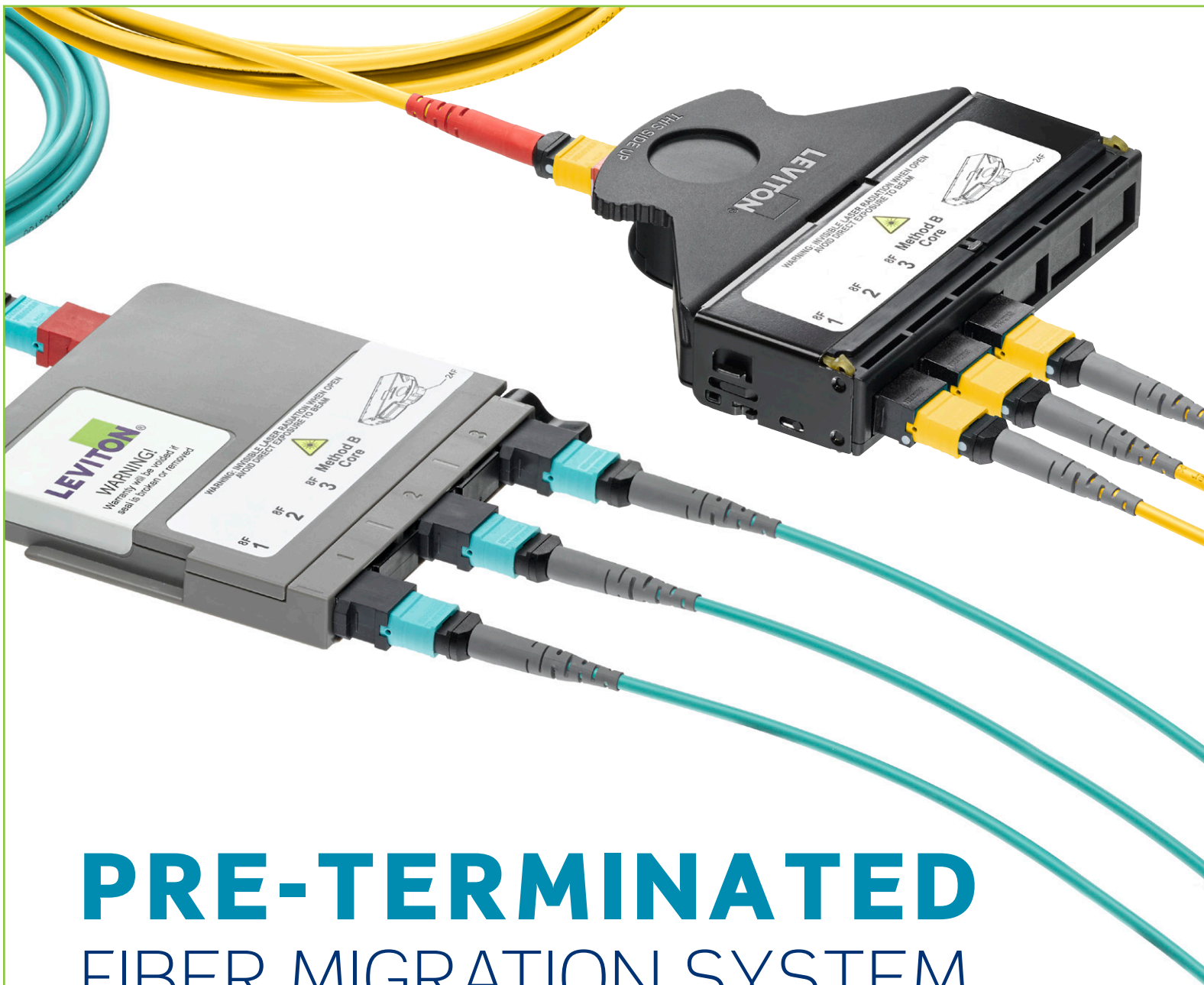# Opt-X™ Unity

Fiber Optic Migration System

PRE-TERMINATED
FIBER MIGRATION SYSTEM

The Opt-X™ Unity Ultra Low Loss System offers an ideal migration path to 40, 100, 200, and 400 Gb/s and beyond. The system features pre-terminated trunks, harnesses, array cords, and MTP® cassettes to help you future-proof your networks.

