Centrix™ System

CORNING

Features and Benefits

Supports 4,320 LC or 2,880 SC ports per frame
Saves space through increased port density

Available in rear cable access
Designed in compliance with GR-449-CORE, Issue 3 standards

Modular cassette design
Enables one platform for many application spaces e.g. central office, headend, FTTx, FTTCS and data center

Increased jumper routing space
Supports standard 1.6 and 2.0 mm jumpers (2.0 in a 36 F cassette only)

Available in front cable access
Allows for back-to-back frame configuration

The Centrix™ System is a high–density fiber management system that provides a balance of industry–leading density with innovative jumper routing. The system can be deployed in multiple applications including: central office, headend, FTTx, FTTCS and data center.

Centrix System supports up to 4,320 LC or 2,880 SC connector ports per standard 7–ft frame/2134 mm. The frame design provides optimized routing paths for jumpers, reducing the risk of pileup or entanglement. A single jumper length for an in–frame, cross–connect network design reduces jumper inventory.

At the foundation of the Centrix System is a single, modular cassette that can be tailored to include a variety of optical devices (splitter, WDM, etc). The modular cassette provides flexibility and functionality within a single frame without sacrificing density. Each cassette contains up to either 24 SC or 36 LC connector adapters. Easy port access is possible due to a sliding cassette with drop–down handle. A 1RU housing will hold 3 cassettes, a 2RU housing will hold 6 cassettes and a 4RU will hold 12 cassettes. Housings can be ordered empty, loaded with cassettes for on-frame splicing or as stubbed assemblies to reduce installation time and risk.

The Centrix System is available with both rear or front cable access. Front cable access allows back-to-back frame configurations or mounting against a wall. Both frame configurations save space through increased port density.

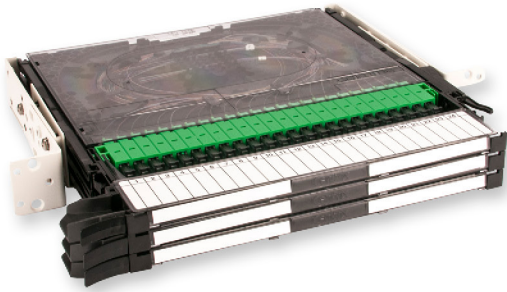| Housing Size	1RU	2RU	4RU
Max. Density - LC	108 F	216 F	432 F
Max. Density - SC	72 F	144 F	288 F
Cassette Capacity	3	6	12
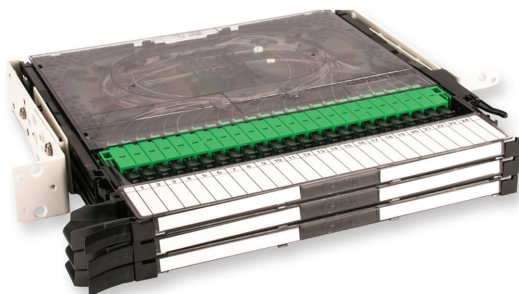
Centrix CTX-S1U Housing with 3 cassettes
| Photo CRR3606
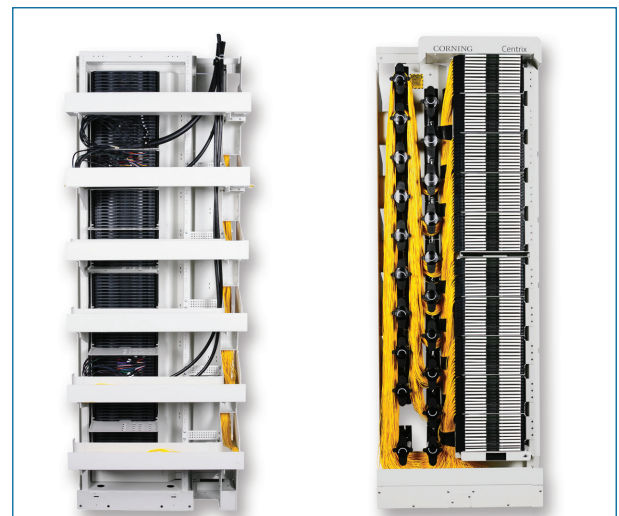
Centrix Frame
| Photos CRR2014; CRR3616

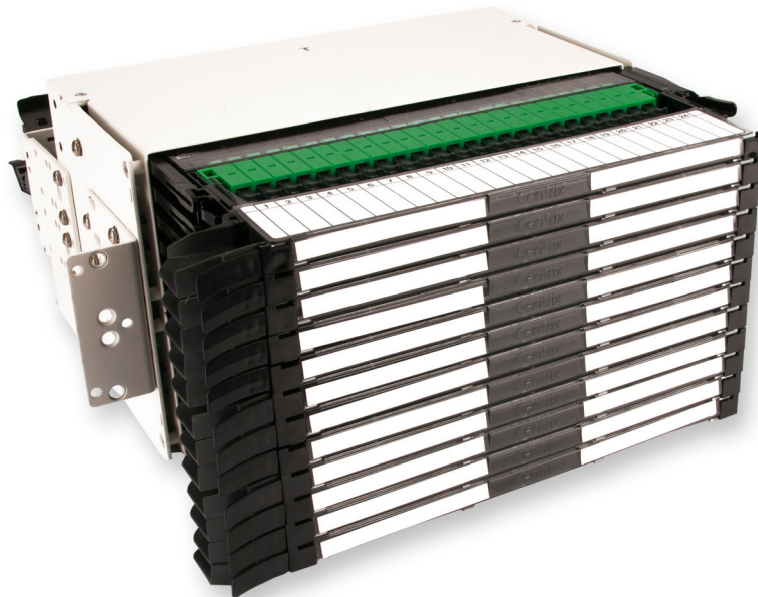CORNING

Centrix™ System

Centrix CTX-S1U Housing with 3 cassettes | Photo CRR3606

Centrix CTX-S2U Housing with 6 cassettes | Photo CRR3608

Centrix CTX-S4U Housing with 12 cassettes | Photo CRR3602

Centrix™ System

Upper jumper trough

Interconnect jumper routing exit point (six additional rear routing troughs included with the rear cable access frame)

Centrix™ 4U housing (10 per 7-ft frame)

Integrated jumper routing guide (extends to the full frame height)

Centrix cassette (120 per frame)

Lower jumper trough

Front Cable Access Frame

Rear Cable Access Frame

Cable Access	Dimensions: H x W x D
Front	84 x 35 x 12 in (2134 x 902 x 305 mm)

Cable Access	Dimensions: H x W x D
Rear	84 x 30 x 24 in (2134 x 762 x 610 mm)

Centrix Frame, Rear and Front Cable Access
| Photos CRR2014, CRR3616

Centrix™ System

Frames, Housings and Cassettes

Centrix™ housings and cassettes are available in several configurations:

Frames:
• Rear Cable Access
• Front Cable Access

Housings:
• Empty
• Loaded with pigtailed cassettes
• Stubbed

Cassettes:
• Loaded with adapters and pigtails
• Loaded with patch panels
• Stubbed with 2 m MTP®
• Loaded with MTP 12-fiber connectors
• Loaded with splitters
• Loaded with WDM's

