

iPatch® Ready Upgrade Kit for SYSTIMAX 360™ Fiber Shelves Instructions

General

These instructions describe how to install **iPatch® Ready™** Upgrade Kit to convert standard **SYSTIMAX 360™** G2 fiber shelves and **InstaPATCH® 360** fiber shelves to **iPatch** Fiber Shelves. These instructions address conversion of both sliding and fixed shelves. The **iPatch Ready** Upgrade Kit is a **SYSTIMAX®** approved product. Refer to the instruction, **SYSTIMAX®** 360G2-Type Fiber Management Trough Instructions for 360G2 and 600G2 Shelves (860440494), for additional information.

Ordering information is listed below:

Material ID	Part No.	Description
760105148	360-iP-UP-KIT-G2-LC	iPatch® upgrade kit for 360G2-1U-MOD shelves with LC cassettes

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.

Tools Required

- T10 Torx driver

Parts List

Verify parts against the parts list below:

Quantity	Description
1	Trough assembly
4	12 port LC adapters
4	Bezels
1	Instruction sheet

This product is covered by one or more of the following U.S. patents or their foreign equivalents: 6,285,293 and 6,522,737





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.
- 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.
- This shelf is for use in restricted access areas only.



IMPORTANT

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

Overview

To convert a rack with standard **SYSTIMAX 360** fiber shelves to **SYSTIMAX 360 iPatch** fiber shelves for use with an **iPatch** system, you must perform the following steps:

- Step 1.** Mount a panel bus for the rack.
- Step 2.** Install an **iPatch** Manager to supervise the rack.
- Step 3.** Install **iPatch Ready** Upgrade Kits to convert **SYSTIMAX 360** fiber shelves for use with the **iPatch** system.
- Step 4.** Program the order of the panels in the rack.

Step 1 – Mount the Panel Bus

A panel bus must be installed on each rack where you plan to upgrade shelves. The panel bus allows the **iPatch** Manager and **iPatch** shelves to communicate. Also, the **iPatch** Manager supplies power to the **iPatch** shelves through the panel bus.

The panel bus must be installed to the left on the rack (viewed from the front). The preferred location is the back corner of the rack's left rail. The area where the panel bus will be mounted must be free of protrusions, such as threaded inserts, nuts, and bolts.

Note: To mount the panel bus on a rack other than a 7-foot rack or on a rack with a hole pattern other than the universal hole pattern, contact your **SYSTIMAX** Solutions local account representative.

For instructions to install the panel bus for the rack, see the **SYSTIMAX 360™ iPatch® G2** Fiber Upgrade Kit, LC Instructions (860542620).

Step 2 – Install the iPatch Manager

An **iPatch** Manager must be installed on each rack where you plan to upgrade shelves. The **iPatch** Manager supervises the **iPatch** panels in the rack and communicates with the **iPatch** system. For upgrade applications, we recommend using a Panel Manager.

We recommend mounting the Panel Manager in the 34th 1U slot up from the bottom of the rack so that the top of the unit is about 65 inches above the floor. For instructions to install and configure the Panel Manager, see the **SYSTIMAX® iPatch®** System Panel Manager Guide (860442573).

Step 3 – Upgrade the Fiber Shelves

Before you upgrade the shelves in the rack, you must remove power from the Panel Manager for the rack.

Note: For instructions to upgrade a **SYSTIMAX 360** 1100 type panel, see the **iPatch® Ready** Upgrade Module for **SYSTIMAX 360™** 1100 Type Panels Instruction Sheet (860458421).

Preparing the Shelf

1. Remove power from the rack's Panel Manager.
2. If the shelf is a sliding shelf, fully extend the shelf from the rack.
3. Open the door on the patch cord trough by gently pulling both upper corners to release the latches. Open door, remove from trough by pulling door upward on each end until hinge pins release from hinge sockets. Support the trough under the hinge when removing the door.

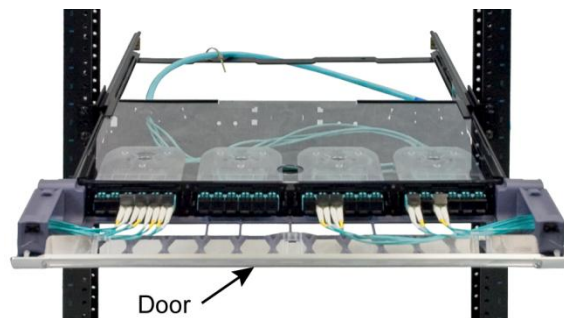


Figure 1 Removing the Door from the Patch Cord Trough

- Slide the plastic cover off the shelf.

