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Instruction Sheet

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SYSTIMAX 360™ iPatch® InstaPATCH®
Fiber Shelf Instructions

General

The **SYSTIMAX 360**™ **iPatch**® **InstaPATCH**® fiber shelf is a **SYSTIMAX**® approved product and is available in a sliding configuration and fixed configuration. Each shelf includes one **iPatch** ready LC module designed for use in an **iPatch** System and four modules that allow connection of multi-fiber trunk cables terminated with push-on MPO connectors. Each module provides six LC duplex fiber ports. This shelf is one unit high and can be mounted in a standard 19-inch (483mm) rack with a universal hole pattern.

Note: To use the **SYSTIMAX 360 iPatch InstaPATCH** shelf in an existing **iPatch** System, the **iPatch** managers must be running firmware version 8.1 or later. The System Manager firmware, used to manage the system, must be version 7.1 or later. We recommend that you upgrade the System Manager software to version 7.1 or a later version before you install the **SYSTIMAX 360 iPatch InstaPATCH** shelf.

Ordering information is listed below:

Material ID	Part No.	Description
760117424	360-iP-INSTA-LC-4OS	360G2 sliding fiber shelf with **InstaPATCH** 360 **OptiSPEED**® modules
760193805	360-iP-INSTA-LC-4LS	360G2 sliding fiber shelf with **InstaPATCH** 360 **LazrSPEED**® modules
760193813	360-iP-INSTA-LC-4TS	360G2 sliding fiber shelf with **InstaPATCH** 360 **TeraSPEED**® modules
760183202	360-iP-INSTA-LC-4LS-FX	360G2 fixed fiber shelf with **InstaPATCH** 360 **LazrSPEED** modules

SYSTIMAX 360™ iPatch® InstaPATCH® Sliding Fiber Shelf

This product is covered by one or more of the following U.S. patents or their foreign equivalents: 6285293 and 6522737.

How to Contact Us

- To find out more about **CommScope**® products, visit us on the web at http://www.commscope.com/

- For technical assistance:

  - Within the United States, contact your local account representative or technical support at 1-800-344-0223. Outside the United States, contact your local account representative or **PartnerPRO**™ Network Partner.

  - Within the United States, report any missing/damaged parts or any other issues to **CommScope** Customer Claims at 1-866-539-2795 or email to claims@commscope.com. Outside the United States, contact your local account representative or **PartnerPRO** Network Partner.

Specifications

Fiber Optic Interface

Industry-standard LC

Compatible Fiber Size

Multimode with 50 µm core diameter, such as **LazrSPEED**

Multimode with 62.5 µm core diameter, such as **OptiSPEED**

Singlemode with 8.3 µm core diameter, such as **TeraSPEED**

Environmental Data

Temperature	-40º F to 158º F (-40º C to 70º C) (storage)
Range	23º F to 122º F (-5º C to 50º C) (operational)
Humidity	95% non-condensing

Tools Required

- Flat blade screwdriver
- T10 Torx driver (optional)

Parts List

Verify parts against the parts list below:

Quantity	Description
1	Shelf assembly (sliding) with panel bus jumper
1	Patch cord trough
1	Hinged door for patch cord trough
4	12-24 x ½" screws for mounting the shelf in a 19-inch (483mm) or 23-inch (584mm) rack
2	Liquid tight cable fittings (cable glands)
2	Plastic cable tie retainers
4	Cable ties
3	Fiber routing clips
1	Instruction sheet

Separately Orderable Components

Material ID	Part No.	Description
760039883	600-23BRKT	Mounting bracket accessory kit for 23-inch (584mm) rack and ETSI rack

⚠️ Important Safety Cautions

- To reduce the risk of fire, electric shock, and injury to persons, read, understand, and adhere to the following instructions as well as any warnings marked on the product.

- Remote risk of electric shock. Never install the product in wet locations or during lightning storms. Never touch uninsulated communication wires or terminals.

- Disconnected optical components may emit invisible optical radiation that can damage your eyes. Never look directly into an optical component that may have a laser coupled to it. Serious and permanent retinal damage is possible. If accidental exposure to laser radiation is suspected, consult a physician for an eye examination.

- Wear safety glasses to install the shelf. Although standard safety glasses provide no protection from potential optical radiation, they offer protection from accidental airborne hardware and cleaning solvents.

Precautions

- **iPatch** high density fiber modules contain fiber optic cable and passive optical components. When removed from protective packing, they should be handled carefully and installed in appropriate racks for mechanical support and protection.

- **iPatch** high density fiber modules require virtually no maintenance to maintain their performance. They contain no user-serviceable components, and any damage to the anti-tamper label or removal of top cover or front adapter mounting panel will void the warranty.

