FlexNAP™ System
An Evolant® OptiSheath™ Premier Terminal Distribution Solution

Description
Corning Cable Systems FlexNAP™ 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 1.25 in duct) outside plant distribution applications, Corning Cable Systems FlexNAP System significantly reduces installation time by 50 percent per network access point.

The increased speed of network deployment, along with the reliability of factory testing, offer significant value to the end-user in the following key areas: deployment velocity, risk avoidance, workforce efficiency and capital avoidance.

Features / Benefits
• Factory terminated and tested
• Distribution cables available as ALTOS® Loose Tube and ALTOS Figure-8 Cables
• Factory-installed sealed access points
• Patented, flexible, preterminated access point terminal allows the complete cable system to conform to drum size of most standard cable reels
• Maximum of two tethers per tap point (24 fibers)
• OptiFit® Premier MT Cable Assembly is available in 4-, 6-, 8- or 12-fiber configurations
• OptiSheath™ Advantage MultiPort Terminals are suitable for both aerial and below-ground applications and may be configured with four, six, eight or 12 OptiTap™ Adapters
• Compatible with most standard outside plant installation equipment
• Engineering services and rental capabilities available to plan, design, order and supervise the installation
Designing A FlexNAP™ System

A FlexNAP System cable consists of three major components:

1. FlexNAP System distribution cable

2. FlexNAP System network access points (with OptiFit® Premier MT Cable Assembly)

3. FlexNAP System terminal (with OptiSheath™ Advantage MultiPort Terminal) and OptiFit Premier MT Cable Assembly (ordered separately)

Sample Design Layouts
Ordering A FlexNAP™ System

Ordering a FlexNAP System can be completed in three easy steps:

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 Cable Systems at 1-800-743-2675 to gain access to the online configurator.

3. **Place Order** – Place order matching the bill-of-materials generated by the online configurator.

Placing an Order using the Online Configurator

A FlexNAP System design bill-of-materials is available via the online configurator. The following information is provided to illustrate available FlexNAP System configurations or to allow for creating a bill-of-materials for planning purposes.

1. **Select cable type, fiber count and total cable length.**

<table>
<thead>
<tr>
<th>Fibers</th>
<th>ALTOS® All-Dielectric Cable</th>
<th>Figure 8 Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>FNAP-CBL-012EW4</td>
<td>FNAP-CBL-012EWA</td>
</tr>
<tr>
<td>24</td>
<td>FNAP-CBL-024EW4</td>
<td>FNAP-CBL-024EWA</td>
</tr>
<tr>
<td>36</td>
<td>FNAP-CBL-036EW4</td>
<td>FNAP-CBL-036EWA</td>
</tr>
<tr>
<td>48</td>
<td>FNAP-CBL-048EW4</td>
<td>FNAP-CBL-048EWA</td>
</tr>
<tr>
<td>60</td>
<td>FNAP-CBL-060EW4</td>
<td>N/A</td>
</tr>
<tr>
<td>72</td>
<td>FNAP-CBL-072EW4</td>
<td>FNAP-CBL-072EWA</td>
</tr>
<tr>
<td>96</td>
<td>FNAP-CBL-096EW4</td>
<td>FNAP-CBL-096EWA</td>
</tr>
<tr>
<td>144</td>
<td>FNAP-CBL-144EW4</td>
<td>FNAP-CBL-144EWA</td>
</tr>
</tbody>
</table>

2. **Select network access point types by number of tethers, application, cable type and fiber count.**