- Industry-leading 24-fiber MTP system
- Trunks, harnesses, cassettes, and array cords use MTP multi-fiber connectors with best-in-class Ultra Low Loss optical performance
- Cassettes available in two Leviton platforms: e2XHD and HDX
- Available in laser optimized multimode and single-mode (OM3/OM4/OS2)
- Third-party verification of 40/100G channel performance
- Meets IEEE and MSA standards

Contact the Data Center Design Team for assistance:
(800) 824 3005 or **dcteam@leviton.com**

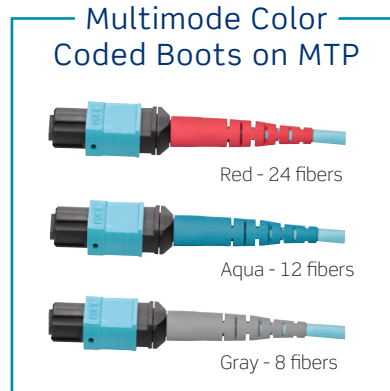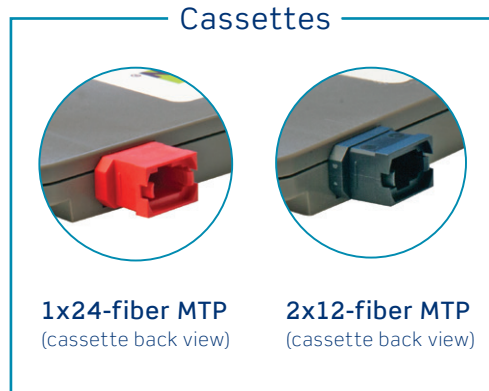CISCO Partner
Solution Partner

INTERTEK ETL LISTED US

MTP® is a registered trademark of US Conec Ltd.
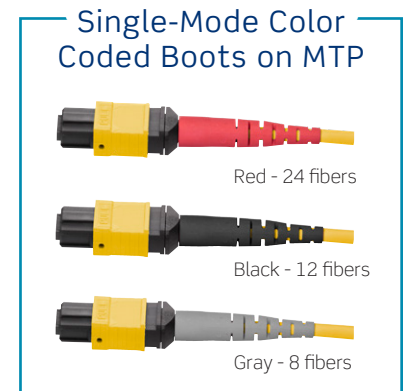
Opt-X™ Unity 40/100/200/400G Solutions

- 24-fiber MTP® trunks
- 24-fiber MTP harnesses
- 24-fiber MTP array patch cords
- 24-fiber MTP cassettes

Opt-X Unity Solutions for Migrating from Existing 10G Networks

- 8- and 12-fiber MTP trunks
- 8- and 12-fiber MTP harnesses
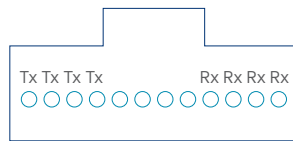- 8- and 12-fiber array patch cords
- 8- and 12-fiber MTP cassette

Cassettes

1x24-fiber MTP
(cassette back view)

2x12-fiber MTP
(cassette back view)

Multimode Color Coded Boots on MTP

Red - 24 fibers

Aqua - 12 fibers

Gray - 8 fibers

In Europe, 12-fiber OM3 boot = Aqua, 12-fiber OM4 boot = Heather Violet

Single-Mode Color Coded Boots on MTP

Red - 24 fibers

Black - 12 fibers

Gray - 8 fibers

In Europe, 12-fiber OS2 boot = Yellow

MTP Lane Assignments for 40, 100, 200, 400 Gb/s

Tx Tx Tx Tx   Rx Rx Rx Rx

QSFP 40GBASE-SR4
QSFP28 100GBASE-SR4
100G-PSM4
200G-SR4
400G-DR4
400G-SR4.2

Tx Tx Tx Tx   Rx Rx Rx Rx
Tx Tx Tx Tx   Rx Rx Rx Rx
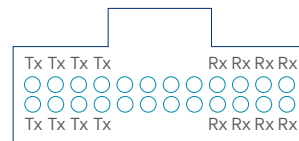
2x100G-PSM4
2x100G-SR4

