CORNING

2021 Carrier Networks Selection Guide

FTTP #FiberToThePeople

Carrier Innovation

1970 — Invented the first low-loss optical fiber for communication networks

1990 — Fiber optic splice closure 2178 created for buried, below-grade, aerial, and pole-mounted deployments

1994 — Developed first CATV node assembly

2005 — Corning® SLiC® aerial closure released as free-breathing, weather-resistant, single-piece closure for aerial applications

2012 — Corning® Crimplok™ connector — First-known, commercially available, field-mounted connector for FTTx indoor and outdoor use with no splice, gel, or adhesives

2014 — 7 million homes passed with OptiTip® connectors

2016 — Corning® Clear Track fiber pathway answers demand for small-footprint, virtually invisible fiber deployment option

2018 — Added 3M's high-bandwidth products, expanding the optical solutions for our customers and improving access to broadband connectivity

1978 — Developed loose tube fiber optic cable design

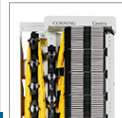**1992** — First domestic ribbon cable invented

2004 — Preterminated OptiTap® connector-enabled products became an industry standard and spurred OptiTip® connector and FlexNAP™ system development facilitating mass FTTH deployments

2005 — Corning® ClearCurve® fiber revolutionized fiber installation in the most challenging environments

2013 — Centrix™ system was developed to support highdensity solutions for central office applications

2015 — Launched MiniXtend® cable with FastAccess® technology with industry-leading fiber density

2017 — Launched the FlexNAP™ multiuse system, the industry's first solution to offer a combination of multifiber and singlefiber connection points, making it easier to quickly deploy FTTx networks

2020 — Introduced Pushlok™ Connector Technology, enabling the smallest form factor preconn solutions available

Contents

Connect to the Corning Advantage

Each fiber-to-the-home (FTTH) deployment presents unique challenges — and we can help. With over 15 years' experience passing more than 58 million homes, we've set the standard for innovative, field-proven FTTH solutions.

Our portfolio of products and engineering support is designed to address your specific challenges from speed of deployment, labor and cost considerations, performance requirements, future readiness, and more.

To get started, use this quick selection guide to help determine the right architecture, deployment method, and products you need to do the job right the first time.

Evolve your network. Transform the world.

Network Architectures

Network Architectures
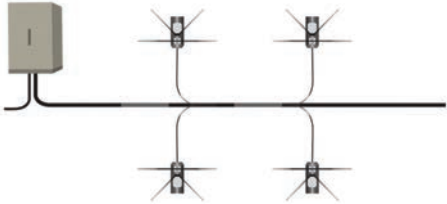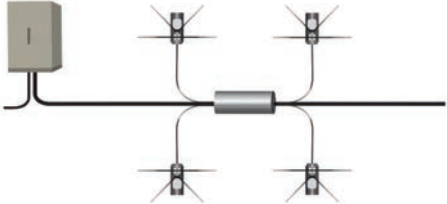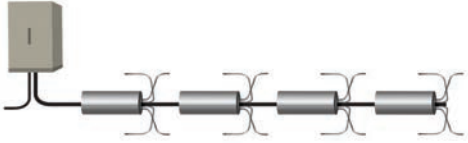
Connect to our experience passing over 58 million homes over the most prevalent architectures in all-fiber networks. Whether you're deploying RFoG, GPON, EPON, or looking forward to next-generation PON technologies, we can help you find success with either fiber-rich converged designs or fiber-lean architectures —or a blended architecture, if that's what's best for your unique environment. As a leader in global FTTH deployments and innovation, whichever deployment scenario you choose from the following table, we have a solution that will deliver value that's right for you.

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	Home Run	Centralized Split	Distributed Split	Distributed Tap
Consolidated Point for Cable and Splicing Management	Yes	Yes	No	No
Cabinets in the Field	Yes, as aggregation point	Yes	Yes	Yes
Upfront Network CapEx	High	Moderate	Low	Low
Fiber-Lean Feeder/ Distribution System	Rich feeder and distribution cables	Leaner feeder than home run	Leaner feeder and distribution than home run; leaner distribution than centralized split	Ultra Lean feeder and distribution
OLT Ports Efficiency	Best	Best	Moderate to Low	Moderate
Supports Efficient Growth Strategy	High	High to moderate	Moderate to low	Low
Split Ratios Flexibility	High	High	Moderate	Moderate
Easily Adaptable	Best	Best	Moderate	Moderate to low
Quick Facts	• Typically deployed to subscribers within five miles of central office in conjunction with centralized split and distributed split architectures • Home run architectures offer dedicated fiber from CO/HE to each subscriber with no splitters in the field, resulting in the most fiber-rich network architecture	• Most common architecture deployed in the United States and Canada • A single, centralized location for housing splitters in the field optimize OLT ports while leaning out the feeder network	• Gaining popularity in the United States based on widespread success in Latin America and Europe • By distributing or cascading splits in two or more field locations, the physical size of products in the field can shrink in size as the ports at each location are shared until the last access point	• Asymmetric/Uneven split terminals allow for single-fiber distribution of concatenated terminals • Ideally suited for environments where natural barriers restrict network growth • Routes are custom configured to optimize link loss • Most fiber lean architecture shown

Deployment Methods

Deployment Methods

Your successful deployment is a delicate balance of budget, timing, labor, and other variables. An achievable project plan hinges on your ability to carefully choose the deployment method that maximizes your resources. Regardless of your network architecture type, you can deploy a future-ready FTTH network using an end-to-end preconnectorized method, a fully spliced method, or a mix of preconnectorized and spliced segments. Using what you know about the skill level of your labor and what's required of your network, take advantage of the following table to select your preferred deployment method.

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	Full Preconnectorized	Preconnectorized	Full Splice
Architecture	Home run, centralized, distributed	Home run, centralized, distributed	Home run, centralized, distributed
Installation Type	Greenfield/brownfield	Greenfield/brownfield	Greenfield/brownfield
Speed of Deployment (HP)	Fast	Moderate	Slow
Subscriber Connection Speed (HC)	Fast	Fast	Slow
Optimal Method of Build	Aerial, duct	Aerial, duct, direct buried	Aerial, duct, direct buried
Optimal Subscriber Density	Medium to high	Low to high	Low to medium
Design Verification/Planning	High	Moderate	Low
Preconnectorized	Yes, for terminals and drops	Yes, for subscriber drops	No
Splices in the Field	Low	Moderate	High
Labor Skill Level	Low	Moderate	High
Installation Risk due to Labor Variability	Low	Moderate	Moderate to high
Scalable for Mass Deployment	Best	Fair	Poor
Deferability	High	Moderate	Low
Quick Facts	• Preinstalled "plug-and-play" network access points mean simplicity, speed, and profitability for you and the fastest turn-up for your subscribers • Splicing is concentrated at splitter cabinets	• Enables fast installation of subscriber drops by utilizing hardened connectors at terminals • Splicing extends to distribution access points as well as splitter cabinet	• Allows for the least amount of pre-engineering up front • Requires skilled labor splicing at all access points and subscriber premises

Fiber in Single-Family Units (SFU)
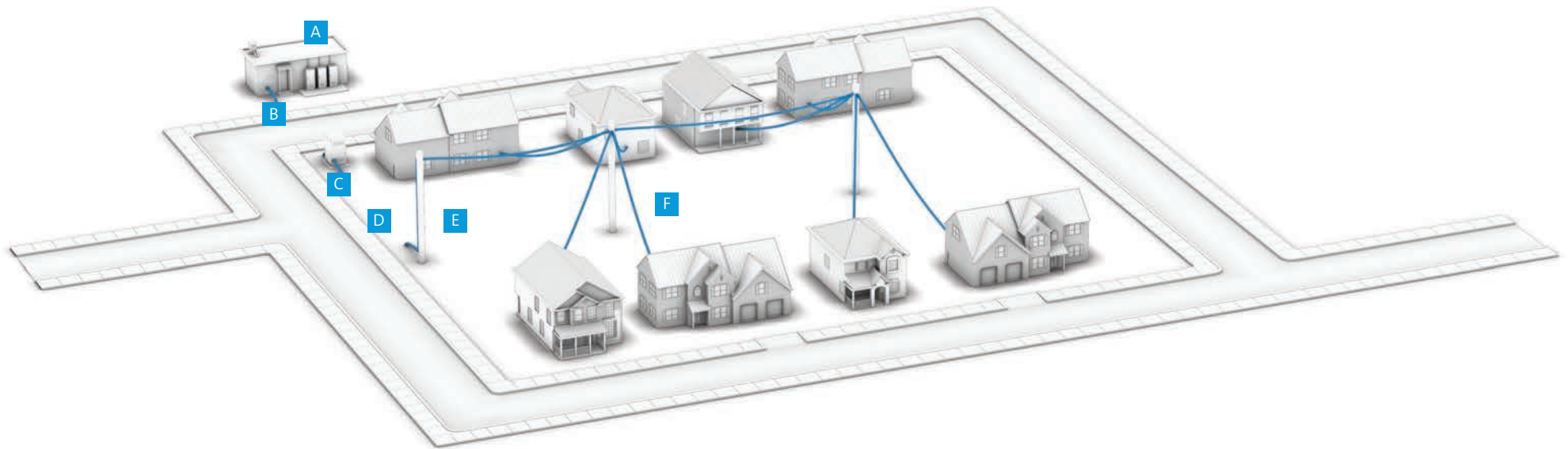
A **Central Office/Headend** (pages 10 and 14)
Network electronics combine and disperse signals to a specified serving area.

B **Optical Feeder Cable** (page 16)
Fiber optic cables feed small distribution-serving areas.

C **Local Convergence Point** (page 19)
In centralized and distributed split architectures, the field splitters are managed in this consolidated splice point.

