



OPT-X™ Fiber Optic System

The Leviton e2XHD high density patching platform works with pre-terminated copper and fiber cable, supporting migration to 400 Gb/s and beyond. Coupled with premier performance, the e2X Unity system accepts Base8, 12, and 24 configurations for applications requiring extended distances and multiple connection points between active devices. OPT-X fiber optic systems are global solutions available everywhere.

RECOMMENDED FOR:

- Cloud Data Centers
- Mission Critical Networks
- Financial Institutions
- Extended Reach Networks
- Migration to 400G and Beyond
- Multiple Connection Points
- Top-of-Rack Installations



The e2XHD patching platform provides a high-density 48 port solution for enterprise and data center applications, where fast deployment and simple maintenance are priorities. Rear-loading e2XHD fiber and copper cassettes quickly snap in and pull out of high-density 96 fiber panels (using LC), making installation, moves, adds, and changes easier and faster.

The OPT-X Unity solution of trunks, array patch cords, and cassettes exceed industry standards, offering superior channel performance, extended distances, and easy migration to 40, 100, 200, 400 Gb/s, and beyond. Performance assurance and extended distance calculations are available through extensive testing and analysis with the Leviton Optical Link Verification Tool.

Use Cases

Multiple Connection Points

Ultra-low-loss OPT-X Unity connectivity helps manage your power budget while allowing multiple connection points, even greater than 4, in the end-to-end channel.

Extended Distances

High performance cable and ultra-low-loss OPT-X Unity connectivity enable extended distances. This offers greater flexibility in network architectures, optical reach beyond industry standards, and opportunities to optimize network cost.

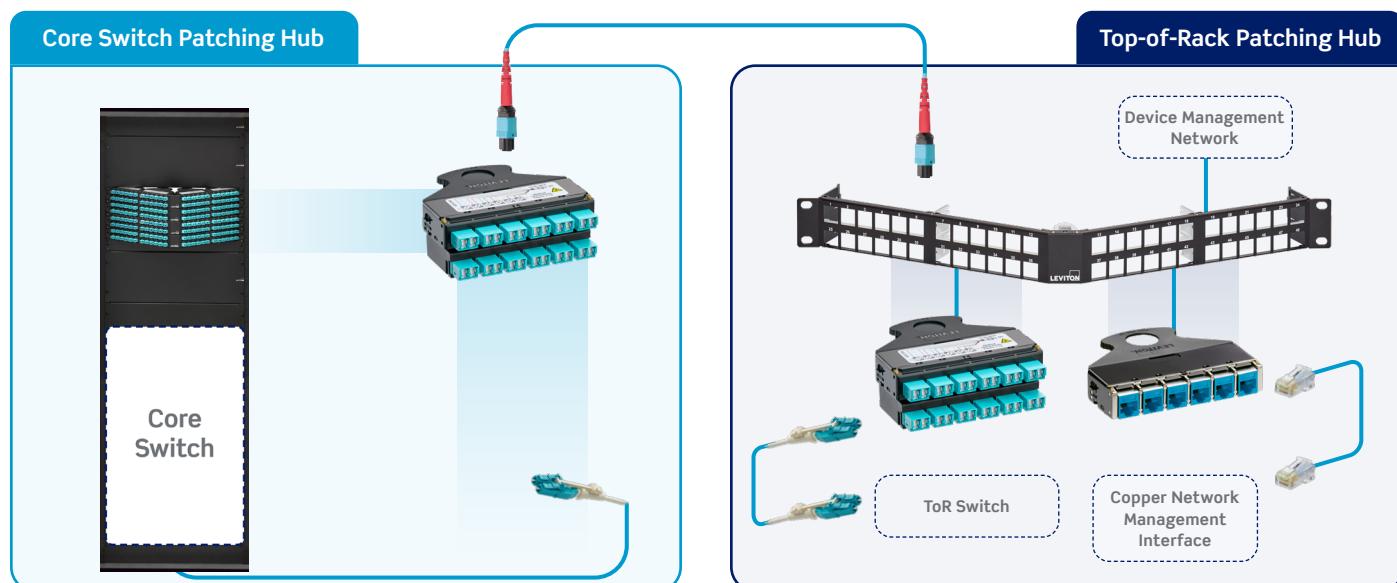
High Density Open Patching

Rear access and installation of the cassettes, cabling, and cable management provides faster day one installation and maintenance for moves, adds, and changes with an efficient open patching design.

Multimedia Connections

Flat and angled e2XHD panels allow a mix-and-match of Leviton fiber and copper snap-in cassettes for optical and management network interfaces.

