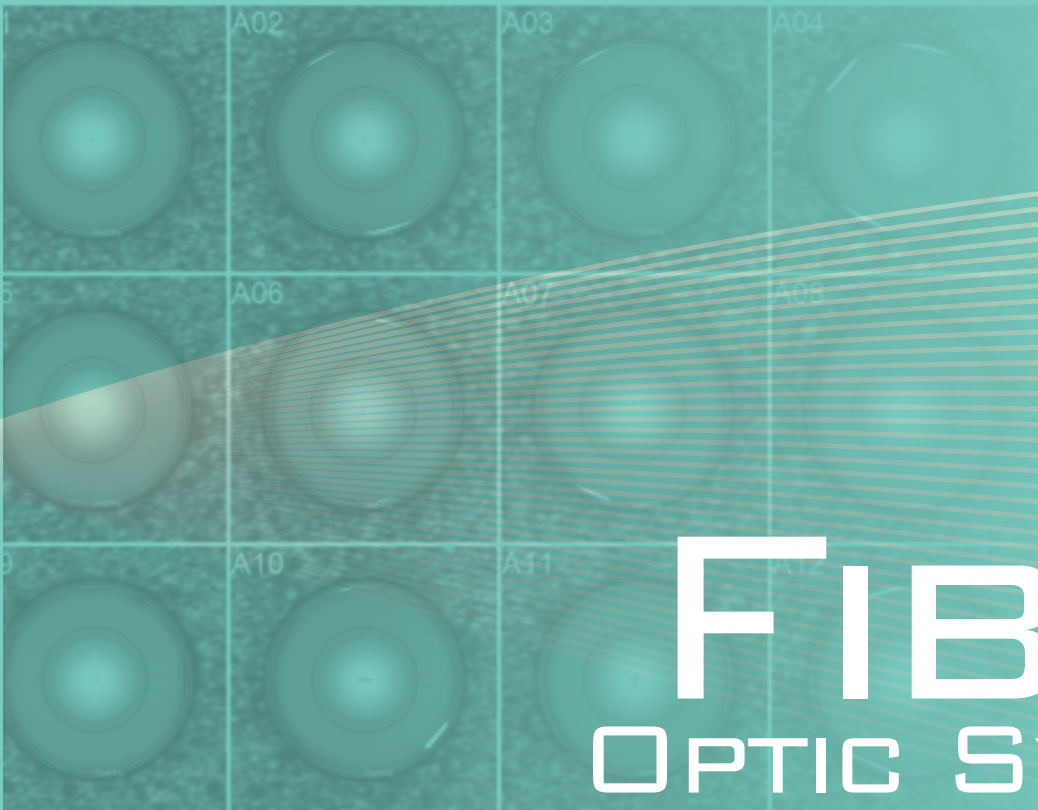


Fast Lead Time

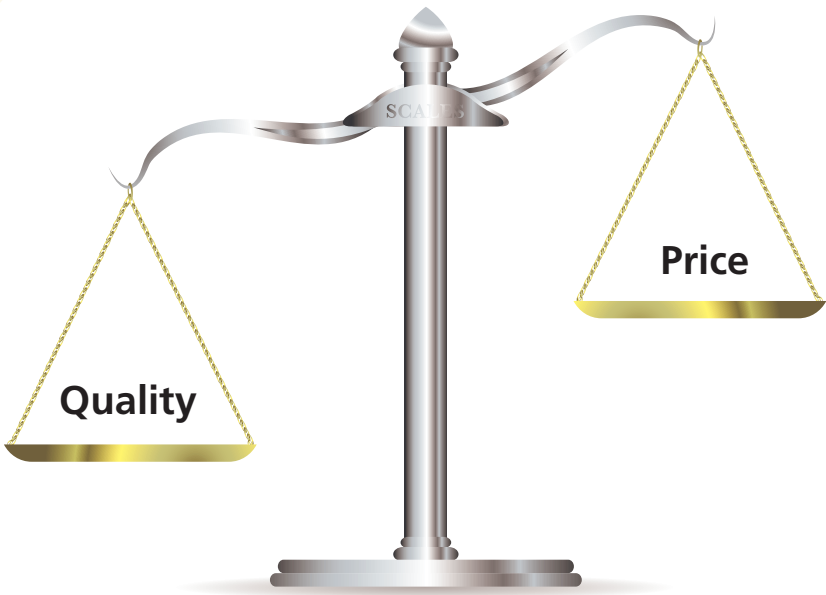
JE offer one week lead time for fiber patch cord, from order releasing to goods received by customers, you are free of stock pressure, get better cash flow.



FIBER OPTIC SYSTEM

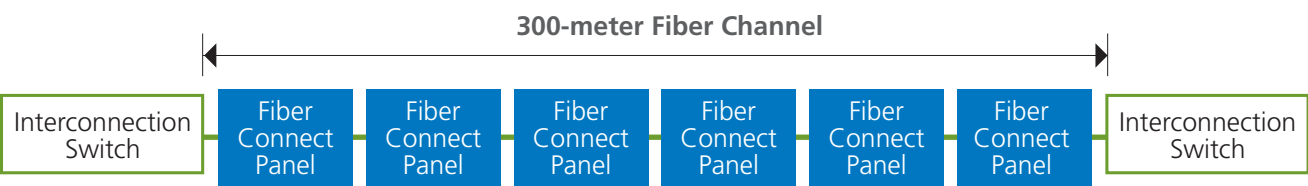
Competitive Price

Compare with same quality competitors, JE offer absolutely competitive prices to our customers.



Fiber Optic Loss Budgets Calculation	01
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Fiber Optic Loss Budgets Calculation



10G LC OM3 300Mtr Channel with 6 Connections

Total Optimized MM Connector Loss:	6 x 0.15dB/connector = 0.90 dB
OM3 Cable Loss:	300 m x 3.5dB/km = 1.05 dB
Total	1.95 dB < Max. 2.6dB

*Per IEEE802.3ae, a 10GBASE Channel over OM3 fiber has a Max. 300Mtr with Max. loss 2.6dB

10G LC OS2 300Mtr Channel with 6 Connections

Total Optimized SM Connector Loss:	6 x 0.15dB/connector = 0.90 dB
OS2 Cable Loss:	300 m x 0.35dB/km = 0.105 dB
Total	1.005 dB < Max. 1.6dB

*Per IEEE802.3ae, a 10GBASE Channel over OS2 fiber has a Max. 300Mtr with Max. loss 1.6dB



40G MTP OM3 100Mtr Channel with 4 Connections

Total Optimized MM Connector Loss:	4 x 0.35dB/connector = 1.40 dB
OM3 Cable Loss:	100 m x 2.2dB/km = 0.22 dB
Total	1.62 dB < Max. 1.9 dB

*Per IEEE802.3ba, a 40GBASE Channel over OM3 fiber has a Max. 100Mtr with Max. loss 1.9dB

100G MTP OM4 150Mtr Channel with 3 Connections

Total optimized Connector Loss:	3 x 0.35dB/connector = 1.05 dB
OM4 Cable Loss:	150 m x 2.2dB/km = 0.33 dB
Total	1.38 dB < Max. 1.5 dB