D **Optical Distribution Cable** (page 24)
Bulk or preterminated cable solutions extend into neighborhoods and along city streets to cover the desired serving area.

E **Network Access Point** (page 25)
Discrete locations along the cable path allow for subscriber access to the distribution cable through closures or terminals.

F **Subscriber Drop** (pages 34 and 39)
The final piece connects the customer premise electronics to the assigned network access point.

Fiber in Multidwelling Units (MDU)

A **Outside Demarcation Point** (page 19)

Most MDU scenarios feature a demarcation point outside the building. Multiple small MDUs are often fed by distribution cabinets in the outside plant.

B **Inside the Basement** (page 20 or 31)

Medium- to large-sized buildings often have a dedicated splitter cabinet supporting anywhere from 32 to 864 living units.

C **At the Floor** (page 31)

Riser cables feed terminals on the floor and serve as the transition point from riser to horizontal cabling. Some buildings require a dedicated terminal on each floor, whereas other buildings use one terminal serving several adjacent floors.

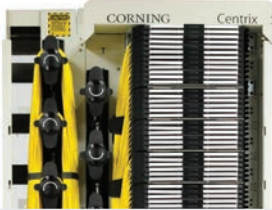**D** **To the Living Unit** (pages 34, 37, and 39)

In medium- and large-sized MDUs, horizontal drop cables run down hallways providing an access point for subscribers to connect. In small MDUs, drop cables home run to the cabinet/splitter terminal.

Central Office/Headend Solutions
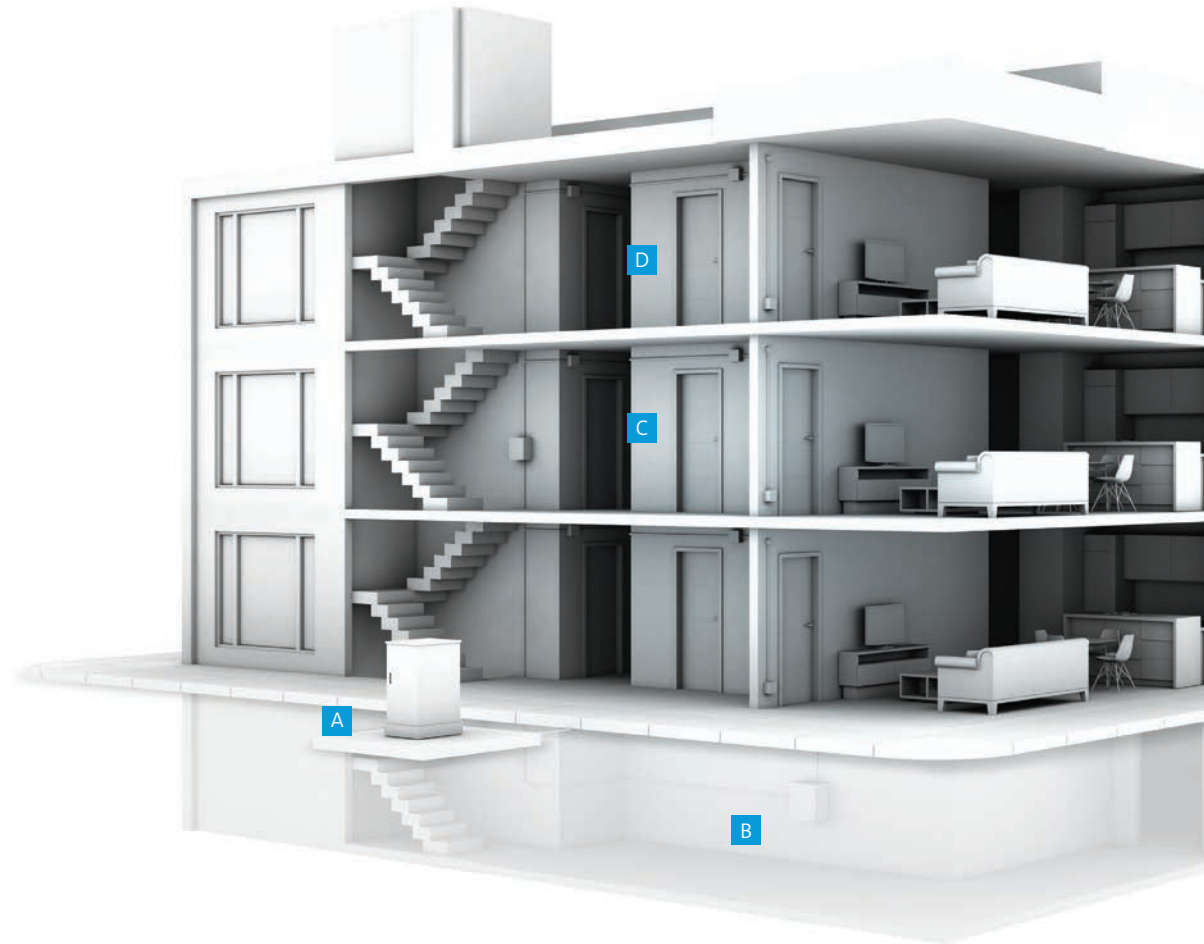
Central Office/Headend Solutions

The central office/headend (CO/HE) is the foundation needed to support demand for increased connectivity, capacity, and speed. To simplify the design and deployment of your CO/HE, we've developed versatile product families that deliver industry-leading density, enable improved scalability, and provide the lowest total cost of ownership. Use the following table to pinpoint the product set within our portfolio that will work best for your network.

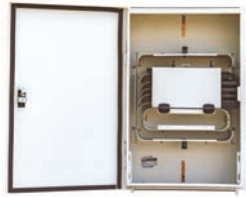|	High Density		Medium Density	
CORNING				
	Centrix™ System	EDGE™/EDGE8® Solutions	Closet Connector Housing (CCH)	Eclipse® Hardware
Application	Central office, headend	Central office, headend	Remotes	Central office, headend, remotes
Frame Configuration	Centrix GR-449 Certified frame. 19-in or 23-in racks with front and rear access	19-in or 23-in with rear cable access	19-in or 23-in	19-in or 23-in
Capacity in 7-ft Frame	2,880 SC/4,320 LC (3,840 with PON splitters)	5,760 LC	1,440 SC 2,880 with 24-port cassettes LC	1,440 (864 with PON splitters)
Wall-Mountable Option	No	No	Yes	Yes
Cable Type	**Loose Tube:** outdoor dielectric, indoor/outdoor, riser, plenum, and outdoor micro cables **Ribbon:** outdoor dielectric, indoor/outdoor, and riser cables	Preterminated assemblies with plenum non-armored or plenum armored cables	**Loose Tube:** outdoor dielectric, indoor/outdoor, and riser cables **Ribbon:** outdoor dielectric, indoor/outdoor, and riser cables **Tight-Buffered:** riser and plenum cables	**Loose Tube:** outdoor dielectric, outdoor armored, indoor/outdoor, and riser cables **Ribbon:** outdoor dielectric, outdoor armored, indoor/outdoor, riser and plenum cables **Tight-Buffered:** riser and plenum cables
Connector Type	SC, LC, MTP® connectors	LC, MTP connectors	SC, LC, FC, ST® compatible, MTP connectors	SC, FC, LC compatible
Jumper Size	1.2, 1.6, 2.0 mm	1.6, 2.0 mm	1.2, 1.6, 2.0 mm	1.2, 1.6, 2.0 mm
Devices xWDM and NG-PON2	Yes	Yes	No	Yes
Accommodate Splitters	Yes	Yes, 1x2 only	Yes	Yes
Port Tapping	Yes	Yes	No	No
On-Frame Splicing	Yes	Yes	Yes	Yes
Removable Housing Cover	No	1U and 2U only	Yes	No
Quick Facts	• GR-449 Issue 3 compliant • Scalable in features and function • Industry-leading cable and jumper management • Base-8 and Base-12 fiber applications • Enclosed 4U housing option for 19-in or 23-in racks • Versatile cassettes/modules including staggered LC cassette for improved port access	• Base-8 and Base-12 fiber applications • Tip-to-tip solution for data centers and storage area networks (SANs) • Ideal for structured cabling in a data center	• Variety of field-termination options • Platinum interior color maximizes visibility • Splice cassette for in-frame splicing in an easy-to-manage, compact footprint	• Integrated fiber management • Front-to-back jumper access • Splitter compatible with OptiTect® Gen III and LS series

Optical Splice Enclosures

Optical Splice Enclosures

When transitioning fiber and cable from outdoors to indoors, operators require a rugged enclosure that is optimized for quick re-entry and network expansion. The transition splice occurs in a different location from the optical fiber distribution frames to better manage the fiber and cable. Corning's optical splice enclosure (OSE) portfolio offers varying densities, scalability, and excellent fiber management with routing guide plates which organize and separate stored fiber and fiber entering splice trays. With options offering up to 6,912 ribbon and 5,184 single-fiber splice capacity, we can help support low- to high-density networks.