Centrix 1RU, 2RU and 4RU Housings
| Photo CRR3609

Fiber Capacity					
Adapter Type	Terminations per Cassette	Terminations per Housing Size			Terminations per Frame
		1RU	2RU	4RU	
SC	12, 24	36, 72	72, 144	144, 288	1440 to 2880
LC	24, 36	72, 108	144, 216	288, 432	2880 to 4320

Centrix™ System

Frames

Ordering Information

CTX - ☐☐ - FRAME - 7
      [1]

[1] Select frame options.
   SA = Centrix™ standard frame, rear cable access, 7 ft
   FA = Centrix frame, front cable access, 7 ft

Frame Isolation Pads

Ordering Information

CTX - PK - ☐☐
          [1]

[1] Select frame isolation pads.
   SA = Centrix™ standard frame isolation pad, rear cable access
   FA = Centrix frame isolation pad, front cable access

Ordering Information

Part Number Example	
Part Number	Product Description
CTX-SA-FRAME-7	Centrix™ Standard Rear Cable Access Frame, 7 ft
CTX-SA-FRAME-6	Centrix™ Rear Cable Access Frame, 6 ft (70 inches high)
CTX-FA-FRAME-7	Centrix™ Front Cable Access Frame, 7 ft

Note: Corning recommends using an isolation pad with all installations of Centrix frames.

Centrix™ System

Empty Housings, Rack Mounting

Centrix S1U Housing |
Photo CRR3615

Centrix S2U Housing |
Photo CRR3613

Centrix S4U Housing |
Photo CRR3611

Ordering Information

C T X - ☐ ☐ ☐
      1

1   Defines Centrix™ rack housings.
    S1U = 1RU, 3 cassette housings, empty
    S2U = 2RU, 6 cassette housings, empty
    S4U = 4RU, 12 cassette housings, empty
    E4U = 4RU, 12 cassette enclosed housings, empty

Ordering Information

Part Number Example	
Part Number	Product Description
CTX-S1U	Centrix™ Housing**,** 1U, 3 Cassette Positions Empty
CTX-S2U	Centrix™ Housing**,** 2U, 6 Cassette Positions Empty
CTX-S4U	Centrix™ Housing**,** 4U, 12 Cassette Positions Empty

Centrix™ System

Housings with Cassettes, Adapters and Pigtails for Splicing

Ordering Information

```
C X ☐ ☐☐ P ☐☐ - ☐☐ - 2 R ☐ 0 0 0
    1   2      3      4      5 6 7    8
```
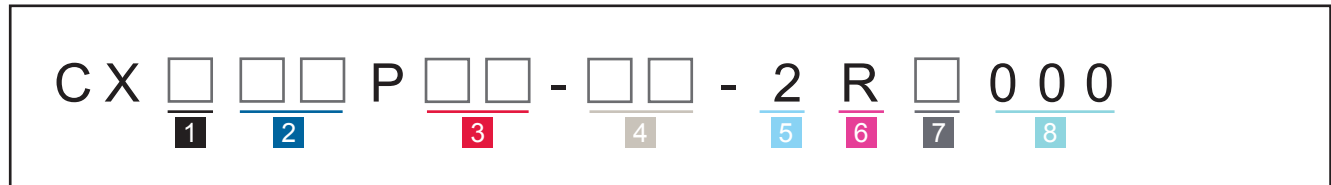
1 Select Centrix housing.
  1 = 1U, up to 3 cassette positions
  2 = 2U, up to 6 cassette positions
  4 = 4U, up to 12 cassette positions

2 Select total fiber count.
  Specify fiber count per options below. *
  Housing - Fiber count 1RU
  36 = 36, 12-fiber cassette
  72 = 72, 24-fiber cassette
  A8 = 108, 36-fiber cassette
  Housing - Fiber count 2RU
  72 = 72, 12-fiber cassette
  E4 = 144, 24-fiber cassette
  M6 = 216, 36-fiber cassette
  Housing - Fiber count 4RU
  E4 = 144, 12-fiber cassette
  U8 = 288, 24-fiber cassette
  WW = 432, 36-fiber cassette

3 Select fiber count per cassette.
  12 = 12 fibers (SC)
  24 = 24 fibers (LC or SC)
  36 = 36 fibers (LC)

4 Select adapter code.
  Single-mode:
  6C = SC APC
  3C = SC UPC
  B3 = LC APC
  A9 = LC UPC

5 Defines pigtail length.
  2 = Standard pigtail

6 Defines pigtail type.
  R = Single-mode (OS2)

7 Select pigtail type.
  J = Ribbon
  H = Single-fiber

8 Defines Centrix splice housing.
  000 = Standard

*Example configurations provided are for fully loaded pigtailed cassette housings; partially loaded pigtailed cassette housings are available and can be ordered by using a total fiber count value of: the number of cassettes multiplied by the fiber count of the cassette configuration requested. The number of cassettes available per housing must agree with selection [1] and the fiber count of the cassette must agree with selections [3] & [4].
Note: Not all part number configurations are available, please confirm availability with a Corning Optical Connectivity Customer Care representative.

Ordering Information

Part Number Example	
Part Number	**Product Description**
CX4U8P24-3C-2RJ000	Centrix™ Splice Housing, 4U, 12 Cassettes each with 24 SC UPC adapters & SM Pigtails, Ribbon standard SM Pigtails, total of 288 F
CX4WWP36-A9-2RJ000	Centrix™ Splice Housing, 4U, 12 Cassettes each with 36 LC UPC adapters & SM Pigtails, Ribbon standard SM Pigtails, total of 432 F
CX172P24-3C-2RH000	Centrix™ Splice Housing, 1U, 3 Cassettes each with 24 SC UPC adapters & SM pigtails, 900 µm standard SM pigtails, total of 72 F

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Stubbed Housings

Ordering Information

CX ☐ ☐☐ ☐☐ ☐☐ ☐☐ - ☐☐ 0 0 ☐ ☐
[1] [2] [3] [4] [5] [6] [7] [8] [9] [10]

1 Select Centrix housing.
1 = 1U, 3 cassette positions
2 = 2U, 6 cassette positions
4 = 4U, 12 cassette positions

2 Select total fiber count.
Specify fiber count per table based on housing size.*
Housing - Fiber count 1RU
36 = 36, 12-fiber cassette
72 = 72, 24-fiber cassette
Housing - Fiber count 2RU
72 = 72, 12-fiber cassette
E4 = 144, 24-fiber cassette
M6 = 216, 36-fiber cassette
Housing - Fiber count 4RU
E4 = 144, 12-fiber cassette
U8 = 288, 24-fiber cassette
WW = 432, 36-fiber cassette
*108 F not available.