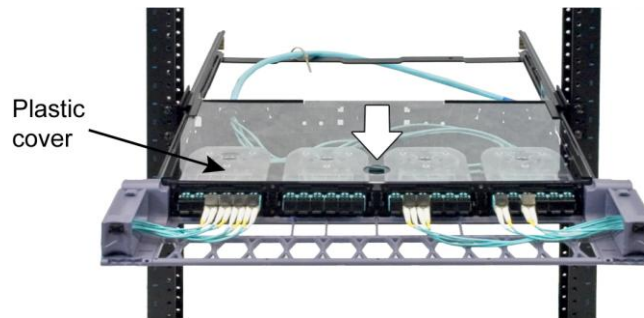


Figure 2 Removing the Plastic Cover from the Shelf

- If the shelf has G2 modular cassettes, remove the hinged dust covers from the cassettes.

Note: To remove a hinged dust cover, open the cover and pull it straight off the top of the cassette.

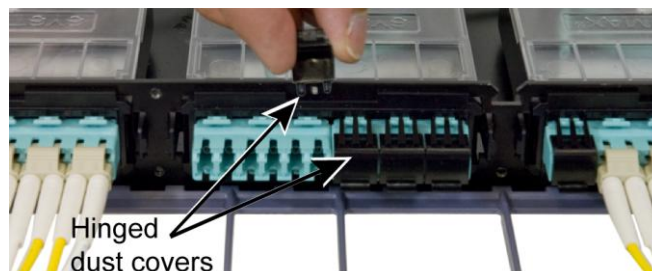


Figure 3 Removing the Hinged Dust Covers from G2 Modular Cassettes

- If the shelf has InstaPATCH modules:

Use your fingers to pry the color-coded plastic frame off the front of each module. You can use pliers with a cutter or a similar tool to cut the frames and remove them from the patch cords. Discard the frames.

Note: To determine the orientation of a module after its frame has been removed, look at the back of the module. If "ALPHA" is right reading (not upside down), the module is in the ALPHA orientation. If "BETA" is right reading, the module is in the BETA orientation.

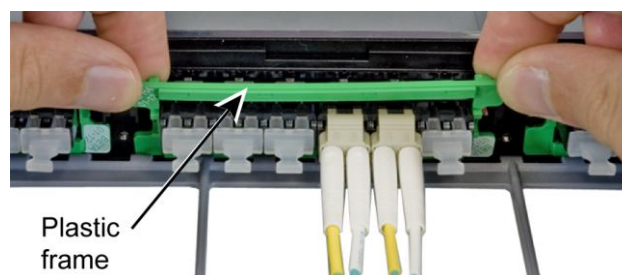


Figure 4 Removing the Plastic Frames from InstaPATCH Module

On the **iPatch Ready** Upgrade Kit, apply one of the color-coded labels provided to the opening for each module. Place the label just above the labeling area for the ports (Figure 5).

Use the same label color as the color of the plastic frame that you removed. The table below shows the fiber type corresponding to each color.

Color	Fiber Type
Aqua	Multimode with 50 μm core diameter— LazrSPEED[®]
Beige	Multimode with 62.5 μm core diameter— OptiSPEED[®]
Green	Singlemode with 8.3 μm core diameter & APC connection— TeraSPEED[®]
Blue	Singlemode with 8.3 μm core diameter— TeraSPEED

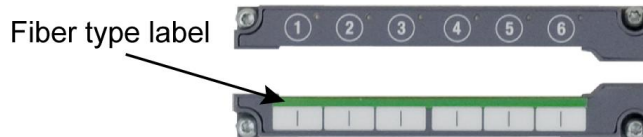


Figure 5 Applying the Fiber Type Labels for each Module

Installing the Panel Bus Jumper

1. Install two flat cable retainers inside the shelf in the locations shown (Figure 6).

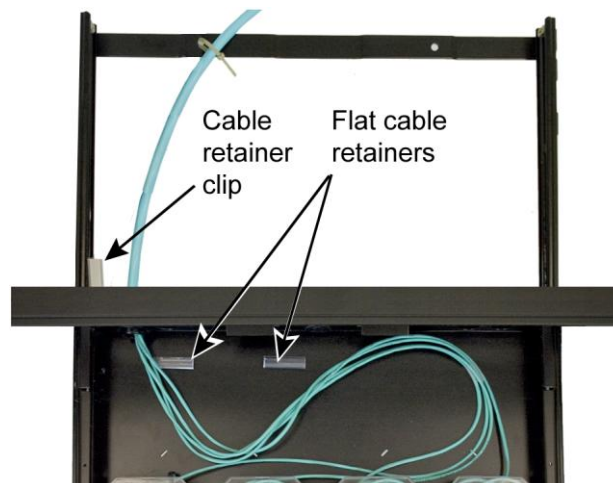


Figure 6 Installing the Cable Retainers Inside of the Shelf

2. If the shelf is a sliding shelf:
Install one cable retainer clip on the inside of the sliding rail as shown (Figure 6).
Install one flat cable retainer and one cable retainer clip on the outside of the sliding rail as shown (Figure 7).