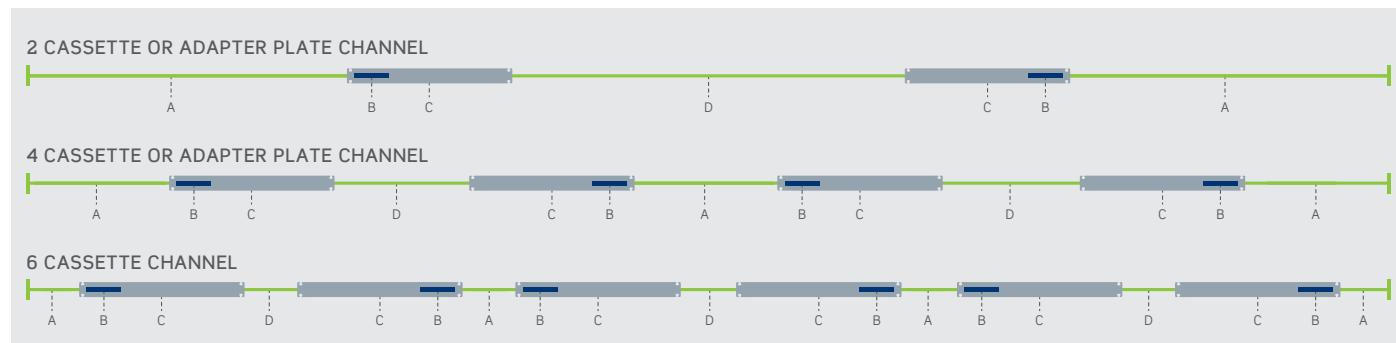
Example Network



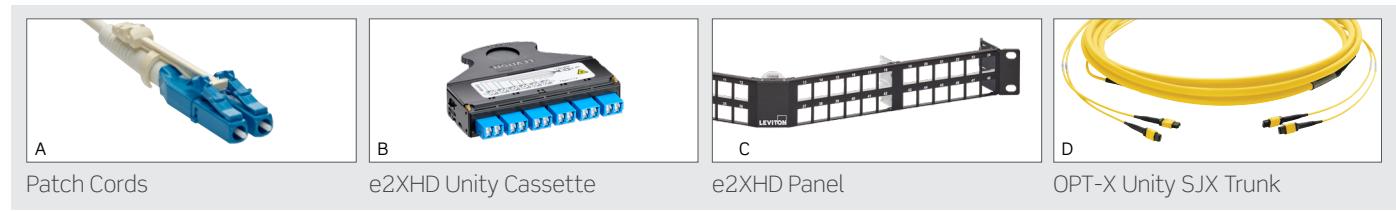
Total Channel Performance

Many organizations need to maximize existing cabling infrastructure or extend from that infrastructure. This can lead to the need for performance over distances that exceed industry standards, mating these signals through multiple connection points, or a combination of both. These scenarios may raise concerns about the passive channel's bandwidth capabilities and attenuation loss in relation to the transceiver transmit power and receiver sensitivity. e2X Unity maximizes the reach capability while offering the highest density of fiber connections and, as a system, Leviton's design tools can verify the expected performance of those end-to-end channels.

Channel Reach Performance Examples



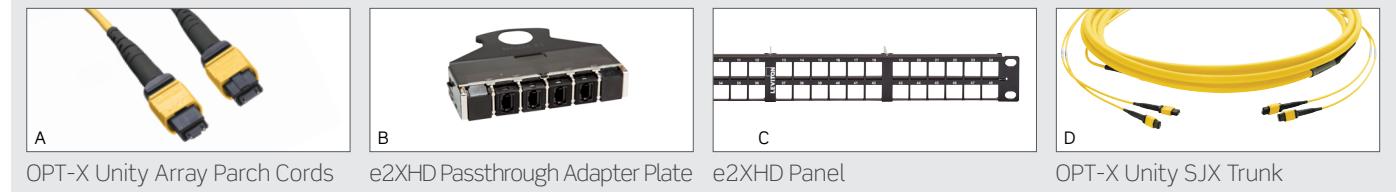
Duplex Transceivers and Base 8/12 or 24 MTP-LC Cassettes



OM4	10G SR				25G SR				40G BiDi			
# of Connection Points	2	4	6		2	4	6		2	4	6	
MTP® Type	12	24	12	24	12	24	12	24	12	24	12	24
Reach (m)	For expected optical reach data, contact your local sales person. Leviton.com/ns/global-locations											

