

Mini-OTE 300 Tap

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1 General

The Mini-OTE 300 optical terminal enclosure is a unique plug-n-play solution for tap deployments in Fiber-To-The-x (FTTx) architectures. Featuring pre-connectorized hardened full-size OptiTap® or mini-size DLX® adapter ports, CommScope’s Mini-OTE 300 accelerates fiber deployment for new subscriber activation and service, minimizing labor costs. Each terminal is delivered with the tap pre-installed in the terminal and all feeder and drop ports are sealed with a plug. The terminal housing is closed and secured to prevent damage to internal splices.

The unit is designed for installation in pedestal, hand hole, pole and strand mount applications. Accessory kits are available to provide hardware and brackets required for pole and strand installations. In some pedestal styles, the strand mount brackets can be used for terminal stability such as pedestals with a mounting stake or D-bar design. Once the field technician has secured the terminal housing using with the appropriate hardware, the Mini-OTE is ready for drops to be connected to the adapter ports. Each terminal has pre-defined port access to the Tap Input, Tap Thru and Splitter Outputs.

The Tap Input is color coded green and is Port position #3 (first row, second from right side) on all Tap models. The Tap Thru is color coded orange and is Port position #4 (first row, first port on right side of the terminal). Second and third rows on the 8 Port and 12 Port models are Splitter Outputs. See [Figure 1](#).

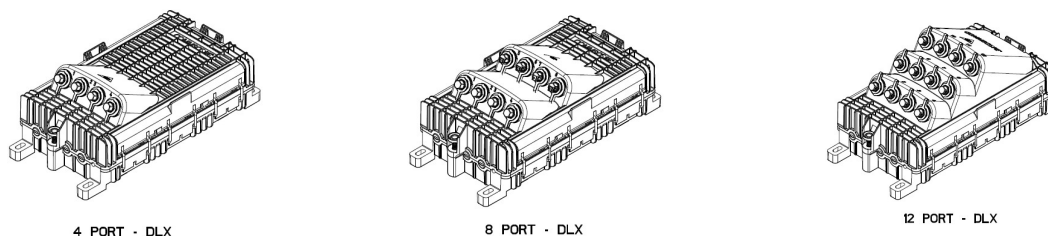


Figure 1. Mini-OTE Tap Ports

1.1 Adapter Options:

Adapter options include the following:

- 4 Port – Mini-Size DLX
- 8 Port – Mini-Size DLX
- 12 Port – Mini-Size DLX
- 4 Port – Full Size DLX
- 8 Port – Full Size DLX
- 12 Port – Full Size DLX

Table 1 summarizes the port locations and functions.

Table 1: Mini-OTE Ports

| Row | 1x2 Tap (4 Port Terminal) | 1x4 Tap (8 Port Terminal) | 1x8 Tap (12 Port Terminal) |
|-----|--|---|---|
| 1 | Port#1 & 2 Drop Outputs; Port#3 Tap Input; Port#4 Tap Thru | Port#1 N/A; Port#2 N/A; Port#3 Tap Input; Port#4 Tap Thru | Port#1 N/A; Port#2 N/A; Port#3 Tap Input; Port#4 Tap Thru |
| 2 | N/A | Port#1 N/A; Port#2 N/A; Port#3 Tap Input; Port#4 Tap Thru | Port#5 through Port#8: Drop Outputs |
| 3 | N/A | N/A | Port#9 through Port#12: Drop Outputs |

2 Mounting Options

The OTE-M-STRAND-BRKT accessory kit provides two brackets and hardware for mounting the Mini-OTE 300 in strand mount applications and some pedestal applications depending on the pedestal design. [Figure 2](#) shows the mounting options.



Figure 2. Mounting Options

The OTE-M-STRAND-CLAMP accessory kit provides two strand clamps and hardware for mounting the Mini-OTE 300 terminal closer to the D-Bar or to a universal back plate. This device is included in the Mini-OTE 300 kits. [Figure 3](#) shows the strand mount clamps and hardware and the installation options.



Figure 3. Strand Mount Clamps/Hardware – Pedestal Installation Options

3 Using Hardened Connectors and Adapters

Hardened connectors and adapters provide sealed environmental protection for the subscriber drop cable connector and the SC adapter mounted within the Mini-OTE optical port. The following sections provide a description of the connector and adapter components and provide instructions for connecting or disconnecting the drop cable to/from the optical ports.

3.1 Connector Components

The basic components of the drop cable connector are shown in [Figure 4](#). The dust cap threads onto the connector coupling nut. A pair of O-rings on the connector body provide a tight seal when the dust cap is in place. A pulling eye is provided in the end of the dust cap for pulling the drop cable through conduit.

