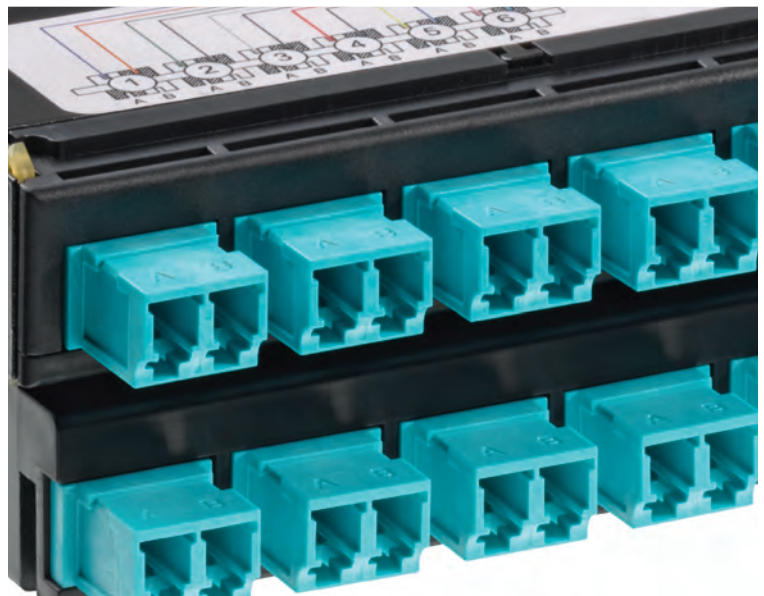
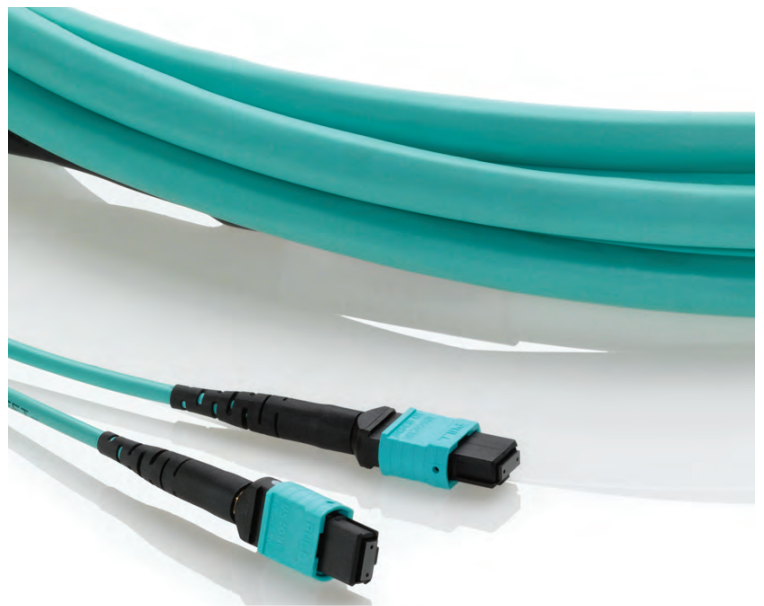
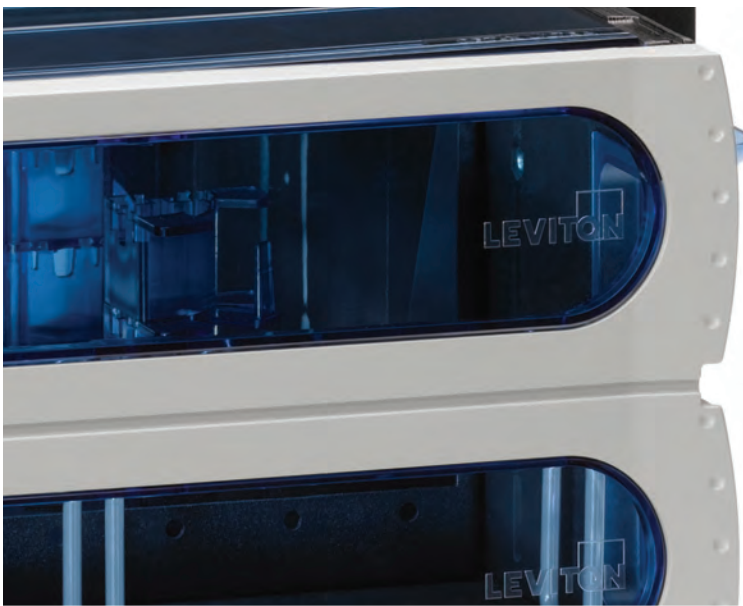


# Pre-terminated Solutions Guide

Plug-n-Play Systems for the Data Center



# Install, upgrade, and maintain every connection in your data center with Leviton pre-terminated fiber and copper solutions.

Our pre-terminated systems and components are designed for rapid deployment: with 100% factory testing and no need for field terminations or splices, installation time is reduced by up to 75%. These components — including enclosures, panels, modules, and cable assemblies — are ideal for environments where performance, flexibility, and scalability are critical.

Data center installations and upgrades often require unique, custom products. Get the exact solution you need through Leviton's online make-to-order (MTO) program. Our pre-terminated components can be customized with user-friendly configurators that take you step-by-step through the specification process. Go to [leviton.com/configurator](https://leviton.com/configurator) to build your custom pre-terminated products.

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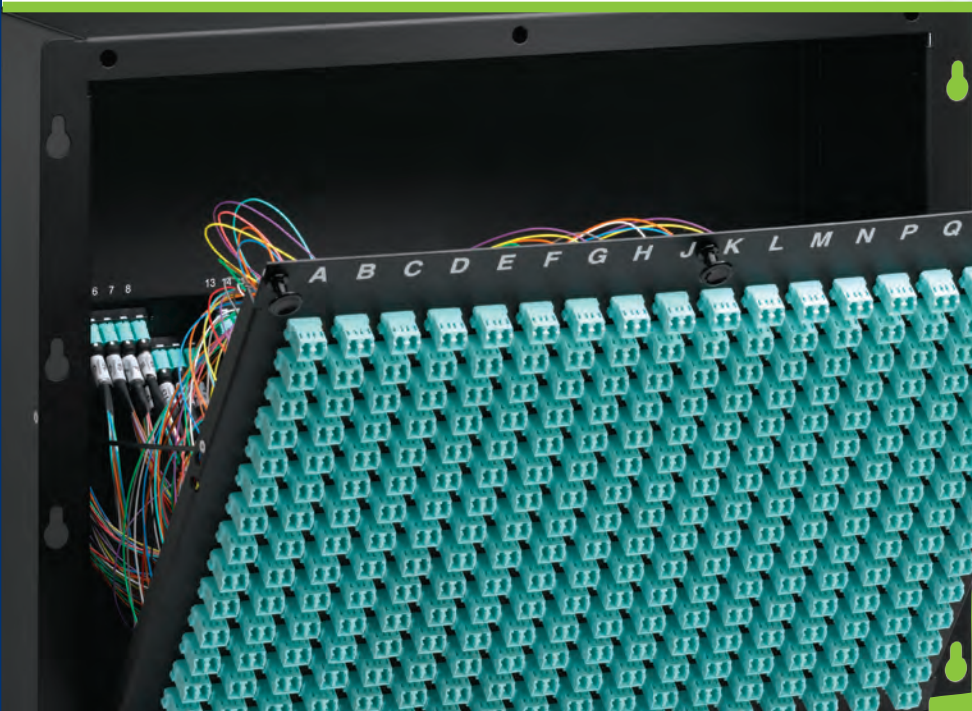
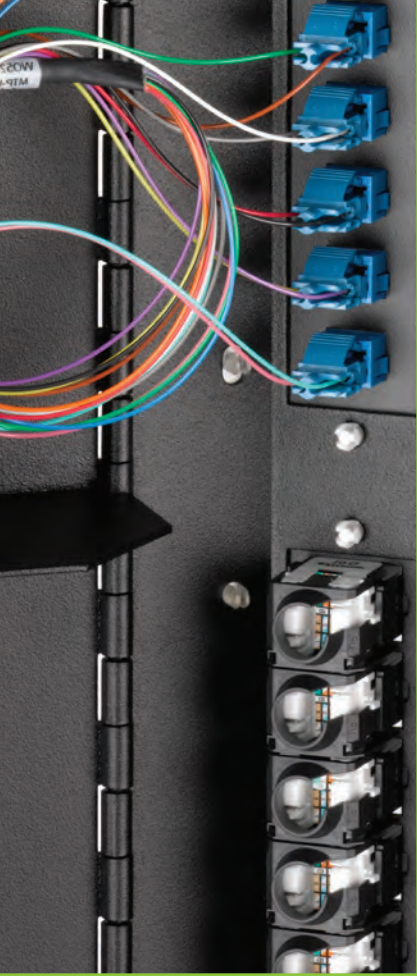
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## Need additional data center support?

Partner with Leviton's data center specialists to ensure that your infrastructure designs support their objectives. Our data center design group and specifications team provide technical support, including design, layout, elevations, pathways, and specifications, customized to each installation. They can also help create product solutions customized to any architecture.

Email Leviton's data center team at [dcteam@leviton.com](mailto:dcteam@leviton.com), or visit [leviton.com/datacenter](https://leviton.com/datacenter) for more information.





# Contents

- 2 Pre-terminated Fiber Solutions
- 4 e2XHD Patching System
- 5 Opt-X® Unity 40/100G System
- 8 Fiber Trunks & Harnesses
- 10 Fiber Patch Cords
- 11 Secure Keyed LC System
- 12 Fiber Enclosures
- 13 MTP® Modules
- 14 Brackets & Adapter Plates
- 15 Fiber Patch Panels
- 16 Copper Cable Assemblies
- 17 Secure RJ System
- 18 Copper Patch Panels
- 19 Ordering Guide

# Pre-terminated Fiber Solutions

Leviton recommends using pre-terminated fiber trunks and harnesses whenever possible. With 100% factory testing and no need for field terminations or splices, installation time is reduced by up to 75%. Pre-terminated MTP® modules feature a space-saving design with a notched back for a smaller footprint and excellent radius control.

