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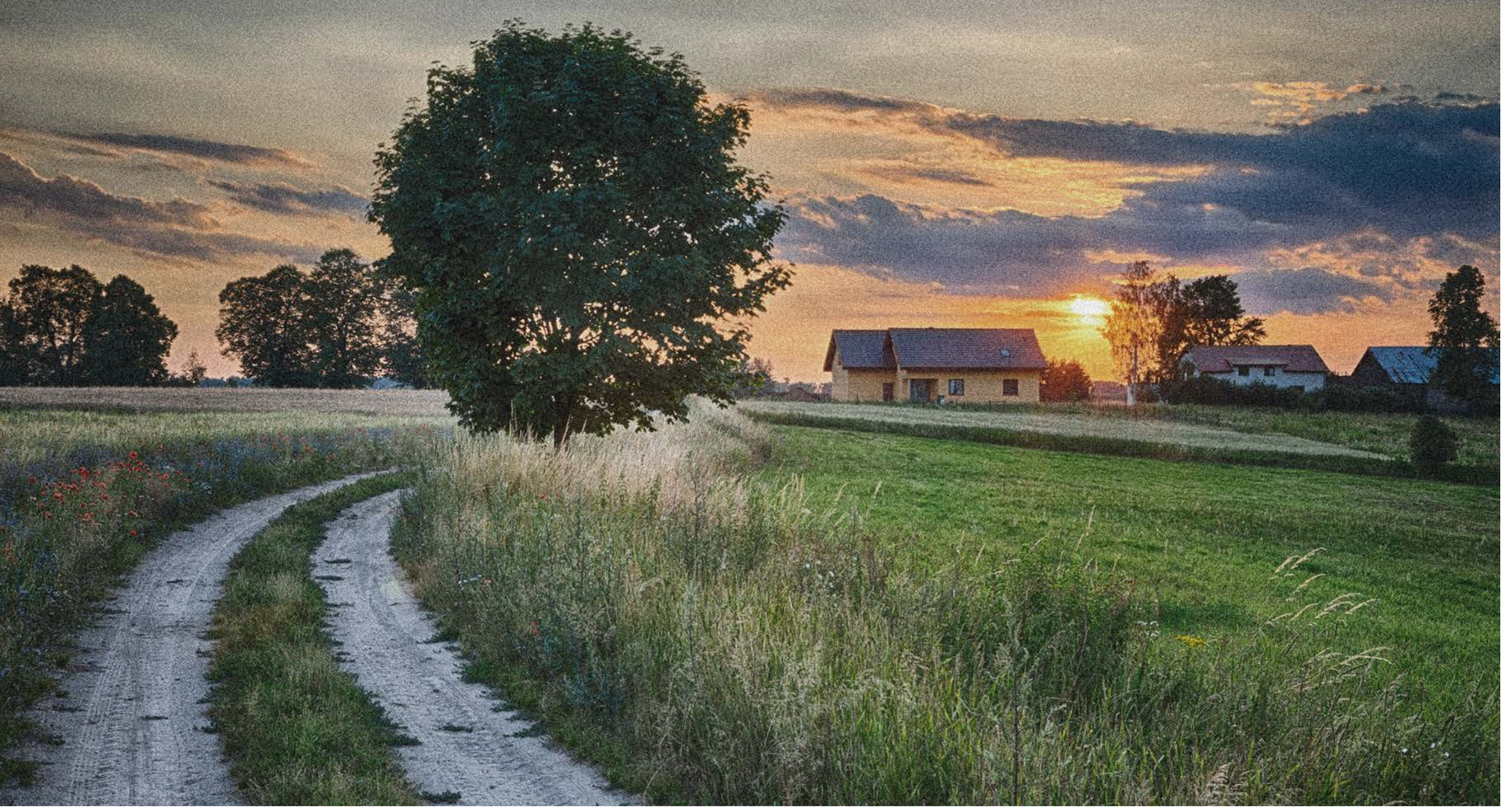
Centralized Split Architecture Guide



