

CORNING

Optical Management Shelf (OMS)

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1. General

This document describes the recommended procedure for installing the optical management shelf (OMS) housing (Figure 1). The OMS is available with connectorized pigtails for internal splicing, with factory installed cable assemblies for remote splicing, or with adapters only for field installation of connectorized cables.

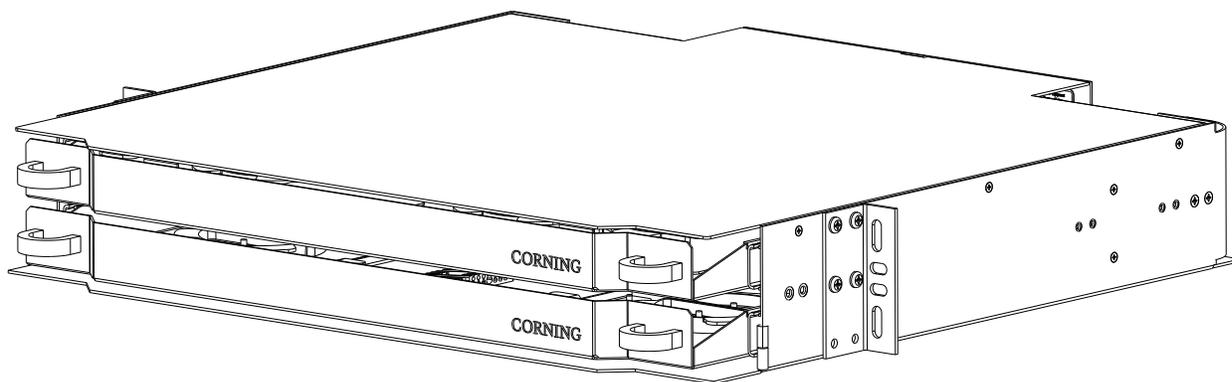


Figure 1

2. Tools and Equipment

- Phillips-head screwdriver
- Cable tie installation tool
- Cable preparation tool kit

3. Carton Contents

A mounting kit containing the following hardware is included with each unit.

- (4) #6-32 screws
- (4) #12-24 mounting screws
- (4) #10-32 mounting screws
- (4) Metric mounting screws
- (20) Cable ties

Each OMS unit also includes a cable strain-relief kit containing the following hardware and components. (For more information refer to the universal cable clamp [UCC] installation instruction provided with the kit.)

- Strain-relief bracket (1)
- #6-32 screws (2)
- UCC kit (1)
- Clamp, self-locking (6)
- #12-24 screws (2)

4. Rack-Mount the OMS

Step 1: Following the directions provided with the Universal Cable Clamp (UCC), mount the UCC to the bracket provided and attach the bracket to the rear of the rack on the same side in which the cable will enter the rear of the housing. For top cable entry, install UCC 3 inches above the housing or 3 inches below the OMS housing for bottom entry.

NOTE: If UCC is installed other than indicated, adjust cable jacket length in Table 1 accordingly.

Step 2: Position the first OMS housing into the rack at the lowest possible mounting position (Figure 3) allowing for the presence of the UCC.

Step 3: Slide the housing into the rack from the front. Align the mounting brackets with holes in the rack and secure the housing to the rack, using four #12-24 screws (provided).