Solutions are made to your specifications:

- Fiber and cable type
- Fiber count
- Connector type
- Breakout leg types
- Length

## Trunk Cables

- MTP to MTP, including new 24-fiber MTP connector
- Discrete to discrete (ST, SC, LC, FC, MT-RJ, and MU)
- MTP to discrete
- Single-mode, multimode, and laser optimized multimode types available
- Secure Keyed LC trunks lock into any industry compliant adapter or interface

## Harnesses

- MTP to MTP connectors
- MTP to discrete connectors (ST, SC, LC, FC, MT-RJ, MU)
- Single-mode, multimode, and laser optimized multimode types available
- Secure Keyed LC harnesses lock into any industry compliant adapter or interface

## MTP Modules

- MTP to MTP
- MTP to discrete (ST, SC, LC, FC, MT-RJ, MU)
- Single-mode, multimode, and laser optimized multimode types available

## Pre-terminated Connector Performance (dB)

CONNECTOR MATED PAIRS	MULTIMODE						SINGLE-MODE	
	Duplex Typical IL	Duplex Max IL	12-fiber Standard Typical IL	12-fiber Standard Max IL	12-fiber Premium Max IL	24-fiber Premium Max IL	Typical IL	Max IL
LC	0.15	0.25	—	—	—	—	0.25	0.35
SC	0.20	0.25	—	—	—	—	0.25	0.35
MU	0.15	0.25	—	—	—	—	0.25	0.35
MTP	—	—	0.35	0.50	0.35	0.35	0.35	0.60

MTP MODULES & HARNESSSES	MULTIMODE		SINGLE-MODE	
	12-fiber Premium Max IL	24-fiber Premium Max IL	Typical IL	Max IL
LC	0.50	0.50	0.60	1.00
SC	0.50	—	0.60	1.00
MU	0.50	—	0.60	1.00

## 50/125 µm Laser Optimized Multimode Systems (OM3/OM4)

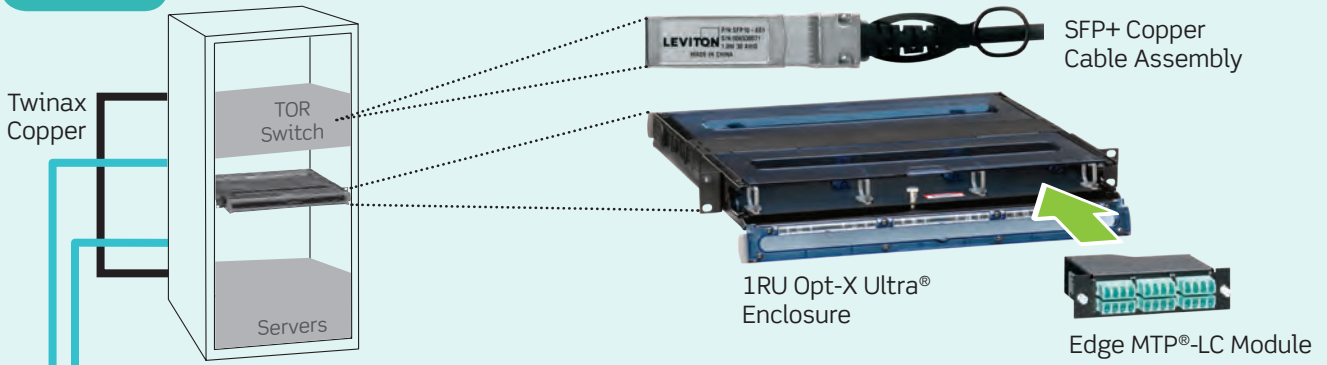
SPECIFICATIONS	50/125 µm LOMM SYSTEM (OM3)		50/125 µm LOMM SYSTEM (OM4)	
	850 nm	1300 nm	850 nm	1300 nm
Maximum Attenuation (dB/km)	3.0	1.0	3.0	1.0
Overfill Launch Minimum Bandwidth (MHz•km)	1500	500 <sup>2</sup>	3500	500 <sup>2</sup>
Effective Modal Bandwidth (EMB)(MHz•km)	2000 <sup>1</sup>	N/A	4700 <sup>1</sup>	—
1G Transmission Distance (meters)	1000	600	1000	600
10G Transmission Distance (meters)	300	300	550	300
40/100G Transmission Distance (meters)	100	N/A	150	N/A

1. The effective modal bandwidth is determined based on an overfill launch (OFL) per TIA-455-204, except on laser optimized fiber types.

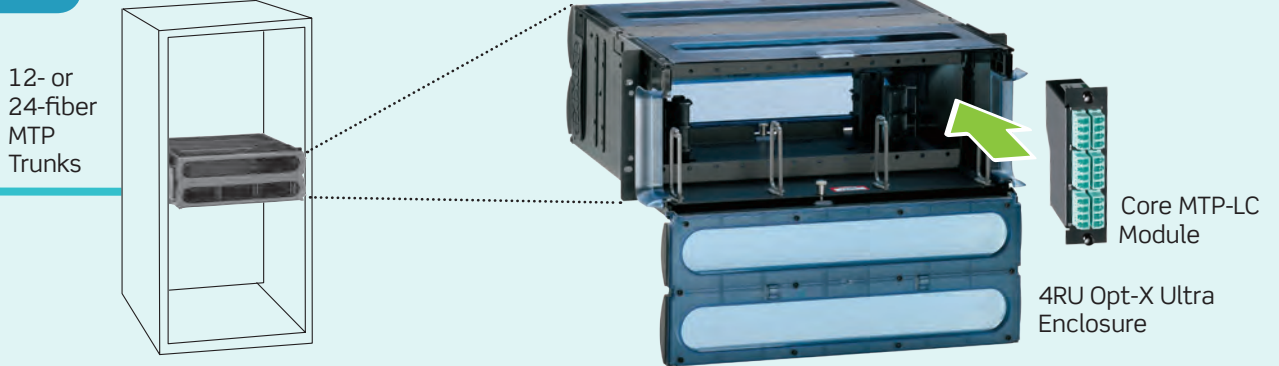
2. 10GbE transmission at 1,300 nm only applies to 10GBASE-LX4 (CWDM).



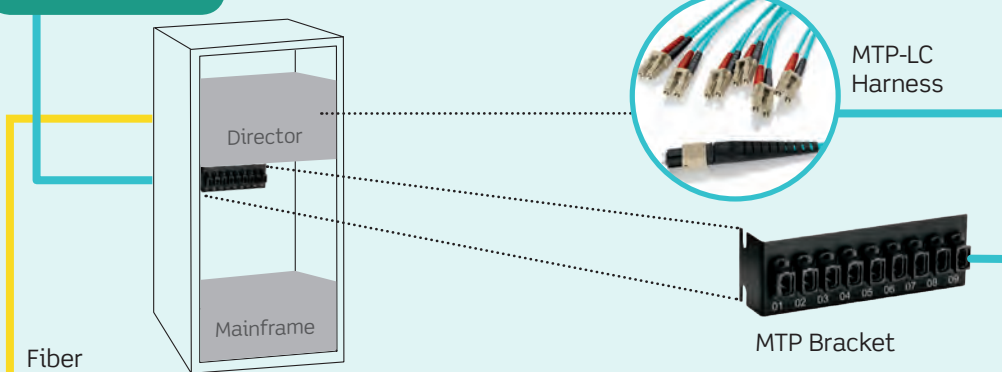
EDA/Edge



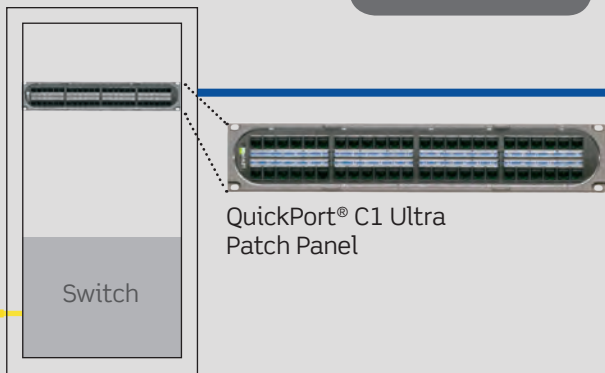
MDA/Core



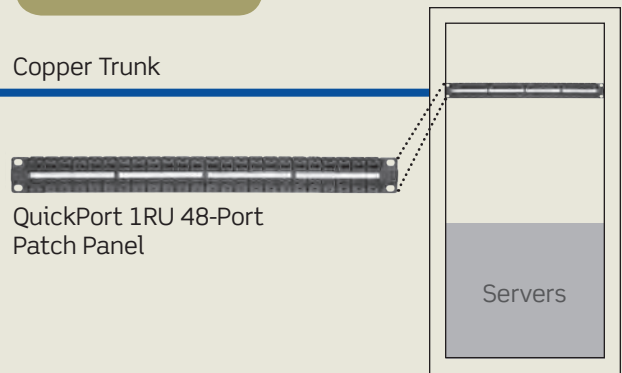
SAN/Mainframe



Copper HDA/EoR



Copper EDA/Edge

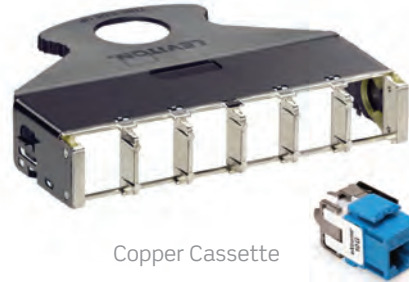


# e2XHD Patching System

The e2XHD Patching System provides simple termination and improved cabling routing for both fiber and copper applications. Cassettes quickly snap in and pull out of the high density angled panel, making installation and maintenance easier than ever. Copper cassettes use field terminated connectors, while fiber cassettes are pre-terminated. Panel covers and blank modules offer extra protection from dust and damage.



MTP to LC 24-Fiber Cassette



Copper Cassette

## e2XHD MTP® Fiber Cassettes

- Used exclusively with e2XHD 1RU High Density Angled Panel
- Available in 12- or 24-fiber, OM3, OM4, single-mode
- Allows for simple migration path to 40GbE or 100GbE networks with MTP cassettes
- Leviton-designed MTP adapter swivel allows for easy cable routing and proper bending radius
- All cassettes use either 24-fiber or 12-fiber low-loss MTP connectors

## e2XHD 6-Port Copper Cassette Kit

- Used exclusively with e2XHD 1RU High Density Angled Panel
- Supplied as a kit with cassette and six eXtreme® CAT 6A and CAT 6 QuickPort® Connectors
- Cassettes are also available pre-terminated on Leviton trunk cables
- Connectors snap into cassette after termination
- AXT barrier reduces alien crosstalk between ports



1RU Angled 24 Port Panel



Rear Cable Manager

## e2XHD 1RU High Density Angled Panel

- Holds up to 48 fiber channels or 48 copper ports
- Accepts up to 8 copper cassettes
- Accepts up to 8 single height or 4 double height fiber cassettes
- Rear Cable Manager snaps directly into the panel without tools, and includes cable management rings to help manage and route incoming fiber cables
- Angled Panel Top Cover protects cassettes mounted in the panel, and minimizes dust and debris behind the panel
- Angled Panel Blank Insert easily snaps into the rear of the panel and blocks any unused cassette openings



Angled Panel Cover



Blank Insert

## SPOTLIGHT MTP Adapter



The e2XHD Fiber Cassette features an MTP adapter that swivels to three positions for easier cable routing. Used in conjunction with the patching system's rear cable manager and cable management rings, the adapter delivers an ideal solution for eliminating cable tension and ensuring proper bend radius.

# Opt-X® Unity 40/100G System Overview

Update your data center to meet new high speed applications with the Leviton Opt-X Unity 40/100G Fiber System — a single, simple connectivity solution that makes it easy to migrate to 40/100G speeds. System components are available in laser optimized multimode (OM3/OM4), and feature industry-leading 24-fiber MTP® connectors.