Cost Components Comparison

Labor Effort
Level of connectorization impacts crew & size

Full Splice

Spliced Terminals

Full Preconnectorized

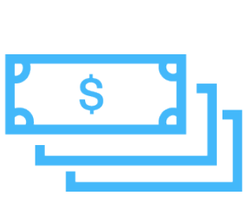
Material Cost
Level of connectorization impacts upfront cost

Full Splice
$

Spliced Terminals
$ $

Full Preconnectorized
$ $ $ $

Total Cost
Labor effort and material cost drive total cost



Full Splice

Spliced Terminals

Full Preconnectorized

Whether your deployment is centralized split, distributed split, or optical tap, you can count on our fiber-to-the-home expertise. The most common architecture deployed in the United States and Canada is a centralized split (CS) network. A CS network is characterized by a single split location between electronics in the outside plant, often with several splitters housed in a centralized location. We've compiled the most commonly used preconnectorized products for centralized split. This document outlines two methods of deploying the distribution portion of the network depending on the level of connectivity used.

Our broad portfolio of products address your specific challenges from speed of deployment, labor and cost considerations, performance requirements, future-readiness, and more.

Select your options across these areas of the network:

- (A) Central Office (CO)
- (B) Feeder Cable
- (C) Fiber Distribution Hub (FDH)
- (D & E) Distribution Segment
- (F) Customer Premises

Connectivity for the Win!

We are willing to bet on connectivity for your build. Decades of experience with connectivity have proven a wise investment for network operators around the world.

Your next deployment's fully connectorized design is on us.

Reach out to our subject matter experts to get your consultation started at **connect@corning.com**

Centralized Split Option 1

Spliced Terminals

The first CS option shown on this page highlights a spliced terminal design. Note: First layer splitters often exist in cabinets but, in smaller serving areas, may be housed in splice closures or colocated with remote OLTs.

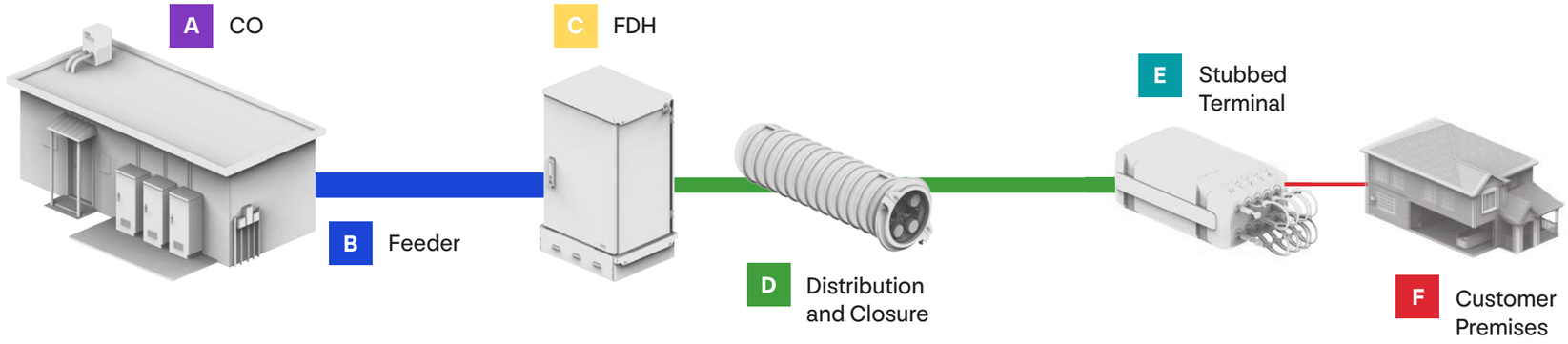
Cost Components Comparison

Labor Effort
High number of splice events requiring specialized labor

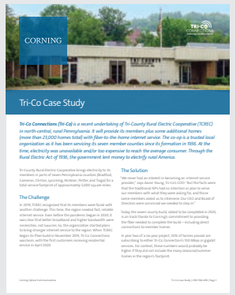
Material Cost
Moderate increase in terminal cost vs. full splice solutions

$ $

Total Cost
Savings result from connectorized terminal ports and deferred drops



See How Tri-Co Deployed This Connectivity Solution.