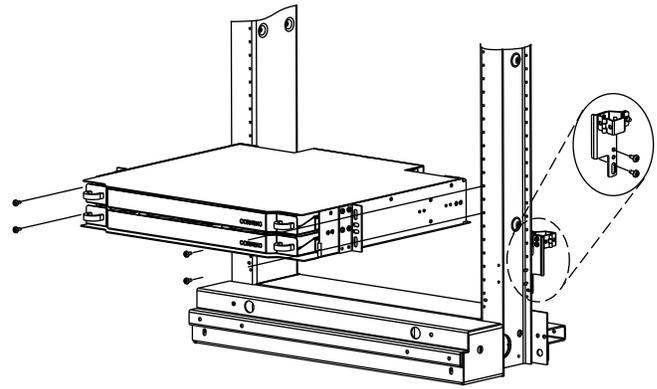


Figure 2

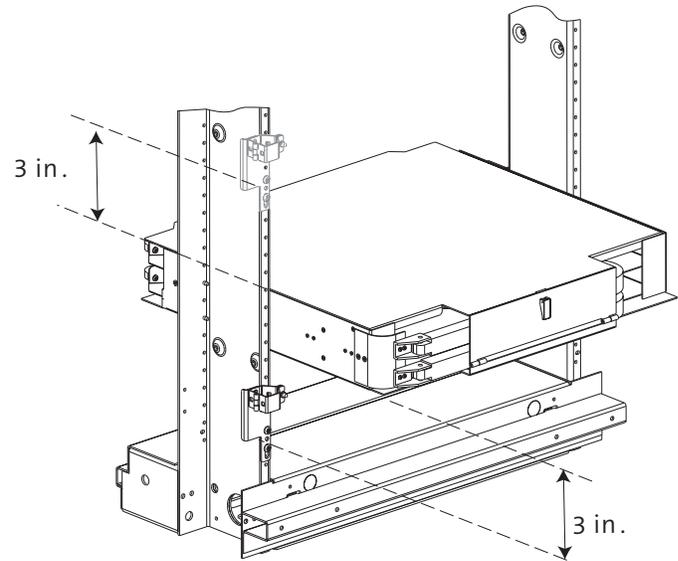


Figure 3

5. Cable Preparation

	<p>WARNING: Never look directly into the end of a fiber that may be carrying laser light. Laser light can be invisible and can damage your eyes. Viewing it directly does not cause pain. The iris of the eye will not close involuntarily as when viewing a bright light. Consequently, serious damage to the retina of the eye is possible. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.</p>
	<p>WARNING: DO NOT use magnifiers in the presence of laser radiation. Diffused laser light can cause eye damage if focused with optical instruments. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.</p>
	<p>CAUTION: Cleaved or broken glass fibers are very sharp and can pierce the skin easily. Do not let these pieces of fiber stick to your clothing or drop in the work area where they can cause injury later. Use tweezers to pick up cleaved or broken pieces of glass fibers and place them on a loop of tape kept for that purpose alone. Good housekeeping is very important.</p>
	<p>CAUTION: The wearing of cut-resistant safety gloves to protect your hands from accidental injury when using sharp-bladed tools and armored cable is strongly recommended. Use extreme care when working with severed armor. There will be a sharp edge where armor is cut. To minimize the chance of injury from the cut armor, cover the exposed edge with a wrap of electrical tape. To minimize the chance of injury from sharp-bladed tools, always cut away from yourself and others. Dispose of used blades and armor scrap properly.</p>



CAUTION: Recommend the use of safety glasses (spectacles) conforming to ANSI Z87, for eye protection from accidental injury when handling chemicals, cables or fiber. Pieces of glass fiber are very sharp and have the potential to damage the eye.

- Step 1:** Before preparing the cable, determine how many fibers will be routed into each shelf and how many shelves are required to terminate the entire cable.
- Step 2:** Perform cable sheath removal steps per any instructions provided with the cable being installed.
- Step 3:** Prepare cable to be installed as shown in Figure 4. Use jacket strip length from Table 1 corresponding to number of shelves required to terminate entire cable.

Shelves Required for cable	Jacket Strip Length (in)
1	68
2	69.5
3	71
4	72.5
5	74
6	72.5
7	77
8	78.5

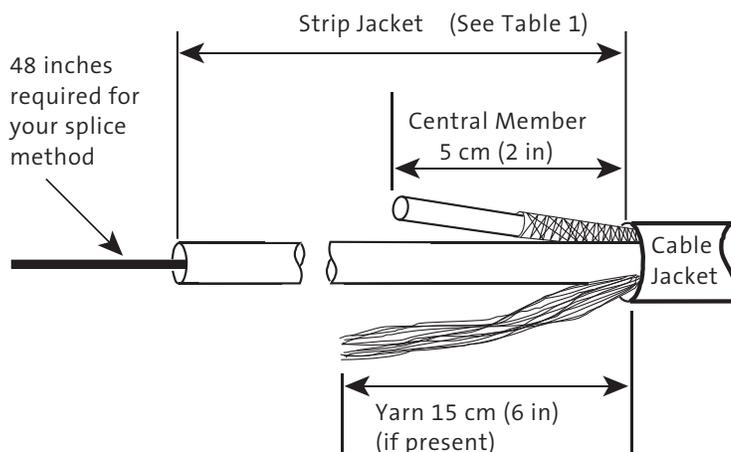


Table 1: Jacket Strip Lengths

Figure 4

6. Cable Strain-relief

- Step 1:** Attach cable protector bracket to the side of the housing using four #6-32 screws (Figure 5).

