

CORNING



Central Office

# Design Guide



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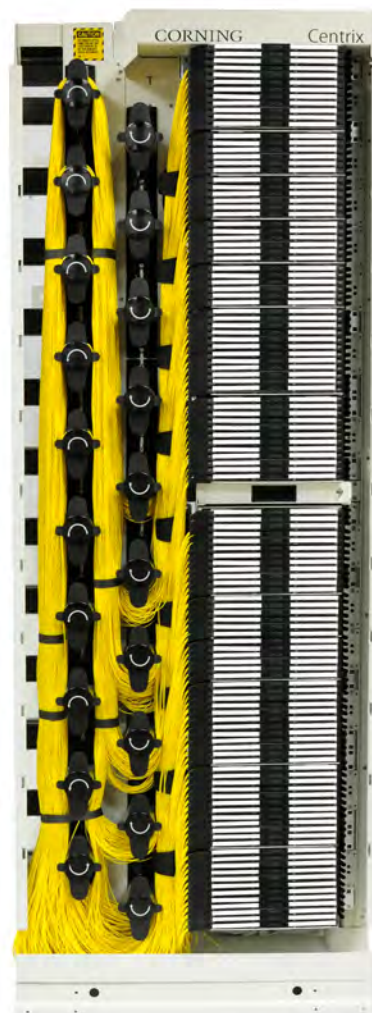
## Central Office Solutions

With reliability in your central office being critical, you need products that provide sophisticated fiber management to meet today's explosion of data services. Our Central Office Design Guide, featuring our Centrix™ system products and solutions, help you identify and implement the right network approach based on your requirements, challenges, and goals.

As you will see in the following pages, our Centrix system combines extreme flexibility and simplicity with the ultimate in density. Central office solutions are available with a variety of splitter, coarse wavelength division multiplexing (CWDM), and dense wavelength division multiplexing (DWDM) options that can be colocated within the same hardware frame, thereby optimizing space. Flexible and scalable hardware also means that, even if there is significant growth in a given network, the central office infrastructure can continue to cope with increased demands and requirements without the need for added space.

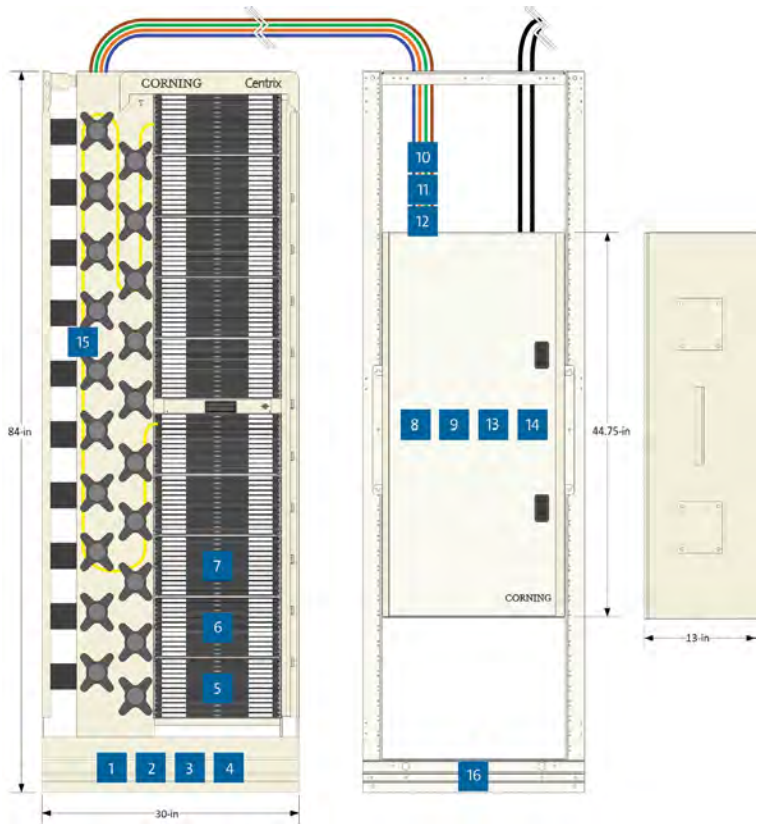
**To learn more about central office solutions, visit [corning.com/ISP](http://corning.com/ISP).**

We are here, ready to help you create a scalable solution that optimizes the capabilities of your unique network.



# Option 1: Centrix™ Stubbed Housing OSP Connection

The Centrix™ standard access frame (item 1,2) offers superior jumper management in a GR-449 frame. With six rear jumper troughs and two columns of jumper routing hubs on the front of the frame, the standard access frame provides spacious jumper management. The service bracket and workshelf (3,4) are accessories that enhance craft work on the frame without having to bring in a cumbersome work table. The optical splice enclosure (OSE) (item 8) is an industry-leading indoor splice enclosure that simplifies cable termination, splicing, and fiber storage. The OSE accepts both indoor and outdoor cables through the top or bottom plates where cables are strain relieved using cable entry kits (10,11,12). Cables are broken out using furcation kits (13,14) and furcation legs are routed into splice trays (9) where they will be spliced during the initial installation or stored for future growth. Stubbed Centrix housings (5,6,7) come in fiber increments ranging from a one-rack unit 72-fiber housing up to a four-rack unit 432-fiber housing. Adding capacity is as simple as installing the housing, pulling the cable stub to the OSE, furcating the cable, and splicing to the OSP cable. This option does require interior wall space or a 23-in rack (16) to mount the OSE. 4-m jumpers (15) are recommended for all cross-connecting within the Centrix frame.



## Advantages

- Easy up-front installation
- Pay-as-you-grow system
- Painless addition of capacity
- Indoor splicing environment