- Fiber optic trunk cable and jumper performance is sensitive to bending, pulling, and crushing. Minimum bend radius must be maintained during installation per the manufacturer's specification. Appropriate pulling socks must be used during installation, and pulling forces shall not exceed manufacturer's recommendations. MPO terminated trunk cables may use ribbonized fiber optic cable, which has a preferential bend axis. Use caution to avoid kinking trunk cables.

- **iPatch** high density fiber modules are preterminated, with protective dust caps installed on all adapters.

- **IMPORTANT**: Dust covers are installed in the ports to protect the fibers connected to the back of the ports. Do not remove a dust cover from a port until you connect a patch cord to that port. If you remove a patch cord later, replace dust cover in the port.

- Prior to installation, clean the trunk cable and jumper connectors per the manufacturer's recommendations.

- All wiring that connects to this equipment must meet applicable local and national building codes and network wiring standards for communication cable.

- Care should be taken not to compromise the stability of the rack by installation of this equipment.

- **iPatch** high density fiber modules are for use in restricted access areas only.
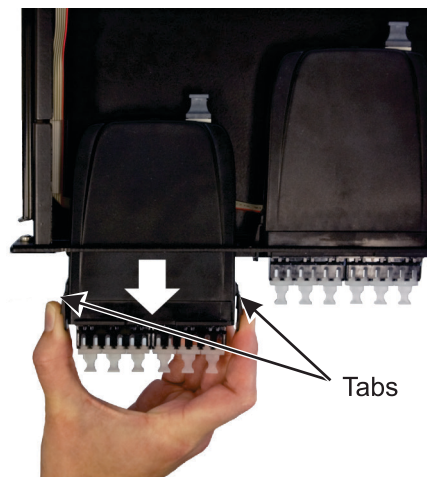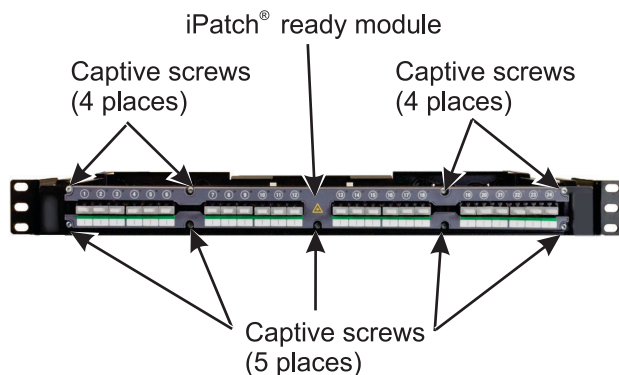
⚠️ IMPORTANT

- **SYSTIMAX 360 iPatch InstaPATCH** shelves use infrared sensing technology and should be installed where they are not exposed to direct sunlight or other infrared sources.

Step 1 – Configure InstaPATCH Modules

The **SYSTIMAX 360 iPatch InstaPATCH** fiber shelf is shipped with four **InstaPATCH** modules installed in the ALPHA orientation. The **InstaPATCH** modules **must** be configured for the proper polarity. Identical modules are used at both ends of a trunk cable, but module orientation is inverted from end to end. Module at one end of trunk cable **must** be oriented in ALPHA configuration, while module at opposite end of trunk cable **must** be oriented in BETA configuration.


iPatch® ready module

Captive screws (4 places)

Captive screws (4 places)

Captive screws (5 places)

Tabs

To change the orientation of the modules:

1. Slide top cover off the shelf.

2. Use a T10 Torx driver to loosen the nine captive screws securing the **iPatch** ready module to the shelf, as shown above on the left.

   Note: Use a dedicated T10 Torx driver. Drivers with interchangeable bits are too wide to access the screws.

3. Remove the **iPatch** ready module from the shelf and set aside module without disconnecting panel bus jumper from module.

4. Remove an **InstaPATCH** module, by pressing the tabs on both sides of module to release it, then pulling the module out from the front of the shelf as shown above on the right.

Front   Rear
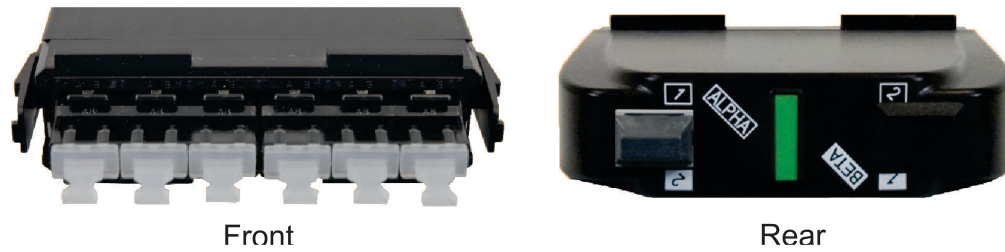
Module in ALPHA Orientation


