

Fiber Backbone System

Acting as the pillar of a building or campus network, a backbone system links different locations together to form a local area network (LAN). For example, a backbone can enable building-to-building or floor-to-floor wired and wireless connectivity. To ensure sufficient reach, high speeds, network reliability and resiliency, fiber is used to create these backbone systems.

A fiber backbone system must be able to sustain many different users and applications, as well as continued growth in data rates. The backbone is the lifeline for everything from simple voice transmission and high-definition video streaming to emerging technologies like AI and virtual reality. As a result, speeds of 40 Gb/s, 100 Gb/s or more are critical.

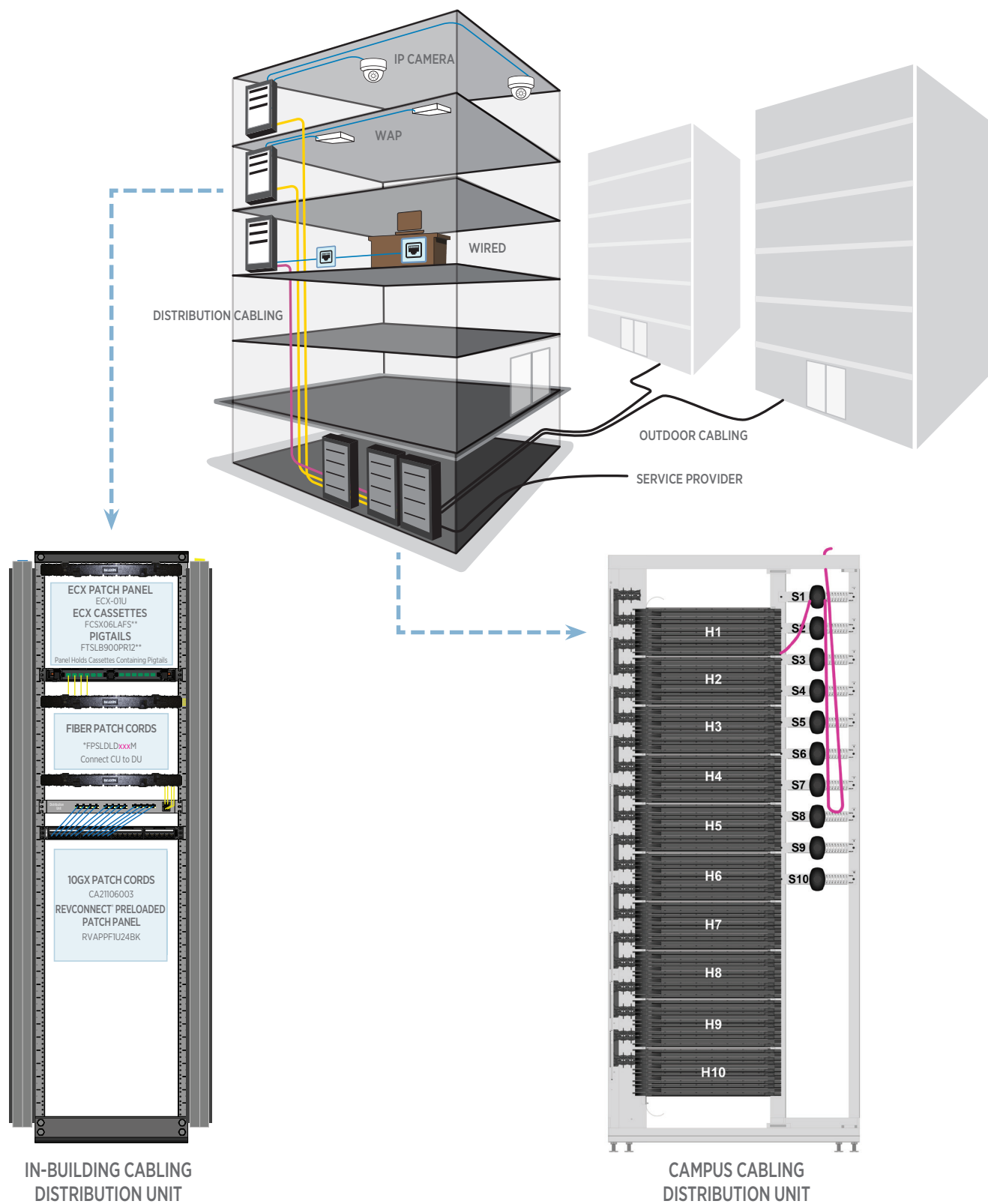
A fiber backbone system is comprised of fiber optic cables and connectors, termination hardware and fiber-enabled devices.



APPLICATION GUIDE


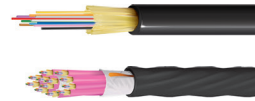
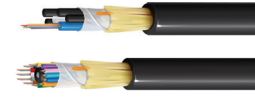
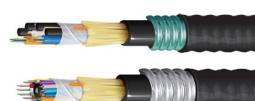


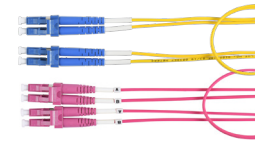

Belden offers a full suite of copper and fiber cable and connectivity systems that support every type of technology you'll need now and in the future. Learn more about how Belden is uniquely positioned to provide reliable products and services for your jobs. Visit belden.com/Solutions/Smart-Building-Solutions.