# Option 1: Centrix™ Stubbed Housing OSP Connection

No.	Description/Location	Part Number	Qty.	Spec Sheet	SRP	Video
1	Standard Rear Cable Access Frame, 7-ft	CTX-SA-FRAME-7	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
2	Isolation Ground Pad Kit, rear access frame	CTX-PK-SA	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
3	Centrix™ Cassette Service Bracket	CTX-SERVICE-BKT	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
4	Centrix Frame-Mounted Workshelf	CTX-WORKSHELF	1	<a href="#">Spec Sheet</a>		
5	Centrix 4U Housing, 432F stubbed, 12 cassettes, each cassette with 36 LC UPC adapters, 50 ft (16 m) stub with ALTOS® ribbon riser indoor, gel-free, one cable, standard rear access frame, .93-in cable outer diameter	CX4WW1636A9-Q7001B	2		<a href="#">SRP</a>	<a href="#">Video</a>
6	Centrix 4U Housing, 432F stubbed, 12 cassettes, each cassette with 36 LC APC adapters, 50 ft (16 m) stub with FREEDM® loose tube indoor/outdoor ribbon, one cable, standard rear access frame, 1.09-in cable outer diameter	CX4WW1636B3-QF001B	1		<a href="#">SRP</a>	<a href="#">Video</a>
7	Centrix 4U Housing, 288F stubbed, 12 cassettes, each cassette with 24 SC APC adapters, 50 ft (16 m) stub with FREEDM loose tube indoor/outdoor, riser, gel-free, one cable, standard rear access frame, .63-in cable outer diameter	CX4U816246C-UF001B	1		<a href="#">SRP</a>	<a href="#">Video</a>
8	High-Density OSE, space for 30 OSE splice trays. Four 1-in, (15) 1.375-in, and four 1.9375-in entry ports per plate, stacker for OSE splice trays, with workshelf, standard cable entry, lockable	OSE-HD0-W0-1-L	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
9	Mass Fusion Heat-Shrink Splice Tray, 144F	OSE-ST-3-TQ	11	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
10	OSE Cable Entry Kit .625 to .75-in OD, 1.375-in knockout	OSE-CBL-36	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
11	OSE Cable Entry Kit .875 to 1-in OD, 1.375-in knockout	OSE-CBL-38	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
12	OSE Cable Entry Kit 1- to 1.25-in OD, 1.75-in knockout	OSE-CBL-39	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
13	High-Fiber-Count Furcation Kit E (ALTOS ribbon, six tubes, gel-free)	HFC-FURC-KIT-E	4	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
14	RTV Sealant for blocking the gel in gel-filled cables during the furcation	1102001-01	1	<a href="#">Spec Sheet</a>	N/A	
15a	Jumper, single-mode, SC APC to SC APC, 4 m long, 1.6 mm outer diameter	444401G3116004M	1			<a href="#">Video</a>
15b	Jumper, single-mode, LC APC to LC APC, 4 m long, 1.6 mm outer diameter	222201G3116004M	1			<a href="#">Video</a>
15c	Jumper, single-mode, LC UPC to LC UPC, 4 m long, 1.6 mm outer diameter	020201G3116004M	1			<a href="#">Video</a>
16	Unequal Flange - 23-in frame, 7-ft high	UDF-ERO-23E-07-035	1			

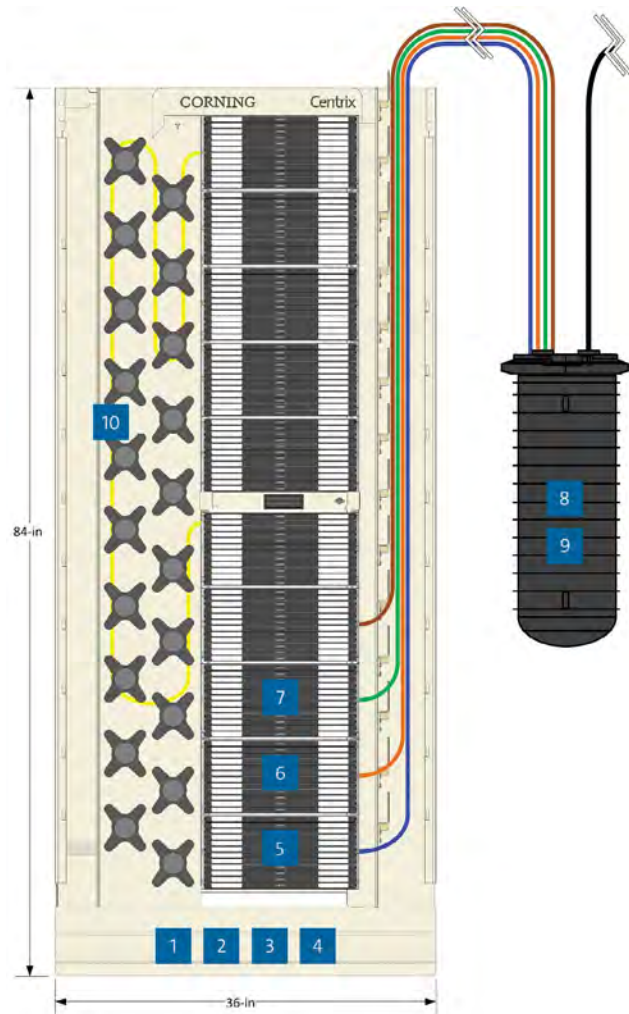
Please refer to the numbered diagram on previous page.

## Option 2: Front Access Centrix™ Stubbed Housing OSP Connection

The Centrix™ front access frame (items 1,2) offers superior jumper management in a compact front access frame. All work in the Centrix FA frame takes place from the front making it possible for the 1-ft deep frame to be mounted against a wall. The service bracket and workshelf (3,4) are accessories that enhance craft work on the frame without having to bring in a cumbersome work table. Front access stubbed Centrix housings (5,6,7) come in fiber increments ranging from a one-rack unit 72-fiber housing up to a four-rack unit 432-fiber housing. Splicing will take place in an outdoor splice closure (9,10). Using closures to complete the connection between inside plant fiber and outside plant fiber will require planning to make sure there is sufficient room in the outdoor duct. This option offers scalability and the ability to defer capital investment because unused fiber can be coiled up inside the closure for termination later when needed. 4-m jumpers (10) are recommended for all cross-connecting within the Centrix front access frame.

### Advantages

- Easy up-front installation
- Pay-as-you-grow system
- Smaller indoor footprint



## Option 2: Front Access Centrix™ Stubbed Housing OSP Connection

No.	Description/Location	Part Number	Qty.	Spec Sheet	SRP	Video
1	Front Cable Access Frame, 7-ft	CTX-FA-FRAME-7	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
2	Isolation Ground Pad Kit, front access frame	CTX-PK-FA	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
3	Centrix™ Cassette Service Bracket	CTX-SERVICE-BKT	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
4	Centrix Frame-Mounted Workshelf	CTX-WORKSHELF	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
5	Centrix 4U Housing, 432F stubbed, 12 cassettes, each cassette with 36 LC UPC adapters, 300 ft (92 m) stub FREEDM loose tube indoor/outdoor ribbon, one cable, front access frame, 1.09-in cable outer diameter	CX4WW9236A9-QF001R	2		<a href="#">SRP</a>	<a href="#">Video</a>
6	Centrix 4U Housing, 432F stubbed, 12 cassettes each cassette with 36 LC APC adapters, 300-ft (92 m) stub with FREEDM® loose tube indoor/outdoor ribbon, one cable, front access frame, 1.09-in cable outer diameter	CX4WW9236B3-QF001R	1		<a href="#">SRP</a>	<a href="#">Video</a>
7	Centrix 4U Housing, 288F stubbed, 12 cassettes, each cassette with 24 SC APC adapters, 300-ft (92 m) stub with FREEDM loose tube indoor/outdoor, riser, gel-free, one cable, front access frame, .63-in cable outer diameter	CX4U892246C-UF001R	1		<a href="#">SRP</a>	<a href="#">Video</a>
8	Fiber Optic Splice Closure, 2178-XL	2178-XL-8G	2	<a href="#">Spec Sheet</a>		
9	Splice Tray with stackable, fiber entry/exit both ends of tray, positionable splice holders	2543	11			
10a	Jumper, single-mode, SC APC to SC APC, 4 m long, 1.6 mm outer diameter	444401G3116004M	1			<a href="#">Video</a>
10b	Jumper, single-mode, LC APC to LC APC, 4 m long, 1.6 mm outer diameter	222201G3116004M	1			<a href="#">Video</a>
10c	Jumper, single-mode, LC UPC to LC UPC, 4 m long, 1.6 mm outer diameter	020201G3116004M	1			<a href="#">Video</a>