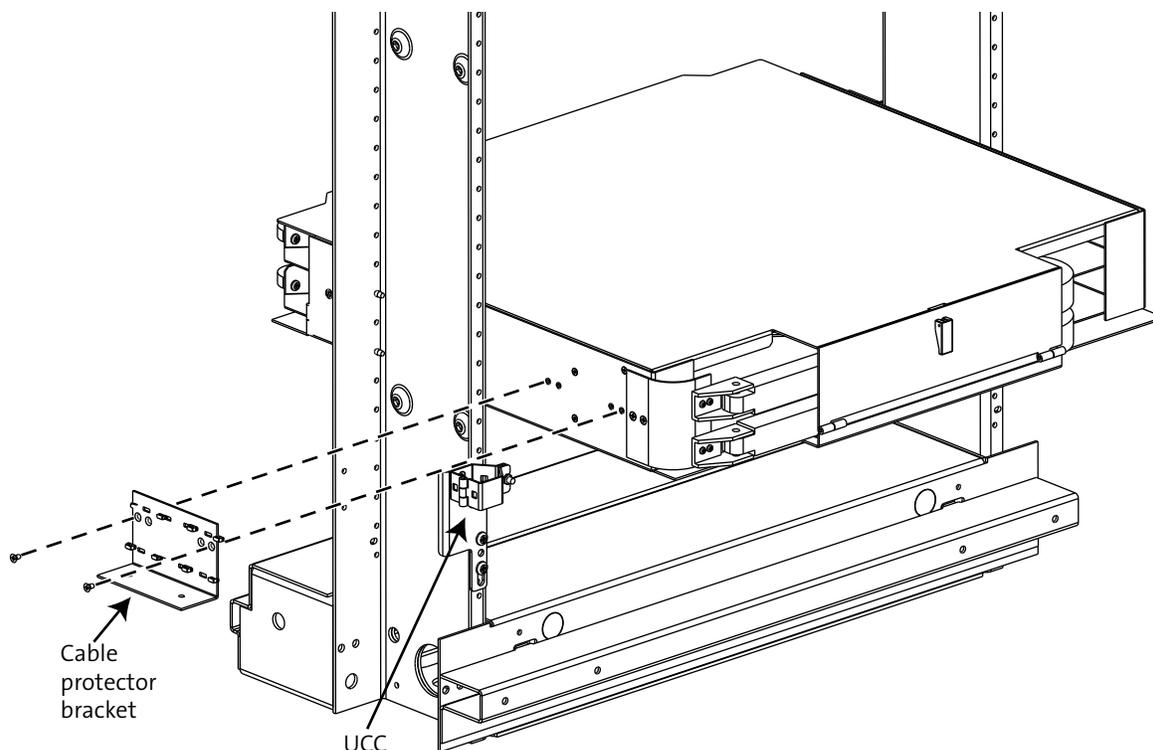


Figure 5

- Step 2:** Route cable through the UCC with the cable sheath terminating approximately one inch above the UCC.
- Step 3:** Route buffer tubes for each shelf into the OMS housing from the rear (Figure 6).

Step 4: Use cable ties (provided) to retain buffer tubes or subunits to the cable tie anchors on the cable protector bracket (Figure 6).

Step 5: Attach the cable protector cover to protect exposed cable as shown in Figure 6.