Opt-X Unity Ultra Low Loss (ULL) Performance

CONNECTOR MATED PAIRS	MULTIMODE		SINGLE-MODE
	8- & 12-FIBER ULL	24-FIBER MAX IL	8-, 12- & 24-FIBER MAX IL
MTP	0.20 dB	0.35 dB	0.35 dB

Commercially Available 40/100G Transceivers

TRANSCEIVER	FORM FACTOR	FIBER TYPE	# OF FIBERS	CONNECTOR
40G-SR4	QSFP+	OM3/OM4	8	MPO12
40G-BIDI	QSFP+	OM3/OM4	2	LC
40G-PLRL4	QSFP+	OS2	8	MPO12
40G-LR4	QSFP+	OS2	2	LC
100G-SR10	CFP/CFP2/CPAK	OM3/OM4	20	MPO24
100G-SR4	QSFP28	OM3/OM4	8	MPO12
100G-CWDM4	QSFP28	OS2	2	LC
100G-LR4	CFP2/CPAK/QSFP28	OS2	2	LC
10x10-LR	CPAK	OS2	20	MPO24
100G-PSM4	QSFP28	OS2	8	MPO12
100G-BIDI	QSFP28	OM3/OM4	2	LC
2x100G-SR4	QSFP-DD	OM3/OM4	16	MPO24
2x100G-PSM4	QSFP-DD	OS2	16	MPO24
400G-FR4	QSFF-DD/OSFP	OS2	2	LC
400G-DR4	QSFF-DD/OSFP	OS2	8	LC
400G-SR4.2	QSFP-DD	OM3/OM4	8	MPO12

Common commercially available transceivers as of 1/1/2021. This list is subject to change. Please check with Application Engineering for the latest list.

10, 40, 100 Gb/s Channel Configuration
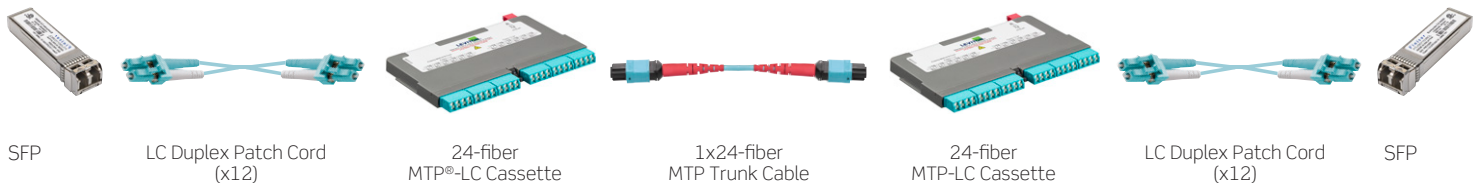
SFP

LC Duplex Patch Cord
(x12)

24-fiber
MTP®-LC Cassette

1x24-fiber
MTP Trunk Cable

24-fiber
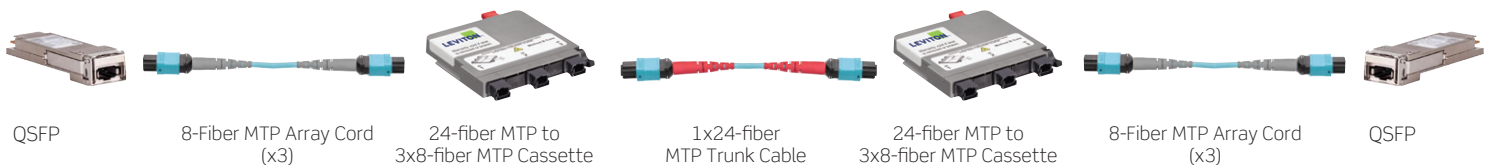MTP-LC Cassette

LC Duplex Patch Cord
(x12)

