Next-generation OTE® portfolio
Optical termination enclosures for FTTX deployment
In the past, it’s been thought that broadband customers’ ability to consume enough network bandwidth to necessitate FTTX deployment would be decades away. But surprisingly, bandwidth consumption in the home has been growing exponentially. Today, an average home uses up to 30 percent more network bandwidth every year compared to the previous year.*

Entertainment technology like internet gaming, virtual reality and video on demand is partially responsible for the growing bandwidth demand as costs for such devices have become more affordable and more commonplace. But “smarter” household appliances that are becoming more mainstream, technology that uses sensor connectivity, data applications, and the Internet of Things (IoT) are also contributing to the hunger for more bandwidth.

*ACG Research, “Forecast of Residential Fixed Broadband and Subscription Video Requirements,” 2014

Source: Cisco VNI Global IP Traffic Forecast, 2015–2020

The number of devices connected to IP networks will be >3x the global population by 2020

Real-world challenges to fiber deployment

In the race to deliver gigabit services and acquire new subscribers, service providers (SP), multiple service operators (MSO) and telcos are faced with a number of challenges in connecting residences, businesses, educational and healthcare facilities to the fiber network. These challenges include the speed of deployment, network design flexibility and reliability in the network’s connectivity.

**Speed of deployment:** Since installing fiber can be labor intensive, deploying fiber solutions that save time can increase a company’s ROI.

**Design flexibility:** Being able to adapt to real-world conditions can be the difference between a smooth installation and a costly one.

**Reliability:** Choosing components that can withstand the test of time can significantly reduce the number of future truck roll-outs.
Any application. Any configuration. One portfolio.

CommScope’s family of optical termination enclosures (OTE) was specifically designed to streamline and speed the deployment of fiber while delivering long-lasting reliability and peace of mind. Composed of four OTE series, this portfolio was designed with an almost limitless choice for sizes, styles and configurations to accommodate nearly every unique deployment need.

These robust enclosures feature pre-connectorized hardened adapter ports and are fully compatible with full size and miniaturized DLX® systems. They provide plug-and-play simplicity for deploying and managing fiber optic connections. They also offer a unique solution for splicing, termination and pass-through cable requirements in FTTx architectures to facilitate deployment.

Next-generation OTE portfolio

<table>
<thead>
<tr>
<th>OTE2</th>
<th>Mini-OTE 200</th>
<th>Mini-OTE 300</th>
<th>Mini-OTE 400</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image of OTE2" /></td>
<td><img src="image2.png" alt="Image of Mini-OTE 200" /></td>
<td><img src="image3.png" alt="Image of Mini-OTE 300" /></td>
<td><img src="image4.png" alt="Image of Mini-OTE 400" /></td>
</tr>
</tbody>
</table>

**Recommended application**
- Highest port count ideal for building wall mount*
- Excellent for pole mount with internal system for cable fixation
- Versatile configuration; optimal for strand and handhole installation
- Highly flexible and easy fit into tight places in handhole and pedestal

**Network location**
- Aerial
- Aerial Handhole Pedestal
- Aerial Handhole Pedestal
- Aerial Handhole Pedestal

**Style**
- Butt & inline
- Butt
- Butt & inline
- Butt

**Max # of ports**
- 16 full size
- 6 full size or 8 DLX miniaturized
- 12 full size or 12 DLX miniaturized
- 8 full size or 8 DLX miniaturized

**Configuration**
- No splitter or 1:4 or 1:8 or 1:16 splitter
- No splitter or 1:4 or 2x1:4 or 1:8 splitter
- No splitter or 1:2 or 1:4 or 1:8 or Optical taps: 2, 4 or 8 drops CCWDM 2 or 4 or 8 channel
- No splitter

* Not UL listed for use in USA
Simpler architecture. Faster deployment.

When considering how to save on deployment, revisiting a network’s topology may be worthwhile. While the star topology architecture (Figure 1) provides a number of performance benefits, the installation requires a detailed site survey to identify cable lengths and installation obstacles while the deployment requires lots of fiber cables and additional installation labor.

One option that requires less cable is the daisy chain topology (Figure 2). This fiber deployment architecture eliminates the need for site surveys and reduces the amount of fiber needed to complete the last mile. Using the daisy chain topology also helps alleviate the possible confusion and overcrowded conditions that can occur at the fiber hubs.

