CORNING Evolv[™] Terminals with Pushlok[™] Technology



Pushlok[™] hardened connector technology is the key component enabling smaller terminals and drops for FTTx networks than ever before. Designed for use in nearly every access network environment, the terminal is small enough to be placed in existing handholes or pedestals where space is paramount, on building façades, or in aerial networks (pole- or strand-mount). Improved aesthetics improve end-user adoption for façade applications.

There are two styles of terminals designed to meet various space and density requirements: terminals with one row of adapter ports and terminals with two rows of adapter ports. For terminals with one row of adapter ports, the ports are aligned in a single row with the input stub on the left and 2-, 4-, 6- or 8-distribution ports on the right. For terminals with two rows of ports, the input stub is on the front left of the terminal and there are 6-, 8-, 12- or 16-distribution ports. Each port's corresponding release button is actuated to remove the dust cap or drop. When installing drops, the keyed ports provide an audible and physical positive feedback minimizing technician variation and potential damage due to mishandling.

Features	Benefits
Pushlok cable assembly connector ports for customer drop terminations	Lower installation cost and increase speed of connection
Standard and integrated splitter terminal options	Solution supports various architecture types
Durability	100 lb cable tensile strength
Available stubbed or preterminated with $OptiTip^*multifiber$ technology	Compatible with existing FlexNAP [*] installations
Small-form-factor optimizes space in pedestals/handholes	Lower profile overall with drop entry ports on bottom
Ultrasonically welded housing	Eliminates water ingress potential and prevents unwanted entry in the field
Factory-terminated polished connectors	Eliminates loss associated with excess fusion splices

Mechanical Specifications		
Terminal Type	Dimensions (L x W x H)	Weight
2-Distribution Port Terminal (one row of 4 ports, 2 filled)	15.4 x 8.4 x 3.0 cm (6.06 x 3.29 x 1.18 in)	0.195 kg (0.43 lb)
4-Distribution Port Terminal (one row of 4 ports)	15.4 x 8.4 x 3.0 cm (6.06 x 3.29 x 1.18 in)	0.195 kg (0.43 lb)
6-Distribution Port Terminal (one row of 8 ports, 2 filled)	15.4 x 13.4 x 3.0 cm (6.06 x 5.29 x 1.18 in)	0.390 kg (0.86 lb)
6-Distribution Port Terminal (two rows of 4 ports, 2 filled)	15.4 x 8.4 x 5.8 cm (6.06 x 3.29 x 2.30 in)	0.400 kg (0.88 lb)
8-Distribution Port Terminal (one row of 8 ports)	15.4 x 13.4 x 3.0 cm (6.06 x 5.29 x 1.18 in)	0.390 kg (0.86 lb)
8-Distribution Port Terminal (two rows of 4 ports)	15.4 x 8.4 x 5.8 cm (6.06 x 3.29 x 2.30 in)	0.400 kg (0.88 lb)
12-Distribution Port Terminal (one row of 12 ports)	15.4 x 18.5 x 3.0 cm (6.06 x 7.29 x 1.18 in)	0.475 kg (1.05 lb)
12-Distribution Port Terminal (two rows of 8 ports, 4 filled)	15.4 x 13.4 x 5.8 cm (6.06 x 5.29 x 2.30 in)	0.600 kg (1.32 lb)
16-Distribution Port Terminal (two rows of 8 ports)	15.4 x 13.4 x 5.8 cm (6.06 x 5.29 x 2.30 in)	0.600 kg (1.32 lb)

Optical Specifications				
Connector Type	Fiber Type	Insertion Loss, Maximum	Insertion Loss, Typical	Reflectance, Maximum
Pushlok [™] Connector	Single-mode (OS2)	0.50 dB	0.15 dB	-60 dB
OptiTip [®] Multifiber Connector	Single-mode (OS2)	0.50 dB	0.35 dB	-60 dB

Packaging		
Cable Stub Length	Dimensions (L x W x H)	Packaging Method
Cables ≤ 350 ft	152 x 762 x 762 mm (6 x 30 x 30 in)	Box
Cables ≥ 350 ft	846 x 178 x 846 mm (33 x 7 x 33 in)	Reel