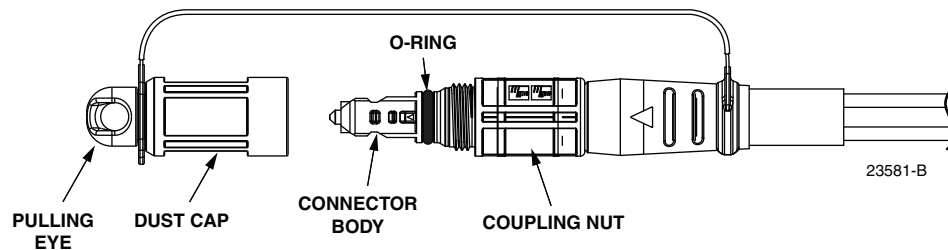


Figure 4. Connector Components

3.2 Drop Cable Connector Components

The basic components of the Mini-OTE optical port hardened adapter are shown in [Figure 5](#). The dust cap threads into the adapter housing. An O-ring on the dust cap provides a tight seal when the dust cap is in place. The 216B key tool is required to remove the dust cap.

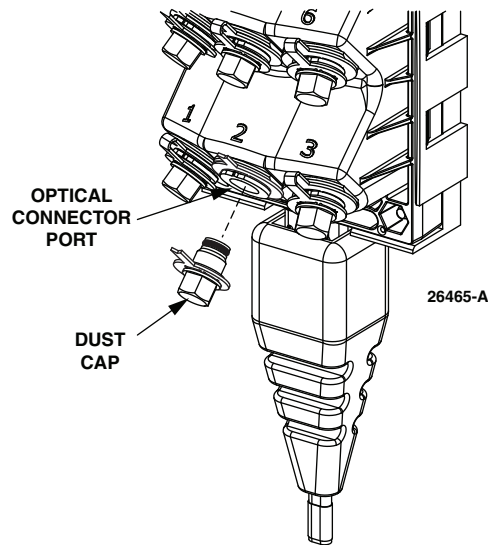


Figure 5. Optical Port Components

3.3 Connecting Drop Cable to Mini-OPE Optical Port

Danger! Exposure to laser radiation can seriously damage the retina of the eye. Do not look into the ends of any optical fiber. Do not assume the laser power is turned-off or that the fiber is disconnected at the other end.

Use the following procedure to connect a drop cable to an optical port on the Mini-OPE enclosure:

1. Unscrew the dust cap from the drop cable connector (see [Figure 4 on Page 3](#)).
2. Inspect the drop cable connector O-rings for dryness and apply O-ring lubricant (MST-ACC-LUBE1) to each O-ring if dry. See [Section 5 on page 9](#).

Note: The connector O-rings are pre-lubricated by the factory and should not require additional lubrication for the initial assembly.

3. Use the 216B key tool (accessory) to unscrew the dust cap (see [Figure 5](#)) from the Mini-OPE optical port.
4. Clean both the optical port adapter and the drop cable connector (requires accessory kit FHD-ACC-CLNKIT1) as specified in ADCP-96-067.
5. Align the drop cable connector with the optical port as shown in [Figure 6](#). The pointer on the drop cable connector should line up with the notch on the optical port.
6. Insert the drop cable connector into the optical port. If the drop cable connector does not insert all the way to the bottom of the port, rotate drop cable connector slightly to either side until it slides freely into place.
7. Thread the drop cable connector coupling nut into the optical port and tighten coupling nut until finger tight.
8. Inspect the optical port dust cap O-ring (see [Figure 4 on Page 3](#)) for dryness and apply O-ring lubricant to the O-ring if dry (MST-ACC-LUBE1). For the procedure, refer to [Section 5 on page 9](#).

Note: The optical port dust cap O-ring is pre-lubricated by the factory and should not require additional lubrication for the initial assembly.

9. Thread the optical port dust cap into the drop cable dust cap as shown in [Figure 7](#) and then tighten both dust caps finger tight. This ensures that both dust caps will stay clean when not in use.

