VERICOM®

The Future Of Technology - Today.

Data Center Cabling Solutions

VERICOM®

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BICSI CORPORATE MEMBER

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About Vericom

Our Story

Vericom Global Solutions is a leading provider of network infrastructure and connectivity solutions for enterprise, government, and operator markets. With global headquarters in Knoxville, TN, we provide best-in-class solutions to more than 30 countries worldwide.

We deliver a comprehensive product portfolio designed to meet our customers' network infrastructure needs in an increasingly connected world through our global network of distributors and integrators.

In addition to our innovative design, engineering and manufacturing capabilities, we are the relationship of choice for a diverse family of clients worldwide who are confident in our ability to consistently perform to a standard of excellence that is without equal in the industries we serve.

Why Vericom

When partnering with Vericom, customers unlock the support of a global team of industry experts. Our emphasis is on quality, reliability, compatibility and standards-compliant products. Vericom utilizes our global distribution network to provide a comprehensive end-to-end infrastructure and connectivity solutions approach to meet the customer needs in the industries served.


Global Headquarters, USA

About Vericom

Industry Compliance

Built to meet or surpass industry standards for quality and performance, compliance is a toppriority. With a history of meeting the challenges industry professionals face, Vericom is the relationship of choice for those customers in the pursuit of innovation.

Custom Configuration & Delivery Options

For customers that know the specifications of their installation, Vericom can easily incorporate accessories or help to outfit a custom solution to meet those requirements. Vericom has flexibility to offer customizable shipping options,such as flat-pack IT enclosures that can be built onsite when space is a premium. When special delivery services are required, Vericom can provide a complete list of service options for review.


Industry Compliant Production Capabilities


Custom Configurations - Build To Suit


Global Logistics Network Capacity

Brand Values & Philosophy

We strive every day to make Vericom the world's most desirable network infrastructure and connectivity solutions provider to work for and partner with. Our desire to be the best in our field by offering quality products with integrity is a driving force to provide our customers with product offerings that remain relevant throughout the ever-changing data technologies and communications community.

We offer "The Future Of Technology- Today."

Our Customer Support Team is available during our normal business hours:

Monday-Friday: 8:00am - 8:00pm EST

Saturday-Sunday: Closed

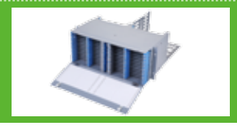
Contact us with any questions or comments you may have regarding our products or services at:

Phone: 865-671-4455

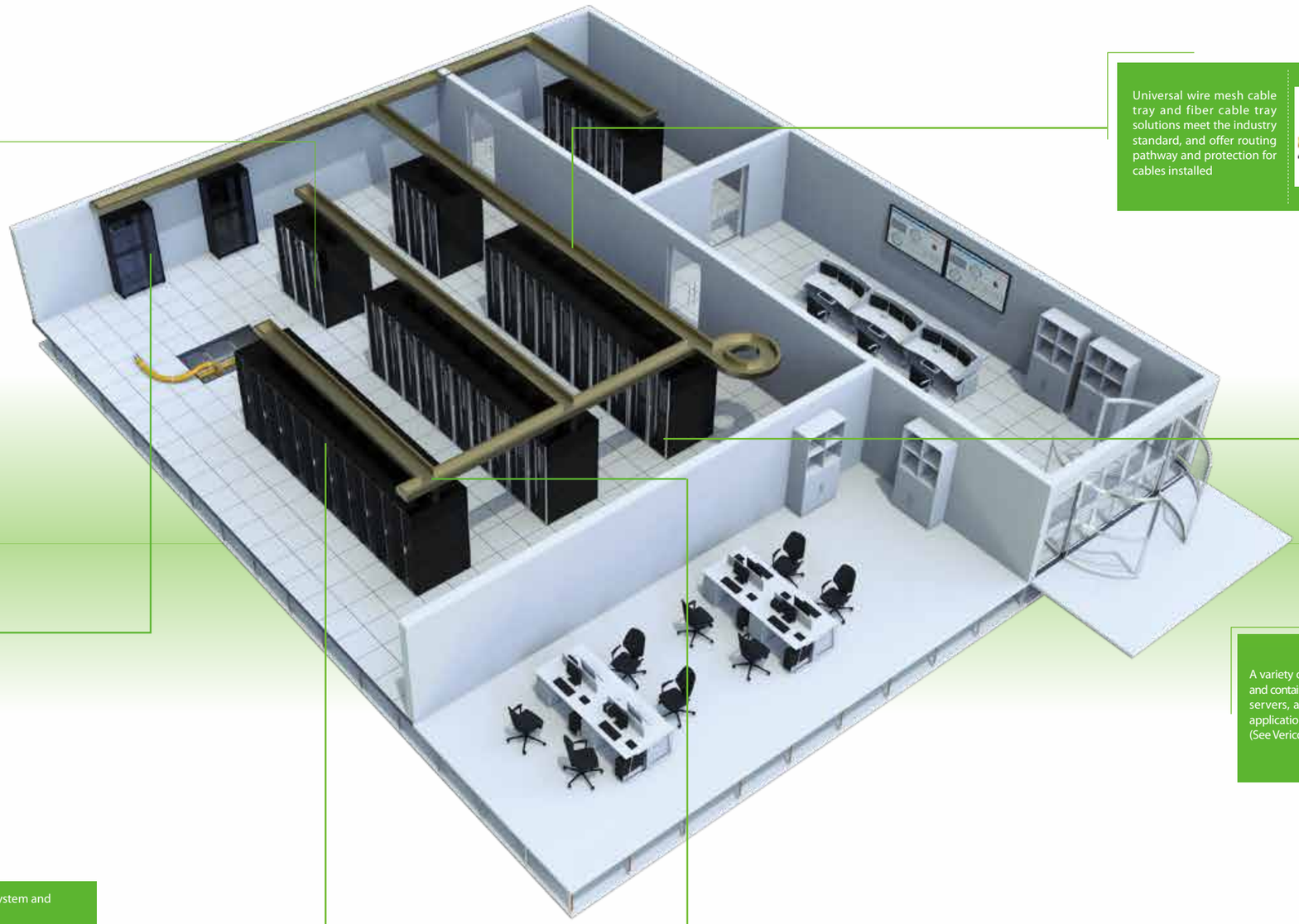
Email: sales@vericomsolutions.com

DATA CENTER CABLING SOLUTIONS

Scalable modular fiber management system with 10G, 40G and 100G capable transmission rates



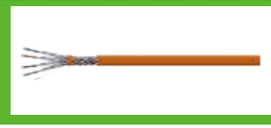
Universal wire mesh cable tray and fiber cable tray solutions meet the industry standard, and offer routing pathway and protection for cables installed



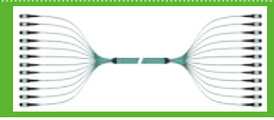
High-density front accessible fiber management system to allow fast removals, additions, and replacements

A variety of 19" equipment cabinets and containment systems for switches, servers, and many other network applications
(See Vericom Cabinet Catalog)

High performance CAT8 cabling system and components



Simple and reliable cable system designed to support maximum link performance and extended transmission distance



Advantages of Vericom Data Center Cabling Solutions

1. High Density

Vericom provides industry-leading high-density optical fiber management and cable routing products. By occupying less space, these products allow our customers to deploy more profit-generating servers and other passive equipment in the data center.

2. Easy Operetion and Low Cost

Designed for better optimization and faster installations, our data cabling systems can reduce the overall cost and maintenance of the installation, all while optimizing the product life cycle costing with easy removals, additions, and replacements. By utilizing our organized fiber routing components and easily recognizable color-coded connectors, identification becomes simple, minimizing time spent on installation and maintenance.

3. Future-proofed for Higher Data Rates

Vericom fiber management systems are designed to provide a fast and easy way for upgrading 10G serial to 40G and 100G parallel fiber. Our high-density systems allow for different data transmission rates and applications to be mixed in a single high-density fiber patch panel without risk of damage or malfunction to adjacent modules and connectors. This high flexibility not only increases returns on investment for customers, but also increases utilization of existing assets.