Terminal Cable Stub Information		
SST-Drop [™] Cable Stub		
Application	SST-Drop cable offers the ease of installation of standard ALTOS [*] cable in an easy-access, single-tube design. The toneable version allows for effortless detection of buried cable with a toning conductor that can be separated. The dielectric version eliminates any bonding and grounding requirements.	
Cable Specification Reference Materials	1-12 F SST Toneable Cable: Family Spec Sheet 0336_NAFTA_AEN 12 F SST Dielectric Cable: Product Specification 012EB4-14701A20_NAFTA_AEN	
MiniXtend [®] Cable Stub		
Application	MiniXtend cable with Binderless* FastAccess* Technology is an all-dielectric loose tube cable designed for microduct applications. The outer diameter of the 12-72 F cable is 5.4 mm (0.21 in).	
Cable Specification Reference Materials	Family Spec Sheet 0136_NAFTA_AEN	
Long-Span SST Cable Stub		
Application	Long-Span SST cable is ideal for rural, aerial environments where longer cable distances are required. The cable supports pole-to-pole span lengths ranging from 400 ft (NESC Heavy) to 500 ft (NESC Medium).	

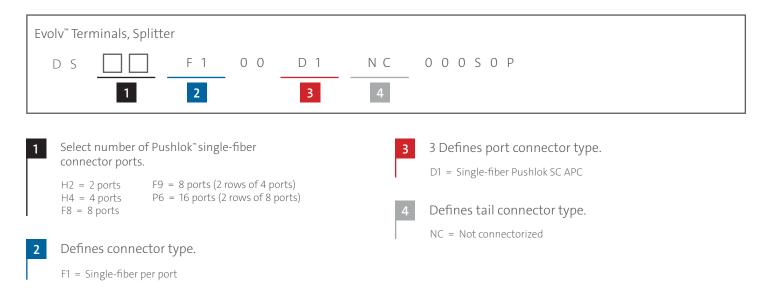
*Corning's proprietary binderless FastAccess technology refers to the combination of a Corning FastAccess technology jacket with an innovative technology used to bind cable construction through the manufacturing process, eliminating the use of binder yarns and waterblocking tapes.

Evolv[™] Splitter Terminals with Pushlok[™] Technology

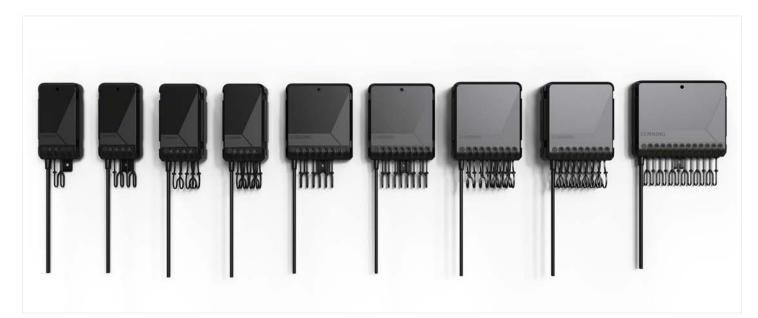


Evolv Splitter Terminal Ordering Information

Splitter Terminals	
Part Number	Product Description
DSH2F100D1NC000S0P	Evolv [®] Splitter Terminal with Pushlok [®] Technology, 2 port, unstubbed, 1x2 splitter
DSH4F100D1NC000S0P	Evolv Splitter Terminal with Pushlok Technology, 4 port, unstubbed, 1x4 splitter
DSF8F100D1NC000S0P	Evolv Splitter Terminal with Pushlok Technology, 8 port, unstubbed, 1x8 splitter
DSF9F100D1NC000S0P	Evolv Splitter Terminal with Pushlok Technology, 8 port, unstubbed, 1x8 splitter, 2 rows of 4 ports
DSP6F100D1NC000S0P	Evolv Splitter Terminal with Pushlok Technology, 16 port, unstubbed, 1x16 splitter, 2 rows of 8 ports