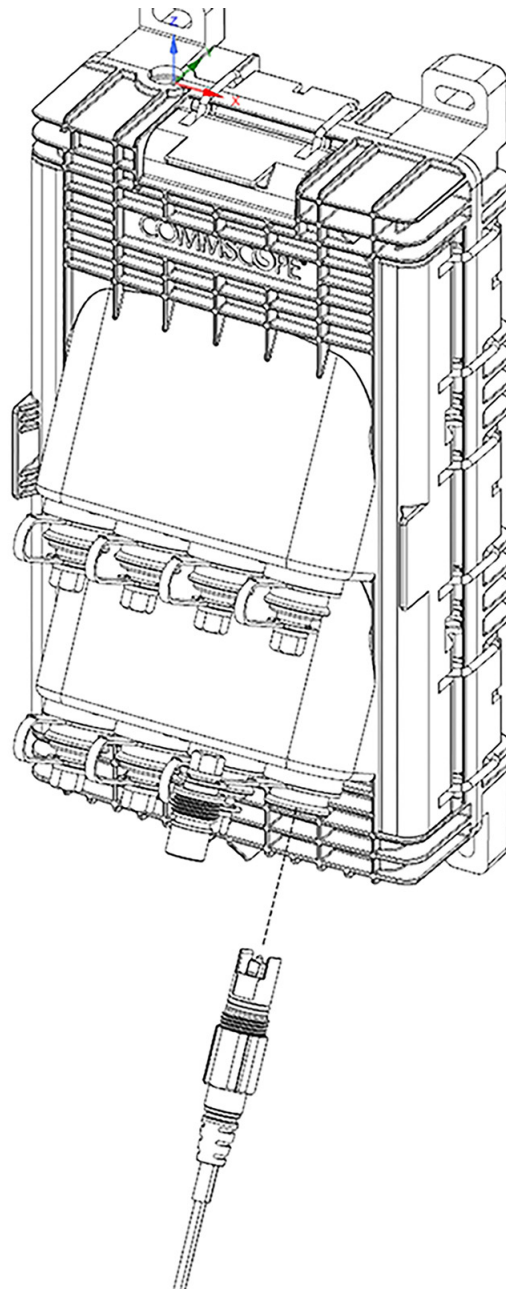
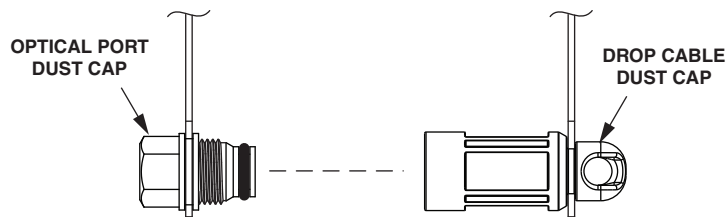


Figure 6. Connecting Drop Cable to Mini-OTE Optical Port



23586-B

Figure 7. Dust Caps

3.4 Disconnecting Drop Cable from Mini-OTE Optical Port

Danger! Exposure to laser radiation can seriously damage the retina of the eye. Do not look into the ends of any optical fiber. Do not assume the laser power is turned-off or that the fiber is disconnected at the other end.

Use the following procedure to disconnect a drop cable from an optical port on the Mini-OTE terminal:

1. Unscrew the optical port dust cap from the drop cable dust cap (see [Figure 7](#)).
2. Unscrew the drop cable connector coupling nut from the optical port (see [Figure 6](#)).
3. Inspect the optical port dust cap O-ring for dryness and apply O-ring lubricant (MST-ACC-LUBE1) to the O-ring if dry. For the procedure, refer to [Section 5 on page 9](#).
4. Thread the optical port dust cap into the optical port and tighten using the 216B key tool (see [Figure 5](#)).
5. Inspect the drop cable connector O-rings for dryness and apply O-ring lubricant (MST-ACC-LUBE1) to each O-ring if dry. For the procedure, refer to [Section 5 on page 9](#).
6. Thread the drop cable dust cap onto the drop cable connector coupling nut and tighten until finger tight (see [Figure 4](#)).

4 Maintenance of Mini-OTE 300 Terminals

Maintenance for the Mini-OTE terminal is limited to cleaning the hardened adapters as needed to maintain optimal performance, lubricating O-rings that may become dry, or replacing a damaged optical connector.

4.1 Drop Cable Connector Cleaning Procedure

Cleaning kit (FHD-ACC-CLNKIT1) is required for this procedure. Use the following procedure to clean the drop cable connector:

Note: Use the approved local cleaning device that has slots for a hardened connector shroud.

1. Unscrew the drop cable connector dust cap from the end of the drop cable connector.
2. Examine the end of the drop cable connector and determine which is the high side and which is the low side of the connector end-face as shown in [Figure 8](#).