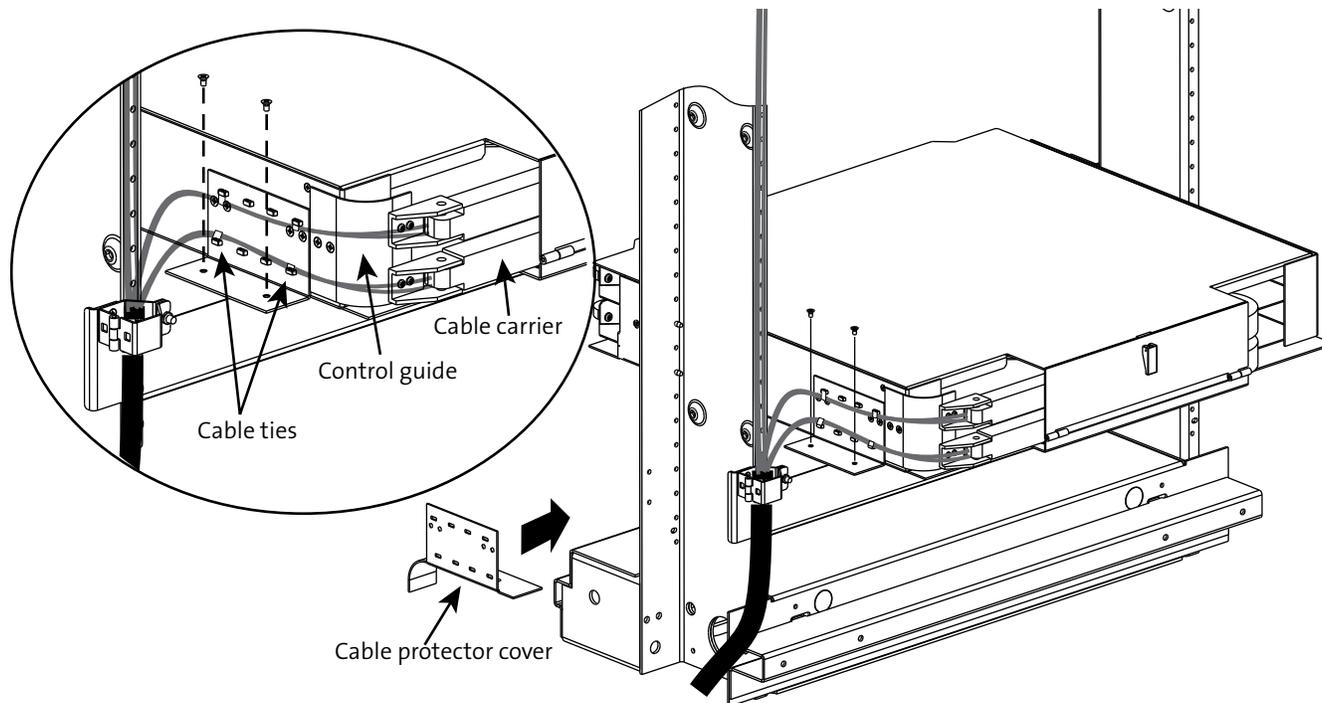


Figure 6

7. Route Cable into the OMS

The unit is shipped with the cable carrier and control guide (Figure 7) installed for cable entry from the right. If bringing cable into the housing from the left, detach the cable carrier and its brackets and attach them on the left side of the housing (shown by the dashed line illustration in Figure 7).

Step 1: Feed incoming cable into the cable carrier from the rear of the OMS and use cable ties at approximately the positions shown in Figure 7 to hold the cable inside the carrier.

Step 2: Open shelf drawer and pull cable into the unit from the front and feed it around the fiber guide next to the cable carrier as shown in Figure 7.

Step 3: With the top tray (not shown) rotated to the “up” position, route fibers in the lower level as shown in Figure 7.

8. Pigtail Preparation

Pigtails are fiber optic cables with connectors at only one end. Refer to Figure 8 to determine pigtail component lengths to be used when stripping the unconnectorized end of the pigtail. Connector number corresponds to the numbers shown on the jumper slack storage cover label in Figure 10.