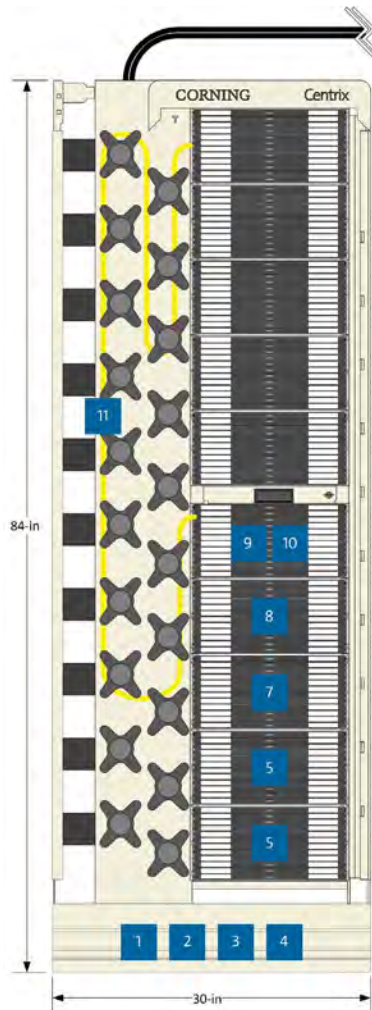
Please refer to the numbered diagram on previous page.

## Option 3: Centrix™ Splice Cassettes

Outside plant cables are broken out using furcation kits (item 12,13) and strain relieved to Centrix™ housings using universal cable clamps. If cables have a fiber count greater than 432 fibers, the furcation legs will be routed to more than one splice housing (5,6,7,8). Splicing then takes place in the splice cassettes. If OSP cables are not spliced upon being pulled into the building, they will need to be stored in cable racks until time comes to splice them. It is recommended to furcate and splice the total fiber count of a cable at one time, or to store unterminated furcation legs in a suitable housing until the time comes to splice them in splice cassettes. Splice housings come in fiber increments ranging from a one-rack unit 72-fiber housing up to a four-rack unit 432-fiber housing and cassettes can be purchased individually with 24- or 36-fiber counts (9,10). The cassettes can also be purchased preloaded into a housing (5,6,7,8) which reduces ordering complexity. 4-m jumpers (11) are recommended for all cross-connecting within the Centrix standard access frame.

### Advantages

- Indoor splicing environment





## Option 3: Centrix™ Splice Cassettes

No.	Description/Location	Part Number	Qty.	Spec Sheet	SRP	Video
1	Standard Rear Cable Access Frame, 7 ft	CTX-SA-FRAME-7	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
2	Isolation Ground Pad Kit, rear access frame	CTX-PK-SA	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
3	Centrix™ Cassette Service Bracket	CTX-SERVICE-BKT	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
4	Centrix Frame-Mounted Workshelf	CTX-WORKSHELF	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
5	Centrix 4U Splice Housing, 288F, 12 cassettes, each cassette with 24 SC APC adapters, SM pigtails, ribbon standard SM pigtails	CX4U8P24-6C-2RJ000	2		<a href="#">SRP</a>	<a href="#">Video</a>
6	Centrix 4U Splice Housing, 432F, 12 cassettes, each cassette with 36 LC APC adapters, SM pigtails, ribbon standard SM pigtails	CX4WWP36-B3-2RJ000	1		<a href="#">SRP</a>	<a href="#">Video</a>
7	Centrix 4U Splice Housing, 288F, 12 cassettes, each cassette with 24 SC UPC adapters, SM pigtails, 250 μm standard SM pigtails	CX4U8P24-3C-2RH000	1		<a href="#">SRP</a>	<a href="#">Video</a>
8	Centrix 4U Splice Housing, 432F, 12 cassettes, each cassette with 36 staggered LC UPC adapters, SM pigtails, 250 μm standard SM pigtails	CX4WWP3S-A9-2RH000	1		<a href="#">SRP</a>	<a href="#">Video</a>
9	Centrix 4U Housing, 12 cassette positions, empty	CTX-S4U	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
10	Centrix Splice Cassette with 36 LC UPC adapters and SM pigtails, ribbon standard SM pigtails	CTXCPP36-A9-2RJ000	12	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
11a	Jumper, single-mode, SC APC to SC APC, 4 m long, 1.6 mm outer diameter	444401G3116004M	1			<a href="#">Video</a>
11b	Jumper, single-mode, LC APC to LC APC, 4 m long, 1.6 mm outer diameter,	222201G3116004M	1			<a href="#">Video</a>
11c	Jumper, single-mode, LC UPC to LC UPC, 4 m long, 1.6 mm outer diameter	020201G3116004M	1			<a href="#">Video</a>
12	Furcation for gel-filled/gel-free UltraRibbon™ cables, 288F-864F (one kit per cable end and uses epoxy). Please see SRP to determine quantity needed for your application and contact customer care at (828) 901-5000 for SRP generation for your application.	HFC-FURC-KIT-A	2		<a href="#">SRP</a>	
13	High-Fiber-Count Furcation Kit E (ALTOS® ribbon, six tubes, gel-free)	HFC-FURC-KIT-E	11		<a href="#">SRP</a>	

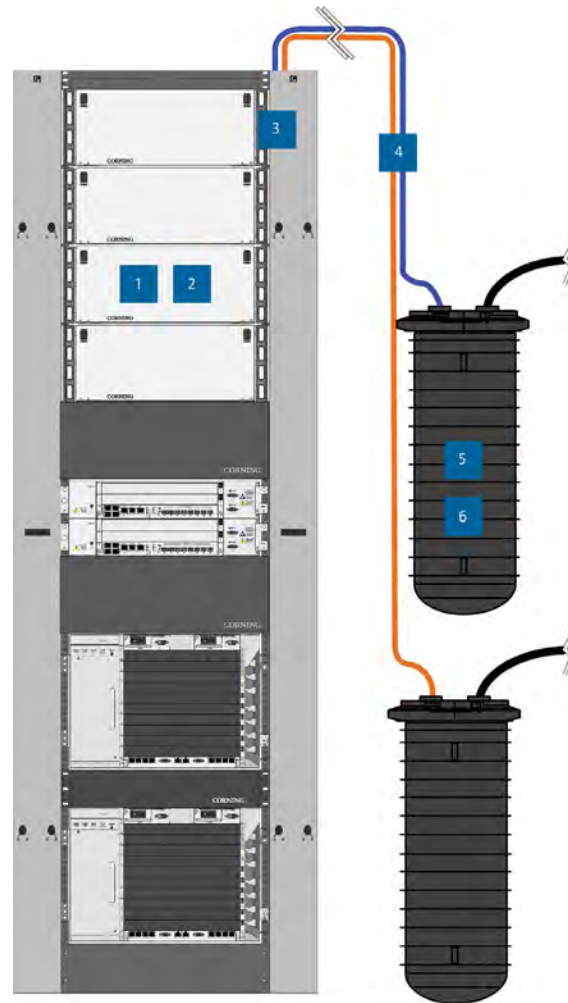
Please refer to the numbered diagram on previous page.

## Option 4: Centrix™ Stubbed MTP® Solution

The easiest method to connect to the outside plant cable uses preconnectorized 864-F MTP®/MPO trunk cable (item 4) to connect the inside plant to the outside plant (OSP). Centrix™ enclosed MTP housings (1,2) are mounted to a 19-/23-in rack. The trunk cable is strain relieved using frame-mounted brackets (3) creating a secure environment for the cable furcation legs. The furcation legs are plugged into the rear of each Centrix MTP cassette and the stub end of the cable is spliced to OSP cables in a closure up to 1,500-ft away from the rack.

