opticonx

Xtreme12 Solutions
base 12

FOR DATA CENTERS AND STORAGE AREA NETWORKS

Xtreme12™ is Opticonx's Base-12 cabling solution for easy migration of 10/25/40/50/100 and 400G parallel optics deployments in the data center. This end to end plug and play system of modules, trunks, patch panels, harnesses and patch cables provide complete utilization of fiber cabling infrastructure. Xtreme low loss components combine to provide high performance cabling links in data centers and storage area networks.

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Xtreme12™ 10G Cassette Modules

Cassette modules provide the interface between MTP® terminated trunk cables and 10GbE LC (SFP+), and/or 40GbE MTP (QSFP+) terminated patchcords and harnesses for connecting to switches and other active devices.

Low-loss connectors and adapters, bend insensitive fiber, and internally shuttered LC adapters, are standard in all Xtreme12™ 10G Cassette Modules and MTP Elite™ connections on both 10G and 40G modules.
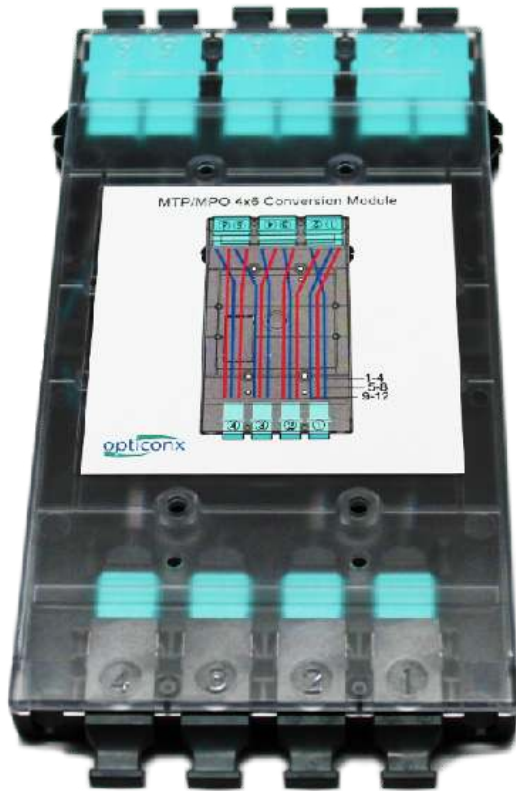
Ordering Information

DESCRIPTION	PART NUMBER
12F, **OM3** Bend Insensitive, Low Loss, **Aqua**	P3XCCB14LL*
12F, **OM3** Bend Insensitive, Low Loss, Aqua - 8 LC and Front MTP	P3XCCB14LLF-FA*
12F, **OM3** Bend Insensitive, Xtreme Low Loss, **Aqua**	P3XCCB14XL*
12F, **OM4** Bend Insensitive, Low Loss, **Aqua**	P3XCDB14LL*
12F, **OM4** Bend Insensitive, Xtreme Low Loss, **Aqua**	P3XCDB14XL*
12F, **OM4** Bend Insensitive, Low Loss, **Magenta**	P3XCFB14LL*
12F, **OM4** Bend Insensitive, Xtreme Low Loss, **Magenta**	P3XCFB14XL*
12F, **OM5** Bend Insensitive, Low Loss	P3XCHB14LL
12F, **OM5** Bend Insensitive, Xtreme Low Loss	P3XCHB15XL
12F, **OS2** Bend Insensitive, Low Loss, **Blue**	P3XCBA15LL*
12F, **OS2** Bend Insensitive, Xtreme Low Loss, **Blue**	P3XCBA15XL*
12F, **OS2** Bend Insensitive, Low Loss, **Green APC**	P3XCBA31LL*
12F, **OM4** Bend Insensitive, Xtreme Low Loss, **Green APC**	P3XCBA31XL*
* Use A for Method A Straight Through Polarity or U for Universal Polarity	

Specifications

GENERAL SPECIFICATIONS	
Fiber Count/Port Count	12/6 per cassette
Front Adapter Type	Shuttered LC or Shuttered LC (8) plus 1 MTP (P3XCCB14LLF-F*)
Front Adapter Color	Aqua (OM3,OM4), Magenta (OM4) Blue (OS2), Green (OS2 APC)
Rear Adapter Type	MTP (pinned)
Rear Adapter Color	Aqua (OM3, OM4), Green (OS2)
Polarity	Method A (Straight Through)
OPTICAL SPECIFICATIONS	
Loss Type	Maximum Module Insertion Loss
Low Loss (LL)	0.50dB (OM3/OM4/OM5), 1.00dB (OS2)
Xtreme Low Loss (XL)	0.35dB (OM3/OM4/OM5), 0.60dB (OS2)

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MTP Conversion Module

When used in parallel applications that utilize 8 fibers (4 TX and 4 RX lanes), conventional 12 fiber MTP/MPO cables waste 1/3rd of the fibers in the cable plant. To overcome this, Opticonx recommends the use of Xtreme12 Conversion Modules to eliminate wasted fibers.