SFP

- 24-fiber MTP backbone
- Provides Duplex (2-fiber) connections at equipment
- Universal polarity cassettes allow for the same interchangeable cassette on both ends of a Method B trunk in a fiber channel

Will support the following optics:

✓ Juniper 40G-LX4

✓ Arista 40G Universal

✓ Cisco 40G-BIDI and 40/100G-SRBD

✓ 40G-SWDM4

40, 100, 400 Gb/s Channel Configuration

QSFP

8-Fiber MTP Array Cord
(x3)

24-fiber MTP to
3x8-fiber MTP Cassette

1x24-fiber
MTP Trunk Cable

24-fiber MTP to
3x8-fiber MTP Cassette
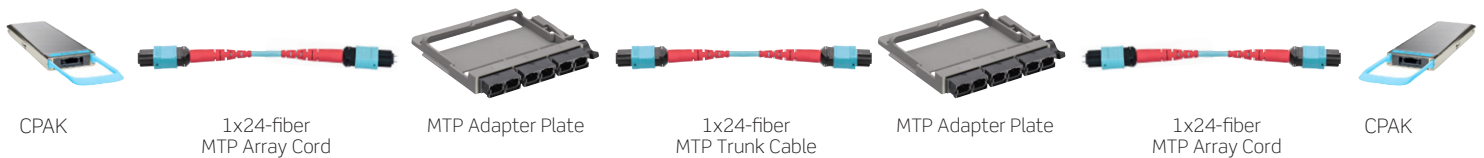
8-Fiber MTP Array Cord
(x3)

QSFP

- Same 24-fiber MTP Backbone stays in place
- Swap out MTP-LC cassettes for MTP-MTP conversion cassettes
- Provides Parallel (8-fiber) connections at equipment
- Universal polarity cassettes allow for the same interchangeable cassette on both ends of a Method B trunk in a fiber channel

Will support the following optics:

✓ 40G-SR4, C/X/ESR4

✓ 100G-SR4, XSR4

100G Channel Configuration

CPAK

1x24-fiber
MTP Array Cord

MTP Adapter Plate

1x24-fiber
MTP Trunk Cable

MTP Adapter Plate

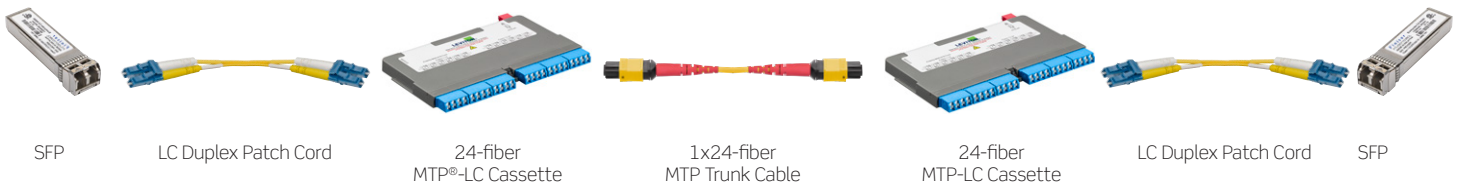1x24-fiber
MTP Array Cord

CPAK

- Same 24-fiber MTP Backbone stays in place
- Swap out MTP-LC/MTP-MTP cassettes with MTP pass-thru cassettes
- Provides Parallel (20- and 24-fiber) connections at equipment

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

Will support the following optics:

