

PRODUCT SELECTION

Fiber and Access Product Guide

Find the product by its role in the subscriber connection.

Need	Product family	Pages
Distribute and connect drops	NAP, ODN, MST, SAT and FATC	2–9
Connect hardened interfaces	PT, PC and SA–SA assemblies	10–13
Route the subscriber cable	PMDC and dielectric drop cable	14–16
Terminate and manage fiber	SC connectors and CX-31 enclosure	17–18
Split or combine optical paths	PLC splitters and CWDM	19–21

ENGINEERING SELECTION

Preconnectorized NAP and ODN

Start with the optical path, then count subscriber, input and continuation connections separately.

Terminal function	How to specify it
Asymmetric cascade NAP	NAP-10: eight subscriber outputs, one input and one continuation. The nominal 70% branch continues the cascade; the 30% branch is shared across the eight subscribers.
Preconnectorized ODN	Select the port map and optical assembly together. The proposed 8-port build uses 8 SC/APC pigtails; the proposed 16-port build uses four 1×4 PLC splitters. The documented FSP-16X-A platform has 16 adapters.
Balanced splitter terminal	Choose 1×8 or 1×16 splitting where the design calls for equal distribution. CX-MST-17/18 offers configured PLC options.
Splice-and-drop closure	CX-FATC-003 provides feeder splicing and cable exits. Its 24 drop cable ports are distinct from hardened external adapters.

Define the finished connection

Engineering input	Why it matters
Port map and split ratio	Distinguishes subscribers, network input and continuation; establishes the optical budget.
Mating geometry and cable entry	Identifies the hardened connector, keying, cable diameters, retention and seals.
Installed optical limits	Sets insertion and return loss for each finished path, including connector and splitter contributions.
Installation and acceptance	Defines wall/pole/aerial mounting, environmental exposure, sample evaluation and required test records.

Specify the optical assembly, port map, cable seals and mounting with the order. Product qualification applies to the selected configuration and its supporting test records.

APPLICATION GUIDE

Select the End-to-End Connection

Coordinate the terminal, cable and connection method around the installation.

Application	Candidate products	Check together
Preterminated service drop	CX-MST-17/18 or CX-SAT; matched hardened assembly	Port geometry, split ratio, lead lengths, mounting
Field-spliced drop	CX-FATC-003; CX-DROP-2X3; CX-SC-FST	Entry seals, splice capacity, cable profile, holder
Managed customer handoff	CPX-PMDC; CX-31	Peel treatment, connector polish, bend radius, slack volume
Panel patching	MPO-LC; patch cords; adapters	Fiber count, polarity, MPO gender/keying, panel fit

Follow the optical path

Define the network input, any splitter or continuation path, and each subscriber connection. Match the connector geometry, fiber, polish and cable construction across adjoining products.

Application examples are selection aids. Calculate the optical budget for the actual equipment and route; see the engineering reference near the end of this catalog.

FEATURED CONFIGURATION / NAP-10

NAP 10 FTTH Terminal

Eight subscriber connections and a dedicated continuation path for cascaded FTTH distribution.



Port arrangement: eight subscriber ports, one input and one continuation port.

Optical layout	1×9 asymmetric PLC; nominal 70/30 cascade split
Port roles	10 hardened positions: 8 subscriber + 1 input + 1 continuation
Enclosure	Black reinforced polypropylene; mechanical sealing; 337 × 112 × 95 mm
Protection / temperature	IP68 manufacturer rating; -40 to +70 °C
Fiber / wavelength	G.657.A2; 1260-1650 nm
PLC subscriber / continuation loss	≤16.3 dB / ≤2.2 dB
PLC return loss / directivity	≥55 dB / ≥55 dB
PLC uniformity / PDL	≤0.8 dB / ≤0.3 dB
Mounting	Wall, pole or aerial; select brackets and mounting kit

The 30% branch is shared across the eight subscriber outputs; the nominal 70% branch continues the cascade. PLC limits describe the splitter, not a measured finished-terminal acceptance result. Match the exact hardened mating interface and seal unused ports.

FEATURED PLATFORM / FSP-16X-A

ODN Preconnectorized Distribution Box

FSP-16X-A: a 16-port enclosure for splicing, optical distribution and protected subscriber connections.