**Single-Tether FlexNAP System Network Access Points**

<table>
<thead>
<tr>
<th>Application</th>
<th>Aerial</th>
<th>Direct Buried</th>
<th>1.25 inch Duct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Type</td>
<td>ALTOS Dielectric</td>
<td>ALTOS Dielectric</td>
<td>ALTOS Dielectric</td>
</tr>
<tr>
<td>Fiber Count</td>
<td>Figure-8 ALTOS</td>
<td>ALTOS Dielectric</td>
<td>ALTOS Dielectric</td>
</tr>
<tr>
<td></td>
<td>12, 24, 36, 48, 60, 72, 96, 144</td>
<td>12, 24, 36, 48, 60, 72, 96, 144</td>
<td>12, 24, 36, 48, 60, 72, 96</td>
</tr>
<tr>
<td>Tether Assembly Count</td>
<td>FSW4A04M2TN005F</td>
<td>FSW4A04M2TN005F</td>
<td>FSW4A04M2SN015F</td>
</tr>
<tr>
<td></td>
<td>FSWAA04M2TN005F</td>
<td>FSWAA04M2SN015F</td>
<td>FSW4A04M2SN015F</td>
</tr>
<tr>
<td>4</td>
<td>FSW4A06M2TN005F</td>
<td>FSW4A06M2TN005F</td>
<td>FSW4A06M2SN015F</td>
</tr>
<tr>
<td></td>
<td>FSWAA06M2TN005F</td>
<td>FSWAA06M2SN015F</td>
<td>FSW4A06M2SN015F</td>
</tr>
<tr>
<td>6</td>
<td>FSW4A08M2TN005F</td>
<td>FSW4A08M2TN005F</td>
<td>FSW4A08M2SN015F</td>
</tr>
<tr>
<td></td>
<td>FSWAA08M2TN005F</td>
<td>FSWAA08M2SN015F</td>
<td>FSW4A08M2SN015F</td>
</tr>
<tr>
<td>8</td>
<td>FSW4A12M2TN005F</td>
<td>FSW4A12M2TN005F</td>
<td>FSW4A12M2SN015F</td>
</tr>
<tr>
<td></td>
<td>FSWAA12M2TN005F</td>
<td>FSWAA12M2SN015F</td>
<td>FSW4A12M2SN015F</td>
</tr>
<tr>
<td>12</td>
<td>FSW4A12M2TN005F</td>
<td>FSW4A12M2TN005F</td>
<td>FSW4A12M2SN015F</td>
</tr>
<tr>
<td></td>
<td>FSWAA12M2TN005F</td>
<td>FSWAA12M2SN015F</td>
<td>FSW4A12M2SN015F</td>
</tr>
</tbody>
</table>

Call Customer Service for more information at 1-800-743-7675.
3. Order the appropriate OptiSheath™ Advantage MultiPort Terminal with OptiFit® Premier MT Cable Assembly tether separately.

Standard length is 10 ft. For customized lengths up to 500 ft, refer to the ordering information below. For lengths greater than 500 ft, please call customer service.

<table>
<thead>
<tr>
<th>Tether Fiber Count</th>
<th>Part Number</th>
<th>OptiFit® Premier MT Cable Assembly Tether Port Count</th>
<th>Tether Assembly Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>MTB-044FD010FW-P</td>
<td>4</td>
<td>10 ft</td>
</tr>
<tr>
<td>6</td>
<td>MTB-064FD010FW-P</td>
<td>6</td>
<td>10 ft</td>
</tr>
<tr>
<td>8</td>
<td>MTB-084FD010FW-P</td>
<td>8</td>
<td>10 ft</td>
</tr>
<tr>
<td>12</td>
<td>MTB-124FD010FW-P</td>
<td>12</td>
<td>10 ft</td>
</tr>
</tbody>
</table>

**Ordering Information**

MTB - Select number of OptiFit Cable Assembly ports.
04 = 4 OptiFit Drop Cable Assembly adapters
06 = 6 OptiFit Drop Cable Assembly adapters
08 = 8 OptiFit Drop Cable Assembly adapters
12 = 12 OptiFit Drop Cable Assembly adapters

04 = 4 OptiFit Drop Cable Assembly adapters

3. Select OptiTap™ Adapter type.
44 = APC
58 = UPC

4. Select cable type.
FD = SST Flat Drop Dielectric Cable
TD = SST Flat Drop Toneable Cable

5. Select cable length.
010 = 10 ft
025 = 25 ft
050 = 50 ft
075 = 75 ft
100 = 100 ft
500 = 500 ft

10. Defines unit of measure.
F = Feet

11. Defines mounting bracket.
W = Wall, wood pole, pedestal

12. Defines packaging.
P = Individual packaging for all lengths. Shipping reel available >400 feet
*Leave position vacant for coiled cable packaging lengths >400 feet and bulk packaging (requires order multiples)

**Accessories**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TKT-07007</td>
<td>OptiTip™ MT Connector Cleaning Kit (200 cleanings)</td>
</tr>
<tr>
<td>2104478-01</td>
<td>OptiTip MT Connector Cleaning Tool</td>
</tr>
</tbody>
</table>
## FlexNAP™ System Distribution Cable Specifications