40Gbs Ethernet (40GBASE-SR4) and 100Gbs Ethernet (100GBASE-SR4) use 8 fibers per channel.

The MTP interface uses the 1st four fibers to transmit and the last four fibers to receive. The middle four fibers are not utilized.

12-fiber MTP leaves 1/3 of the fibers dark. The Xtreme12 2x3 Conversion Module converts the signal from 3 4-channel transceivers to two 12-fiber trunks, achieving 100% utilization of a 12-fiber network.

A denser solution for 12-fiber networks is a 4x6 Conversion Module for converting the signal from 6 4-channel transceivers to 4 12-fiber trunks.

Conversion Modules for 24-fiber networks convert 1 24-fiber MTP to 3 8-fiber MTPs.

®MTP is a Registered Trademark of USCONEC.

Ordering Information

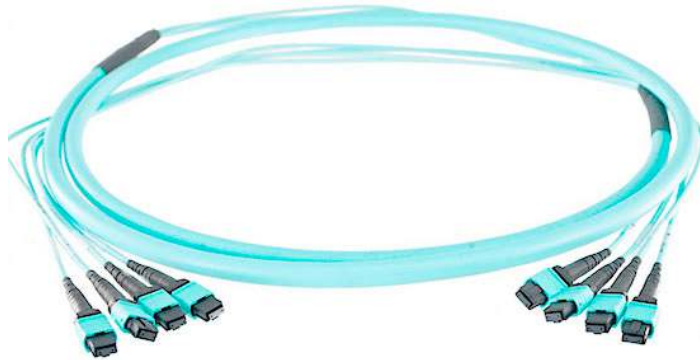| (2) 12 FIBER MTP TO (3) 8 FIBER MTP	PART NUMBER
Conversion Module, 2-12 fiber MTP(m) to 3-8 fiber MTP(m), OM3, Low Loss	X+CM23CB66LL
Conversion Module, 2-12 fiber MTP(m) to 3-8 fiber MTP(m), OM4, Xtreme Low Loss	X+CM23DB66XL
Conversion Module, 2-12 fiber MTP(m) to 3-8 fiber MTP(m), OM5, Xtreme Low Loss	X+CM23HB66XL
Conversion Module, 2-12 fiber MTP(m) to 3-8 fiber MTP(m), Singlemode, Low Loss	X+CM23BA66LL

(4) 12 FIBER MTP TO (6) 8 FIBER MTP	PART NUMBER
Conversion Module, 4-12 fiber MTP(m) to 6-8 fiber MTP(m), OM3, Low Loss	X+CM46CB66LL
Conversion Module, 4-12 fiber MTP(m) to 6-8 fiber MTP(m), OM4, Xtreme Low Loss	X+CM46DB66XL
Conversion Module, 4-12 fiber MTP(m) to 6-8 fiber MTP(m), OM5, Xtreme Low Loss	X+CM46HB66XL
Conversion Module, 4-12 fiber MTP(m) to 6-8 fiber MTP(m), Singlemode, Low Loss	X+CM46BA66LL

(1) 24 FIBER MTP TO (3) 8 FIBER MTP	PART NUMBER
Conversion Module, 1-24 fiber MTP(m) to 3-8 fiber MTP(m), OM3, Low Loss	X+CM13CB66LL
Conversion Module, 1-24 fiber MTP(m) to 3-8 fiber MTP(m), OM4, Xtreme Low Loss	X+CM13DB66XL
Conversion Module, 1-24 fiber MTP(m) to 3-8 fiber MTP(m), OM5, Xtreme Low Loss	X+CM13HB66XL
Conversion Module, 1-24 fiber MTP(m) to 3-8 fiber MTP(m), Singlemode, Low Loss	X+CM13BA66LL

Xtreme12™ MTP Trunk Cables

Xtreme12™ Trunks are factory terminated with 12 fiber MTP® connectors for interconnecting with Xtreme12™ LC to MTP® modules and harnesses