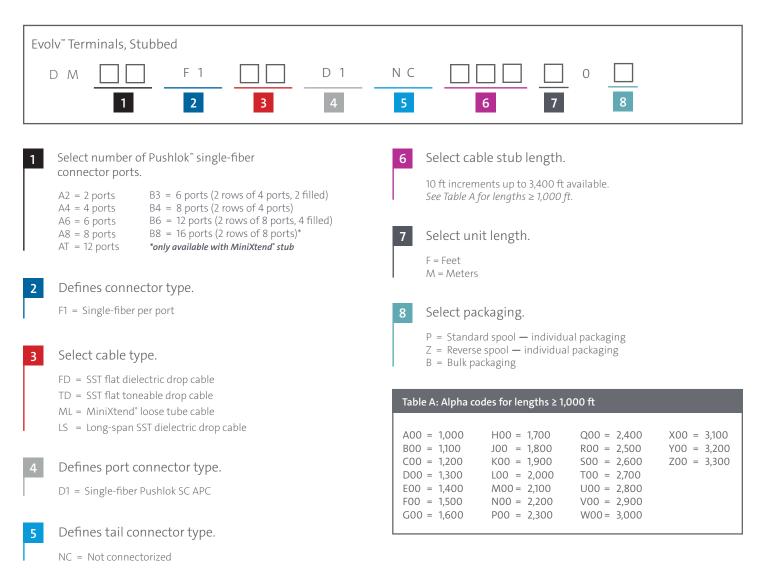


Evolv[™] Stubbed Terminals with Pushlok[™] Technology



Stubbed Terminals — S	ee Additional Configurations on Page 6
Part Number	Product Description
DMA2F1TDD1NC010F0P	Evolv [™] Terminal with Pushlok [™] Technology, 2 port, stubbed, SST toneable, 10 ft
DMA4F1FDD1NC050F0P	Evolv Terminal with Pushlok Technology, 4 port, stubbed, SST dielectric, 50 ft
DMA6F1TDD1NC100F0P	Evolv Terminal with Pushlok Technology, 6 port, stubbed, SST toneable, 100 ft
DMB3F1TDD1NC150F0P	Evolv Terminal with Pushlok Technology, 6 port, 2 rows of 4 ports (2 filled), stubbed, SST toneable, 150 ft
DMA8F1FDD1NC500F0P	Evolv Terminal with Pushlok Technology, 8 port, stubbed, SST dielectric, 500 ft
DMB4F1TDD1NC010F0P	Evolv Terminal with Pushlok Technology, 8 port, 2 rows of 4 ports, stubbed, SST toneable, 10 ft
DMATF1FDD1NC050F0P	Evolv Terminal with Pushlok Technology, 12 port, stubbed, SST dielectric, 50 ft
DMB6F1FDD1NC050F0P	Evolv Terminal with Pushlok Technology, 12 port, 2 rows of 8 ports (4 filled), stubbed, SST dielectric, 50 ft
DMB8F1FDD1NC100F0P	Evolv Terminal with Pushlok Technology, 16 port, 2 rows of 8 ports, stubbed, SST dielectric, 100 ft
DMA2F1MLD1NC010F0P	Evolv Terminal with Pushlok Technology, 2 port, stubbed, MiniXtend®, 10 ft
DMA4F1MLD1NC050F0P	Evolv Terminal with Pushlok Technology, 4 port, stubbed, MiniXtend, 50 ft
DMA6F1MLD1NC100F0P	Evolv Terminal with Pushlok Technology, 6 port, stubbed, MiniXtend, 100 ft
DMB3F1MLD1NC200F0P	Evolv Terminal with Pushlok Technology, 6 port, 2 rows of 4 ports (2 filled), stubbed, MiniXtend, 200 ft
DMA8F1MLD1NC500F0P	Evolv Terminal with Pushlok Technology, 8 port, stubbed, MiniXtend, 500 ft
DMB4F1MLD1NC010F0P	Evolv Terminal with Pushlok Technology, 8 port, 2 rows of 4 ports, stubbed, MiniXtend, 10 ft
DMATF1MLD1NC050F0P	Evolv Terminal with Pushlok Technology, 12 port, stubbed, MiniXtend, 50 ft
DMB6F1MLD1NC050F0P	Evolv Terminal with Pushlok Technology, 12 port, 2 rows of 8 ports (4 filled), stubbed, MiniXtend, 50 ft
DMB8F1MLD1NC100F0P	Evolv Terminal with Pushlok Technology, 16 port, 2 rows of 8 ports, stubbed, MiniXtend, 100 ft
DMA4F1LSD1NC100F0P	Evolv Terminal with Pushlok Technology, 4 port, stubbed, Long-Span SST, dielectric, 100 ft
DMA8F1LSD1NC250F0P	Evolv Terminal with Pushlok Technology, 8 port, stubbed, Long-Span SST, dielectric, 250 ft
DMATF1LSD1NC500F0P	Evolv Terminal with Pushlok Technology, 12 port, stubbed, Long-Span SST, dielectric, 500 ft