4. Improving Cable Management and Equipment Ventilation

We recognize the importance of designing and manufacturing products that are not only simple but reliable. Our design makes an ease in cable management all while minimizing the overall cable footprint in order to ensure adequate space is available for scaling. Temperature management is a major factor we take seriously in order to maintain stable and effective operations. Our goal in designing these products, is to create a system that will operate at peak efficiency and performance without effecting power, cooling capacity, or ease of installation and maintenance.

5. Minimize Downtime

A main goal in our product development process is to make our devices and products reusable and reliable over its entire serviceable lifecycle. Combining sophisticated optical fiber technology with innovative cable systems creates a seamless optical fiber management solution. Our products create a concise, clear, and organized environment to not only reduce the risk of system downtime, but to increase repeatability.

Contents

High Density Fiber Distribution Solutions

Data Center Cabling Solutions

Data Center Pre-terminated Optical Fiber Solutions

Cleaning Tools

Data Center Copper Cabling Solutions

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High Density Fiber Distribution Solutions

Vericom G-Series optical fiber patch panel offers fast, flexible, and future-proofed connections with servers and switches in the data centers. With the minimum cost, time, and impact, G-series solutions can meet the applications under different requirements, including the locations, business model and data rates, and adapt to the future changes.

G-series Fiber Patch Panel System adopts compact and light patching modules for easy plug, remove or replacement. It could be inserted from both the front and rear side, and provide various modules for different functions, including patching, conversion, splicing, etc.

Vericom high density and scalable design could meet the future most-demanding data center requirements. 1U and 4U optional size offer industry-leading high density and first class splicing, pre-terminating, and patching solutions for almost every application. It can support 72 LC Duplex or MTP adaptors in 1U space, and 288 ports in 4U space. This high density can not only reduce the total cost, but also effectively utilize for more profit-generating passive device. The split design allows the customers to separate the redundant cables and put them at the different sides of equipment racks, and reduce the impact on existing communications.

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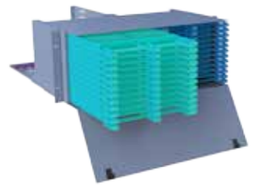
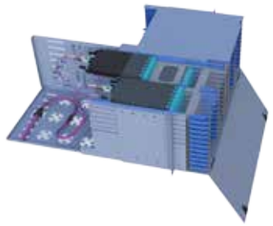
HIGH DENSITY FIBER DISTRIBUTION SOLUTIONS

01 1U and 4U Available

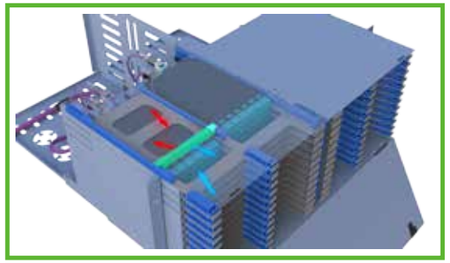
02 Max. 144 Fibers per Unit (LC)



03 Split into Left and Right for Better Cable Management

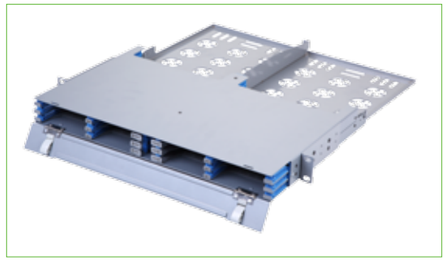


04 Insert Modules from Rear or Front

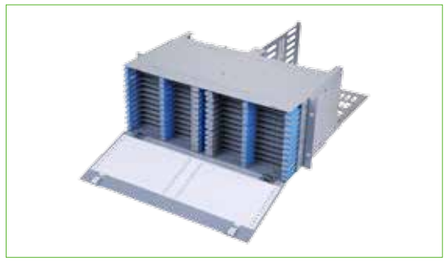


05 Optional Device to Separate Hot and Cold Air

06 LC Patching Module

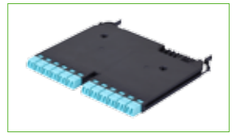


1U G-series Patch Panel



4U G-series Patch Panel

LC Patching Module



LC Splicing Module, 24 Ports

MTP/MPO-LC Transition Module

MTP/MPO-MTP/MPO Transition Module

Features & Benefits

- 1U and 4U available
- 12-fiber or 24-fiber MTP/MPO-LC, and MTP/MPO-MYP/MPO modules
- Up to 144 cores per U with MTP/MPO-LC connectors
- Front and rear insertion for modules
- Individually sliding trays allow front and easy access and operation especially in high density applications
- Hinged front door for easy operation and maintenance
- Visible port marking for easy identification
- Suitable for 10G with LC and 40G to 100G connections with MTP
- Universal Polarity Z of MPO-LC modules for easy connections without flipping the modules or thinking which patch cord to use

Standard Compliance

- ISO/IEC 24764
- ISO/IEC 11801-5
- ANSI/TIA-942-A/B
- EN50173-5

Specification (G-series Optical Fiber Patch Panel)

	1U	4U
Dimension (mm)	482.6x320x44	482.6x320x176
Weight (kgs)	3.6	12.4
Material	Frame: Cold Rolled Plate with Powder Coating Other Components: PC/ABS	
Capacity	Max. 12 Modules	Max. 48 Modules
Density	Max. 144 Fibers LC	Max. 576 Fibers LC

G-SERIES OPTICAL FIBER PATCH PANEL SYSTEM

Ordering Information

G-series High-density Optical Fiber Patch Panels

Part No.	Description
VR-F-GMPO-1U	1U G-series High Density Optical Fiber Patch Panel (Module Unloaded)
VR-F-GMPO-4U	4U G-series High Density Optical Fiber Patch Panel (Module Unloaded)
VR-F-GMPO-1U-A	1U G-series High Density Optical Fiber Patch Panel (with Back Bracket, Module Unloaded)
VR-F-GMPO-4U-A	4U G-series High Density Optical Fiber Patch Panel (with Back Bracket, Module Unloaded)

Patching Modules

Part No.	Description
VR-F-GMPO-MD2SM	LC Patching Module, G-series, 12 Fibers, Single Mode
VR-F-GMPO-MD2OM3	LC Patching Module, G-series, 12 Fibers, OM3
VR-F-GMPO-MD2OM4	LC Patching Module, G-series, 12 Fibers, OM4
VR-F-GMPO-MD2OM5	LC Patching Module, G-series, 12 Fibers, OM5
VR-F-GMPO-MD3B	6-Port MPO 12-Core Module, G-series, Black
VR-F-GMPO-MD3R	6-Port MPO 24-Core Module, G-series, Red

LC Splicing Module, 24 Ports

Part No.	Description
VR-F-GMPO-MD6SM	LC Splicing Module, 24 Ports, Single Mode, G-series
VR-F-GMPO-MD6OM3	LC Splicing Module, 24 Ports, OM3, G-series
VR-F-GMPO-MD6OM4	LC Splicing Module, 24 Ports, OM4, G-series
VR-F-GMPO-MD6OM5	LC Splicing Module, 24 Ports, OM5, G-series

MTP/MPO-LC Transition Modules

Part No.	Description	
VR-F-GMPO/A/B-CD-E-F	MTP/MPO-LC Transition Module, G-series	
A	Connector Type	None=PC, APC=APC
B	Connector Gender	None=Female, M=Male
C	Connector	MD4=12-Core MPO to 12-Core LC Transition Module MD7=24-Core MPO to 24-Core LC Transition Module
D	Fiber Type	SM=Single Mode, OM3=OM3, OM4=OM4, OM5=OM5
E	Polarity	None=A, B=B, C=C, Z=Universal Polarity
F	Insertion Loss	None=Standard, U=Ultra Low Loss

Example: VR-F-GMPO-MD4OM3-Z-U
G-series 12-Core MPO12/PC Female to 12-Core LC Transition Module, OM3 Polarity Z, Ultra Low Loss

MTP/MPO-MTP/MPO Transition Modules

Part No.	Description	
VR-F-GMPO/A/C+MPO/B/D-EF-G-H	MTP/MPO-MTP/MPO Transition Module, G-series	
A, B	Connector Type	PC=PC, APC=APC
C, D	Connector Gender	F=Female, M=Male
E	Connector	MD5=1x24 Cores MPO to 3x8 Cores MPO Module MD8=4x12 Cores MPO to 6x8 Cores MPO Module MD9=4x24 Cores MPO to 12x8 Cores MPO Module
F	Fiber Type	SM=Single Mode, OM3=OM3, OM4=OM4, OM5=OM5
G	Polarity	A=A, B=B, C=C, Z=Universal Polarity
H	Insertion Loss	None=Standard, U=Ultra Low Loss