Low insertion loss
Better link loss performance for longer distances and more interconnect points
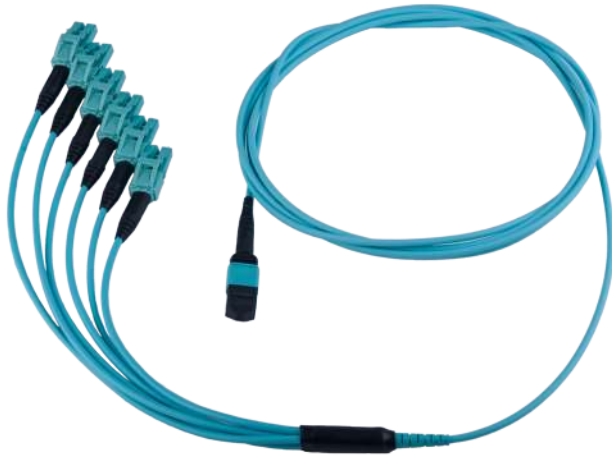
Bend insensitive fibers
Standard for OM3/OM4/OM5 fibers, optional for OS2

Ordering Information

P3XM	1	DB	L	001	M	0	B
	Select fiber count 1 = 12 2 = 24 3 = 36 4 = 48 6 = 72 7 = 96 8 = 144	Select fiber type CB = OM3 DB = OM4 HB = OM5 BA = OS2	Select performance L = Low Loss X = Xtreme Low Loss	Length	M = Meters F = Feet	Pulling Eye Kit 0 = No Pek 1 = 1 Pek 2 = 2 Peks	Method A = A B = B C = C

Specifications

GENERAL SPECIFICATIONS	
Fiber Count	12F, 24F, 36F, 48F, 72F, 96F, 144F
Connector	12 Fiber MTP, 12 Fiber MTP Elite Non-pinned
Connector Color	Aqua (OM3,OM4), Blue UPC (OS2), Green APC (OS2)
Polarity	Method A, B or C
OPTICAL SPECIFICATIONS	
Loss Type	Maximum Insertion Loss
Low Loss (LL)	0.50dB (OM3/OM4/OM5), 1.0dB (OS2)
Xtreme Low Loss (XL)	0.35dB (OM3/OM4/OM5), 0.60dB (OS2)
Transmission Loss	1.0dB/Km (OM3/OM4/OM5), 0.40dB/Km (OS2)
10G and 40/100G Transmission Distance	300/100 (OM3), 550/150 (OM4/OM5), 80Km/40Km (OS2)

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Xtreme12™ 10/100G Harnesses

Xtreme12™ harnesses interconnect end point switches and storage devices with cabling trunks

Low insertion loss
Better link loss performance for longer distances and more interconnect points

Uniboot polarity switchable connectors
Field switchable, tool-less connector

Bend insensitive fibers
Standard for OM3/OM4 fibers, optional for OS2

Ordering Information

X12HN	CB	L	07	F	A	6	2	3
	Select fiber type CB = OM3 DB = OM4 HB = OM5 BA = OS2	Select performance L = Low Loss X = Xtreme Low Loss	Length	F = Feet M = Meters	Pinout A U	Gender 6 = Male 9 = Female	Stagger 0 = None 1 = Stagger Low to High 2 = Stagger High to Low	Overall Breakout Length 1 = 12 2 = 18 3 = 24 4 = 36 5 = 48

Specifications

GENERAL SPECIFICATIONS	
Fiber Count	12
SFP+ Connector	Duplex LC Uniboot
SFP+ Connector Color	Aqua (OM3, OM4), Blue (OS2)
QSFP Connector	MTP (pinned)
QSFP Connector Color	Aqua (OM3/OM4), Green (OS2)
Polarity	Method A (Straight Through)
OPTICAL SPECIFICATIONS	
Loss Type	Maximum Harness Insertion Loss
Low Loss (LL)	0.50dB (OM3/OM4/OM5), 1.00dB (OS2)
Xtreme Low Loss (XL)	0.35dB (OM3/OM4/OM5), 0.60dB (OS2)

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MADE IN THE USA

Xtreme12™ Patch Panels

Xtreme12™ rack mount patch panels house up to 12 Xtreme12™ cassette modules for a total of 72 duplex ports in a 1 RU space. Xtreme12™panels come in two designs, a slide out tray version and static panel version.

The slide out version completely houses the incoming trunk cable, modules and outgoing patch cords. The slide out shelf provides for complete access to both front and rear compartments from the front of the rack or cabinet.