### Advantages

- Quick inside plant connection
- No bulky hardware stored in the cable reel
- 864-fiber count per cable occupies less space in wall penetrations and ducts
- Gel-free cable enables faster and cleaner splicing in closures



## Option 4: Centrix™ Stubbed MTP® Solution

No.	Description/Location	Part Number	Qty.	Spec Sheet	SRP	Video
1	Centrix™ Enclosed 4U Housing, 12 cassette positions, empty	CTX-E4U	4	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
2	Centrix Module with 36-port LC UPC three pinned MTP® adapters, OS2, rear access	CTX36A9-893RBR	48	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
3	EDGE™ Solutions Strain-Relief Bracket, accommodating four EDGE solutions clip parking positions	EDGE-CDF-RJ04-BKT	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
4a	Plug & Play™ Indoor/Outdoor 864-F Trunk Cable with 36-in MTP furcation legs/stub end, FREEDM® gel-free ribbon cable, 300 ft	A0090CEGUF0BP300F	2		<a href="#">SRP</a>	
4b	Plug & Play Indoor/Outdoor 864-F Trunk Cable with 36-in MTP furcation legs/stub end, FREEDM gel-free ribbon cable, 500 ft	A0090CEGUF0BP500F	2		<a href="#">SRP</a>	
4c	Plug & Play Indoor/Outdoor 864-F Trunk Cable with 36-in MTP furcation legs/stub end, FREEDM gel-free ribbon cable, 1000 ft	A0090CEGUF0BPA00F	2		<a href="#">SRP</a>	
4d	Plug & Play Indoor/Outdoor 864-F Trunk Cable with 36-in MTP furcation legs/stub end, FREEDM gel-free ribbon cable, 1500 ft	A0090CEGUF0BPF00F	2		<a href="#">SRP</a>	
5	Fiber Optic Splice Closure, 2178-XL	2178-XL-8G	2	<a href="#">Spec Sheet</a>		
6	Splice Tray with stackable, fiber entry/exit both ends of tray, positionable splice holders	2543	11			

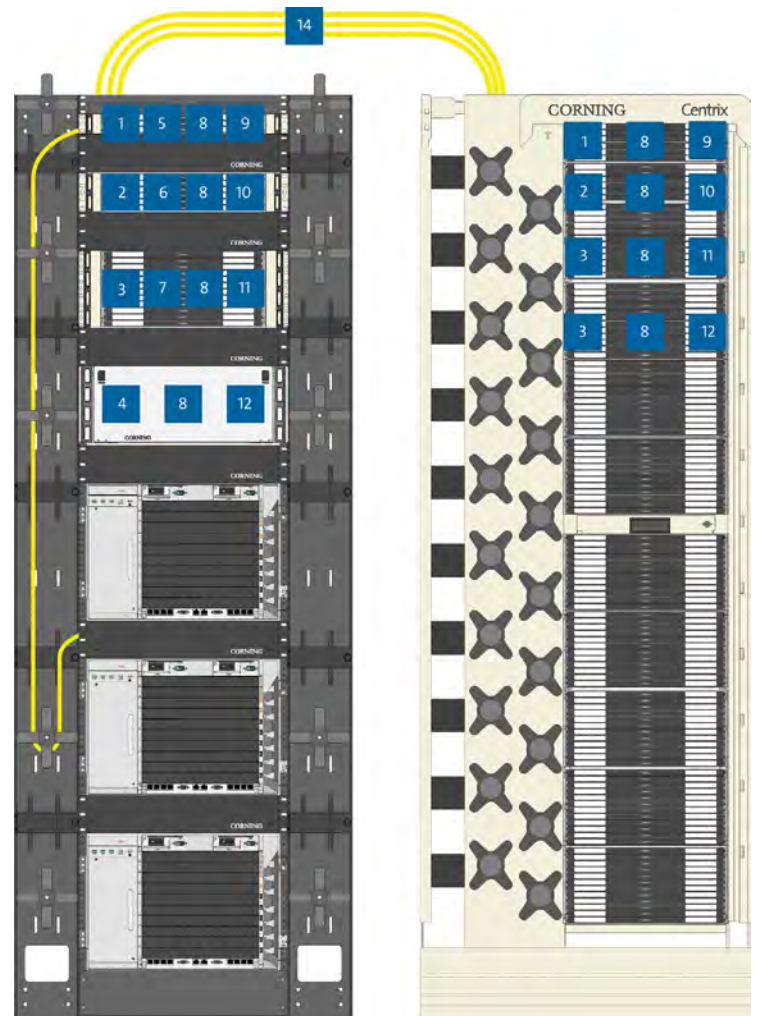
Please refer to the numbered diagram on previous page.

## Option 5: ISP Connection with Centrix™ MTP® Modules

Inside plant port replication is a fast and easy process when using MTP®/MPO connectivity. Instead of running low-fiber-count connections between active gear and the optical distribution frame cross-connect, ISP engineers are using multifiber connector (MTP, MPO) trunk cables (14) to bridge the gap. Corning offers MTP trunk cables in fiber count increments up to 432-F and as long as 1500-ft. The Centrix™ standard 15-in housings (1,2,3) can also be mounted in 19- or 23-in racks with the help of mounting brackets (5,6,7) that have integrated jumper routing guides. Finally, the MTP trunk cables plug into Centrix MTP modules (9-13) to complete the connection. This system can be installed on day one and the active ports can be connected with single-fiber jumpers as capacity is added.

### Advantages

- High-fiber-count trunk cables reduce the number of cable runs in an overhead trough system
- Easier moves, adds, or changes
- Quick connectivity using multifiber connectors (MTP, MPO)



## Option 5: ISP Connection with Centrix™ MTP® Modules

No.	Description/Location	Part Number	Qty.	Spec Sheet	SRP	Video
1	Centrix™ 1U Housing, three cassette positions, empty	CTX-S1U	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
2	Centrix 2U Housing, six cassette positions, empty	CTX-S2U	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
3	Centrix 4U Housing, 12 cassette positions, empty	CTX-S4U	3	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
4	Centrix Enclosed 4U Housing, 12 cassette positions, empty	CTX-E4U	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
5	Centrix Mounting Kit for S1U in a 19-in rack	CTX-KIT-1RU-19CLP	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
6	Centrix Mounting Kit for S2U in a 19-in rack	CTX-KIT-2RU-19CLP	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
7	Centrix Mounting Kit for S4U in a 19-in rack	CTX-KIT-4RU-19CLP	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
8	Centrix Rear Access Frame, rear-mounted MTP® trunk strain-relief bracket	CTX-KIT-S4U-MTP-SR	8	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
9	Centrix Module with 24-port SC APC two pinned MTP adapters, OS2, rear access	CTX246C-892RBR	6	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
10	Centrix Module with 24-port LC APC two pinned MTP adapters, OS2, rear access	CTX24B3-892RBR	12	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
11	Centrix Module with 36-port LC UPC three pinned MTP adapters, OS2, rear access	CTX36A9-893RBR	16	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
12	Centrix Module with 36-port staggered LC UPC three pinned MTP adapters, OS2, rear access	CTX3SA9-893RBR	24		<a href="#">SRP</a>	
13	Centrix Module with 36-port MM LC UPC three pinned MTP adapters, OM4, rear access	CTX36AD-933QBR	0		<a href="#">SRP</a>	
14a	72F MTP (non-pinned)/MTP (non-pinned), 10 m furcation to furcation, non-armored plenum rated, 33-in (+/- 3 in) leg length straight-through polarity	G909072GPNDDP010M	1			
14b	144F MTP (non-pinned)/MTP (non-pinned), 20 m furcation to furcation, non-armored plenum rated, 33-in (+/- 3 in) leg length straight-through polarity	G9090E4GPNDDP020M	1			
14c	288F MTP (non-pinned)/MTP (non-pinned), 30 m furcation to furcation, non-armored plenum rated, 33-in (+/- 3 in) leg length straight-through polarity	G9090U8GPNDDP030M	1			
14d	432F MTP (non-pinned)/ MTP (non-pinned), 40 m furcation to furcation, non-armored plenum rated, 33-in (+/- 3 in) leg length straight-through polarity	G9090AKGPNDDP040M	1			