A Central Office (CO)

The Centrix™ hardware system is a pay-as-you-grow solution where you can choose to order fully loaded racks/frames on day one, or simply start with a cassette in a housing. The core of the solution is a single, modular cassette that can be tailored to include a variety of optical devices and can contain up to 36 LC connector adapters.

B Feeder Cable

Whether aerial or buried, we have the fiber count, quality, and reliability your network demands. For higher fiber counts, ribbon cable may be a good option for you! For below-grade applications, consider using an armored cable. If you are looking for a solution to place in congested ducts with microducts, MiniXtend® cable may be the right fit.

C Fiber Distribution Hub (FDH)

The Panel Access Cabinet (PAC) series provides everything necessary to manage up to 864 fibers for an outside plant FTTx application in pole- and pad-mount environments. For below-grade installations, the LCPE is designed to house five 1x32 splitters (ordered separately) with preterminated SC APC adapters.

D Distribution Cable & Splice Closures

Depending on your deployment method and architecture type, cable attributes may vary from self-support to armored or even microduct suitable cables. In the distribution, cables chosen may or may not be identical to the feeder depending on the serving area's needs.

E Stubbed Terminals

Evolv® terminals are up to 4x smaller, significantly reducing new infrastructure pathway costs or enabling reuse of existing assets.

F Customer Premises

Corning's drop cable portfolio and associated assemblies allow for full plug-and-play at the subscriber premises and also support field-installable terminations.

Centralized Split Option 2

Full Preconnectorized

The second CS option shown on this page highlights a fully preconnectorized design leveraging FlexNAP™ cables in the distribution. Note: First layer splitters often exist in cabinets but, in smaller serving areas, may be housed in splice closures or colocated with remote OLTs.

Cost Components Comparison

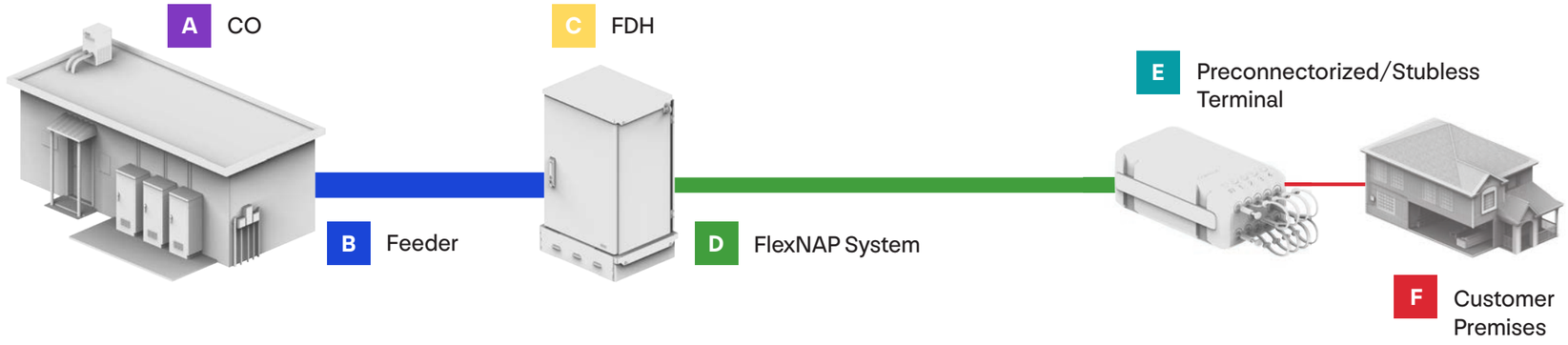
Labor Effort
Eliminates splice events downstream of splitter cabinet

Material Cost
Pre-installed connectors along distribution cable increase material cost

$ $ $ $

Total Cost
Savings result from reduction of splice events and cable placement labor

See How DFN Deployed This Connectivity Solution.