Example: VR-F-GMPO/PC/F+MPO/PC/M-MD5OM3-B
G-series 24-Core MPO24/PC Female to 3xMPO8/PC Male Transition Module, OM3, Polarity B

1U L-series Patch Panel

3U L-series Patch Panel

Blank Plate

MPO Adaptor Plate

MTP/MPO-LC Transition Module

MTP/MPO-MTP/MPO Transition Module

Features & Benefits

- 1U and3U optional
- Up to 96 cores per U with MPO-LC modules
- 12-core, 24-core MPO to LC, and MPO to MPO available
- Fully-enclosed internal cable management
- Snap-in design for easy operation
- Removable front cable manager
- Universal Polarity Z of MPO-LC modules for easy connections without flipping the modules or thinking which patch cord to use

Standard Compliance

- ISO/IEC 24764
- ISO/IEC 11801-5
- ANSI/TIA-942-A/B
- EN50173-5

Specification (G-series Optical Fiber Patch Panel)

	1U	3U
Dimension (mm)	482.6x339x44	482.6x339x132
Weight (kgs)	4.8	7
Material	Frame: Cold Rolled Plate with Powder Coating Other Components: PC/ABS	
Capacity	Max. 4 Modules	Max. 12 Modules
Density	Max. 96 Fibers LC	Max. 288 Fibers LC

L-SERIES OPTICAL FIBER PATCH PANEL SYSTEM

Ordering Information

L-series High-density Optical Fiber Patch Panels

Part No.	Description
VR-F-MPO-1U	1U L-series High Density Optical Fiber Patch Panel (Module Unloaded)
VR-F-MPO-3U	3U L-series High Density Optical Fiber Patch Panel (Module Unloaded)

Blank Plate

Part No.	Description
VR-F-MPO-MD1	L-series Blank Plate

MPO Adaptor Plate

Part No.	Description
VR-F-MPO-MD2B	L-series 6-Port MPO 12-core Adaptor Plate, Black
VR-F-MPO-MD2R	L-series 6-Port MPO 24-core Adaptor Plate, Red

MTP/MPO-LC Transition Modules

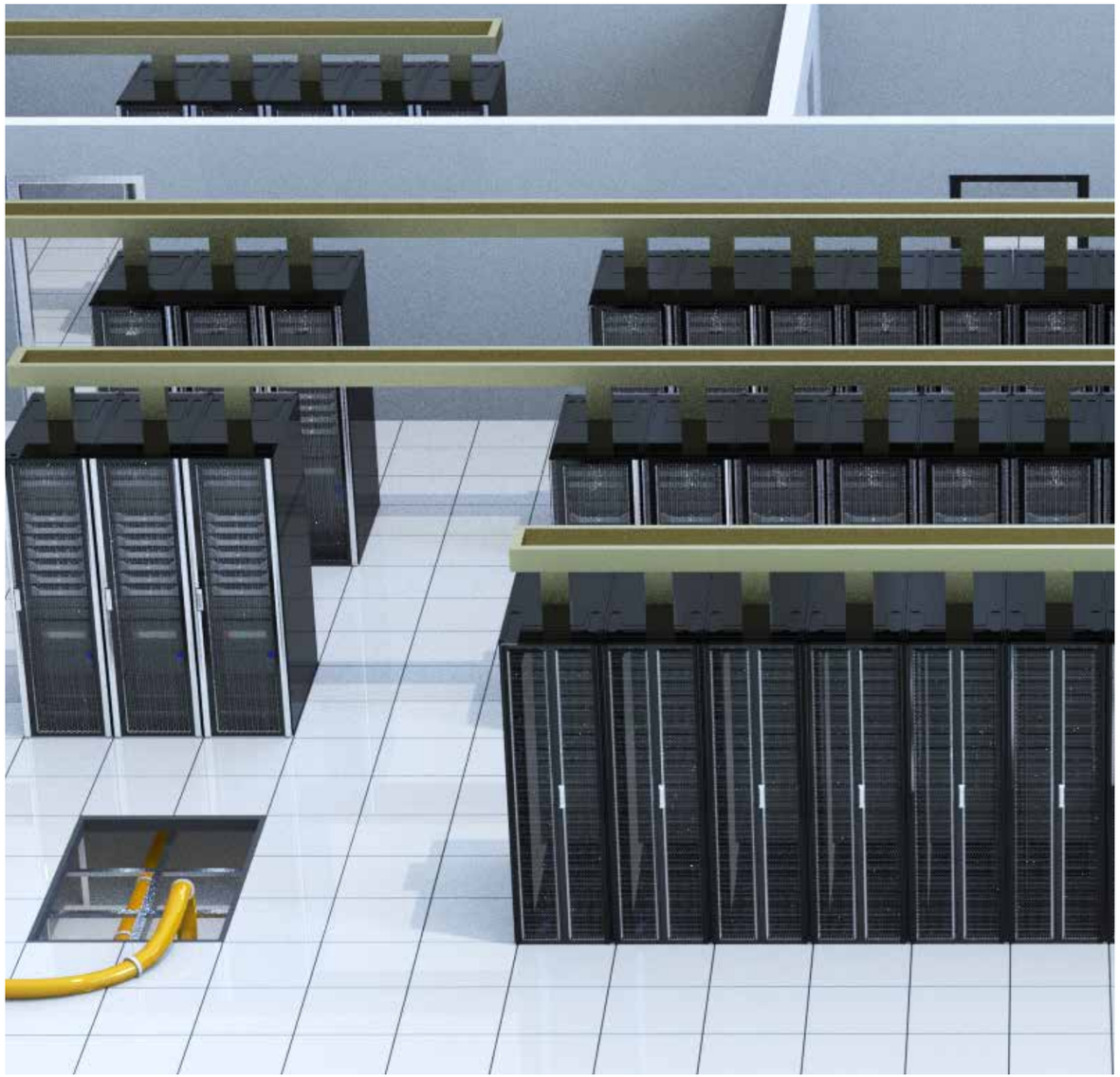
Part No.	Description	
VR-F-MPO/A/B-CD-E-F	MTP/MPO-LC Transition Module, L-series	
A	Connector Type	None=PC, APC=APC
B	Connector Gender	None=Female, M=Male
C	Connector	MD3=1x12 Cores MPO to 12 Cores LC Module MD4=2x12 Cores MPO to 24 Cores LC Module MD5=1x24 Cores MPO to 24 Cores LC Module
D	Fiber Type	SM=Single Mode, OM3=OM3, OM4=OM4, OM5=OM5
E	Polarity	None=A, B=B, C=C, Z=Universal Polarity
F	Insertion Loss	None=Standard, U=Ultra Low Loss

Example: VR-F-MPO-MD5OM3-Z
L-series 24-Core MPO24/PC Female to 24-Core LC/PC, OM3, Polarity Z

MTP/MPO-MTP/MPO Transition Modules

Part No.	Description	
VR-F-MPO/A/C+MPO/B/D-EF-G-H	MTP/MPO-MTP/MPO Transition Modules, L-series	
A, B	Connector Type	PC=PC, APC=APC
C, D	Connector Gender	F=Female, M=Male
E	Connector	MD6=1x24 Cores MPO to 3x8 Cores MPO Module MD7=2x12 Cores MPO to 3x8 Cores MPO Module MD8=2x24 Cores MPO to 6x8 Cores MPO Module MD9=4x12 Cores MPO to 6x8 Cores MPO Module
F	Fiber Type	SM=Single Mode, OM3=OM3, OM4=OM4, OM5=OM5
G	Polarity	A=A, B=B, C=C, Z=Universal Polarity
H	Insertion Loss	None=Standard, U=Ultra Low Loss