Front   Rear
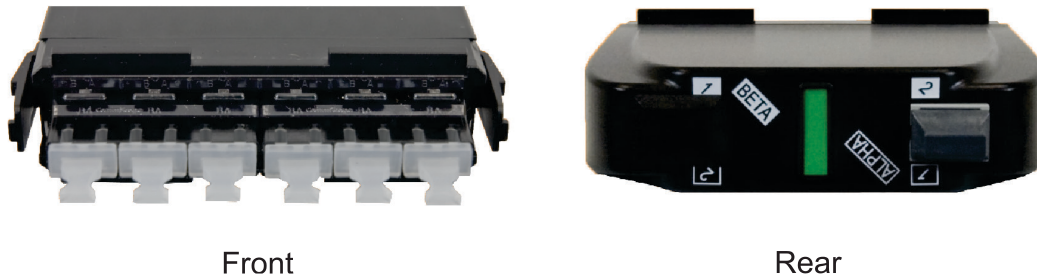
Module in BETA Orientation

5. Change the orientation of a module to the ALPHA or BETA orientation as shown above.

6. Repeat items 4 and 5 to change orientation of other modules.

7. Reinstall the **InstaPATCH** module by sliding it into the front of the shelf and pressing into place. An audible click will be heard when module is fully seated in shelf.


Tabs

Panel bus jumper connection

Back View
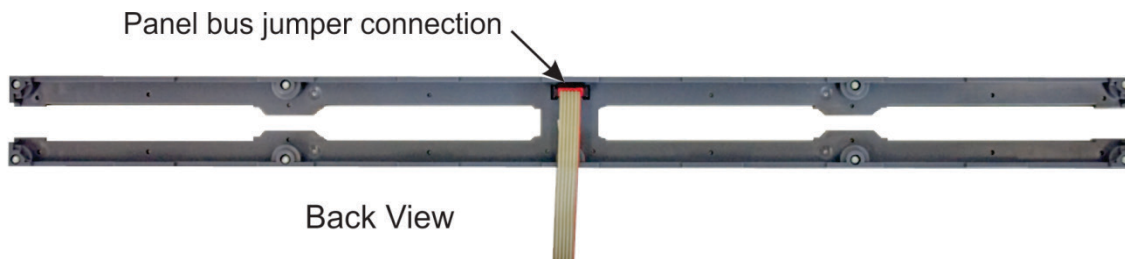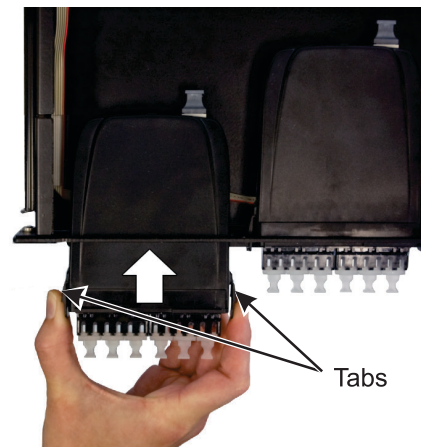
IMPORTANT: The connector is keyed. The polarized tab on the panel connector fits into the opening in the header connector on the back of the faceplate as shown above. Ensure that the panel bus jumper is firmly connected to the back of the **iPatch** ready module as shown.

8. Place the **iPatch** ready module back on the front of the panel, aligning the captive screws with the corresponding holes in the panel.

9. Starting with the center screw, tighten the nine captive screws to secure the module to the shelf as shown.
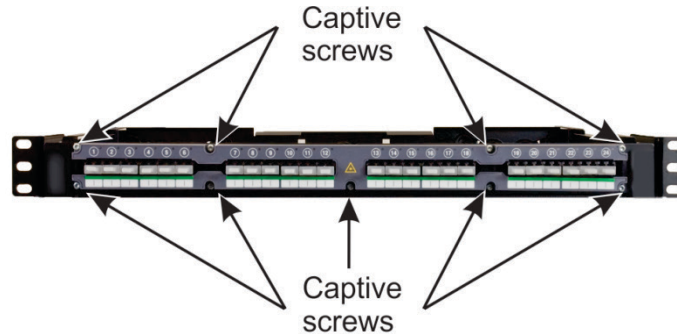

IMPORTANT: Make sure the module is fully seated on front of shelf. Tighten screws until snug.