3 Select stub length.
16 = 16 m (50 ft)
31 = 31 m (100 ft)
61 = 61 m (200 ft)
92 = 92 m (300 ft)

4 Select fiber count per cassette.
12 = 12 fibers (SC)
24 = 24 fibers (LC or SC)
36 = 36 fibers (LC)

5 Select adapter code.
Single-mode:
6C = SC APC
3C = SC UPC
B3 = LC APC
A9 = LC UPC

6 Defines fiber type.
- = Single-mode (OS2)

7 Select cable type.
C7 = Ribbon riser, indoor, 12 F ribbons, single tube, water-swellable, 216 F
U4 = ALTOS dielectric, Fast Access, loose tube outdoor, gel-free up to 288 F
UF = FREEDM loose tube indoor/outdoor riser gel-free up to 288 F
M4 = MiniXtend loose tube gel-filled to 144 F

7 Select cable type.
81 = Unitized MIC riser cable, buffered up to 144 F
Q4 = ALTOS outdoor ribbon dielectric, gel-free, 288 to 432 F
QF = FREEDM loose tube indoor/outdoor gel-free, water-swellable tape, 288 to 432 F
Q7 = Ribbon riser, indoor, 12 F ribbons, single tube, water-swellable, 288 to 432 F

8 Defines special configuration.
00 = Standard

9 Select the number of cables.**
1 = One cable (standard)
2 = Two cables with full fiber count divided evenly
**Two cables only available for rear cable entry.

10 Select cable entry direction.
B = Right, when viewed from the rear (standard)
R = Right, when viewed from the front (Only an option for a front access frame)

Not all part number configurations are available, please confirm availability with a Corning Optical Connectivity Customer Care representative.

Ordering Information

Part Number Example	
Part Number	Product Description
CX4U831243C-UF001B	Centrix™ Stubbed 4U Housing, 288 F using (12) 24 port SC UPC cassettes, SM, FREEDM® LT indoor/outdoor gel-free cable, 31 m stub
CX4U831246C-UF001B	Centrix™ Stubbed 4U Housing, 288 F using (12) 24 port SC APC cassettes, SM, FREEDM® LT indoor/outdoor gel-free cable, 31 m stub

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Centrix™ System

Ordering Information

Part Number Example	
Part Number	Product Description
CX4WW1636B3-QF001B	Centrix™ Stubbed 4U Housing, 432 F using (12) 36 port LC APC cassettes, SM, FREEDM® LT ribbon gel-free indoor/outdoor cable, 16 m stub
CX4WW3136A9-QF001B	Centrix™ Stubbed 4U Housing, 432 F using (12) 36 port LC UPC cassettes, SM, FREEDM® LT ribbon gel-free indoor/outdoor cable, 31 m stub

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Pigtail Cassettes

Ordering Information

C T X   C P P ☐☐ - ☐☐ - 2 R ☐ 0 0 0
        [1]   [2]   [3]   [4] [5] [6] [7]
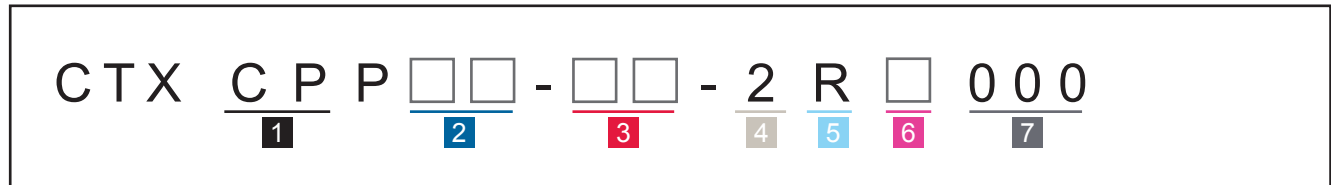
[1] Defines cassette type.
CP = Centrix cassette with adapters and pigtails

[2] Select fiber count per cassette.
12 = 12 fibers (SC)
24 = 24 fibers (LC or SC)
36 = 36 fibers (LC)
3S = 36 fibers staggered (LC only)

[3] Select adapter code.
Single-mode:
6C = SC APC
3C = SC UPC
B3 = LC APC
A9 = LC UPC

[4] Defines pigtail type.
2 = Standard pigtails

[5] Defines fiber type.
R = Single-mode (OS2)

[6] Select pigtail type.
J = Ribbon
H = Single-fiber

[7] Defines optical devices.
000 = No optical devices

Not all part number configurations are available, please confirm availability with a Corning Optical Connectivity Customer Care representative.

Ordering Information

Centrix MTP® Cassettes	
Part Number	Product Description
CTXCPP24-6C-2RH000	Centrix™ Splice Cassette with 24 SC APC adapters & SM Pigtails, MIC 900 µm standard SM
CTXCPP24-3C-2RJ000	Centrix™ Splice Cassette with 24 SC UPC adapters & SM Pigtails, Ribbon standard SM Pigtails
CTXCPP36-A9-2RJ000	Centrix™ Splice Cassette with 36 LC UPC adapters & SM Pigtails, Ribbon standard SM Pigtails
CTXCPP36-B3-2RJ000	Centrix™ Splice Cassette with 36 LC APC adapters & SM Pigtails, Ribbon standard SM Pigtails

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Centrix™ Patch Cassette

Ordering Information

```
C T X C A ☐☐ - ☐☐☐
          1      2   3
```

1 Select total fiber count.*
  12 = 12 fibers (SC)
  24 = 24 fibers (LC or SC)
  36 = 36 fibers (LC)
  * Defined by cable access.

2 Select adapter code.
  Single-mode:
  6C = SC APC
  3C = SC UPC
  B3 = LC APC
  A9 = LC UPC

3 Select cable access type.
  Rear Access*
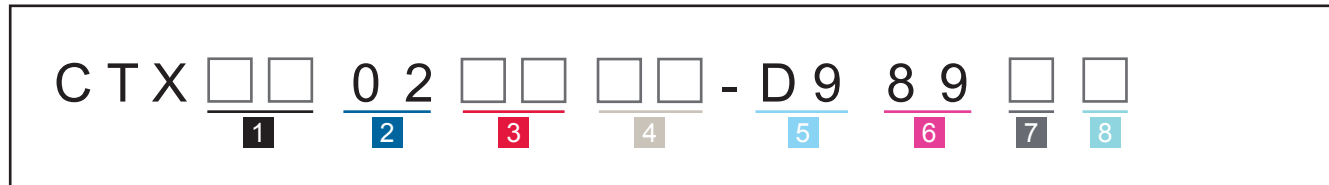 B = Rear access
  Front Access**
  L = Left front access
  R = Right front access

  *Rear Access will allow for 24 SC max or 36 LC max.
  **Front Access will allow for 12 SC max or 24 LC max
  due to front entrance space required.