OS2	10G LR				40G LR				100G CWDM4			
# of Connection Points	2	4	6		2	4	6		2	4	6	
MTP Type	12	24	12	24	12	24	12	24	12	24	12	24
Reach (m)	For expected optical reach data, contact your local sales person. Leviton.com/ns/global-locations											

Parallel Transceivers and MTP Adapter Plates



	OM4 – 40G SR4				OM4 – 100G SR4				OS2 – 100G PSM4			
# of Connection Points	2	4	2	4	2	4	2	4	2	4	2	4
MTP Type	12	24	12	24	12	24	12	24	12	24	12	24
Reach (m)	For expected optical reach data, contact your local sales person. Leviton.com/ns/global-locations											

Leviton can calculate reach for virtually any transceiver type. Contact 800-722-2082 for additional support or visit Leviton.com/ns/global-locations.

The engineered link values listed in the tables are outputs from Leviton's Optical Link Verification Tool. To obtain these expected reach distances, the products must be properly installed by a Leviton Certified Installer. Additionally, the active equipment at both ends of the link must be properly installed and in good working condition, and meet appropriate IEEE 802.3 standards for the specific application. Leviton stands behind its system warranties, located at <https://leviton.com/ns/warranties>. As a variety of applications and connection points are possible, contact 800-722-2082 or appeng@leviton.com for specific design consultation and Link Performance verification.

DUPLEX OPTICS CHANNELS



Duplex Patch Cords

Fiber Patch Cords

Fiber Optic Patch Cords are designed to interconnect or cross connect fiber networks within structured cabling systems for data centers, Broadband CATV, Passive Optical Networks (PON), WDM or DWDM multiplexing, FTTH, and voice services in metropolitan and access networks.

- Leviton-patented LC Unibody connector with SPECTRO-LINK™ Technology for plenum patch cords includes reversible polarity feature, allowing polarity changes in the field without moving or twisting fiber
- Cable jacket color-coded for easy ID of fiber
- 100% tested for insertion loss and single-mode for return loss
- Leviton design is ideal for high-density applications



Cassettes

e2XHD Fiber Cassettes

e2XHD Unity MTP® cassettes are engineered for the most demanding data center networks, where extended reach and multiple connection points are required. They are pre-terminated, pre-tested, and come with 12- or 24-fiber MTP connectors.

- Ultra-low-loss Base8, Base12, and Base24 MTP connectors
- Leviton-patented IP5x-rated internal shutters on LC adapters eliminate need for dust plugs to reduce waste, speed deployment, and ensure safer installation
- Universal Polarity Base8, Base12, and Base24
- Pre-terminated fiber eliminates the need for complicated field terminations and splices
- Easy one-hand installation and removal from the rear of the panel
- Option of pinned (male) or unpinned (female) MTP connector

Fiber Patch Cords	Plenum Part No.	LSZH Part No.
OM4, LC-LC Low Loss Patch Cord, 1 m	PCF-M4PR2VV-0010MAB	LPC-M4D1LCLC0010
OM4, LC-LC Low Loss Patch Cord, 3 m	PCF-M4PR2VV-0030MAB	LPC-M4D1LCLC0030
OM4, LC-LC Low Loss Patch Cord, 5 m	PCF-M4PR2VV-0050MAB	LPC-M4D1LCLC0050
OS2, LC-LC Low Loss Patch Cord, 1 m	PCF-S2PR2VV-0010MAB	LPC-S2D1LCLC0010
OS2, LC-LC Low Loss Patch Cord, 3 m	PCF-S2PR2VV-0030MAB	LPC-S2D1LCLC0030
OS2, LC-LC Low Loss Patch Cord, 5 m	PCF-S2PR2VV-0050MAB	LPC-S2D1LCLC0050
LC-LC Low Loss Patch Cord	PCF-**PR2VV-xxxxMAB	LPC-**D1LCLCxxxx

** Fiber Type: M4 (OM4), S2 (OS2)

xxxx Length: (e.g. 10.2 m = 0102, 3.5 m = 0035)

Base8 Cassettes - Popular Configurations	Part No.
OM4, 8-fiber MTP (male) to LC Shuttered (aqua), 4:1 Breakout Cassette, Universal Polarity	ULE2XHD-F008CSKQDJ
OM4, 8-fiber MTP (male) to LC Shuttered (heather violet), 4:1 Breakout Cassette, Universal Polarity	ULE2XHD-F008CSKVDJ
OS2, 8-fiber MTP (male) to LC Shuttered (blue), 4:1 Breakout Cassette, Universal Polarity	ULE2XHD-A008CSKLDJ