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	Optical Splice Enclosures		
	Low Density	High Density	Ultra-High Density
Single-Fiber Splice Capacity	1,296	3,240	5,184
Ribbon Splice Capacity	1,728	4,320	6,912
Dimensions (H x W x D)	81.3 x 55.9 x 25.4 cm (32.0 x 22.0 x 10.0 in)	114.3 x 55.9 x 33.0 cm (45.0 x 22.0 x 13.0 in)	148.1 x 53.9 x 32.3 cm (15.3 x 22.0 x 12.7 in)
Splice Tray Capacity	Up to 12	Up to 30	Up to 48
Splice Tray Options	1-in OSE splice tray stacker 0.5-in splice tray stacker 0.2-in splice tray stacker 0.4-in splice tray stacker	1-in OSE splice tray stacker 0.5-in splice tray stacker 0.2-in slice tray tracker or 0.4-in splice tray stacker	0.5-in splice tray stackers
Shipping Weight	75 lbs (34.0 kg)	90 lbs (40.8 kg)	120 lbs (54.4 kg)
Mounting Type	Wall-mountable, rack 23-in	Wall-mountable, rack 23-in	Wall-mountable, rack 23-in
Standard Recommended Procedures (SRPs)	Optical Splice Enclosure: 003-450-AEN Cable Entry Kit: 003-354-AEN	Optical Splice Enclosure: 003-450-AEN Cable Entry Kit: 003-354-AEN	Optical Splice Enclosure: 003-1032-AEN Cable Entry Kit: 003-1036-AEN
T-Slot Mounting Kit	Yes	Yes	No
Workshelf	Yes	Yes	Yes
Locking Option	Yes	Yes	Yes
Application	Equipment rooms, splice vaults, and building entrance terminals	Equipment rooms, splice vaults, and building entrance terminals	Equipment rooms, splice vaults, and building entrance terminals
Quick Facts	• 0.090-in 5052-H32 aluminum sheet • Cable entry plates allow various entry options including standard cable entry and mid-span cable access • Accommodates top or bottom cable entry • Horizontal pass-through ports provided near top and bottom of cabinet sides	• 0.090-in 5052-H32 aluminum sheet • Cable entry plates allow various entry options including standard cable entry and mid-span cable access • Accommodates top or bottom cable entry • Horizontal pass-through ports provided near top and bottom of cabinet sides	• 0.090-in 5052-H32 aluminum sheet • Accommodates top cable entry only
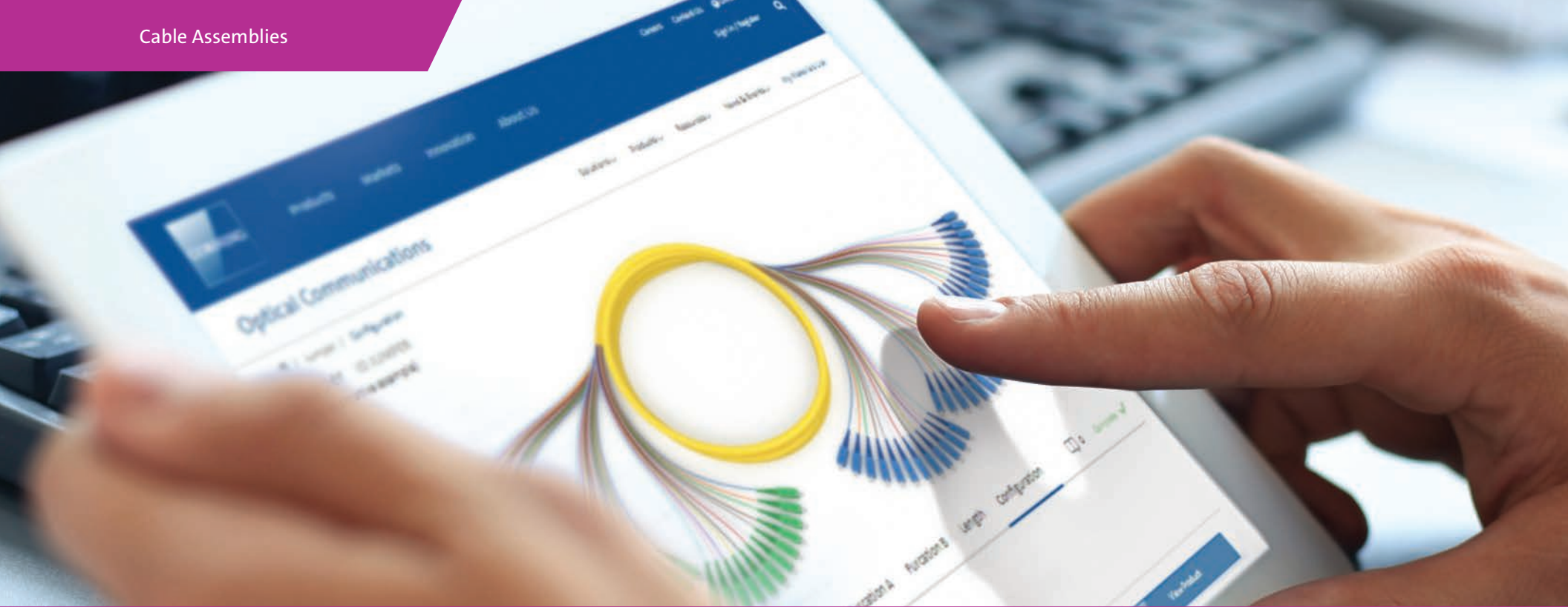
Cable Assemblies

Cable Assemblies

As the industry's leading supplier of cable assemblies, Corning's state-of-the-art manufacturing process ensures reliable connector performance with products that meet or exceed all industry standards for reflectance and insertion loss. Our ability to scale to meet your deployment needs is what sets us apart, along with the highest-quality fiber and factory-tested connectors. All assemblies undergo rigorous performance testing to ensure optimal quality in every connector.

Our new cable assembly configurator enables users to create part numbers while visually verifying different product attributes. This configurator provides reverse configuration features, realistic visualization, and dynamic specification sheet capabilities. Visit **www.corning.com/configurators/cab** to configure your next assembly.

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	Assemblies			
	Single-Fiber Assemblies	**Duplex Assemblies**	**Duplex Zipcord Assemblies**	**Multifiber Assemblies**
Subunit Size	1.2, 1.6, 2.0 mm	1.6, 2.0 mm	1.2, 1.6, 2.0 mm	1.2, 1.6, 2.0 mm
Fiber Size	250 µm (for the 1.2 mm) 900 µm (for the 1.6 and 2.0 mm)	250 µm (for the 1.2 mm) 900 µm (for the 1.6 and 2.0 mm)	900 µm	250 µm
Assembly Type	Jumpers, pigtails	Jumpers, pigtails	Jumpers, pigtails	Jumpers, pigtails, harnesses, trunks
Cable Design	Round	Round	Flat	Round
Application	Central office, headend, mobile switch center, remote	Central office, headend, mobile switch center	Central office, headend, mobile switch center, LAN	Central office, headend
Solution Compatibility	Centrix™ system, CCH, and Eclipse® hardware	EDGE™ and EDGE8® solutions	Centrix system, CCH, Eclipse hardware, EDGE and EDGE8 solutions	Centrix system, EDGE and EDGE8 solutions
Fiber Count	1	2	2	8, 12, 24, increments up to 1,728
Fiber Type	*Bend-insensitive fibers* Single-Mode: Corning® SMF-28® Ultra fiber Corning® ClearCurve® LBL or ClearCurve ZBL fibers	*Bend-insensitive fibers* Single-Mode: SMF-28 Ultra fiber Multimode: ClearCurve OM3, OM4, and OM5 fiber	*Bend-insensitive fibers* Single-Mode: SMF-28 Ultra fiber Multimode: ClearCurve OM3 and OM4 fiber	*Bend-insensitive fibers* Single-Mode: SMF-28 Ultra fiber Multimode: ClearCurve OM3, OM4, and OM5 fiber
Connector Types	SC APC, SC UPC, LC APC, LC UPC, FC APC, FC UPC, ST® compatible PC connectors	SC APC, SC UPC, LC APC, LC UPC, FC APC, FC UPC, ST compatible PC, uniboot (LC only) standard and lockable connectors	SC APC, SC UPC, LC APC, LC UPC, FC APC, FC UPC, ST compatible PC connectors	SC APC, SC UPC, LC APC, LC UPC, MTP® connectors
Packaging	Bag, box, or reel Jumper-in-a-box	Bag, box, or reel Jumper-in-a-box	Bag, box, or reel Jumper-in-a-box	Bag, box, or reel Jumper-in-a-box
Quick Facts	Single-length management and simplified inventory with jumper-in-a-box for Centrix system-compatible assemblies (5 m)	• Quickly switch polarity in the field with LC uniboot connectors • Simplified inventory management with jumper-in-a-box	• Easily separate connector ends in the field for simplified routing • Simplified inventory management with jumper-in-a-box	• High-performance and quick connectivity with MTP connector-enabled assemblies • Manage polarity (type A or B) in conjunction with Corning's universal polarity EDGE systems

Optical Cables

Optical Cables

We invented the first low-loss optical fiber 50 years ago, igniting the critical spark that began a communications revolution. And today, after recently delivering our 1 billionth kilometer of fiber, we continue to lead the industry in product quality and innovation. Corning cables with binderless* FastAccess® technology feature a groundbreaking innovation in cable design that eliminates the use of binder and waterblocking yarns and waterblocking tapes, resulting in significant time-savings. Corning FastAccess cables can be accessed up to 70% faster and reduce the risk of buffer tube damage. With designs for every environment, our innovative cables solve your unique application challenges, from congested duct space and environmental extremes, to mechanical forces and cable entry concerns.

*Corning's proprietary binderless FastAccess® technology refers to the combination of a Corning FastAccess technology jacket with an innovative technology used to bind cable construction through the manufacturing process, eliminating the use of binder yarns and waterblocking tapes.