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✿ The system configurations shown are illustrative. We offer a variety of options to meet your specific use case and project constraints. Please reach out to Belden, and our solutions consultants will gladly assist you in configuring the systems you need.

Fiber Backbone Checklist Example

	Belden Part Number	Description
Cables		
 Indoor Distribution	FISD012P9	FX Indoor, Distribution Tight Buffer, OS2, 12 Fibers, OFNP, Non-Unitized, Yellow Jacket
	FISD144PK	FX Indoor, Distribution Tight Buffer, OS2, 144 Fibers, OFNP, Sub-Units(12F), Yellow Jacket
	FI4D012P9	FX Indoor, Distribution Tight Buffer, OM4, 12 Fibers, OFNP, Non-Unitized, Erika Violet Jacket
	FI4D144PK	FX Indoor, Distribution Tight Buffer, OM4, 144 Fibers, OFNP, Sub-Units(12F), Erika Violet Jacket
 I/O Distribution	FDSD012P9	FX Indoor/Outdoor, Distribution Tight Buffer, OS2, 12 Fibers, OFNP, Non-Unitized, Black Jacket
	FDSD144PK	FX Indoor/Outdoor, Distribution Tight Buffer, OS2, 144 Fibers, OFNP, Sub-Units(12F), Black Jacket
	FDSD012A9	FX Indoor/Outdoor, Distribution Tight Buffer, OM4, 12 Fibers, OFNP, Non-Unitized, Black Jacket
	FDSD144AK	FX Indoor/Outdoor, Distribution Tight Buffer, OM4, 144 Fibers, OFNP, Sub-Units(12F), Black Jacket
 Single Jacket OSP Loose Tube-Dry*	FSSL012ND	FX Outdoor, Loose Tube, OS2, 12 Fibers, OSP, Sub-Units(12F) Dry, Black Jacket
	FSSL144ND	FX Outdoor, Loose Tube, OS2, 144 Fibers, OSP, Sub-Units(12F) Dry, Black Jacket
	FSSL0126D	FX Outdoor, Loose Tube, OS2, 12 Fibers, OSP Corrugated Steel Tape Armor, Sub-Units(12F) Dry, Black Jacket
	FSSL1446D	FX Outdoor, Loose Tube, OS2, 144 Fibers, OSP Corrugated Steel Tape Armor, Sub-Units(12F) Dry, Black Jacket
 Double Jacket OSP Loose Tube-Dry*	FSSH012ND	FX Outdoor Heavy-Duty Loose Tube, OS2, 12 Fibers, OSP, Sun-Units(12F) Dry, Black Jacket
	FSSH144ND	FX Outdoor Heavy-Duty Loose Tube, OS2, 144 Fibers, OSP, Sub-Units(12F) Dry, Black Jacket
	FSSH0126D	FX Outdoor Heavy-Duty Loose Tube, OS2, 12 Fibers, OSP Corrugated Steel Tape Armor, Sub-Units(12F) Dry, Black Jacket
	FSSH1446D	FX Outdoor Heavy-Duty Loose Tube, OS2, 144 Fibers, OSP Corrugated Steel Tape Armor, Sub-Units(12F) Dry, Black Jacket
 Digital Electricity™ Class 4 Cables*	DEIP162U	Digital Electricity™ Copper Cable, 16 AWG, 2-Pair CU, Plenum
	DEIP182U	Digital Electricity Copper Cable, 18 AWG, 2-Pair CU, Plenum
	DHIP162USD06J	Digital Electricity Hybrid Cable, 16 AWG, 2-Pair CU, 6f, OS2, Distribution, 4.5 mm Sub, Plenum
	DHIP182USD06J	Digital Electricity Hybrid Cable, 18 AWG, 2-Pair CU, 6f, OS2, Distribution, 4.5 mm Sub, Plenum
* Gel-filled options are available.		
Assemblies and Cordsets		
 MPO Pre-Terminated Assemblies**	FMSMMB1010MPMEY	FX MPO Trunk, OS2, MPO-12(Male To Male), Type-B, 1 MPO (12 Fibers), 10 m, OFNP, Mini-Distribution 4.8 mm (Double Jacket), Fan-Out: 1.0 m x In-Line, Yellow Jacket
	FMSMMBD010MPUEY	FX MPO Trunk, OS2, MPO-12(Male To Male), Type-B, 12 MPO (144 Fibers), 10 m, OFNP, Mini-Distribution (2.0 mm Sub-Units), Fan-Out: 1.0 m x In-Line, Yellow Jacket
	FMSMMB1010MAMEY	FX MPO Trunk, OS2, MPO-12(Male To Male), Type-B, 1 MPO (12 Fibers), 10 m, OFCP (Plenum Armored), Mini-Distribution (3.0 mm Sub-Units), Fan-Out: 1.0 m x In-Line, Yellow Jacket
	FMSMMBD010MAMEY	FX MPO Trunk, OS2, MPO-12(Male To Male), Type-B, 12 MPO (144 Fibers), 10 m, OFCP (Plenum Armored), Mini-Distribution (3.0 mm Sub-Units), Fan-Out: 1.0 m x In-Line, Yellow Jacket
** Many options are available, including OM4. See website or catalog for full offering.		
 FX Patch Cords	FPSLDLDxxxM	FX Patch Cord, OS2, LC Duplex to LC Duplex, xxx m, OFNR, Duplex Zip 2.0 mm, A-To-B, Yellow Jacket
	FP4LDLDxxxM	FX Patch Cord, OM4, LC Duplex to LC Duplex, xxx m, OFNR, Duplex Zip 2.0 mm, A-To-B, Erika Violet Jacket
Note: xxx denotes length in meters		
 Splice-On Connectors	FTSLC900FS01	FX Fusion Splice-On Connector, OS2, LC Simplex, 900 µm Tight Buffer, Blue Housing
	FT4LC900FS01	FX Fusion Splice-On Connector, OM4, LC Simplex, 900 µm Tight Buffer, Erika Violet Housing