Note: density will be reduced by 33.3% when using Base8 Cassettes

Base12 Cassettes - Popular Configurations	Part No.
OM4, 12-fiber MTP (male) to LC shuttered (aqua), Universal Polarity	ULE2XHD-F012CSKODU
OM4, 12-fiber MTP (male) to LC shuttered (heather violet), Universal Polarity	ULE2XHD-F012CSKVDU
OS2, 12-fiber MTP (male) to LC shuttered (blue), Universal Polarity	ULE2XHD-A012CSKLDU

Base24 Cassettes - Popular Configurations	Part No.
OM4, 1x24-fiber MTP (male) to LC shuttered (aqua), 12:1 Breakout Cassette, Universal Polarity	ULE2XHD-F024CSHQES4
OM4, 1x24-fiber MTP (male) to LC shuttered (heather violet), 12:1 Breakout Cassette, Universal Polarity	ULE2XHD-F024CSHVES4
OS2, 1x24-fiber MTP (male) to LC shuttered (blue), 12:1 Breakout Cassette, Universal Polarity	ULE2XHD-A024CSHLES4

PARALLEL OPTICS CHANNELS



Array Patch Cords

OPT-X Unity Fiber Array Patch Cords

OPT-X Unity MTP® Array Cords are designed to cross connect from structured cabling directly into active equipment with an MPO/MTP transceiver interface. They are also used as direct interconnect cables for point-to-point connections. MTP connectors offer ultra-low-loss performance to support maximum distance and multiple connection points while staying within IEEE low-loss limits.

- Ultra-low-loss MTP connectors in 8, 12, and 24 fibers for maximum network design flexibility
- Array patch cords offer migration path to 40, 100, 200, and 400 Gb/s



Adapter Plates

e2XHD Fiber Adapter Plates

QUICKPORT™ Pass-Through Adapter Plates quickly snap-in and pull out of the e2XHD high-density panels, making installation easier to connect to pre-terminated trunks.

- Compatible with flat and angled e2XHD panels
- Easy one-hand installation and removal
- Visible sequential numbering to identify ports (for Tx and Rx)

MTP-to-MTP Array Patch Cords, Method B	Plenum Part No.	CPR-Rated Part No. (B2ca)
8-Fiber, OS2, unpinned, 3 m	ULUP8MM-B003M	ULUP8CMM-B0030-S
12-Fiber, OS2, unpinned, 3 m	ULUP2LL-B003M	ULUP2CLL-B0030-S
24-Fiber, OS2, unpinned, 3 m	ULUP4JJ-B003M	ULUP4CJJ-B0030-S
8-Fiber, OS2, pinned, 3 m	ULUP8NN-B003M	ULUP8CNN-B0030-S
12-Fiber, OS2, pinned, 3 m	ULUP2KK-B003M	ULUP2CKK-B0030-S
24-Fiber, OS2, pinned, 3 m	ULUP4HH-B003M	ULUP4CHH-B0030-S
8-Fiber, OM4, unpinned, 3 m	UL548MM-B003M	UL548CMM-B0030-S
12-Fiber, OM4, unpinned, 3 m	UL542LL-B003M	UL542CLL-B0030-S
24-Fiber, OM4, unpinned, 3 m	UL544JJ-B003M	UL544CJJ-B0030-S
8-Fiber, OM4, pinned, 3 m	UL548NN-B003M	UL548CNN-B0030-S
12-Fiber, OM4, pinned, 3 m	UL542KK-B003M	UL542CKK-B0030-S
24-Fiber, OM4, pinned, 3 m	UL544HH-B003M	UL544CHH-B0030-S
8-Fiber, unpinned	UL**8MM-BxxxM	UL**8CMM-Byyy-S
12-Fiber, unpinned	UL**2LL-BxxxM	UL**2CLL-Byyy-S
24-Fiber, unpinned	UL**4JJ-BxxxM	UL**4CJJ-Byyy-S
8-Fiber, pinned	UL**8NN-BxxxM	UL**8CNN-Byyy-S
12-Fiber, pinned	UL**2KK-BxxxM	UL**2CKK-Byyy-S
24-Fiber, pinned	UL**4HH-BxxxM	UL**4CHH-Byyy-S

** Fiber Type: 5L (OM3), 54 (OM4), UP (OS2)

xxx Length: (e.g. 10 m = 010, 3 m = 003)

yyy Length: (e.g. 10.2 m = 0102, 3.5 m = 0035)