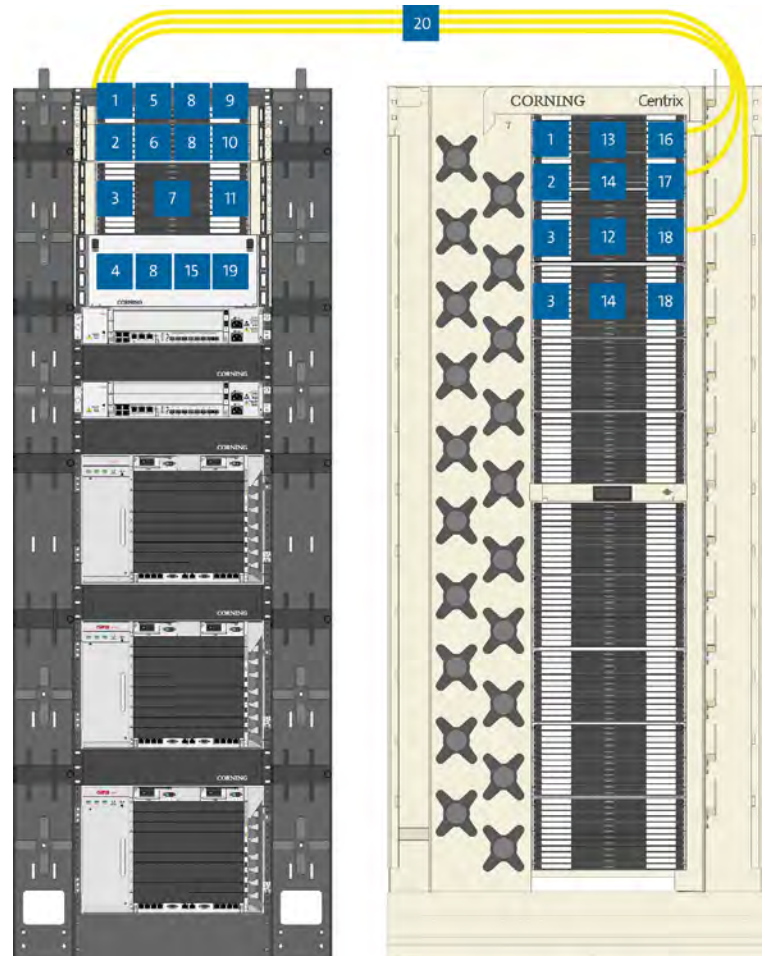
Please refer to the numbered diagram on previous page.

## Option 6: ISP Connection with Front Access Centrix™ MTP® Modules

Inside plant port replication is a fast and easy process when using MTP®/MPO connectivity. Instead of running low-fiber-count connections between active gear and the optical distribution frame cross-connect, ISP engineers are using multifiber connector (MTP, MPO) trunk cables (20) to bridge the gap. Corning offers MTP trunk cables in fiber count increments up to 432-F and as long as 1500-ft. The Centrix™ standard 15-in housings (1,2,3) can also be mounted in 19- or 23-in racks with the help of mounting brackets (5,6,7) that have integrated jumper routing guides. Finally, the MTP trunk cables plug into front access Centrix MTP modules (9-15) to complete the connection. There are two variations of front access MTP modules; one with integrated MTP adapters, and the other which requires an external MTP adapter panel (16-19). This system can be installed on day one and the active ports can be connected with single-fiber jumpers as capacity is added.

### Advantages

- High-fiber-count trunk cables reduce the number of cable runs in an overhead trough system
- Easier moves, adds, or changes
- Quick connectivity using multifiber connectors (MTP, MPO)