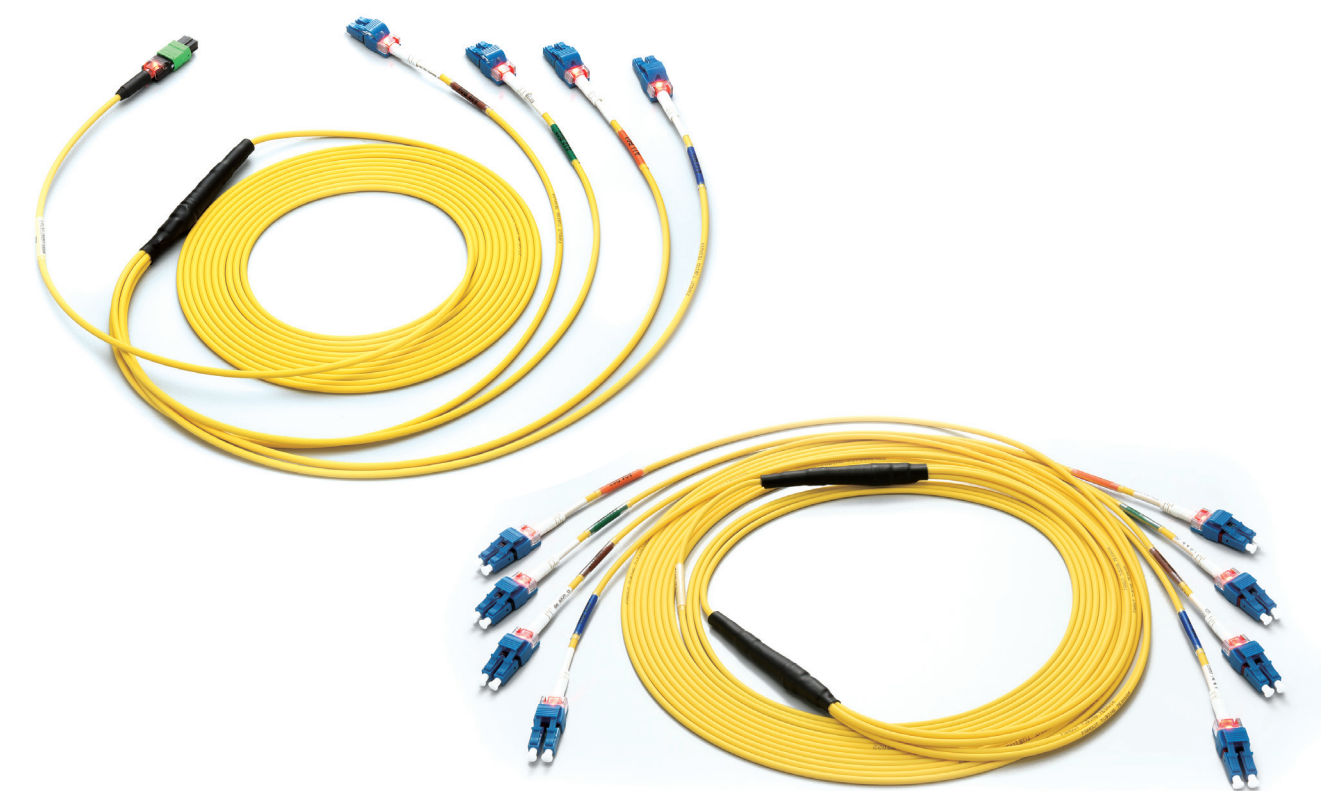
*Per IEEE802.3ba, a 100GBASE Channel over OM4 fiber has a Max. 150Mtr with Max. loss 1.5dB

	10G	40G	100G
Approach	10G	10G X 4	10G X 10
Max. Distance	OM3: 300M (850nm) OM4: 550M (850nm) SMF: 10KM (1310nm)	OM3: 100M (850nm) OM4: 150M (850nm) SMF: 10KM (1310nm)	OM3: 100M (850nm) OM4: 150M (850nm) SMF: 10KM (1310nm)

USCONEC Certification



Owl-Eyed Identification System

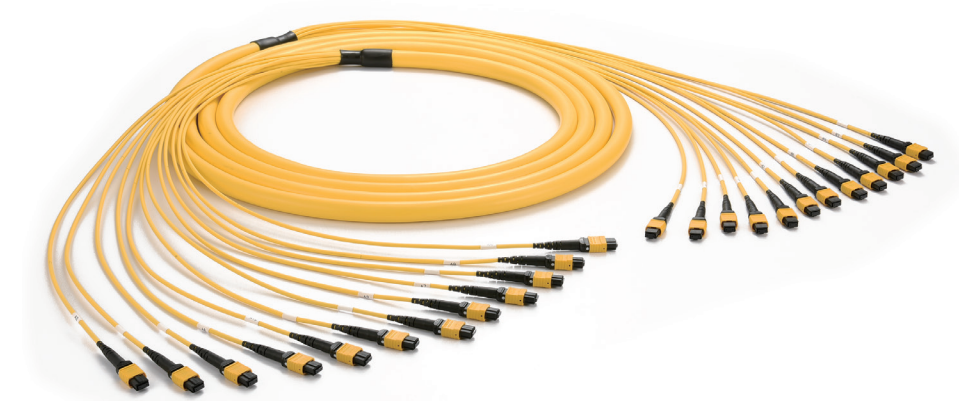


- Easily identify the termination point to the other
- Make trouble shooting easier
- Visually trace individual patch cord without pulling or affecting the patch cord
- Polarity switchable design in LC
- Red / Black color indication for polarity check
- Patent pending

Transmission Performance

Harness	Multimode			Single mode		
	Insertion Loss		Return Loss	Insertion Loss		Return Loss
	Standard Loss	Low Loss		Standard Loss	Low Loss	
LC	< 0.3 dB	< 0.15 dB	> 35 dB	< 0.2 dB	< 0.15 dB	> 55 dB
MTP	< 0.5 dB	< 0.35 dB	> 20 dB	< 0.75 dB	< 0.35 dB	> 60 dB

MTP Trunk Cable Assembly

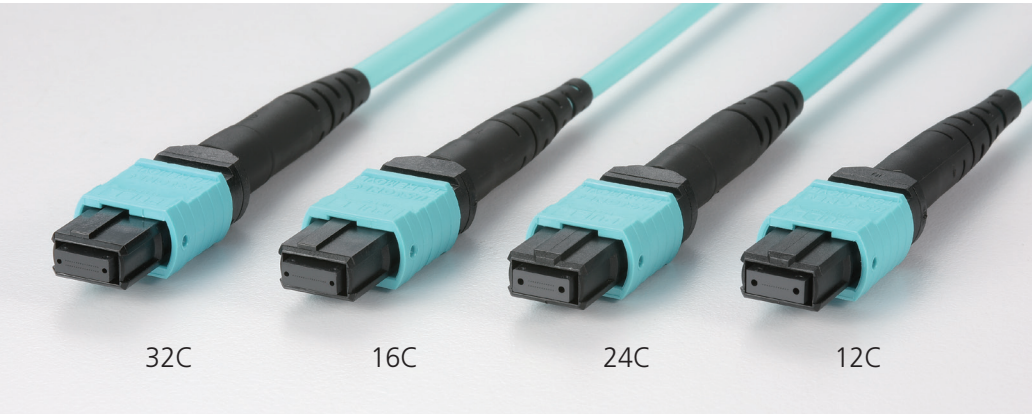


- Polarity A, B, C and customized are welcome
- 100% factory terminated and tested
- 8, 12, 24, 36, 48 cores... up to 144 cores are available
- Options with OM3, OM4 bend-insensitive fiber and OS2 G.657A
- Flexible micro cable reduced weight and carriage costs
- Parallel optic transmission over 40G / 100G / 400G Ethernet
- “Plug and Play” solution eliminates in-field termination, reduces installation cost and time

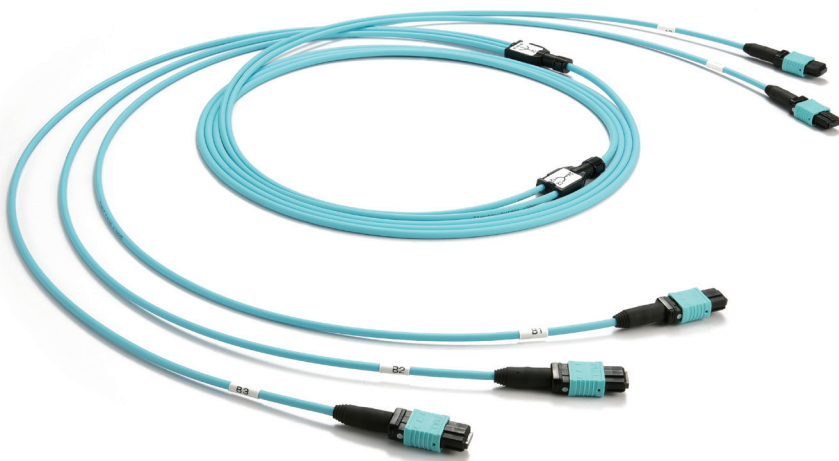
Transmission Performance

MTP mated pair	OM3 BIMMF		OM4 BIMMF		OS2 G.657A	
	Standard Loss	Low Loss	Standard Loss	Low Loss	Standard Loss	Low Loss
Insertion Loss	< 0.5dB	< 0.35dB	< 0.5dB	< 0.35dB	< 0.75dB	< 0.35dB
Return Loss	> 20dB	> 25dB	> 20dB	> 25dB	> 60dB	> 60dB