Parameter	Published platform specification
Adapter ports / cable entries	16 preconnectorized adapters / 8 cable entries
Cable diameter at entries	Ø5–16 mm; customization available
Splice capacity	144 fusion splices; 6 trays × 24 splices
Housing / internal components	Black polypropylene (PP) / PC+ABS or ABS
Dimensions / mounting hole spacing	430 × 196 × 139 mm / 154 × 414 mm
Protection / flammability	IP68 manufacturer rating / UL-94HB standard
Operating / installation temperature	-40 to +65 °C / -15 to +40 °C
Storage temperature	-45 to +75 °C
Relative humidity / atmospheric pressure	≤85% at +30 °C / 70–106 kPa
Mounting	Wall, pole or aerial; select the mounting kit
Neutral salt spray	48 hours; customization available

The platform specifications above describe the 16-port enclosure. Define the 8-port version separately. Select the exact hardened adapter and matching connector with the project drawing.

FSP-16X-A / OPTICAL SELECTION

ODN Optical and Port Configurations

Choose the optical function independently of the enclosure port count.

Optical assembly	Component IL	Return loss	Box IL
SC/APC pigtail	≤ 0.3 dB	≥ 55 dB	≤ 0.5 dB
1x2 PLC	≤ 4.0 dB	≥ 55 dB	≤ 4.2 dB
1x4 PLC	≤ 7.4 dB	≥ 55 dB	≤ 7.6 dB
1x8 PLC	≤ 10.5 dB	≥ 55 dB	≤ 10.7 dB
1x16 PLC	≤ 13.5 dB	≥ 55 dB	≤ 13.7 dB

Box IL is the manufacturer's insertion-loss specification for the assembled box with the indicated optical path. These are platform defaults, separate from customer qualification limits.

Standard pigtail

Parameter	Specification
Interface / fiber	SC/APC; single-mode simplex; 1 fiber; G.657.A2
Diameter / jacket / standard length	0.9 mm / PVC / 1.5 m
Optical test methods	IL: IEC 61300-3-4, Method B; RL: IEC 61300-3-6, Method 1

Project configuration options

Version	Proposed assembly
8 ports	8 SC/APC pigtails
16 ports	4 PLC splitters of 1x4; 16 SC/APC outputs and 4 input pigtails

Confirm the project port map, selected hardened adapter, pigtail length and mounting before sample preparation. The proposed 1 m pigtails are separate from the 1.5 m platform default.

FEATURED CONFIGURATION / CX-MST-17/18

Multiport Fiber Access Terminal

External hardened drop connections with optional integrated PLC splitting.



Specification	Details
Port configurations	17 or 18 ports; input/output assignment by configuration
Housing / dimensions	Reinforced PC+ABS; 330 × 190 × 108 mm (L × W × H)
Sealing / protection	Mechanical sealing; IP68 with correct assembly and cable seals
Optical fiber	Single-mode G.657.A1 / G.657.A2
PLC splitter options	1×8 or 1×16 mini PLC
PLC insertion loss	≤10.5 dB (1×8); ≤13.5 dB (1×16)
Optical test wavelengths	1310 / 1490 / 1550 nm
PLC return loss / directivity	≥55 dB (APC) / ≥55 dB
PLC uniformity	≤0.8 dB
Operating temperature / humidity	−40 to +65 °C; ≤95% RH
Mounting options	Wall, pole or aerial

Specify the input/output map, hardened interface, cable seals and mounting kit. PLC values refer to the stated terminal option; do not substitute standalone splitter-module limits.

FEATURED CONFIGURATION / CX-SAT SERIES

Splitter Access Terminal

A compact splitter assembly with hardened input and output leads, prepared for the selected drop layout.



Specification	Details
Closure dimensions	145 × 105 × 50 mm
Cable / fiber	4.8–5.0 mm black TPU cable; single-mode G.657.A1
Optical connection	Hardened inline SC/APC interface
Lead lengths	Input 0.3 m; output 0.5 m; custom lengths by specification
Return loss	≥55 dB
Protection / operating temperature	IP68 when correctly mated and sealed; –40 to +70 °C

Split configurations

Part number	Split	Maximum IL	Net weight
CPX-SAT-102	1×2	4.5 dB	0.4 kg
CPX-SAT-104	1×4	7.8 dB	0.6 kg
CPX-SAT-108	1×8	11.0 dB	0.8 kg
CPX-SAT-116	1×16	13.7 dB	1.2 kg

The CX-SAT family uses the CPX-SAT order references shown. Specify interface, lead lengths and mounting. Seal every unused connection.