	Loose Tube Cables		Micro Cables	
CORNING	ALTOS® Loose Tube Cable	SOLO® All-Dielectric Self-Supporting (ADSS) Cable	MiniXtend® Cable	MiniXtend HD Cable
Fiber Size	250 µm	250 µm	250 µm	200 µm
Splicer Compatibility	Single-fiber splicers	Single-fiber splicers	Single-fiber splicers	Single-fiber splicers
FastAccess® Technology	Yes, up to 288 F in dielectric; up to 72 F in armored; binderless* FastAccess technology up to 72 F (dielectric only)	No	Yes, with binderless* FastAccess technology	Yes, with binderless* FastAccess technology
Water Blocking Technology	Gel-free and Gel-filled	Gel-filled	Gel-filled	Gel-filled
Environment	Aerial lashed, duct, direct-buried (armored recommended for direct-buried and toning)	Aerial self-supporting, best near power lines or for long spans	Microduct	Microduct
Duct Requirements (inner diameter)	Dielectric and Lite armored cable: 1.25-in duct up to 432 fibers	Aerial only	8 mm microduct: 12-96 fibers 10 mm microduct: 144 fibers	12 mm microduct: 288 fibers 14 mm microduct: 432 fibers
Armor Available	Yes	N/A	No, armored and toneable microducts are available from microduct vendors	No, armored and toneable microducts are available from microduct vendors
Flame-Rated Version	FREEDM® indoor/outdoor cable, riser LSZH™ cable	No, outdoor only	FREEDM indoor/outdoor cable	No
Fiber Count	12-432	12-288	12-144	144-432
Quick Facts	Most widely deployed cable design globally	• Ideal when no strand is available to lash to and new strand is cost prohibitive • Designed for deploying in the power supply zone	FastAccess technology enables up to 70% faster cable access and 80% lower installation cost vs. standard cable jackets, reduces risk of damage to buffer tubes and fibers	Utilizes Corning® SMF-28® Ultra 200 µm optical fiber to achieve the most dense cable

*Corning's proprietary binderless FastAccess® technology refers to the combination of a Corning FastAccess technology jacket with an innovative technology used to bind cable construction through the manufacturing process, eliminating the use of binder yarns and waterblocking tapes.
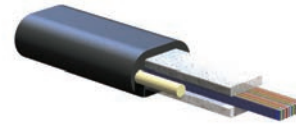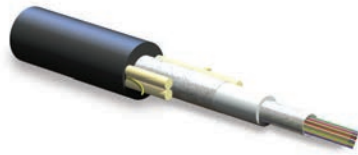
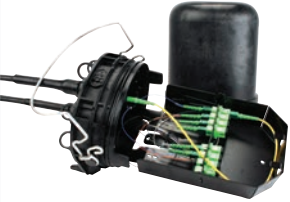|	Ribbon Cables			
CORNING	SST-Ribbon™ Cable	SST-UltraRibbon™ Cable	RPX® Gel-Free Ribbon Cable	Corning® RocketRibbon™ Cable
Fiber Size	250 µm	250 µm	250 µm	200* or 250 µm
Splicer Compatibility	Mass fusion splicers	Mass fusion splicers	Mass fusion splicers	Mass fusion splicers
FastAccess® Technology	No	No	No	Yes, except 1,728 and 3,456
Water Blocking Technology	Gel-free	Gel-free	Gel-free	Gel-free
Environment	Aerial lashed, duct, direct-buried (armored recommended for direct-buried and toning)	Aerial lashed, duct, direct-buried (armored recommended for direct-buried and toning)	Outdoor aerial, duct and direct buried; also typically in distribution segment as part of FlexNAP™ terminal distribution system	Duct
Duct Requirements	1.25-in duct: up to 216 fibers	1.25-in duct: up to 864 fibers	1.0 to 1.25-in duct: up to 144 fibers	288-864: 1.25-in duct 1,728: 1.5-in duct 3,456 or 6,912: 2.0-in duct
Armor Available	Yes	Yes	No	Yes, except 3,456
Flame-Rated Version	FREEDM® indoor/outdoor cable, riser or plenum	FREEDM indoor/outdoor cable, riser or plenum	No	FREEDM indoor/outdoor cable, LSZH™ (dual listing) coming soon
Fiber Count	12-216 (12-fiber increments)	288-864	24-144	96-288 flame rated (coming soon) 288-864; 1,728; 3,456; or 6,912*
Quick Facts	Ribbon stack comprised of 12-fiber ribbons helically rotated to create excess fiber length	Ribbon stack comprised of a combination of 12-, 24-, and 36-fiber ribbons helically stranded in a central tube	• Rugged and compact design ensures the ribbon stack and cable act as one unit. • Dielectric strength members under the cable jacket provide tensile and anti-buckling strength • Suitable for short span ADSS applications	Utilize conventional 12-fiber ribbons packaged in a unique subunit design that will provide the new standard fiber density, fast cable prep access, and easy identification

*200 µm fiber optional

Local Convergence Point

The network you build today will serve your customers for many years, so we've designed our family of cabinets to serve them well. These cabinets, the cornerstone of our FTTH portfolio, enable quick subscriber turn-up and error-free, long-term management of your climbing take rates. See the following options to find your ideal balance of size, density, and features. All cabinets incorporate our innovative cable routing and splitter storage.

Local Convergence Point

CORNING	Outdoor LCPs			
	Splitter Cabinet, MAC Series*	Splitter Cabinet, PAC Series	Local Convergence Cabinet, MC Series	Retrofit Fiber Panel for Copper Cabinet
Architecture	Centralized	Centralized	Distributed	Centralized
Capacity	120 distribution fibers	72, 144, 288, 432, 576, 864 fibers	120 distribution fibers	144, 288, 432, 576, 864 fibers
Prestubbed Feeder	Yes. Use of stubbed and splice on frame applications is supported by use of Centrix housings used with the MAC cabinet.	ALTOS® gel-free cable, SST-Ribbon™ gel-free cable	OptiTip® stubs	ALTOS® gel-free cable, SST-Ribbon™ gel-free cable
Distribution Stub(s)	Yes Note: Stubbed distribution housings are supported in the MAC cabinet.	Yes	Yes (OptiTip stubs)	Ribbon dielectric or armored
Mounting Options	288 & 576 MAC Cabinets = Pad or Pole; 864 MAC Cabinets = Pad	Pad or pole	Wall or pole	Inside various industry copper cabinets
Splitter	Dual 1x4, dual 1x8, dual 1x16,1x16, 1x32, or 1x64	Dual 1x4, dual 1x8, dual 1x16, 1x32 or 1x64	1x4, 1x8	Dual 1x4, dual 1x8, dual 1x16,1x16, 1x32, or 1x64
xWDM Capability	No	Yes	No	Yes
Splice	No	No	No	No
Splitter Compatibility	LC or RM series splitters	LS or or RM series splitters	MC or RM series splitters	LS, FOS-SM
Pass-Through Capability	Yes	Yes	Yes	Yes

*The MAC also features the ability to support optical cross-connect applications and blown-in fiber deployments.

	Outdoor LCPs		Indoor LCPs		
CORNING	Fiber Dome Splitter Terminal	Local Convergence Point Enclosure (LCPE)	Local Convergence Cabinet, Indoor Gen III Series	Local Convergence Cabinet, Indoor LS Series	Local Convergence Cabinet, Indoor CE Series
Architecture	Centralized	Centralized, distributed	Centralized, distributed	Centralized, distributed	Centralized, distributed
Capacity	32 fibers	72, 96, 144 fibers (SC APC); 144 and 288 fibers (LC APC)	144, 288, 432 fibers	144, 288, 432, 576, 864 fibers	72, 96, 144, 288, 432, 576, 864 fibers
Prestubbed Feeder	Prestubbed LT cable; four 12-fiber tails or one 48-fiber tail	ALTOS® cable, SST-Ribbon™ cable	SST-Ribbon cable, FREEDM® ribbon riser cable, ALTOS riser cable	FREEDM ribbon riser cable, FREEDM loose tube cable	FREEDM ribbon riser cable, FREEDM loose tube cable
Distribution Stub(s)	Yes	Yes	Yes	Yes	Accomplished with RPDpass® riser assemblies or direct drops
Mounting Options	Aerial strand and pole-mount, pedestal, handhole, manhole	Aerial strand and pole-mount, pedestal, handhole, manhole	Wall- or rack-mount	Wall- or rack-mount	Wall- or rack-mount
Splitter	1x32	Dual 1x4, dual 1x8, dual 1x16, or 1x32	Dual 1x4, dual 1x8, dual 1x16, or 1x32	Dual 1x8, dual 1x16, or 1x32	Dual 1x4, dual 1x8, dual 1x16, or 1x32
xWDM Capability	Yes	Yes	Yes	Yes	Yes
Splice	No	Yes, splice option available	Yes	Yes	Yes
Splitter Compatibility	Splitter is factory installed	SC APC use LCPE series LC APC use RM series WDM LCPE Splitters	Gen III series splitters	LS series splitters	LS/Gen III series splitters
Pass-Through Capability	Yes	No	No	Yes	Yes