Parallel Optic Transmission Over 40G / 100G / 400G Ethernet



MTP Y Cable Assembly



- Standard Polarity and customized are welcome
- 100% factory terminated and tested
- 1x24F to 2x12F / 1x24F to 3x8F / 2x12F to 3x8F are available
- Options with OM3, OM4 bend-insensitive fiber and OS2 G.657A
- Flexible micro cable reduced weight and carriage costs

Transmission Performance

MTP mated pair	OM3 BIMMF		OM4 BIMMF		OS2 G.657A	
	Standard Loss	Low Loss	Standard Loss	Low Loss	Standard Loss	Low Loss
Insertion Loss	< 0.5dB	< 0.35dB	< 0.5dB	< 0.35dB	< 0.75dB	< 0.35dB
Return Loss	> 20dB	> 25dB	> 20dB	> 25dB	> 60dB	> 60dB

1x24F to 2x12F

End A Position	Fiber Color	End B Position
1	Blue	1
2	Orange	2
3	Green	3
4	Brown	4
5	Gray	5
6	White	6
7	Red	7
8	Black	8
9	Yellow	9
10	Purple	10
11	Pink	11
12	Aqua	12
13	Blue	1
14	Orange	2
15	Green	3
16	Brown	4
17	Gray	5
18	White	6
19	Red	7
20	Black	8
21	Yellow	9
22	Purple	10
23	Pink	11
24	Aqua	12

1x24F to 3x8F

End A Position	Fiber Color	End B Position
1	Blue	1
2	Orange	2
3	Green	3
4	Brown	4
5	Gray	1
6	White	2
7	Red	3
8	Black	4
9	Yellow	1
10	Purple	2
11	Pink	3
12	Aqua	4
13	Blue	12
14	Orange	11
15	Green	10
16	Brown	9
17	Gray	12
18	White	11
19	Red	10
20	Black	9
21	Yellow	12
22	Purple	11
23	Pink	10
24	Aqua	9

2x12F to 3x8F

End A Position	Fiber Color	End B Position
1	Blue	12
2	Orange	11
3	Green	10
4	Brown	9
5	Gray	4
6	White	3
7	Red	2
8	Black	1
9	Yellow	12
10	Purple	11
11	Pink	10
12	Aqua	9
1	Blue	4
2	Orange	3
3	Green	2
4	Brown	1
5	Gray	12
6	White	11
7	Red	10
8	Black	9
9	Yellow	4
10	Purple	3
11	Pink	2
12	Aqua	1

MTP to LC Harness Assembly

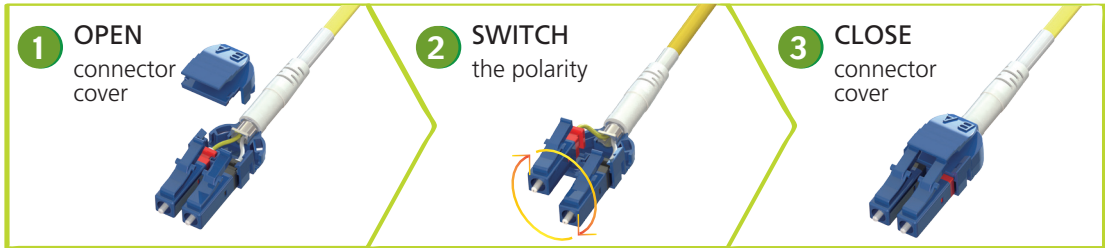


- UniBoot LC is polarity switchable design
- Half tube counts are ease of cable management
- 1x12C MTP to 6xLC uniboot / 1x12C MTP to 4xLC uniboot / 1x24C MTP to 10xLC uniboot / 1x24C MTP to 12xLC uniboot are available
- 100% Factory terminated and tested
- Options with OM3, OM4 bend-insensitive fiber and OS2 G.657A

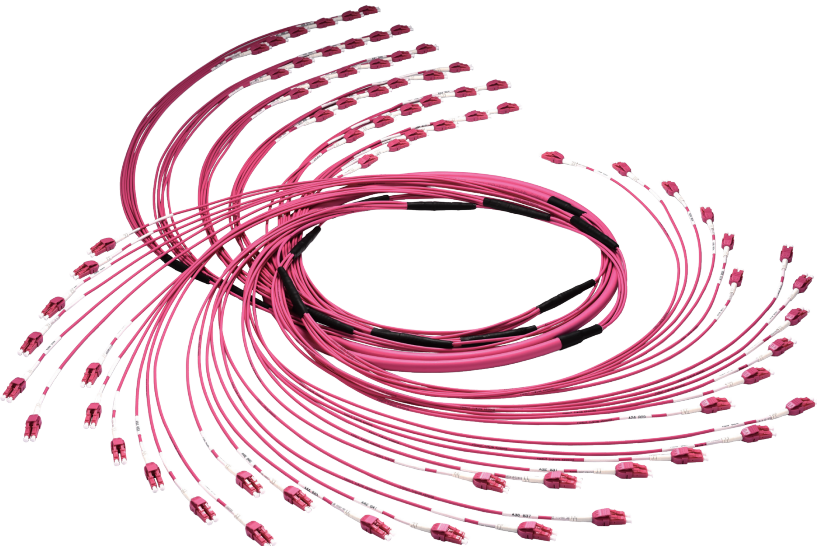
Transmission Performance

Harness	Multimode			Single mode		
	Insertion Loss		Return Loss	Insertion Loss		Return Loss
	Standard Loss	Low Loss		Standard Loss	Low Loss	
LC	< 0.3 dB	< 0.15 dB	> 35 dB	< 0.2 dB	< 0.15 dB	> 55 dB
MTP	< 0.5 dB	< 0.35 dB	> 20 dB	< 0.75 dB	< 0.35 dB	> 60 dB

Switch Polarity



UniBoot LC MicroCable Assembly

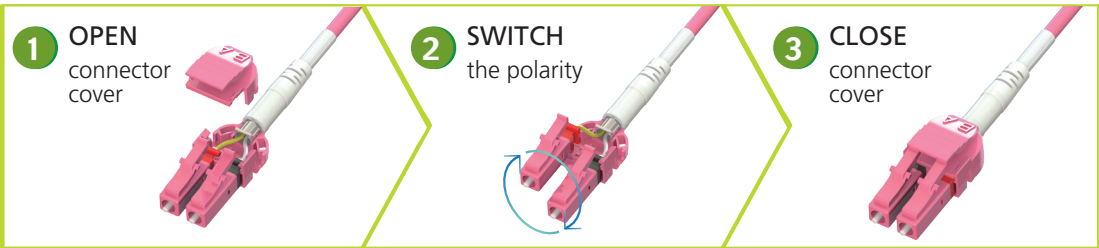


- Uniboot LC is polarity switchable design
- Red/Black color indication for polarity check
- 100% Factory terminated and tested
- Half tube counts are ease of cable management
- Flexible microcable reduced weight and carriage costs
- 2, 8, 12, 24, 36, 48 cores... up to 144 cores are available
- Options with OM3, OM4 bend-insensitive fiber and OS2 G.657A
- Breakout tubing Length Max. 2.5M.