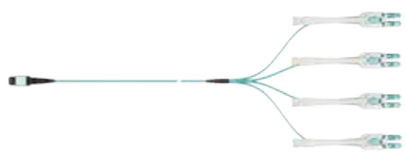
Example: VR-F-MPO/PC/F+MPO/PC/M-MD6OM3-B
L-series 24-Core MPO24/PC Female to 3xMPO8/PC Male Transition Module, OM3, B



MTP/MPO Cable Assemblies

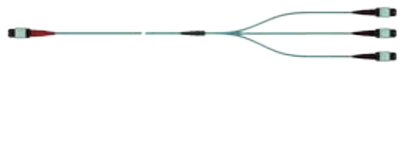
01 **MTP/MPO Backbone Cable**

For the backbone of optical network formed by single cable or multi cables



02 **MTP/MPO-LC Equipment Harness**

For converting the MTP/MPO backbone into LC



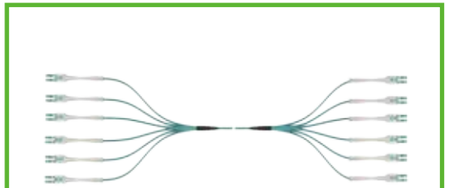
03 **MTP/MPO Conversion Harness**

For converting the MTP/MPO backbone into other different MTP/MPO that matches with the equipment

04 **MTP/MPO Patch Cord**

To interconnect the fiber patch panel or modules to servers and switches

LC Cable Assemblies



05 **LC Backbone Harness**

For the connections between different cabinets in data centers

06 **LC Patch Cord**

To interconnect the fiber patch panel or modules to servers and switches with duplex LC interfaces

MTP/MPO Cable Assemblies

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HIGH DENSITY FIBER DISTRIBUTION SOLUTIONS

01 Quick Access

MTP/MPO backbone cable combines multiple strands OFC into one to make the operation easier

02 Small Cable Diameter

3.0mm cable diameter to improve the space utilization

03 MPO Gender Change Easily

Remove the guiding pins to change from male to female

04 Switchable Polarity

Simply change the polarity by pulling out and pushing in the guide keys on both sides

05 Colored Blocks

Colored blocks on the push-pull tab can identify the applications easily

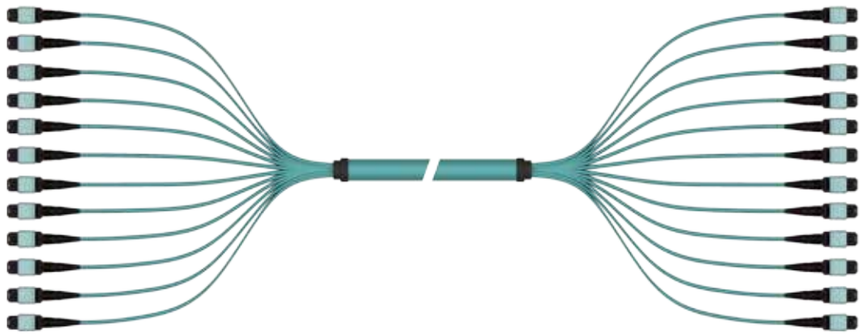
06 Ultra Low Loss Connectivity

Insertion Loss for MTP/MPO≤0.30dB

Vericom designs and manufactures a wide section of pre-terminated cable assemblies, including backbone cables, equipment harness, conversion harness, and MPO patch cords, to simplify the fiber connection and termination, especially in high-density applications.

Available in 8, 12 and 24 fibers, our MPO pre-terminated cable assemblies also offer standard loss or low-loss singlemode and multimode fibers to meet different connectivity requirements.

Our MPO connectors can change the polarity and gender in the field, and offers great flexibility for installation, operation and future network upgrade, while reducing the overall investments of evolving data centers.



The MTP/MPO backbone optical fiber cables are high-density and multi-core cables with various fibers count up to 144 cores, which combine multiple sub-units into one cable to reduce the overall diameter of cable and installation time, and optimize the space utilization of cabling while keeping the strength and toughness of cables. 12-fiber sub-unit and 24-fiber sub-unit are available to meet different MTP/MPO connection requirements.

Features & Benefits

- 12-core and 24-core sub-units available
- SM (G657A2), OM3, OM4, OM5 fiber types available
- Small diameter for space saving and management
- Customized fan-out cable length
- Bend-optimized fibers as standard optical fibers
- Faster than traditional fusion splicing
- 40G and 100G applications
- Color coded sheaths for easy ideatification of fiber types

Standard Compliance

- ISO/IEC 24764
- ISO/IEC 11801-5
- ANSI/TIA-942-A/B
- EN50173-5

MTP/MPO BACKBONE CABLE

Specification

Cable Type	Indoor Non-metallic OFC, Aramid Yarn, Double Sheaths		
Cable Diameter (mm)	Sub-unit	12 Fibers	2.8
		24 Fibers	3.0
	Backbone Cable With Double Sheaths	12 Fibers/24 Fibers	4.5
		48 Fibers	8.5
		72 Fibers	10.4
		144 Fibers	13.5
Sheath Material	LSZH, OFNP (PVC)		
Sheath Color	Single Mode		Yellow
	OM3		Aqua
	OM4		Violet
	OM5		Lemon Green
Working Temperature (°C)	-10 ~ +60		

Optical Performance

Fiber Type	Insertion Loss (dB)		Return Loss (dB)
Single Mode APC	Standard<0.7	ULL<0.35	>50 (Length>3m)
OM3	Standard<0.35	ULL<0.25	>20 (Length>3m)
OM4	Standard<0.35	ULL<0.25	>20 (Length>3m)
OM5	Standard<0.35	ULL<0.25	>20 (Length>3m)

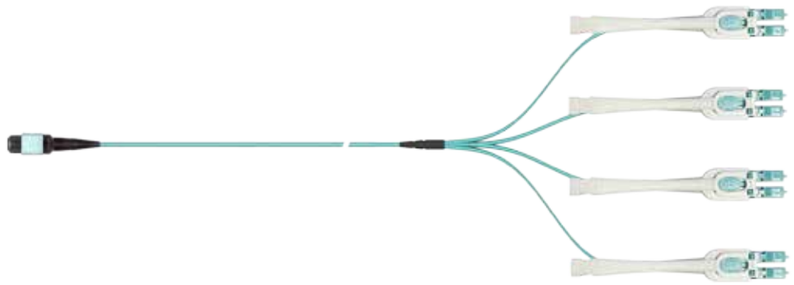
Mechanical Performance

	Test Standard	Condition	24 Cores (2 X 12 Cores sub-unit)	48 Cores (4 X 12 Cores sub-unit)	72 Cores (6 X 12 Cores sub-unit)	144 Cores (12 X 12 Cores sub-unit)
Max Tensile Strength (N)	IEC60794-1-2 E1	Installtion	500	800	1000	1200
		Operation	200	400	500	600
Crush Resistance (N/dm)	IEC60794-1-2 E3	Short term	5000	15000	15000	15000
		Long term	1000	2000	2000	2000
Min Bending Radius (mm)	IEC60794-1-2 E11	Installation	10	130	100	190
		Operation	20	90	150	200
Tensile Strength Of Adaptor(N)	IEC60794-1-2 E1		50	50	50	50

Ordering Information

Part No.	Description	
VR-A/C/E+B/D/F-G-H-I-J-K	MTP/MPO Backbone Cable	
A, B	Connector	MPO12, MPO24, MTP12, MTP24
C, D	Connector Type	PC, APC
E, F	Connector Gender	F=Female, M=Male
G	Fiber Type	SM, OM3, OM4, OM5
H	Polarity	A=A, B=B, C=C,
I	Fiber Core	12, 24, 48, 72, 144
L	Length	XXX=Xm (001=1m)
J	Outer Sheath	None=LSZH, P=OFNP
k	Insertion Loss	None=Standard, U=Ultra Low Loss

Example: VR -MPO24/PC/M+MPO24/PC/M-OM3-B-24-010
MPO-MPO Backbone Cable, MPO24/PC Male to MPO24/PC Male, 24 Cores, OM3, Polarity B, Double Sheaths, LSZH, 10 meters



MTP/MPO-LC backbone and equipment harness is for the conversion and connection from the backbone MTP/MPO to LC duplex connectors on the switch, server, and other optical equipment.
MTP/MPO-LC harness could be inserted into the equipment quickly and directly, and offers fast and easy removes, additions and replacements. Although LC duplex connectors are widely used in 1G and 10G Ethernet and 4G, 8G, 16G and 32G fiber channels, but in the future this connection will be changed to MTP/MPO as parallel fiber optics cables can provide higher data transmission rates.