## 40/100G System Components

- 24-fiber MTP trunks
- 24-fiber MTP harnesses
- 24-fiber MTP array patch cords
- 24-fiber MTP modules

## Migration solutions to 40/100G System from existing 10G networks

- Premium 12-fiber MTP trunks
- Premium 12-fiber MTP harnesses
- 24-fiber and premium 12-fiber array patch cords
- Premium 12-fiber MTP modules

## 40/100G Multimode Channel Requirements (IEEE802.3ba)

OPTICAL FIBER TYPE	MAX. CHANNEL INSERTION LOSS	MAX. CONNECTOR LOSS	MAX DISTANCE
OM3	1.9 dB	1.5 dB	100 meters
OM4	1.5 dB	1.0 dB	150 meters



MTP Module, Array Cords, and Trunk

### COLOR CODED BOOTS ON MTP



Red - 24 Fiber

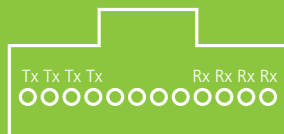


Black - 12 Fiber



Gray - 8 Fiber

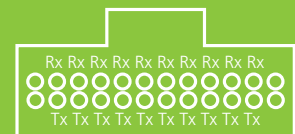
## MTP Lane Assignments for 40/100G



40GBASE-SR4, 8-fiber MTP



100GBASE-SR10, 2x12-fiber MTPs

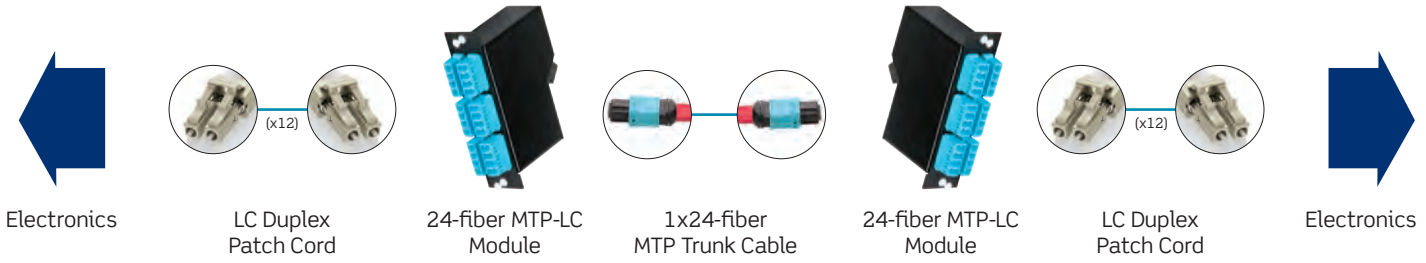


100GBASE-SR10, 24-fiber MTP

# 10/40/100G Configurations - Using Opt-X® Unity 24-fiber MTP® Cabling

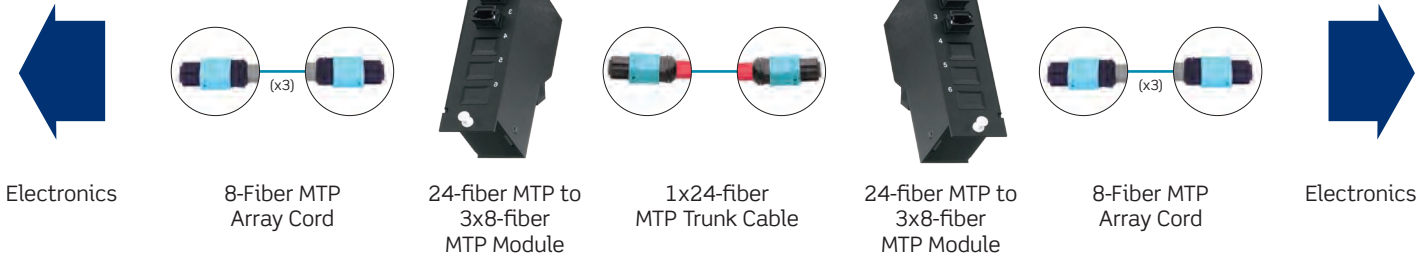
## 100G to 10G Channel Configuration

## Using Opt-X Unity 24-fiber MTP® Cabling

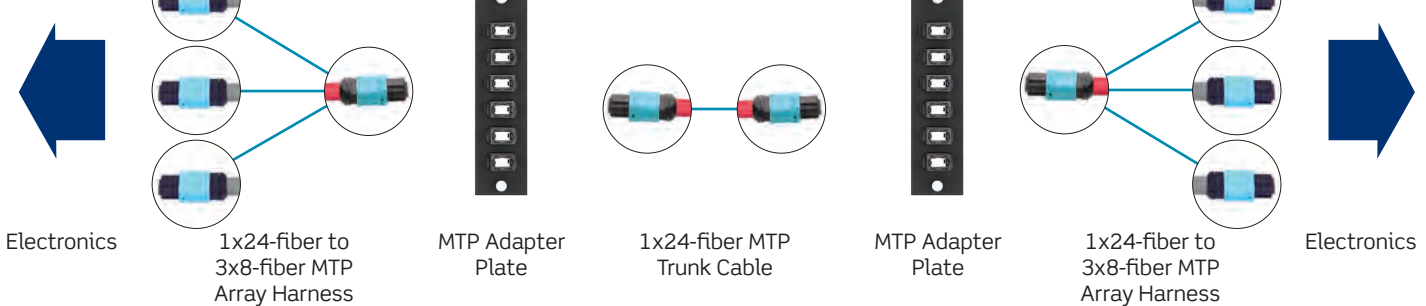


## 100G to 40G Channel Configuration

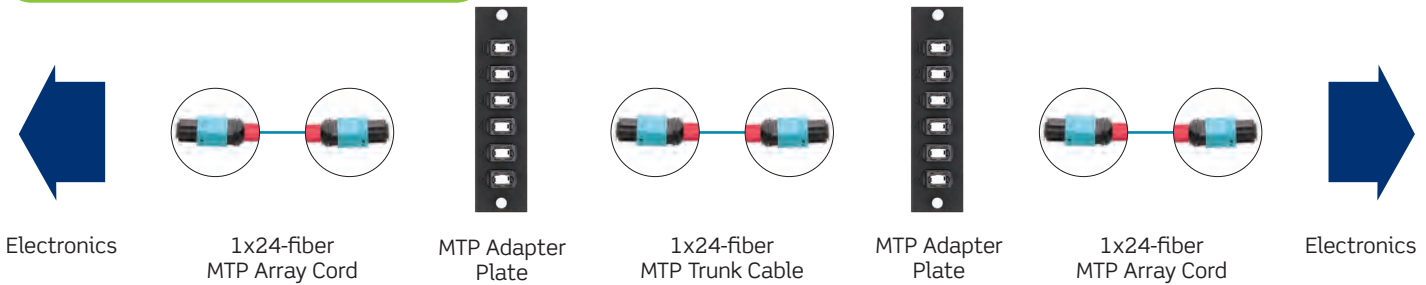
### Option A



### Option B



## 100G Channel Configuration



\* = 24-fiber MTP Trunk Cables available in 24-, 48-, 72-, 96-, and 144-fiber count.



# 40/100G Configurations - Using Legacy 12-fiber MTP® Cabling

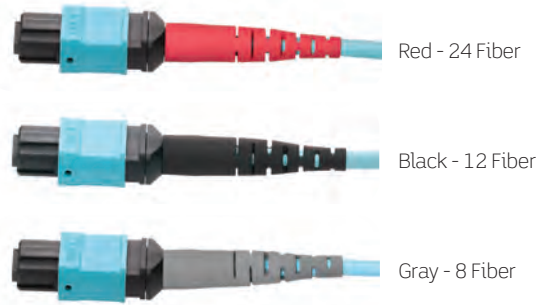


1x24-fiber MTP  
(module back view)



2x12-fiber MTP  
(module back view)

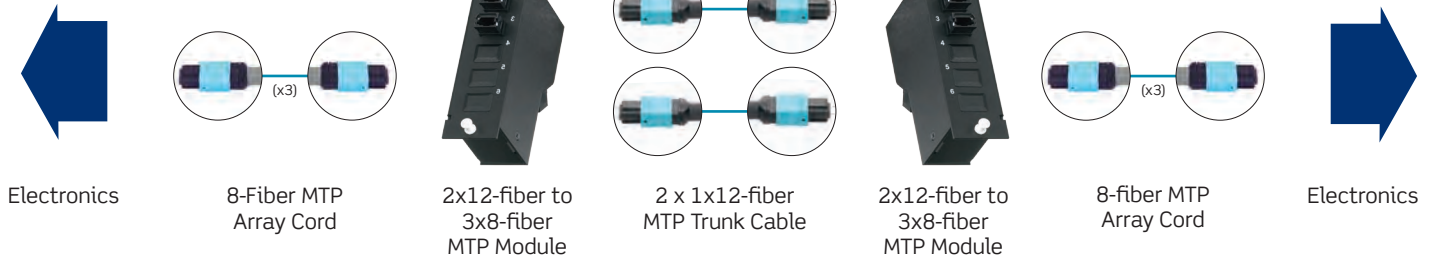
## Color Coded Boots on MTP



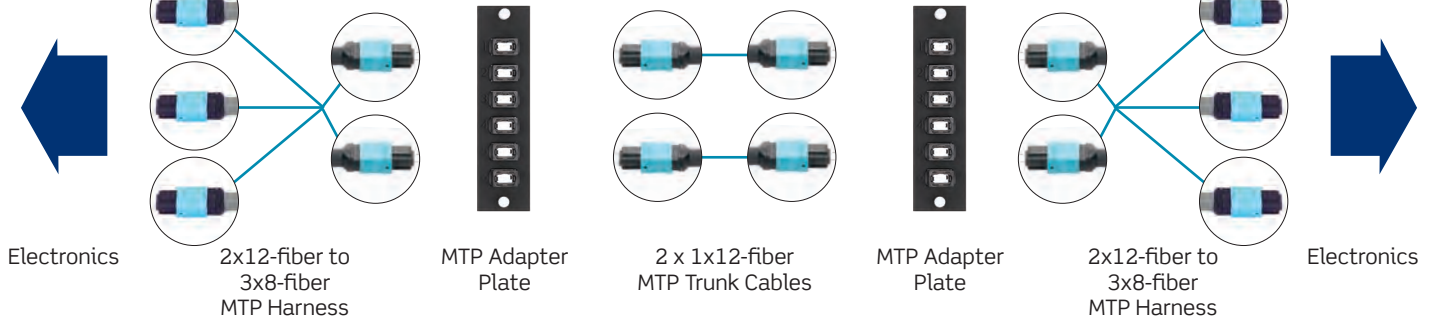
## Using Legacy 12-fiber MTP® Cabling

### Legacy 10G to 40G Migration

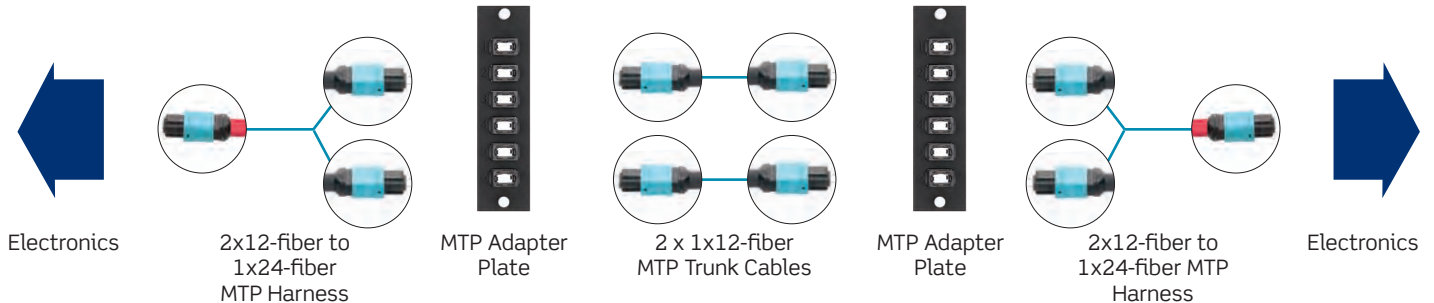
#### Option A



#### Option B



### Legacy 10G to 100G Migration



\* = 12-fiber MTP Trunk Cables available in 12-, 24-, 36-, 48-, 72-, 96-, and 144-fiber count.