Evolv[™] Stubbed Terminal Ordering Information



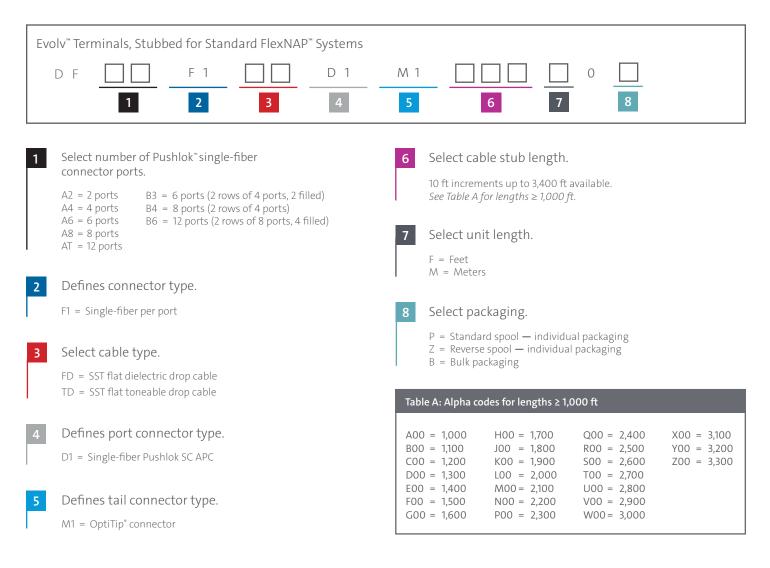
Evolv[™] Stubbed Terminals with Pushlok[™] Technology for FlexNAP[™] Systems



Stubbed Terminals for FlexNAP[™] Systems — See Additional Configurations on Page 8

Part Number	Product Description
DFA2F1FDD1M1050F0P	Evolv" Terminal with Pushlok" Technology, 2 port, preconnectorized OptiTip® stub, SST dielectric, 50 ft
DFA4F1FDD1M1100F0P	Evolv Terminal with Pushlok Technology, 4 port, preconnectorized OptiTip stub, SST dielectric, 100 ft
DFA6F1FDD1M1100F0P	Evolv Terminal with Pushlok Technology, 6 port, preconnectorized OptiTip stub, SST dielectric, 100 ft
DFB3F1FDD1NC150F0P	Evolv Terminal with Pushlok Technology, 6 port, 2 rows of 4 ports (2 filled), preconnectorized OptiTip stub, SST dielectric, 150 ft
DFA8F1FDD1M1500F0P	Evolv Terminal with Pushlok Technology, 8 port, preconnectorized OptiTip stub, SST dielectric, 500 ft
DFB4F1FDD1M1050F0P	Evolv Terminal with Pushlok Technology, 8 port, 2 rows of 4 ports, preconnectorized OptiTip stub, SST dielectric, 50 ft
DFB6F1FDD1M1100F0P	Evolv Terminal with Pushlok Technology, 12 port, 2 rows of 8 ports (4 filled), preconnectorized OptiTip stub, SST dielectric, 100 ft
DFATF1FDD1M1150F0P	Evolv Terminal with Pushlok Technology, 12 port, preconnectorized OptiTip stub, SST dielectric, 150 ft