# Option 6: ISP Connection with Front Access Centrix™ MTP® Modules

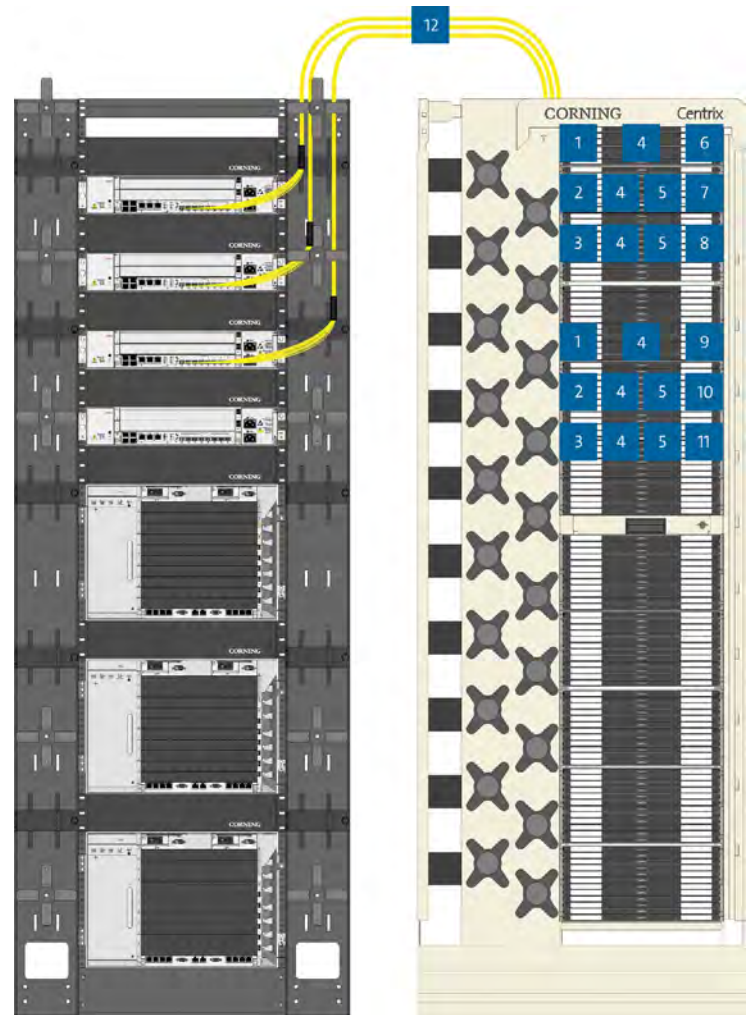
No.	Description/Location	Part Number	Qty.	Spec Sheet	SRP	Video
1	Centrix™ 1U Housing, three cassette positions, empty	CTX-S1U	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
2	Centrix 2U Housing, six cassette positions, empty	CTX-S2U	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
3	Centrix 4U Housing, 12 cassette positions, empty	CTX-S4U	3	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
4	Centrix Enclosed 4U Housing, 12 cassette positions, empty	CTX-E4U	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
5	Centrix Mounting Kit for S1U in a 19-in rack	CTX-KIT-1RU-19CLP	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
6	Centrix Mounting Kit for S2U in a 19-in rack	CTX-KIT-2RU-19CLP	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
7	Centrix Mounting Kit for S4U in a 19-in rack	CTX-KIT-4RU-19CLP	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
8	Centrix Rear Access Frame, rear mounted MTP® trunk strain-relief bracket	CTX-KIT-S4U-MTP-SR	4	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
9	Centrix Module with 36-port LC UPC 3 integrated pinned MTP adapters, OS2, rear access	CTX36A9-893RBR	3	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
10	Centrix Module with 36-port staggered LC UPC three integrated pinned MTP adapters, OS2, rear access	CTX3SA9-893RBR	6		<a href="#">SRP</a>	
11	Centrix Module with 24-port LC APC two integrated pinned MTP adapters, OS2, front right access	CTX24B3-892RRR	12	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
12	Centrix Cassette with 24 SC APC adapters which terminate with (2), 2-m MTP adapter leg(s), front right access	CTX2402246C-D9892R	12		<a href="#">SRP</a>	
13	Centrix Cassette with 36 LC APC adapters which terminate with (3), 2-m MTP adapter leg(s), front right access	CTX360236B3-D9893R	3	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
14	Centrix Cassette with 36 LC UPC adapters which terminate with three 2-m MTP adapter leg(s), front right access	CTX360236A9-D9893R	18		<a href="#">SRP</a>	
15	Centrix Cassette with 36 LC UPC adapters which terminate with three 2-m MTP adapter leg(s), rear access	CTX360236A9-D9893B	12		<a href="#">SRP</a>	
16	Front Access Frame, Centrix 1U MTP adapter panel, nine MTP adapters	CTX-KIT-F1U-A889	1		<a href="#">SRP</a>	
17	Front Access Frame, Centrix 2U MTP adapter panel, 18 MTP adapters	CTX-KIT-F2U-M689	1		<a href="#">SRP</a>	
18	Front Access Frame, Centrix 4U MTP adapter panel, 36 MTP adapters	CTX-KIT-F4U-WW89	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
19	Enclosed Housing, right side when viewed from rear, Centrix 4U MTP adapter panel, 36 MTP adapters	<a href="#">CTX-KIT-E4U-R-WW89</a>	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
20a	72F MTP (non-pinned)/MTP (non-pinned), 10 m furcation to furcation, non-armored plenum rated, 33-in (+/- 3 in) leg length, straight-through polarity	G909072GPNDDP010M	1			
20b	144F MTP (non-pinned)/MTP (non-pinned), 20 m furcation to furcation, non-armored plenum rated, 33-in (+/- 3 in) leg length, straight-through polarity	G9090E4GPNDDP020M	1			
20c	288F MTP (non-pinned)/MTP (non-pinned), 30 m furcation to furcation, non-armored plenum rated, 33-in (+/- 3 in) length, straight-through polarity	G9090U8GPNDDP030M	1			
20d	432F MTP (non-pinned)/MTP (non-pinned), 40 m furcation to furcation, non-armored plenum rated, 33-in (+/- 3 in) leg length straight-through polarity	G9090AKGPNDDP040M	1			

## Option 7: ISP Connection with Centrix™ Patch Panel Cassettes

Inside plant port replication can be accomplished with high-fiber-count, single-fiber connector trunk cables as well. Instead of running low-fiber-count connections between active gear and the optical distribution frame cross-connect, ISP engineers are using multifiber trunk cables (12) to bridge the gap. Corning offers single-fiber connector trunk cables in fiber count increments up to 144F. The Centrix™ standard 15-in housings (1,2,3) are populated with patch panel cassettes (6-11) and trunk cables plug into the adapter bank to complete the connection. It is recommended that this system is connected as active gear capacity is added.

### Advantages

- High-fiber-count trunk cables reduce the number of cable runs in an overhead trough system
- Low-loss port replication with single-fiber connectivity





## Option 7: ISP Connection with Front Access Centrix™ MTP® Modules

No.	Description/Location	Part Number	Qty.	Spec Sheet	SRP	Video
1	Centrix™ 1U Housing, three cassette positions, empty	CTX-S1U	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
2	Centrix 2U Housing, six cassette positions, empty	CTX-S2U	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
3	Centrix 4U Housing, 12 cassette positions, empty	CTX-S4U	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	<a href="#">Video</a>
4	Centrix Rear Access Frame, rear-mounted MTP® trunk strain-relief bracket	CTX-KIT-S4U-MTP-SR	6	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
5	Centrix Housing Cable Strain-Relief, bracket only	CTX-KIT-SR-SA	3		<a href="#">SRP</a>	
6	Centrix Patch Panel Cassette with 24-port SC APC rear entry	CTXCA24-6CB	3	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
7	Centrix Patch Panel Cassette with 24-port SC UPC rear entry	CTXCA24-3CB	6	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
8	Centrix Patch Panel Cassette with 24-port LC APC front right entry	CTXCA24-B3R	12	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>	
9	Centrix Patch Panel Cassette with 36-port LC UPC rear entry	CTXCA36-A9B	3		<a href="#">SRP</a>	
10	Centrix Patch Panel Cassette with 36-port staggered LC APC rear entry	CTXCA3S-B3B	6		<a href="#">SRP</a>	
11	Centrix Patch Panel Cassette with 36-port staggered LC UPC rear entry	CTXCA3S-A9B	12		<a href="#">SRP</a>	
12a	24-F Simplex SC UPC/Simplex SC UPC, 15-m(s), OS2, plenum-rated indoor cable	585824GD9LLC015M	1		<a href="#">Spec Sheet 2</a>	
12b	36-F Simplex SC APC/Simplex SC APC, 20-m(s), OS2, plenum-rated indoor cable	444436GD9LLC020M	1		<a href="#">Spec Sheet 2</a>	
12c	48-F Simplex LC UPC/Simplex LC UPC, 25-m(s), OS2	020248GD9LLC025M	1		<a href="#">Spec Sheet 2</a>	
12d	72-F Simplex LC APC/Simplex LC APC, 30-m(s), OS2, plenum-rated indoor cable	222272GD9LLC030M	1		<a href="#">Spec Sheet 2</a>	