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D FlexNAP™ System

The FlexNAP system utilizes optical fiber cables upon which network access points are pre-installed at customer-specified locations along the length of the cable. In this design, the FlexNAP system has multifiber tethers that connect to preconnectorized stubbed terminals.

E Preconnectorized/Stubless Terminals

Evolv® terminals are up to 4x smaller, significantly reducing new infrastructure pathway costs or enabling reuse of existing assets.

F Customer Premises

Corning's drop cable portfolio and associated assemblies allow for full plug-and-play at the subscriber premises and also support field-installable terminations.

Product Ordering Information

A Central Office (CO)

Part Number	Description
Frame	■
CTX-SA-FRAME-7	Standard Rear Cable Access Frame, 7 ft
Housings	■
CTX-S4U	Centrix™ Housing, 4U, 12 cassette positions, empty
CX4WWP36-B3-2RJ000	432F Centrix 4U Splice Housing, 36F LCA cassettes
CX4U831246C-xx002B	288F Centrix 4U Stubbed Housing, 24F SCA cassettes, 31-m stub, xx cable
Cassettes	● ■
CTXCMA00-6C-SP8102	Centrix Splitter Cassette, 1x2 splitter, SC APC, ●
CTXCMA00-B3-SP1132	Centrix Splitter Cassette, 1x32 splitter, LC APC ●
CTX360236A9-D9893B	Centrix Stubbed Cassette, 36 LCU to 3 MTP®, 2 m ■
CTXCPP24-6C-2RH000	Centrix Pigtail Cassette, 24 SC APC ■
CTXCA36-B3B	Centrix Patch Cassette, 36 LC APC ■
Jumpers	✓
444401G3116004M	Jumper, SC APC to SC APC, 4-m long, 1.6-mm OD
585801G3116004M	Jumper, SC UPC to SC UPC, 4-m long, 1.6-mm OD
222201G3116004M	Jumper, LC APC to LC APC, 4-m long, 1.6-mm OD
020201G3116004M	Jumper, LC UPC to LC UPC, 4-m long, 1.6-mm OD

B Feeder Cable

Part Number	Description
Ribbon Cables	✓
xxxZC5-14100D53	SST-Ribbon™ Armored Cable (144-864 fibers)
xxxEC4-14100D53	SST-Ribbon All-Dielectric, Non-Armored (012-216 fibers)
xxxEV4-14100D53	SST-UltraRibbon™ All-Dielectric, Non-Armored (288-864 fibers)
xxxEV4-44101D53	RPX® All-Dielectric Self-Supporting Cable (024-144 fibers)
Loose Tube Cables	✓
xxxZU4-T4F22D20	ALTOS® Loose Tube Cable (012-288 fibers)
xxxZUC-T4F22D20	ALTOS Lite Single-Jacket, Armored (012-288 fibers)
Microduct Cables	✓
xxxZM4-T4F22A20	MiniXtend® Cable (012-144 fibers)
xxxZH4-Y4F40A20	MiniXtend HD Cable (144-288 fibers)
xxxZH4-S4F40A20	MiniXtend HD Cable (288-432 fibers)

C Fiber Distribution Hub (FDH)