Step 2A – Route Panel Bus Jumper on Sliding Shelf
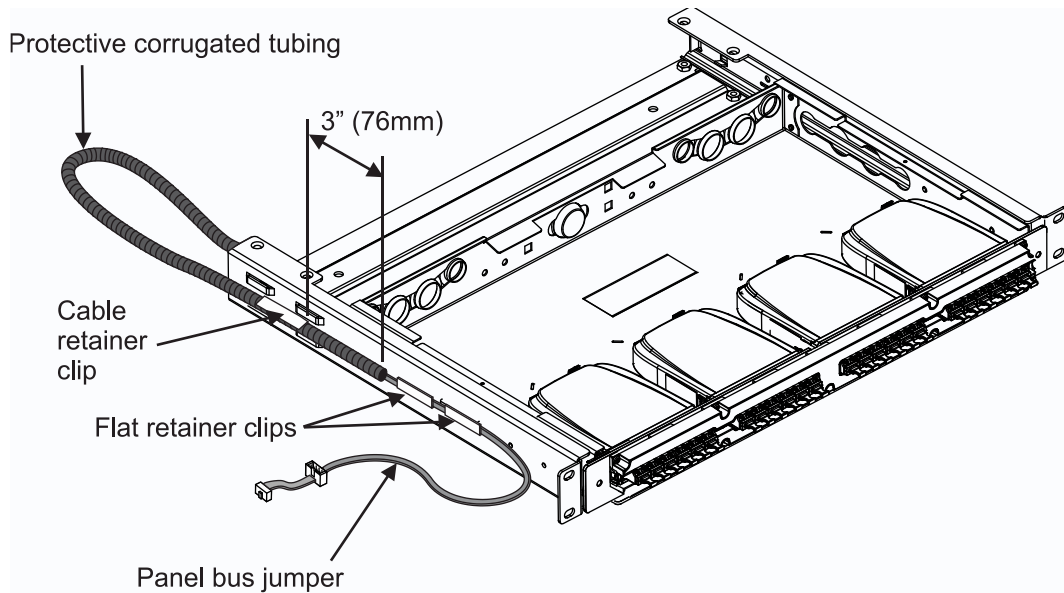
1. If it has not already been removed, slide the top cover off the shelf.

2. Remove tape securing panel bus jumper to cable support.

3. Route panel bus jumper within protective corrugated tubing around end of sliding rail to outside of rail.

4. Snap corrugated tubing protecting panel bus jumper into cable retainer clip on outside of rail as shown.

5. Position corrugated tubing so that about 3 inches (76mm) of tubing extends past end of the cable retainer clip.

6. Position the exposed ribbon cable of the panel bus jumper in the flat retainer clips on the outside of the sliding rail.

Step 2B – Route Panel Bus Jumper on Fixed Shelf
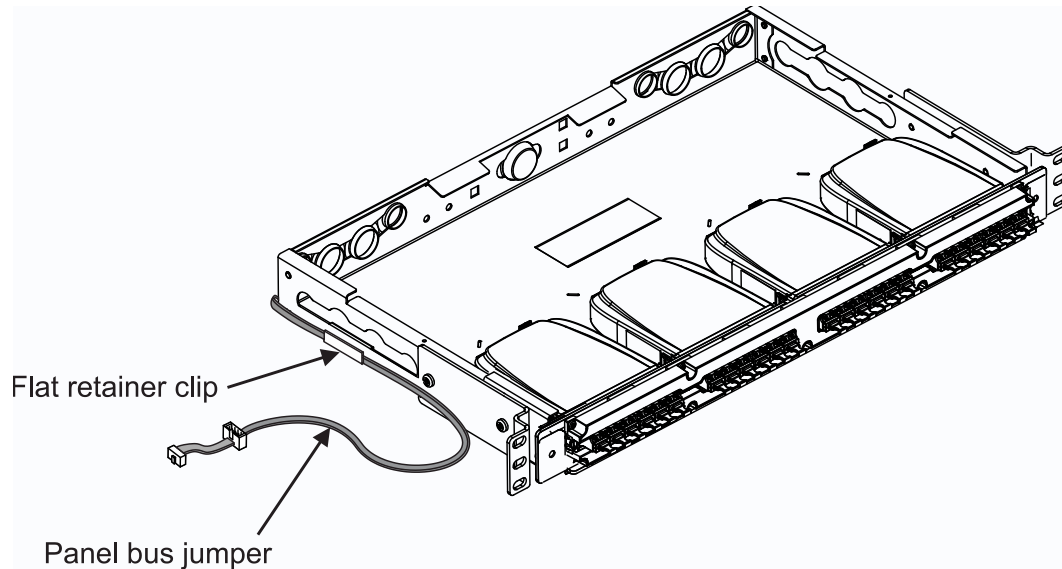
Flat retainer clip

