

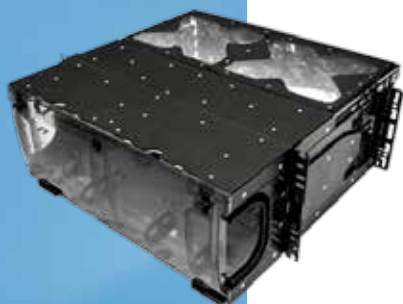
Our End-to-End Expertise.  
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# FiberExpress® Systems

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## FiberExpress® System

### Rack-Mount Fiber Connectivity System

The elegantly simple solution for incorporating flexibility, manageability and scalability into high-density fiber channels.

#### Faster

- Faster field-termination with sliding, tilting drawers
- Faster pre-term installation with fixed shelves and cassettes
- Faster MACs with fewer components

#### Easier

- Easier installation with tool-less removable drawers and lighter weight
- Easier port identification with clear visible labeling
- Easier configuration with LC, SC, ST and MPO modules

#### Better

- Better fiber protection with covered patch cord tray
- Better density with up to 72 LC Duplex ports per 1U
- Better visibility with Titanium finish options



With the same look and feel, the cost effective FX UHD Shelf and the feature-rich FX UHD Housing can be mixed and matched to create unique Half Pre-Term systems that provide field termination benefits like exact cable length, the ability to fit in smaller conduits, and rapid cost-effective installation of pre-term solutions.

Termination Type	Feature-Rich FX UHD Housing	Entry-Level FX UHD Shelf
<b>Pre-Term Assemblies</b>		
MPO Trunks	✓	✓
Jacketed Fan-Out	✓	✓
900 μm Fan-Out	✓	X
<b>Field Termination</b>		
Pig-Tail w/Splicing	✓	X
900 μm Connectorization (ie. FX Brilliance)	✓	X
Jacketed Connectorization	✓	✓

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## FX<sup>®</sup> UHD & FX<sup>®</sup>@EASE Systems

- Easy configuration for a variety of applications with LC, SC, ST and MPO modules and better density with up to 72 LC Duplex or MPO ports per 1U
- Faster installation with lighter weight, tool-less removable drawers and overall fewer components
- Superior access, fiber protection and port identification with sliding, tilting drawers, covered patch cord tray and clear visible labeling

With support for both legacy ST and SC and modern LC and MPO applications, the FX UHD offers cost effective migration from current 1G and 10G to 40G and 100G applications with only a simple cassette or adapter frame change – and it includes all the installation and management features needed to maintain maximum uptime.

The FX UHD System provides superior port access and protection with up to double the density of comparable units for a 50% space reduction. The intuitive, modular design of the system also means fewer components and a single system to support a variety of port counts and configurations.

### Applications

Ideal for fast, reliable, low-cost installations with maximum efficiency, capacity and uptime, the FX UHD System is designed for rapid deployment of high-density fiber interconnects and cross connects at active equipment in data centers, SAN environments and LANs.

Whether in a top of rack, end of row or centralized environment, the system's modular design accommodates high-performance, low-loss fiber architectures with superior flexibility and reconfigurable components to support current 1G and 10G applications and easy migration to future 40G and 100G applications. Using low-loss pre-terminated cassettes and assemblies with the FX UHD System also supports the use of zone distribution areas (ZDAs) that enable pre-cabling the core switch to the row and then rapid deployment down the row as more capacity is needed.

The system's reduced physical footprint offers additional mounting options in both Data Centers and LANs – in shallow racks and cabinets, vertical mounting configurations, and even floor and ceiling boxes. Using Belden KeyConnect frames with modular inserts, the FX UHD System makes it possible to combine fiber, copper and multimedia connectivity in mixed media environments – all in the same rack unit of space.

The ultra high-density rack-mount fiber connectivity system from Belden<sup>®</sup> that offers an elegantly simple solution for incorporating flexibility, manageability and scalability into high-density fiber channels.

The FX UHD System includes a wide range of pre-terminated cassettes and field-terminated frames to support virtually any high-density fiber connectivity need while offering cost effective migration from current 10G to 40 and 100G applications.

### Features

- Support for both pre-term installation and field termination
- Better density with up to 72 LC Duplex or MPO ports per 1U
- Adaptable for present and future needs with LC, SC, ST and MPO modules
- 1U, 2U, and 4U configurations and 19" and 23" rack mount options
- Superior cable management and port access with sliding, tilting drawers
- Efficient one-person installation with tool-less removable drawers and lighter weight (4U FX UHD weighs just 2.4 kg)
- Titanium finish option for better visibility, reduced lighting needs and contrast against white cabinets
- Sleek front faceplate for easy shelf identification and clear visible labeling for easy port identification
- Better fiber protection with covered patch cord tray

