FlexNAP™ Single-Fiber Tether Distribution System

Features and Benefits

Factory-installed, sealed splice points (1 fiber per tether)
Drastically reduce field splicing with a predetermined loss at each waterproof tether attachment point (TAP)

Flexible preterminated access points
Utilize traditional field-installation techniques for aerial, below-grade, and duct applications

Maximum of two tethers per attachment point
Up to 8 fibers at each TAP

Available with ALTOS® loose tube gel-free, ALTOS figure-8, ALTOS Lite™ gel-free armored, and RPX® ribbon distribution cable types
Field familiarity with traditional network cable types

OptiSheath® stubless splitter multiport terminals may be configured with four or eight OptiTap® connector adapters
Allow multiple configuration variations that are suitable for aerial, below-ground, and duct applications

Corning FlexNAP™ outside plant system provides the most cost-effective method of deploying optical fiber in outside plant distribution networks at speeds significantly faster than traditional field installations. 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. The cable and network access points are tested and shipped as a complete distribution cable/terminal system.

Compatible with both aerial (overlash, dedicated, messenger and self-support) and below-ground (direct-buried and duct) outside plant distribution applications, Corning FlexNAP system significantly reduces installation time by as much as 50 percent per network access point.
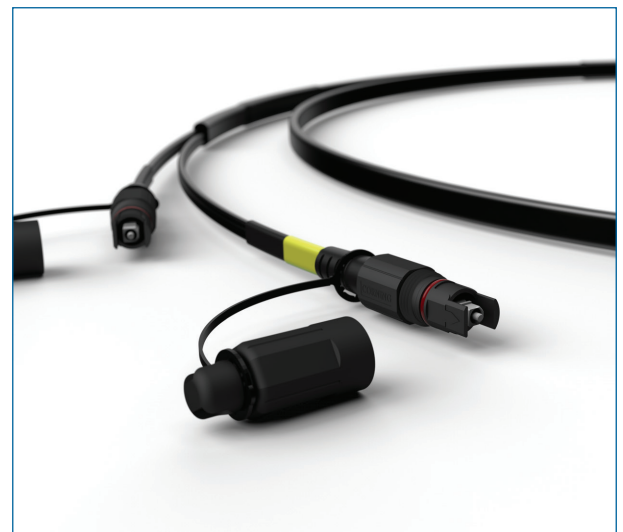
The increased speed of network deployment, along with the reliability of factory testing, offers significant value to the end user in the following key areas: deployment velocity, risk avoidance, workforce efficiency, capital avoidance, and deferment.

Standards

Design and Test Criteria	GR-3122, GR-771, GR-3120
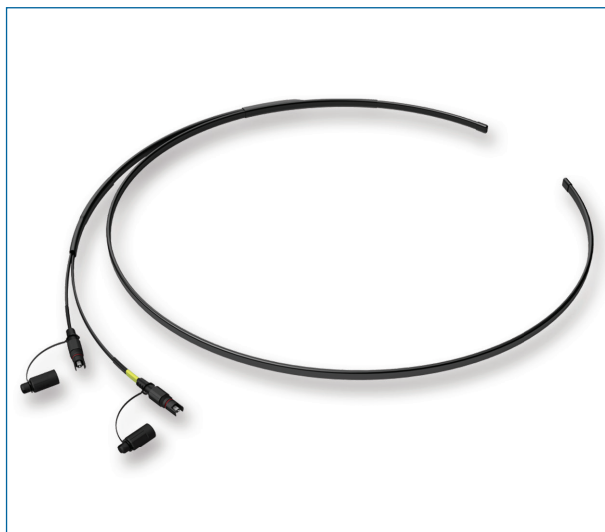
FlexNAP Single-Fiber Tether System
| Photo LAN8667