Closures and Terminals
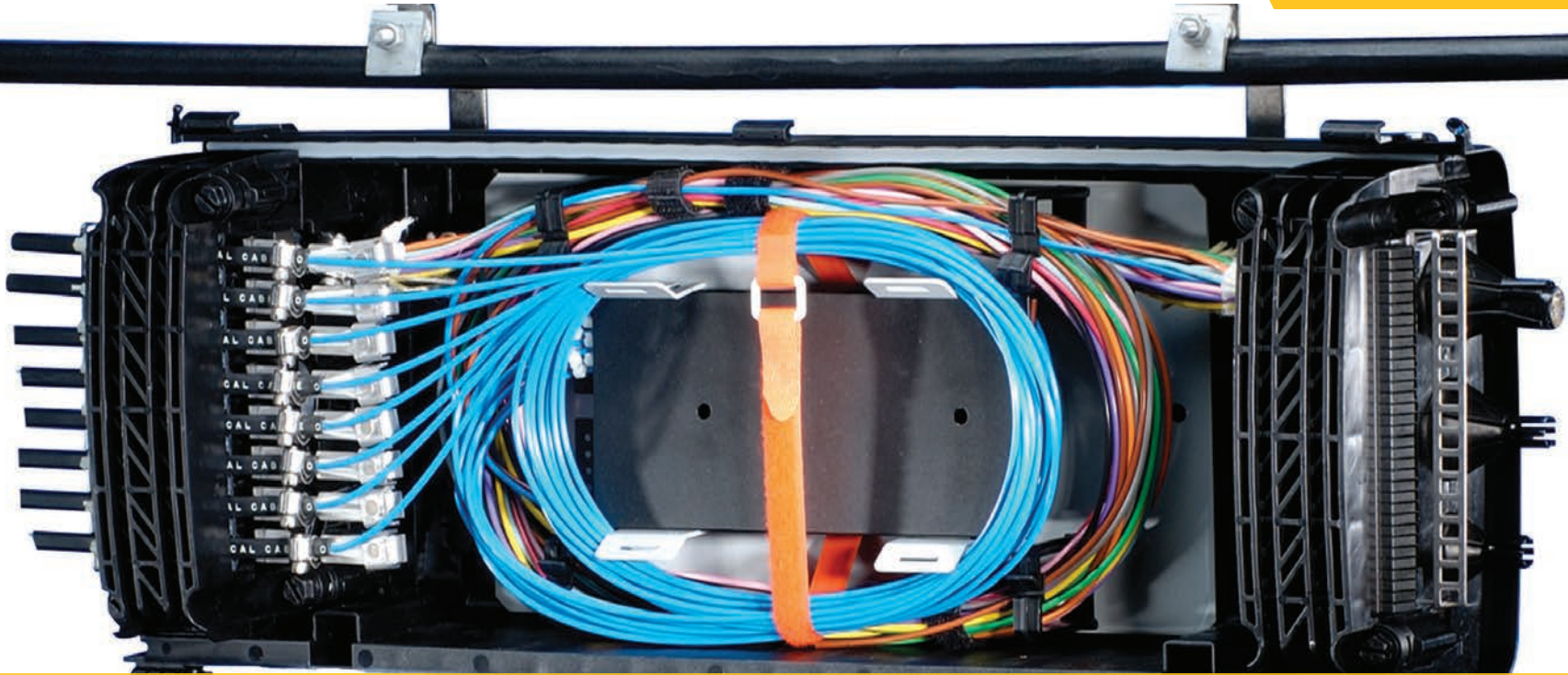
Closures and Terminals

Whether your FTTH network design has closures in a buried or aerial environment, one thing remains the same: you need assured environmental protection and quick, incremental subscriber drops. From our experience in the field, we know that not all closures are the same. Our preconnectorized terminals are thoughtfully designed to incorporate individual strain-relief, sealing of all cables, and quick-release clamps for easy re-entry. With our expanded solution portfolio, we can help you choose the one that's best for your deployment from the following tables.

Visit **our cable and closure pairings site** to find the best fit for your network.

CORNING

	Below-Grade Closures			
	2178 Series Closures	SCF Series Closures	UCA Series Closures	FDC Fiber Dome Closure
Best Fit Cable Type*	Ribbon	Ribbon	Loose tube	Loose tube
Installation Environment	Vault, (FR), handhole, strand, pole	Handhole, strand, pole	Strand, pole, pedestal, façade	Strand, handhole, pole
Single-Fiber Splices – Loose Tube	XSB: 48, XLB 96 S: 96 L: 288 XL: 576	96, 384, 576	24, 36, 48, 60	FDC08M-72 FDC08S-96 FDC10S-432 FDC12S-720
Mass Fusion Splices – Ribbon	XSB: 288, XLB 432 S: 288 L: 864 XL: 1,728 or 3,456	1,152 or 1,728	48 fibers (4 ribbons) 144 fibers (12 ribbons)	FDC08M-144 FDC08S-288 FDC10S-864 FDC12S-2880
Sealing Type	Mechanical	Mechanical	Mechanical	Mechanical
Doubles as Terminal	Yes, small sizes support spliced drops	No	Yes, spliced or via ports	Yes, spliced or via ports
Pre-term Compatibility	None, splice only	None, splice only	Hardened OptiTip® or OptiTap® connectors	Non-hardened, SC and LC
Number of Distribution/Drop Cables	Expandable kits available; port counts vary	3, 4, 6	2, 4	Based on type of base and grommet in the ECAM
Maximum Number of Cable Ports	XS: 3 Butt only S: 2 per side L: 2 per side XL: 4 per side	5, 6, 8	4, 12, 20	Based on the base type 8(8M-A), 3(8S-B), 5(8S-C), 8(8S-C) 7(10S), 5(12S)
Cable Entry Style	In-line, butt	Butt	In-line, butt	Butt
Slack	Yes	Yes	Yes	Yes
Accommodates Splitters and xWDM	Yes	Yes	Yes	Yes
IEC/GR or Specific Attribute	GR-771	GR-771	IP68	GR-771

*All closures are compatible with multiple cable designs. Visit https://www.corning.com/optical-communications/worldwide/en/home/products/fiber-closures.html.

CORNING

	Above-Grade Closures			
	SCA Series Closures	SLiC® Fiber Aerial Closures	BPEO Series Closures	MPE Series Closures
Installation Environment	Strand	Strand	Handhole, pole, façade	Handhole, pole, façade
Single-Fiber Splices – Loose Tube	144, 288	Model 533-432 fibers Model 542-432 fibers Model 733-864 fibers	Up to 576 splices with loose tube; up to 1,152 splices with single-fiber G657 fiber	144
Mass Fusion Splices – Ribbon	288, 432	Model 533-144 fibers Model 547-144 fibers Model 733-864 fibers	288	None
Sealing Type	Gel	Free-breathing	Mechanical	Mechanical
Doubles as Terminal	Yes	Yes, with OptiTap®, ECAM, or direct splice	Yes	Yes
Connector Type	Splice, SC, or OptiTap connectors	Splice, SC, or OptiTap connectors	Splice only, 12/16/24 SC bulkhead connectors or Pushlok™ connectors	Splice, OptiTap or OptiTip® connectors
Number of Distribution/ Drop Cables	6, 16	24	Up to 25	16 (8 per side)
Maximum Number of Cable Ports	22	28	Up to 29	6 (3 per side)
Cable Entry Style	In-line	In-line, butt	Butt	In-line
Slack	Yes	Yes	Yes	Yes
Accommodates Splitters and Optical Devices	Yes	Yes	Yes, including distributed tap splitters	Yes
Industry Ratings	Telcordia TR TSY-000949 and GR-771 requirements	GR-771 (aerial)	IP68 (buried) IP56 (aerial)	IP68

FlexNAP™ System

Save time and money with our FlexNAP™ system, a pre-engineered factory-terminated network access point integrated into fiber optic distribution cables. Designed for FTTH networks, the factory-tested and factory-sealed system deploys up to 50% faster than traditional deployment methods by eliminating costly field splices. The FlexNAP system simplifies installation by using the same methods as bulk cable while leveraging the speed of preconnectivity. Depending on your network architecture, either the FlexNAP standard, single-fiber, or multiuse system will be your choice for this technician-friendly FTTH innovation. Trust in a technology that's helped operators pass more than 20 million premises and counting.

FlexNAP™ System

CORNING

	FlexNAP™ Standard System	FlexNAP Single-Fiber System	FlexNAP Multiuse System
Architecture	Centralized, home run	Distributed	Combined home run, centralized, distributed
Maximum Fiber Count	**ALTOS® loose tube cable (dielectric, armored, or figure-8):** 432 fibers with 204 terminated remainder expressed **RPX® ribbon cable (dielectric or toneable):** 144 fibers	**ALTOS loose tube cable (dielectric or armored):** 432 fibers with 204 terminated remainder expressed **RPX ribbon cable (dielectric or toneable):** 144 fibers **SST-Drop™ cable (dielectric):** 12 fibers	**ALTOS loose tube cable (dielectric or armored):** 432 fibers with 204 terminated remainder expressed **RPX ribbon cable (dielectric or toneable):** 144 fibers
Aerial Self-Supporting Cable	Yes, with RPX ribbon or ALTOS figure-8 cable	Yes, with RPX ribbon cable or SST-Drop cable	Yes, with RPX ribbon cable
Buried Environment	**Loose tube:** 1.25-in duct up to 72 fibers dielectric, 2-in duct up to 216-fiber dielectric, or 72-fiber armored cable **RPX ribbon cable:** 2-in duct	**Loose tube:** 1.25-in duct up to 72 fibers dielectric, 2-in duct up to 216-fiber dielectric, or 72-fiber armored cable **RPX ribbon cable:** 2-in duct **SST-Drop cable (dielectric):** 1.25-in duct	**RPX ribbon cable:** 2-in duct
Maximum Tethers per Tap	2, dual tap dual tether option available to access 48-fibers max per location	2	2, OptiTip® OptiTap® tethers collocated at the same tap point
Multifiber Connector Tether Options	**Using OptiTip connectors:** **Loose tube:** 2, 4, 6, 8, or 12 **RPX ribbon cable:** 4, 8, or 12	N/A	**Using OptiTip connectors:** **Loose tube:** 2, 4, 6, 8, or 12 **RPX ribbon cable:** 4, 8, or 12
Single-Fiber Connector Tether Options	N/A	**Using OptiTap connectors:** **Loose tube:** 1, 2, or 4 **RPX ribbon:** 4 **SST-Drop cable:** 1, 2, 4 Tethers with more than 1 fiber have secondary furcation point	**Using OptiTap connectors:** **Loose tube:** 1, 2, or 4 **RPX ribbon:** 4 Tethers with more than 1 fiber have secondary furcation point
Supports Preterm Laterals	Yes, maximum 48 fiber per lateral	N/A	Yes, maximum 48 fiber per lateral
Pretermination Possible at Cabinet	No	No	Yes, maximum 48 fiber via dual tether dual tap with pretermination-enabled cabinet
Enables Converged Networks	Yes	Yes	Yes
OSP Terminal Compatibility	Supports Legacy MTB, MPF and Evolv™ terminals	Supports 1:4 and 1:8 stubless splitter MTS and MSF terminals	Supports MTB, MPF, MTS, and MSF terminals
MDU Terminal Compatibility	Supports OptiTip multifiber connector-enabled MDU and LPT terminals	Supports OptiTap single-fiber connector-enabled splitter MDU and LPT terminals	Supports OptiTap and OptiTip connector-enabled MDU and LPT terminals

Outside Plant Terminals

Specifically designed for outside plant (OSP) fiber access networks, our multiport family delivers fully sealed environmental protection and fast, easy incremental connection for increased deployment velocity. For the greatest deployment acceleration, you can pair connector-enabled terminals with our FlexNAP™ system. Another best practice is to consolidate cable access points by routing several terminal stubs to a single-splice location, increasing workforce efficiency and reducing the total connection time for subscribers.