## FiberExpress®@EASE Patch Panel Systems

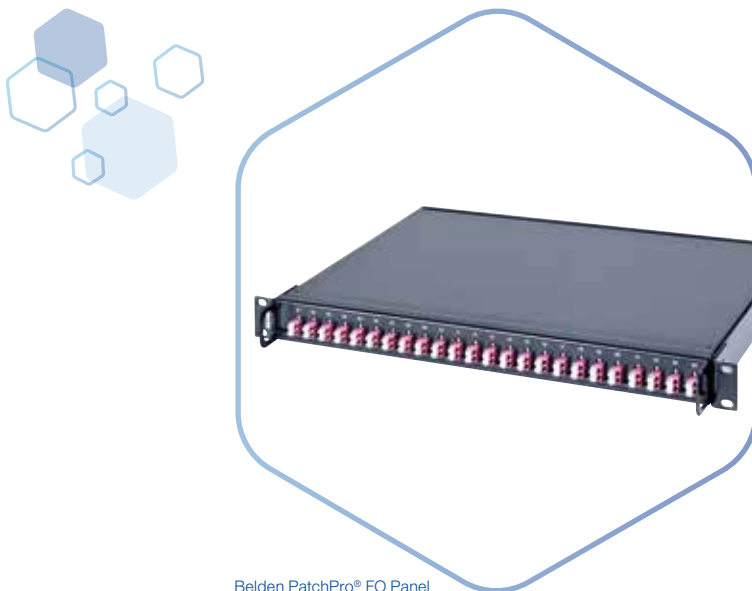
### Solutions for Quicker and Easier Future Proof Fiber Management through Intelligent Readiness

The new FiberExpress@EASE panel is designed and manufactured high quality you expect from Belden with space saving technology to offer improved installation times and a faster Return on Investment (RoI) via:

- Simple 1u footprint
- Easier in-rack management
- Pre-loaded adapters ready for installation
- Splice tray including

#### FO Panels:

- 48-port termination/splice panel set (with 24x duplex LC or SC in OS2, OM3 or OM4, including splicing cassette and pigtail set)
- 48-port MPO panel set (with 24x duplex LC or SC in OS2, OM3 or OM4, including MPO/LC or MPO/SC assembly set)



Belden PatchPro® FO Panel

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### FiberExpress@EASE Panels

Fiber Connectivity MPO Patch Panels	Part Number
PatchPro 48-port LC/UPC-DX OS2 iPLM Ready MPO Panel Set	PPLSMPOR
PatchPro 48-port SC/UPC-DX OS2 iPLM Ready MPO Panel Set	PPSSMPOR
PatchPro 48-port LC/APC-DX OS2 iPLM Ready MPO Panel Set	PPLAMPOR
PatchPro 48-port SC/APC-DX OS2 iPLM Ready MPO Panel Set	PPSAMPOR
PatchPro 48-port LC OM3 iPLM Ready MPO Panel Set	PPL3MPOR
PatchPro 48-port SC OM3 iPLM Ready MPO Panel Set	PPS3MPOR
PatchPro 48-port LC OM4 iPLM Ready MPO Panel Set	PPL4MPOR
PatchPro 48-port SC OM4 iPLM Ready MPO Panel Set	PPS4MPOR
PatchPro 48-port LC/UPC-DX OS2 iPLM Ready MPO alternate Panel Set	PPLSMPOR-ALT
PatchPro 48-port SC/UPC-DX OS2 iPLM Ready MPO alternate Panel Set	PPSSMPOR-ALT
PatchPro 48-port LC/APC-DX OS2 iPLM Ready MPO alternate Panel Set	PPLAMPOR-ALT
PatchPro 48-port SC/APC-DX OS2 iPLM Ready MPO alternate Panel Set	PPSAMPOR-ALT
PatchPro 48-port LC OM3 iPLM Ready MPO alternate Panel Set	PPL3MPOR-ALT
PatchPro 48-port SC OM3 iPLM Ready MPO alternate Panel Set	PPS3MPOR-ALT
PatchPro 48-port LC OM4 iPLM Ready MPO alternate Panel Set	PPL4MPOR-ALT
PatchPro 48-port SC OM4 iPLM Ready MPO alternate Panel Set	PPS4MPOR-ALT

Fiber Connectivity Term/Splice Patch Panels	Part Number
PatchPro 48-port LC/UPC-DX OS2 iPLM Ready Term/Splice Panel Set	PPLSTSR
PatchPro 48-port SC/UPC-DX OS2 iPLM Ready Term/Splice Panel Set	PPSSTSR
PatchPro 48-port LC/APC-DX OS2 iPLM Ready Term/Splice Panel Set	PPLATSR
PatchPro 48-port SC/APC-DX OS2 iPLM Ready Term/Splice Panel Set	PPSATSR
PatchPro 48-port LC OM3 iPLM Ready Term/Splice Panel Set	PPL3TSR
PatchPro 48-port SC OM3 iPLM Ready Term/Splice Panel Set	PPS3TSR
PatchPro 48-port LC OM4 iPLM Ready Term/Splice Panel Set	PPL4TSR
PatchPro 48-port SC OM4 iPLM Ready Term/Splice Panel Set	PPS4TSR

Includes all Connectivity, without RFID & Hardware  
Add -H for half loaded panels after the part number(half loaded panels will come with 24 pigtailed)



## FiberExpress®@EASE Patch Panel Systems

### Fiber Solutions for Even Faster Performance

In today's information-intensive world, optical fiber networks are increasingly being used to support mission-critical data transmissions in financial and government institutions, large enterprises, educational and healthcare facilities across the globe.