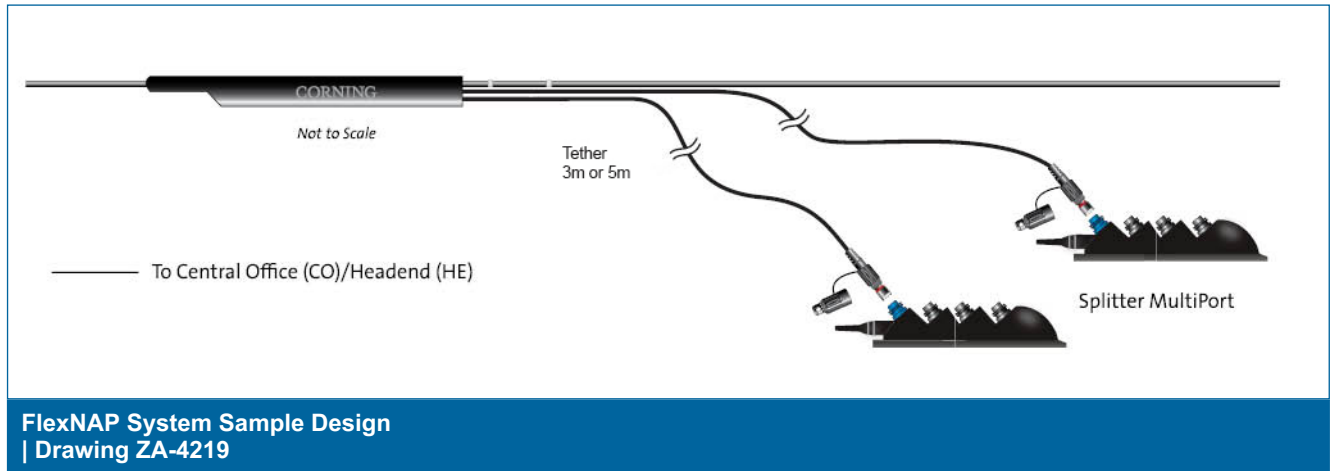**FlexNAP OptiTap Connector**
| Photo LAN8665

FlexNAP™ Single-Fiber Tether Distribution System

Designing A FlexNAP™ System

Not to Scale

Tether
3m or 5m

— To Central Office (CO)/Headend (HE)

Splitter MultiPort

FlexNAP System Sample Design
| Drawing ZA-4219

A FlexNAP system cable consists of four components:
  1. FlexNAP system distribution cable
  2. FlexNAP system network access points (with OptiTap cable assembly)
  3. FlexNAP system terminal (with OptiSheath® stubless splitter multiPort terminal)
  4. OptiTap extender cable assembly

FlexNAP™ Single-Fiber Tether Distribution System

Sample Design Layouts
Aerial FlexNAP™ System Portfolio
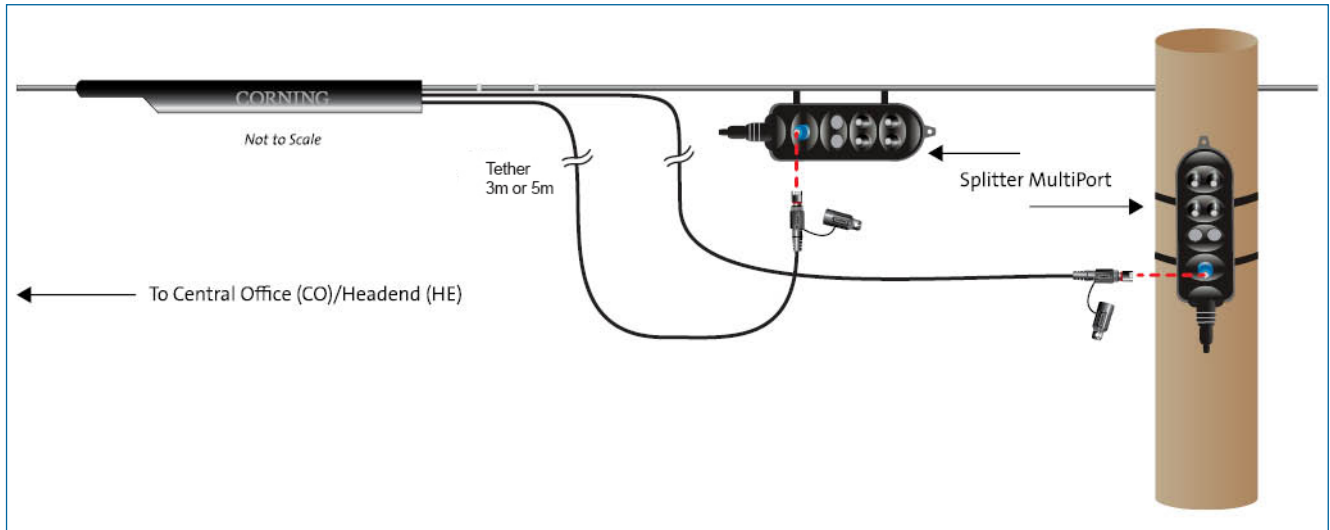
FlexNAP System Sample Design – Aerial | Drawing ZA-4218