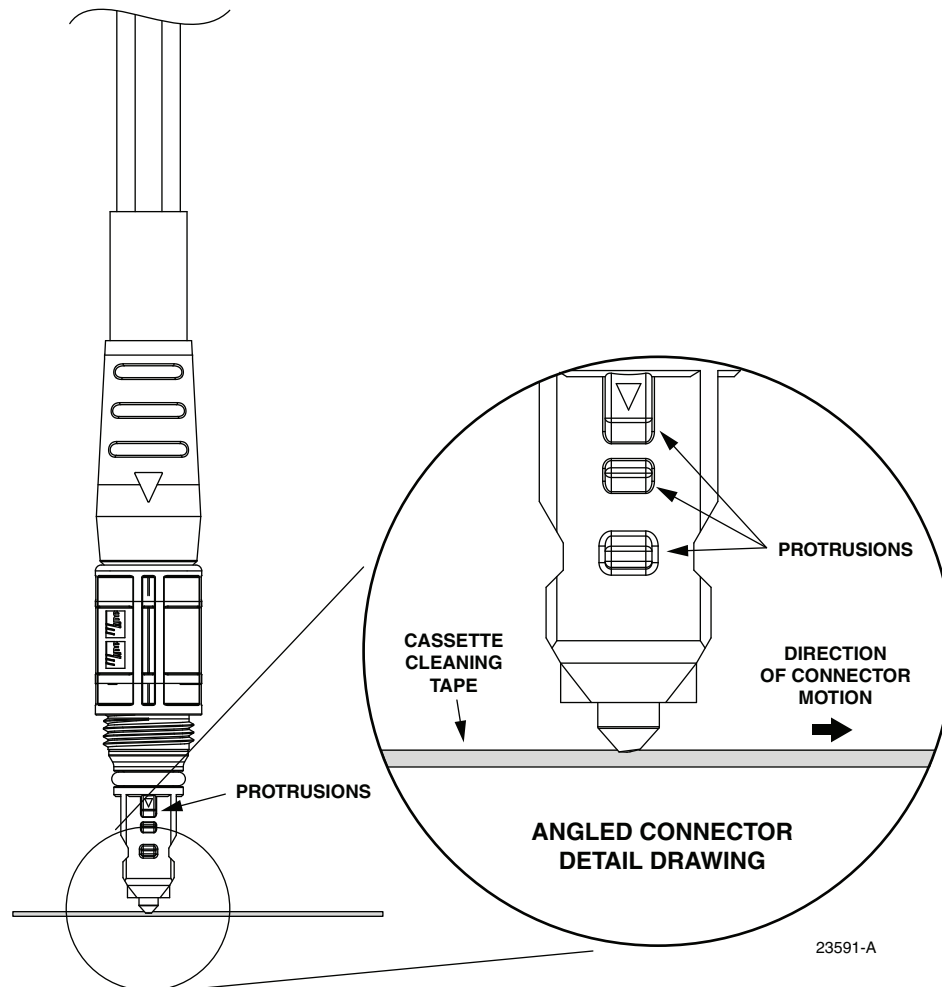


Figure 8. Angled Connector End-Face Detail

3. Locate the cleaning tape cassette that is provided with the cleaning kit.
4. Open the tape shutter by squeezing the lever on the underside of the cassette and then keep the shutter open by continuing to squeeze the lever.
5. Hold the end-face of the drop cable connector perpendicular to the cleaning tape and with the high side of the connector pointing in the direction of cleaning as shown in [Figure 9](#).

Note: The drop cable connector uses angled SC type connectors. Make sure the high side of the connector end-face is pointing in the direction of the cleaning motion.

6. With light pressure, slide the connector end-face once across the tape in the direction shown using a smooth linear motion. Do not press too hard and do not repeat the cleaning motion with the same tape.