✓ 100G-SR10, SR10 MXP, XSR10

2-Fiber Channels: 10, 40, 100, 200, 400 Gb/s

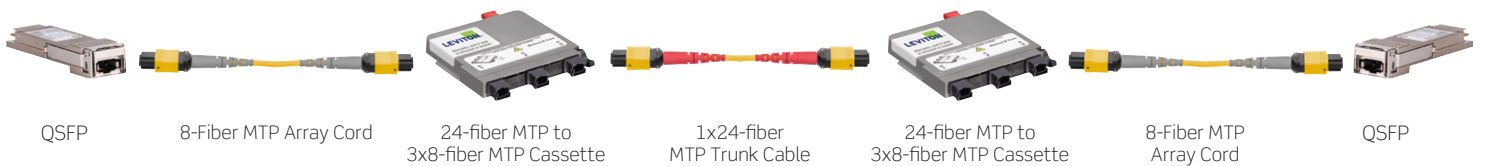| SFP | LC Duplex Patch Cord | 24-fiber MTP®-LC Cassette | 1x24-fiber MTP Trunk Cable | 24-fiber MTP-LC Cassette | LC Duplex Patch Cord | SFP |

- 24-fiber MTP backbone
- Provides Duplex (2-fiber) connections at equipment
- Universal polarity cassettes allow for the same interchangeable cassette on both ends of a Method B trunk in a fiber channel

Will support the following optics:
- ✓ 40G-LR4, LRL4/IR4
- ✓ 100G-LRL4, CWDM4, LR4, DR
- ✓ 200G-FR4, FR8
- ✓ 400G-FR8

8-Fiber Channels: 40, 100, 200, 400 Gb/s

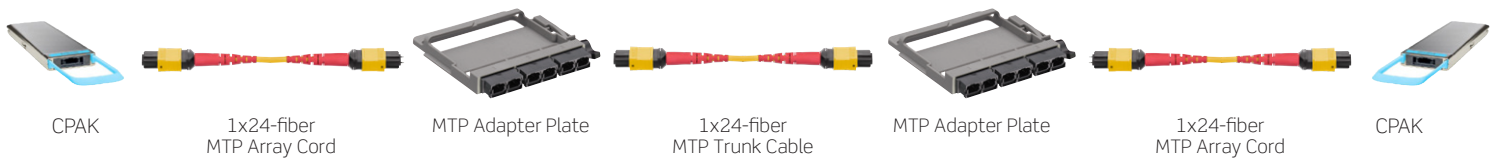| QSFP | 8-Fiber MTP Array Cord | 24-fiber MTP to 3x8-fiber MTP Cassette | 1x24-fiber MTP Trunk Cable | 24-fiber MTP to 3x8-fiber MTP Cassette | 8-Fiber MTP Array Cord | QSFP |

- Same 24-fiber MTP Backbone stays in place
- Swap out MTP-LC cassettes for MTP-MTP conversion cassettes
- Provides Parallel (8-fiber) connections at equipment
- Universal polarity cassettes allow for the same interchangeable cassette on both ends of a Method B trunk in a fiber channel

Will support the following optics:
- ✓ 4x10G-IR, LR, PLR4
- ✓ 40G-PLRL4
- ✓ 100G-PSM4,
- ✓ 200G-DR4, SR4
- ✓ 400G-DR4

20-Fiber Channel: 100G

| CPAK | 1x24-fiber MTP Array Cord | MTP Adapter Plate | 1x24-fiber MTP Trunk Cable | MTP Adapter Plate | 1x24-fiber MTP Array Cord | CPAK |

- Same 24-fiber MTP Backbone stays in place
- Swap out MTP-LC/MTP-MTP cassettes with MTP pass-thru cassettes
- Provides Parallel (20-fiber) connections at equipment