Panel bus jumper

1. If it has not already been removed, slide the top cover off the shelf.

2. Remove tape securing panel bus jumper to cable support.

3. Route panel bus jumper around end of fixed shelf and insert into the flat retainer clip on the outside of the shelf.

Step 3 – Install Shelf and Connect Panel Bus Jumper

When installing multiple shelves in a rack, install the lowest shelf first and work toward the top of the rack.
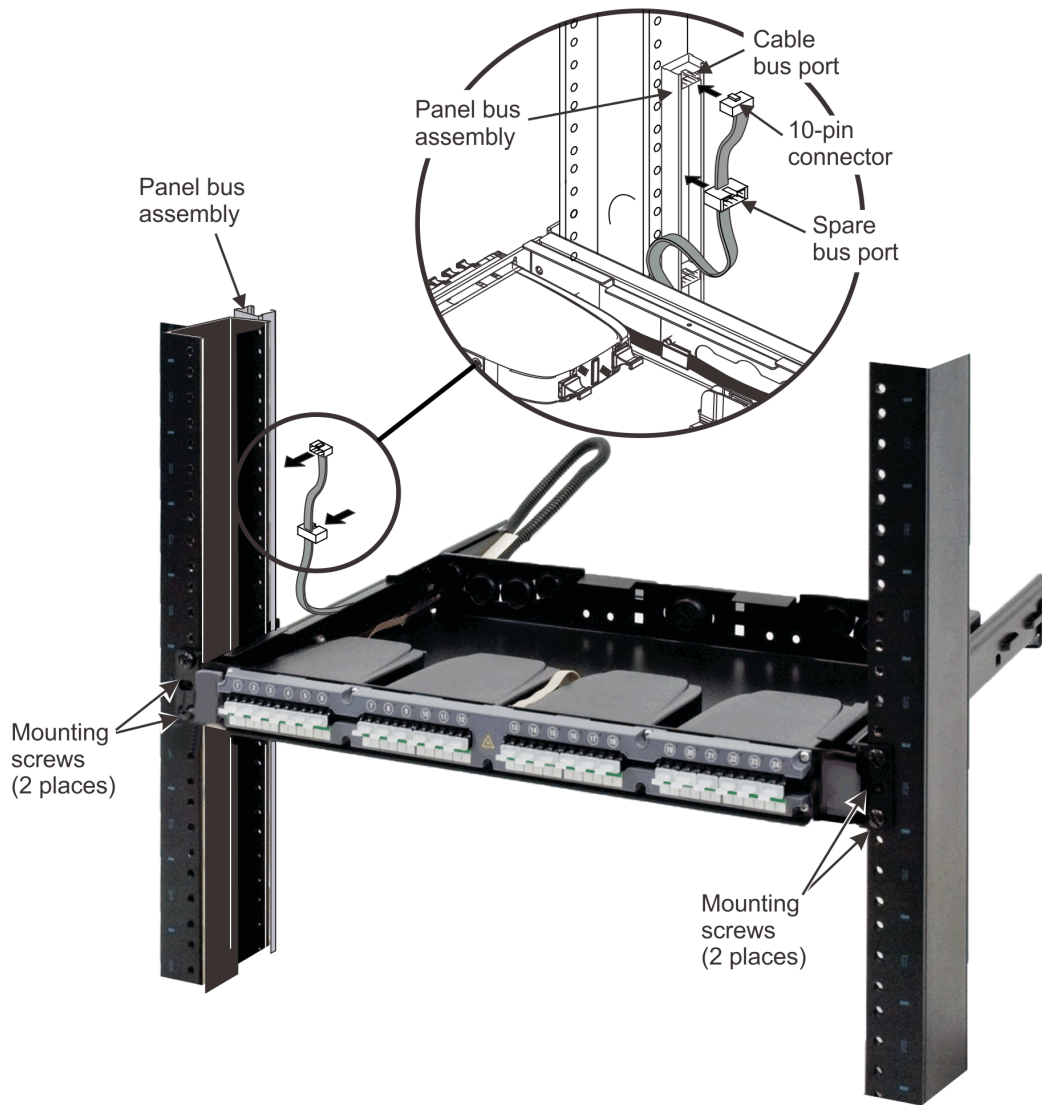

1. Mount the shelf in the rack using the four mounting screws provided, as shown above and described below. Sliding shelf is shown, but fixed shelf is similar.

   - For a 19-inch (483mm) rack, mount shelf to rack using the pre-installed mounting brackets and four 12-24 screws provided.

   - For a 23-inch (584mm) rack, use the 600-23BRKT accessory kit (ordered separately) and install one conversion bracket on each side of shelf using four 10-32 screws included in the kit. Mount shelf to rack using four 12-24 screws provided.

   - For an ETSI rack, use the 600-23BRKT accessory kit (ordered separately) and install one conversion bracket on one side of the shelf using two of the four 10-32 screws included in the kit. Mount shelf to rack using four M6 x 12mm screws (not provided). The shelf will not be centered in the rack.

2. Connect the keyed female 10-pin connector on the panel bus jumper into the nearest cable bus port on the panel bus.

   IMPORTANT: Make sure that the jumper connector is fully seated.

3. Install the spare port built into the jumper cordage into the panel bus frame by turning it at an angle, inserting into frame, and turning it back perpendicular to the frame.