FEATURED CONFIGURATION / CX-FATC-003

Fiber Access Terminal Closure

Feeder-to-drop splicing, cable branching and protected fiber storage in one enclosure.



Parameter	Specification
Overall dimensions	380 × 245 × 155 mm
Enclosure material	Engineering polycarbonate with UV stabilizer
Splice capacity	Up to 96 fibers: four trays × 24 splices
Feeder cable entry	One uncut-cable entry; cable diameter 10–17.5 mm
Branch cable entries	Two entries; cable diameter 8–17.5 mm
Drop cable ports	24 ports; standard configuration for cable diameter below 4 mm
Seal and protection	Mechanical gasket and bolted closure; IP68 with correct assembly and sealing
Operating temperature	–40 °C to +85 °C
Mounting options	Wall, pole or aerial lashing; specify the required mounting accessories

Choose seals for the actual cable diameters and specify the splice-tray arrangement. Follow the installation instructions for cable preparation and closure.

ENGINEERING SELECTION

Hardened Drop and Distribution

Match the connector to the terminal and the cable to its job. Subscriber drops and distribution routes have different mechanical requirements.

Selection	Documented assembly / configuration input
Mini figure-8 drop	CX-OPT-SCAPC-PT: 1 × G.657.A2; 2.0 × 5.1 mm nominal profile; LSZH; FRP with galvanized-steel messenger.
Round reinforced assembly	CX-OPT-SCAPC-PC: 1 × G.657.A2; 5.0 ±0.2 mm; LSZH; aramid yarn and stainless-steel mesh.
Distribution assembly	Define fiber count, cable construction, strength members, span/duct route, branch layout, length and exact hardened end interfaces in the selected drawing.
Assembly optical limits	For the two featured assemblies: connector IL ≤0.3 dB and RL ≥60 dB at 1310 and 1550 nm. Apply these limits only to their stated configurations.
Cable loads	PT: 300 / 600 N; PC: 450 / 2,000 N, long / short term. Cable tensile limits do not establish connector pulling limits.

Prepare an engineering-ready order

Specify connector geometry and polish at both ends; cable profile and route; total and branch lengths; pulling provisions; labeling; and finished-path acceptance limits. Review connector retention, immersion, thermal cycling and cable mechanical evidence for the selected assembly.

A hardened connector fitted to a different cable is a different assembly. Use the approved cable drawing and relevant test records rather than transferring a drop-cable rating to a distribution cable.

FEATURED CONFIGURATION / CX-OPT-SCAPC-PT

Mini Figure-8 Hardened Drop Pigtail

CX-OPT-SCAPC-PT: a single-fiber drop pigtail with a hardened SC/APC interface and a galvanized-steel messenger.



Specification	Details
Optical fiber	1 × single-mode G.657.A2
Cable profile	Flat figure-8; (2.0 ±0.1) × (5.1 ±0.1) mm
Jacket	Black LSZH
Reinforcement	FRP elements with a galvanized-steel messenger
Optical interface	Hardened OPT/SC/APC
Connector insertion / return loss	≤0.3 dB / ≥60 dB at 1310 and 1550 nm
Loss change: interchange / repeat	≤0.2 dB / ≤0.2 dB
Fiber attenuation	≤0.35 dB/km at 1310 and 1550 nm
Cable tensile load, long / short term	300 N / 600 N
Cable crush, long / short term	1,000 / 2,000 N per 100 mm
Cable operating temperature	–20 to +70 °C

Specify length and opposite-end preparation. Match the messenger support and grounding to the route. No direct-burial or connector pulling rating is implied.

FEATURED CONFIGURATION / CX-OPT-SCAPC-PC

Round Reinforced Hardened Cable Assembly

CX-OPT-SCAPC-PC: a reinforced single-fiber assembly with a hardened OPT/SC/APC interface.