Belden fiber solutions meet or exceed all applicable TIA/EIA, ISO/IEC and IEEE standards and offer:

- High bandwidth and transmission speed
- The potential for network growth
- Extended reach – distance
- Fault tolerance
- Greater data security
- Support for Gigabit and multi-Gigabit protocols and networked applications
- Reduced design complexities
- Quick installation
- Increased flexibility



FE Ease SC  
DUPLEX SlideoutPanel

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**FiberExpress@EASE Panels**

Description	Part Number
19" 1U OM2, 24-port, ST Simplex, Term/Splice Panel	NN01406.MM24
19" 1U OM3, 24-port, ST Simplex, Term/Splice Panel	NN01406.3M24
19" 1U OS2, 24-port, ST Simplex, Term/Splice Panel	NN01406.SM24
19" 1U OM2, 24-port, FC Simplex, Term/Splice Panel	NN01407.MM24
19" 1U OM3, 24-port, FC Simplex, Term/Splice Panel	NN01407.3M24
19" 1U OS2, 24-port, FC Simplex, Term/Splice Panel	NN01407.SM24

Configuration for half loaded pigtailed	Part Number
19" 1U OM2, 24-port, ST Simplex, Term/Splice Panel	NN01406.MM12
19" 1U OM3, 24-port, ST Simplex, Term/Splice Panel	NN01406.3M12
19" 1U OS2, 24-port, ST Simplex, Term/Splice Panel	NN01406.SM12
19" 1U OM2, 24-port, FC Simplex, Term/Splice Panel	NN01407.MM12
19" 1U OM3, 24-port, FC Simplex, Term/Splice Panel	NN01407.3M12
19" 1U OS2, 24-port, FC Simplex, Term/Splice Panel	NN01407.SM12





## FiberExpress®@EASE Patch Panel Systems

### The KeyConnect Patch Panel Series:

- Includes the unique AngleFlex Patch Panel available in 24-port/1U and 48-port/2U configurations. Patent-pending removable angled inserts provide intuitive left, right or bi-directional patch cord routing and more efficient switch connection. Angled inserts eliminate the need for horizontal cable management, for a 27% space savings per rack.
- The Flex Patch Panel series is available in 24-port/1U and 48-port/2U configurations, and is designed to be populated using Category Modular Jacks, Fiber Adapters or Multimedia Modules.

### Physical and Mechanical Characteristics

- Multimode LC module: beige and aqua adapters with phosphor bronze sleeve
- Single-mode LC module: blue adapter with ceramic sleeve
- ST Compatible MM/SM: metal adapter with ceramic sleeve
- Materials: Fire-retardant plastic UL94V-0
- Colors: Almond, electrical white and black

### Packaging

- KeyConnect Modular Jacks – Individually packaged
- KeyConnect Multimedia Modules – 10 units in a clear plastic bag



10GX AngleFlex  
Patch Panel, 1U,  
24-port, Black



10GX AngleFlex  
Patch Panel, 2U,  
48-port, Black



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### FiberExpress®EASE Panels

Description	Part Number
AngleFlex Patch Panel, 1U, 24-port, Black	AX103248
AngleFlex Patch Panel, 2U, 48-port, Black	AX103249

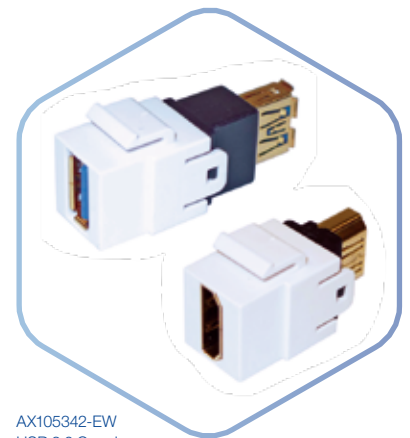
Description	Part Number		
	Almond	Electr. White	Black

### KeyConnect Multimedia Modules

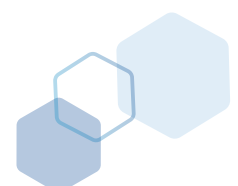
Multimedia Modules, Copper			
3.5 mm Audio Coupler, F/F, Gold	AX105334-AL	AX105334-EW	AX105334-BK
3.5 mm Audio Coupler, F/Solder, Gold	AX105335-AL	AX105335-EW	AX105335-BK
S-video Coupler, F/F	AX105336-AL	AX105336-EW	AX105336-BK
RCA Gold-plated Coupler, F/F, Red	AX105337-AL	AX105337-EW	AX105337-BK
RCA Gold-plated Coupler, F/F, White	AX105338-AL	AX105338-EW	AX105338-BK
RCA Gold-plated Coupler, F/F, Yellow	AX105339-AL	AX105339-EW	AX105339-BK
RCA Gold-plated Coupler, F/F, Green	AX105340-AL	AX105340-EW	AX105340-BK
RCA Gold-plated Coupler, F/F, Blue	AX105341-AL	AX105341-EW	AX105341-BK
Video F Coax 3GHz, Recess, Gold-Plated	AX105346-AL	AX105346-EW	AX105346-BK
Video F Coax, Recessed	AX102903	AX102904	AX102905
Video F Coax, Flush	AX102906	AX102907	AX102908
Video BNC Coax, Flush	AX104573	AX104575	AX104574
USB 3.0 Coupler, A to A	AX105342-AL	AX105342-EW	AX105342-BK
USB 2.0 Coupler, B to B	AX105344-AL	AX105344-EW	AX105344-BK
HDMI Coupler (Version 1.4)	AX105345-AL	AX105345-EW	AX105345-BK
Multimedia Modules, Fiber			
LC Duplex OM3 (Aqua Adapter)	AX104937	AX104938	AX104939
LC Duplex OM4 (Erika Violet Adapter)	AX105641-AL	AX105641-EW	AX105641-BK
LC Duplex SM (Blue Adapter)	AX102419	AX102420	AX102421
LC Duplex SM/APC (Green Adapter)	AX105642-AL	AX105642-EW	AX105642-BK
SC Duplex OM3 (Aqua Adapter)	AX105643-AL	AX105643-EW	AX105643-BK
SC Duplex SM (Blue Adapter)	AX102686	AX102687	AX102688
SC Duplex SM/APC (Green Adapter)	AX105374-AL	AX105374-EW	AX105374-BK