Evolv[™] Terminal, Stubbed for FlexNAP[™] Systems Ordering Information



CORNING

Evolv[™] Optical Tap Terminals with Pushlok[™] Technology



1x2 Optical Tap Terminal, 90/10 Power Split

1x4 Optical Tap Terminal, 90/10 Power Split

1x8 Optical Tap Terminal, 90/10 Power Split

Optical distributed taps, known also as uneven-split or asymmetric terminals, are most appropriate for short length, dense environments or rural FTTx applications where lean distribution runs are desired. Each run supports 32 or 64 subscriber ONTs with cascaded multiport terminals utilizing preconnectorized single-fiber assemblies in the distribution. The fully preconnectorized system reduces installation costs while increasing the speed of deployment.

This solution is comprised of an array of power-split ratios to customize each run for optimal signal reach. Tap splits of 90/10, 85/15, 80/20, 70/30, and 60/40 split ratios can be cascaded, or daisy-chained, to accommodate a wide variety of deployment scenarios.

Each multiport terminal includes the uneven, asymmetric splitter, a standard 1x2, 1x4, or 1x8 splitter to support customer connections, as well as a pass-through port feeding subsequent terminals in the run in a single form factor. The number of terminals in an individual run and the variation of multiport terminals used is dependent upon the distances between terminals and subscribers to maintain an acceptable link loss budget. By limiting the number of terminal options and utilizing preconnectorized Pushlok[™] drop cables, FTTx designs and material inventories can be simplified.

Features	Benefits
Pushlok Connector Ports for Drop Termination	Lower installation cost and increased speed of interconnection
Stubless Multiport Terminal System	Reduces distribution cable fiber count; allows full plug-and-play distribution deployment, without requiring splicing
Full Preconnectorized Single-Fiber Architecture	A cost-effective solution that diverts a portion of power to support a typical run of 32 to 64 ONTs
Factory-Installed and Tested Connectors	Connector design provides stability, reliability, and durability
Supports Various Power Split Ratios	Solutions available to accommodate numerous combinations of power split ratio designs
Rapid Repair/Restoration	Damaged single-fiber preconnectorized drops can be repaired quickly with low-skill technicians to restore subscriber services
Dual-Ended ROC [®] Drop Cable Assembly	ROC drop assemblies terminated with Pushlok connectors on both ends provide quick and efficient connectivity between terminals

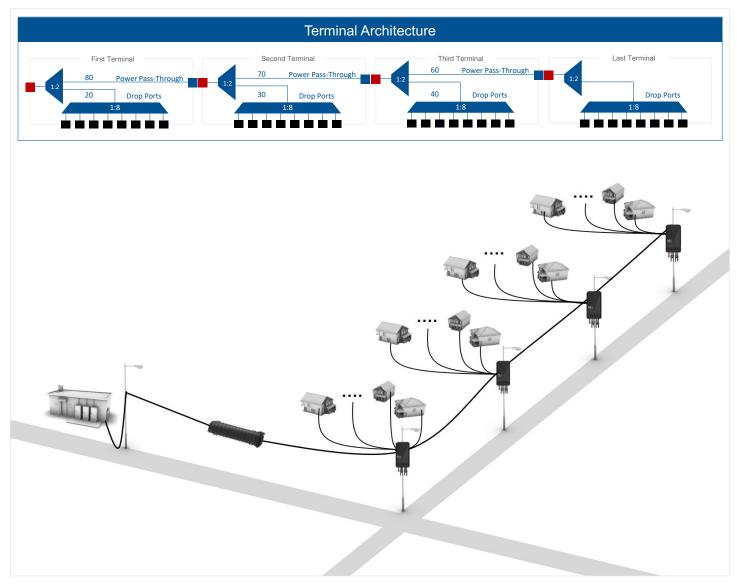
Corning Optical Communications

Evolv Terminal with Pushlok Technology Solution Specification Sheet | CRR-1417-AEN | Page 8

Evolv[™] Optical Tap Terminals with Pushlok[™] Technology

The optical distributed tap architecture leverages a cascaded network of uneven-split, or asymmetric split, multiport terminals to ensure sufficient signal reaches subscribers along the route. As the first terminal is closest to the signal source (OLT), a lower amount of signal is needed to feed the subscribers served from the 1x2, 1x4, or 1x8 splitter.