Specification	Details
Optical fiber	1 × single-mode G.657.A2
Cable outside diameter	5.0 ±0.2 mm
Jacket / tight buffer	Black LSZH / 0.9 mm blue PVC tight buffer
Strength members	Aramid yarn and stainless-steel mesh
Optical interface	Hardened OPT/SC/APC configuration
Connector insertion / return loss	≤0.3 dB / ≥60 dB at 1310 and 1550 nm
Loss change: interchange / repeat	≤0.2 dB / ≤0.2 dB
Fiber attenuation	≤0.35 dB/km at 1310 and 1550 nm
Cable tensile load, long / short term	450 N / 2,000 N
Minimum cable bend radius	10D long term; 20D short term; D = cable diameter
Cable operating temperature	−20 to +70 °C

This construction includes metal. Specify grounding, route, length and both end interfaces. Cable load ratings are not allowable pulling forces through connectors.

FEATURED CONFIGURATION / CX-OPT-SA-SA

Hardened SC/APC Patch Cord

A factory-terminated hardened SC/APC interface to a standard SC/APC connection.



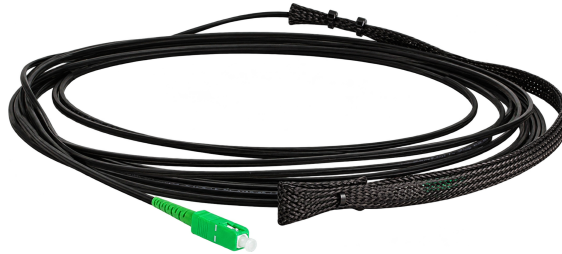
Specification	Details
Connector configuration	OPT-SC/APC hardened interface to standard SC/APC
Optical fiber	1 × single-mode G.657.A2
Cable / reinforcement	3.0 mm round LSZH jacket; aramid yarn
Connector insertion / return loss	≤0.3 dB / ≥60 dB at 1310 and 1550 nm
Loss change: interchange / repeat	≤0.2 dB / ≤0.2 dB
Fiber attenuation	≤0.35 dB/km at 1310 and 1550 nm
Cable tensile load, long / short term	120 N / 240 N
Cable crush resistance	1,000 N per 100 mm
Minimum cable bend radius	15D long term; 20D short term; D = cable diameter
Operating temperature	−40 to +85 °C

Specify length and exact hardened mating geometry. Protect the standard SC/APC end within the appropriate installation. Cable loads do not establish connector pulling limits.

FEATURED CONFIGURATION / CPX-PMDC SERIES

Peelable MicroDrop Cable

One continuous indoor/outdoor cable with factory-terminated options and a peelable subunit for discreet premises routing.



Specification	Details
Fiber type	Single-mode G.657.B3
Construction	Indoor/outdoor dielectric flat drop
Flame rating	OFNR, FT-4
Nominal outside dimensions	2.0 mm × 3.0 mm
Nominal weight	4 lb / 1,000 ft
Pull tension: installation / operation	100 lbf (45 kgf) / 30 lbf (14 kgf)
Bend radius: jacketed	63.0 mm (2.5 in)
Bend radius: 900 µm subunit	5.0 mm (0.2 in)
Installation temperature	-30°C to 60°C
Operating temperature	-40°C to 70°C
Maximum attenuation / wavelengths	0.4 dB/km at 1310 nm / 0.3 dB/km at 1550 nm
Insertion loss	0.3 dB
Back reflection	-65.0 dB

FRP strength members. Listed standard references: GR-409, GR-326, GR-20 and ANSI-ICEA-S-104-696. Confirm the selected cable marking and supporting documents for the installation.

CPX-PMDC SERIES

MicroDrop Ordering Options

Build the order reference from the connector pair, length and end preparation. The peel and pull-sock choices are shown separately below.

SC/APC at both ends

Part number	Length
CPX-PMDC-SASA010F-S	10 ft
CPX-PMDC-SASA050F-S	50 ft
CPX-PMDC-SASA100F-S	100 ft
CPX-PMDC-SASA200F-S	200 ft

Order field	Code
Connector A	SA = SC/APC
Connector B	SA = SC/APC; NA = none
Length / units	3-digit length; F = feet; M = meters

Choose the end preparation

Suffix	Peel treatment	Pull sock
Blank	No pre-peel	No
PE	No pre-peel	Yes
A	¼ in of peel exposed	No
S	¼ in of peel exposed	Yes

Example: CPX-PMDC-SASA050F-S specifies SC/APC at both ends, 50 ft, with a pre-peeled end and pull sock. The S option exposes a clear 900 µm subunit.