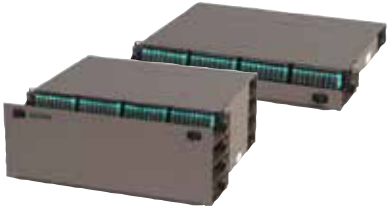
AX102417  
LC Duplex module



AX105342-EW  
USB 3.0 Coupler  
and AX105345-EW HDMI Coupler



# FiberExpress® Patch Panel Systems



Top: AX104681, FX Ultra HD 1U Patch Panel Housing  
Bottom: AX104683, FX UHD 4U Patch Panel Housing (shown loaded)

## FX UHD Housings and Shelves

Elegantly simple yet uncompromisingly flexible. Ultra high-density rack-mount fiber connectivity system, crafted for effortless installation and maintenance.

### Faster

- Faster field-termination with high-accessibility sliding and tilting drawers
- Faster pre-term installation with simple fixed shelves and cassettes

### Easier

- Easier installation with tool-less removable drawers and lightweight housings
- Easier port identification with clear visible labeling
- Easier to configure with flexible port count LC, SC, ST and MPO modules

### Better

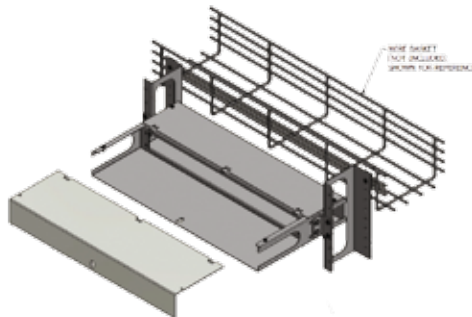
- Better fiber protection with covered patch cord tray
- Better high density offering with 18-port modules for up to 72 LC Duplex ports per 1U
- Better visibility with light colored Titanium finish



AX104681, FX UHD Patch Panel 1U with Mounted Splice Housing Kit (AX104684)



Top: AX105164, FX UHD 1U Patch Panel Standard Shelf  
Bottom: AX105167, FX UHD 4U Patch Panel Recessed Shelf (shown loaded)



XPE-S0003, FX UHD Basket Hanger for 1U FX UHD Patch Panel Housings and Shelves



AX105700, FX UHD Fiber Management Spool Kit



Left: FXFUBRSHM, FX UHD Single Cassette Holder with Magnetic Attachment  
Right: FXFUBRDHM FX UHD Double Cassette Holder with Magnetic Attachment (Bottom)



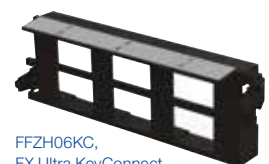
AX105813 FX UHD 1U Bezel

Use Titanium patch panels to reduce lighting requirements and improve visibility as well as providing sufficient contrast against white cabinets to avoid the snow blind effect.

For rapid expansion within a data center as it grows, Belden Low-Loss Pre-term solutions using the FX UHD System enables ZDA (zone distribution) architectures. ZDA allows pre-cabling the core switch to the row on Day 0 and rapid deployment down the row on Day 1 as capacity is needed.

## Optimizes Space in Mixed Media Environments

Belden KeyConnect frames with modular inserts makes it possible to combine fiber, copper and multimedia connectivity – all in the same rack unit of space with in any member of the FX UHD family.



FFZH06KC, FX Ultra KeyConnect Frame, 6-Port

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## FX UHD Housings

Feature-rich housings are fully enclosed to provide protection for exposed 250 µm and 900 µm fibers coupled with sliding and tilting drawers to speed up and simplify installation and maintenance.

Description	Number of Module Bays	Total LC Duplex/MPO Ports using FX Ultra Frames and Cassettes	Total LC Duplex/MPO Ports using FX UHD Frames and Cassettes	Belden Part Number
				Titanium
1U Housing with Front and Rear Cable Tray	4	48	72	AX104681
2U Housing with Front and Rear Cable Tray	8	96	144	AX104682
4U Housing with Front and Rear Cable Tray	16	192	288	AX104683
Optional 1U Splice Housing Kit, 144 splices (add up to 4 on the 4U Housing) <sup>1</sup>	N/A	N/A	N/A	AX104684
Optional Patch Cord Tray Cover, 19" <sup>2</sup>	N/A	N/A	N/A	AX105162

1. Up to 4 splice housing kits can be added to 4U housings. Splice housing kits are only compatible with standard 19" rack mount housings.  
2. Use with 1U or 4U housings to protect the contents of the topmost patch cord tray.

## FX UHD Shelves, Single Cassette Holder

Entry-level cost effective solutions for pre-terminated systems.