Features & Benefits

- SM (G657A2), OM3, OM4, OM5 fiber types
- "Plug and Play"
- Round cable structure with small diameter
- LSZH sheath
- Low space occupancy in the cable tray and rack
- Easy operation and deployment
- Direct and fast cabling installation
- SM and MM MTP/MPO to low-loss duplex LC connector
- LC uniboot with switchable polarity
- Push-pull tab for easy operation and deployment
- Backbone part adopts double sheaths
- Colored sheaths for easy identification

Standard Compliance

- ISO/IEC 24764
- ISO/IEC 11801-5
- ANSI/TIA-942-A/B
- EN50173-5

MTP/MPO-LC BACKBONE AND EQUIPMENT HARNESS

Specification

Cable Type	Indoor Non-metallic OFC, Aramid Yarn		
Cable Diameter (mm)	Sub-unit	Single Tube 2 Cores	2.0
	Backbone Cable With Double Sheaths	8, 12, 24 Cores	4.5
Sheath Material	LSZH, OFNP (PVC)		
Sheath Color	Single Mode		Yellow
	OM3		Aqua
	OM4		Violet
	OM5		Lemon Green
Working Temperature (°C)	-10 ~ +60		

Optical Performance

Fiber Type	**MPO Insertion Loss (dB)**		**Return Loss (dB)**
Single Mode APC	Standard<0.7	ULL<0.35	>50 (Length>3m)
OM3	Standard<0.35	ULL<0.25	>20 (Length>3m)
OM4	Standard<0.35	ULL<0.25	>20 (Length>3m)
OM5	Standard<0.35	ULL<0.25	>20 (Length>3m)

Mechanical Performance

	Testing Standard	Condition	Parameter
Maximum Tensile Strength	IEC60794-1-2-E1	Installation	150N
Minimum Bending Radius	IEC60794-1-2-E11	Installation	145mm
		Operation	95mm

Ordering Information

Part No.	**Description**	
VR-A/B/D+LC/C-E-F-G-H-I-J	MTP/MPO-LC Backbone and Equipment Harness	
A	Connector	MPO8, MPO12, MPO20, MPO24, MTP8, MTP12, MTP20, MTP24
B, C	Connector Type	PC, APC
D	Connector Gender	F=Female, M=Male
E	Fiber Type	SM, OM3, OM4, OM5
F	Polarity	A=A-B/B-A, B=A-A/B-B
G	Fiber Core	8, 12, 20, 24
H	Length	XXX=Xm (001=1m)
I	Outer Sheath	None=LSZH, P=OFNP
J	Insertion Loss	None=Standard, U=Ultra Low Loss

Example: VR-MPO8/PC/F+LC/PC-OM3-A-8-010
MPO-LC Equipment Harness, MPO8/PC Female to LC/PC Duplex, 8 Cores, OM3, Polarity A, LSZH Sheath, 10 meters

MTP/MPO conversion harness are generally used to connect and match between the existing MTP/MPO backbone cables and equipment. As the harness reduces one MTP/MPO connecting point in the optical links, it is a low loss alternative of conversion modules.

As we all know, 12-core connector is utilized by 40G/SR4 transceiver, and 24-core connector is for 100G/SR10 transceiver. The conversion harness allows the user to combine 12-core backbone cables into one 24-core connection to reach 100G data rate, or divide one 24-core backbone fiber to into two 12-core connections as well, which offers good flexibility and guarantees the transmission loss.

Features & Benefits

- SM (G657A2), OM3, OM4, OM5 fiber types
- Color-coded connectors, boots and cable sheaths
- Low loss
- Small diameter
- Compact size of cable and divider
- Conversion between 12-core and 24-core backbone cables

Standard Compliance

- ISO/IEC 24764
- ISO/IEC 11801-5
- ANSI/TIA-942-A/B
- EN50173-5

MTP/MPO CONVERSION HARNESS

Specification

Cable Type	Indoor Non-metallic OFC, Aramid Yarn, Double Sheaths		
Cable Diameter (mm)	Sub-unit	8 Fibers	2.8
		12 Fibers	2.8
		24 Fibers	3.0
	Backbone Cable With Double Sheaths	24 Fibers	4.5
Sheath Material	LSZH, OFNP (PVC)		
Sheath Color	Single Mode		Yellow
	OM3		Aqua
	OM4		Violet
	OM5		Lemon Green
Working Temperature (°C)	-10 ~ +60		

Optical Performance

Fiber Type	Insertion Loss (dB)		Return Loss (dB)
Single Mode APC	Standard<0.7	ULL<0.35	>50 (Length>3m)
OM3	Standard<0.35	ULL<0.25	>20 (Length>3m)
OM4	Standard<0.35	ULL<0.25	>20 (Length>3m)
OM5	Standard<0.35	ULL<0.25	>20 (Length>3m)

Mechanical Performance

	Testing Standard	Condition	8 Cores (Sub-unit)	12 Cores (Sub-unit)	24 Cores (Backbone Cable)
Maximum Tensile Strength Splitter(N)	IEC60794-1-2 E1	Installation	150	150	150
Maximum Tensile Strength (N)	IEC60794-1-2 E1	Installation	500	500	500
		Operation	5000	5000	5000
Compressive Resistance (N/dm)	IEC60794-1-2 E3	Short Term	1000	1000	1000
		Long Term	20	20	20
Minimum Bending Radius (mm)	IEC60794-1-2 E11	Installation	10	10	10
		Operatopn			

Ordering Information

Part No.	Description	
VR-A/C/E+B/D/F-G-24-H-I-J	MTP/MPO Conversion Harness	
A	Connector	MPO24, MTP24
B	Connector	MPO8, MPO12, MTP8, MTP12
C, D	Connector Type	PC, APC
E, F	Connector Gender	F=Female, M=Male
G	Fiber Type	SM, OM3, OM4, OM5
24	Fiber Core	24 Cores
H	Length	XXX=Xm (001=1m)
I	Outer Sheath	None=LSZH, P=OFNP
J	Insertion Loss	None=Standard, U=Ultra Low Loss

Example: VR-MPO24/PC/F+MPO8/PC/F-OM3-24-010
MPO-MPO Conversion Harness, MPO24/PC Female to MPO8/PC Female, 24 Cores, OM3, Double Sheaths, 10 meters

The 12F/24F MTP/MPO patch cord is used to connect fiber distribution frames or modules to servers and switches that use SR4 or SR10 parallel optical ports. It facilitates rapid deployment or installation of the high-density backbone cabling solution in data centers and other high-density fiber applications.
12-core MTP/MPO is compatible with 40G 8-fiber transceiver, but only 8 of the 12 fibers are utilized, as SR4 only requires 8 fibers. In this way, 8F will save 33% fibers.
The 8-core MTP/MPO patch cords are used to connect optical fiber patch panels with servers and switches which will use SR4 parallel interfaces, and also can be used to connect two independent patch panels and modules.