Part Number	Description
Cabinets/Splice Closures	✓ ●
SCPP431C41E31V4S00-U	Gen III Series Cabinet, pole mount, 288 fibers, 48-fiber feeder, ribbon cable, 100-ft stubs ✓
SDPP131UC1C31UCS00-U	Gen III Series Cabinet, pole mount, 144 fibers, 12-fiber feeder, ALTOS® armored cable, 100-ft stubs ✓
D3DDU4SUCL6C000LXFA-U	Panel Access Cabinet, pole mount, 432 fibers, 72-fiber feeder, 72-fiber pass through, ALTOS Lite armored cable, 31-m stubs ✓
PAG-C3CCU4SU4P6C000LXFA-U	Panel Access Cabinet, pad mount, 288 fibers, 48-fiber feeder, 48-fiber pass through, ALTOS dielectric cable, 31-m stubs ✓
UMR1CC6CZ6C21132	RMS Splitter, 1x32 ●
WMR4CC6CA6C11132	LS Series Splitter Module, 1x32 ●
EDBS00BBSC00BBS00P-U	Local Convergence Point Enclosure, 144 fibers, Loose Tube feeder cable, splice capable ✓
XSB1DDA91A911132	Local Convergence Point Enclosure, splitter module, 1x32 ●

D Option 1: Cable & Splice Closures

Part Number	Description
Ribbon Cables	✓
xxxZC5-14100D53	SST-Ribbon Armored (144-864 fibers)
xxxEC4-14100D53	SST-Ribbon Dielectric, Non-Armored (012-216 fibers)
xxxEV4-14100D53	SST-UltraRibbon Dielectric, Non-Armored (288-864 fibers)
Loose Tube Cables	✓
xxxZU4-T4F22D20	ALTOS Loose Tube Cable (012-288 fibers)
xxxZUC-T4F22D20	ALTOS Lite Armored Loose Tube Cable (012-288 fibers)
Microduct Cables	✓
xxxZM4-T4F22A20	MiniXtend Cable (012-144 fibers)
xxxZH4-Y4F40A20	MiniXtend HD Cable (144-288 fibers)
xxxZH4-S4F40A20	MiniXtend HD Cable (288-432 fibers)
Splice Closures	✓
FDC-08M-G-N0N-01Q-A-00-U	Fiber Dome Closure, 8 S12 ports, 1 2543-D-XSB tray, 4 single fusion splice holder (48 SF), 2 RF splice holder (144 RF), 1 ground, 2 trays max
FDC-08S-G-N0N-01R-A-00-U	Fiber Dome Closure, 8 S12 ports, 1 2543-D tray, 8 single fusion splice holder (96 SF), 4 RF splice holder (288 RF), 1 ground, 2 trays max
SCA-9T24-LRS-U	SCA Aerial Terminal, SNAP-9T24, standard end caps, direct fusion splicing, 16 drop ports
BPEO-S15-AMX-U	BPEO Splice Closure Size 1.5, MiniXtend

D Option 2: FlexNAP™ System

Part Number	Description
FlexNAP Trunk Cables	✓
FNAP-CBL-xxxEU4	FlexNAP Distribution Trunk Cable, ALTOS loose tube cable, dielectric, xxx fibers (012-432 fibers)
FNAP-CBL-xxxEUC	FlexNAP Distribution Trunk Cable, ALTOS loose tube cable, armored, xxx fibers (012-432 fibers)
FNAP-CBL-xxxEV4	FlexNAP Distribution Trunk Cable, RPX® ribbon cable, dielectric, xxx fibers (024-144 fibers)
FNAP-CBL-xxxEV2	FlexNAP Distribution Trunk Cable, RPX ribbon cable, toneable, xxx fibers (024-144 fibers)
FlexNAP Tether Attachment Points	✓
FSU4AxxT2TN005F	FlexNAP Tether Attachment Point, ALTOS loose tube cable, dielectric, Multifiber Pushlok® connector (male), aerial, xx fibers (02-12 fibers)
FSU4CxxT2RN015F	FlexNAP Tether Attachment Point, ALTOS loose tube cable, dielectric, low-profile (up to 72 fiber), below-grade, xx fibers (02-12 fibers)
FSUCAxxT2RN015F	FlexNAP Tether Attachment Point, ALTOS loose tube cable, armored, Multifiber Pushlok connector (male), below-grade, xx fibers (02-12 fibers)
FSV4AxxT2TN005F	FlexNAP Tether Attachment Point, RPX ribbon cable, dielectric, Multifiber Pushlok connector (male), aerial, xx fibers (04, 08, or 12 fibers)
FSV2AxxT2RN015F	FlexNAP Tether Attachment Point, RPX ribbon cable, toneable, Multifiber Pushlok connector (male), below-grade, xx fibers (04, 08, or 12 fibers)