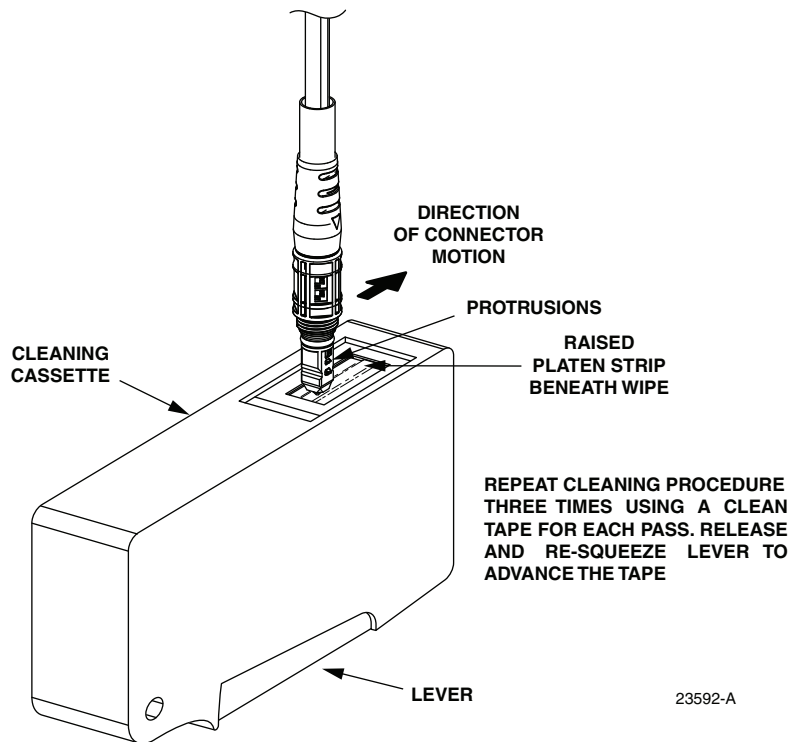


Figure 9. Angled Connector End-Face Detail

7. Release the lever on the underside of the cassette to close the tape shutter.
8. Repeat steps 3 through 6 until the connector has been cleaned three times.
9. When the connector is clean, reinstall the drop cable dust cap and tighten until finger tight.

4.2 Mini-OTE Adapter/Connector Cleaning Procedure

Cleaning kit (FHD-ACC-CLNKIT1) is required for this procedure. Use the following procedure to clean the Mini-OTE optical port adapters and the internal connectors:

1. Using a 216B key tool, unthread the optical port dust cap from the optical port adapter.
2. Locate the dry swabs that are provided with the connector/adapter cleaning kit.
3. Insert a dry swab into the adapter as shown in [Figure 10](#).

Note: Do not apply alcohol to the swab or the adapter.

4. While applying light pressure against the connector end-face, rotate the dry swab 360° three times.
5. Dispose of the dry swab after use.
6. When the connector end-face and adapter ferrule are clean, reinstall the optical port dust cap and tighten using the 216B key tool.

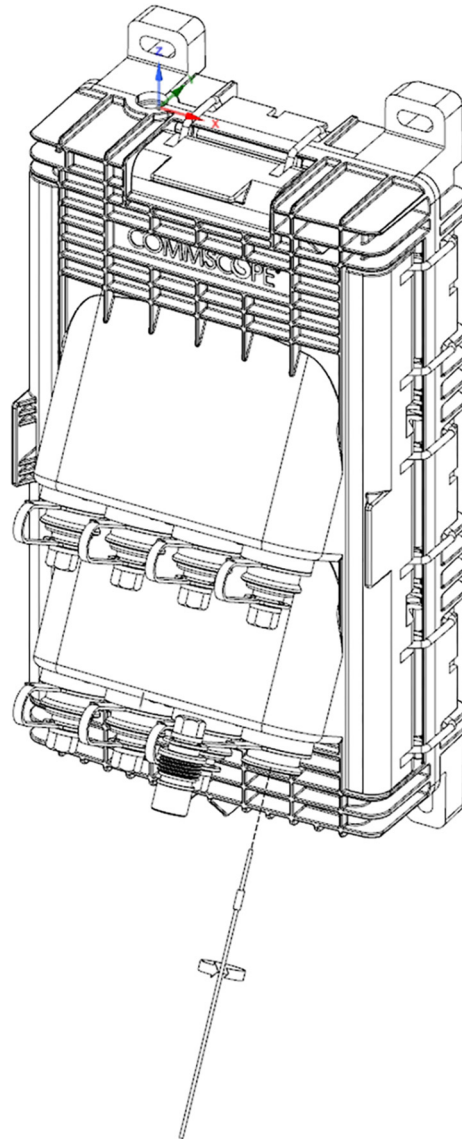


Figure 10. Cleaning Optical Port Connector and Adapter

5 O-Ring Lubrication

The O-rings used on the hardened connector and on the optical port dust cap are lubricated when shipped from the factory to prevent damage during installation.

If the O-rings become excessively dry, they may require additional lubrication to prevent damage. Remove the O-rings from the connector or dust cap and apply a small amount of lubricant directly to each ring. Then reinstall the O-rings on the connector or dust cap. Apply only the recommended O-ring lubricant (MST-ACC-LUBE1).

6 Product Support

- To find out more about CommScope® products, visit us on the web at www.commscope.com/
- For technical assistance, customer service, or to report any missing/damaged parts, visit us at <http://www.commscope.com/SupportCenter>