Features & Benefits

- SM, OM3, OM4, OM5 fiber types available
- 12 and 24 fibers available
- Different polarities available
- Bend optimized fibers
- Low loss
- Colored sheaths for easy identification
- Small diameter for easy routing(3mm)
- Suitable for 8 fibers SR4 deployments (12 fibers)

Standard Compliance

- ISO/IEC 24764
- ISO/IEC 11801-5
- ANSI/TIA-942-A/B
- EN50173-5

MTP/MPO PATCH CORD

Specification

Cable Diameter (mm)	8 Fibers	3.0
	12 Fibers	3.0
	24 Fibers	3.6
Sheath Material	LSZH, OFNP (PVC)	
Sheath Color	Single Mode	Yellow
	OM3	Aqua
	OM4	Violet
	OM5	Lemon Green
Working Temperature (°C)	-10 ~ +60	

Optical Performance

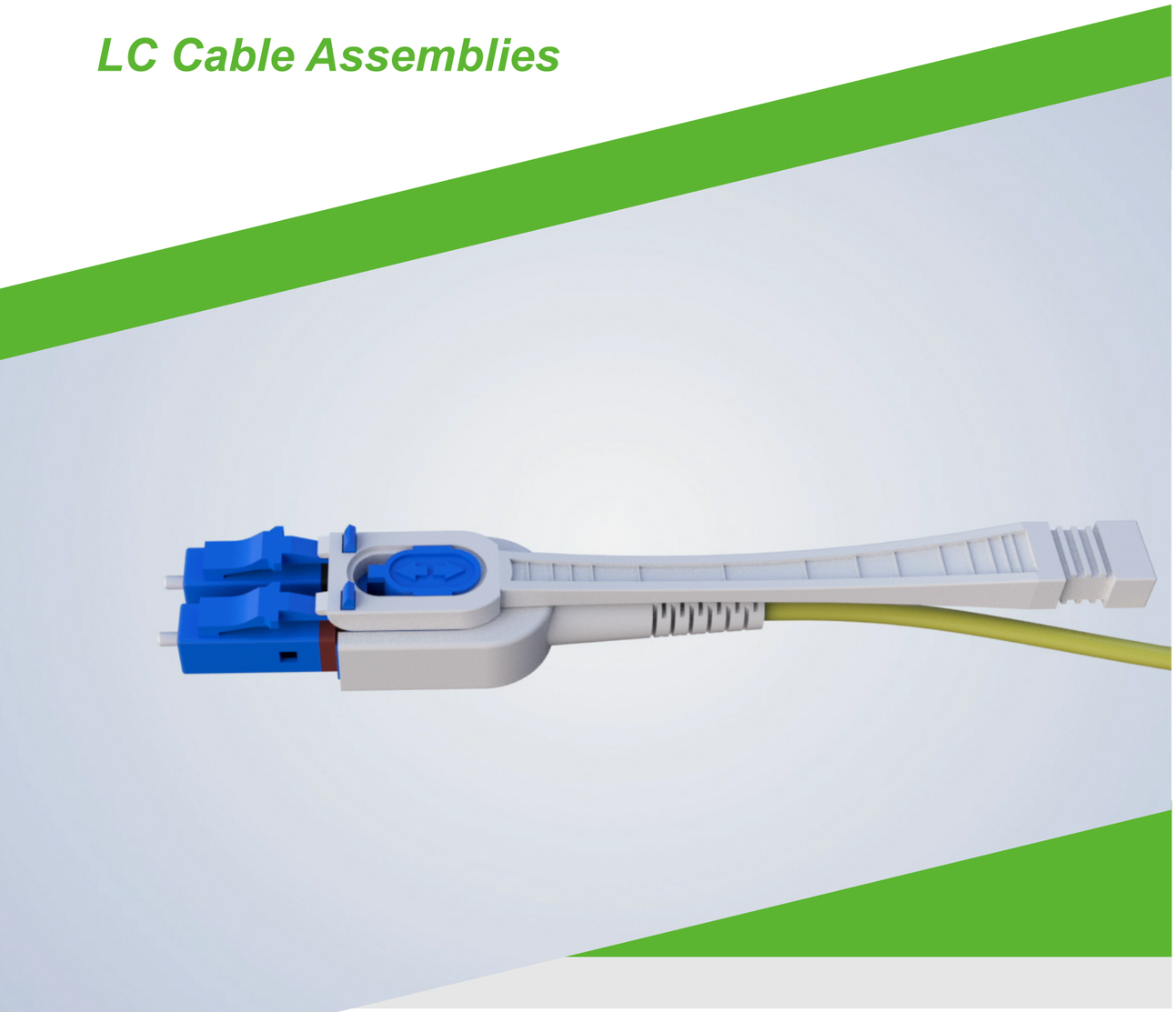
Fiber Type	Insertion Loss (dB)		Return Loss (dB)
Single Mode APC	Standard<0.7	ULL<0.35	>50 (Length>3m)
OM3	Standard<0.35	ULL<0.25	>20 (Length>3m)
OM4	Standard<0.35	ULL<0.25	>20 (Length>3m)
OM5	Standard<0.35	ULL<0.25	>20 (Length>3m)

Ordering Information

Part No.	Description	
VR-TXA/C/E+B/D/F-G-H-I-J-K-L	MTP/MPO Patch Cord	
X	Connector	None=Standard, A= MPO with Push-pull tab, Switchable Polarity and Changeable Gender
A, B	Connector	MPO8, MPO12, MPO24, MTP8, MTP12, MTP24
C, D	Connector Type	PC, APC
E, F	Connector Gender	F=Female, M=Male
G	Fiber Type	SM, OM3, OM4, OM5
H	Polarity	A, B, C
I	Fiber Core	8, 12, 24
J	Length	01-99mm
K	Outer Sheath	None=LSZH, P=OFNP
L	Insertion Loss	None=Standard, U=Ultra Low Loss

Example: VR-TMPO8/PC/F+MPO8/PC/F-OM3-B-8-03
MPO-MPO Patch Cord, MPO8/PC Female to MPO8/PC Female, 8 Cores, OM3, Polarity B, LSZH Sheath, 3 meters

LC Cable Assemblies



Vericom LC Cable Assemblies are featured with smaller cable diameter(Duplex LC in one jacket and housing instead of zipcord duplex cables) and switchable polarity, and push-pull tab to provide highest packing density and easy, fast access in data centers.

Available in singlemode and multimode fiber types, our LC pre-terminated cable assemblies also offer standard loss or low-loss options to meet different requirements on connectivity performance.

Each LC assembly is designed with a special push-pull tab that can be inserted or removed from the rear of the connector simply by "pushing" and "pulling" the extraction tab, which allows the polarity change on site and easy moves, adds, changes and other minor adjustments while bringing minimal disruption to the existing cabling.

VERICOM

LC CABLE ASSEMBLIES

01 **Duplex LC Connector**

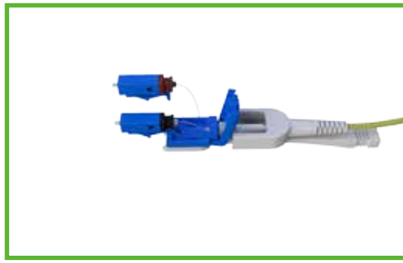
Duplex LC to improve the installation density

02 **Small Cable Diameter**

2.0mm cable diameter to improve the space utilization

03 **Optional Push-pull Tab**

Optional -pull tab enables the operator to fast access the equipment



04 **Switchable Polarity**

Switchable polartiy is quick to be done on site and allows to remove, add and change the connections easily in the daily operations.

05 **Multiple Fiber Type Available**

Single mode or multi mode fibers available with different colored sheaths

06 **Ultra Low Loss Performance**

Ultra low loss option could decrease the IL to 0.25db in single mode and 0.15db in multi mode and meet higher data transmission requirement

LC BACKBONE HARNESS

LC-LC backbone harnesses are used as the pre-terminated backbone cables between the cabinets in data centers, and generally it is connected with patching modules, and works as equipment patch cords for switches and servers.