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Stubbed cassettes with MTP Connector Option

Ordering Information

C T X ☐☐ 0 2 ☐☐ ☐☐ - D 9 8 9 ☐ ☐
   1   2   3   4   5   6   7 8

1 Select fiber count.
- 12 = 12 fibers
- 24 = 24 fibers
- 36 = 36 fibers

2 Defines stub length.
- 02 = For MTP pretermination

3 Select fiber count per cassette.
- 12 = 12 fibers (SC)
- 24 = 24 fibers (LC or SC)
- 36 = 36 fibers (LC)

4 Select adapter code.
Single-mode:
- 6C = SC APC
- 3C = SC UPC
- B3 = LC APC
- A9 = LC UPC

5 Defines cable type.
- D9 = Single-mode, 12 F cable assembly

6 Defines preterminated connector type.
- 89 = MTP pinned (MTP standard)

7 Select stub quantity.
- 1 = One cable stub
- 2 = Two cable stubs
- 3 = Three cable stubs

8 Select cable stub access.
- B = Rear access
- R = Front right access
- L = Front left access

Not all part number configurations are available, please confirm availability with a Corning Optical Connectivity Customer Care representative.

Ordering Information

Part Number Example	
Part Number	Product Description
CTX2402246C-D9892B	Centrix™ Stubbed Cassette, 24 F, SC APC to 2 MTP®, SM, 12 F cable assembly, 2 m
CTX360236A9-D9893B	Centrix™ Stubbed Cassette, 36 F, LC UPC to 3 MTP®, SM, 12 F cable assembly, 2 m
CTX240224B3-D9892B	Centrix™ Stubbed Cassette, 24 F, LC APC to 2 MTP®, SM, 12 F cable assembly, 2 m
CTX240224A9-D9892B	Centrix™ Stubbed Cassette, 24 F, LC UPC to 2 MTP®, SM, 12 F cable assembly, 2 m
CTX360236B3-D9893B	Centrix™ Stubbed Cassette, 36 F, LC APC to 3 MTP®, SM, 12 F cable assembly, 2 m

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Module with Integrated MTP Connector Option

Ordering Information

```
C T X ☐☐ ☐☐ ☐ - ☐☐ ☐ ☐ ☐ ☐
      1   2    3   4  5  6  7
```

1 Select fiber count.
- 24 = 24 fibers (LC or SC)
- 36 = 36 fibers (LC)

2 Select adapter code.
Single-mode:
- 6C = SC APC
- 3C = SC UPC
- B3 = LC APC
- A9 = LC UPC

Multimode:
- AD = LC duplex

3 Select preterminated MTP type.
| **Single-mode:** | **Multimode:** |
| 89 = Pinned | 93 = Pinned |

4 Select MTP quantity.
- 2 = Two for 24 fiber cassettes
- 3 = Three for 36 fiber cassettes

5 Select fiber type.
- R = Single-mode (OS2)
- T = 50 µm multimode (OM3)
- Q = 50 µm multimode (OM4)

6 Select MTP access type.
Rear Access:
- B = Rear access frame

Front Access:
- L = Left MTP adapters
- R = Right MTP adapters
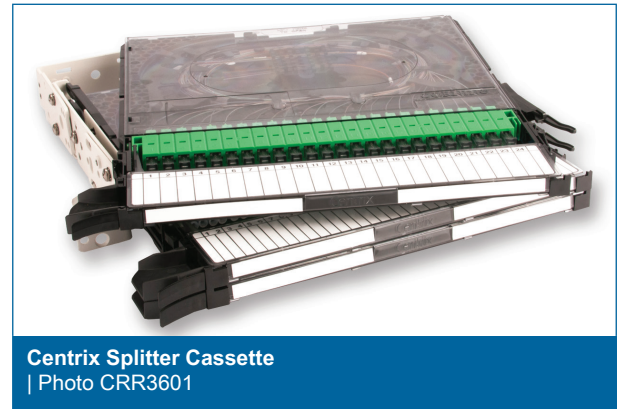
7 Select polarity.
- R = Classic
- U = Universal

Not all part number configurations are available, please confirm availability with a Corning Optical Connectivity Customer Care representative.

Ordering Information

Part Number Example	
Part Number	**Product Description**
CTX24A9-892RRR	CTX Module, 24 port, LC UPC front facings, pinned, 2 MPO adapters, SM, right side front facing MPO adapters, classic polarity
CTX24A9-892RLR	CTX Module, 24 port, LC UPC front facings, pinned, 2 MPO adapters, SM, left side front facing MPO
CTX24B3-892RRR	CTX Module, 24 port, LC APC front facings, pinned, 2 MPO adapters, SM, right side front facing MPO adapters, classic polarity
CTX24B3-892RLR	CTX Module, 24 port, LC APC front facings, pinned, 2 MPO adapters, SM, left side front facing MPO
CTX126C-891RRR	CTX Module, 12 port, SC APC front facings, pinned, 1 MPO adapter, SM, right side front facing MPO
CTX126C-891RLR	CTX Module, 12 port, SC APC front facings, pinned, 1 MPO adapter, SM, left side front facing MPO
CTX36A9-893RBR	CTX Module, 36 port, LC UPC front facings, pinned, 3 MPO adapters, SM, rear facing MPO adapters,

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Splitter Cassettes

Centrix Splitter Cassette
| Photo CRR3601

Ordering Information

C T X C M A 0 0 - ☐☐ - S P ☐ ☐☐☐

1 2 3 4 5 6

1 Defines cassette type, adapters with splitter devices.
   CMA = Centrix cassette with splitter devices

2 Defines reference (future place holder).
   00 = Reference place holder

3 Select adapter code.
   6C = SC APC (24 F max.)
   B3 = LC APC (36 F max.)

4 Defines device type.
   SP = Splitter

5 Select number of devices.
   1, 2, 3, 4, 5, 6, 7, 8*, or 9*
   T = 12*
   1x2 only

6 Select split ratio.
   102 = 1x2
   104 = 1x4
   108 = 1x8
   116 = 1x16
   132 = 1x32

Not all part number configurations are available, please confirm availability with a Corning Optical Connectivity Care representative.

Ordering Information

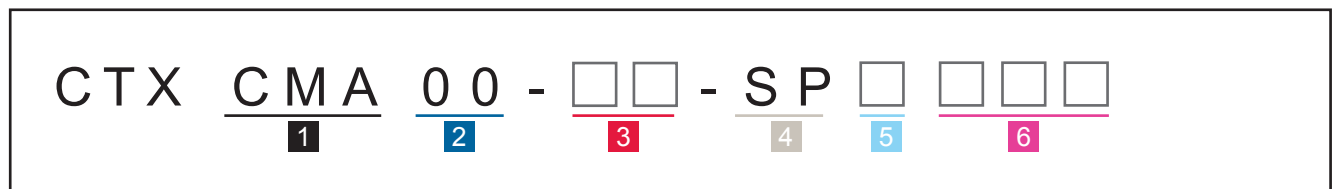| Part Number Example	
Part Number	Product Description
CTXCMA00-B3-SP1132	Centrix™ Splitter Cassette, one 1x32 Splitter, LC APC connectors
CTXCMA00-B3-SP1116	Centrix™ Splitter cassette, one 1x16 Splitter, LC APC connectors
CTXCMA00-6C-SP1116	Centrix™ Splitter cassette, one 1x16 Splitter, SC APC connectors

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Centrix™ System

Coarse Wavelength Division Multiplexing (CWDM) Solutions

Corning coarse wavelength division multiplexing solutions (CWDM) multiplexers and demultiplexers utilize advanced thin-film-filter technology designed for use with less expensive, non-temperature controlled lasers. CWDM filters are available in industry-standard 20 nm spacing with options for a 1310 nm RF overlay bypass as well as single or bidirectional test ports.