24-fiber MTP® Trunk



Legacy 12-fiber MTP Trunk



LC to LC Trunk



MTP to LC Trunk



Secure Keyed LC to Secure Keyed LC Trunk

## All Trunk Cables

- Up to 75% faster install than field-terminated trunks
- All orders customized for cable type, length, staggering, fiber count, labeling, and more
- Polarity options of MTP® methods A, B, or C
- 100% factory tested, with test results included for each assembly
- Trunks labeled with serial number and length for traceability and easy re-order
- Discrete connectors are heat-cured and use ceramic ferrules and sleeves for optimal performance
- Optional pulling eye protects connectors and eases installation

## 24-fiber MTP Trunk Cables

- 24-fiber trunk configuration offers a migration solution to 100G from 10G or 40G networks
- Available in 24-, 48-, 72-, 96-, and 144-fiber count
- Boots are color-coded red to designate 24-fibers

## Legacy 12-fiber MTP Trunk Cables

- 12-fiber MTP trunk configuration offers migration solution to 40G from 10G networks
- Standard and low-loss premium 12-fiber MTP connectors available
- Available in 12-, 24-, 36-, 48-, 72-, 96-, and 144-fiber count
- Boots are color-coded black to designate 12-fibers

## Discrete & Hybrid Trunk Cables

- Terminations available in LC, Secure Keyed LC, MU, ST, SC, FC, MT-RJ, and MTP
- MTP to discrete connector configurations also available
- Secure Keyed LC Trunk Cables prevent unauthorized and inadvertent moves, adds, and changes (MACs), and plug into any industry compliant LC adapter or interface
- Discrete connectors are heat-cured and use ceramic ferrules and sleeves for optimal performance



## All Harnesses

- Custom short length cable for cabinet/rack patching
- Custom staggering available
- Polarity options of MTP methods A, B, or C
- 100% factory tested, with test results included for each assembly
- All assemblies labeled with serial number and length for traceability and easy re-order
- Used in conjunction with MTP brackets (Zero-U) or Flush Mount Series MTP 1RU panels as Plug-n-Play solution

## MTP Array Harnesses

- Pre-terminated MTP to MTP connectors in laser optimized multimode
- All array harnesses use low-loss MTP connectors
- For use in attaching directly to 40/100G transceivers
- Used in 12- and 24-fiber cabling systems
- Use for direct connection to active equipment
- Offered in 8-, 12-, or 24-fiber configurations
- Boots are color-coded to designate the number of fibers in the connector: 24-fiber is red, 12-fiber is black, 8-fiber is gray

## Legacy 12-fiber MTP to Discrete Harnesses

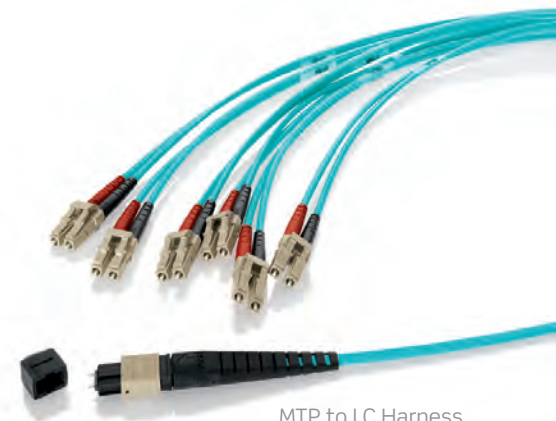
- Pre-terminated MTP to discrete connectors (SC, LC, MU, ST, MT-RJ) in all fiber types
- Secure Keyed LC Harnesses prevent unauthorized and inadvertent moves, adds, and changes (MACs), and plug into any industry compliant LC adapter or interface



24-fiber MTP® to 3x8-fiber  
Array Harness



Legacy 12-fiber MTP Array Harness



MTP to LC Harness



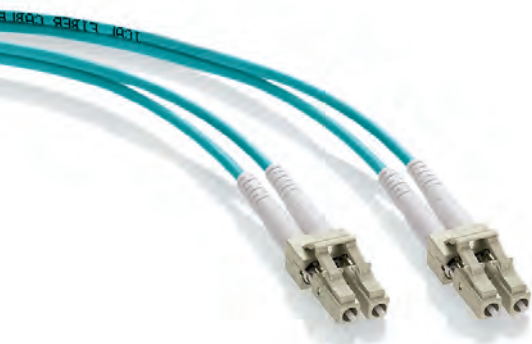
Secure Keyed MTP to LC Harness







24-fiber MTP to 24-fiber MTP®  
Array Cord



LC to LC Duplex Patch Cord



SC to SC Duplex Patch Cord



Secure Keyed LC to Secure Keyed LC  
Patch Cord

## MTP® Array Cords

- 50/125  $\mu\text{m}$  laser optimized multimode, OM3 and OM4
- All array cords use low-loss MTP connectors
- Used in 12- and 24-fiber cabling systems
- 8-, 12-, and 24-fiber MTP array cords offer migration path to 40/100G from 10G
- Available in 1, 2, 3, 5, and 10 meter lengths
- Boots are color-coded to designate the number of fibers in the connector: 24-fiber is red, 12-fiber is black, 8-fiber is gray

## Premium Series Patch Cords & Pigtailed

- Available in simplex, duplex, and pigtail configurations
- Wide variety of connector options
- TIA color-coded connectors
- Boots color coded for easy I.D. of fiber
- All fiber options: OM1, OM2, OM3, OM4, and OS2
- Advanced polishing and assembly techniques
- Insertion loss and return loss tested to industry leading standards
- Quick-turn service for fast delivery
- Custom labeling options
- Premium Series includes the Leviton Limited Lifetime Warranty
- Pigtailed and patch cords can be custom configured through Leviton's make-to-order program

## Economy Series Patch Cords & Pigtailed

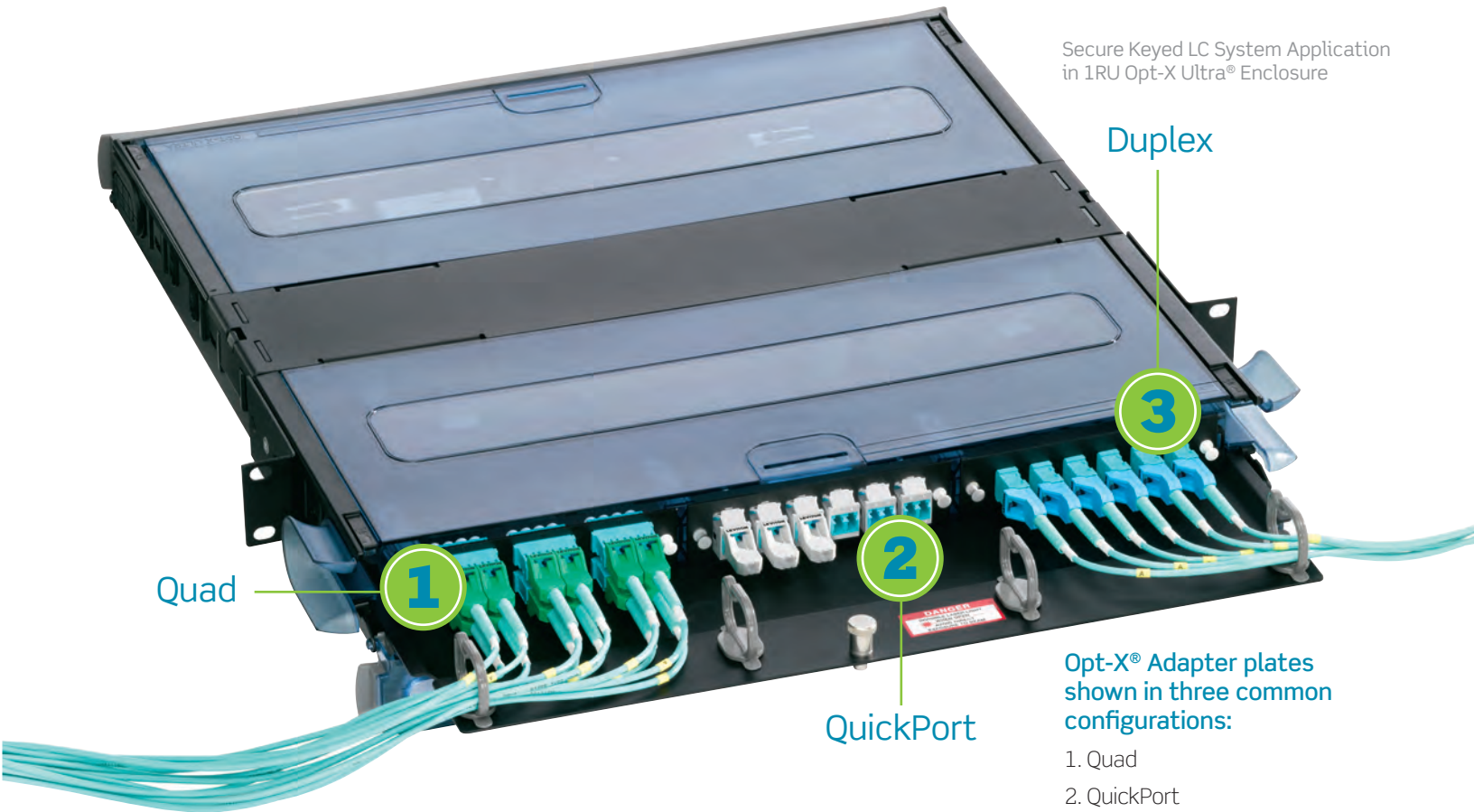
- Available in Duplex configurations
- Industry standard connector options
- Industry standard connector and test requirements
- All cables 100% optically tested
- Many fiber options: OM1, OM2, OM3, and OS1
- All cables are pre-labeled and individually bagged

## Secure Keyed LC Patch Cords

- Available in OM1, OM2, OM3, OM4, and OS2
- Prevent unauthorized and inadvertent moves, adds, and changes (MACs)
- Plug into any industry compliant LC adapter or interface

## Secure Keyed LC System

- Secure Keyed LC system includes trunk cables, harnesses, patch cords, pigtails, and field installable connectors
- System prevents unauthorized or inadvertent moves, adds, or changes (MACs) in sensitive applications
- Choose from eight colors to segregate and secure networks
- Duplex LC connector plugs into any industry compliant LC adapter or interface
- Made in the United States



## All Secure Keyed LC Tools & Accessories

- Port protection plugs enable unused LC ports to be locked, and can only be removed with a matching color extraction tool
- Extraction tools allow for easy connector removal from adapter plates and wallplates
- Dust caps protect connectors upon removal from a port, promoting good fiber discipline