Features & Benefits

- 12 cores and 24 cores available
- SM (G657A2), OM3, OM4, OM5 fiber types
- Compact divider
- Simple and fast fixation
- Small diameter
- Traceable LC duplex connector
- Push-pull tab for easy operation
- Customized fan-out lengths
- Colored sheaths for easy identification

Standard Compliance

- ISO/IEC 24764
- ISO/IEC 11801-5
- ANSI/TIA-942-A/B
- EN50173-5

LC BACKBONE HARNESS

Specification

Cable Type	Indoor Non-metallic OFC, Aramid Yarn, Double Sheaths	
Sheath Material	LSZH, OFNP (PVC)	
Sheath Color	Single Mode	Yellow
	OM3	Aqua
	OM4	Violet
	OM5	Lemon Green
Connector Color	Single Mode (PC)	Blue & White
	Single Mode (APC)	Green & White
	OM3/OM4/OM5	Aqua & White
Working Temperature (°C)	-10 ~ +60	

Optical Performance

Fiber Type	Insertion Loss (dB)		Return Loss (dB)
Single Mode PC	Standard<0.3	ULL<0.25	>50 (Length>3m)
OM3	Standard<0.25	ULL<0.15	>20 (Length>3m)
OM4	Standard<0.25	ULL<0.15	>20 (Length>3m)
OM5	Standard<0.25	ULL<0.15	>20 (Length>3m)

Mechanical Performance

	Testing Standard		Parameter
Maximum Tensile Strength	IEC60794-1-2-E1	Installation	150N
Minimum Bending Radius	IEC60794-1-2-E11	Installation	145mm
		Operation	95mm

Ordering Information

Part No.	Description	
VR-LC/A+LC/B-C-D-E-F-G	LC Backbone Harness	
A, B	Connector Type	PC, APC
C	Fiber Type	SM, OM3, OM4, OM5
D	Fiber Core	8, 12, 24
E	Length	XXX=Xm (001=1m)
F	Outer Sheath	None=LSZH, P=OFNP
G	Insertion Loss	None=Standard, U=Ultra Low Loss

Example: VR -LC/APC+LC/PC-OM3-12-015
LC-LC Backbone Harness, LC/PC Duplex, 12 Cores, OM3, Double Sheaths, LSZH, 15 meters

LC patch cords are used to connect optical fiber patch panels to servers and switches with duplex LC interfaces, and also for two separate patch panels or modules within the cross-connections.

Features & Benefits

- SM (G657A2), OM3, OM4, OM5 fiber types available
- Push-pull tab for easy operation in high density applications
- Duplex LC connectors in one housing
- Switchable polarity
- Short connector length
- Colored sheaths for easy identification

Standard Compliance

- ISO/IEC 24764
- ISO/IEC 11801-5
- ANSI/TIA-942-A/B
- EN50173-5

LC PATCH CORD, WITH PUSH-PULL TAB

Specification

Cable Type	Indoor Non-metallic OFC, Aramid Yarn	
Cable Diameter (mm)	2 Cores in 1 Tube	2.0
Sheath Material	LSZH, OFNP (PVC)	
Sheath Color	Single Mode	Yellow
	OM3	Aqua
	OM4	Violet
	OM5	Lemon Green
Working Temperature (°C)	-25 ~ +70	

Optical Performance

Fiber Type	Insertion Loss (dB)		Return Loss (dB)
Single Mode PC	Standard<0.3	ULL<0.25	>50 (Length>3m)
OM3	Standard<0.25	ULL<0.15	>20 (Length>3m)
OM4	Standard<0.25	ULL<0.15	>20 (Length>3m)
OM5	Standard<0.25	ULL<0.15	>20 (Length>3m)

Ordering Information

Part No.	Description	
VR-LC/A+LC/B-C-D-E-F-G-H	LC Patch Cord, with Push-pull Tab	
A, B	Connector Type	PC, APC
C	Fiber Type	SM, OM3, OM4, OM5
D	Polarity	A=A-B/B-A, B=A-A/B-B
E	Fiber Core	2
F	Length	XX=Xm (01=1m)
G	Outer Sheath	None=LSZH, P=OFNP
H	Insertion Loss	None=Standard, U=Ultra Low Loss

Example: VR-LC/PC+LC/PC-OM3-A-D-03
LC/PC-LC/PC Duplex Patch Cord, OM3, A-B/B-A Polarity, with Push-pull Tab, 3 meters

Cleaning Tools

In today's network applications, the bandwidth requirements are higher, and the loss budgets of data transmission over optical fiber are also tighter than ever before. Therefore dirt, duct and other contaminants could be the enemies of current and future high-speed data transmission, and it is very important to ensure that the optical connections are free of containments.

Vericom cleaning tools are easy to use with ergonomic design and are available in MTP/MPO cleaner, SC/ST/FC cleaner, LC cleaner, and box type cleaner, etc. All the fiber optic cleaning products and materials are lint-free, and can eliminate the contaminants simply, reliably, and inexpensively while not damaging the fiber end-face in any fiber network.

MTP/MPO Cleaner

Part No: VR3-001

Features & Benefits

- Number of use: 700+
- Easy to handle with ergonomic design
- Suitable for male and female MTP/MPO connectors
- Small design to clean the narrow end of MTP/MPO connectors

SC/ST/FC Cleaner

Part No: VR2-006-01

Features & Benefits

- Number of use: 700+
- Easy to handle with ergonomic design
- Effectively clean the SC/ST/FC φ2.5mm adaptors

LC Cleaner

Part No: VR2-006-02

Features & Benefits

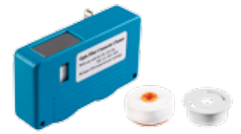
- Number of use: 800+
- Easy to handle with ergonomic design
- Effectively clean the LC/MU adaptor φ1.25mm adaptors

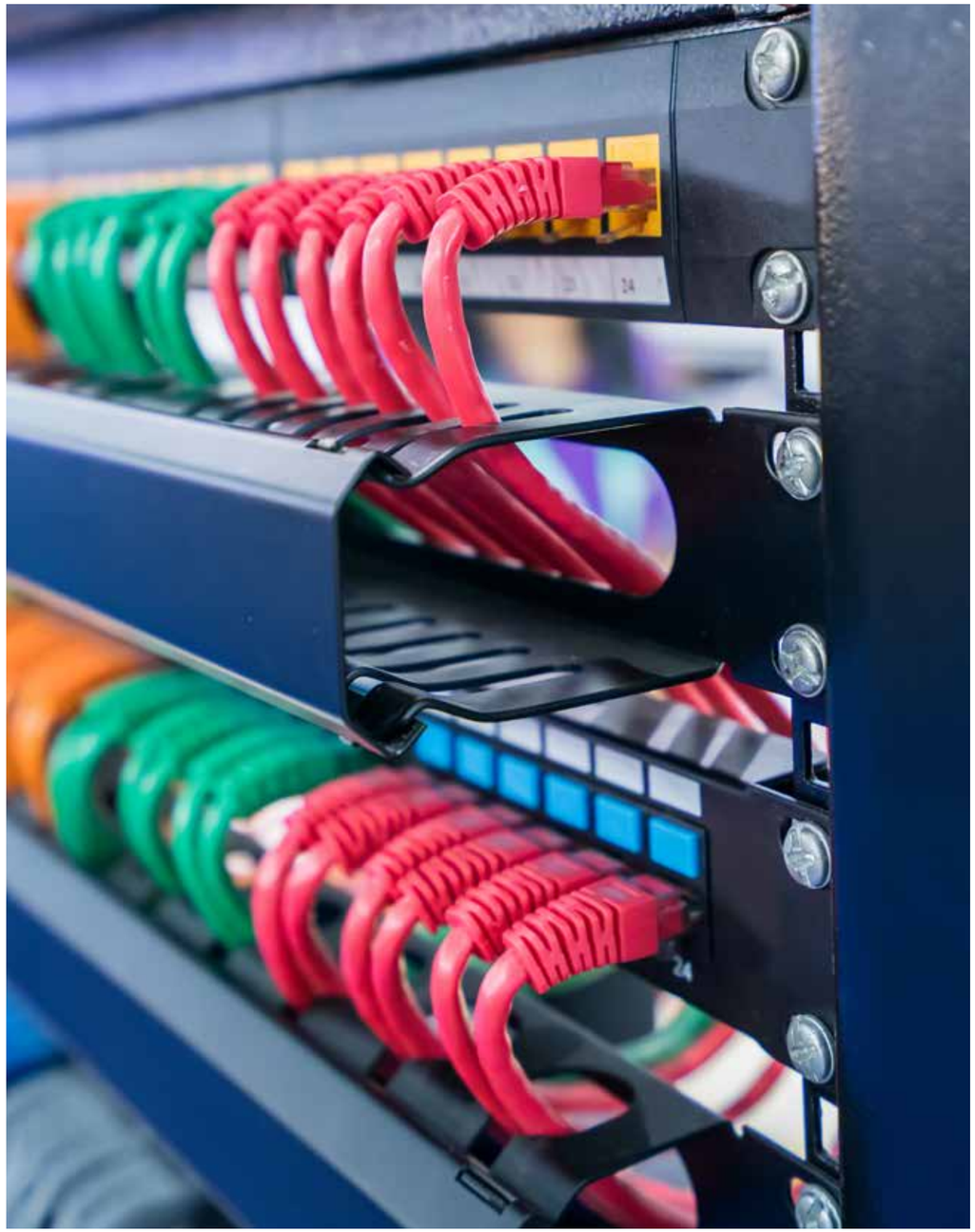
Box Type Cleaner

Part No: VR1-001(Box Type Cleaner)
VR1-001-01(Cleaning Cartridge)