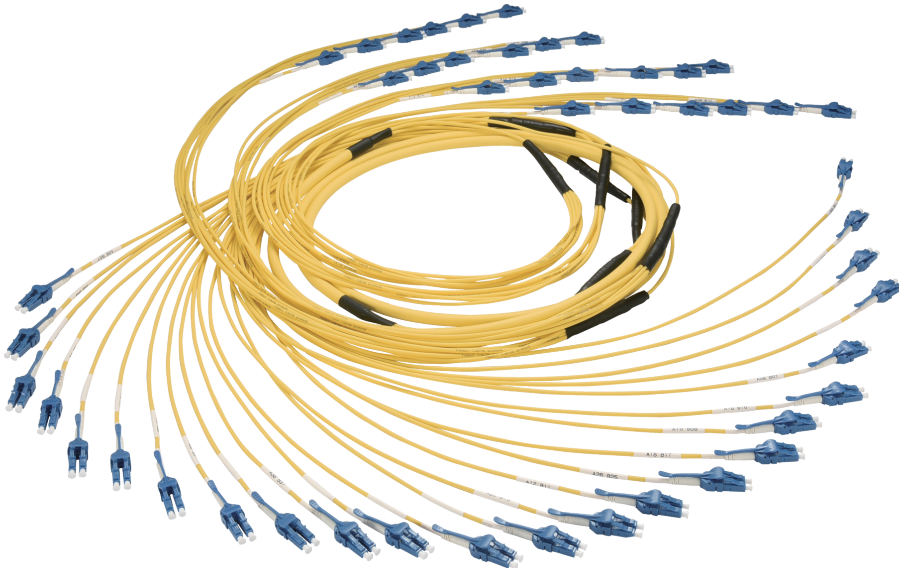
Transmission Performance

LC mated pair	300M/10G OM3		550M/10G OM4		10KM/10G OS2	
	Standard Loss	Low Loss	Standard Loss	Low Loss	Standard Loss	Low Loss
Insertion Loss	< 0.3dB	< 0.15dB	< 0.3dB	< 0.15dB	< 0.2dB	< 0.15dB
Return Loss	> 35dB	> 40dB	> 35dB	> 40dB	> 55dB	> 55dB

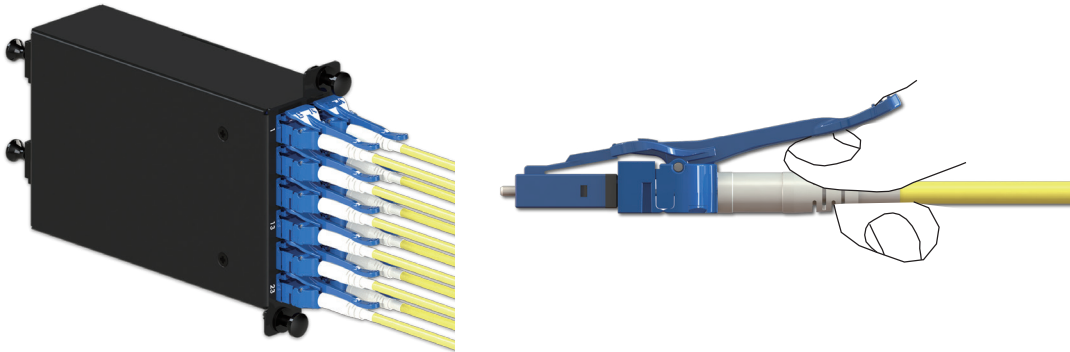
Switch Polarity



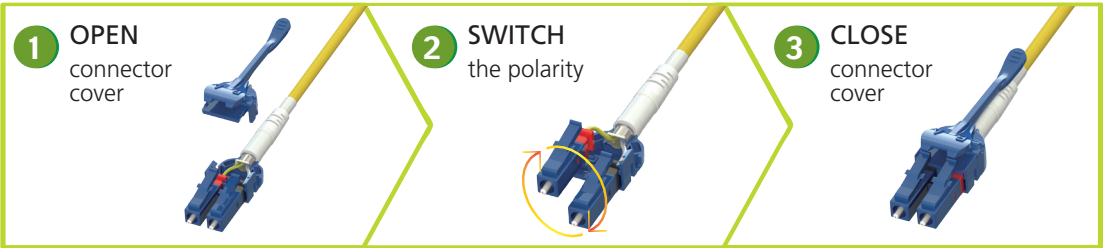
Extractor LC MicroCable Assembly



- Seesaw tab design makes LC connector easy extraction in high density construction
- Extractor LC is polarity switchable design
- Red/Black color indication for polarity check
- 100% Factory terminated and tested
- Half tube counts are ease of cable management
- 2, 8, 12, 24, 36, 48 cores... up to 144 cores are available
- Options with OM3, OM4 bend-insensitive fiber and OS2 G.657A
- Breakout tubing length Max. 2.5M.

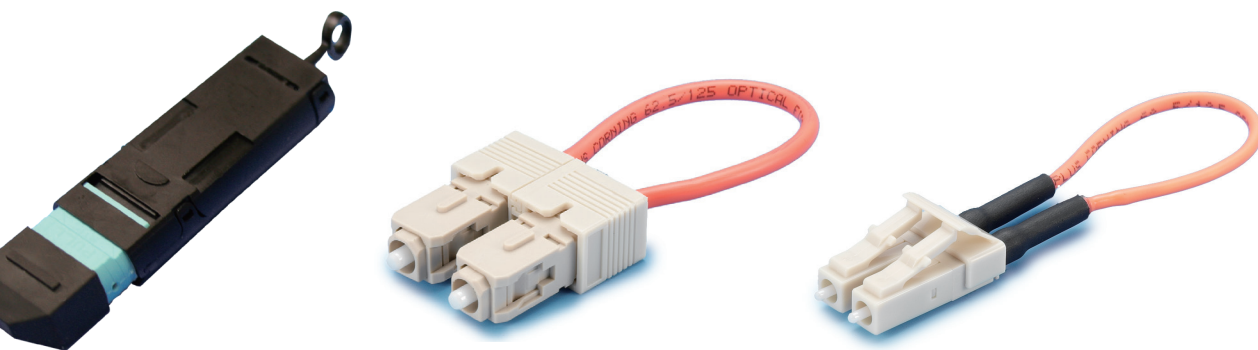


Switch Polarity



Loop Back

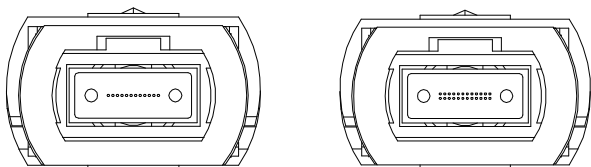
Fiber loop back provide an economical solution for a number of fiber optic test applications. These loop back cables offer a generous manageable fiber loop virtually eliminating bend loss. Each cable is functionally tested before shipping and is covered by a lifetime warranty. For MTP, device burn-in and loopback testing for network cards and QSFP modules. A signal loop from transceiver to receiver is within one MTP. Loopback includes SC, LC and 12C / 24C MTP connector types, allows testing of optical network segment by segment.



Transmission Performance

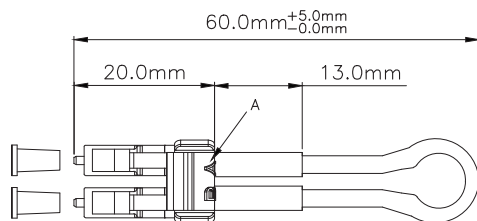
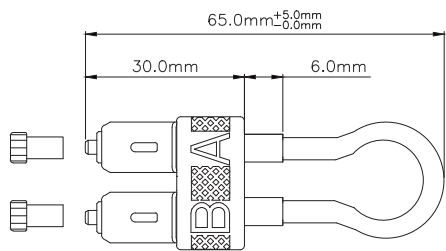
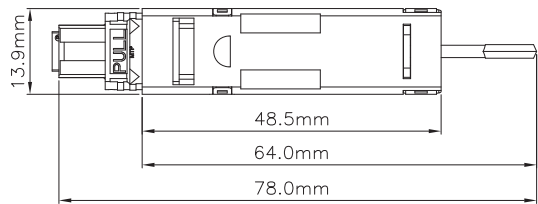
Insertion Loss	Multimode	Singlemode
MTP	< 1.5 dB	< 1.5 dB
LC / SC	< 0.5 dB	< 0.3 dB

