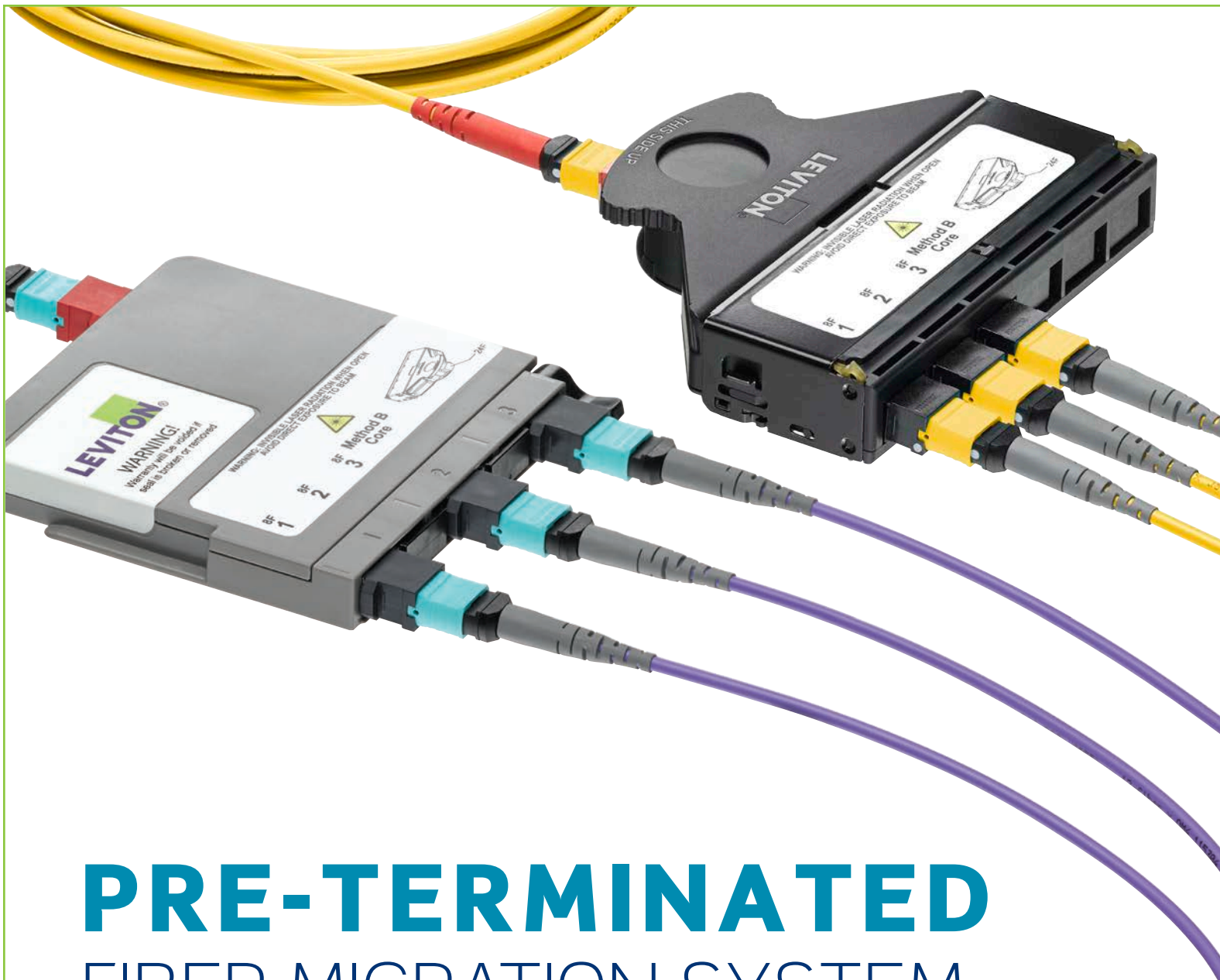


# Opt-X<sup>®</sup> Unity

Fiber Optic Migration System





# PRE-TERMINATED FIBER MIGRATION SYSTEM

The Opt-X® Unity 40, 100, 200, 400 Gb/s system offers an ideal migration path to speeds beyond 10 GbE, and meets IEEE and MSA standards. The system features pre-terminated trunks, harnesses, array cords, and MTP® cassettes to help you future-proof your networks.

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

Contact Data Center Design Team for assistance: **800.824.3005** or [dcteam@leviton.com](mailto:dcteam@leviton.com)