E Option 1: Stubbed Terminals

Part Number	Description
Terminals	✓
DMA4F1FDD1NCxxxF0P-U	Evolv® Terminal, 4-port, SST dielectric cable, xxx feet
DMA8F1TDD1NCxxxF0P-U	Evolv Terminal, 8-port, SST toneable cable, xxx feet

E Option 2: Preconnectorized/Stubless Terminals

Part Number	Description
Terminals*	✓
DFA4F1yDD1T1xxxF0P-U	Evolv Terminal, 4-port, Multifiber Pushlok connector (female), xxx feet
DFA8F1yDD1T1xxxF0P-U	Evolv Terminal, 8-port, Multifiber Pushlok connector (female), xxx feet
DFA4F100D1T3000S0P	Evolv Terminal, 4-port, stubless
DFA8F100D1T3000S0P	Evolv Terminal, 8-port, stubless

*"y" indicates either dielectric (F) or toneable (T)

F Customer Premises

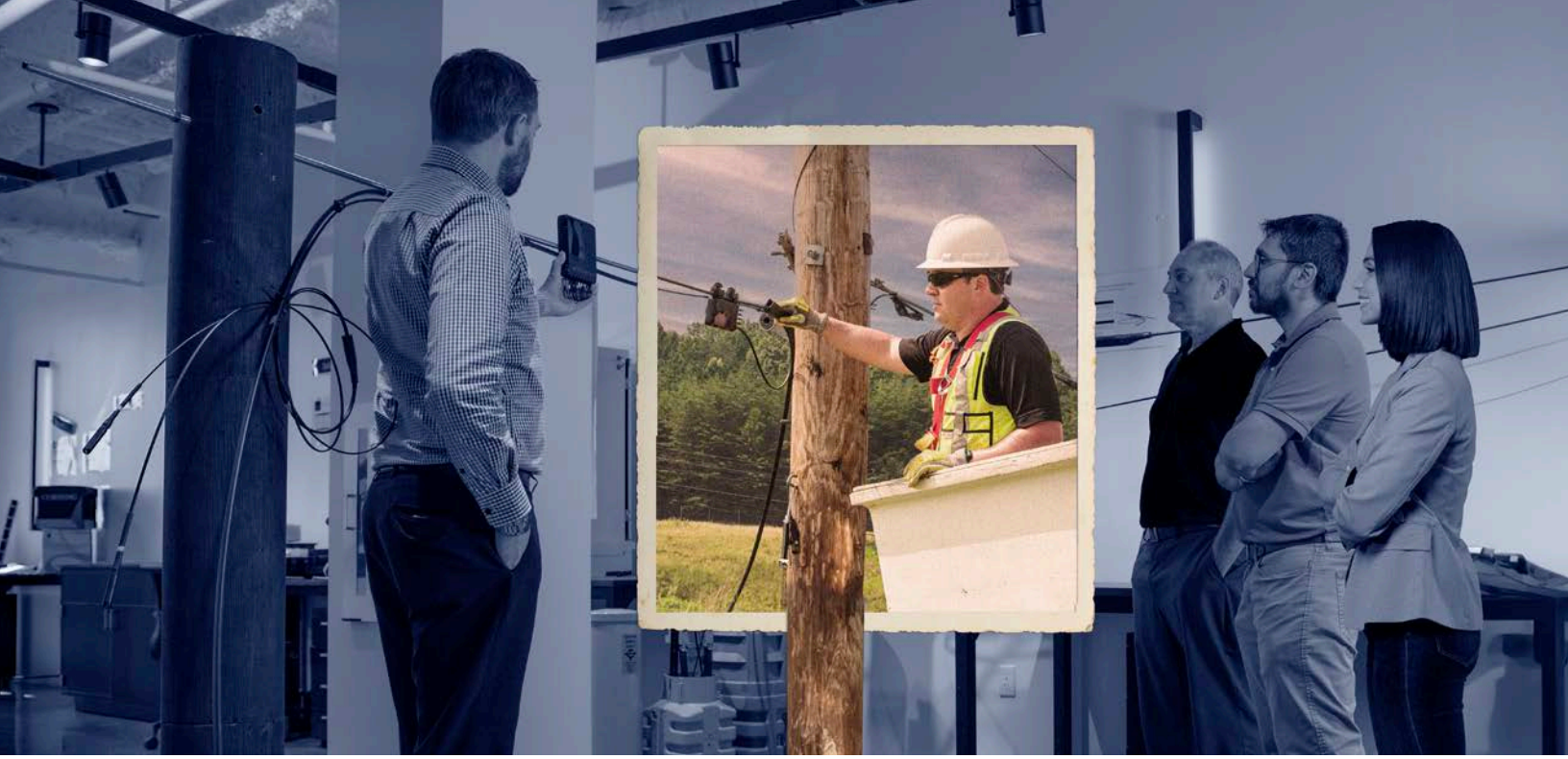
Part Number	Description
Drops	✓
00D101EB49RxxxF-P-U	ROC™ Drop Cable, Pushlok™ to Pigtail, dielectric, xxx feet
00D101EB19RxxxF-P-U	ROC Drop Cable, Pushlok to Pigtail, toneable, xxx feet
D14401EB4R3xxxF-P-U	ROC Drop Cable, Pushlok to SC, dielectric, xxx feet
D14401EB1R3xxxF-P-U	ROC Drop Cable, Pushlok to SC, toneable, xxx feet
00D101UB4JRxxxF-P-U	Round ROC Drop Cable, below-grade jetting/duct, Pushlok to pigtail, xxx feet
Field-Installable Connectors	● ■
OSNP-SCA-900-Z	OptiSnap® Field Installable Connector, SC APC, Qty 25 ●
NPCP-SCA-48	NPC+ (No Polish Connector), field-installable SC APC, compatible with 250 µm and 900 µm fiber, no toolkit required, package of 48 connectors ●
TKT-OPTISNAP-CF	OptiSnap Connector Installation Toolkit with flat cleaver (FBC-009), fiber prep and cleaning supplies, gray case ■