Features and Benefits

Passive and outside plant hardened
No power or temperature-controlled environment required

Epoxy-free optical path
Higher reliability

Low insertion loss and high isolation
Minimum impact on insertion loss budgets and lower transmission costs

Wavelength		Fiber color	
1270	1470	Slate	
1290	1490	Violet	
1310	1510	Blue	
1330	1530	Green	
1350	1550	Yellow	
1370	1570	Orange	
1390	1590	Red	
1410	1610	Brown	
1430		White	
1450		Black	
Test Rx		Rose	
Test Tx		Aqua	
COM		White	
EXP		Black	
Y		Slate	
W		Slate	
T		Slate	

Color Codes for CWDM Wavelengths
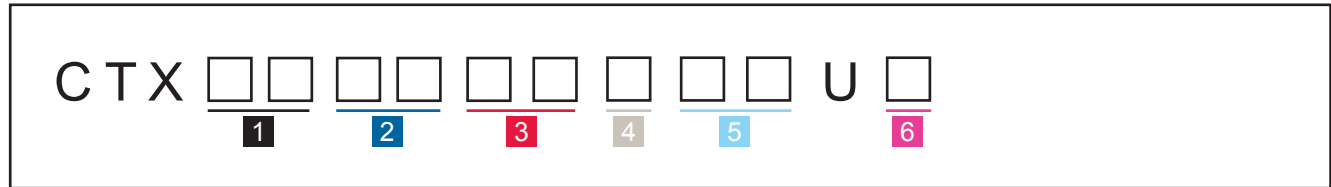
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Ordering Information

```
C T X ☐☐  ☐☐  ☐☐  ☐  ☐☐  U ☐
      1    2    3   4   5      6
```

1 Select connector type.

Single-mode:

3C = SC UPC simplex
6C = SC APC simplex
A9 = LC UPC duplex adapters
B3 = LC APC duplex adapters

2 Select number of channel devices.

01 = 1 device mux or demux
02 = 2 devices mux or demux
03 = 3 devices mux or demux
04 = 4 devices mux or demux
05 = 5 devices mux or demux
06 = 6 devices mux or demux
07 = 7 devices mux or demux
08 = 8 devices mux or demux
09 = 9 devices mux or demux
10 = 10 devices mux or demux
A1 = 11 devices mux or demux
A2 = 12 devices mux or demux
A3 = 13 devices mux or demux
A4 = 14 devices mux or demux
A5 = 15 devices mux or demux
A6 = 16 devices mux or demux
A7 = 17 devices mux or demux
A8 = 18 devices mux or demux
A9 = 19 devices mux or demux
BO = 20 devices mux or demux
11 = 1 device mux and demux
22 = 2 devices mux and demux
33 = 3 devices mux and demux
44 = 4 devices mux and demux
55 = 5 devices mux and demux
66 = 6 devices mux and demux

See Notes 1, 2 & 3.

3 Select first range of two adjacent wavelengths (channels must be consecutive).

Z = No wavelength
K = 1270   A = 1450
L = 1290   B = 1470
M = 1310   C = 1490
N = 1330   D = 1510
P = 1350   E = 1530
Q = 1370   F = 1550
R = 1390   G = 1570
S = 1410   H = 1590
U = 1430   J = 1610
T = Triplexer (1310 + 1490/1550)
W = 1310/1550
VH = 1590 Quadplexer
VJ = 1610 Quadplexer

See Notes 1 & 2.

4 Select 1310 option.
 - = No 1310 WDM option
Y = With 1310 option

5 Select second range of two adjacent wavelengths (channels must be consecutive).

Z   = No wavelength
K   = 1270   A = 1450
L   = 1290   B = 1470
M   = 1310   C = 1490
N   = 1330   D = 1510
P   = 1350   E = 1530
Q   = 1370   F = 1550
R   = 1390   G = 1570
S   = 1410   H = 1590
U   = 1430   J = 1610

See Notes 1 & 2.

6 Select test port.

T = Single 95/5 test port
D = Bi-directional 99/1 test port
N = No test port

Notes:
1) For selections 3 & 5, must choose a total of 4 digits — 2 for each set of adjacent wavelengths; wavelengths not to exceed total number of channels chosen in Section 2.
2) If choosing mux OR demux channels, wavelength digit "Z" (no wavelength) will be chosen for one or more of the 4 wavelength digits.
3) Choose the number of devices in Section 2; example, 3 quadplexers, or 4 'W' devices.

Not all part number configurations are available, please confirm availability with a Corning Optical Connectivity Care representative.

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WDM Cassettes

Part Number Example	
Part Number	Product Description
CTX6C08BJYZZUN	Centrix™ WDM Cassette, 8 channel Mux or DeMux, 1470-1610 with 1310 port, SC APC
CTXB308BJYZZUN	Centrix™ WDM Cassette, 8 channel Mux or DeMux, 1470-1610 with 1310 port, LC APC
CTX3C08BJYZZUN	Centrix™ WDM Cassette, 8 channel Mux or DeMux, 1470-1610 with 1310 port, SC UPC
CTXA908BJYZZUN	Centrix™ WDM Cassette, 8 channel Mux or DeMux, 1470-1610 with 1310 port, LC UPC

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Multi-channel CWDM Connectorized – Concatenated

Parameters	4 Channel	8 Channel	16 Channel
Operating Temperature	-40˚ to +85˚C	-40˚ to +85˚C	-40˚ to +85˚C
Central Wavelengths (nm)	1271, 1291, 1301, 1311, 1331, 1351, 1371, 1391, 1411, 1431, 1451, 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611		
Mux and Demux with Connectors			
Channel Spacing (nm)	20	20	20
Channel Passband (nm)	± 6.5	± 6.5	± 6.5
Ripple within passband (dB)	≤ 0.5	≤ 0.5	≤ 0.5
CWDM Channel Insertion Loss (dB)	≤ 2.2	≤ 3.8	≤ 4.5
Optical Express Channel Insertion Loss (dB)	≤ 1.9	≤ 3.5	≤ 3.9
Non-Adjacent Channel Isolation (dB)	≥ 40	≥ 40	≥ 40
Adjacent Channel Isolation (dB)	≥ 30	≥ 30	≥ 30
Directivity (dB)	≥ 50	≥ 50	≥ 50
Return Loss (dB)	≥ 45	≥ 45	≥ 45
Polarization Dependent Loss (dB)	≤ 0.1	≤ 0.15	≤ 2.0
Polarization Mode Dispersion (dB)	≤ 0.1	≤ 0.1	≤ 0.1
Mux and Demux with Connectors and 1310 nm port			
CWDM Channel Insertion Loss	≤ 2.6	≤ 4.2	≤ 4.9
Isolation of 1310 nm channel	≥ 40	≥ 40	≥ 40
Mux and Demux with Connectors and 1 percent monitoring port			
CWDM Channel Insertion Loss	≤ 2.7	≤ 4.3	≤ 5.0
Monitoring Port Insertion Loss*	≤ 24	≤ 24	≤ 24

