LEVITON ®
Network Solutions

E2X
Engage

OPT-X™ Fiber Optic System

Leviton's e2XHD high-density patching platform works with pre-terminated copper and fiber cable to support a wide variety of network needs and deployment locations. The Engage enhanced performance level offers optical reach beyond industry standards for high speed connections (e.g. 400 Gb/s). OPT-X fiber optic systems are global solutions available everywhere.

RECOMMENDED FOR:

Cloud and Enterprise Data Centers

Edge Data Centers

Mission Critical Networks

Pre-Terminated 10G-400G Networks

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. 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.
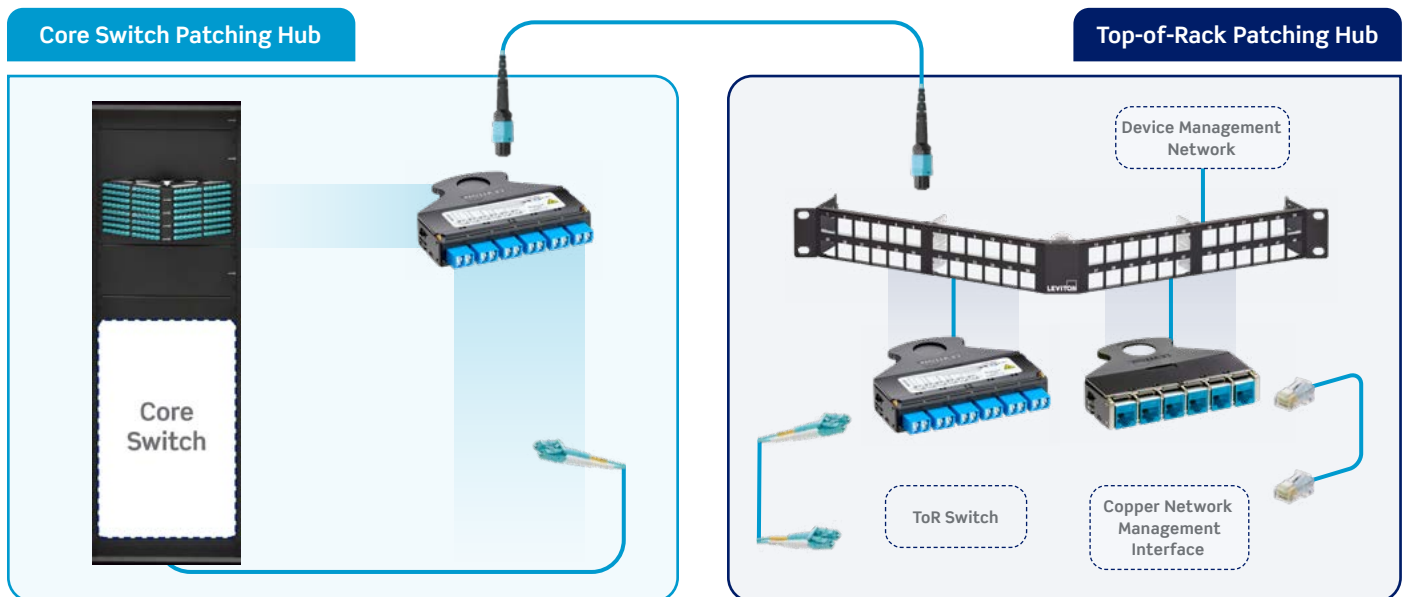
OPT-X Engage pre-terminated trunks, array patch cords, and cassettes offer low-loss connectivity and high performing solutions beyond industry standards. Performance assurance and extended distance calculations are available through extensive testing and analysis with the Leviton Optical Link Verification Tool.