TKT-NPCP-FBC007	FBC-007 precision cleaver plus accessories for NPC+ ■
Fiber Transition Housing	✓
FTH-602-A1100-U	Fiber Transition Housing, 1 SC APC simplex adapter, ground post for toning, hex security screw, 3-m slack storage
FTH-602-A0100-U	Fiber Transition Housing, 1 SC APC simplex adapter, hex security screw, 3-m slack storage

Build America, Buy America Act (BABAA) Compliance

✓ **Produced in the United States:** Meets requirements of the Build America, Buy America Act (BABAA), and 2 C.F.R. 184. All fiber, cable, and preform manufacturing occurs in the United States. For each manufactured product, at least 55% of the content is produced in the United States.

● **Waived:** Meets requirements of NTIA's Limited General Applicability, Nonavailability Waiver of the Buy America Domestic Content Procurement Preference as Applied to the BEAD Program.

■ **Suggested de Minimis:** Minor hardware that Corning believes will not exceed the thresholds under the de minimis waiver. De minimis products may cumulatively comprise up to the lesser of 5% of the total applicable project costs, or $1,000,000.



To meet your requirements, we've nurtured long-term relationships with authorized distributors who stock our products and further support your needs including training, customer needs assessment, logistics, and equipment. Whether you are an end user, contractor, or installer, connect with our authorized distributors to purchase your Corning solution today.

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