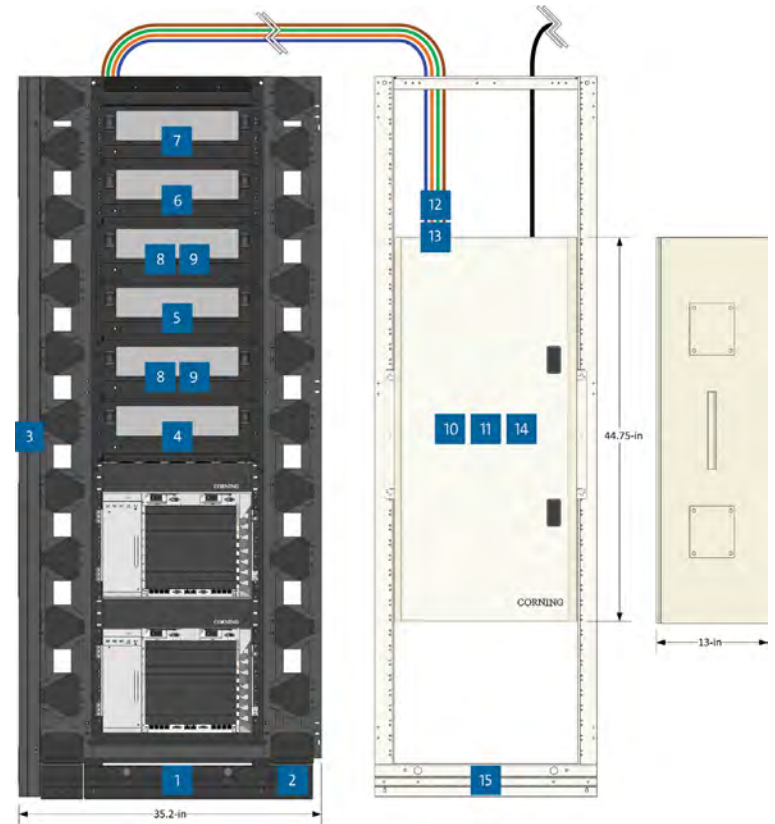
Please refer to the numbered diagram on previous page.

## Option 8: OSP Connection with Eclipse® Stubbed Housings

The Eclipse® frame (item 1,2,3) offers enhanced jumper management in a Zone-4 earthquake-rated frame. The Eclipse system is a perfect fit for environments where high connector and jumper density is not important. The optical splice enclosure (OSE) (item 8) is an industry-leading indoor splice enclosure that simplifies cable termination, splicing, and fiber storage. The OSE accepts both indoor and outdoor cables through the top or bottom plate where cables are strain relieved using cable entry kits (12,13). Cables are broken out using furcation kits (14) and furcation legs are routed into splice trays (11) where they will be spliced during the initial installation or stored for future growth. Stubbed Eclipse housings (4,5,6,7) come in fiber increments ranging from a one-rack unit 24-fiber housing up to a four-rack unit 144-fiber housing. Adding capacity is as simple as installing the housing, pulling the cable stub to the OSE, furcating the cable, and splicing to the OSP cable. Eclipse splitter housings and modules (8,9) can be added to an Eclipse frame to complete any ISP splitting needed for the optical distribution system. This option does require interior wall space or a 23-in rack (16) to mount the OSE.

### Advantages

- Easy up-front installation
- Pay-as-you-grow system
- Painless addition of capacity
- Indoor splicing environment



## Option 8: Eclipse® Stubbed Housing OSP Connection

No.	Description/Location	Part Number	Qty.	Spec Sheet	SRP
1	Eclipse® Frame, 7-ft with top and bottom shelves, 19-in wide, Zone 4 rated	ECL-BAY-7-Z4	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
2	Interbay Storage Unit, dual sided with mandrels	ECL-IBD-7-1	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
3	7-Ft End Cap for use with ECL-IBD-7-1	ECL-EC-7	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
4	Four-Rack Unit, 144-fiber housing, 12 connectors per panel, SC UPC, 15-m stub, ALTOS® loose tube .62-in outer diameter, gel-free, (OS2)	ECL4151259-U4001B	1		<a href="#">SRP</a>
5	Four-Rack Unit, 144-fiber housing, 12 connectors per panel, SC APC, 20-m stub, FREEDM® loose tube riser .7-in outer diameter, gel free, (OS2)	ECL42012D9-UF001B	1		<a href="#">SRP</a>
6	Four-Rack Unit, 144-fiber housing, 12 connectors per panel, LC UPC, 25-m stub, SST-Ribbon™ all-dielectric OSP .66-in outer diameter, (OS2)	ECL42512A9-C4001B	1		<a href="#">SRP</a>
7	Four-Rack Unit, 144-fiber housing, 12 connectors per panel, LC APC, 30-m stub, FREEDM ribbon plenum indoor/outdoor cable, .54-in outer diameter, (OS2)	ECL43012B3-CF001B	1		<a href="#">SRP</a>
8	Eclipse® Hardware Gen III FTTx Module Housing, four-rack units, equipped with nine Gen III splitter adapters, two ECL-CP-SCPARK parking lots, and one 12 F SC APC duplex connector panel, single-mode (OS2)	ECL-GEN3-U8-MH4U	2		<a href="#">SRP</a>
9a	1 x 32 SC APC Input/Output GEN III Splitter	UMB1CC6CZ6C21132	9	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
9b	1 x 64 SC APC Input/Output GEN III Splitter	UMB1CC6CZ6C21164	5		<a href="#">SRP</a>
9c	Dual 2 x 16 SC APC Input/Output GEN III Splitter	UMB1CC6CZ6C22116	4	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
10	High-Density OSE, space for 30 OSE splice trays. (4) 1-in, (15) 1.375-in, and (4) 1.9375-in, entry ports per plate, stacker for OSE splice trays, with workshelf, standard cable entry, lockable	OSE-HD0-W0-1-L	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
11a	48F Single-Fiber Heat-Shrink Fusion Splice Tray	OSE-ST-6		<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
11b	144F Mass Fusion Heat-Shrink Splice Tray	OSE-ST-3-TQ	11	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
12	OSE Cable Entry Kit .5 to .625 in OD, 1.375-in knockout	OSE-CBL-35		<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
13	OSE Cable Entry Kit .625 to .75 in OD, 1.375-in knockout	OSE-CBL-36	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
14	Furcation for gel-filled/gel-free Corning central tube ribbon cables 12-216-F (one kit per cable end)	CHFC-FURC-KIT-C	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
15	Unequal Flange - 23-in frame, 7-ft high	UDF-ERO-23E-07-035	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>

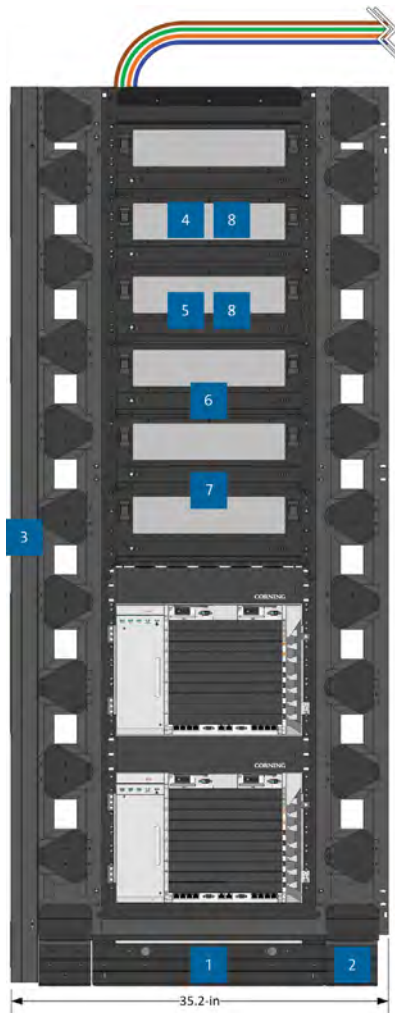
Please refer to the numbered diagram on previous page.