Description	Number of Module Bays	Total LC Duplex/MPO Ports using FX Ultra Frames and Cassettes	Total LC Duplex/MPO Ports using FX UHD Frames and Cassettes	Belden Part Number	
				Magnetic	Non-Magnetic
1U FX UHD Bezel	4	48	72	AX105813	
1U Standard Fixed Shelf	4	48	72	AX105164	
1U Recessed Fixed Shelf	4	48	72	AX105165	
4U Standard Fixed Shelf	10	120	180	AX105166	
4U Recessed Fixed Shelf	10	120	180	AX105167	
FX UHD Single & Double Cassette Holders				Magnetic	Non-Magnetic
Single Cassette Holder (Black Finish)	1	18	12	FXFUBRSHM	FXFUBRSHM
Double Cassette Holder (Black Finish)	1	36	24	FXFUBRDHM	FXFUBRDHS

## Standard FX Ultra KeyConnect Frames

Patch Ports	Description	Belden Part Number
6	FX Ultra KeyConnect Frame 6-Port	FFZH06KC
8	FX Ultra KeyConnect Frame 8-Port	FFZH08KC

## Standard FX UHD Accessories

Description	Belden Part Number
FX UHD Blank Plate	FFZH00BB
FX UHD Patch Cord Release Tool	AX104685
FX Ultra LC Duplex Color-coded Icon Kit	AX104572
FX UHD Fiber Management Spool kit, includes base plates and eight spool segments	AX105700
1U Rackmount Enclosure for Cable Tray Mounting	XPE-S0003



FC3H18LDMF, FX UHD Cassette, OS2, 18 Ports, MPO-12 (female), LC Duplex, Type-A, Blue Adapters



FC3U12LDMF1A, FX Ultra Cassette, OM3, 12 Ports, MPO-12 (female), LC Duplex, Type-A ALT, Aqua Adapters



FC3H12LDFS, FX UHD Splice Cassette, OM3, 12 Ports, LC duplex, Aqua Adapters



FCZH00BBFS, FX UHD Empty Splice Cassette

## FiberExpress® Cassettes

### FX UHD and FX Ultra Cassettes

Featuring the highest density at 72 LC Duplex or MPO ports per 19" rack unit FX UHD family is the ideal choice for high-port count applications such as in the data center.

Unique 1" pull-out feature of the FX Ultra family provides a medium density solution with a superior ease of use for day-to-day MAC (moves, adds and changes) within the Enterprise or cross-connect within the data center.



Pair a Type-A and Type-A ALT on Type-B MPO Trunk to ensure correct port number and to provide simple upgrade path to SR4 (40G/100G) protocols.



Use manageable density FX Ultra modules in dynamic patching environments where ease of access and use and speed are critical. Use FX UHD modules in static patching environments where density is the critical factor.



Use Angled cassettes for MoR or EoR (Middle or End of Row) when combining with Belden AngleFlex copper patch panels to achieve a clean uniform appearance.



FX UHD Angled Cassettes, 12 Ports, LC Duplex and 6 Ports, SC Duplex. See Tailored *SmartPart* numbers for Details.

### Tailored FX UHD and FX Ultra Cassettes (Base12)

#### Building a SmartPart Number

Fixed Letter Series	1. Choose Fiber Type	2. Choose Product Family	3. Choose Port Count (Patch Side)	4. Choose Connector (Patch Side)	5. Choose Connector (Trunk Side)	6. Choose Polarity (Trunk)	7. Choose Adapter Color
<b>FC</b>	<b>3</b>	<b>U</b>	<b>03</b>	<b>LD</b>	<b>MM</b>	<b>A</b>	<b>A</b>
	<b>Fiber Type</b>	<b>Product Family</b>	<b>Port Count (Patch Side)</b>	<b>Connector (Patch Side)</b>	<b>Connector (Trunk Side)</b>	<b>Polarity (Trunk)</b>	<b>Adapter Color</b>
	1 OM1	H FX UHD	03	LD LC Duplex	MM MPO-12 (m)	A Type-A	T Beige
	3 OM3	U FX Ultra (1" Pull)	06	LA LC/APC Duplex	MF MPO-12 (f)	1 Type-A ALT	N Black
	4 OM4	L FX U Angled Left	12	SD SC Duplex			A Aqua
	S OS2	R FX U Angled Right	18	SC SC Simplex			E Erika V.
				SA SC/APC Duplex			B Blue
				SB SC/APC Simplex			G Green
				ST ST			

For further options contact Belden for custom Engineered solutions.

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### Standard Type-A Cassettes (Base12)

Description			Belden Part Number				
Patch Ports (fibers)	Trunk Ports	Family	OM1 Beige Adapters	OM3 Aqua Adapters	OM4 Erika Violet Adapters	OS2 Blue Adapters	OS2/APC Green Adapters
<b>LC Duplex to MPO-12(12f) Female</b>							
18 (36)	3	FX UHD*	–	FC3H18LDMF	FC4H18LDMF	FCSH18LDMF	FCSH18LAMF
12 (24)	2	FX Ultra	FC1U12LDMF	FC3U12LDMF	FC4U12LDMF	FCSU12LDMF	FCSU12LAMF
<b>SC Duplex to MPO-12(12f) Female</b>							
6 (12)	1	FX Ultra	FC1U06SDMF	FC3U06SDMF	FC4U06SDMF	FCSU06SDMF	FCSU06SAMF
<b>SC Simplex to MPO-12(12f) Female</b>							
12 (12)	1	FX Ultra	–	–	–	FCSU12SCMF	FCSU12SBMF