The jacketed cable and exposed subunit have different bend limits. Use the cable ratings on page 14 when planning the route.

FEATURED CONFIGURATION / CX-DROP-2X3

Dielectric FTTH Drop Cable

Outdoor flat cable for field-cut installation lengths and configured connector assemblies.



Specification	Details
Fiber	1 × ITU-T G.657.A2 single-mode
Nominal cable dimensions	2.0 × 3.0 mm
Tight buffer diameter	0.9 mm
Strength members	Dual parallel FRP
Jacket	UV-stabilized black HDPE
Attenuation at 1310 nm	≤0.34 dB/km
Attenuation at 1550 nm	≤0.20 dB/km
Bend radius: installation / static	≥20 × cable diameter / ≥10 × cable diameter
Operating / storage temperature	−40 to +70 °C / −50 to +80 °C
Standard reel length	2,000 m
Standard reference	YD/T 1951-2018

CPX-LX11-B supports the specified 2.0 × 3.0 mm profile. Select field or factory termination and the required mating interface.

ENGINEERING SELECTION

SC/APC Field Connector Selection

Choose cable fit, termination method and the operating envelope together with optical performance.

Model	Published cable fit	APC RL	Operating range
CX-SC-G50	2 × 3 mm flat drop	≥55 dB	-20 to +75 °C
CPX-LX11-B	2 × 3 or 2 × 5 mm flat drop	≥50 dB	-20 to +75 °C
CX-SC-G58-ANT	0.9 mm fiber; 2 / 3 mm round; 2 × 3 mm flat	≥55 dB	-20 to +75 °C

Cable dimensions are a selection input

A 2 × 3 mm profile corresponds to 3 × 2 mm when the same cross-section is described in the opposite order. A 2 × 5 mm listing does not establish compatibility with 3 × 5 mm cable. Check the actual clamp, boot, cable drawing and retention requirement.

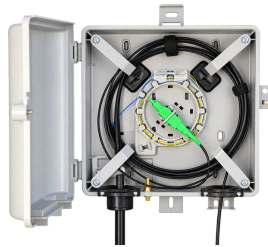
Check before selection	Evidence to request
Optical limits	The featured mechanical models list average IL ≤0.3 dB and maximum ≤0.5 dB. Confirm APC return loss for the exact variant and test wavelengths.
Mechanical retention	Request the retention test for the selected cable size and connector. Mating durability is not cable pull-out strength.
Operating envelope	If an installation requires -25 °C, the published -20 °C minimum does not cover it. Request a documented suitable configuration.
Preparation and tooling	Specify strip length, cleave length, cable version and compatible assembly tools. Fusion splice-on is a separate termination method.

Model selection identifies a candidate product. Customer qualification requires the specified variant, supporting test evidence and acceptance of the evaluated sample.

FEATURED CONFIGURATION / CX-31 SERIES

Fiber Interface and Slack Storage

Termination, splice protection and cable slack management at the transition to customer premises.



Specification	Details
Adapter interfaces	SC/APC, SC/UPC, LC/APC or LC/UPC
Port configurations	1, 2, 4, 6 or 12 ports; up to 24 ports with LC adapters
Slack storage	Up to 50 ft (15.2 m); capacity depends on cable configuration
Splice methods	Fusion or mechanical splicing
Cable routing	Rear-entry grommets, corner retention and tie-down points
Configuration options	Cable-entry clamp; internal or external grounding options
Closure	3/8-inch hex bolt; security-seal provision

Established order references

Part number	Configuration
CX31-01-01-01-N	1-port SC/APC
CX31-01-01-02-N	2-port SC/APC
CX31-02-01-06-N	6-port SC/APC
CX31-04-01-12-N	12-port SC/APC

Specify adapters, cable grommets and grounding. Storage capacity depends on cable diameter and permitted bend radius.