Opt-X Ultra® Enclosures

## Opt-X Ultra® Enclosures

- Designed for large enterprise and data center applications
- Sliding tray removes completely from enclosure to facilitate field terminations and splicing
- Sliding tray with front and rear stop glides forward and backward providing accessibility to front and rear of bulkhead after installation
- Patch cord bend radius guides minimize macro bending
- Stackable and adjustable fiber rings simplify cable management
- 1RU, 2RU, and 4RU sizes



Opt-X® 1000i Enclosure

## Opt-X® 1000i Enclosures

- Sliding tray glides forward (with stop) and backward, and removes (1RU, 2RU) for easy field terminations and splicing
- 15" depth for high-density fiber termination and/or splicing
- Stackable and adjustable fiber rings simplify cable routing and organization
- Accepts Opt-X adapter plates and/or Opt-X MTP® modules
- Door lock option available on front, rear, or both doors
- 1RU, 2RU, 3RU, and 4RU sizes



Opt-X 500i, Flush-Mount Enclosure

## Opt-X 500i Enclosures

- One-piece removable cover/door allows for complete accessibility to the back of the enclosure and protects fibers
- 10.5" depth for minimal space requirements
- Stackable and adjustable fiber rings simplify cable routing and organization
- Add-on patch cord cable management tray (sold separately) uses existing rack unit
- Accepts Opt-X adapter plates and/or Opt-X MTP modules
- 1RU, 2RU, and 3RU sizes



8RU 576-fiber LC-MTP High Density Flush-Mount Enclosure

## Opt-X Enclosure Capacity with 24-fiber Opt-X Unity System

RACK UNITS	MAX # OF OPT-X PLATES/MODULES	MAX 10G/LC CHANNELS	MAX 40G/MTP CHANNELS	MAX 100G/MTP CHANNELS*
1U	3	36	18	18
2U	6	72	36	36
4U	12	144	72	72

\* = Requires at least 48-fiber trunks cables.

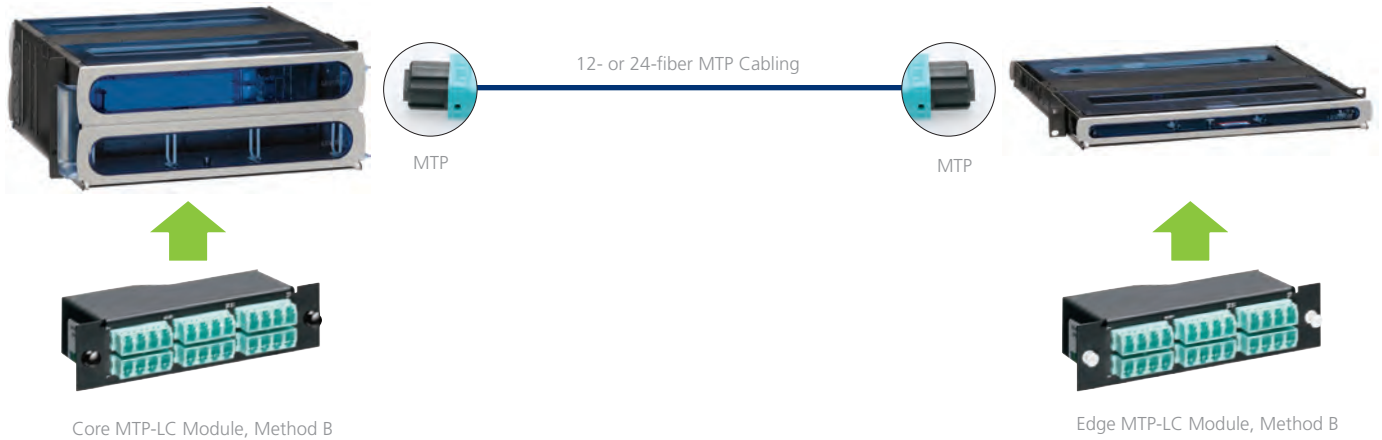
## High Density Flush-Mount Series

- Staggered, ergonomic design allows easy access to connectors (1RU, 6RU, 8RU)
- 1RU enclosure holds up to 72 channels or 144 fibers (using LC)
- 4RU and 6RU hold up to 144 channels/288 fibers, and 8RU up to 288 channels/576 fibers
- Shallow depth allows back-to-back mounting in cabinets and 4-post racks for high-density applications



## MTP Modules

TIA Method B polarity installations require one core MTP-LC module for each edge MTP-LC module.



### 40/100G MTP modules

- Available in Opt-X® style footprint
- Allows easy migration from 10G to 40GbE or 100GbE
- Each module supports up to 48 fibers using MTP, or 24 fibers using LC
- All modules use either 24-fiber or 12-fiber low-loss MTP connectors
- Bend-insensitive fiber used in OM3/OM4 modules
- MTP-MTP modules are used with MTP array cords (see page 20)
- See page 12 for MTP module capacity

### Legacy 12-Fiber MTP modules

- Plug-n-Play module eliminates need for field termination or splices
- Each module supports up to 24 fibers (LC)
- Bend-insensitive fiber used in OM3/OM4 modules
- All premium 12-fiber MTP modules use low-loss MTP connectors
- Low insertion loss of 0.5 dB maximum
- 100% factory tested with test results included with each module
- See page 12 for MTP module capacity



MTP-LC Module w/ Shutters



24-fiber MTP-MTP Module



1x24-fiber MTP Module  
(back view)



2x12-fiber MTP Module  
(back view)



Universal Plug-n-Play MTP® Bracket



LEFT: Standard Adapter MTP Bracket  
RIGHT: 90° Angled MTP Bracket w/ Adapters

## Universal Fiber Plug-n-Play MTP® Brackets

- Accepts all LightSpace® (LGX® Footprint) 6- and 8-pack adapter plates
- Available in both MTP® Plug-n-Play and discrete connector/plug termination configurations
- Available in open or fully closed configurations
- Mounts to back rail (right or left side) of racks and cabinets, freeing up valuable space
- MTP trunk cable can be terminated to either the top or bottom surface of the product

## Fiber Plug-n-Play MTP Brackets

- Available in various sizes and configurations to accommodate 6 to 12 adapters
- Mounts to back rail (right or left side) of racks and cabinets, freeing up valuable space
- Provide direct connection to trunk cables and harnesses



Opt-X® Adapter Plates

## Opt-X® Precision Molded Adapter Plates

- Available in LC, SC, and ST configurations in various fiber port counts
- Precision molded adapter plates (in 6, 8, 12, or 24 fibers) eliminate rattle and loose fit
- Zirconia ceramic sleeve used in precision molded adapter plates for best optical performance, reliability, and durability
- Color of precision molded adapter plate identifies fiber type, per TIA-568-C.3
- Other configurations in LC, SC, and MTP available in metal plates (in 6, 16, or 72/144 fibers)
- Captive push/pull fasteners allow for quick, tool-free installation and removal
- Fits in all Opt-X rack-mount and wall-mount enclosures and Vertigo panels
- Made in the U.S.A.

### VertiGO® Rack-Mount Plug-n-Play Patch Panels

- Install horizontally to cabinet and rack mounting rails
- Provide up to 18 ports of fiber connectivity using MTP® trunks or discrete point termination
- Accept all Opt-X® adapter plates, allowing for a mix of copper, fiber, and multimedia connectivity
- Adjustable mounting ears provide five unique offset distances for enhanced horizontal cable management
- Integrated cable manager



VertiGO® Rack-Mount Plug-n-Play Patch Panels

### VertiGO Zero-U Patch Panels

- All styles sold empty, with either QuickPort® or Opt-X style openings
- Zero-U uses no rack space
- Low profile design fully covers connections
- Improves cabinet center airflow by routing rear cable along outer edges
- Styles with 3" and 6" channels provide additional cable management space
- Hinged doors provide easy access to termination field
- Magnified label holders make for easy reading
- Supports copper and fiber installations
- Multiple applications include: standard 19" rack/cabinet, enclosure in raised floor, mounts to ladder tray above racks and in the work area as a MUTOA (Multi-user Telecommunications Outlet Assembly)



LEFT: QuickPort® 12-Port panel, Zero-U  
RIGHT: Opt-X® Adapter Plate panel, Zero-U

### VertiGO Fiber Plug-n-Play Patch Panels

- Mount vertically to standard 19" racks or cabinets while consuming no horizontal rack space
- Accept all Opt-X adapter plates, allowing for a mix of copper, fiber, and multimedia connectivity
- Internal metal divider provides separation of copper and fiber cabling
- Provide either MTP Plug-n-Play or discrete point termination
- Can mount to the back rails of racks and cabinets, ladder tray, walls, or in under-floor applications for maximum versatility



VertiGO Fiber Plug-n-Play  
Patch Panel

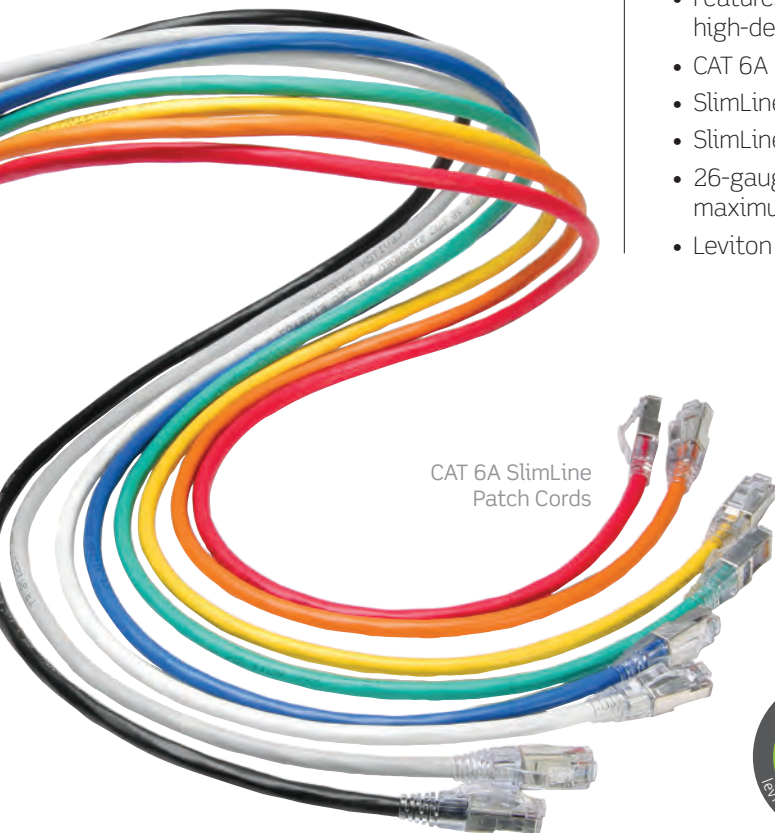




CAT 6A Jack to Jack Trunk



CAT 6A Jack to Plug Trunk



CAT 6A SlimLine Patch Cords

## Pre-terminated CAT 6A/6/5e UTP & Shielded Copper Trunks

- Fast and easy installation with reduced labor costs
- 100% factory tested, with test results included for each link
- CAT 6A trunks provide guaranteed performance in lengths as short as 10 feet
- UTP connectors use Leviton's patented Retention Force Technology for consistent system reliability
- Plugs feature clear SlimLine design with snagless strain relief boot
- Terminated ends offered in staggered or even alignment
- Customized breakout length from braided sleeve improves installation flexibility and appearance
- Each assembly receives an individualized serial number, and individual cables are numbered relative to that serial number (custom labeling available on request)
- Pre-terminated assemblies are eligible for Leviton's lifetime product, system, and performance warranties
- Trunks also available terminated to e2XHD Copper Cassettes, using eXtreme® CAT 6A or CAT 6 QuickPort® Connectors