\*Optional HD Patch cord release tool AX104685

### Standard Type-A-Alternate Cassettes (Base12)

Description			Belden Part Number				
Patch Ports (fibers)	Trunk Ports	Family	OM1 Beige Adapters	OM3 Aqua Adapters	OM4 Erika Violet Adapters	OS2 Blue Adapters	OS2/APC Green Adapters
<b>LC Duplex to MPO-12(12f) Female</b>							
18 (36)	3	FX UHD	–	FC3H18LDMF1A	FC4H18LDMF1E	FCSH18LDMF1B	FCSH18LAMF1G
12 (24)	2	FX Ultra	FC1U12LDMF1T	FC3U12LDMF1A	FC4U12LDMF1E	FCSU12LDMF1B	FCSU12LAMF1G
<b>SC Duplex to MPO-12(12f) Female</b>							
6 (12)	1	FX Ultra	FC1U06SDMF1T	FC3U06SDMF1A	FC4U06SDMF1E	FCSU06SDMF1B	FCSU06SAMF1G
<b>SC Simplex to MPO-12(12f) Female</b>							
12 (12)	1	FX Ultra	–	–	–	FCSU12SCMF1B	FCSU12SBMF1G

### Standard Splice Cassettes

Description		Belden Part Number				
Patch Ports (fibers)		OM1 Beige Adapters	OM3 Aqua Adapters	OM4 Erika Violet Adapters	SM Blue Adapters	OS2/APC Green Adapters
<b>MPO Type-A (Key-Up/Key-Down)</b>						
12 (144)		FC1H12MPFS	FC3H12MPFS	FC4H12MPFS	–	FCSH12MPFS
<b>LC Duplex</b>						
12 (24)		FC1H12LDFS	FC3H12LDFS	FC4H12LDFS	FCSH12LDFS	FCSH12LAFS
<b>SC Duplex</b>						
6 (12)		FC1H06SDFS	FC3H06SDFS	FC4H06SDFS	FCSH06SDFS	–
<b>SC Simplex</b>						
12 (12)		–	–	–	–	FCSH12SBFS
<b>ST (Metal Adapters)</b>						
12 (12)		FCSH12STFS				
<b>Splice Only (No Adapters)</b>						
N/A (144)		FCZ00BBFS				

FX Brilliance Universal (page 49) or FX Pigtails (page 31 or 39) sold separately.

### Standard FX UHD Angled Cassettes (Base12)

Description	Left			Right		
Patch Ports (fibers)	OM3 Aqua Adapters	OM4 Erika Violet Adapters	SM Blue Adapters	OM3 Aqua Adapters	OM4 Erika Violet Adapters	OS2 Blue Adapters
<b>LC Duplex to MPO-12(12f) Female Type-A</b>						
12(24)	FC3L12LDMF	FC4L12LDMF	FCSL12LDMF	FC3R12LDMF	FC4R12LDMF	FCSR12LDMF
<b>LC Duplex to MPO-12 (12f) Female Type-A Alternate</b>						
12(24)	FC3L12LDMF1A	FC4L12LDMF1E	FCSL12LDMF1B	FC3R12LDMF1A	FC4R12LDMF1E	FCSR12LDMF1B
<b>SC Duplex to MPO-12(12f) Female Type-A</b>						
6 (12)	FC3L06SDMF	FC4L06SDMF	FCSL06SDMF	FC3R06SDMF	FC4R06SDMF	FCSR06SDMF
<b>SC Duplex to MPO-12(12f) Female Type-A Alternate</b>						
6 (12)	FC3L06SDMF1A	FC4L06SDMF1E	FCSL06SDMF1B	FC3R06SDMF1A	FC4R06SDMF1E	FCSR06SDMF1B



## FiberExpress® Cassettes

### Belden FX UHD Base8 Cassettes

Optimized for SR4 and PSM4 based architectures like 40G and 100G Ethernet as well as Compute, Switch and Storage equipment with groupings of 4, 8 and 12 ports. Belden Base8 Cassettes optimize costs when used with Base8 MPO Trunks and Patch cords by eliminating dark fiber associated with SR4 & PSM4 architectures.



FC3U034MMF,  
FX UHD Optimizer  
Cassette, OM3, Aqua Adapters



FCSU12LD4F,  
FX Ultra Cassette,  
OM3, 12 Ports, MPO-12 (female), LC Duplex,  
Type SR4 (Base8), Aqua Adapters

### Tailored FX UHD and FX Ultra Cassettes (Base8)

#### Building a SmartPart Number

Fixed Letter Series	1. Choose Fiber Type	2. Choose Product Family	3. Choose Port Count (Patch Side)	4. Choose Connector (Patch Side)	5. Choose Connector (Trunk Side)	6. Choose Polarity (Trunk)	7. Choose Adapter Color
<b>FC</b>	<b>3</b>	<b>U</b>	<b>04</b>	<b>LD</b>	<b>4M</b>	<b>4</b>	<b>A</b>
	<b>Fiber Type</b>	<b>Product Family</b>	<b>Port Count (Patch Side)</b>	<b>Connector (Patch Side)</b>	<b>Connector (Trunk Side)</b>	<b>Polarity (Trunk)</b>	<b>Adapter Color</b>
	3 OM3	H FX UHD	04 4 Ports	LD LC Duplex	4M MPO-12 (8f) Male	4 SR4 (Base8)	A Aqua
	4 OM4	U FX Ultra	08 8 Ports		4F MPO-12 (8f) Female		E Erika V.
	S OS2	L FX U Angled Left	12 12 Ports				B Blue
		R FX U Angled Right	16 16 Ports				

For further options contact Belden for custom Engineered solutions.