Through our extensive FTTH experience, we've designed these OSP terminals with flexible form factors and integrated splitters to adapt to your individual network. Look at the following table to see which combination of features is right for you.

Outside Plant Terminals

CORNING

	Subscriber Terminals					
	MultiPort (MOB)	MultiPort Flex Stubbed (MOF)	MultiPort (MTB)	MultiPort Flex (MPF)	MultiPort Flex Terminated (MTF)	Evolv™ DN Terminal (DM/DF)
Architecture	Centralized	Centralized	Centralized	Centralized	Centralized	Centralized
Drop Capacity	2, 4, 6, 8, 12 ports	4, 8, 12 ports	2, 4, 6, 8, 12 ports	4, 8, 12 ports	4, 8, 12 ports	2, 4, 6, 8, 12, 16 ports
Input Cable	SST-Drop™ cable (toneable or dielectric) MiniXtend® cable	SST-Drop cable (toneable or dielectric) 4.8 mm round drop (legs)	RPX® ribbon cable < 18 ft (toneable or dielectric) 4.8 mm round drop (legs) or SST-Drop cable > 18 ft (toneable or dielectric)	4.8 mm round drop (legs)	RPX ribbon cable (dielectric)	SST-Drop cable or MiniXtend Cable
Input Connector	None (stubbed)	None (stubbed)	OptiTip® multifiber hardened connector	OptiTip multifiber hardened connector	OptiTip multifiber hardened connector	None (DM); OptiTip multifiber hardened connector (DF)
Splitter	No	No	No	No	No	No
Low Profile	No	Yes	No	Yes	Yes	Yes
FlexNAP™ System Compatible	No	No	Yes	Yes	Yes	Yes
Expansion Port	No	No	No	No	No	No
Port Type	OptiTap® adapter	OptiTap adapter	OptiTap adapter	OptiTap adapter	OptiTap adapter	Pushlok™ single-fiber adapter

CORNING

	Splitter Terminals					
	MultiPort Splitter (MOS/MTS)	MultiPort Splitter Stubless (MTS)	MultiPort Flex Splitter (MSF)	MultiPort Distributed TAP (MDT)	Evolv™ Splitter Terminal (DS)	Evolv Distributed TAP (DT)
Architecture	Distributed	Distributed	Distributed	Distributed TAP	Distributed	Distributed TAP
Drop Capacity	4, 8 ports	4, 8 ports	4, 8 ports	2, 4, 8 ports	2, 4, 8, 16 ports	2, 4, 8 ports
Input Cable	SST-Drop™ cable (toneable or dielectric)	None; OptiTap® drop assembly serves as input cable	4.8 mm round drop	None	None; Pushlok™ drop assembly serves as input cable	None, Pushlok drop assembly serves as input cable
Input Connector	None (stubbed) or OptiTap connector (male) or OptiTip® multifiber hardened connector (with expansion port only)	OptiTap single-fiber hardened connector (female)	OptiTap single-fiber hardened connector (female)	OptiTap single-fiber hardened connector (female)	Pushlok single-fiber	Pushlok single-fiber
Splitter	1x4 or 1x8	1x4 or 1x8	1x2, 1x4, or 1x8	One uneven 1x2 (90/10 to 60/40 available) with one standard 1x2, 1x4 or 1x8	1x4, 1x8, or 1x16	One uneven 1x2 (90/10 to 60/40 available) with one standard 1x2, 1x4 or 1x8
Low Profile	No	No	Yes	No	Yes	Yes
FlexNAP™ System Compatible	No	Yes	Yes	Yes, FlexNAP single-fiber system as feeder trunk	No	No
Expansion Port	Configurable	No	No	Yes	No	Yes
Port Type	OptiTap Adapter	OptiTap Adapter	OptiTap Adapter	OptiTap Adapter	Pushlok single-fiber	Pushlok single-fiber

CORNING

	Distribution Terminals				
	UltraNAP™ 4-Port Terminal (B1, S1)	UltraNAP 6-Port Terminal (B1, S1)	MF2 MultiPort Terminal	MF4 MultiPort Terminal	MF12 MultiPort Terminal
Architecture	Centralized	Centralized	Centralized, home run	Centralized, home run	Centralized, home run
Drop Capacity	12-fiber capacity: Four OptiTap® ports with two 4-fiber OptiTip® expansion ports	12-fiber capacity: Six OptiTap ports with one 6-fiber OptiTip expansion port	4-24 fiber capacity: 2, 3, 4, 6, 8, or 12 2-fiber OptiTip ports	4-48 fiber capacity: 2, 3, 4, 6, 8, or 12 4-fiber OptiTip ports	48-144 fiber capacity: 2, 3, 4, 6, 8, or 12 12-fiber OptiTip ports
Input Cable	SST-Drop™ cable (toneable or dielectric)	SST-Drop cable (toneable or dielectric)	SST-Drop cable (toneable or dielectric) MiniXtend® cable ALTOS® cable	SST-Drop cable (toneable or dielectric) MiniXtend cable ALTOS cable	ALTOS cable RPX® ribbon cable
Input Connector	None (stubbed) or OptiTip multifiber hardened connector	None (stubbed) or OptiTip multifiber hardened connector	None (stubbed) or OptiTip multifiber hardened connector (6 ports/12-fiber maximum for preconnectorized)	None (stubbed) or OptiTip multifiber hardened connector (3 ports/12-fiber maximum for preconnectorized)	None (stubbed)
Splitter	No	No	No	No	No
Low Profile	No	No	No	No	No
FlexNAP™ System Compatible	Yes	Yes	Yes	Yes	No
Expansion Port	Yes	Yes	No	No	No
Port Type	OptiTap & OptTip adapter	OptiTap & OptiTip adapter	OptiTip adapter	OptiTip adapter	OptiTip adapter

Multidwelling (MDU) Terminals and NIDs

Whether you're servicing a business or a residence, there's no one-size-fits-all answer for your multidwelling or multitenant needs. You need a customized solution and a collaborator with the expertise to simplify your challenges, so you can focus on delivering the services and applications that your subscribers expect. Other variables like aesthetics, labor skill level, and rights-of-way access will factor into your architecture and product selection. Choose a supplier that knows your environment and has manufacturing expertise that can help you choose flexible, simplified product sets. What you will find on the following pages are a range of solutions that address the wide variety of environments you may encounter in the field, backed by the expertise we've gained in more than 15 years of global deployments.

Multidwelling (MDU) Terminals and NIDs

CORNING

Multidwelling Unit Terminals

	MDU Terminal	MDU Splitter Terminal	Transition Terminal	Low-Profile Terminal (LPT)	Low-Profile Terminal with Splitters (LPT)
Architecture	Centralized, home run	Centralized, distributed	Centralized	Centralized, home run	Distributed
Environment	Indoor/outdoor	Indoor/outdoor	Indoor/outdoor	Indoor/outdoor	Indoor/outdoor
Capacity	6, 12, 24, 36, 48 fibers	4, 6, 16, 32 fibers	72, 96, 144, 216, 288 fibers	4, 6, 8, 12 fibers	4, 8 fibers
Prestubbed Feeder	OptiTip® stub, MTP® connector, AL-TOS®, SST-Ribbon™, and FREEDM® loose tube indoor/outdoor cables	FREEDM loose tube indoor/outdoor cable, 4-12 fibers	FREEDM Ultra, FREEDM ribbon riser	OptiTip stub, MTP connector enabled: RPDpass riser cable assembly (indoor only)	No; OptiTap® or SC APC options
Compatible Solutions	FlexNAP™ system with OptiTip stubs or adapter ports; RPDpass® riser assemblies	No	RPDpass riser cable assembly	FlexNAP system with OptiTip stubs RPDpass riser assemblies	FlexNAP system with OptiTap connector
Drop	Corning® ClearCurve® drop cable (2.9 to 4.8 mm)	ClearCurve drop cable (2.9 to 4.8 mm)	N/A when used as a basement terminal, Corning® Clear Track Hallway-enabled with MTP connectors when used as a zone terminal	ClearCurve drop cable (2.9 to 4.8 mm)	ClearCurve drop cable (2.9 to 4.8 mm)
Splitter	No	1x32 or dual 1x4, dual 1x8, dual 1x16	No	No	1x4, dual 1x4, or 1x8
Slack	Yes, optional rear housing for additional storage	Yes, optional rear housing for additional storage	Yes, optional rear housing for additional storage	Yes, optional rear housing for additional storage	Yes, optional rear housing for additional storage
Splice	Yes	Yes	No	Yes, for drop cables only	No, OptiTap connector input