Notes: *Monitor port insertion loss = Measurement from Mon port - Measurement from Com port
 Methodology for calculating the specification for multiple channel CWDM devices
 Reflect IL 0.4 dB – Pass IL 0.7 dB – Connectors (pair) IL 0.3 dB

Examples:

A 4 channel CWDM. Maximum IL = 0.4 x3 + 0.7 = 1.9 dB, when it is with connector the maximum IL = 1.9 + 0.3 = 2.2 dB
An 8 channel CWDM. Maximum IL = 0.4 x 7 + 0.7 = 3.5 dB, when it is with connector the maximum IL = 3.5 + 0.3 = 3.8 dB

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CWDM Specifications Connectorized Compact

Parameters	4 channel	8 channel	16 channel	4 channel	8 channel	16 channel
Operating Temperature	-40° to +85° C			-10° to +60° C		
Central Wavelengths (nm)	1271, 1291, 1311, 1331, 1351, 1371, 1391, 1411, 1431, 1451, 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611			1271, 1291, 1311, 1331, 1351, 1371, 1391, 1411, 1431, 1451, 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611		
Mux and Demux with Connectors						
Channel Spacing (nm)	20	20		20	20	
Channel Passband (nm)	± 6.5	± 6.5		± 6.5	± 6.5	
Ripple within Passband (dB)	≤ 0.5	≤ 0.5		≤ 0.5	≤ 0.5	
CWDM Channel Insertion Loss (dB)	≤ 1.8	≤ 2.1		≤ 1.6	≤ 1.9	
Optical Express Channel Insertion Loss (dB)	≤ 1.8	≤ 2.1		≤ 1.6	≤ 1.9	
Non-Adjacent Channel Isolation (dB)	≥ 45	≥ 45		≥ 45	≥ 45	
Adjacent Channel Isolation (dB)	≥ 30	≥ 30		≥ 30	≥ 30	
Directivity (dB)	≥ 50	≥ 50		≥ 50	≥ 50	
Return Loss (dB)	≥ 45	≥ 45		≥ 45	≥ 45	
Polarization Dependent Loss (dB)	≤ 0.2	≤ 0.2		≤ 0.2	≤ 0.2	
Polarization Mode Dispersion (dB)	≤ 0.2	≤ 0.2		≤ 0.2	≤ 0.2	
Mux and Demux with Connectors and 1310 nm port						
CWDM Channel Insertion Loss	≤ 2.0	≤ 2.3		≤ 1.8	≤ 2.1	
Isolation of 1310 nm channel	≥ 40	≥ 40		≥ 40	≥ 40	
Mux and Demux with Connectors and 5 percent monitoring port						
CWDM Channel Insertion Loss	≤ 2.2	≤ 2.5		≤ 2.0	≤ 2.3	
Monitoring Port Insertio Loss	≤ 15.5	≤ 15.5		≤ 15.5	≤ 15.5	
Mux and Demux with Connectors and 1 percent monitoring port						
CWDM Channel Insertion Loss	≤ 2.2	≤ 2.5		≤ 1.9	≤ 2.2	
Monitoring Port Insertio Loss	≤ 24	≤ 24		≤ 24	≤ 24	

Notes: Monitor port insertion loss = Measurement from Mon port - Measurement from Com port
Methodology for calculating the specification for multiple channel CWDM devices
Reflect IL 0.4 dB – Pass IL 0.7 dB – Connectors (pair) IL 0.3 dB

Examples:
A 4 channel CWDM. Maximum IL = 0.4 x3 + 0.7 = 1.9 dB, when it is with connector the maximum IL = 1.9 + 0.3 = 2.2 dB
An 8 channel CWDM. Maximum IL = 0.4 x 7 + 0.7 = 3.5 dB, when it is with connector the maximum IL = 3.5 + 0.3 = 3.8 dB

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Dense Wavelength Division Multiplexing (DWDM) Solutions

Corning DWDM multiplexers and de-multiplexers utilize advanced thin-film filter and athermal waveguide technology designed for low insertion loss, high isolation and excellent temperature stability in a totally passive device. They are available in various channel counts at ITU industry standard 100 and 200 GHz spacing, in both the C and L Band. Corning's DWDM devices are Telcordia GR-1209 and GR-1221 qualified and have a wide variety of packaging options.

Features and Benefits

Passive and outside plant hardened
No power or temperature-controlled environment required

Epoxy-free optical path
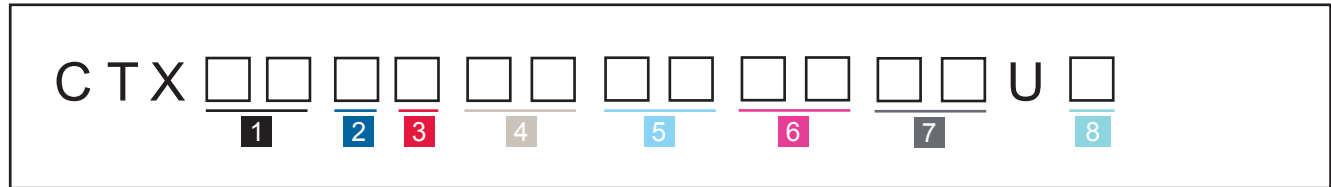Higher reliability

Low insertion loss and high isolation
Minimum impact on insertion loss budgets and lower transmission costs

Transport protocol independent
Flexibility

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Ordering Information

C T X ☐☐ ☐ ☐ ☐☐ ☐☐ ☐☐ ☐☐ U ☐
   1 **2** **3** **4**   **5**   **6**   **7**   **8**

1 Select connector type.
Single-mode:
3C = SC UPC simplex
6C = SC APC simplex
A9 = LC UPC duplex adapters
B3 = LC APC duplex adapters

2 Select channel spacing.
1 = 100 GHz*
2 = 200 GHz
Select 1 for single channel devices.

3 Select type.
A = Mux or demux*
B = Mux and demux
Select A for single channel devices.
See note 1.

4 Select number of channels, set one.
nn = Number of channels
04 = Four channels
08 = Eight channels
11 = Eleven channels
16 = Sixteen channels
32 = Thirty-two channels*
See Note 2.

5 Select ITU grid first channel, set one.
21 = C21 (1560.61 nm, 192.10 THz)
ZZ = No selection
See note 1.

6 Select number of channels, set two.
nn = Number of channels
04 = Four channels
08 = Eight channels
11 = Eleven channels
16 = Sixteen channels
32 = Thirty-two channels*
00 = No selection
See Note 2.