Features & Benefits

- Number of use: 500+ per reel
- Fast and convenient operation
- Suitable for SC/FC/ ST /LC connetors
- Replaceable cleaning cartridge for cost-saving and long-term use



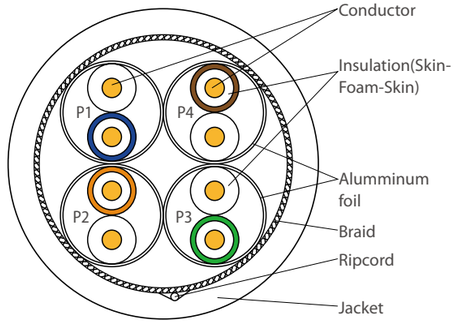


DATA CENTER COPPER CABLING SOLUTIONS

Category 8 Shielded Solutions

Vericom Category 8 end to end S/FTP solutions comprise of cable, patch panel, patch cords and 360° shielded information outlets/jacks. The Category 8 system offers superior electrical performance meeting 40G Base-T requirements under all challenging conditions with design or features while minimizing noise interference and maintaining signal integrity.

CATEGORY 8 S/FTP 4 PAIR CABLE, SHIELDED



Applications

- High-end data cable for data center
- Developed particularly for Maximum 40G Base-T transmission
- Channel length of 30 meters in end of array cabinet (EoR /ToR)
- Transmission of digital and analogue voice, video and data signals
- All ICT network applications up to 2000 MHz
- Power over Ethernet (PoE / PoE+/PoE++)

Construction

Conductor	Material	Solid Bare Copper
	Diameter	22 AWG
Insulation	Material	Physical Foaming PE
	Color	White / Blue White / Orange White / Green White / Brown
Shielded	Al Foil+Copper Braid	
Jacket	Material	LSZH
	Diameter	8.5±0.3mm

Standard Compliance

- ISO/IEC 11801
- ANSI/TIA-568.2-D
- IEC60332-3-22
- IEC61034
- IEC60754
- EN50399

Features & Benefits

- Excellent electrical performance with skin-foam-skin design
- Individually shielded pair and overall braid to offer good NEXT and ANEXT performance
- Frequency 1-2000MHz, extended to 2200MHz
- 30 meter channel maximum
- Field termination available

Electrical Performance

DC Resistance	≤2.4Ω/30m
Mutual Capacitance	≤99pF/30m
Impedance (Ω)	1~100MHz 100±15% 100~250MHz 100±20% 250~1000MHz 100±30% 1000~2000MHz 100±35%
NVP	78%

Physical Performance

Pulling Strength	110N
Min. Bend Radius	10 x max Jacket Diameter
Installation and Storage Temperature	0~60°C (32~140°F)
Operating Temperature	-20~60°C (-4~140°F)

Transmission Performance

FREQUENCY	RL	IL	NEXT	PSNEXT	ACR-F	PS ACR-F	PSANEXT	PSAACR-F
	Min.	Max.	Min.	Min.	Min.	Min.	Min.	Min.
(MHz)	(dB)	(dB/30M)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
1	20	2	75.3	72.3	75	76	80	80
4	23	2	66.3	63.3	67	64	80	80
8	24.5	2	61.8	58.8	60.9	57.9	80	80
10	25	2	60.3	57.3	59	56	80	80
16	25	2.2	57.2	54.2	54.9	51.9	80	78.1
20	25	2.5	55.8	52.8	53	50	80	76.2
25	25	2.8	54.3	51.3	51	48	80	74.2
31.25	25	3.1	52.9	49.9	49.1	46.1	80	72.3
62.5	23.6	4.4	48.4	45.4	43.1	40.1	80	66.3
100	22.2	5.6	45.3	42.3	39	36	80	62.2
200	20.1	7.9	40.8	37.8	33	30	80	56.2
250	19.4	8.9	39.3	36.3	31	28	80	54.2
300	18.9	9.8	38.1	35.1	29.5	26.5	80	52.7
400	18	11.4	36.3	33.3	27	24	78.5	50.2
500	17.3	12.8	34.8	31.8	25	22	77	48.2
600	16.8	14.1	33.6	30.6	23.4	20.4	75	46.6
1000	15.2	18.6	30.3	27.3	19	16	72.5	42.2
1500	14	23.2	27.7	24.7	15.5	12.5	69.9	38.7
2000	13.1	27.2	25.8	22.8	13	10	68	36.2

Ordering Information

Part No.	Description
SP8072Z-OR0305MD	Category 8 S/FTP Shielded Cable, LSZH Flame Retardant, Orange, 305m/Drum

CATEGORY 8 KEYSTONE JACK AND MODULAR PLUG, SHIELDED

Features & Benefits

- Meet and exceed Category 8 standard performance
- Applicable cable diameter: 5.5-9.0mm
- Fast and toolless termination
- 360° fully shielded to prevent ANEXT and EMI
- Outstanding electrical performance

Features & Benefits

- 40G, 40G Base-T Ethernet applications
- Applicable cable diameter: 7.0-8.5mm
- IP20 protection

Standard Compliance

- ISO/IEC 11801
- ANSI/TIA-568.2-D

Electrical Performance

Dielectric Strength	DC 1000V(AC750V) 1min, No Breakdown and Arcing Phenomena
Rated Current	≥0.75A

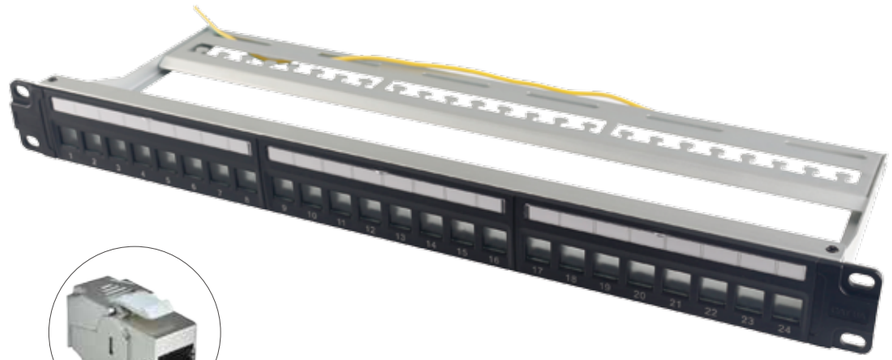
Physical Performance

IDC	Phosphor Bronze
RJ45 Pin	Phosphor Bronze with 50μm Gold Plating
Plug Insertion	≥1000 times
IDC Insertion Life Span	≥250 times
AWG	22 ~ 26AWG
Wiring	T568B

Ordering Information

Part No.	Description
KJ8001	Category 8 Shielded Keystone Jack
MPG801	Category 8 Shielded Filed-termination Modular Plug

CATEGORY 8 PATCH PANEL, SHIELDED, LOADED (WITH DUST-PROOF SHUTTER)



Standard Compliance

- ISO/IEC 11801
- ANSI/TIA-568.2-D

Features & Benefits

- Meet and exceed Category 8 performance
- Modular shielded design
- Dust-proof shutter in the front to prevent dust and air flow
- Snap-in design and removable keystone jacks for easy installation and maintenance
- Convenient and clear label management
- Rear cable manager

Electrical Performance

Dielectric Strength	DC 1000V(AC750V) 1min, No Breakdown and Arcing Phenomena
Connecting Resistance	≤20mΩ
Insulation Resistance	Under Normal Atmospheric Pressure ≥500MΩ

Physical Performance

IDC	Phosphor Bronze
RJ45 Pin	Phosphor Bronze with 50μm Gold Plating
Plug Insertion	≥1000 times
IDC Insertion Life Span	≥250 times
AWG	22 ~ 26AWG
Wiring	T568A/T568B

Ordering Information

Part No.	Description
PP8001-24	Category 8 Shielded Patch Panel, Loaded (with Dust-proof Shutter)