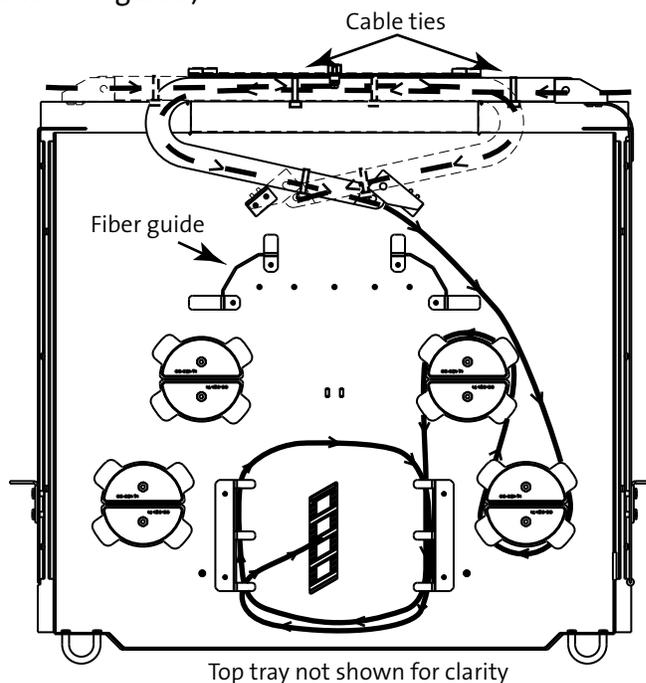


Figure 7

Pigtail lengths - OMS (end of sheath to tip of connector)		
Connector Number	Color	Length in inches
1	blue	10
2	orange	10.5
3	green	11
4	brown	11.5
5	slate	12
6	white	12.5
7	red	13.5
8	black	14
9	yellow	14.5
10	violet	15.25
11	rose	16
12	aqua	16.75

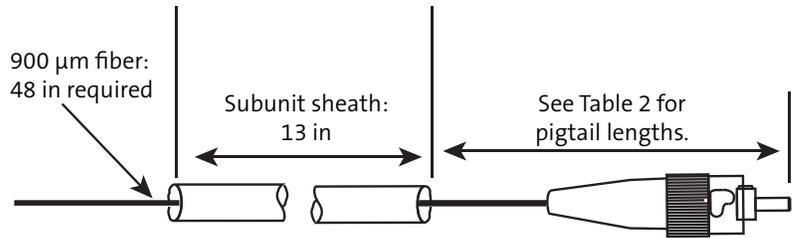


Figure 8

Table 2: Pigtail Strip Length

9. Connector Adapter Installation

Connector adapters are available to fit the SC, LC Duplex, MT-RJ, ST®-compatible, and FC connector sleeves. Refer to Figure 9 for installation of each sleeve type.

Step 1: Snap the adapter holders with adapter installed in the connector support panel on the connector shelf. Lift the adapter to access it for connector installation (Figure 9).

Step 2: Remove dust caps and insert connector bodies into the adapters. Observe the precautions in Section 12 for connector care.

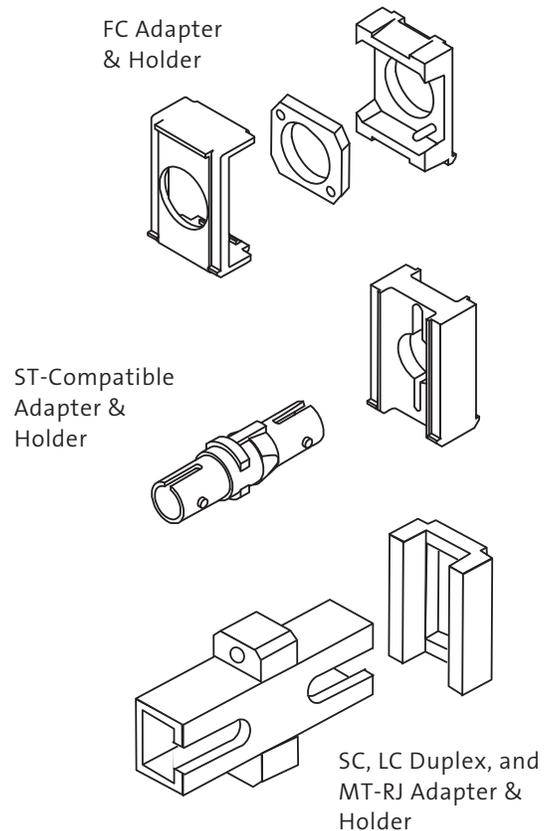
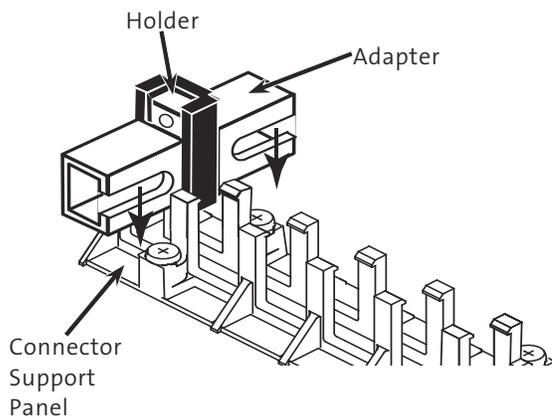