Whether you choose to use a star topology, daisy chain topology or combination of both, our series of OTEs can provide significant intrinsic savings by reducing optical fiber cable needed and requiring less labor for installations.

These OTEs also provide installers with the flexibility of splitting signals inline or at a hub. Because they can accommodate higher fiber counts, our OTEs can be used anywhere in the network. In addition to being used in daisy chain topology, OTEs can be used as hubs, feeding multiple stars. Given the higher fiber count, adding additional branches at a later stage is also possible, which represents a strong field advantage.
FTTH networks typically use splitters to distribute the optical signal and the OTE portfolio offers passive optical modules (splitters, taps and CCWDMs) to aid in achieving the optimal solution.

A centralized split architecture is the most flexible but also the most expensive. An alternative to this is a cascaded tap architecture (Figure 3). In this case, fiber optic taps are used instead of splitters, and the topology is laid out in a linear, daisy-chain fashion.

Imagine taking a fiber in a fiber optic cable, cutting it, and splicing a tap in between. The optical signal passes through the tap and continues down the fiber, while the tap siphons/drops off a portion of the downstream signal for locally connected subscribers. Multiple taps can be placed down the line until the optical link budget is exhausted or the maximum number of subscribers per OLT port (typically 32, but 64 or more are supported) has been reached.

Optical tap architecture offers a cost-optimized solution for rural or low-density FTTH deployment. When configured with optical taps, the Mini-OTE 300 provides reduced FTTH deployment costs and improved business case—thus helping secure project funding for rural or low-density communities.
What makes our family of OTEs truly valuable is knowing that they protect every single connection. In the end, they deliver peace of mind.

Decades of collaboration between our material scientists, resin suppliers, independent test labs and customers have enabled CommScope to offer a durable outer shell that’s optimally designed to withstand any extreme environment condition. High UV stability and resistance to hydrolysis give our closure materials the ability to perform in aerial installations under very hot and humid climates. In addition, we applied our material science know-how to our sealant technology.

Traditional seal methods have evolved over the years. Many traditional sealing methods lose their effectiveness with each re-entry after deployment is complete. Because installers often have a need for re-entry in OTEs for maintenance or adding fiber, our mini-OTEs employ a revolutionary gel technology that’s easy to use and requires no special tools.

As an early pioneer in the gel technology, we’ve formulated a proprietary compressed gel sealant that conforms and maintains a water-tight seal, meeting IP68 standards. IP68 standards require that a closure is dust tight and protected against the effects of permanent submersion in water up to 13 feet (four meters). With our compressed gel, no tools or special handling are required to acquire IP68 qualifications.

By making our mini-OTEs re-enterable and waterproof, installers can use them with confidence in underground handholes, where flooding typically occurs. With the OTE portfolio, reliability is inherent in our design and not an afterthought.
FTTX network integration

- Mini-OTE 300 Series
  - Strand mounted
- Mini-OTE 200 or 300 Series
  - Pole mounted
- Mini-OTE 200 Series
  - Wall mounted
- Mini-OTE 200, 300 or 400 Series
  - Handhole & pedestal mounted

*OTE2 and Mini OTE-2 are not UL listed for wall mounting in USA
### Ordering Information

#### OTE2 Series

<table>
<thead>
<tr>
<th>Number of ports</th>
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<tr>
<td>S24</td>
<td>Tray for up to 24 heat shrink splice protectors (SMOUV 45 mm)</td>
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<table>
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<th>Type of adapter</th>
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<tr>
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<td>Full-size</td>
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<tr>
<td>X</td>
<td>DLX miniaturized</td>
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<table>
<thead>
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<td>1:4</td>
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<tr>
<td>18</td>
<td>1:8</td>
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<tr>
<td>W</td>
<td>Wall</td>
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<tr>
<td>P</td>
<td>Pole or pedestal</td>
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<th>Housing color</th>
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<tr>
<td>B</td>
<td>RAL9005 (black)</td>
</tr>
<tr>
<td>G</td>
<td>RAL7015 (gray)</td>
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## Mini-OTE 300 Series

### Ordering Information

**Mini-OTE 300 Series**

#### Number of ports

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<tr>
<th>Number of ports</th>
<th>Description</th>
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<tr>
<td>04</td>
<td>4 ports</td>
</tr>
<tr>
<td>06</td>
<td>6 ports</td>
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<tr>
<td>08</td>
<td>8 ports</td>
</tr>
<tr>
<td>12</td>
<td>12 ports</td>
</tr>
</tbody>
</table>