7 Select ITU grid first channel, set two.
21 = C21 (1560.61 nm, 192.10 THz)
ZZ = No selection
See note 1.

8 Select test port.
Y = Single 95/5 test port
D = Bi-directional 99/1 test port
N = No test port

Notes:
1) For selections 3, 5 & 7, pick odd (C21,C23,C25...) or even (C20,C22,C24) starting points for 200 GHz channel spacing.
2) For selections 4 & 6, 16 channel maximum building blocks are used; e.g., a 36-channel arrangement concatenates to two 16-channel.

Not all part number configurations are available, please confirm availability with a Corning Optical Connectivity Care representative.

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Multi-channel DWDM Connectorized – Concatenated										
Parameters	**4 Channel**		**8 Channel**		**16 Channel**		**32 Channel**		**40 Channel**	
Operating Temperature	-40˚ to +85˚C		-40˚ to +85˚C		-40˚ to +85˚C		-40˚ to +85˚C			
Frequency spacing (GHz)	**100**	**200**	**100**	**200**	**100**	**200**	**100**	**200**	**100**	**200**
Mux and Demux with Connectors										
Channel Spacing (nm)										
Channel Passband (nm)	± 0.11	± 0.25	± 0.11	± 0.25	± 0.11	± 0.25	± 0.11	± 0.25	± 0.11	± 0.25
Ripple within passband (dB)	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
DWDM Channel Insertion Loss (dB)	≤ 2.5	≤ 2.35	≤ 4.3	≤ 3.95	≤ 5.15	≤ 4.8	≤ 5.65	≤ 5.15	≤ 6.1	≤ 5.55
Optical Express Channel Insertion Loss (dB)	≤ 2.1	≤ 1.9	≤ 3.9	≤ 3.5	≤ 4.35	≤ 3.9	≤ 5.25	≤ 4.7	≤ 5.7	≤ 5.1
Non-Adjacent Channel Isolation (dB)	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40
Adjacent Channel Isolation (dB)	≥ 30	≥ 30	≥ 30	≥ 30	≥ 30	≥ 30	≥ 30	≥ 30	≥ 30	≥ 30
Directivity (dB)	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50
Return Loss (dB)	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45
Polarization Dependent Loss (dB)	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2
Polarization Mode Dispersion (dB)	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1
Mux and Demux with Connectors and 1310 nm port										
DWDM Channel Insertion Loss	≤ 2.95	≤ 2.75	≤ 4.75	≤ 4.35	≤ 5.2	≤ 4.75	≤ 6.1	≤ 5.55	≤ 6.55	≤ 5.95
Isolation of 1310 nm channel	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40
Mux and Demux with Connectors and 5 percent monitoring port										
DWDM Channel Insertion Loss	≤ 3.1	≤ 2.9	≤ 4.9	≤ 4.5	≤ 5.3	≤ 4.9	≤ 6.2	≤ 5.7	≤ 6.7	≤ 6.1
Monitoring Port Insertion Loss*	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5
Mux and Demux with Connectors and 2 percent monitoring port										
DWDM Channel Insertion Loss	≤ 3.1	≤ 2.9	≤ 4.9	≤ 4.5	≤ 5.3	≤ 4.9	≤ 6.2	≤ 5.7	≤ 6.7	≤ 6.1
Monitoring Port Insertion Loss*	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5
Mux and Demux with Connectors and 1 percent monitoring port										
DWDM Channel Insertion Loss	≤ 3.1	≤ 2.9	≤ 4.9	≤ 4.5	≤ 5.3	≤ 4.9	≤ 6.2	≤ 5.7	≤ 6.7	≤ 6.1
Monitoring Port Insertion Loss*	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5	≤ 15.5

Notes: *Monitor port insertion loss = Measurement from Mon port - Measurement from Com port
*All values specified are with connectors.

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DWDM Channels

100 GHz Channels	Wavelength (in nm)	Frequency (in THz)	100 GHz Channels	Wavelength (in nm)	Frequency (in THz)				Popular channels
(DWDM Channel C36)	1548,51	193,60	(DWDM Channel C72)	1520,25	197,20				C60
(DWDM Channel C35)	1549,32	193,50	(DWDM Channel C71)	1521,02	197,10				C59
(DWDM Channel C34)	1550,12	193,40	(DWDM Channel C70)	1521,79	197,00				C58
(DWDM Channel C33)	1550,92	193,30	(DWDM Channel C69)	1522,56	196,90				C57
(DWDM Channel C32)	1551,72	193,20	(DWDM Channel C68)	1523,34	196,80				C56
(DWDM Channel C31)	1552,52	193,10	(DWDM Channel C67)	1524,11	196,70				C55
(DWDM Channel C30)	1553,33	193,00	(DWDM Channel C66)	1524,89	196,60				C54
(DWDM Channel C29)	1554,13	192,90	(DWDM Channel C65)	1525,66	196,50				C53
(DWDM Channel C28)	1554,94	192,80	(DWDM Channel C64)	1526,44	196,40				C52
(DWDM Channel C27)	1555,75	192,70	(DWDM Channel C63)	1527,22	196,30				C51
(DWDM Channel C26)	1556,55	192,60	(DWDM Channel C62)	1527,99	196,20				C50
(DWDM Channel C25)	1557,36	192,50	(DWDM Channel C61)	1528,77	196,10				C49
(DWDM Channel C24)	1558,17	192,40	(DWDM Channel C60)	1529,55	196,00				C48
(DWDM Channel C23)	1558,98	192,30	(DWDM Channel C59)	1530,33	195,90				C47
(DWDM Channel C22)	1559,79	192,20	(DWDM Channel C58)	1531,12	195,80				C46
(DWDM Channel C21)	1560,61	192,10	(DWDM Channel C57)	1531,90	195,70				C45
(DWDM Channel C20)	1561,42	192,00	(DWDM Channel C56)	1532,68	195,60				C44
(DWDM Channel C19)	1562,23	191,90	(DWDM Channel C55)	1533,47	195,50				C43
(DWDM Channel C18)	1563,05	191,80	(DWDM Channel C54)	1534,25	195,40				C42
(DWDM Channel C17)	1563,86	191,70	(DWDM Channel C53)	1535,04	195,30				C41
(DWDM Channel C16)	1564,68	191,60	(DWDM Channel C52)	1535,82	195,20				C40
(DWDM Channel C15)	1565,50	191,50	(DWDM Channel C51)	1536,61	195,10				C39
(DWDM Channel C14)	1566,31	191,40	(DWDM Channel C50)	1537,40	195,00				C38
(DWDM Channel C13)	1567,13	191,30	(DWDM Channel C49)	1538,19	194,90				C37
(DWDM Channel C12)	1567,95	191,20	(DWDM Channel C48)	1538,98	194,80				C36
(DWDM Channel C11)	1568,67	191,10	(DWDM Channel C47)	1539,77	194,70				C35
(DWDM Channel C10)	1569,59	191,00	(DWDM Channel C46)	1540,56	194,60				C34
(DWDM Channel C09)	1570,42	190,90	(DWDM Channel C45)	1541,35	194,50				C33
(DWDM Channel C08)	1571,24	190,80	(DWDM Channel C44)	1542,14	194,40				C32
(DWDM Channel C07)	1572,06	190,70	(DWDM Channel C43)	1542,94	194,30				C31
(DWDM Channel C06)	1572,89	190,60	(DWDM Channel C42)	1543,73	194,20				C30
(DWDM Channel C05)	1573,71	190,50	(DWDM Channel C41)	1544,53	194,10				C29
(DWDM Channel C04)	1574,54	190,40	(DWDM Channel C40)	1545,32	194,00				C28
(DWDM Channel C03)	1575,37	190,30	(DWDM Channel C39)	1546,12	193,90				C27
(DWDM Channel C02)	1576,20	190,20	(DWDM Channel C38)	1546,92	193,80				C26
(DWDM Channel C01)	1577,03	190,10	(DWDM Channel C37)	1547,72	193,70				C25
									C24
									C23
									C22
							4 8 16 32 40		C21