### Maximum Tensile Loads
- **Short-Term**: 2700 N (600 lbf)
- **Long-Term**: 890 N (200 lbf)

### Storage Temperature
- -40 to 70˚C (-40 to 158˚F)

### Installation Temperature
- -30 to 70˚C (-22 to 158˚F)

### Operation Temperature
- -40 to 70˚C (-40 to 158˚F)

### ALTOS® All-Dielectric Cables, 12-144 Fiber

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Nominal Nominal Nominal</th>
<th>Maximum Number Number Weight Outer Cable Minimum Bend Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum Number Number Weight Outer Cable Minimum Bend Radius</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fiber Fibers per Tube of Tube Positions Tubes Member (lb/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1000 ft) mm (in) mm (in) cm (in) cm (in)</td>
<td></td>
</tr>
<tr>
<td>2-60</td>
<td>5 1-5 Dielectric 91 (67) 11.5 (0.46) 17.3 (6.8) 11.5 (4.6)</td>
<td></td>
</tr>
<tr>
<td>61-72</td>
<td>6 6 Dielectric 106 (76) 12.2 (0.49) 18.3 (7.2) 12.2 (4.9)</td>
<td></td>
</tr>
<tr>
<td>73-96</td>
<td>8 7-8 Dielectric 140 (98) 14.1 (0.56) 21.2 (8.3) 14.1 (5.6)</td>
<td></td>
</tr>
<tr>
<td>97-120</td>
<td>10 9-10 Dielectric 181 (124) 16.1 (0.64) 24.2 (9.5) 16.1 (6.4)</td>
<td></td>
</tr>
<tr>
<td>121-144</td>
<td>16 11-16 Dielectric 196 (136) 17.6 (0.70) 26.4 (10.4) 17.6 (7.0)</td>
<td></td>
</tr>
</tbody>
</table>

### ALTOS Figure-8 Cables, 12-144 Fiber

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Nominal Nominal Nominal</th>
<th>Maximum Number Number Weight Outer Cable Minimum Bend Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum Number Number Weight Outer Cable Minimum Bend Radius</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fiber Fibers per Tube of Tube Positions Tubes Member (lb/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1000 ft) mm (in) mm (in) cm (in) cm (in)</td>
<td></td>
</tr>
<tr>
<td>2-60</td>
<td>5 1-5 Dielectric 316 (212) 11.5 (0.46) 23.1 (6.8) 11.5 (4.6)</td>
<td></td>
</tr>
<tr>
<td>61-72</td>
<td>6 6 Dielectric 330 (222) 12.2 (0.49) 23.8 (7.2) 12.2 (4.9)</td>
<td></td>
</tr>
<tr>
<td>73-96</td>
<td>8 7-8 Dielectric 364 (245) 14.1 (0.56) 25.7 (7.2) 14.1 (5.6)</td>
<td></td>
</tr>
<tr>
<td>97-120</td>
<td>10 9-10 Dielectric 405 (272) 16.1 (0.64) 27.7 (10.9) 16.1 (6.4)</td>
<td></td>
</tr>
<tr>
<td>121-144</td>
<td>16 11-16 Dielectric 420 (282) 17.6 (0.70) 29.2 (10.4) 17.6 (7.0)</td>
<td></td>
</tr>
</tbody>
</table>

*Contact Engineering Services for typical sag and tension information.*
## FlexNAP™ System Network Access Point, Terminal and Tether Specifications

<table>
<thead>
<tr>
<th>Storage Temperature</th>
<th>-40 to 70˚C (-40 to 158˚F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Temperature</td>
<td>-30 to 70˚C (-22 to 158˚F)</td>
</tr>
<tr>
<td>Operation Temperature</td>
<td>-40 to 70˚C (-40 to 158˚F)</td>
</tr>
<tr>
<td>Design and Test Criteria</td>
<td>GR-3122, GR-771, GR-3120</td>
</tr>
</tbody>
</table>

### FlexNap System Terminal

<table>
<thead>
<tr>
<th>Type</th>
<th>Application</th>
<th>Maximum Distribution Fibers per Access Point</th>
<th>Maximum Tether Assemblies per Access Point</th>
<th>Nominal Outer Diameter mm (in)</th>
<th>Nominal Weight kg (lbs)</th>
<th>Minimum Bend Radius Loaded cm (in)</th>
<th>Minimum Bend Radius Installed cm (in)</th>
<th>Maximum Tensile Load Short-Term N (lbf)</th>
<th>Maximum Tensile Load Long-Term N (lbf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Profile</td>
<td>Aerial Direct-Buried</td>
<td>96</td>
<td>2</td>
<td>25 (1)</td>
<td>.6 (1.3)</td>
<td>24.2 (9.5)</td>
<td>16.1 (6.4)</td>
<td>2700 (600)</td>
<td>890 (200)</td>
</tr>
<tr>
<td>High-Fiber-Count</td>
<td>Aerial Direct-Buried</td>
<td>144</td>
<td>2</td>
<td>40 (1.6)</td>
<td>1.2 (2.6)</td>
<td>26.4 (10.4)</td>
<td>17.6 (7.0)</td>
<td>2700 (600)</td>
<td>890 (200)</td>
</tr>
</tbody>
</table>