## CAT 6A/6/5e UTP & Shielded Patch Cords

- Component-rated for optimum channel performance
- Independently tested and verified by Intertek (ETL) to meet TIA-568-C.2 component and channel requirements
- Features narrow profile SlimLine plug for less congestion in high-density applications
- CAT 6A patch cord provides exceptional alien crosstalk (AXT) suppression
- SlimLine style strain relief boot ensures long-term network performance
- SlimLine style snagless design prevents tab breakage
- 26-gauge (CAT 6A) and 24-gauge (CAT 6/5e) stranded cable for maximum flexibility
- Leviton patch cord required for channel warranty



Copper Cassette Terminated to Leviton Trunk Cables



## SFP+ 10G Passive Copper Cable Assembly

- SFF-8431 compliant for SFP+ interconnects including Checksum EEPROM
- Meets requirements for data speeds up to 10 Gbps at distances up to seven meters
- Hot pluggable interconnect
- Low power, low latency
- Provides superior electromagnetic interference (EMI) suppression for transmission speeds up to 10 Gbps
- Integrated strain relief ensures reliable performance
- Low-profile pull latch enables belly-to-belly cable installation
- Works in active equipment with highest possible port density
- 100% factory terminated
- Third-party verified through the University of New Hampshire InterOperability Lab (UNH-IOL)
- Packaged in anti-static bags



SFP+ Copper Cable Assembly



Secure RJ Port Blocker



White (W) Yellow (Y)



Orange (O) Red (R)



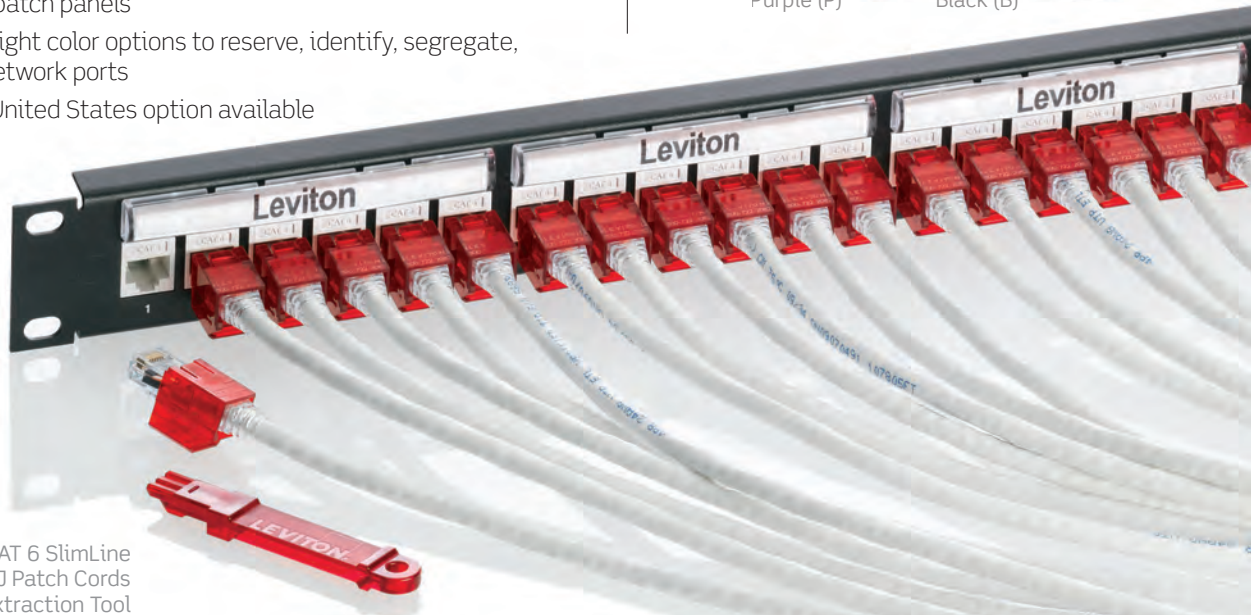
Blue (L) Green (G)



Purple (P) Black (B)

## Secure RJ System

- Secure RJ System — including patch cord, port blocker, and extraction tool — provides physical security for critical network ports
- Same-color extraction tool disengages color-matched patch cords and port blockers
- Port blocker prevents unauthorized network connection and protects ports not currently in use
- Patented design prevents unauthorized or inadvertent moves, adds, or changes in sensitive applications
- Innovative locking mechanism requires matching color extraction tool
- Compatible with most industry standard RJ-45 ports in network equipment, devices, patch panels, and work area outlets
- Works with high-density network equipment and 1RU 48-port patch panels
- Available in eight color options to reserve, identify, segregate, and secure network ports
- Made in the United States option available



CAT 6 SlimLine  
Secure RJ Patch Cords  
& Extraction Tool



QuickPort® C1 Ultra Patch Panel

## C1 Ultra Composite Patch Panels

- Panel face can be customized to feature any design, color, or logo, making it ideal for showroom-style environments
- Available in 48-port 2RU QuickPort® and 110-style models
- Panels include two integrated patch cord managers that attach directly to the face of the panel, saving up to 50% of valuable rack/cabinet space
- Offers streamlined look with the Opt-X Ultra® fiber enclosure and Versi-Duct® cable management system
- Panel is 100% recyclable



QuickPort 2RU 48-Port Flat Panel  
w/ MagLens Label Holder



QuickPort 1RU 48-Port High-Density Flat Patch Panel



QuickPort 1RU 48-Port High-Density Angled Patch Panel



QuickPort 2RU 48-Port Angled Shielded Patch Panel

## 1RU 24-Port & 2RU 48-Port Patch Panels

- QuickPort and 110-style options
- Available in flat, angled, recessed, and recessed-angled
- CAT 5e, 6, and 6A options

## High-Density Patch Panels

- 1RU 48-Port QuickPort Patch Panels provide twice the density of a conventional 1RU panel
- 2RU 72-Port QuickPort Panels offer a 50% increase in density, robust performance, and easy installation in flat, recessed-flat, and angled, and recessed-angled styles
- High-density flat panel features a patented die-cast aluminum construction that withstands the bulk and weight of terminated cables
- High-density angled panel eliminates need for horizontal managers, allowing patch cords to flow directly into vertical management

## Shielded Patch Panels

- 1RU 24-port and 2RU 48-port flat and angled patch panels
- Accepts all CAT 5e, 6, and 6A QuickPort shielded connectors
- Compatible with F/UTP, U/FTP, and all common shielded cable types



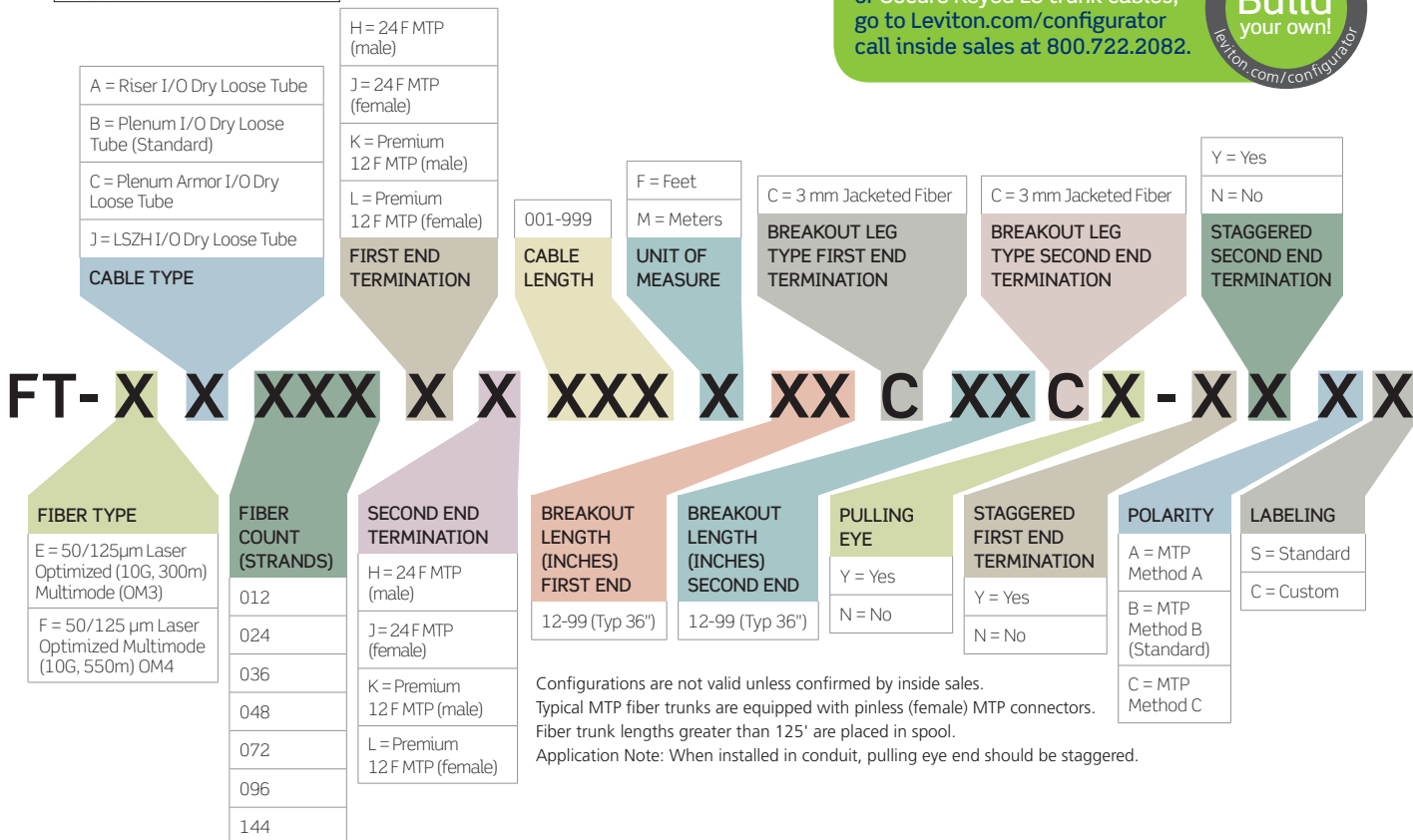
## OPT-X® UNITY 40/100G FIBER MTP TRUNK CABLES



Example: **FT-EB024HJ100F36C36CY-YNBS**: Fiber Trunk, 24-fiber Laser Optimized Multimode plenum cable (10G, 300m), MTP to MTP, overall length of 100 feet not including breakout lengths (to 3 mm jacketed fiber) of 36 inches on both ends, with pulling eye on first end connector termination. Second end termination is MTP method B.