- 12 to 216 fibers
- 1 to 8 fiber OptiTap connector-based tether attachment points (TAPs)
- ALTOS dielectric loose tube gel-free, ALTOS Lite™ loose tube gel-free armored, ALTOS figure-8 loose tube, and RPX Dielectric Ribbon
- TAP tether length – 3m or 5 m
- Stubless terminal
- OptiTap extender assembly length – 10 ft minimum

Buried/Duct FlexNAP System Portfolio

- Buried application
 – Direct buried/Duct: 12 to 216 fibers
 – 2-in duct: 12 to 72 fibers
- 1- and 8-fiber OptiTap connector-based tether attachment points (TAPs)
- ALTOS Loose-tube Armored Cable, ALTOS Lite Loose-tube Dielectric Cable, RPX Toneable Ribbon Cable
- TAP tether length – 15 ft
- Stubless terminal
- OptiTap extender assembly length – 10 ft minimum

FlexNAP™ Single-Fiber Tether Distribution System

Specifications

Temperature Range	
Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	-30 °C to 70 °C (-22 °F to 158 °F RPX cable -18° to 70°C)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

FlexNAP™ Single-Fiber Tether Distribution System

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Type	Maximum Distribution Cable Fiber Count	Minimum Duct Size (in)	Maximum Fibers per Access Point	Maximum Tether Assemblies per Access Point	Nominal Overmold Outer Diameter mm (in)	Minimum Bend Radius Loaded cm (in)	Minimum Bend Radius Installed cm (in)	Maximum Tensile Load Short-Term N (lbf)	Maximum Tensile Load Long-Term N (lbf)
FlexNAP System – Loose Tube Dielectric									
Low-Profile	≤ 72	1.25	24	2	28 (1.1)	15.8 (6.2)	10.5 (4.1)	2700 (600)	890 (200)
Note: Dual-tether locations will have two individual single-tether access points.									
Standard	≤ 72	2	24	2	36 (1.4)	15.8 (6.2)	10.5 (4.1)	2700 (600)	890 (200)
High-Fiber-Count	96	2	24	2	44 (1.7)	18.3 (7.2)	12.2 (4.8)	2700 (600)	890 (200)
	144	2	24	2	44 (1.7)	23.7 (9.3)	15.8 (6.2)	2700 (600)	890 (200)
	216	2	24	2	44 (1.7)	24.0 (9.4)	16.0 (6.3)	2700 (600)	890 (200)

Type	Maximum Distribution Cable Fiber Count	Minimum Duct Size (in)	Maximum Fibers per Access Point	Maximum Tether Assemblies per Access Point	Nominal Overmold Outer Diameter mm (in)	Minimum Bend Radius Loaded mm (in)	Minimum Bend Radius Installed mm (in)	Maximum Tensile Load Short-Term N (lbf)	Maximum Tensile Load Long-Term N (lbf)
FlexNAP System – Loose Tube Armored									
Standard	≤ 72	2	24	2	44 (1.7)	182 (7.2)	121 (4.8)	2700 (600)	890 (200)
High-Fiber-Count	96	3	24	2	50 (2.0)	207 (8.1)	138 (5.4)	2700 (600)	890 (200)
	144	3	24	2	50 (2.0)	263 (10.4)	175 (6.9)	2700 (600)	890 (200)
	216	3	24	2	50 (2.0)	266 (10.5)	177 (7.0)	2700 (600)	890 (200)

Type	Maximum Distribution Cable Fiber Count	Minimum Duct Size (in)	Maximum Fibers per Access Point	Maximum Tether Assemblies per Access Point	Nominal Closure Outer Diameter mm (in)	Minimum Bend Radius Loaded mm (in)	Minimum Bend Radius Installed mm (in)	Maximum Tensile Load Short-Term N (lbf)	Maximum Tensile Load Long-Term N (lbf)
FlexNAP System – Dielectric or Toneable RPX									
	24, 48, 72, 96, 144	2	24	2	25.4 (1.0)	229 (9.0)	229 (9.0)	2700 (600)	890 (200)

Notes:
1) RPX FlexNAP tether fiber counts are 4, 8, 12.
2) All cable types allow two access points three feet apart resulting in four tethers at the same location for a maximum of 48 fibers.