#### Type of adapter

- **H**: Full-size
- **X**: DLX miniaturized

#### Passive optical module options

- **NN**: No splitter
- **12**: 1:2 splitter (FBT)
- **14**: 1:4 splitter (planar)
- **18**: 1:8 splitter (planar)
- **2C**: 2 channel CCWDM
- **4C**: 4 channel CCWDM
- **8C**: 8 channel CCWDM

#### Number of trays

- **03**: 3 trays (standard)—2 fiber splicing trays, 1 fiber storage tray

#### Optional features

- **EXT**: External mounting
- **##**: Starting CCWDM wavelength, 20nm spacing
- **###A**: Starting CCWDM wavelength, skipped channels

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**Example:** OTE-04MX-14-EXTG03

4 Port Mini-OTE with 1x4 splitter, external mounting, grounding, 3 trays
## Ordering Information continued

### Mini-OTE 300 Series with optical taps

![Diagram of Mini-OTE 300 Series with optical taps]

#### Number of ports

<table>
<thead>
<tr>
<th>Number of ports</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>04</td>
<td>4 ports</td>
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<tr>
<td>08</td>
<td>8 ports</td>
</tr>
<tr>
<td>12</td>
<td>12 ports</td>
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</table>

#### Type of adapter

<table>
<thead>
<tr>
<th>Type of adapter</th>
<th>Description</th>
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<tbody>
<tr>
<td>H</td>
<td>Full-size</td>
</tr>
<tr>
<td>X</td>
<td>DLX miniaturized</td>
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#### Type of tap

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<thead>
<tr>
<th>Type of tap</th>
<th>Description</th>
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<td>12</td>
<td>2 drops</td>
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<td>14</td>
<td>4 drops</td>
</tr>
<tr>
<td>18</td>
<td>8 drops</td>
</tr>
</tbody>
</table>

**Example:** OTE-08MH-14-190G03
Eight-port mini-OTE 300, full-size hardened adapters, 1x4 tap, 19dB, ground plug, 3 trays

#### Number of trays

<table>
<thead>
<tr>
<th>Number of trays</th>
<th>Description</th>
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<tbody>
<tr>
<td>03</td>
<td>3 trays (standard)—2 fiber splicing trays, 1 fiber storage tray</td>
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#### Tap dB value

<table>
<thead>
<tr>
<th>Tap dB value</th>
<th>2 Drop</th>
<th>4 Drop</th>
<th>8 Drop</th>
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### Mini-OTE 400 Series

![Diagram of Mini-OTE 400 Series]

#### Number of ports

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<th>Description</th>
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<td>04</td>
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#### Hardened connector type

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<th>Type of connector</th>
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<td>Full size</td>
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<tr>
<td>X</td>
<td>DLX miniaturized</td>
</tr>
</tbody>
</table>

**Example:** OTE400-08MX-NN-EXT02
Eight-port mini-OTE with DLX drops, no splitter, external mounting, 2 trays
Why CommScope?

CommScope enables companies around the world to design, build and manage their wired and wireless networks. Our vast portfolio of network infrastructure includes some of the world's most robust and innovative wireless and fiber optic solutions.

Key capabilities include:

- **Expertise**: More than 40 years of experience meeting the most demanding customer needs and deployment environments.

- **End-to-end solutions**: A comprehensive fiber portfolio spanning the customer premises, multidwelling units (MDU), access network, central office and headend.

- **Innovation**: Increasing R&D investment, rapid prototyping and nearly 10,000 patents and pending applications.

- **Global reach**: More than 30 facilities focused on manufacturing, R&D and distribution.

- **Standards pioneering**: Worldwide recognized industry experts actively contributing to advances in standards and new technologies.

- **The CommScope Infrastructure Academy**: A series of training courses that keep installers and engineers current with the latest infrastructure technology and deployment best practices.

For more information, visit [https://www.commscopetraining.com/](https://www.commscopetraining.com/).

With so much riding on your network, it only makes sense that your network runs on CommScope. Contact a CommScope representative today.
CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement.

We collaborate with our customers and partners to design, create and build the world’s most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com.