MTP Polarity



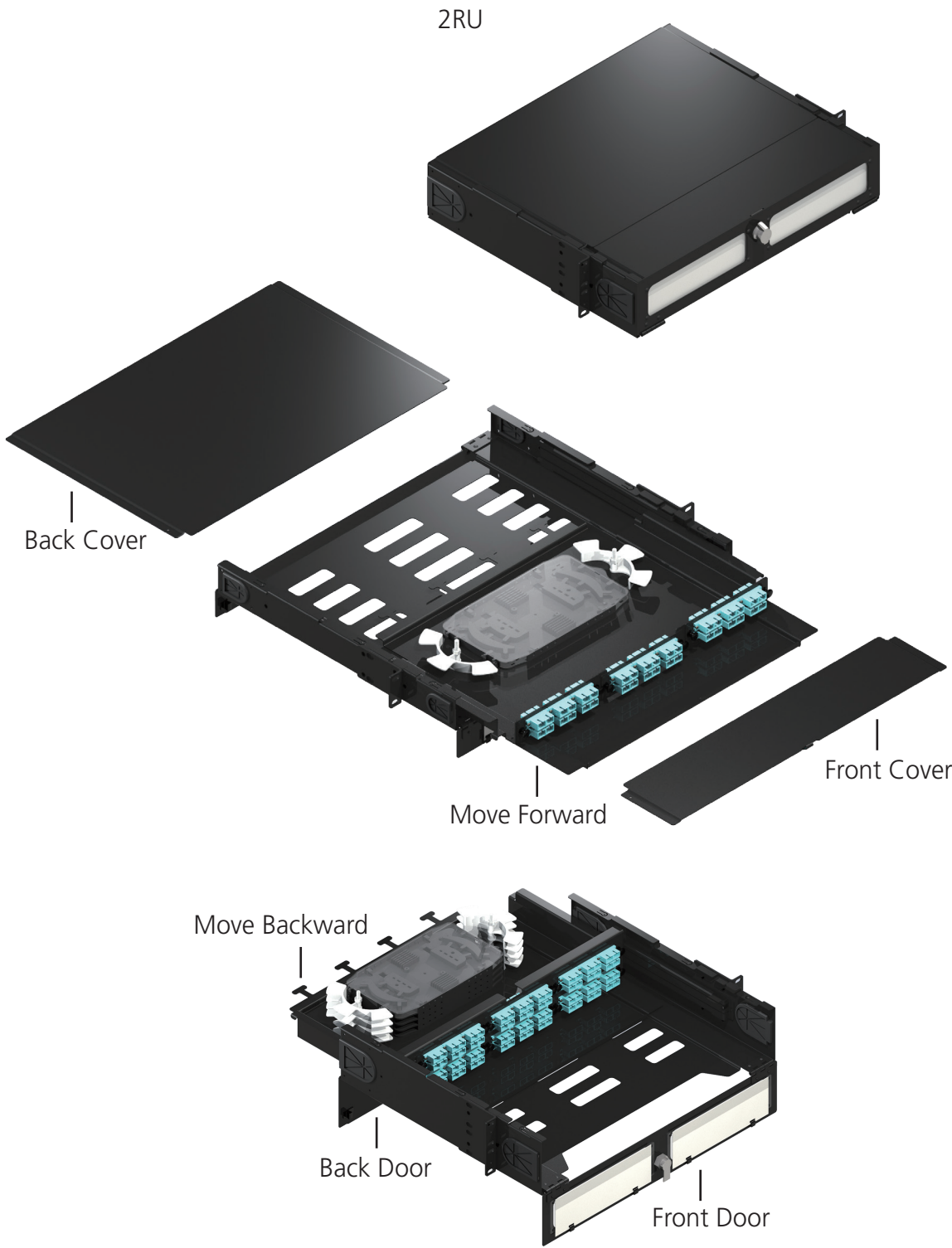
Channel Standard Fiber Number		
01	to	12
02	to	11
03	to	10
04	to	09
05	to	08
06	to	07

Channel Standard Fiber Number		
01	to	13
02	to	14
03	to	15
04	to	16
05	to	17
06	to	18
07	to	19
08	to	20
09	to	21
10	to	22
11	to	23
12	to	24



Bi-Direction Sliding Fiber Enclosure

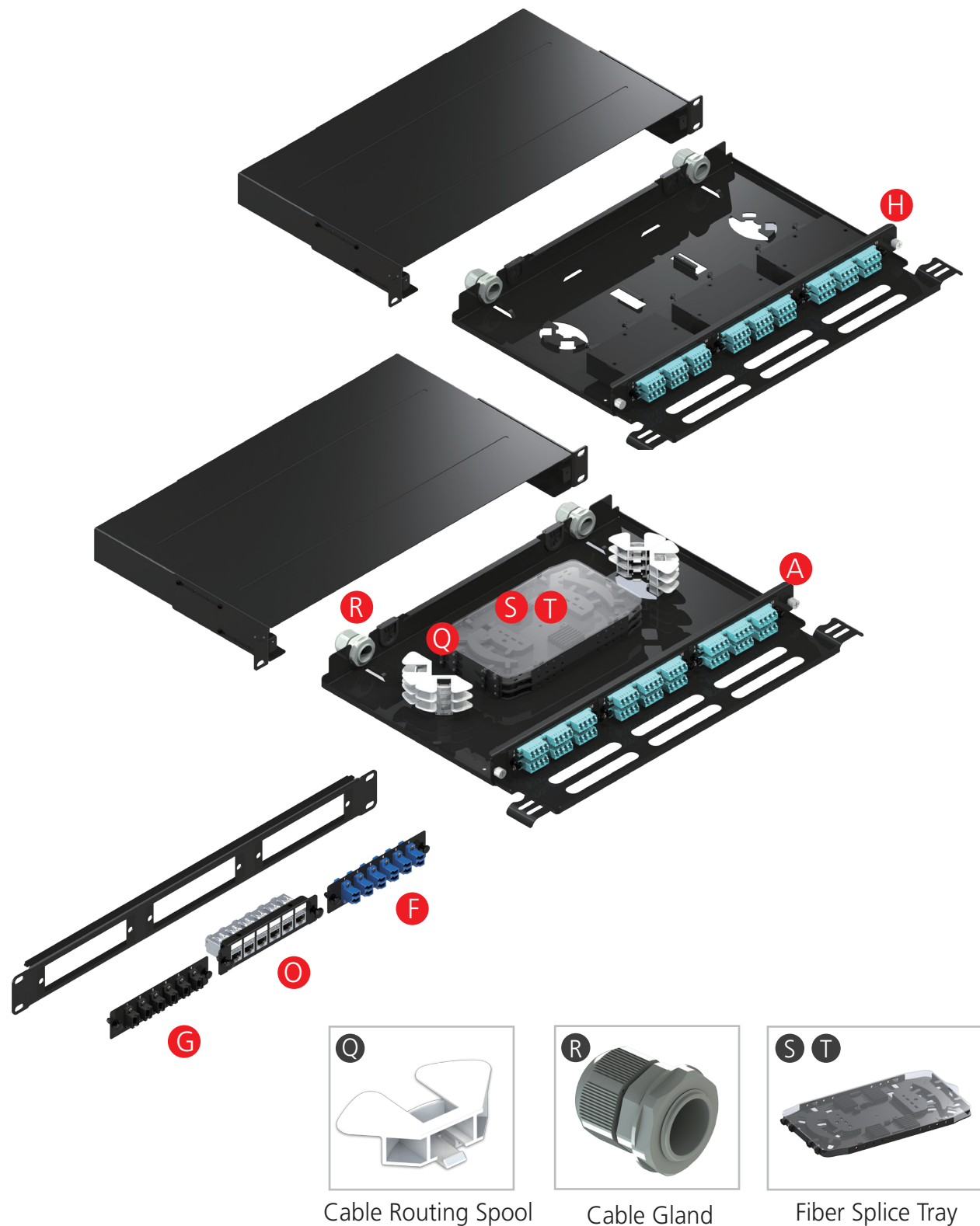
Bi-Direction sliding fiber enclosure can be shut off with hinged front door and rear cover after termination, so it is away from dusts and prevents disconnection by careless touch, more secured and compact construction.



* Both of 1RU and 2RU are available.

Multi-Function LGX Fiber Patch Panel

Multi-Function LGX fiber patch panel is constructed by flexible design to achieve diversified applications, like in-field fiber termination, pre-termination fiber cassette and RJ45 keystone termination. The panel accepts LGX cutout fiber adaptor plate, fiber cassette and even LGX 6 RJ45 keystone jack plate.