### OptiFit® Premier MT Cable Assembly Tether

<table>
<thead>
<tr>
<th>Tether Assembly</th>
<th>Tether Length (ft)</th>
<th>Connector Style</th>
<th>Cable Type</th>
<th>Available Fiber Counts</th>
<th>Insertion Loss (dB) Typical*</th>
<th>Reflectance (dB) Typical</th>
<th>Polish</th>
<th>Alignment Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerial</td>
<td>5</td>
<td>OptiTip™ MT Jack</td>
<td>SST flat drop</td>
<td>4, 6, 8, 12</td>
<td>0.35</td>
<td>≤-65</td>
<td>8˚ angle</td>
<td>Stainless steel guide pins</td>
</tr>
<tr>
<td>Below Ground</td>
<td>15</td>
<td>OptiTip™ MT Jack</td>
<td>SST flat drop</td>
<td>4, 6, 8, 12</td>
<td>0.35</td>
<td>≤-65</td>
<td>8˚ angle</td>
<td>Stainless steel guide pins</td>
</tr>
</tbody>
</table>

### FlexNAP System compatible OptiSheath™ Advantage MultiPort Terminal Specifications

<table>
<thead>
<tr>
<th>Terminal Type</th>
<th>OptiTap® Adapter Port Counts</th>
<th>Connector Style</th>
<th>Insertion Loss (dB) Typical*</th>
<th>Reflectance (dB) Typical*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scaled with OSP cable stub</td>
<td>4, 6, 8, 12</td>
<td>OptiFit Cable Assembly to SC APC</td>
<td>0.19</td>
<td>≤-65</td>
</tr>
</tbody>
</table>

*Typical performance when mated with a Corning Cable Systems OptiFit Advantage Drop Cable Assembly

**Typical performance when mated with a Corning Cable Systems OptiTip MT Connector jack**

<table>
<thead>
<tr>
<th>Connector Style</th>
<th>Cable Type</th>
<th>Fiber Counts</th>
<th>Insertion Loss (dB) Typical</th>
<th>Reflectance (dB) Typical**</th>
<th>Polish</th>
</tr>
</thead>
<tbody>
<tr>
<td>OptiTip MT Plug</td>
<td>SST flat drop</td>
<td>4, 6, 8, 12</td>
<td>0.35</td>
<td>≤-65</td>
<td>8˚ angle</td>
</tr>
</tbody>
</table>

Description: OptiSheath Advantage 4-Port MultiPort Terminal
Dimensions (L x H x W) mm (in): 27.4 x 6.6 x 7.3 (10.8 x 2.6 x 2.9)

Description: 6-, 8-, 12-Port OptiSheath Advantage MultiPort Terminal
Dimensions (L x H x W) mm (in): 10.1 x 14.7 x 38.1 (15 x 4.0 x 5.8)
## Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOB-KT-W-WD-PED-4</td>
<td>OptiSheath™ Advantage 4-Port MultiPort Terminal Mounting Bracket for wall, wood pole and pedestal applications (included with standard terminal)</td>
</tr>
<tr>
<td>MOB-KT-AHD</td>
<td>OptiSheath Advantage 4-Port MultiPort Terminal Mounting Bracket for aerial-strand applications</td>
</tr>
<tr>
<td>MOB-KT-PED-3-4</td>
<td>OptiSheath Advantage 4-Port MultiPort Terminal Mounting Bracket for up to three multiports in a pedestal</td>
</tr>
<tr>
<td>MOB-KT-W-WD-PED</td>
<td>OptiSheath Advantage 6- to 12-Port MultiPort Terminal Mounting Bracket for wall, wood pole and pedestal applications (included with standard terminal)</td>
</tr>
<tr>
<td>MOB-KT-MTL-PL-12</td>
<td>OptiSheath Advantage 6- to 12-Port MultiPort Terminal Mounting Bracket for metal pole applications</td>
</tr>
<tr>
<td>MOB-KT-AHD-12</td>
<td>OptiSheath Advantage 6- to 12-Port MultiPort Terminal Mounting Bracket for aerial-strand applications</td>
</tr>
<tr>
<td>MOB-KT-HANDHOLE</td>
<td>OptiSheath Advantage 6- to 12-Port MultiPort Terminal Mounting Bracket for handhole applications</td>
</tr>
</tbody>
</table>