Fiber Adapter Plates	Part No.
4 Simplex MTP Adapters (black), keyed up to keyed up	E2XHD-4MB*
4 Simplex MTP Adapters (black), keyed up to keyed down	E2XHD-4MP
Blank	e2XHD-BLK

* Not designed for use with single-mode applications

DUPLEX OR PARALLEL OPTICS CHANNELS



Panels	Part No.	Typical Region
e2XHD Universal Flat Panel, 1RU	E2X1F-S48	United States, Canada, LATAM, APAC
e2XHD Universal Angled Panel, 1RU	E2X1A-S48	
e2XHD Universal Flat Panel, 1RU	E2X1F-E48	Europe, Middle East
e2XHD Universal Angled Panel, 1RU	E2X1A-E48	

Panels

Flat and Angled Panels

- Accept Leviton e2XHD cassettes, passthrough adapter plates and blanks
- e2XHD panels accommodate up to 96 LC fibers for 48 ports in 1RU
- Panels allow a mix-and-match of shielded, UTP, and fiber e2XHD cassettes
- Alignment tabs ensure upright insertion of cassettes
- To remove cassettes from the panel, simply pull out the handle using the release latch
- Rear Cable Manager for angled panels (E2XHD-CMB) and flat panels (E2X1F-CMB) supports copper or fiber cables, and snaps directly to panel without tools
- Optional cassette blank and angled panel cover reduces debris and improves airflow
- 1RU flat and angled panels allow open access to patch cords and trunks; no moving parts
- Angled panel eliminates the need for horizontal patch cord cable managers

Trunks

OPT-X Unity SJX Ultra-Low-Loss Fiber Trunks

Factory-terminated and tested MTP® trunk cable assemblies feature ultra-low-loss connectors to support maximum distance and multiple connection points while staying within IEEE low-loss limits.

- Terminations available in 24-, 12-, and 8-fiber configurations
- Migration solution to 40, 100, 200, and 400 Gb/s networks
- Up to 70% faster install than field-terminated trunks
- 100% factory tested, with test results included in packaging
- See [leviton.com/mto](#) to configure for your application
- Available in plenum and riser/LSZH CPR cable ratings



Unpinned MTP-to-MTP, Method B Trunks	Base12		Base24	
	Plenum Part No.	CPR-Rated (B2ca) Part No.	Plenum Part No.	CPR-Rated (B2ca) Part No.
OM4	12-Fiber	FTU-FW2012LLxxxF36C36CN-NNBS	FTU-FZ0212Lyyy09B09BN-NNBS	—
	24-Fiber	FTU-FW2024LLxxxF36B36BN-NNBS	FTU-FZ024Lyyy09B09BN-NNBS	FTU-FZ024Jyyy09C09CN-NNBS
	48-Fiber	FTU-FW2048LLxxxF36B36BN-NNBS	FTU-FZ048Lyyy09B09BN-NNBS	FTU-FZ048Jyyy09C09CN-NNBS
	96-Fiber	FTU-FW2096LLxxxF36B36BN-NNBS	FTU-FZ096Lyyy09B09BN-NNBS	FTU-FZ096Jyyy09C09CN-NNBS
	144-Fiber	FTU-FW2144LLxxxF36B36BN-NNBS	FTU-FZ144Lyyy09B09BN-NNBS	FTU-FZ144Jyyy09C09CN-NNBS
OS2	12-Fiber	FT-AW2012LLxxxF36C36CN-NNBS	FTU-AZ012Lyyy09B09BN-NNBS	—
	24-Fiber	FT-AW2024LLxxxF36B36BN-NNBS	FTU-AZ024Lyyy09B09BN-NNBS	FTU-AZ024Jyyy09C09CN-NNBS
	48-Fiber	FT-AW2048LLxxxF36B36BN-NNBS	FTU-AZ048Lyyy09B09BN-NNBS	FTU-AZ048Jyyy09C09CN-NNBS
	96-Fiber	FT-AW2096LLxxxF36B36BN-NNBS	FTU-AZ096Lyyy09B09BN-NNBS	FTU-AZ096Jyyy09C09CN-NNBS
	144-Fiber	FT-AW2144LLxxxF36B36BN-NNBS	FTU-AZ144Lyyy09B09BN-NNBS	FTU-AZ144Jyyy09C09CN-NNBS

xxx Length: (e.g. 10 ft = 010, 3 ft = 003)

yyy Length: (e.g. 10.2 m = 0102, 3.5 m = 0035)

MTP® is a registered trademark of US Conec, Ltd.

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