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### Standard SR4 Optimizer Cassettes (Base8)

Description			Belden Part Number		
Patch Ports (fibers)	Trunk Ports	Family	OM3 Aqua Adapters	OM4 Erika Violet Adapters	OS2/APC Green Adapters
<b>MPO-12(8f) Male to MPO-12(12f) Female</b>					
6 x MPO-12 (8f)	4 x MPO-12 (12f)	FX Ultra	FC3U064MMF	FC4U064MMF	FCSU064MMF
3 x MPO-12 (8f)	2 x MPO-12 (12f)	FX Ultra	FC3U034MMF	FC4U034MMF	FCSU034MMF

### Standard SR4 Cassettes (Base8)

Description			Belden Part Number		
Patch Ports (fibers)	Trunk Ports	Family	OM3 Aqua Adapters	OM4 Erika Violet Adapters	OS2 Blue Adapters
<b>LC Duplex to MPO-12(8f) Female</b>					
16 (32)	4	FX UHD	FC3H16LD4F	FC4H16LD4F	FCSH16LD4F
12 (24)	3	FX Ultra	FC3U12LD4F	FC4U12LD4F	FCSU12LD4F
8 (16)	2	FX Ultra	FC3U08LD4F	FC4U08LD4F	FCSU08LD4F
4 (8)	1	FX Ultra	FC3U04LD4F	FC4U04LD4F	FCSU04LD4F

### Standard SR4 Angled Cassettes (Base8)

Description	Left			Right		
Patch Ports (fibers)	OM3 Aqua Adapters	OM4 Erika Violet Adapters	OS2 Blue Adapters	OM3 Aqua Adapters	OM4 Erika Violet Adapters	OS2 Blue Adapters
<b>LC Duplex to MPO-12(8f) Female</b>						
12 (24)	FC3L12LD4F	FC4L12LD4F	FCSL12LD4F	FC3L12LD4F	FC4L12LD4F	FCSL12LD4F





# FiberExpress® Frames

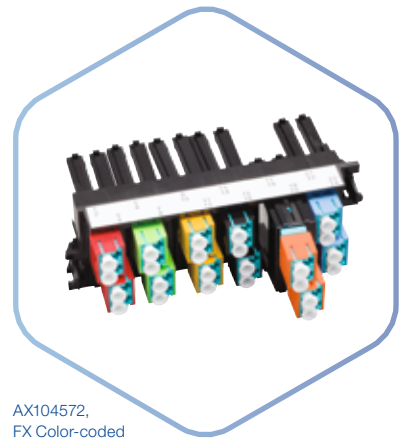
## Tailored FX UHD and FX Ultra Frames

### Building a SmartPart Number

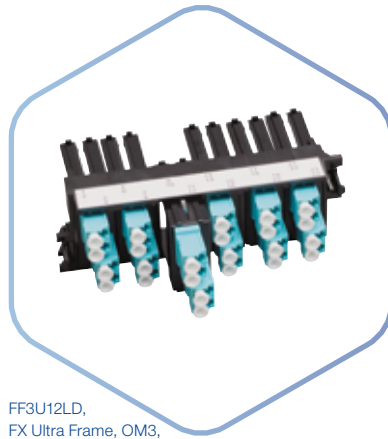
Fixed Letter Series	1. Choose Fiber Type	2. Choose Product Family	3. Choose Port Count	4. Choose Connector for Patch Side	5. Choose Adapter Color																																																																		
<b>FF</b>	<b>3</b>	<b>H</b>	<b>18</b>	<b>LD</b>	<b>A</b>																																																																		
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FF3H18LD,  
FX UHD Frame, OM3,  
18 Ports, LC Duplex,  
Aqua Adapters



AX104572,  
FX Color-coded  
Icon Kit, (shown on frame)



FF3U12LD,  
FX Ultra Frame, OM3,  
12 Ports, LC Duplex,  
Aqua Adapters



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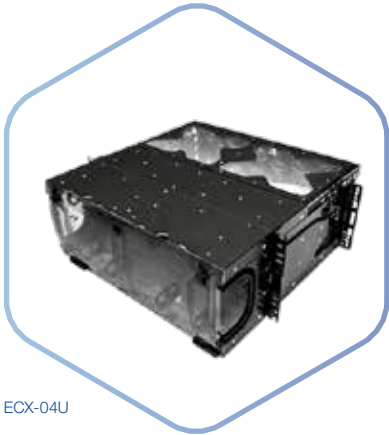
### Standard FX UHD and FX Ultra Frames

Description		Belden Part Number				
Patch Ports (fibers)	Family	OM1 Beige Adapters	OM3 Aqua Adapters	OM4 Erika Violet Adapters	SM Blue Adapters	SM/APC Green Adapters
<b>MPO Type-A (Key-Up/Key-Down)</b>						
18	FX UHD	–	FF3H18MP	FF4H18MP	–	FFSH18MP
12	FX Ultra	–	FF3U12MP	FF4U12MP	–	FFSU12MP
<b>LC Duplex</b>						
18 (36)	FX UHD	–	FF3H18LD	FF4H18LD	FFSH18LD	FFSH18LA
12 (24)	FX Ultra	FF1U12LD	FF3U12LD	FF4U12LD	FFSU12LD	FFSU12LA
<b>SC Duplex</b>						
6 (12)	FX Ultra	FF1U06SD	FF3U06SD	FF4U06SD	FFSU06SD	FFSU06SA
<b>SC Simplex</b>						
12 (12)	FX Ultra	–	–	–	FFSU12SC	FFSU12SB
<b>ST</b>						
12 (12), Metal	FX Ultra	← FFSU12ST →				–