	MDU Terminals		Network Interface Devices (NIDs)			
CORNING	Fiber Distribution Terminal (PBO Series)	Riser Distribution Terminal (RTW or RTC)	Integrated Fiber NID	FTH-602	FTH-76S	FTH-NG1
Architecture	Centralized, distributed, or home run	Centralized, home run	Centralized, home run	All	All	All
Environment	Indoor/outdoor	Indoor	Outdoor	Indoor/outdoor	Indoor/outdoor	Indoor/outdoor
Capacity	Up to 12 fibers	12, 24 fiber (by adding 12-F SC modules)	1 or 2 fibers	1-6 fibers	1-6 fibers (spliced) 1-2 fibers (connectorized)	1-24 fibers (connectorized)
Prestubbed Feeder	N/A	MTP®-enabled	N/A	SC UPC/APC LC UPC/APC	SC APC OptiTap® adapter (1 fiber only)	SC UPC/APC LC UPC/APC
Compatible Solutions	No	RPDpass®	No	Field-installable connectors	Field-installable connectors	Field-installable connectors
Drop	Corning® ClearCurve® drop cable, SST-Drop™ or ROC™ drop cables	2.9 mm compact, 4.8 mm rugged, Corning® Clear Track, RPDpass horizontal	Up to 4.8 mm drop cables	Up to 4.8 mm drop cables	Up to 4.8 mm drop cables	Up to 4.8 mm drop cables
Splitter	Yes, up to 1x8	No	No	No	No	No
Slack	Yes	No	Yes, up to 35 ft of 4.8 mm	3 m	10 m	Repair loop only
Splice	Yes, to pigtails for preconnectorized drops or full splice directly to drops	No	Yes, to pigtails for preconnectorized drops or full splice directly to drops	Mechanical, fusion	Fusion	No splicing

Drop Assemblies

Drop Assemblies

To reduce the cost and time of deploying drop cables in your optical access network, we factory terminate our drops with either SC APC or environmentally sealed hardened connectors. These innovative single-fiber drop cable assemblies enable quick, highly reliable customer connections – without field splicing. Available on a wide variety of cables, you can choose a design that's right for your application. Determine which product best fits your needs using the provided table.

CORNING

	Outdoor Drops			Indoor/Outdoor Drops		
	SST-Drop™ Cable Assembly	ROC™ Drop 900 Drop Cable Assembly	SST-Drop In-Line Cable Assembly, Female OptiTap® Connector	SST-Drop Indoor/Outdoor Assembly	DualDrop™ Cable Assembly	Clear Fiber Drop
Connectorized	OptiTap to SC APC assembly, OptiTap pigtail or SC APC to SC APC jumper	OptiTap to SC APC assembly, OptiTap pigtail, SC APC jumper, or Pushlok™ to SC APC assembly or Pushlok single-fiber pigtail	Female OptiTap pigtail or female-to-male OptiTap assembly	OptiTap to SC APC assembly or OptiTap pigtail (2-fiber only available as pigtail)	OptiTap pigtail only	Unterminated, SC APC or SC APC patch cord to SC APC single-fiber pigtail
Toneable/Dielectric	Both	Both	Both	Both	Dielectric	Dielectric
Buried/Aerial	Both	Both	Both	Both	Both	No
Fiber Subunit	250 µm	900 µm	250 µm	900 µm	900 µm	900 µm
FastAccess® Technology	No	Yes	No	No	Yes	Yes
Flat/Round Cable	Flat	Flat	Flat	Flat	Round	Round
Indoor/Outdoor	Outdoor	Outdoor	Outdoor	Indoor/outdoor	Indoor/outdoor	Indoor/outdoor
Fiber Count	1	1	1-2	1-2	1	1
Fiber Type	Corning® SMF-28e+® fiber	SMF-28e+ fiber	SMF-28e+ fiber	Corning® ClearCurve® fiber	ClearCurve fiber	Ultra-bend insensitive single-mode fiber
Pulling Grip	Available	No	Available	Available for 1-fiber assemblies	No	Available
Quick Facts	Robust flat drop cable for self-supporting or direct-buried applications	Compact outdoor drop allows for more slack to be managed at subscriber premise	Ideal to branch off multiports and position at lot lines between subscriber premise	Suited for applications where two services (e.g., business and residential) exist at the same subscriber location	Eliminate transition housing by removing outdoor jacket and route directly to subscriber ONT indoors	Less visible, resulting in an aesthetically pleasing look for both homeowners and property owners

CORNING

	Indoor Drops					In-Living Unit (ILU)
	RPDpass® Riser Cable Assembly	RPDpass Drop Cable Assembly	Corning® Clear Track Micro-Module	Corning® ClearCurve® Rugged Drop Cable Assembly	ClearCurve Compact Drop Cable Assembly	SC APC Shuttered Jumper
Connectorized	MTP® connector jumper	SC APC pigtail or MTP pigtail	SC APC pigtail or MTP pigtail	SC APC or SC UPC (jumper or pigtail)	SC APC or SC UPC (jumper or pigtail)	SC APC shuttered
Outer Dimensions	Cable: 3 mm Grip: 18 mm (0.72 in)	6-fiber: 4.8 mm 8-fiber: 5.2 mm 12-fiber: 6.5 mm	1.8 mm	4.8 mm	2.9 mm	3.0 mm
Fiber Size	250 µm	900 µm	900 µm	900 µm	900 µm	900 µm
Cable Design	Micro-Module	1.65 mm subunits bundled (no outer jacket)	Micro-Module	Round	Round	Round
Installation	Conduit	Conduit	Wall/trim or conduit	Wall/trim	Wall/trim or conduit	N/A
Indoor/Outdoor	Indoor only	Indoor only	Indoor only	Indoor/outdoor	Indoor/outdoor	Indoor only
Fiber Count	12 or 24	6, 8, or 12	12	1	1	1
Fiber Type	ClearCurve ZBL fiber	ClearCurve ZBL fiber	ClearCurve ZBL fiber	ClearCurve ZBL fiber	ClearCurve ZBL fiber	Ultra-bend-insensitive fiber (UBIF)
Packaging	Collapsible plastic reel	Corrugated plastic reel	Reel	Bag or reel	Bag or reel	Bag
Pulling Grip	Standard	Standard	Available	Available	No	No
Quick Facts	Suited for larger MDUs where riser conduit space may be limited	Binderless bundled construction allows for quick access to individual subscriber subunits for termination	Can be easily laid and captured within the Clear Track Hallway Fiber Pathway with the Clear Track Hallway Fiber Installation Tool	Self-bend-limiting jacket allows for widest variation of installation methods including stapling	Optimized for running inconspicuously under carpet and along door frames or molding. Also suitable for raceway and microduct installations	Ideal connection from low-profile wall space with visual connection reference

Residential Hardware

Whether you're taking fiber to the living unit or fiber all the way into a living unit, Corning's variety of small transition boxes and outlets provide the optimal transition point for a variety of applications. With a number of different connector styles and mounting options, each solution offers a custom fit for your fiber deployment. All products are easy to deploy and can be used in both single-family and multifamily unit installations. As fiber progresses closer to subscribers, these transition points will become increasingly important in your network.

CORNING	Distribution		In-Living Unit (ILU)				
	Small Point-of-Entry (POE) Box	Micro POE Box	Low-Profile Wall Plate	Wall Outlet (WLL)	Shuttered Wall Terminal (SWT)	Shuttered Wall Box (SWB)	WLL Box
Environment	Hallway	Hallway	In-living unit	In-living unit	In-living unit	In-living unit	In-living unit
Installation	N/A	N/A	Wall-mountable or outlet	Outlet (flush)	Wall-mountable	Wall-mountable or outlet (cover)	Wall-mountable
Capacity	1 SC adapter inside	Pass-through	1 port	2 keystone ports	4 ports	2 keystone ports	2 ports
Connectivity Type	12-F micro-module	N/A	SC	Shuttered SC compatible with alternative keystone ports (LC, CAT x)	SC, LC	Shuttered SC compatible with alternative keystone ports (LC, CAT x)	SC
Cable Compatibility	6 ft of 18 mm micro-module	900 µm	900 µm	All indoor drops	All indoor drops	All indoor drops	All indoor drops up to 4.8 mm
Slack	Holds 1 splice in lieu of adapter	N/A	6 ft of 900 µm	N/A	1-3 ft, depending on cable size	1-3 ft, depending on cable size	3 ft of 2.9 mm
Quick Facts	Supports mid-span access to separate and terminate individual subscriber fiber, allowing remaining fibers to pass through	Conceals the hole from hallway into subscriber living unit while protecting subscriber drop	Integrated shuttered SC APC port with visual indicator ensures safe subscriber connect-ions with SC APC shuttered jumper	Suitable for greenfield construction and compatible with standard wall junction boxes	Surface-mount configurable terminal to support up to 4 ports, flexible for business and residential environments	Surface-mount subscriber demarcation leveraging shuttered adapters	Surface-mount subscriber demarcation compatible with rugged drops up to 4.9 mm

Bulk Drop Cables

Engineered to withstand demanding conditions, from environmental extremes to mechanical forces, our drop cables can be strung aerially along telephone poles, installed inside underground ducts, or buried directly below ground. We protect the integrity of our optical fibers with rugged constructions and resistance to ultraviolet light and temperature fluctuations. However you plan to deploy your subscriber drops, we've included a cable design for you on the next page.