FlexNAP™ Single-Fiber Tether Distribution System

Tether Application	Tether Length (ft)	Connector Style	Cable Type	Available Fiber Counts	Insertion Loss (dB) Typical	Reflectance (dB) Typical	Polish	Alignment Mechanism
OptiTip® MT Cable Assembly Tether								
Aerial	5	OptiTip MT Pinned	SST flat drop	2, 4, 6, 8, 12	0.35	≤ -65	8º angle	Stainless steel guide pins
Below Ground/Duct	15	OptiTip MT Pinned	SST flat drop	2, 4, 6, 8, 12	0.35	≤ -65	8º angle	Stainless steel guide pins

Ordering Process

Ordering the FlexNAP system is a three-step process:

1. Design and Measure – Design the distribution cable build-plan and measure distances between poles, handholes, or pedestals to fit your specific application.

2. Create and Submit Build-Plan Online – Contact Corning at 800-743-2675 for access to the online configurator.

3. Place Order – Place order by submitting the single, unique part number generated by the online configurator.

Note: Initial FlexNAP system quote will be generated using this specification sheet to create a component bill of material (BOM).

Component Specifications

The FlexNAP system configurator is an online tool used to format a build-plan that will be used to process the FlexNAP system design specifications at Corning. The following information is provided to illustrate the available FlexNAP system configurations and to allow for creating a bill of materials (BOM) for planning purposes once a design is uploaded. The BOM created is only for reference and is not a component breakdown for ordering. A single part number used for ordering will be generated by the FlexNAP system configurator that will encompass the components of the BOM.
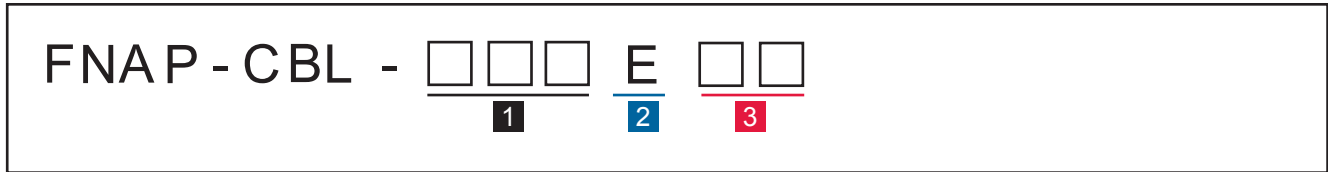
FlexNAP™ Single-Fiber Tether Distribution System

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FlexNAP System Components |

Distribution Trunk Cables

Ordering Information

FNAP - CBL - ☐☐☐ E ☐☐
                  1   **2** **3**

1 Select fiber count.

012 = 12 fibers	072 = 72 fibers
024 = 24 fibers	096 = 96 fibers
036 = 36 fibers	144 = 144 fibers
048 = 48 fibers	216 = 216 fibers
060 = 60 fibers	

See Notes 1 and 2.

2 Defines fiber type.
E = Single-mode (OS2)

3 Select cable type.
U4 = ALTOS loose tube gel-free
UA = Figure-8 loose tube
V4 = RPX gel-free flat ribbon
UC = ALTOS Lite gel-free armored
V2 = RPX toneable
UF = Loose tube flame retardant

1) RPX Cables available in 24, 48, 72, 96 and 144 fiber counts only.
2) 216 fiber only in ALTOS All-Dielectric Cable, ALTOS Lite Gel-Free Armored Cable and figure-8 cable.
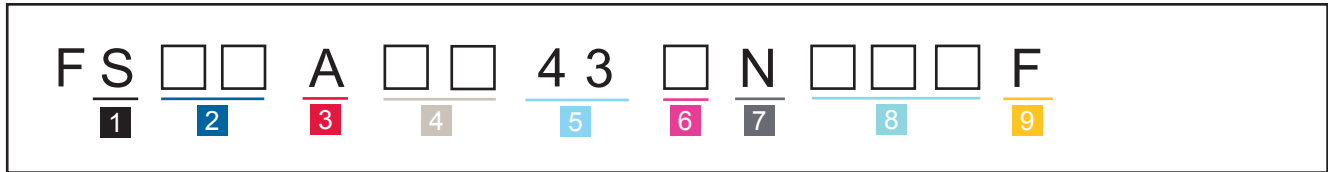
FlexNAP™ Single-Fiber Tether Distribution System

FlexNAP System Components | (continued)

Tether Attachment Points

Ordering Information

F S ☐☐ A ☐☐ 4 3 ☐ N ☐☐☐ F
1   2   3   4   5   6 7   8   9

1 Defines fiber type.
  S = Single-mode (OS2)

2 Select cable type.
  D4 = ALTOS loose tube
       gel-free cable
  D8 = Figure-8 loose tube cable
  DC = ALTOS Lite gel-free
       armored cable
  DT = RPX gel-free flat ribbon
       cable
  V2 = RPX gel-free toneable
       ribbon cable