In many cases, the first multiport terminal will utilize a 90/10 power split where the 10% feeds the subscriber ports and the 90% passes on to feed subsequent terminals downstream. Subsequent terminals in the chain either maintain a similar uneven-split ratio or a higher ratio of local power depending upon the distances between terminals and the total link budget. In higher density environments with short distances between terminals, operators may serve more than the standard 32 or 64 subscribers. However, in low-density rural runs spanning long distances, operators may serve fewer subscribers per route as this is heavily dependent upon the link budget.



Optical Tap Network Architecture Example Illustration (8-Port Evolv Terminals Shown)

Evolv[™] Optical Tap Terminals with Pushlok[™] Technology

Mechanical Specifications	
Application	Aerial, duct, direct-buried
Dimensions (L x W x H)	2-Port Evolv [™] Terminal: 15.4 x 8.4 x 3.0 cm (6.06 x 3.29 x 1.18 in) 4-Port Evolv Terminal: 15.4 x 13.4 x 3.0 cm (6.06 x 5.29 x 1.18 in) 8-Port Evolv Terminal: 15.4 x 8.4 x 5.8 cm (6.06 x 3.29 x 2.30 in)
Weight	2-Port Evolv Terminal: 0.195 kg (0.43 lb) 4-Port Evolv Terminal: 0.390 kg (0.86 lb) 8-Port Evolv Terminal: 0.400 kg (0.88 lb)
Packaging	Individual packaging
Termination	Pushlok" connector assemblies
Axial Pull, Plug to Adapter	50 lbs
Axial Pull, Plug to Cable	100 lbs in axial pull with load applied to the dust cap
Cold Mate/Demate	-20°C mechanical testing

2-Port Evolv Terminal Optical Specifications			
Splitter Type	Insertion Loss, Max	Insertion Loss, Typical	Reflectance, Typical
Pass-Through Port (90)	1.20 dB	1.00 dB	-55 dB
Drop Port (10)	15.40 dB	14.50 dB	-55 dB
Pass-Through Port (85)	1.50 dB	1.20 dB	-55 dB
Drop Port (15)	13.20 dB	12.60 dB	-55 dB
Pass-Through Port (80)	1.80 dB	1.40 dB	-55 dB
Drop Port (20)	11.80 dB	11.20 dB	-55 dB
Pass-Through Port (70)	2.40 dB	2.00 dB	-55 dB
Drop Port (30)	10.00 dB	9.40 dB	-55 dB
Pass-Through Port (60)	3.10 dB	2.80 dB	-55 dB
Drop Port (40)	8.70 dB	8.00 dB	-55 dB

4-Port Evolv Terminal Optical Specifications			
Splitter Type	Insertion Loss, Max	Insertion Loss, Typical	Reflectance, Typical
Pass-Through Port (90)	1.20 dB	1.00 dB	-55 dB
Drop Port (10)	19.30 dB	17.20 dB	-55 dB
Pass-Through Port (85)	1.50 dB	1.20 dB	-55 dB
Drop Port (15)	17.00 dB	15.50 dB	-55 dB
Pass-Through Port (80)	1.80 dB	1.40 dB	-55 dB
Drop Port (20)	16.00 dB	14.50 dB	-55 dB
Pass-Through Port (70)	2.40 dB	2.00 dB	-55 dB
Drop Port (30)	13.60 dB	12.20 dB	-55 dB
Pass-Through Port (60)	3.10 dB	2.80 dB	-55 dB
Drop Port (40)	12.30 dB	11.00 dB	-55 dB