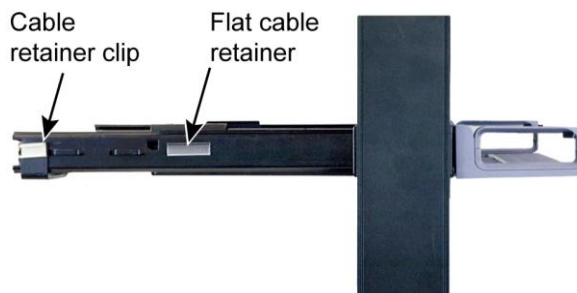


Figure 7 Installing the Flat Cable Retainer and Cable Retainer Clip on the Sliding Rail

3. If the shelf is a fixed shelf, install one flat cable retainer on the outside of the shelf as shown (Figure 8).

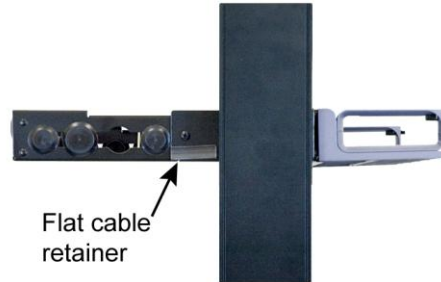


Figure 8 Installing the Flat Cable Retainer on the Outside of the Shelf

4. Feed the end of the panel bus jumper with the small connector from the outside of the shelf through the small rectangular opening in the back, left corner of the shelf (viewed from the front).
5. Position the end of the panel bus jumper with the small connector into the slot in the top, center face of the panel, feeding about two inches of the jumper through the slot.
6. Secure the panel bus jumper in the flat cable retainers inside the shelf as shown.

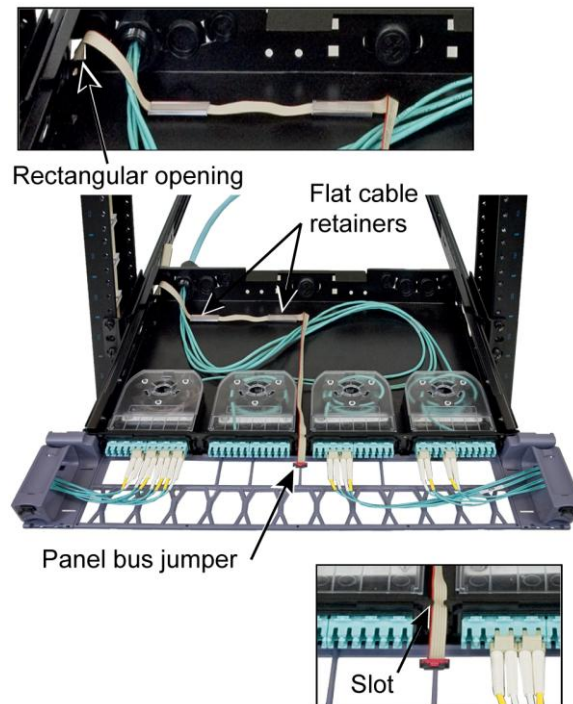


Figure 9 Positioning the Panel Bus Jumper Inside the Shelf

7. If the shelf is a sliding shelf, install the corrugated tubing:
Place the corrugated tubing on the portion of the panel bus jumper extending out the back of the shelf.
Snap the tubing into the cable retainer clip on the inside of the sliding rail as shown (Figure 10).
Snap the tubing into the cable retainer clip on the outside of the sliding rail as shown (Figure 10).

Note: Position the corrugated tubing so that about 1 inch (2.5cm) of the tubing extends past the end of the cable retainer.

Make sure the tubing is positioned so that it protects the portion of the panel bus jumper routed around the end of the sliding rail.

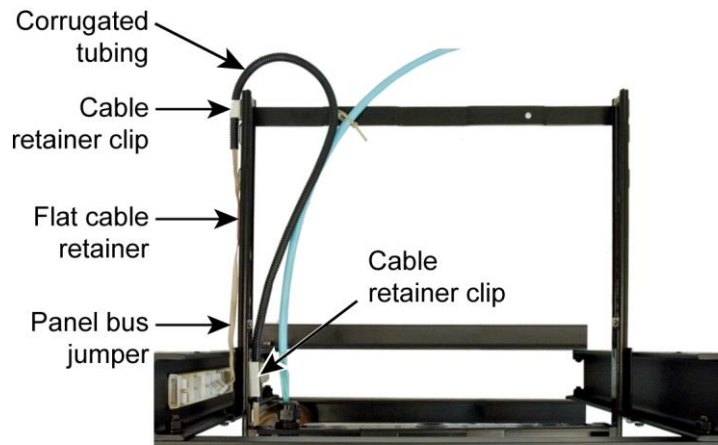


Figure 10 Positioning the Panel Bus Jumper Outside the Shelf (Top View)

8. Secure the exposed ribbon cable of the panel bus jumper in the flat cable retainer on the outside of the sliding rail as shown (Figure 10).