Step 4 – Install Patch Cord Trough
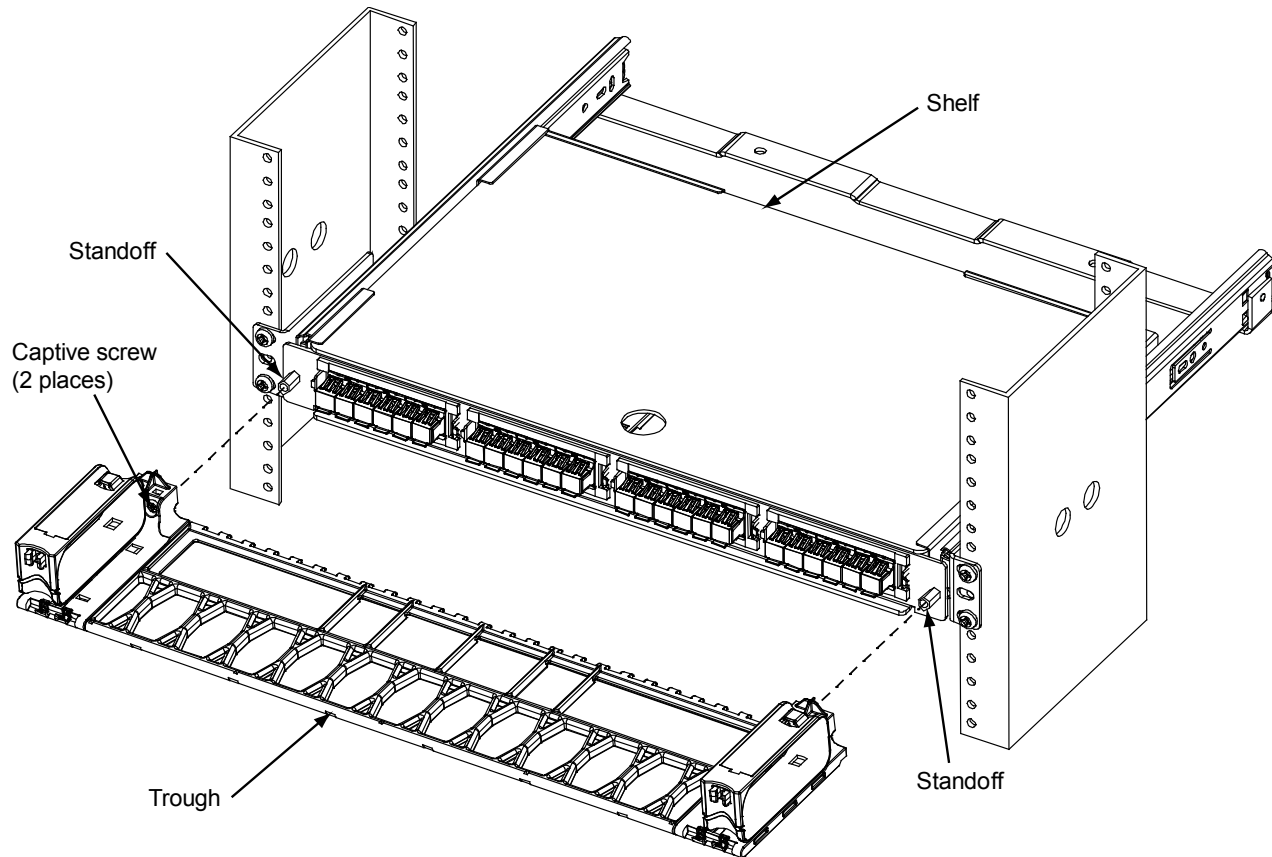
   Note: Shelf shown is representative, actual part may vary.

For Unpopulated and Modular Shelves

1. Position trough on shelf so that indentions behind captive screws rest on the standoffs.

2. Using a Phillips head screwdriver, tighten the captive screw on each end of trough to secure it to shelf.

   Note: If installing the trough on a sliding shelf, pull the shelf out enough to support the faceplate from behind before tightening the captive screws.

Step 5 – Install Trunk Cable

1. Pull the trunk cable to the rack and determine the best way to route the cable to the shelf (from above or below).

    Note: When using a distribution frame, route and loosely secure trunk cable to cable retainers and cable retainer brackets.

2. Follow the manufacturer's instructions to remove pulling sock from trunk cable.

3. Remove a plastic plug from an appropriate cable entry hole in the back of the shelf.

4. Loosen the gland nut on the cable gland. The gland nut does not have to be removed to install the cable gland. See detail shown in the following figure.