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Accessories

Reference Standard Single Frame Cross-Connect Jumper Part Numbers	
Part Number	**Description**
444401G3116004M	Jumper, Single-mode, SC APC to SC APC, 4 m long, 1.6 mm outer diameter
585801G3116004M	Jumper, Single-mode, SC UPC to SC UPC, 4 m long, 1.6 mm outer diameter
222201G3116004M	Jumper, Single-mode, LC APC to LC APC, 4 m long, 1.6 mm outer diameter
020201G3116004M	Jumper, Single-mode, LC UPC to LC UPC, 4 m long, 1.6 mm outer diameter
224401G3116004M	Jumper, Single-mode, LC APC to SC APC, 4 m long, 1.6 mm outer diameter

Corning recommends 1.6 mm jumpers for use in the Centrix solution. Full size Centrix frames support 2,880 to 4,320 jumpers predicated on the connector selection. Other configurations are available, please consult your customer service representative or sales manager for more information.

Centrix™ Housing Mounting Brackets	
Part Number	**Description**
CTX-KIT-1RU-19CLP	Centrix mounting kit with jumper management clips for S1U housing mounting within a 19" rack
CTX-KIT-1RU-23CLP	Centrix mounting kit with jumper management clips for S1U housing mounting within a 23" rack
CTX-KIT-2RU-19CLP	Centrix mounting kit with jumper management clips for S2U housing mounting within a 19" rack
CTX-KIT-2RU-23CLP	Centrix mounting kit with jumper management clips for S2U housing mounting within a 23" rack
CTX-KIT-4RU-19CLP	Centrix mounting kit with jumper management clips for S4U housing mounting within a 19" rack
CTX-KIT-4RU-23CLP	Centrix mounting kit with jumper management clips for S4U housing mounting within a 23" rack
CTX-KIT-4RU-23HUB	Centrix mounting kit with jumper management hubs for S4U housing mounting within a 23" rack
Centrix Stubbed MTP® Accessories	
Part Number	**Description**
CTX-KIT-F1U-7289	Centrix front access frame 1U side mounted MTP adapter panel with 6 SM MTP adapters per panel (72F)
CTX-KIT-F1U-A889	Centrix front access frame 1U side mounted MTP adapter panel with 9 SM MTP adapters per panel (108F)
CTX-KIT-F2U-E489	Centrix front access frame 2U side mounted MTP adapter panel with 12 SM MTP adapters per panel (144F)
CTX-KIT-F2U-M689	Centrix front access frame 2U side mounted MTP adapter panel with 18 SM MTP adapters per panel (216F)
CTX-KIT-F4U-U889	Centrix front access frame 4U side mounted MTP adapter panel with 24 SM MTP adapters per panel (288F)
CTX-KIT-F4U-WW89	Centrix front access frame 4U side mounted MTP adapter panel with 36 SM MTP adapters per panel (432F)
CTX-KIT-S1U-7289	Centrix rear access frame 1U rear mounted MTP adapter panel with 6 SM MTP adapters per panel (72F)
CTX-KIT-S1U-A889	Centrix rear access frame 1U rear mounted MTP adapter panel with 9 SM MTP adapters per panel (108F)
CTX-KIT-S2U-E489	Centrix rear access frame 2U rear mounted MTP adapter panel with 12 SM MTP adapters per panel (144F)
CTX-KIT-S2U-M689	Centrix rear access frame 2U rear mounted MTP adapter panel with 18 SM MTP adapters per panel (216F)
CTX-KIT-S4U-U889	Centrix rear access frame 4U rear mounted MTP adapter panel with 24 SM MTP adapters per panel (288F)
CTX-KIT-S4U-WW89	Centrix rear access frame 4U rear mounted MTP adapter panel with 36 SM MTP adapters per panel (432F)

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Centrix Bracket Kits & Accessories	
Part Number	Description
CTX-KIT-S4U-MTP-SR	Centrix rear access frame 4U rear mounted PNP trunk strain relief bracket
CTX-KIT-SR-SA	Centrix housing cable strain-relief bracket only
CTX-KIT-SR-SA-UCC	Centrix housing cable strain-relief kit with UCC clamp for rear cable access applications
CTX-KIT-SR-FA-UCC	Centrix housing cable strain-relief kit with UCC clamp for front cable access applications
CTX-KIT-SR-CS	Buffer tube and ribbon internal cassette transition strain relief (12 per pack)
CTX-KIT-RT-DH	Centrix cassette kit for right-hand jumper routing (12 per pack)
Centrix Installation & Usage Accessories	
Part Number	Description
CTX-WORKSHELF	Centrix frame-mounted workshelf
CTX-SERVICEBKT	Centrix cassette service bracket
Centrix Mounting Kits into the OCC Cabinets	
Part Number	Description
CTX-KIT-S4U-OCC	Centrix mounting kit for S4U mounting within an OCC cabinet
CTX-KIT-JRG-OCC	Centrix jumper routing guide for use in OCC cabinets
CTX-KIT-CTR80-OCC	Centrix mounting kit for center channel within an OCC-080 cabinet only

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Resources

Standard Recommended Procedures (SRPs)	Rear Cable Access	Front Cable Access
Centrix™ Frame Installation	003-950	003-950
Centrix Empty Housing Installation	003-948	003-948
Centrix Stubbed Housing Installation	003-951	03-951
Centrix Pigtailed Housing and Cassette Installation	003-949	003-949
Jumper Routing in Centrix Frame	003-960	003-960
Centrix Splitter/WDM Cassettes	003-959	003-959
Centrix Accessories	003-961	003-961
Centrix MTP® Stubbed Cassette Installation	003-1006	03-1006
Centrix Platform Housing and MTP Module Installation	003-1011	03-1011
Centrix IBU Installation - Centrix to EMF	003-969	–
Centrix Mounting Brackets Into OCC-031 & OCC-051 Cabinets	–	–
Centrix Housing Mounting Into 19 in / 23 in Frames	003-1025	–
Centrix Patch Panel Installation	003-1017	003-1017
Centrix Mounting Brackets into the OCC-080-G Cabinet	003-1041	–

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