Figure 9

10. Connector Care



WARNING: Isopropyl alcohol is flammable with a flashpoint at 54°F. It can cause irritation to eyes on contact. In case of contact, flush eyes with water for at least 15 minutes. Inhalation of vapors irritates the respiratory tract. Exposure to high concentrations has a narcotic effect, producing symptoms of dizziness, drowsiness, headache, staggering, unconsciousness, and possibly death.

- Always keep dust caps on connectors and adapters when not in use.
- Ensure dust caps are clean before reuse.
- Use optical cleaning materials as standardized by your company.
- Clean the connector before every mating, especially for test equipment patch cords (jumpers).
- A minimum level of cleaning is listed below. Local procedures may require more rigorous cleaning methods.

Step 1: Remove plugs from the connector adapter.

Step 2: Wipe the connector ferrule twice with a lint-free wiping material moistened with isopropyl alcohol. Then wipe across the end of the ferrule.

Step 3: Repeat previous step with a dry wipe.

11. Route Pigtails into the OMS

Step 1: If pigtails are not factory installed, attach connectors to the adapters.

Step 2: Route fibers to the back of the top shelf. Insert fibers from each side of the connector panels through a protective sleeve (provided). Attach each sleeve to the shelf using cable ties (Figure 10).

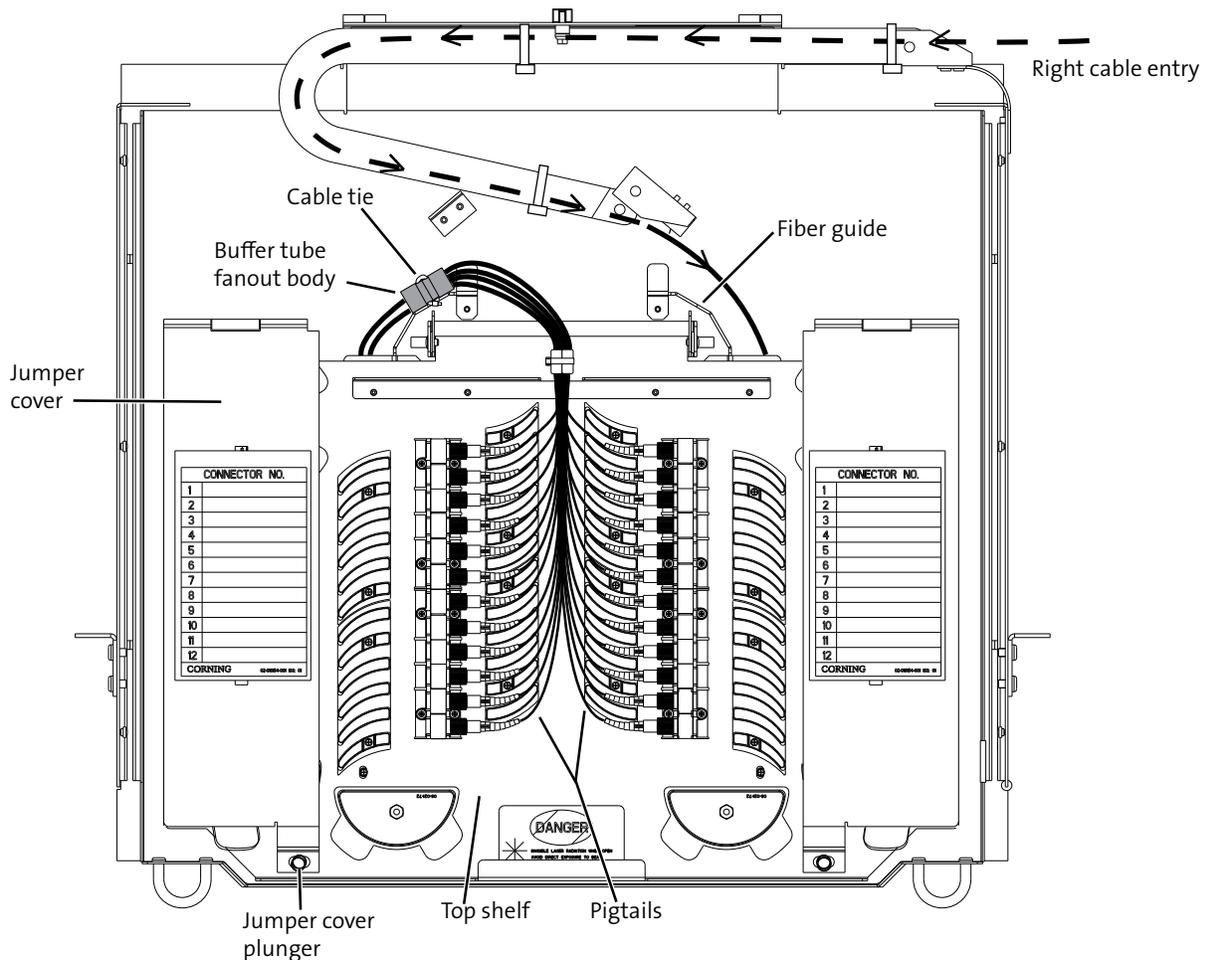
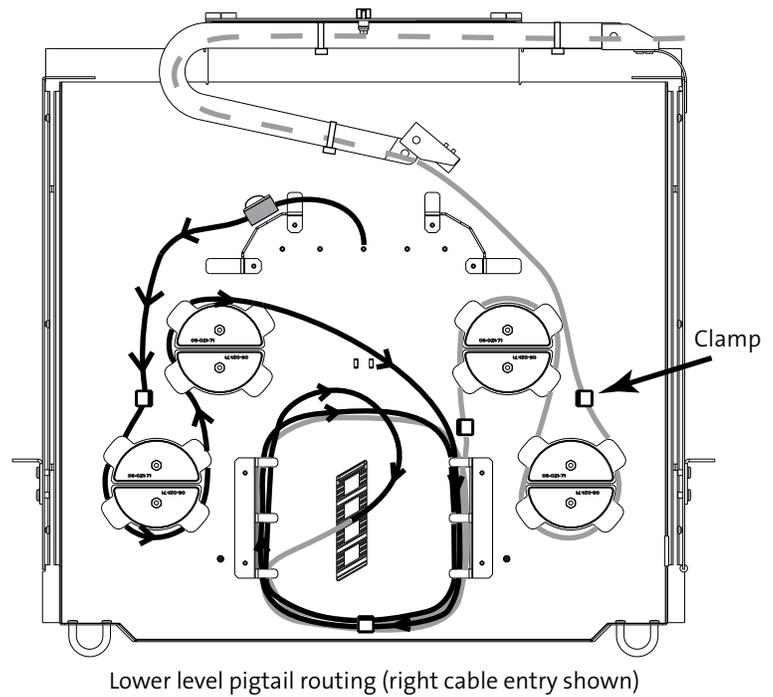


Figure 10

Step 3: Route the ribbon/buffer tubes around the fiber guide (opposite side of incoming fiber) and into the lower level. If required, transition the fibers into a buffer tube fan-out body. Cable tie the buffer tube fan-out body to the fiber guide (Figure 10), then transition the ribbon to the lower level.