5. Feed sub-unit tubes through opening in shelf and temporarily coil them loosely inside shelf.
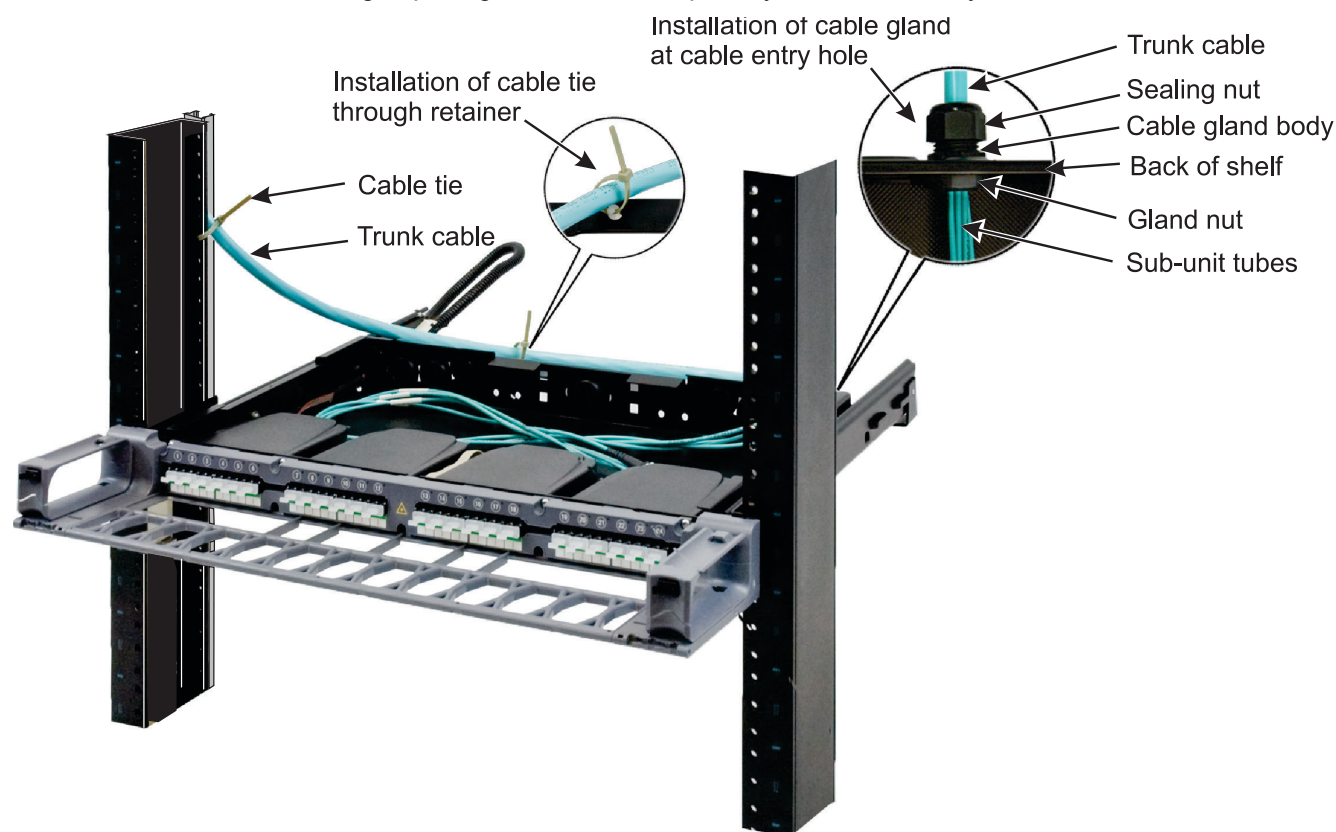

6. Rotate the gland nut as required to allow it to pass through the opening and enter the shelf.

    Note: It may be necessary to temporarily remove a plug from an adjacent opening to provide sufficient clearance for the gland nut to be inserted through the opening.

7. Insert threaded body of cable gland into opening and tighten gland nut onto threaded section to secure cable gland unit to shelf.

8. Insert a cable tie retainer (provided) up through the hole in the cable support on the rear of the shelf on the side opposite from where the cable enters the shelf. See detail above. For example, if the cable enters the shelf on the right side, use the hole on the left side of the cable support.

    Note: Two cable tie retainers are provided for your convenience.

9. Insert a cable tie (provided) through the cable tie retainer and tighten it enough to loosely secure the trunk cable to the cable support.

IMPORTANT: Do not tighten the cable tie completely. Leave enough slack so that the cable moves freely when you slide the shelf out from the rack.

10. Secure the trunk cable to the back of the rack approximately 7 inches (178mm) above the shelf as shown on the left rail in the figure above.

11. For the sliding shelf, extend and retract the shelf to make sure it slides freely and trunk cable and panel bus jumper does not bind.

    Note: The ribbon cable of the panel bus jumper may slide in the corrugated tubing.