Use Cases

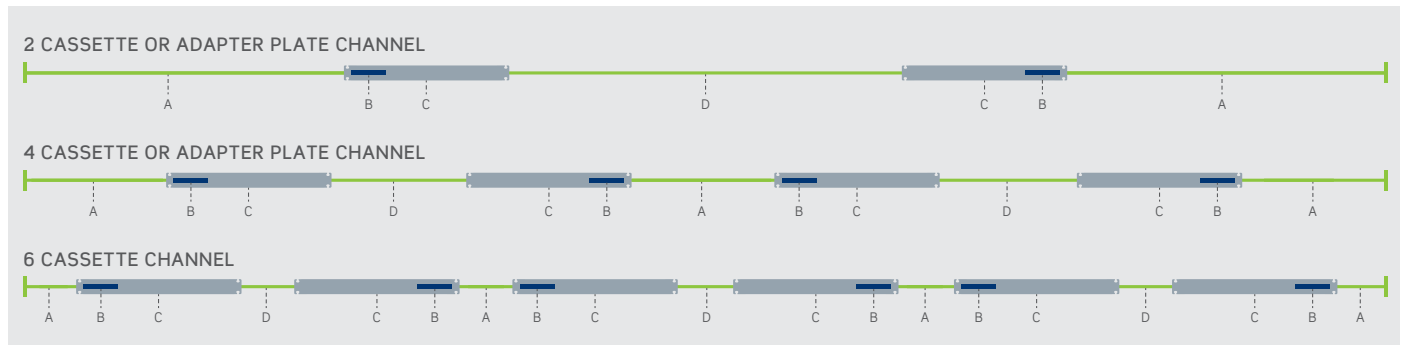| High Performing Optical Channels	Cost-Effective Solution for Typical Networks	High-Density Open Patching	Multimedia Connections
Enhanced, low-loss optical performance extends channels beyond industry standard specifications.	Offers the best value for the most common network architectures with 2 to 6 connection points in the channel.	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.	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

Core Switch Patching Hub

Top-of-Rack Patching Hub

Core Switch

Device Management Network

ToR Switch

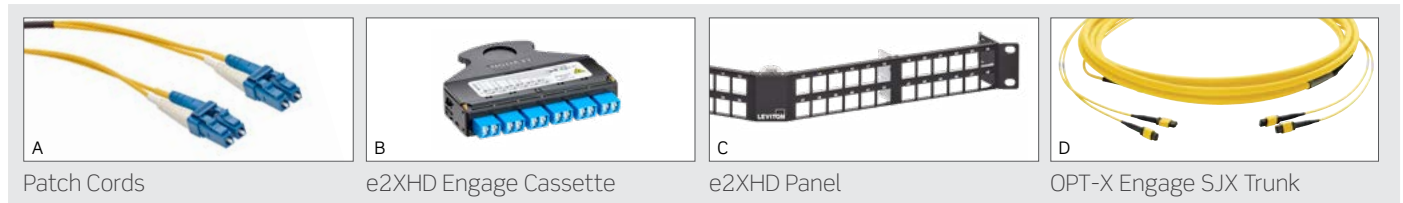Copper Network Management Interface

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Total Channel Performance

For many organizations, the need to maximize existing cabling infrastructure can lead to performance over distances that exceed industry standards, signals mating 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 Engage systems offer enhanced reach beyond industry standards while offering high-density fiber connections. When used as a system, Leviton's design tools can verify the expected performance of those end-to-end channels.
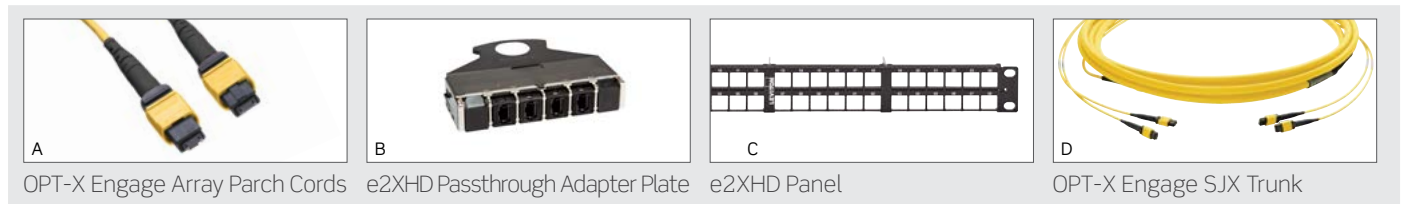
Channel Reach Performance Examples