Evolv[™] Optical Tap Terminals with Pushlok[™] Technology

8-Port Multiport Optical Specifications			
Splitter Type	Insertion Loss, Max	Insertion Loss, Typical	Reflectance, Typical
Pass-Through Port (90)	1.20 dB	1.00 dB	-55 dB
Drop Port (10)	21.74 dB	20.420 dB	-55 dB
Pass-Through Port	1.50 dB	1.20 dB	-55 dB
Drop Port (15)	20.98 dB	18.60 dB	-55 dB
Pass-Through Port (80)	1.80 dB	1.40 dB	-55 dB
Drop Port (20)	18.45 dB	17.50 dB	-55 dB
Pass-Through Port (70)	2.40 dB	2.00 dB	-55 dB
Drop Port (30)	16.71 dB	15.40 dB	-55 dB
Pass-Through Port (60)	3.10 dB	2.80 dB	-55 dB
Drop Port (40)	15.52 dB	14.20 dB	-55 dB

Environmental Characteristics	
Characteristics Temperature Rating	-40°C to 85°C (-40°F to 185°F)
RoHS	Free of hazardous substances according to RoHS 2011/65/EU

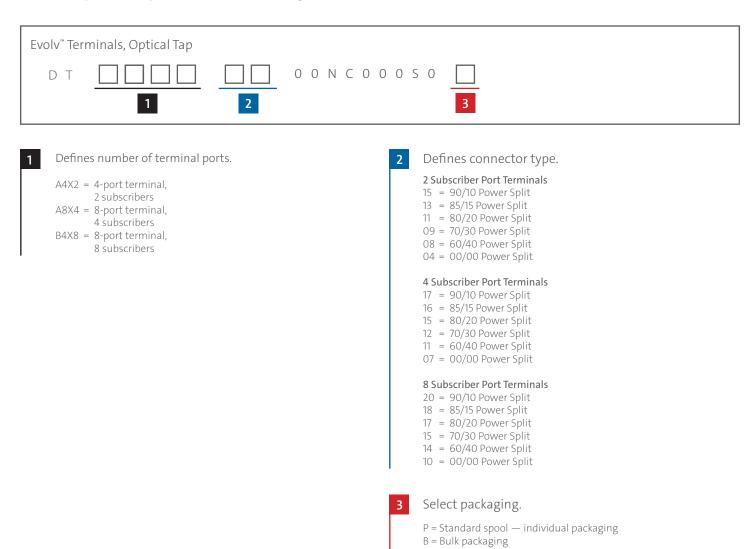
Standards	
Telcordia	Designed to Telcordia GR-771-CORE, Issue 1

Product Design	
Red Connector Port	Input Connector Port
Blue Connector Port	Cascade/Next Hop Connector Port



Optical Tap Evolv Terminal Family (8-Port Evolv Terminals Shown)

Evolv[™] Optical Tap Terminal Ordering Information

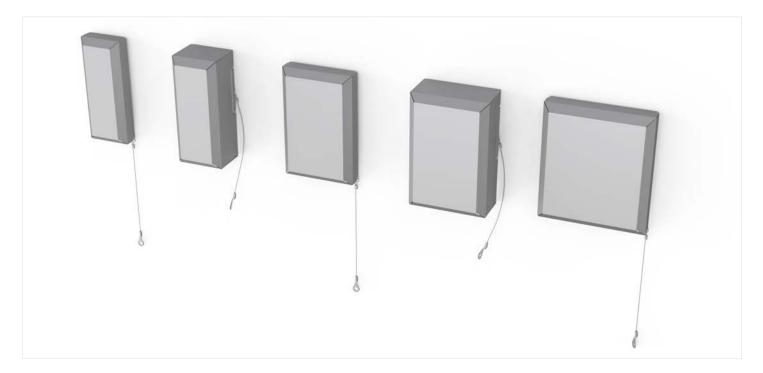


Part Number Examples		
Part Number	Product Description	Units per Delivery
DTA4X21500NC000S0P	Optical Tap Evolv Terminal, 90/10 power distribution, 2 port, stubless	1
DTA8X41700NC000S0P	Optical Tap Evolv Terminal, 90/10 power distribution, 4 port, stubless	1
DTB4X82000NC000S0P	Optical Tap Evolv Terminal, 90/10 power distribution, 8 port, stubless	1