### KeyConnect Fiber Modules

Description	Belden Part Number		
	Almond	Elec. White	Black
LC Duplex - OM3 (Aqua Adapter)	AX104937	AX104938	AX104939
LC Duplex - OM4 (Erika Violet Adapter)	AX105641-AL	AX105641-EW	AX105641-BK
SC Simplex OM1 (Beige Adapter)	AX102683	AX102684	AX102685
SC Simplex - OM3 (Aqua Adapter)	AX105643-AL	AX105643-EW	AX105643-BK
ST- Metal	AX102242	AX102243	AX102244

COMING  
SOON



ECX-04U

## FiberExpress® Enterprise Closet X (ECX)

### Improving on Best-in-Class!

Belden's new FiberExpress (FX) Enterprise Closet X (ECX) Patch Panel system is an elegant, intuitive and flexible solution that has been designed to maximize installer flexibility when compared to industry-leading solutions. FX ECX has been optimized for LAN environments, and provides an easy-to-deploy, efficient solution for installers.

### Benefits

- **Maximum installer flexibility for frequent MAC work:** Front and rear removable cassettes (patent pending) on all housings (1U, 2U, 4U). Multiple options for cable strain relief.
- **Simplified installation with fewer detachable components:** Cassette rails molded into housing. No need for extra rail components that can get lost.
- **Reduce space and cost:** ECX accepts mixed-media copper/fiber using KeyConnect frames. Leverage our broad line of KeyConnect copper connectivity products.
- **Eliminate cassette pinch points:** ECX Splice Cassettes integrate slack management into the cassette lid. This simplifies fiber routing and eliminates pinch points.



### Features

- Up to 192 LC Duplex ports (384 fibers) in 4U housing
- Tool-less, removable, clear doors and top covers
- Clear top cover for better light and visibility
- Removable front and rear housing (4U)
- Complete family of cassettes and frames
  - LC, SC, ST and MPO adapters available
- Supports all modern field-termination techniques
  - Pigtailed with splice trays
  - Splice cassettes
  - Splice-on connectors (FX Fusion)
  - Mechanical splice connectors (FX Brilliance Universal)



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## Ordering Information

### FX ECX Housings

Description	Max Capacity	Belden Part Number
1U Housing	2 Cassettes or Frames	ECX-01U
2U Housing	4 Cassettes or Frames	ECX-02U
4U Housing	12 Cassettes or Frames	ECX-04U

### Kits/Accessories

Description	Belden Part Number
3 Inch Bracket Mount (4U)	ECX-BRKTMT-3
Flush Bracket Mount (4U)	ECX-BRKTMT-0
Lock Kit (1U/2U/4U)	ECX-LOCKKIT

Additional resources available, see [belden.com/ecx](http://belden.com/ecx) for more information.

### Splice Cassettes

Description	Belden Part Number			
	OM3 Aqua Adapters	OM4 Erika Violet Adapters	OS2 Blue Adapters	OS2 APC Green Adapters
<b>LC Duplex</b>				
12 (24)	FC3X12LDFS	FC4X12LDFS	FCSX12LDFS	FCSX12LAFS
<b>SC Duplex</b>				
12 (24)	FC3X12SDFS	FC4X12SDFS	FCSX12SDFS	FCSX12SAFS

Please see table below for more adapter/port count options!

To use the configuration matrices, make a selection from each category and combine to form a custom part number. See examples below.

### FX ECX Splice Cassette Options

Part number example from configuration shown below:

**FCSX06SCFS**

FC	S	X	06	SC	FS				
Fiber Type	Family	Port Count (Patch Side)	Connector (Patch Side)	Connector (Trunk Side)					
1	OM1	X	ECX	03	3 ports	LD	LC Duplex	FS	Splice Cassette
3	OM3			06	6 ports	LA	LC Duplex APC		
4	OM4			08	8 ports	SD	SC Duplex		
S	OS2			12	12 ports	SC	SC Simplex		
						SA	SC Duplex APC		
						SB	SC Simplex APC		
						ST	ST		

### FX ECX Frames/Adapter Strips

Description	Belden Part Number			
Patch Ports (fibers)	OM3 Aqua Adapters	OM4 Erika Violet Adapters	OS2 Blue Adapters	OS2 APC Green Adapters
<b>LC Duplex</b>				
12 (24)	FF3X12LD	FF4X12LD	FFSX12LD	FFSX12LA
<b>SC Duplex</b>				
12 (24)	FF3X12SD	FF4X12SD	FFSX12SD	FFSX12SA

Please see table below for more adapter/port count options!

### FX ECX Frame Options

Part number example from configuration shown below:

**FFSX06SC**

FF	S	X	06	SC			
Fiber Type	Family	Port Count (Patch Side)	Connector (Patch Side)				
1	OM1	X	ECX	03	3 ports	LD	LC Duplex
3	OM3			06	6 ports	LA	LC Duplex APC
4	OM4			08	8 ports	SD	SC Duplex
S	OS2			12	12 ports	SC	SC Simplex
				16	16 ports	SA	SC Duplex APC
						SB	SC Simplex APC
						ST	ST