Step 6 – Connect Cables

Connector Insertion   Connector Removal

Coupler

Ribbed section
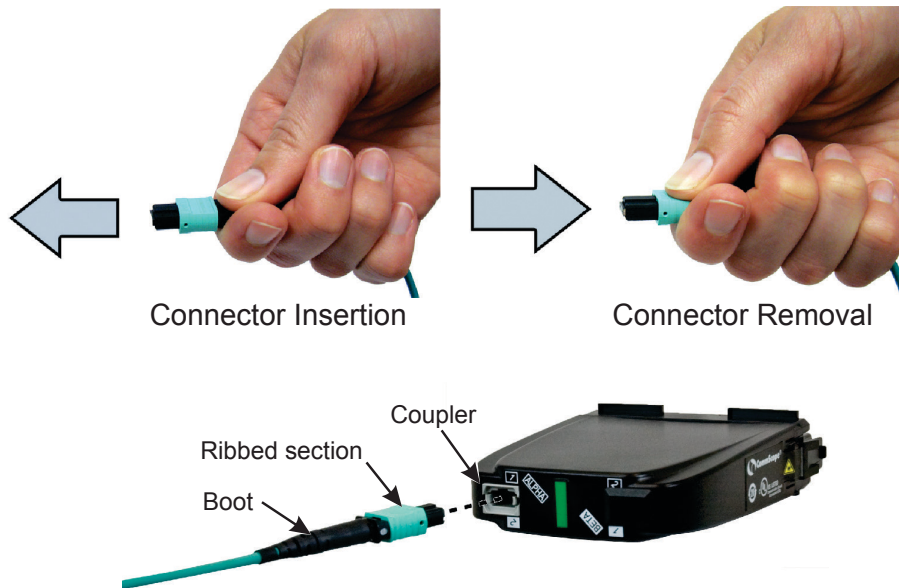
Boot

1. Remove protective dust covers from MPO connectors on the cable and MPO couplers on the back of **InstaPATCH** modules.

2. Grasp connector by its boot, near the base of connector (shown above). Insert MPO connector into coupler until it clicks into place.

   Note: The MPO connection is keyed. The polarized tab on the connector fits into the opening on a coupler on the module.

3. Repeat item 2 to insert each of the trunk cable's MPO connectors into MPO couplers on an **InstaPATCH** module.

4. To unplug an MPO connector, grasp the ribbed sleeve section and pull connector out of coupler. Do not pull on the boot to unplug an MPO connector.

Step 7 – Install Cover and Door
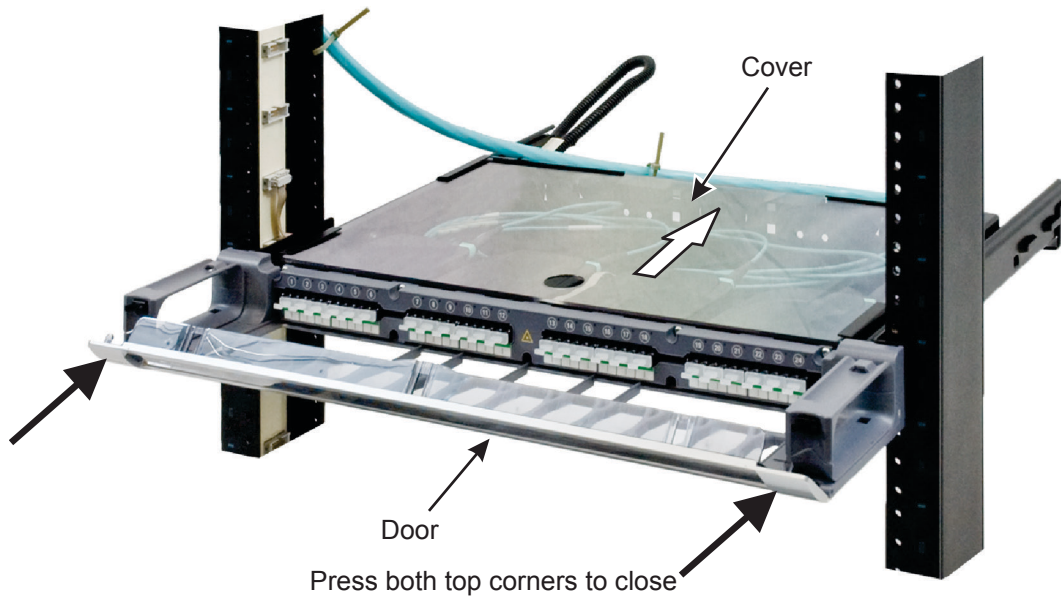
Install top cover and trough door (both provided) to shield shelf from foreign particles. The cover, which is made of clear, flame-retardant plastic, slides on and off shelf. The door for the patch cord trough is hinged and has touch-latches for closing and opening.

1. Slide cover through flanges on shelf until cover reaches the back wall of shelf.

2. Remove door from protective wrapping.

3. Orient door at an angle from trough and position hinge pins on door into hinge sockets on trough.

4. Using one hand to support bottom of trough on one end, push down on inside of door over hinge pins with other hand to seat pins into hinge sockets.

5. Repeat on other end to secure door to trough.

6. Pivot door into the vertical position until strikes engage latches and door snaps into the closed position with an audible click.

7. Door may be reopened by pulling on both upper corners of door (opposite strikes) until the latches release (verified by an audible click).

   Note: Trough door may be removed when opened to a 45° position, by holding one of the side hinge brackets and pulling upward until hinge pins release from socket. Lift door to release from hinge socket on other side bracket.

8. Fully retract the shelf in the rack.