Evolv[™] Terminal Accessories



Evolv [®] Terminal Brackets		
Part Number	Product Description	
EHC-BKT-Wall	Evolv" Wall- and Pole-Mount Terminal Bracket, compatible with 8-, 12-, and 16-port terminals (2 rows of ports)	
ЕНС-ВКТ-НН	Evolv Handhole-Mount Terminal Bracket, compatible with all Evolv terminals (2, 4, 6, 8, 12 and 16 port)	
EHC-BKT-Strand	Evolv Strand-Mount Terminal Bracket, compatible with all Evolv terminals (2, 4, 6, 8, 12 and 16 port)	



Evolv Terminal Covers		
Part Number	Product Description	
EHC-CVR-A4-GRAY	Evolv 2- and 4-Port Terminal Cover	
EHC-CVR-A8-GRAY	Evolv 6- and 8-Port Terminal Cover	
EHC-CVR-B4-GRAY	Evolv 6- and 8-Port Terminal Cover, 2 rows of 4 ports	
EHC-CVR-B8-GRAY	Evolv 12- and 16-Port Terminal Cover, 2 rows of 8 ports	
EHC-CVR-AT-GRAY	Evolv 12-Port Terminal Cover, 1 row of 12 ports	

Evolv[™] Terminal Accessories (continued)



Evolv" Reflector with Pushlok" Technology		
Part Number	Product Description	
07-058064-002	The Evolv Reflector with Pushlok Technology was designed to create a demarcation point in the network through a reflective event on OTDR equipment. This event allows users to validate connectivity to that point within the network. The reflector consumes a fiber connection port within an Evolv terminal in order to measure connectivity.	

Passive Optical Networks have always presented an inherent challenge for OTDR-based testing, and the industry has responded with the introduction of intelligent and automated solutions for continuous monitoring and event-based diagnostics. These advanced systems invariably rely on reflective devices installed at strategic points in the network, which the test equipment uses for trace characterization. One of the many advantages of hardened connectorized solutions is that the terminal's position is ideal for locating these reflective devices.

The Evolv Reflector with Pushlok Technology is a stubbed connector containing an optical filter that provides a highly reflective signature at 1,650 nm on which the latest intelligent OTDR solutions depend. This stand-alone pluggable device fits into any Evolv terminal port to enable remote monitoring of the terminal. In many applications, each terminal has a reflector in one port when it is initially installed. Like any connector, the reflector can be easily removed from the port, which provides the test equipment with the information it needs for terminal identification.

All Evolv connectors, including the reflector, can be used on any OptiTap[®] port using the Evolv Reflector with OptiTap converter.

Features	Benefits
Pushlok" and OptiTap [*] connector technology	Industry standard for new and existing FTTx installations
Reflector with OptiTap converter	One component for both connector formats
Pluggable device	Easy removal for optical characterization
1,650 nm reflective wavelength	Compatible with intelligent OTDR systems

Ordering Information

Part Number	Description	Minimum Order Quantity (MOQ)	Ordering Quantity
07-058064-002	Evolv Reflector with Pushlok Technology	25 pieces	Multiples of 25 pcs only

Evolv[™] Port Cleaner with Pushlok[™] Technology



Accessory Information		
Evolv Port Cleaner with Pushlok Technology		
Part Number	CLEANER-PUSHLOK	
Description	The Evolv port cleaner with Pushlok technology is compatible with both Pushlok and OptiTap [*] connectors and Evolv terminals and multiports. Single-fiber port cleaner accessories are proven effective for removing the following from connector end faces: skin oil, hand lotion, Arizona road dust, pre- and postmate graphite, salt, isopropyl alcohol residue, and distilled water residue. These cleaners are easy to use and offer over 525 cleanings.	
Standards	Free of hazardous substances according to RoHs 2011/65/EU	

Evolv[™] 1-Fiber Pushlok[™] Connection Kit



Accessory Information		
Evolv [™] 1 F Pushlok [™] Connection Kit		
Part Number	OSLC-Pushlok-Adapter	
Description	The 1 F to 1 F Pushlok Adapter contains an OSLC mini-splice repair closure, 2 SC APC converters (KT-PL-SHROUD-SC), and 1 SC APC to SC APC adapter. This allows users to connect 2 Pushlok drop cable 1 F assemblies together. This may be used in instances where a drop cable assembly is too short to reach a final destination and needs to be extended.	

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