3 Select TAP type.
  A = Standard cable type
      closure
  - = Second tether

4 Select fiber count (single or dual tether).
  01 = 1 x 1 fiber tether
  02 = 2 x 1 fiber tether
  04 = 4 x 1 fiber tether

5 Defines connector type.
  43 = OptiTap connector (male)

6 Defines installation environment.
  T = no tether release

7 Defines end cap type.
  N = No loop back

8 Select tether length.
  010 = longest tether 3m
  015 = longest tether 5m

9 Defines unit of measure for tether length.
  F = Feet

FlexNAP™ Single-Fiber Tether Distribution System

FlexNAP System Components | (continued)

Stubless Splitter Multiport Terminals

8-Port (1x8 splitter) | Photo CRR1140

4-Port (1x4 splitter) | Photo CRR1139

Mechanical Characteristics

	Dimensions (L x W x H)	Weight
MultiPort 1x4 Splitter Terminal	312 mm x 86 mm x 76 mm (12.3 in x 3.4 in x 3.0 in)	0.7 kg (1.5 lb)
MultiPort 1x8 Splitter Terminal	381 mm x 147 mm x 101 mm (15.0 in x 5.8 in x 4.0 in)	1.1 kg (2.4 lb)

Optical Characteristics

	Insertion Loss, Max.	Reflectance
MultiPort 1x4 Splitter Terminal	8.0 dB	> 55 dB
MultiPort 1x8 Splitter Terminal	11.4 dB	> 55 dB

Ordering Information

M T S - ☐☐ 4 4 N S 0 0 0 M W - ☐
     1   **2**

1 Select splitter type.
H4 = 1x4
F8 = 1x8

2 Select packaging.
Blank = Bulk packaging
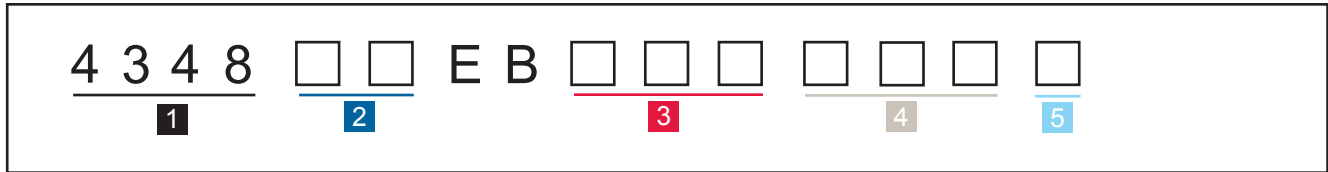(minimum order quantities apply)
P = Individual packaging

FlexNAP™ Single-Fiber Tether Distribution System

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FlexNAP System Components | (continued)

OptiTap Inline — SST-Drop™ Cable Assembly

Ordering Information

4 3 4 8 ☐☐ E B ☐☐☐ ☐☐☐ ☐
1   **2**   **3**   **4**   **5**

1   Defines connector type.

4348 = SC APC OptiTap to non-pinned OptiTap connector

2   Select fiber count.

01 = 1 fiber
02 = 2 fibers

3   Select cable assembly length.

Lengths:
Minimum 10 ft/3 m, then 25 ft/7 m with increments up to 800 ft/243 m
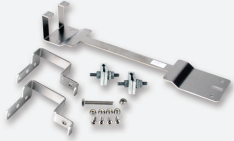
4   Select cable type.

4FD = SST-Drop dielectric cable
1TD = SST-Drop toneable cable
PFS = SST-Drop dielectric cable with pulling grip
PTS = SST-Drop toneable cable with pulling grip

5   Select unit of length.

F = Feet
M = Meters

FlexNAP™ Single-Fiber Tether Distribution System

Accessories

Part Number	Product Description	Units per Delivery	
MOB-KT-AHD	4-, 6-, and 8-port Mounting Bracket for aerial strand applications	1/1	
MOB-KT-AHD-12	12-port Mounting Bracket for aerial strand applications	1/1	
MOB-KT-UNIV-BKT	Universal Mounting Bracket Pack for 4- and 12-port housing	10/1	
CLEANER-PORT-OTAP	Single-fiber Port Cleaner for OptiTap® connector end faces	1/1	