## Option 9: OSP Connection with Eclipse® Splice Housings

Outside plant cables are broken out using furcation kits (item 8) and strain relieved to Eclipse® housings using universal cable clamps. If cables have a fiber count greater than 144 fibers, the furcation legs will be routed to more than one splice housing (4,5,6,7,8). Splicing then takes place in the splice cassettes. If OSP cables are not spliced upon being pulled into the building, they will need to be stored in cable racks until time comes to splice them. It is recommended to furcate and splice the total fiber count of a cable at one time, or to store unterminated furcation legs in a suitable housing until the time comes to splice them in splice cassettes. Splice housings come in fiber increments ranging from a one-rack unit 24-fiber housing up to a four-rack unit 144-fiber housing.

### Advantages

- Indoor splicing environment



## Option 9: OSP Connection with Eclipse® Splice Housings

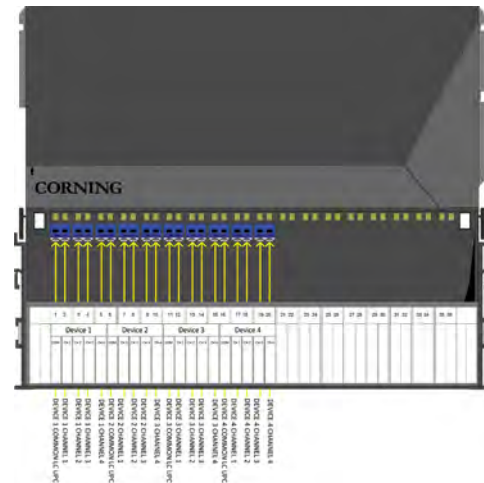
No.	Description/Location	Part Number	Qty.	Spec Sheet	SRP
1	Eclipse® Frame, 7-ft with top and bottom shelves, 19-in wide, Zone 4 rated	ECL-BAY-7-Z4	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
2	Interbay Storage Unit, dual sided with mandrels	ECL-IBD-7-1	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
3	7-Ft End Cap for use with ECL-IBD-7-1	ECL-EC-7	1	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>
4	4RU, 144-fiber housing, 12 connectors per panel, SC UPC, ribbon 3 m tails, four SCF-ST-077 splice trays (OS2)	ED4E4P12-59-3RJ4RO	1		<a href="#">SRP</a>
5	4RU, 144-fiber housing, 12 connectors per panel, SC APC, ribbon 3 m tails, four SCF-ST-077 splice trays (OS2)	ED4E4P12-D9-3RJ4RO	1		<a href="#">SRP</a>
6	4RU, 144-fiber housing, 12 connectors per panel, LC UPC, 900 μm 3 m tails, four SCF-ST-077 splice trays (OS2)	ED4E4P12-A9-3RN4RO	1		<a href="#">SRP</a>
7	4RU, 144-fiber housing, 12 connectors per panel, LC APC, 900 μm 3 m tails, four SCF-ST-077 splice trays (OS2)	ED4E4P12-B3-3RN4RO	1		<a href="#">SRP</a>
8	Furcation for gel-filled/gel-free Corning central tube ribbon cables 12-216-F (one kit per cable end)	HFC-FURC-KIT-C	2	<a href="#">Spec Sheet</a>	<a href="#">SRP</a>

Please refer to the numbered diagram on previous page.

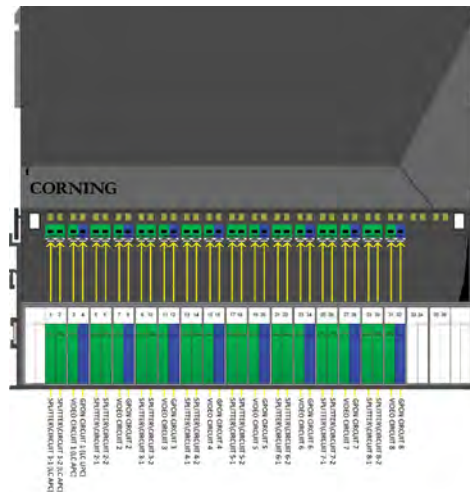
# Option 10: Centrix™ Passive Optical Devices

As telecom bandwidth demand increases, new network designs are needed to accommodate new bandwidth demands. Next-generation PONs (NGPON2, XGS, etc.) offer greater bandwidth at different wavelengths. Corning has coexistence devices that allow operators to deploy Corning has coexistence devices that allow operators to deploy next-generation PONs on the same optical distribution network as existing GPON. In addition, our expertise in filter design provides customized versions of the coexistence units to address local, specific needs. Centrix™ is a perfect platform to deploy next-gen PON technology. The Centrix system can accommodate several passive devices in clearly labeled cassettes to maintain the ultra-high connector density that makes the Centrix platform so valuable.

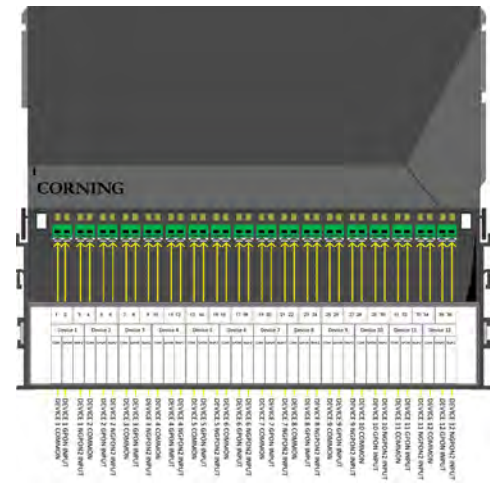
WM1 Module - Centrix LC UPC  
Cassette, (4 devices, 20 ports)



2x2 Splitter Module (Common 1,  
Common 2, RF Video, GPON) -  
Centrix Hybrid LC APC/LC UPC,  
(8 devices, 32 ports)



CEx1-GPON-NGPON2 Module -  
Centrix Hybrid LC APC/LC UPC,  
(12 devices, 36 ports)



## Option 10: Centrix™ Passive Optical Devices

No.	Description/Location	Part Number	Qty.	Spec Sheet	SRP
1	WM1 Module - Centrix™ LC UPC Cassette, (4 devices, 20 ports)	CTXWM1A9A90001-04X	2		<a href="#">SRP</a>
2	WDM Module (RF Video and GPON)- Centrix Hybrid LC APC/LC UPC, (12 devices, 36 ports)	CTXCE1B3B30001-12X	2		<a href="#">SRP</a>
3	2x2 Splitter Module (Common 1, Common 2, RF Video, GPON) - Centrix Hybrid LC APC/LC UPC, (8 devices, 32 ports)	CTXCE2B3B30001-08X	3		<a href="#">SRP</a>
4	CEx1-GPON-NGPON2 Module - Centrix Hybrid LC APC/LC UPC, (12 devices, 36 ports)	CTXCE1B3B30002-12X	1		<a href="#">SRP</a>
5	CEx1-GPON-RF Video-NGPON2 Module - Centrix Hybrid LC APC/LC UPC, (9 devices, 36 ports)	CTXCE1B3B30003-09X	1		<a href="#">SRP</a>
6	CEx2-GPON-RF Video-NGPON2 Module - Centrix Hybrid LC APC/LC UPC, (7 devices, 35 ports)	CTXCE2B3B30002-07X	1		<a href="#">SRP</a>

Please refer to the numbered diagram on previous page.



# CORNING

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