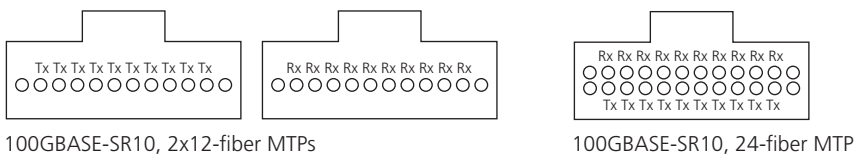
FOR ASSISTANCE, PLEASE CALL 800.722.2082 OR VISIT LEVITON.COM.

To configure standard trunk cables or Secure Keyed LC trunk cables, go to [leviton.com/configurator](http://leviton.com/configurator) call inside sales at 800.722.2082.

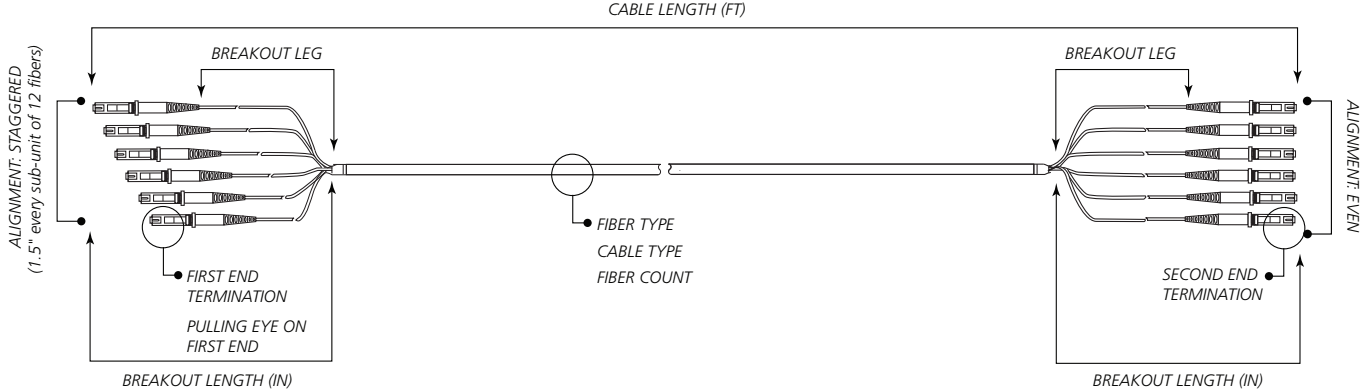


Configurations are not valid unless confirmed by inside sales. Typical MTP fiber trunks are equipped with pinless (female) MTP connectors. Fiber trunk lengths greater than 125' are placed in spool. Application Note: When installed in conduit, pulling eye end should be staggered.

### MTP Lane Assignments for 40/100G:



### Make-to-Order (MTO) Pre-terminated Trunk Cable Options:



## OPT-X® UNITY 40/100G MTP® ARRAY HARNESSSES



Example: **FH-EH024HLB36BE**; Fiber Harness, 24-fiber laser optimized multimode cable (OM3), MTP-MTP, overall length of 8' with breakout length of 36". Polarity is MTP method B. Terminated on both ends with 24-fiber male MTP to 2 x 12-fiber MTP.

**FOR ASSISTANCE, PLEASE CALL 800.722.2082 OR VISIT LEVITON.COM.**

To configure standard MTP and discrete or Secure Keyed LC harnesses, call inside sales at 800.722.2082.



# FH X H 024 X X X XX X

FIBER TYPE	CABLE TYPE	FIBER COUNT	FIRST END TERMINATION	SECOND END TERMINATION	CABLE LENGTH (FEET)	BREAKOUT LENGTH (INCHES)	POLARITY
E = OM3 F = OM4	H = Harness	024	H = 24 F MTP (male) J = 24 F MTP (female)	H = 24 F MTP (male) J = 24 F MTP (female) K = Premium 12 F MTP (male) L = Premium 12 F MTP (female) M = Premium 8 F MTP (female)	3 5 6 8 X = Other	0-48 XX = Other	A = MTP Method A BC = MTP Method B, Core, Black Latches BE = MTP Method B, Edge, White Latches C = MTP Method C (Standard)

Harnesses are typically equipped with pinned (male) connectors on one end. Standard harnesses are supplied with straight polarity.



### MTP® ARRAY CORDS (OM3/OM4)

DESCRIPTION	LENGTH (METERS)	PART NO.
OM3 MTP-MTP	1	5LxT†-M**
OM4 MTP-MTP	1	54xT†-M**



### PREMIUM SERIES FIBER PATCH CORDS

- Available in OM1, OM2, OM3, OM4, and OS2 fiber types
- Part of Quick-Turn service for fast delivery
- Custom configurators

To configure Premium Series and Secure Keyed LC patch cords, call inside sales at 800.722.2082.



### 50/125 μm LASER OPTIMIZED MULTIMODE (OM3)

DESCRIPTION	DUPLEX
SC-SC	5LDSC-M**
LC-LC	5LDLC-M**
SC-LC	5LDCL-M**



### 9/125 μm SINGLE-MODE PATCH CORDS (OS1)

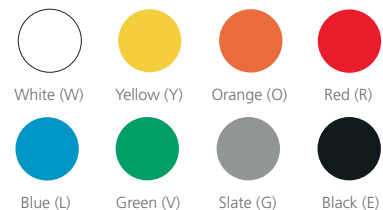
DESCRIPTION	DUPLEX
SC-SC	UPDSC-S**
ST-ST	UPDST-S**
LC-LC	UPDLC-S**
SC-ST	UPDCT-S**
SC-LC	UPDCL-S**

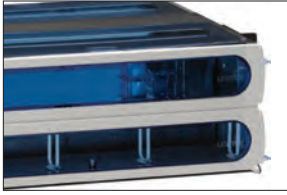
x = Fiber count. (2) = 12 fibers, (8) = 8 fibers, (4) = 24 fibers.  
 † = Location. (C) = Core, (E) = Edge.  
 \*\* = Length in meters. (01), (02), (03), (05), (10).  
 x = colors: Choose from any of the colors below.



### SECURE KEYED LC ACCESSORIES

DESCRIPTION	PART NO.
Port Protection Plug w/ Dust Cap	PPRTN-xLG
Extraction Tool w/ Dust Cap	ETRTRN-xTL
Dust Caps (bag of 10)	DUSTK-CAP





## OPT-X ULTRA® RACK-MOUNT ENCLOSURES

DESCRIPTION	MAXIMUM CAPACITY					PART NO.	
	Fibers (using LC)	Adapter Plates	AND	Splice Trays*	OR		MTP Modules
Opt-X Ultra 1RU, empty, sliding tray	96	3		3		3	5R1UH-S03
Opt-X Ultra 2RU, empty, sliding tray	144	6		6		6	5R2UH-S06
Opt-X Ultra 4RU, empty, sliding tray	288	12		12		12	5R4UH-S12

\*Maximum splice tray capacity is limited by height of selected splice tray.



## OPT-X® 1000i RACK-MOUNT ENCLOSURES

DESCRIPTION	MAXIMUM CAPACITY					PART NO.	
	Fibers (using LC)	Adapter Plates	AND	Splice Trays*	OR		MTP Modules
Opt-X 1000i, 1RU Enclosure, empty	72	3		3		3	5R1UM-F03
Opt-X 1000i, 1RU Enclosure, empty, with sliding tray	72	3		3		3	5R1UM-S03
Opt-X 1000i, 2RU Enclosure, empty	144	6		6		6	5R2UM-F06
Opt-X 1000i, 2RU Enclosure, empty, with sliding tray	144	6		6		6	5R2UM-S06
Opt-X 1000i, 3RU Enclosure, empty (horizontal adapter plate/module orientation)	216	9		12		9	5R3UM-F09
Opt-X 1000i, 3RU Enclosure, empty (vertical adapter plate/module orientation)	288	12		12		12	5R3UM-F12
Opt-X 1000i, 4RU Enclosure, empty (vertical adapter plate/module orientation)	288	12		15		12	5R4UM-F12
Opt-X 1000i, 4RU Enclosure, empty (horizontal adapter plate/module orientation)	360	15		15		15	5R4UM-F15

\*Maximum splice tray capacity is limited by height of selected splice tray.



## OPT-X 500i RACK-MOUNT ENCLOSURES

DESCRIPTION	MAXIMUM CAPACITY					PART NO.	
	Fibers (using LC)	Adapter Plates	AND	Splice Trays*	OR		MTP Modules
Opt-X 500i, 1RU Enclosure, Empty	72	3		3		3	5R1UL-F03
Opt-X 500i, 2RU Enclosure, Empty	144	6		6		6	5R2UL-F06
Opt-X 500i, 3RU Enclosure, Empty	288	12		12		12	5R3UL-F12

\*Maximum splice tray capacity is limited by height of selected splice tray.



# Ordering Guide - e2XHD Patching System, Flush-Mount Enclosures & Panels



## e2XHD PATCHING SYSTEM

DESCRIPTION	PART NO.
e2XHD 1RU High Density Angled Panel	E2X1A-D48
e2XHD 4RU High Density Angled Panel	E2X4A-192
e2XHD 6-port CAT 6A Cassette Kit*	E2X6A-xxx
e2XHD 6-port CAT 6 Cassette Kit*	E2X61-xxx
e2XHD 24-fiber MTP®-LC Fiber Cassette	(see configurator below)
e2XHD 12-fiber MTP-LC Fiber Cassette	(see configurator below)
e2XHD MTP-MTP Fiber Cassette	(see configurator below)
e2XHD MTP-MTP Pass-Through Cassette, four key-up/key-down adapters	E2XHD-4MP
e2XHD MTP-MTP Pass-Through Cassette, four key-up/key-up adapters	E2XHD-4MB
e2XHD Angled Panel Blank Insert	E2XHD-BLK
e2XHD Rear Cable Manager, with cable management rings (four 1/4" rings)	E2XHD-CMB
e2XHD Angled Panel Top Cover	E2XHD-COV
Universal Opt-X® Clamp Kit, single cable grommet (mounts to Rear Cable Manager)	5RCMP-KIT

\* = CAT 6A Cassettes include six 6110G QuickPort® Connectors. CAT 6 Cassettes include six 61110 QuickPort Connectors  
 xxx = connector colors: Black (BLK), Blue (BLU), Green (GRN), Yellow (YEL), Red (RED)

To configure e2XHD Fiber Cassettes, call inside sales at 800.722.2082.

## FLUSH-MOUNT ENCLOSURES & 1RU PANELS



- Custom configurations in 4RU, 6RU, and 8RU sizes
- Incorporates LPM using custom silk screening (modular, numeric, and hexadecimal) for easy port identification

To configure Flush-Mount Enclosures, call inside sales at 800.722.2082.