2 CASSETTE OR ADAPTER PLATE CHANNEL

4 CASSETTE OR ADAPTER PLATE CHANNEL

6 CASSETTE CHANNEL

Duplex Transceivers and Base12 MTP-LC Cassettes

A — Patch Cords

B — e2XHD Engage Cassette

C — e2XHD Panel

D — OPT-X Engage SJX Trunk

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

Parallel Transceivers and MTP Adapter Plates

A — OPT-X Engage Array Parch Cords

B — e2XHD Passthrough Adapter Plate

C — e2XHD Panel

D — OPT-X Engage SJX Trunk

	OM4 — 40G SR4		OM4 — 100G SR4		OS2 — 100G PSM4	
# of Connection Points	2	4	2	4	2	4
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.

- 100% tested for insertion loss and single-mode for return loss
- Cable jacket and boots color-coded for easy ID of fiber

Fiber Patch Cords	Plenum Part No.	LSZH Part No.
OM4, LC Duplex Patch Cord, 1 m	PCF-M4PD1RR-0010MAB	VPC-M4D1LCLC0010
OM4, LC Duplex Patch Cord, 3 m	PCF-M4PD1RR-0030MAB	VPC-M4D1LCLC0030
OM4, LC Duplex Patch Cord, 5 m	PCF-M4PD1RR-0050MAB	VPC-M4D1LCLC0050
OS2, LC Duplex Patch Cord, 1 m	PCF-S2PD1RR-0010MAB	VPC-S2D1LCLC0010
OS2, LC Duplex Patch Cord, 3 m	PCF-S2PD1RR-0030MAB	VPC-S2D1LCLC0030
OS2, LC Duplex Patch Cord, 5 m	PCF-S2PD1RR-0050MAB	VPC-S2D1LCLC0050
LC Duplex Patch Cord	PCF-**PD1RR-xxxxMAB	VPC-**D1LCLCxxxx

** Fiber Type: M4 (OM4), S2 (OS2)
xxxx Length: (e.g. 10.2 m = 0102, 3.5 m = 0035)

Cassettes

e2XHD Fiber Cassettes

e2XHD Engage MTP® cassettes are engineered for the most demanding data center networks, where longer distances are required. They are pre-terminated, pre-tested, and come with 12-fiber MTP connectors.

- Low-loss Base12 MTP connectors
- Leviton-patented IP5x-rated internal shutters on LC adapters eliminate need for dust plugs to reduce waste, accelerate deployments, and ensure safer installation
- Universal Polarity Base12
- 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

Base12 Cassettes – Popular Configurations	Part No.
OM4, 12-fiber MTP (male) to LC shuttered (aqua), Universal Polarity	FME2XHD-F012CSKQDU
OM4, 12-fiber MTP (male) to LC shuttered (heather violet), Universal Polarity	FME2XHD-F012CSKVDU
OS2, 12-fiber MTP (male) to LC shuttered (blue), Universal Polarity	FME2XHD-A012CSKLDU
OM4, 2x12F MTP (male) to LC shuttered (aqua), Universal Polarity	FME2XHD-F024CSKQEU
OM4, 2x12F MTP (male) to LC shuttered (heather violet), Universal Polarity	FME2XHD-F024CSKVEU
OS2, 2x12F MTP (male) to LC shuttered (blue), Universal Polarity	FME2XHD-A024CSKLEU

PARALLEL OPTICS CHANNELS

Array Patch Cords

OPT-X Engage Fiber Array Patch Cords

OPT-X Engage low-loss 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 low-loss performance to support longer distances while staying within IEEE low-loss limits.