24C LC Adaptor Panels

- 6 Quad LC adaptors
- Plug & Play for fast installation
- Ceramic sleeve for OM3, OM4 and SM
- Insertion loss < 0.2dB

A. OM3 Aqua adaptor

B. OM4 Violet adaptor

C. SM Blue adaptor

12C LC Adaptor Panels

D. OM3 Aqua adaptor

E. OM4 Violet adaptor

F. SM Blue adaptor

G. MTP Adaptor

24C MTP-LC Cassettes

- 6 x Quad LC adaptors
- 2 x MTP adaptors
- 2 x 12F MTP-LC Harness
- 100% factory terminated and tested
- Low Insertion loss < 0.5dB
- Plug & Play for fast installation

H. OM3 Cassette

I. OM4 Cassette

J. SM Cassette

12C MTP-LC Cassettes

K. OM3 Cassette

L. OM4 Cassette

M. SM Cassette

N. 40G / 100G Migration Cassette

O. 6-Port Cat.6A Keystone Jack Panels

P. LGX blank panel

Q. Cable Routing Spool

R. Cable Gland

Option: • M20 Cable O.D. 10-14mm

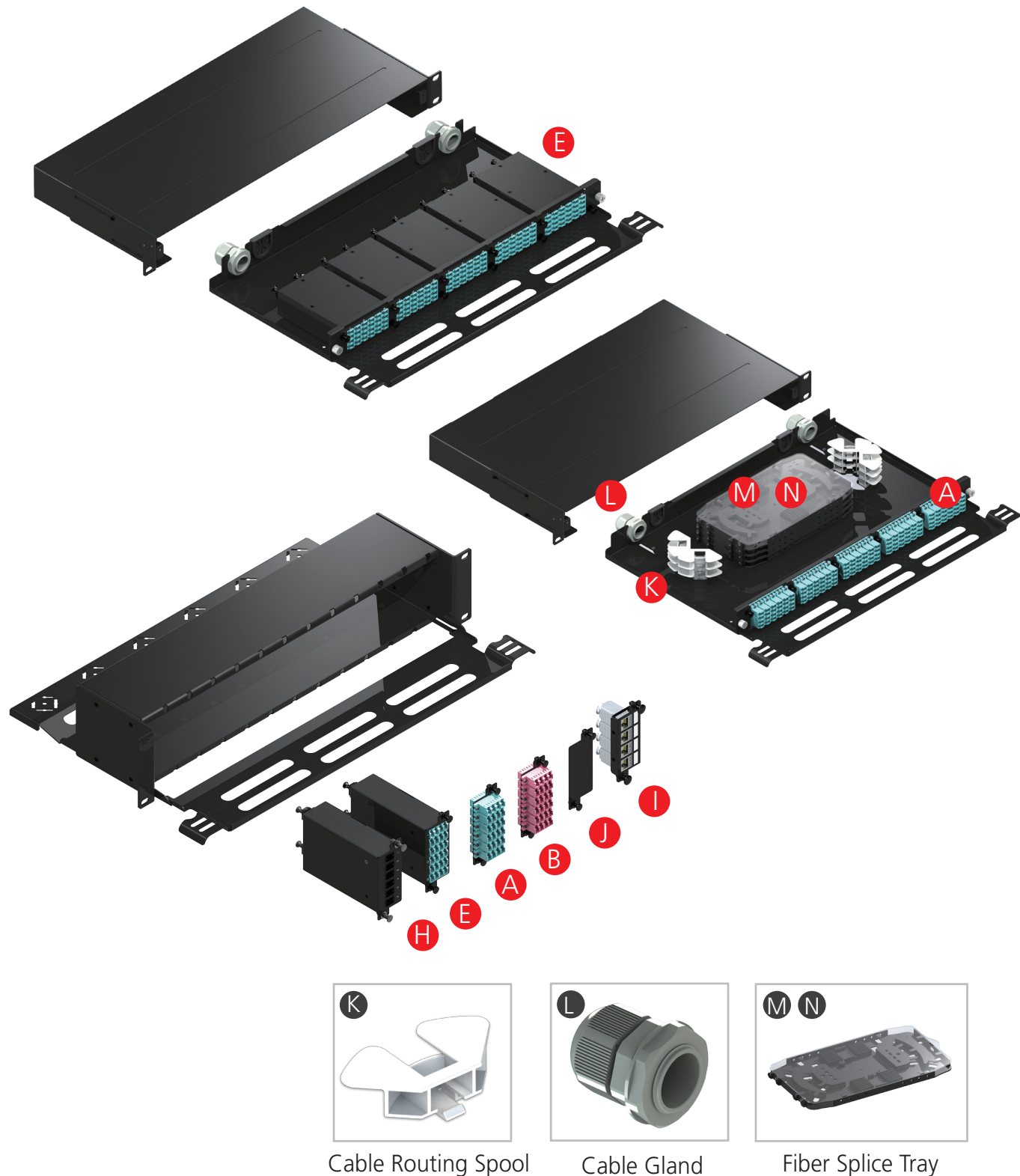
• M25 Cable O.D. 13-18mm

S. 12-Fiber Splice Tray

T. 24-Fiber Splice Tray

Multi-Function HD Fiber Patch Panel

Multi-Function high density fiber patch panel is constructed by flexible design to achieve diversified applications, like in-field fiber termination, pre-termination fiber cassette and RJ45 keystone termination. The maximum port number of 1U multi-function fiber patch panel is up to 120 ports.



Cable Routing Spool

Cable Gland

Fiber Splice Tray

24C LC Adaptor Panels

- 6 Quad LC adaptors
- Plug & Play for fast installation
- Ceramic sleeve for OM3, OM4 and SM
- Insertion loss < 0.2dB

A. OM3 Aqua adaptor
B. OM4 Violet adaptor
C. SM Blue adaptor
D. MTP Adaptor

24C MTP-LC Cassettes

- 6 x Quad LC adaptors
- 2 x MTP adaptors
- 2 x 12F MTP-LC Harness
- 100% factory terminated and tested
- Low Insertion loss < 0.5dB
- Plug & Play for fast installation

E. OM3 Cassette
F. OM4 Cassette
G. SM Cassette

H. 40G/100G Cassette

- I. 4-Port Cat.6A Keystone Jack Panels
- Full shielded by zinc alloy housing
 - C6A component performance
 - Fits 23-26 awg solid and stranded cable
 - Fits cable O.D. 5-8mm

J. Blank Panel

K. Cable Routing Spool

L. Cable Gland

Option:

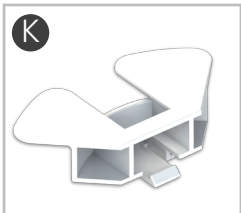
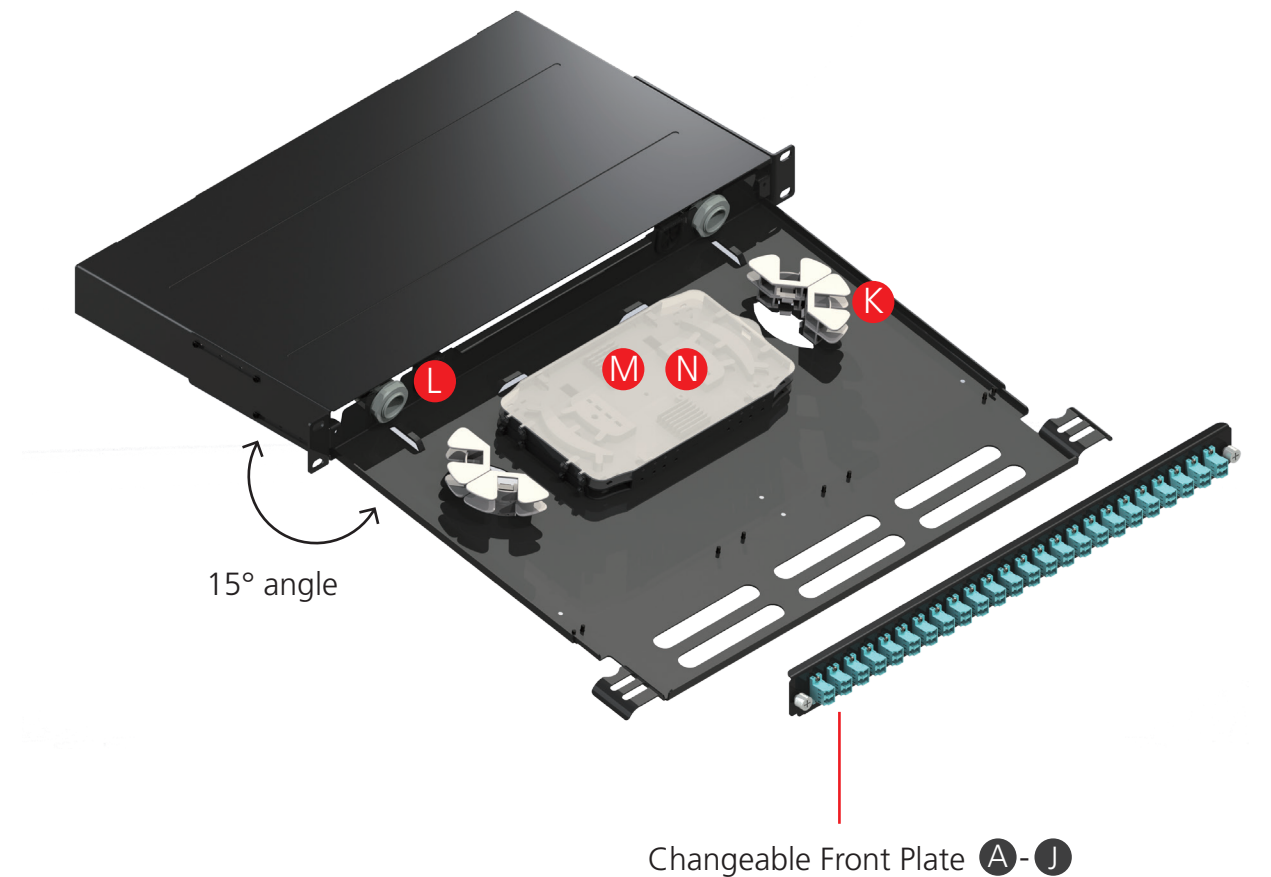
- M20 Cable O.D. 10mm-14mm
- M25 Cable O.D. 13mm-18mm