### FLUSH-MOUNT ENCLOSURE DENSITY, MAXIMUM FIBER COUNT

SIZE/TYPE	SC	LC	MU	ST
1RU Panel/Enclosure	72	144	72	72
4RU Enclosure	144	288	144	144
6RU Enclosure	144	288	288	144
8RU Enclosure	288	576	576	288



## OPT-X® UNITY 40/100G MTP MODULES, COMMON CONFIGURATIONS

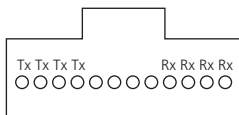
DESCRIPTION	PART NO.
MTP Core Module, 24-fiber, 24F MTP-LC, Method B, black latches	FM -*024CDC0BC
MTP Edge Module, 24-fiber, 24F MTP-LC, Method B, white latches	FM -*024CDC0BE
MTP-MTP Module, 24-fiber, 24F MTP-3x8F MTP, Method B	FM -*024NDC0E
MTP-MTP Module, 48-fiber, 2x24F MTP-6X8F MTP, Method B	FM -*048NDC0B
MTP-MTP Module, 24-fiber, 2x12F MTP-3x8F MTP, Method B	FM -*024NCC0B

\* = Fiber type: OM3 (E), OM4 (F).

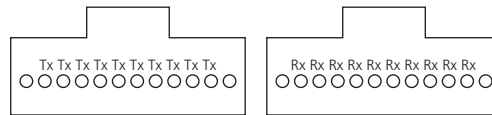
To configure Legacy 12-Fiber Premium MTP Modules, call inside sales at 800.722.2082.



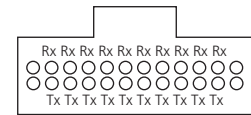
### MTP Lane Assignments for 40/100G:



40GBASE-SR4, 8-fiber MTP



100GBASE-SR10, 2x12-fiber MTPs



100GBASE-SR10, 24-fiber MTP

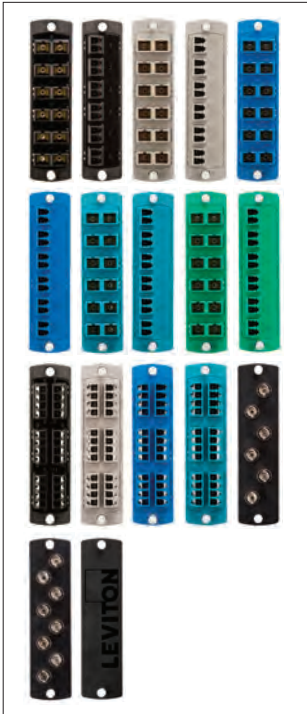


## MTP MODULE & CONNECTOR CLEANING TOOLS

DESCRIPTION	PART NO.
MTP Connector Cleaning Tool (male)	49886-MCT
MTP Connector Cleaning Tool Refill (male)	49886-MCR
LC Connector Cleaning Tool	49886-LCT
SC Connector Cleaning Tool	49886-SCT
MTP Connector Cleaning Tool (female)	49886-UVT
LC Scope Adapter (works w/ 200x scope only)	49886-LCS
Duplex LC Scope Adapter (works w/ 200x scope only)	49886-LCD
MTP Scope Adapter (works w/ 200x scope only)	49886-MCS

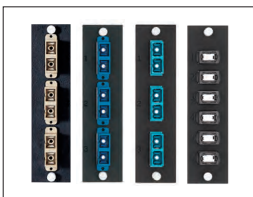
For additional MTP polarity options, call inside sales at 800.722.2082.

# Ordering Guide - Opt-X® Adapter Plates, Zero-U Panels & MTP® Brackets



## OPT-X FIBER ADAPTER PLATES - PRECISION MOLDED

DESCRIPTION	PART NO.
Plate (beige), 62.5 µm MM (OM1), Duplex SC, 12-fiber, zirconia ceramic sleeve	5F100-2IC
Plate (black), 50 µm MM (OM2), Duplex SC, 12-fiber, zirconia ceramic sleeve	5F100-2EC
Plate (aqua), 50 µm LOMM (OM3 & 4), Duplex SC, 12-fiber, zirconia ceramic sleeve	5F100-2QC
Plate (blue), SM (OS1 & 2), Duplex SC, 12-fiber, zirconia ceramic sleeve	5F100-2LC
Plate (green), SM/APC (OS1 & OS2), Duplex SC, 12-fiber, zirconia ceramic sleeve	5F100-2VC
Plate (beige), 62.5 µm MM (OM1), Duplex LC, 12-fiber, zirconia ceramic sleeve	5F100-2IL
Plate (black), 50 µm MM (OM2), Duplex LC, 12-fiber, zirconia ceramic sleeve	5F100-2EL
Plate (aqua), 50 µm LOMM (OM3 & 4) Duplex LC, 12-fiber, zirconia ceramic sleeve	5F100-2QL
Plate (blue), SM (OS1 & 2), Duplex LC, 12-fiber, zirconia ceramic sleeve	5F100-2LL
Plate (green), SM/APC (OS1 & OS2), Duplex LC, 12-fiber, zirconia ceramic sleeve	5F100-2VL
Plate (beige), 62.5 µm MM (OM1), Quad LC, 24-fiber, zirconia ceramic sleeve	5F100-4IL
Plate (black), 50 µm MM (OM2), Quad LC, 24-fiber, zirconia ceramic sleeve	5F100-4EL
Plate (aqua), 50 µm LOMM (OM3 & 4) Quad LC, 24-fiber, zirconia ceramic sleeve	5F100-4QL
Plate (blue), SM (OS1 & OS2), Quad LC, 24-fiber, zirconia ceramic sleeve	5F100-4LL
Plate (black), ST MM/SM, 6-fiber, zirconia ceramic sleeve	5F100-6MT
Plate (black), ST MM/SM, 8-fiber, zirconia ceramic sleeve	5F100-8MT
Plate (black), Blank	5F100-PLT



## OPT-X FIBER ADAPTER PLATES - METAL

DESCRIPTION	PART NO.
3-Pack Duplex SC MM (6-fiber), beige, phosphor bronze sleeve	5F100-3BC
3-Pack Duplex SC SM (6-fiber), blue, zirconia ceramic sleeve	5F100-3ZC
3-Pack Duplex SC MM Laser Optimized (6-fiber), aqua, zirconia ceramic sleeve	5F100-3AC
8-Pack LC MM (16-fiber), beige, phosphor bronze sleeve	5F100-16P
8-Pack LC MM (16-fiber), aqua, zirconia ceramic sleeve	5F100-16A
8-Pack LC SM (16-fiber), blue, zirconia ceramic sleeve	5F100-16Z
6-Pack MTP® (72-fiber), Method A and C (Key up/Key down)	5F100-6MP
6-Pack MTP (72-fiber), Method B (Key up/Key up)	5F100-6MB



For VertiGO rack-mount & Zero-U fiber plug-n-play patch panels, call inside sales at 800.722.2082.

## VERTIGO® ZERO-U PATCH PANELS

DESCRIPTION	PART NO.
QuickPort® 12-Port Zero-U, panel only	49280-QP0
QuickPort 12-Port Zero-U, panel with 3" cable channel	49280-QP3
QuickPort 12-Port Zero-U, panel with 6" cable channel	49280-QP6
Opt-X Adapter Plate Zero-U, panel only	49280-AP0
Opt-X Adapter Plate Zero-U, panel with 3" cable channel	49280-AP3
Opt-X Adapter Plate Zero-U, panel with 6" cable channel	49280-AP6



Universal fiber plug-n-play brackets are custom configured. Call inside sales at 800.722.2082.

## FIBER PLUG-N-PLAY MTP BRACKETS

DESCRIPTION	6 MTP ADAPTERS	9 MTP ADAPTERS	10 MTP ADAPTERS	12 MTP ADAPTERS
Straight Bracket w/ Adapters	FB106-OST	FB109-OST		
90° Angled Bracket w/ Adapters	FB106-090	FB109-090		
Standard 12 MTP-Adapter Bracket				FB112-000
Straight Vertical MTP Bracket			FB110-VST	
45° Angled MTP Bracket				FB112-045



## COPPER TRUNKS



- Custom configure for length, connector type, breakout length, and more
- Trunks also available terminated to e2XHD Copper Cassettes

To configure Copper Trunks, call inside sales at 800.722.2082.



Custom length cords available, call inside sales at 800.722.2082.

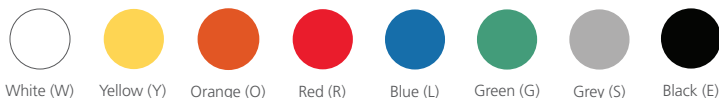
## PATCH CORDS

DESCRIPTION	CAT 6A	CAT 6	CAT 5e
Standard CAT 6A Patch Cord, FTP construction	6AS10-++°		
Standard UTP Patch Cord, matching boot		6D460-xx*	5G460-xx*
SlimLine UTP Patch Cord		6D460-xx*	5D460-xx*
SlimLine UTP Low-Smoke Zero-Halogen (LSZH) Patch Cord		6Z460-++°	5Z460-++°
Standard Shielded Patch Cord, matching boot, grey only		6S460-xxS	5S460-xxS

### STANDARD & SLIMLINE UTP & STANDARD SHIELDED CAT 6A/6/5E PATCH CORDS

xx = Length: (03), (05), (07), (10), (15), or (20) feet.

\* = Colors: Choose from any of the colors below (Orange is standard color for 6AS10 only)



### SLIMLINE UTP LSZH CAT 6/5E PATCH CORDS

++ = Colors: Choose from any of the colors below.

° = Length (1), (2), (3), or (5) meters.



## SECURE RJ SYSTEM

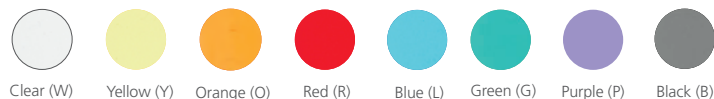
DESCRIPTION	PART NO.
CAT 6 SlimLine Patch Cord, with Secure RJ housing on both ends	SRJ6+-xx*
Secure RJ Port Blocker, pack of 12	SRJPB-00†
Secure RJ Extraction Tool, pack of 1	SRJET-00†

Secure CAT 6A Patch Cords also available

xx = Length: (05), (10) or (20) feet.

† = Patch cord housing, port blocker, and extraction tool colors:

Choose from the transparent colors below.



## SFP+ CABLE ASSEMBLIES

DESCRIPTION	PART NO.
SFP+ 10G Passive Copper Cable Assembly, 30 AWG	SFP10-E**

\*\* = Length in meters: (01), (03), (05), (07).

\* = Patch cord jacket colors:

Choose from the colors below.



## QUICKPORT® PATCH PANELS

DESCRIPTION	EMPTY	DESCRIPTION	EMPTY
2RU 48-Port Flat Composite Panel	C1255-H48	1RU 48-Port Angled Panel	49256-D48
1RU 24-Port Flat Panel	49255-H24	2RU 48-Port Angled Panel	49256-H48
1RU 48-Port Die-Cast Flat Panel	49255-D48	2RU 72-Port Angled Panel	49256-D72
1RU 48-Port Flat Panel	49255-Q48	2RU 72-Port Recessed-Angled Panel	4W256-D72
2RU 72-Port Flat Panel	49255-D72	2RU 48-Port Shielded Angled Panel	49256-D48



# THE SMART CHOICE FOR A BETTER NETWORK

High-performance connectivity backed by the industry's best service and support

We invent the industry's best technologies. We build them to last. And we stand behind every product and every installation – delivering industry-leading performance and unbeatable service and support – throughout the life of your structured cabling system. Add in the peace of mind that comes from working with a stable, century-old supplier and you get far and away the highest return on investment in the industry.

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