- Low-loss MTP connectors in 8 or 12 fibers for maximum network design flexibility

MTP-to-MTP Array Patch Cords, Method B	Plenum Part No.	CPR-Rated Part No. (B2ca s1a,d0,a1)
8-Fiber, OS2, unpinned, 3 m	UP8MM-B003M	UP8CMM-B0030-S
12-Fiber, OS2, unpinned, 3 m	UP2LL-B003M	UP2CLL-B0030-S
8-Fiber, OS2, pinned, 3 m	UP8NN-B003M	UP8CNN-B0030-S
12-Fiber, OS2, pinned, 3 m	UP2KK-B003M	UP2CKK-B0030-S
8-Fiber, OM4, unpinned, 3 m	548MM-B003M	548CMM-B0030-S
12-Fiber, OM4, unpinned, 3 m	542LL-B003M	542CLL-B0030-S
8-Fiber, OM4, pinned, 3 m	548NN-B003M	548CNN-B0030-S
12-Fiber, OM4, pinned, 3 m	542KK-B003M	542CKK-B0030-S
8-Fiber, unpinned	**8MM-BxxxM	**8CMM-Byyyy-S
12-Fiber, unpinned	**2LL-BxxxM	**2CLL-Byyyy-S
8-Fiber, pinned	**8NN-BxxxM	**8CNN-Byyyy-S
12-Fiber, pinned	**2KK-BxxxM	**2CKK-Byyyy-S

** Fiber Type: 54 (OM4), UP (OS2)
xxx Length: : (e.g. 10 m = 010, 3 m = 003)
yyyy Length: : (e.g. 10.2 m = 0102, 3.5 m = 0035)

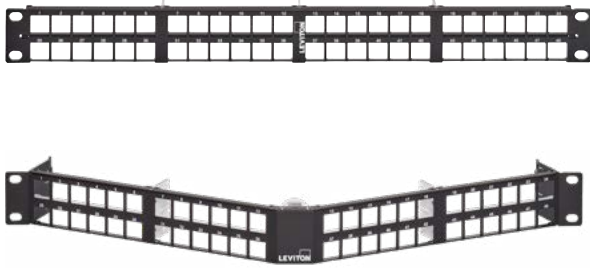## Adapter Plates

e2XHD Passthrough Adapter Plates

QUICKPORT™ Pass-Through 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)

OPT-X E2XHD 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

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DUPLEX OR PARALLEL OPTICS CHANNELS

Enclosures and 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 Engage SJX Low-Loss Fiber Trunks

Factory-terminated and tested MTP® trunk cable assemblies feature low-loss connectors to support longer distances while staying within IEEE low-loss limits.

- Terminations available in Base8 and Base12 configurations
- Up to 70% faster install than field-terminated trunks
- 100% factory tested, with test results included in packaging
- See leviton.com/mto to configure your application
- Available in Plenum and riser/LSZH CPR cable ratings

Unpinned MTP-to-MTP, Method B Trunks		Plenum Part No.	CPR-Rated (B2ca) Part No.
OM4	12-Fiber	FT-FW2012LLxxxF36C36CN-NNBS	FT-FZ012LLyyyy09B09BN-NNBS
	24-Fiber	FT-FW2024LLxxxF36B36BN-NNBS	FT-FZ024LLyyyy09B09BN-NNBS
	48-Fiber	FT-FW2048LLxxxF36B36BN-NNBS	FT-FZ048LLyyyy09B09BN-NNBS
	96-Fiber	FT-FW2096LLxxxF36B36BN-NNBS	FT-FZ096LLyyyy09B09BN-NNBS
	144-Fiber	FT-FW2144LLxxxF36B36BN-NNBS	FT-FZ144LLyyyy09B09BN-NNBS
OS2	12-Fiber	FT-AW2012LLxxxF36C36CN-NNBS	FT-AZ012LLyyyy09B09BN-NNBS
	24-Fiber	FT-AW2024LLxxxF36B36BN-NNBS	FT-AZ024LLyyyy09B09BN-NNBS
	48-Fiber	FT-AW2048LLxxxF36B36BN-NNBS	FT-AZ048LLyyyy09B09BN-NNBS
	96-Fiber	FT-AW2096LLxxxF36B36BN-NNBS	FT-AZ096LLyyyy09B09BN-NNBS
	144-Fiber	FT-AW2144LLxxxF36B36BN-NNBS	FT-AZ144LLyyyy09B09BN-NNBS

xxx Length: : (e.g. 10 ft = 010, 3 ft = 003)   yyyy Length: : (e.g. 10.2 m = 0102, 3.5 m = 0035)

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