M. 12-Fiber Splice Tray

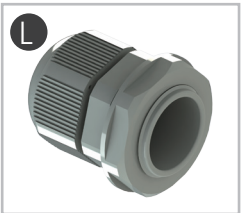
N. 24-Fiber Splice Tray

Fiber Patch Panel with Changeable Front Plate

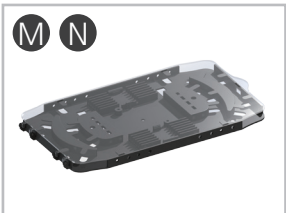
1RU Multi-Function fiber patch panel is constructed by flexible design to achieve diversified applications, in-field fiber termination with various adaptor plates, like ST, FC, SC simplex, SC duplex, LC duplex, LC quad in 12port and 24port.



Cable Routing Spool



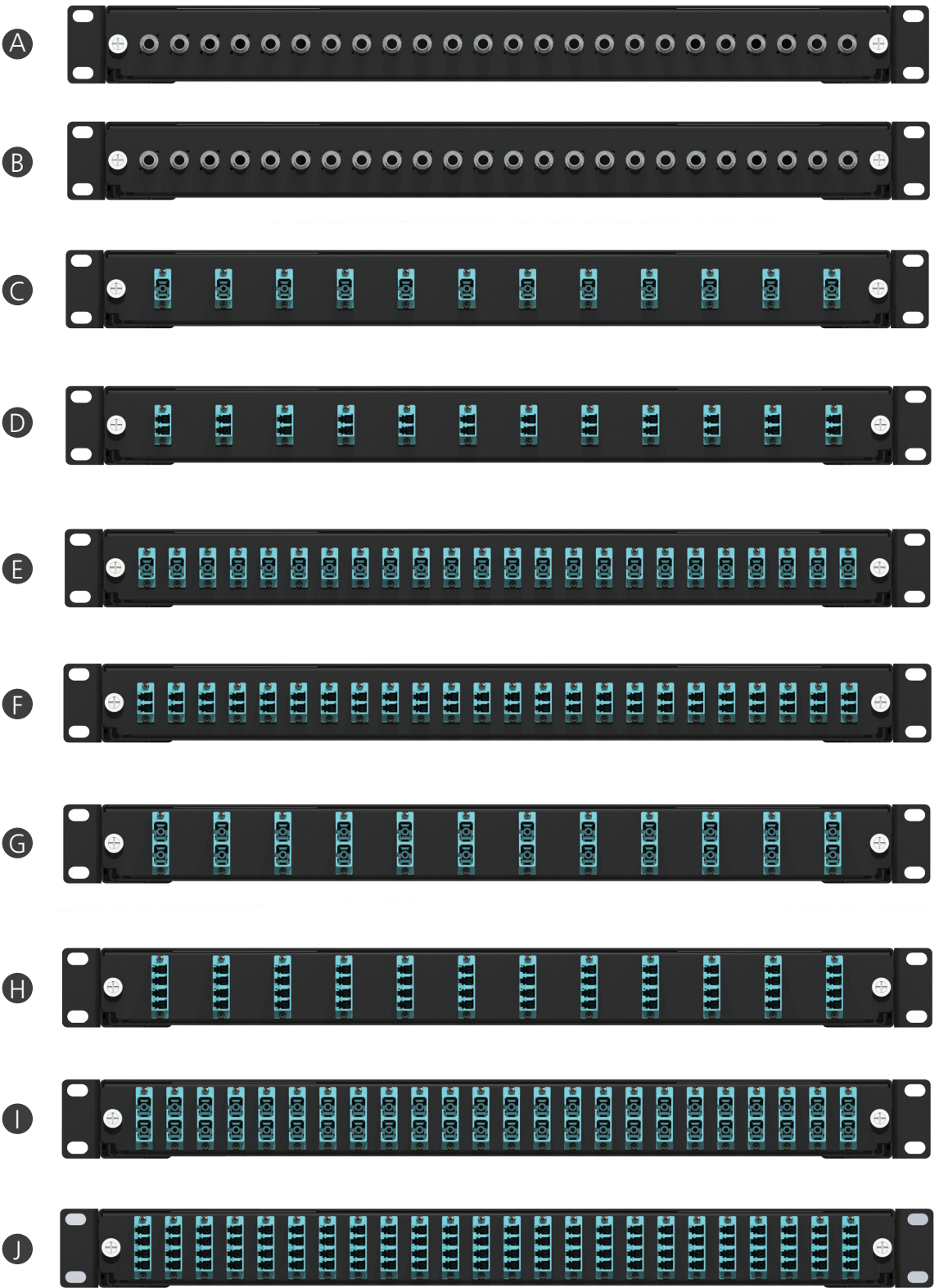
Cable Gland



Fiber Splice Tray

Front Plates

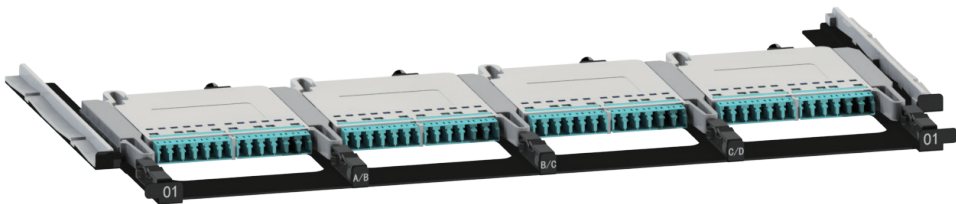
A FC 24pcs	C SC Simplex 12 pcs	E SC Simplex 24 pcs	G SC Duplex 12 pcs	I SC Duplex 24 pcs
B ST 24 pcs	D LC Duplex 12 pcs	F LC Duplex 24 pcs	H LC Quad 12 pcs	J LC Quad 24 pcs



1RU 144-Port Cassette Patch Panel



- 12-fiber cassettes can be mounted in 1U scaling up to 144xLC connectors
- 3-layer design accepts 12 cassettes, provides max. scalability
- Cassette can be easily removed by pulling it out from either at front or back
- Hinged front / rear door support easy cable maintenance
- Mounting bracket design allows solely installation
- Removable sliding tray makes cable management easily
- Low loss fiber solution meets high performance data center requirement
- Light stacked and ultra-high density fiber system
- Pre-terminated, Pre-tested, Play and Play



1RU 144-Port Cassette Patch Panel



- MPO IEC 61754-7 standards compliant multi-fiber connector
- OS2 / OM3 / OM4 bend-insensitive fiber grades are available
- 12 fiber cassette 2x 6-port LC to 1x12C MTP
- Factory pre-terminated and 100% pre-tested
- High performance LC adaptor with zirconia sleeve
- Options with polarity A/C and B
- MTP adaptor for polarity B is aligned key, polarity A/C is opposed key