PRODUCT FAMILY

Splitters and Wavelength Management

Distribute optical power or combine wavelength channels. Match the optical function with a package that fits the network and installation.



PLC splitters

1×N and 2×N configurations with module and connector choices.



FBT couplers

Coupling-ratio options for application-specific optical distribution.



Plug-in and cassette formats

Organized splitter outputs for terminal, shelf and rack integration.



CWDM and WDM modules

Wavelength routing in configured module and enclosure formats.

Selection	Configure around
Optical function	Split ratio or wavelength plan, insertion loss, uniformity and isolation
Packaging	Steel tube, ABS/plastic, plug-in, LGX, cassette or rack configuration
Connection	Fiber type, lead length, connector polish and finished-path acceptance

PLC / 1×N

PLC Optical Splitter Specifications

1-input configurations with documented Grade P and Grade S performance. Module limits exclude connectors.



Connectorized PLC format

Split	Grade P IL max dB	Grade S IL max dB	Uniformity max dB	PDL max dB
1×2	3.6	4.3	0.5	0.2
1×3	6.0	6.2	0.6	0.3
1×4	7.0	7.4	0.8	0.3
1×6	9.2	9.5	0.8	0.3
1×8	10.3	10.7	0.8	0.3
1×12	12.2	12.5	1.2	0.3
1×16	13.6	13.9	1.4	0.3
1×24	15.8	16.0	1.5	0.3
1×32	16.6	17.2	1.5	0.3
1×64	20.1	21.5	2.0	0.5
1×128	24.5	25.5	2.6	0.8

Common optical and environmental limits

Parameter	Specification
Operating wavelength	1260–1650 nm
Temperature-dependent loss, maximum	0.5 dB
Return loss / directivity, minimum	55 dB / 55 dB
Operating / storage temperature	–40 to +85 °C / –40 to +85 °C

PDL = polarization-dependent loss. Connector allowances listed for this platform are +0.2 dB for UPC and +0.3 dB for APC. Confirm the complete connectorized optical path and its acceptance limit; do not substitute bare-module values for a finished terminal.

SPLITTERS AND WAVELENGTH MANAGEMENT

CWDM | Optical and Ordering Reference

CX-CWDM-8SF: eight wavelength channels and a 1310 nm expansion port. Specify Side A and Side B with the actual equipment wavelength plan.

Optical specification

Optical parameter	Specification
Channels	8 channels: 1470-1610 nm
Channel spacing	20 nm
Channel passband	±6.5 nm
Technology	TFF (thin-film filter)
Insertion loss	≤2.4 dB
Expansion-port insertion loss	≤2.4 dB
Return loss / directivity	≥45 dB / ≥45 dB
Polarization mode dispersion	≤0.1 ps
Polarization-dependent loss	≤0.3 dB
Channel isolation	Adjacent ≥30 dB; non-adjacent ≥45 dB
Operating temperature	-20 to +85 °C
Storage temperature	-40 to +85 °C
Connector interface	SC/APC

Define the two ends together

Pair Side A and Side B with the transmit/receive wavelengths of the actual equipment. The eight-channel designation is the module wavelength count; the service count depends on the paired channel plan.

Wavelength labels are retained as specified for this product. Confirm exact filter centers, the expansion-port band and the transceiver wavelength plan. No transmission distance or universal transceiver compatibility is implied.

Identification and packaging

Wavelength or port	Pigtail color
1610 nm	Brown
1590 nm	Red
1570 nm	Orange
1550 nm	Yellow
1530 nm	Green
1510 nm	Blue
1490 nm	Purple
1470 nm	Gray
1310 nm (EXP)	Black
COM	White

Model	Packaging and side
CX-CWDM-8SF-LGX-A	LGX cassette - Side A
CX-CWDM-8SF-LGX-B	LGX cassette - Side B
CX-CWDM-8SF-ABS-A	ABS module - Side A
CX-CWDM-8SF-ABS-B	ABS module - Side B

Net-weight references: LGX box 0.5 kg; two-slot 1U rack 2.5 kg. Rack dimensional reference: 44 × 440 × 230 mm (H × W × D). Confirm the LGX cassette drawing and rack engagement before release; cassette dimensions are not established in this catalog.