Bulk Drop Cables

CORNING

	Flat Drop Cables				
	SST-Drop™ Cables	ROC™ Drop 900 Cables	SST-Drop Indoor/Outdoor Cables	Long-Span Drop Cables	Clear Drop Cables
Toneable/Dielectric	Both	Both	Both	Dielectric	Dielectric
Cable Size	8.1 x 4.5 mm	6.6 x 3.0 mm	8.1 x 4.5 mm	12.7 x 4.4 mm	2.5 x 4 mm
Fiber Size	250 μm	900 μm	900 μm	250 μm	900 μm
FastAccess® Technology	Yes	Yes	Yes	No	Yes
Installation	Aerial/buried (toneable recommended for buried)	Aerial/buried (toneable recommended for buried)	Aerial/buried (toneable recommended for buried)	Aerial (designed specifically for long-span aerial applications in NESC medium-to-heavy conditions)	Aerial, outdoor, and wall indoor
Indoor/Outdoor	Outdoor	Outdoor	Indoor/outdoor	Outdoor	Indoor/outdoor
Fiber Count	1-12	1	1-2	1-12	1
Fiber Type	Corning® SMF-28e+® fiber	SMF-28e+ fiber, Corning® ClearCurve® LBL, or ClearCurve ZBL fibers	ClearCurve LBL or ClearCurve ZBL fiber	Corning® SMF-28® Ultra	Bend-insensitive or ClearCurve ZBL fiber
Option to Preconnectorize	Yes, one or both ends with OptiTap® or SC APC connectors	Yes, one or both ends with OptiTap or SC APC connectors	Yes, one or both ends with OptiTap or SC APC connectors	No	Yes, one or both ends with SC APC connectors
Packaging	Reel in a box	Reel in a box	Bulk or reel in a box	32-in or 42-in reel	Bulk, reel in a box, or bag
Quick Facts	Offers exceptional crush resistance in an easy-access, single-tube design	Reduced OD increases flexibility and improves slack storage as compared to standard flat drop cables	Eliminates indoor ONT transitions with a flame-rated indoor subunit with OptiTap or SC APC connectors	• Enables span lengths up to 500 ft with no support or messenger wire required • Compatible with OptiSnap® and OptiTap field-installable connectors	Clear Drop eliminates the need for termination hardware to transition from the outdoor environment to an indoor terminal, with a clear internal subunit for nearly invisible routing in living units

CORNING

	Round Drop Cables			Corning® Clear Track Fiber		
	Jetted Round Drop Cables	Corning® ClearCurve® Rugged Drop Cables	ClearCurve Compact Drop Cables	Corning® Clear Track 900 µm Clear Fiber	Clear Track Quad with Four 900 µm Clear Fibers	Clear Track Hallway with 12-Fiber Micro-Module
Toneable/Dielectric	Dielectric	Dielectric	Dielectric	N/A	N/A	N/A
Fiber Size	900 µm	900 µm	900 µm	900 µm	900 µm	1.8 mm
FastAccess® Technology	Yes	No	No	No	No	No
Installation	Aerial/buried	Wall/trim	Wall/trim or conduit	Wall with Clear Track ILU fiber pathway	Wall with Clear Track Quad fiber pathway	Wall with Clear Track Hallway fiber pathway
Indoor/Outdoor	Indoor/outdoor	Indoor/outdoor riser, indoor riser, indoor plenum	Indoor/outdoor	Indoor only	Indoor only	Indoor only
Fiber Count	1	1-2	1	1	1-4	12
Fiber Type	ClearCurve ZBL fiber or ClearCurve LBL fiber	ClearCurve ZBL fiber or ClearCurve LBL fiber	ClearCurve ZBL fiber or ClearCurve LBL fiber	Ultra-bend-insensitive fiber	Ultra-bend-insensitive fiber	Ultra-bend-insensitive fiber
Option to Preconnectorize	Yes	Yes	Yes	No	No	Yes
Packaging	Bulk	Bulk or reel in a box	Bulk or reel in a box	Spool in a box	Spool in a box	Spool in a box
Quick Facts	• Enhanced jetting, push-and-pull performance • Eliminates indoor ONT transitions with a flame-rated indoor subunit	• Self-bend-limiting jacket allows for widest variation of installation methods including stapling • Large color selection	• Optimized for running inconspicuously under carpet and along door frames or molding • Suitable for raceway and microduct installations • Large color selection	• Adhesive tape on the back of the pathway enables fast-and-easy installation on practically any surface • Optional cover provides additional durability with virtual invisibility	Use with Clear Track Micro Point-of-Entry (POE) wall cover for home run drops or for use with Hallway Small POE providing test access point with mechanical or spliced termination to living unit	Use with the Clear Track Hallway small point-of-entry box to terminate with a field-mounted mechanical connector or splice for connection to the living unit and test access point

Field-Installable Connectors

Field-Installable Connectors

Field connectorization is fast and convenient whether you're looking for a fusion or mechanical splice. Corning offers both indoor and outdoor solutions in a variety of connector types and toolkits to support your application of choice. With high-optical performance of factory-polished connectors and immediate feedback on the quality of the connector installation, you can be assured of reliable connections. Evaluate the connectorization option that best suits your deployment and take advantage of the craft-friendly products throughout this section.

CORNING

	Mechanical Connectors and Splices					Other	
	OptiSnap® Connectors	OptiTap® Field-Installable Connectors	No Polish Connector + (NPC+)	No Polish Connector (NPC)	Corning® Fibrlok® Optical Fiber Splice 2529	FuseLite II Splice On Connector	Corning® Crimplok™ + Connector
Fiber Compatibility	Single-mode/multimode	Single-mode	Single-mode	Single-mode/multimode	Single-mode/multimode	Single-mode/multimode	Single-mode/multimode
Cable Compatibility	250, 900 µm fibers 1.6, 2.0, 2.9 mm cables	ROC™ drop 900 cable and SST-Drop™ cable	250, 900 µm fibers	250, 900 µm fibers 1.6, 2.0, 3.0 mm cables	250, 900 µm fibers 1.6, 2.0, 3.0, or 4.8 mm cables	250, 900 µm fibers 1.6, 2.0, 2.9 mm cables	250, 900 µm fibers
Fiber Subunit Compatibility	900, 250 µm	900 µm	900, 250 µm	900, 250 µm	900, 250 µm	900, 250 µm	900, 250 µm
Environment	Indoor/outdoor in appropriate hardware or enclosures	Outdoor	Indoor/outdoor in appropriate hardware and enclosures	Indoor/outdoor in appropriate hardware or enclosures	Indoor/outdoor in appropriate hardware or enclosures	Indoor/outdoor in appropriate hardware or enclosures	Indoor/outdoor in appropriate hardware or enclosures
Connector Style	SC APC, SC UPC, LC APC, LC UPC, ST® compatible connectors	OptiSnap SC APC connector as foundation with hardened OptiTap kit	SC UPC, SC APC	SC APC, SC UPC, LC APC, LC UPC, ST compatible connectors	N/A	SC APC, SC UPC, LC APC, LC UPC, ST compatible, MTP® connectors	SC APC, SC UPC
Toolkit Required	TKT-OPTISNAP-CF	TKT-FIOT-SST TKT-FIOT-SST-CF	TKT-NPCP-FBC007	80611323793	80610581870	Compatible fusion splicer with appropriate handler	80611622145 (APC Installation Kit) 80611622459 (UPC Installation Kit)
Packaging	Individual connectors or convenience pack of 25	Individual connectors or convenience pack of 25	Convenience pack of 48 pieces in 6 piece sub-packs	Convenience pack of 60	Convenience pack of 60	Convenience pack of 6 or 25 connectors	Convenience pack of 60
Quick Facts	Designed for rapid terminations at the home in FTTH applications or in the central office/headend	Ideal for drops of odd lengths, inventory reduction, or emergency repairs	No installation tool required, designed for all skill levels, excellent optical and mechanical performance for FTTx applications	Low cost of tooling, ideal for all FTTx installations	High-quality field splice without the need for a fusion splicer	Suited for adds/moves/changes or large-volume termination projects in the central office	Excellent back reflection performance in outdoor environments

Wireless Convergence

Wireless Convergence

As 5G wireless services proliferate, operators are choosing a variety of methods to accomplish these deployments. By leveraging shorter distance and longer reach wavelengths, radio heads and antennas are popping up in a myriad of locations from rooftops to street lamps and water towers, too. One thing is for certain, these systems will require fiber to backhaul the traffic generated. If you're looking to support a combination of services on your network over time, we've got the experience and solutions to help you build one network to manage it all.

|	**xWDM Components**			**LC UPC Connectors**		
	xWDM device	CRAN Centrix™ Cassette	DWDM Multiport Terminal	LC Simplex Assembly	LC Duplex Assembly	LC Multifiber Assembly
Environment	Mobile Switch Center, CRAN Hut or Outside Plant			Radio Head or Consolidation Point		
Purpose	Combines multiple wavelength signals to optimize fiber utilization			Provides optical connectivity to Macro and small cell devices		
Type	Available in CWDM or DWDM configurations as requested			· Simplex or Duplex · Various protective shrouds for compatibility with active electronics providers		
Quick Facts	Even in dedicated CPRI send/receive duplex systems, overlaying FTTH with wireless signals require coexistence xWDM devices			Although there are many options, most radios utilize standard LCs as the key component for connectivity		

xWDM devices and LC connectors are key enabling components that allow for convergence of an existing FTTP network with wireless capability. The fundamental infrastructure components otherwise remain the same and can be found elsewhere in this guide.

In particular, look for solutions that help in congested areas, such as:

· **MiniXtend cables** for microduct applications

· **Evolv terminals** for discrete placement

· **OptiTip enabled solutions** to create plug and play access points.

1 CRAN Hardware

2 Distribution Cable

3 Fiber Terminal

4 RRH Jumpers
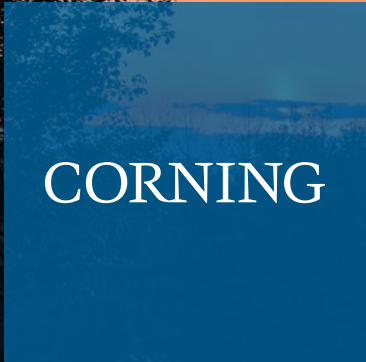
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