Transmission Performance

Harness	Multimode			Single mode		
	Insertion Loss		Return Loss	Insertion Loss		Return Loss
	Standard Loss	Low Loss		Standard Loss	Low Loss	
LC	< 0.3 dB	< 0.15 dB	> 35 dB	< 0.2 dB	< 0.15 dB	> 55 dB
MTP	< 0.5 dB	< 0.35 dB	> 20 dB	< 0.75 dB	< 0.35 dB	> 60 dB

1RU 144 Ports MTP to LC Patch Panel

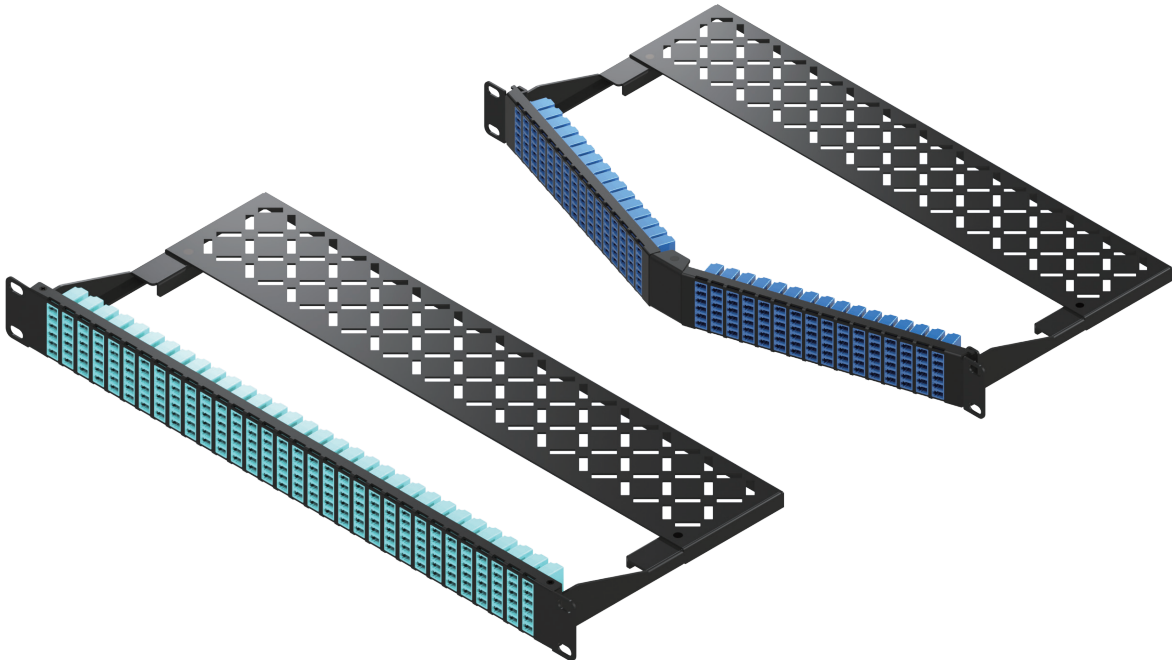


- High density design saves space and light weight
- Both of flat and angled front plates are available
- Neat and flush front plate with good looking
- Angled design minimizes patch cord bend radius to the rack
- Angled design divert cables to two separate directions, makes cable management more efficient

Transmission Performance

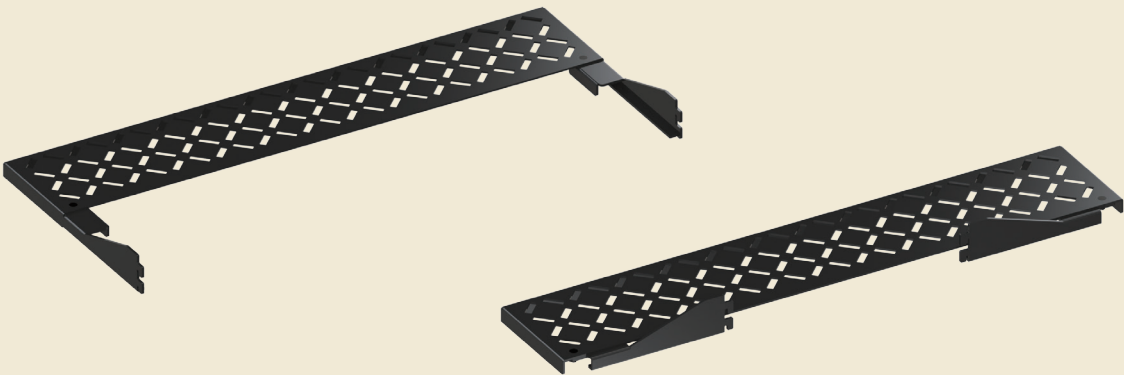
Harness	Multimode			Single mode		
	Insertion Loss		Return Loss	Insertion Loss		Return Loss
	Standard loss	Low Loss		Standard Loss	Low Loss	
LC	< 0.3 dB	< 0.15 dB	> 35 dB	< 0.2 dB	< 0.15 dB	> 55 dB
MTP	< 0.5 dB	< 0.35 dB	> 20 dB	< 0.75 dB	< 0.35 dB	> 60 dB

1RU 192 Ports LC Patch Panel

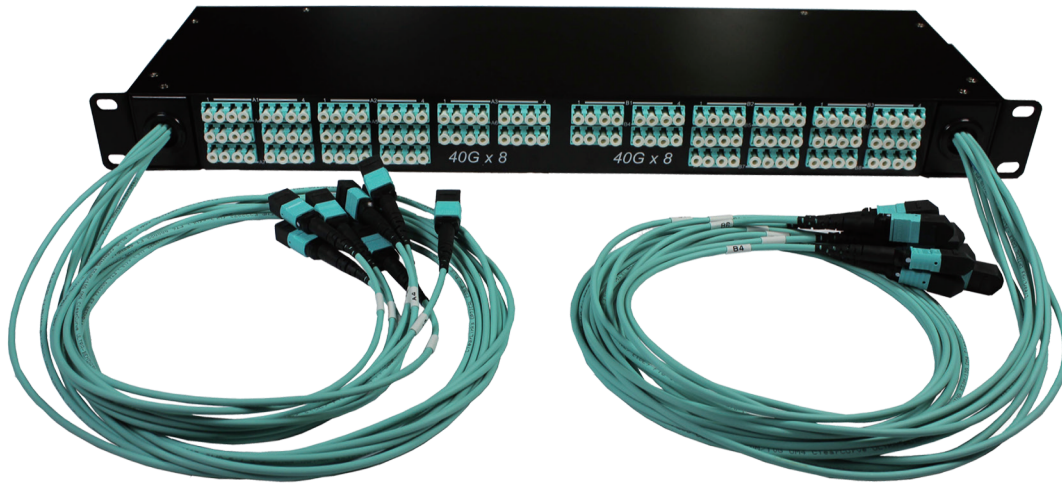


- High density design saves space and light weight
- Both of flat and angled front plates are available
- Neat and flush front plate with good looking
- Angled design minimizes patch cord bend radius to the rack
- Divert cables to two separate directions, makes cable management more efficient
- Removable and foldable cable management bar saves transportation cost and stock space
- LC adaptor SM with ceramic sleeve IL < 0.2dB; MM with P.B. sleeve IL < 0.3dB
- LC adaptor color available in Blue, Beige, Aqua and Erika-violet

Foldable Cable Management



MTP to LC Breakout System



- Compact size design with 5" depth, weight 1.5kg
- Simple and easy installation with front patching design
- 16MTP to 64LC-Duplex and 12MTP to 48LC-Duplex offering greater choice
- Corning universal polarity or customized wiring assignment are accepted

Transmission Performance		50um OM4 BIF	9um OS2 G.657A
MTP Mated Pair	Insertion Loss	≤ 0.35 dB	≤ 0.35 dB
	Return Loss	≥ 25 dB	≥ 60 dB
LC Mated Pair	Insertion Loss	≤ 0.15 dB	≤ 0.1 dB
	Return Loss	≥ 40 dB	≥ 55 dB

Wiring map

Fiber no.	Color	Fiber no.	Color
1.	Blue	7.	Red
2.	Orange	8.	Black
3.	Green	9.	Yellow
4.	Brown	10.	Violet
5.	Slate	11.	Rose
6.	White	12.	Aqua