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	Belden Part Number	Description
Patch Panels, Adapters and Cassettes		
 FX ECX Housings	ECX-01U	FX ECX 1U Fiber Patch Panel Housing
	ECX-02U	FX ECX 2U Fiber Patch Panel Housing
	ECX-04U	FX ECX 4U Fiber Patch Panel Housing
 FX ECX Accessories	ECX-BRKTMTNT-0	FX ECX 4U Rack-Mounting Bracket, Flush
	ECX-LOCKKIT	FX ECX Door Lock Kit
 FX ECX Splice Cassettes	FCSX12LDFP	FX ECX Pre-Loaded Splice Cassette, OS2, LC Duplex, 12-Port, 24f, Blue Adapters
	FCSX03SDFP	FX ECX Pre-Loaded Splice Cassette, OS2, SC Duplex, 3-Port, 6f, Blue Adapters
	FCSX06SDFP	FX ECX Pre-Loaded Splice Cassette, OS2, SC Duplex, 6-Port, 12f, Blue Adapters
 DCX Pre-Terminated Adapter Frames	FFSD06LDMFAB	DCX Pre-Terminated Adapter Frames (MPO-LC), OS2, 6-Port, LC Duplex, MPO-12 (12f) Female, Type-A, Blue Adapters
	FFSD06LDMF1B	DCX Pre-Terminated Adapter Frames (MPO-LC), OS2, 6-Port, LC Duplex, MPO-12 (12f) Female, Type-A Alternate, Blue Adapters
	FF4D06LDMFAE	DCX Pre-Terminated Adapter Frames (MPO-LC), OM4, 6-Port, LC Duplex, MPO-12 (12f) Female, Type-A, Erika Violet Adapters
	FF4D06LDMF1E	DCX Pre-Terminated Adapter Frames (MPO-LC), OM4, 6-Port, LC Duplex, MPO-12 (12f) Female, Type-A Alternate, Erika Violet Adapters
 DCX Splice Cassettes	FCSD06LDFP	DCX Splice Cassette, OS2, 6-Port LC Duplex with 250 µm Pigtails
	FCSD12LDFP	DCX Splice Cassette, OS2, 12-Port LC Duplex with 250 µm Pigtails
	FCSD06LDFS	DCX Splice Cassette, OS2, 6-Port LC Duplex
	FCSD12LDFS	DCX Splice Cassette, OS2, 12-Port LC Duplex
Cabinets and Enclosures		
 FX ECX Wall-Mounts	ECX-02WM	FX ECX Wall-Mount Fiber Enclosure, 2-Module
	ECX-04WM	FX ECX Wall-Mount Fiber Enclosure, 4-Module
	ECX-06WM	FX ECX Wall-Mount Fiber Enclosure, 6-Module
	ECX-01WH	FX ECX Single Cassette Holder
	ECX-DINKIT	DIN Rail Attachment Kit for ECX-01WH
 Racks and Managers	XDR8419-3122836	Four-Post Distribution Rack
	XDR8419-310N	Two-Post Distribution Rack
	BHH 191 UR	Horizontal Manager
	BHV H003	Vertical Manager
 DCX ODF Enclosure	DCXT11-44121-33	DCX ODF Cabinets, Seismic 84x36x15, Left-Right, White, Brush + Top Cable Entry Brackets, Brush + Bottom Cable Entry Brackets, Bifold Plexi Door, Solid Side Panel, Full Rear Panel
	DCXT21-44121-33	DCX ODF Cabinets, Seismic 84x36x15, Right-Left, White, Brush + Top Cable Entry Brackets, Brush + Bottom Cable Entry Brackets, Bifold Plexi Door, Solid Side Panel, Full Rear Panel
 DCX ODF Housing	DCX-384F-LR	DCX Housing, 384-Fiber, Left-Right Cable Flow, 8 Trays, Trunk & Patch Management
	DCX-384F-RL	DCX Housing, 384-Fiber, Right-Left Cable Flow, 8 Trays, Trunk & Patch Management