## Opt-X Unity 40/100G 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)

### Multi-Mode Color Coded Boots on MTP



Red - 24 Fiber



Aqua - 12 Fiber



Gray - 8 Fiber

### Singlemode Color Coded Boots on MTP



Red - 24 Fiber

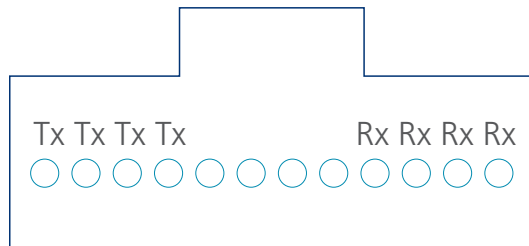


Black - 12 Fiber

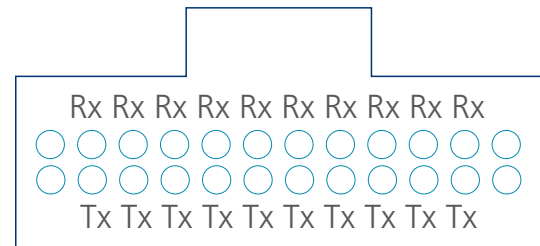


Gray - 8 Fiber

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



QSFP 40GBASE-SR4 / QSFP28 100GBASE-SR4,  
100G-PSM4, 8-fiber MTP



CPAK 100GBASE-SR10, 24-fiber MTP

## Commercially Available 40/100G Transceivers (as of Sept 2017)

TRANSCEIVER	FORM FACTOR	FIBER TYPE	# OF FIBERS	CONNECTOR
40G-SR4	QSFP+	OM3/OM4	8	8F MTP
40G-C/X/ESR4	QSFP+	OM3/OM4	8	8F MTP
40G-BIDI	QSFP+	OM3/OM4	2	LC
40G-LX4	QSFP+	OM3/OM4	2	LC
40G-UNIV	QSFP+	OM3/OM4, OS2	2	LC
40G-LR4 / LRL4 / IR4	QSFP+	OS2	2	LC
40G-SWDM4	QSFP+	OM3/OM4	2	LC
40G-PLRL4 / PLR4	QSFP+	OS2	8	8F MTP
4x10G-IR / LR	QSFP+	OS2	8	8F MTP
100G-SR10 / XSR10	CFP/CFP2/CPAK	OM3/OM4	20	24F MTP
100G-SR4 / XSR4	QSFP28	OM3/OM4	8	8F MTP
100G-CWDM4 / LRL4	QSFP28	OS2	2	LC
100G-LR4	CFP2/CPAK/QSFP28	OS2	2	LC
10x10-LR	CPAK	OS2	20	24F MTP
100G-PSM4	QSFP28	OS2	8	8F MTP
100G-SWDM4	QSFP28	OM3/OM4	2	LC
100G-SR-BD	QSFP28	OM3/OM4	2	LC

Above transceivers are commercially available as of September 2017. This list is subject to change.

### 10, 40, 100 Gb/s Channel Configuration



- 24-fiber MTP backbone
- Provides Duplex (2-fiber) connections at equipment

#### Will support the following optics:

- ✓ Juniper 40G-LX4
- ✓ Arista 40G Universal
- ✓ Cisco 40G-BIDI and 40/100G-SRBD
- ✓ 40G-SWDM4

### 40, 100 Gb/s Channel Configuration

#### Option A



- 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

#### Will support the following optics:

- ✓ 40G-SR4, C/X/ESR4
- ✓ 100G-SR4, XSR4

#### Option B



### 100G Channel Configuration



- 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:

- ✓ 100G-SR10, SR10 MXP, XSR10

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

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



- 24-fiber MTP backbone
- Provides Duplex (2-fiber) connections at equipment

## 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



- 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

## Will support the following optics:

- ✓ 4x10G-IR, LR, PLR4
- ✓ 40G-PLRL4
- ✓ 100G-PSM4,
- ✓ 200G-DR4, SR4
- ✓ 400G-DR4

## 20-Fiber Channel: 100G



- 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

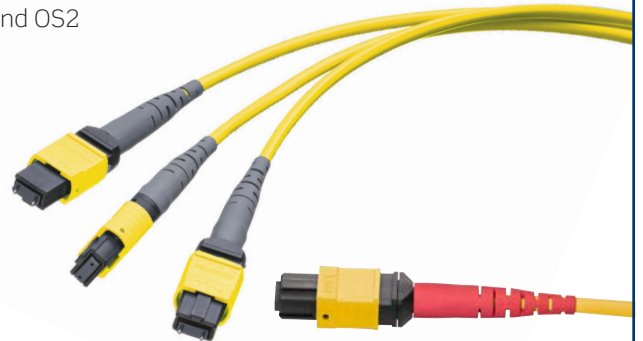


# Opt-X® Unity System Components



## 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 288-fiber count trunks available in OM3, OM4, OM4+, and OS2

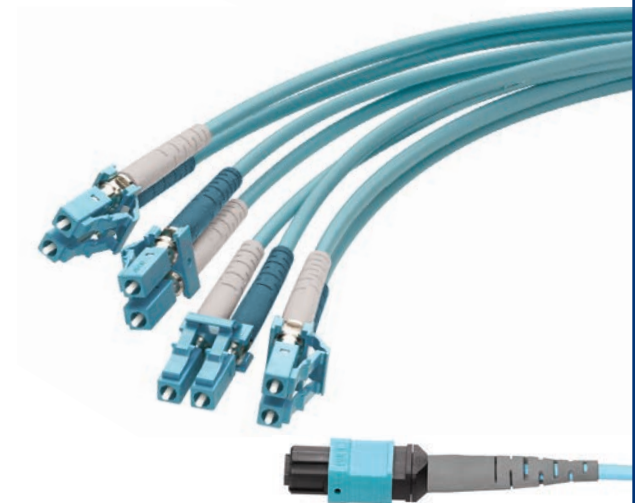


## Pre-Terminated MTP-MTP Array Harnesses

- 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, 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, OM4+, and OS2