Step 4: Route ribbon/buffer tubes around the routing guides on the lower level (Figure 11). Install clamps in the suggested locations shown.

NOTE: Leave enough slack in the area shown so the interconnect tray can be raised without pulling on cables.



Lower level pigtail routing (right cable entry shown)

Figure 11

12. Splicing

Splice the fibers in the bottom shelf as described in the instructions for the splicing method being used.

13. Jumper Installation

Jumpers are fiber optic cable with connectors at both ends. One end is installed in the adapter in the OMS shelf and the other end is generally connected to electronic equipment.

- Step 1:** Remove dust covers and install connectors into the connector adapters as shown in Figure 12.
- Step 2:** Open jumper slack storage cover by pulling up on the plunger (see Figure 10). Route jumpers around routing guides on the shelf assembly as shown in Figure 12.
- Step 3:** Close the cover and secure with plunger.
- Step 4:** Mount the hook-and-loop assembly on the side of the housing and secure the bundle of jumpers with the strap.

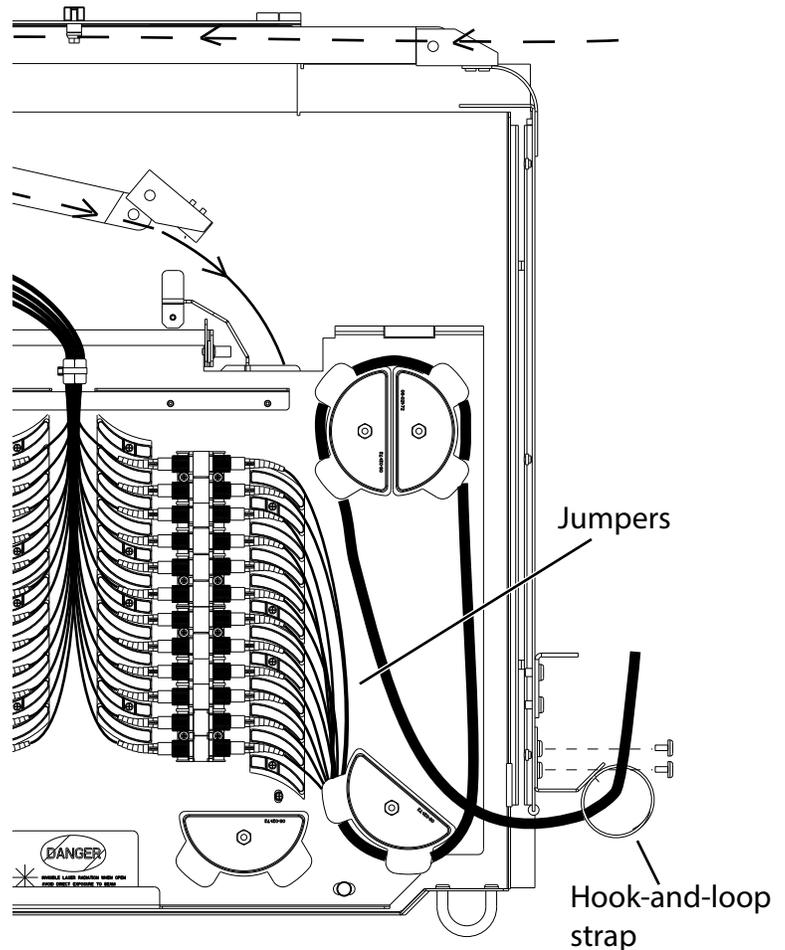


Figure 12

14. Documentation

Record jumper information on the labels on the jumper slack storage covers (Figure 10). Accurate recordkeeping is imperative to maintain an organized installation.

15. Maintenance

The unit requires very little maintenance to ensure fibers and parts remain in good condition.

- External components may be cleaned occasionally with a damp, nonabrasive cloth.
- Check nuts, bolts, and screws; tighten as needed.
- Check fiber optic cable to make sure bends do not exceed the minimum bend radius.
- Check cables for unnecessary strain, for crimping or crushing at entries and exits, and for damage.
- Check unit record labels to make sure all are clear and accurate.