Will support the following optics:
- ✓ 10x10-LR
- ✓ 2x100-SR4
- ✓ 2x100-PSM4

Opt-X™ Unity System Components

Pre-Terminated MTP® Trunk Cables

- Up to 70% faster installation than field-terminated trunks
- MTP polarity options are TIA methods A, B, or C (Method B is standard)
- 100% factory tested, with test results included for each assembly
- All assemblies labeled with serial number and length for traceability and easy re-order
- 12- to 144-fiber count trunks available in OM3, OM4, and OS2
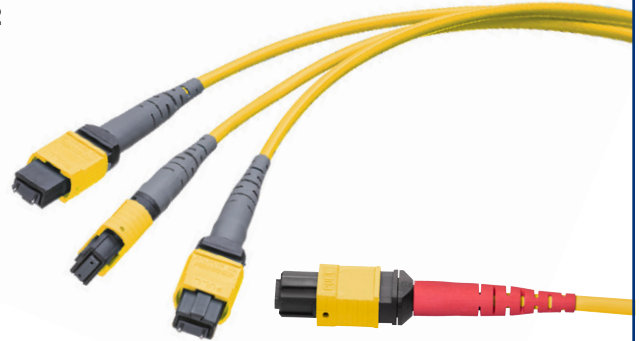
Pre-Terminated MTP-MTP Array Harnesses

- For use in attaching directly to 40/100G transceivers
- MTP polarity options are TIA method A, B, or C (Method B Standard)
- 100% factory tested, with test results included for each assembly
- All assemblies labeled with serial number and length for traceability and easy re-order
- Available in OM3, OM4, and OS2

MTP-LC Array Harnesses

- QSFP to SFP+ transceiver interface
- Creates 10G duplex channels using a 40G parallel array transceiver
- Breakout lengths and staggering available
- Available in OM3, OM4, and OS2
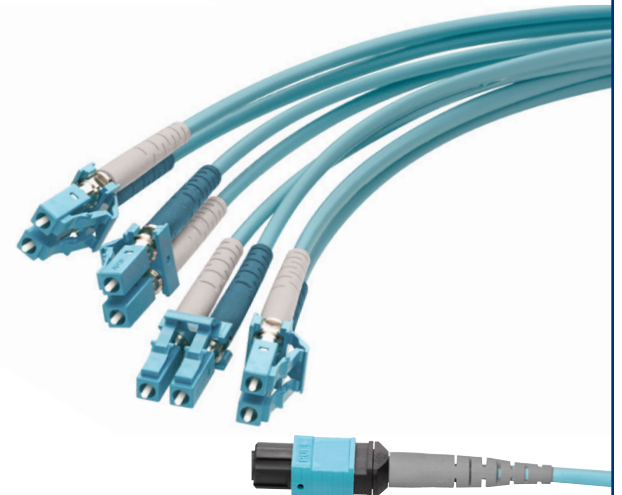
MTP Array Cords

- 8-, 12-, and 24-fiber MTP array cords offer migration path from 10G to 40/100/200/400G
- For use in attaching directly to transceivers
- Available in OM3, OM4, and OS2

MTP Cassettes and Adapter Plates

- Available in e2XHD and HDX style footprints
- Each cassette supports up to 48 fibers using MTP, or 24 fibers using LC
- MTP-MTP cassettes are used with MTP array cords
- Cassettes with Universal polarity designed for use with Method B trunks
- Available in OM3, OM4, and OS2

HDX System

Developed to maximize density in the given space, the Leviton HDX system can patch up to 144 LC fibers per RU in UHDX enclosures, panels, or 3,168 LC fibers on one data center tile with the HDX Distribution Frame. Ideal for service providers, central office facilities, large enterprise, and data centers, the HDX system reduces patching footprint, frees up space, and saves money.

UHDX 4RU Enclosure

12- or 24-fiber
MTP® Cabling, Method B Polarity

UHDX 1RU Enclosure

MTP-LC Conversion Cassette

MTP-LC Conversion Cassette

e2XHD System

Designed to support fast deployment and simple maintenance, the Leviton e2XHD Fiber Patching System is an easy-to-connect, high-density solution for enterprise and data center applications. The system includes 1RU high-density panels, fiber snap-in MTP cassettes for simple migration to 40, 100, 200, and 400 Gb/s networks, and accessories for additional cable protection and management.

e2XHD 1RU Patch Panel

12- or 24-fiber
MTP Cabling, Method B Polarity

e2XHD 1RU Patch Panel

MTP-LC Conversion Cassette

MTP-LC Conversion Cassette