## MTP Array Cords

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

## MTP® Cassettes and Adapter Plates

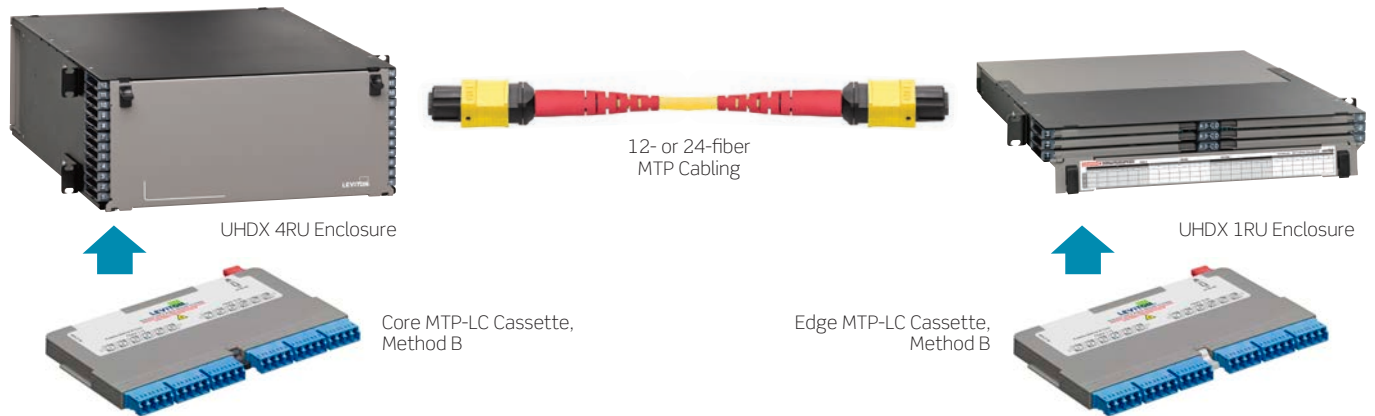
- Available in e2XHD and HDX style footprints
- Each cassette supports up to 48 fibers using MTP, or 24 fibers using LC
- MTP-MTP cassettes are used with MTP array cords
- Cassettes are color coded to identify core and edge placement
- Available in OM3, OM4, OM4+, and OS2



# Enclosure and Panel Options

## HDX System

Developed to maximize density in the given space, the Leviton HDX system can patch up to 144 fibers per RU in UHDx enclosures, or 3,168 fiber 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.

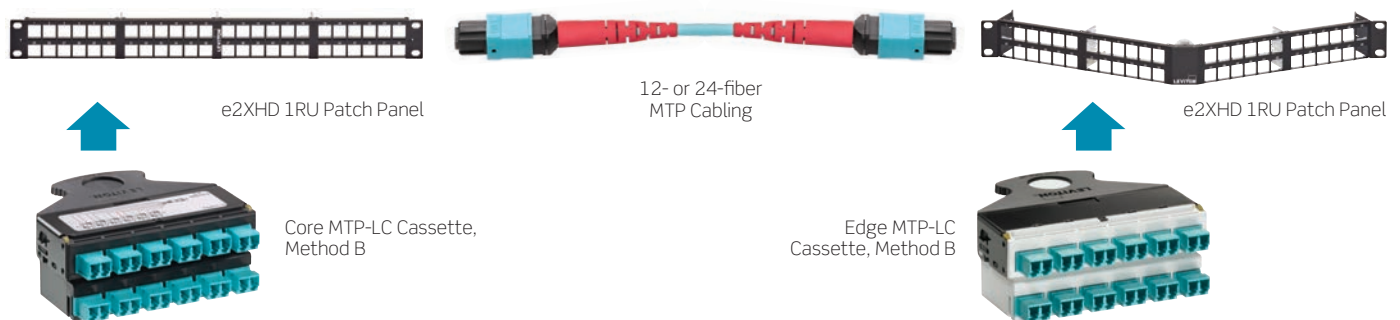


	RACK UNITS	MAX NUMBER OF HDX CASSETTES	MAX 10G/LC CHANNELS	MAX 40G/MTP CHANNELS	MAX 100G/MTP CHANNELS*
<b>UHDx ENCLOSURES CAPACITY</b>	1U	6	72	36	36
	2U	12	144	72	72
	4U	24	288	144	144

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

## 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.



	RACK UNITS	MAX NUMBER OF E2XHD CASSETTES	MAX 10G/LC CHANNELS	MAX 40G/MTP CHANNELS	MAX 100G/MTP CHANNELS*
<b>e2XHD PANEL CAPACITY</b>	1U	4	48	24	24

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

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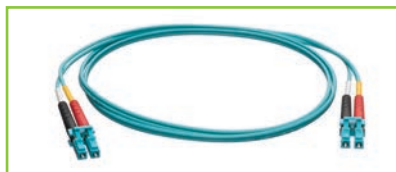


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