1U Slide Out Panel

Ordering Information

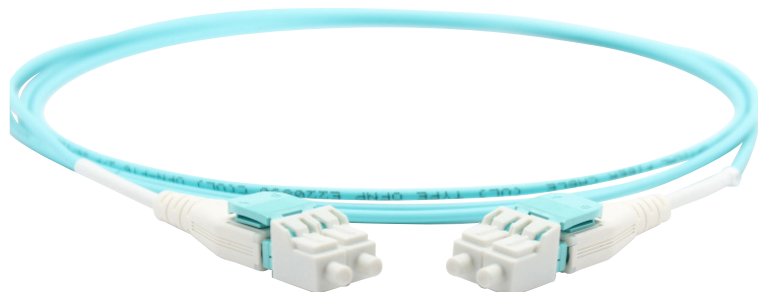| DESCRIPTION	PART NUMBER
1U, rack mount, 6 module capacity (72 ports), slide out shelf	FBX061U
1U, rack mount, 8 module capacity (96 ports), slide out shelf	FBXP081U
1U, rack mount, 12 module capacity (144 ports), slide out shelf	FBXP121U
1U, rack mount, 16 module capacity (192 ports), slide out shelf	FBXP162U

The static version Xtreme12™ 1U panel is completely open for easy front and rear access. It is ideally suited for top of rack (TOR) applications. It can house up to 12 Xtreme12™ modules for up to 144 ports. It can be ordered stand alone or with optional rear trunk cable manager.

Xtreme12 Fixed Panel

Ordering Information

DESCRIPTION	PART NUMBER
1U, rack mount, 8 module capacity (96 ports), fixed panel	FBX12TOR081U
1U, rack mount, 8 module capacity (96 ports), fixed panel, with rear cable manager	FBX12TOR81UCM
1U, rack mount, 12 module capacity (144 ports), fixed panel	FBX12TOR121U
1U, rack mount, 12 module capacity (144 ports), fixed panel, with rear cable manager	FBX12TOR121UCM

Uniboot LC Duplex Jumpers

Uniboot Polarity Switchable Patch Cords feature high density, small form factor LC connectors mated to 2.0mm round duplex cable. They are used to connect switches or network devices in fiber networks directly or interconnect structured cabling systems in a fiber network. Polarity changes can be made in the field quickly, without the use of tools, to the correct fiber mapping polarity.

Ordering Information

P3XJ	DB	14	L	M	001
	Select fiber type CB = OM3 DB = OM4 HB = OM5 BA = OS2	Select connector 14 = Multimode 15 = Singlemode	Select performance L = Low Loss X = Xtreme Low Loss	M = Meters F = Feet	Length

CONNECTOR SPECIFICATIONS		
	Multimode	**Singlemode**
	Low Loss (LL)	Low Loss (LL)
Insertion Loss	0.25dB Maximum	0.35dB
Return Loss	> - 25dB Minimum	> - 55dB UPC
Durability	500 Matings	500 Matings
Repeatability	< 0.20dB	< 0.20dB
Operating Environment	-40 C to 75 C	-40 C to 75 C
Cable Retention	20 lbs / 88 Newtons	20 lbs / 88 Newtons
Rohs	Rohs Compliant	Rohs Compliant

About Opticonx

Opticonx, Inc. designs manufactures, and markets a full line of passive fiber optic connectivity components and systems at our Putnam, Connecticut manufacturing facility. Since our inception in 1995, Opticonx has focused on incorporating top notch design with the highest quality components to produce fiber optic connectivity products and solutions for voice, video, and data applications. Our products include components like cable, cable assemblies, patch panels and splitter kits, and complete Layer 1 infrastructure like our innovative Xtreme™ plug and play fiber system for Data Centers and Campus wide systems.

By focusing all of our efforts on passive fiber solutions, and leveraging our ability to design and manufacture our products under one roof, Opticonx is able to offer rapid prototype and time-to-market custom solutions, keeping our products on the cutting edge of next generation technology. In particular, Opticonx has been a leader in pre-terminated MTP/MPO systems because we manufacture the complete system and it's components, including the cable, at our US manufacturing facility.

These same capabilities provide us unique manufacturing capabilities for OEM and private label applications and customers.

Site Certified

Opticonx Certified Sites are Data Center installations designed by Opticonx utilizing 100% of our Xtreme™ products, installed and tested by Opticonx certified installers. Certified Sites are eligible for our extended product and performance warranty program. Each site installation is evaluated before hand to determine if it is eligible for Site Certification. Consult with your Opticonx representative beforehand if you're interested in this program.

Cabling Guides

Need help designing a structured cabling system that will meet your current and future needs? Our experts have extensive experience with the most popular network switches/devices and network topologies from Cisco, Arista, Brocade, HP, Dell and many more. Our designer's purpose is to deliver a cabling infrastructure that is cost effective, fully utilizes the installed cabling plant, and protects your investment with an eye towards future network upgrades. You'll receive a comprehensive and detailed document laying out your cabling infrastructure and layout.

To download this catalog, please visit opticonx.com.

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