Important: Be careful not to disturb the fiber cables inside the shelf.

9. Connect the panel bus jumper to the nearest connector on the panel bus.

Note: The connector is keyed. The polarized tab on the jumper connector fits into the opening in the header connector on the panel bus.

Important: Make sure that the jumper connector is fully seated in the header connector on the panel bus.

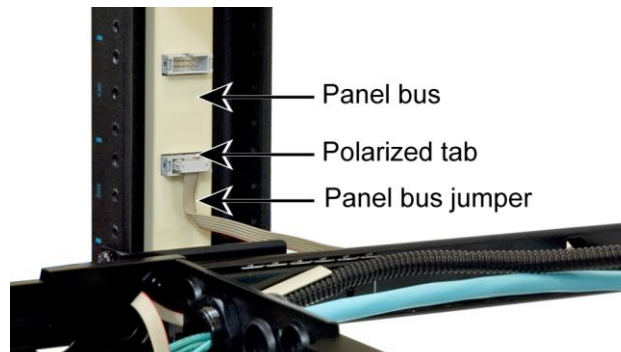


Figure 11 Connecting the Panel Bus Jumper to the Panel Bus

10. If the shelf is a fixed shelf, feed the excess panel bus jumper into the shelf as shown.

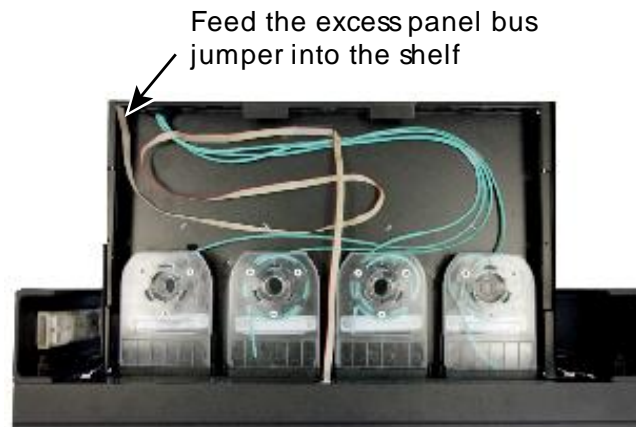


Figure 12 Feeding Excess Panel Bus Jumper into the Fixed Shelf

Installing the iPatch Ready Upgrade Kit

1. Align the **iPatch Ready Upgrade Kit** with the front of the panel, arranging the patch cords as shown (Figure 13). Then, connect the panel bus jumper to the back of the kit.

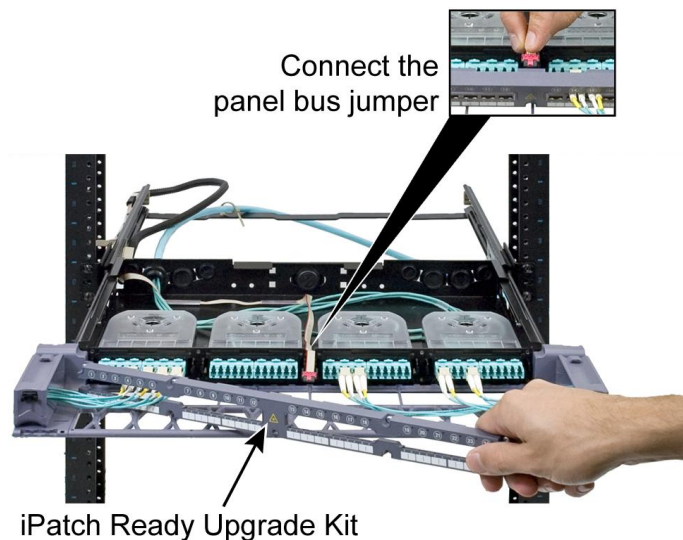


Figure 13 Aligning the Upgrade Kit and Connecting the Panel Bus Jumper

2. Place the **iPatch Ready Upgrade Kit** on the front of the panel, aligning the captive screws with the corresponding holes in the panel.
3. Starting with the center screw, use a T10 Torx driver to tighten the nine captive screws and secure the kit to the panel.

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

Important: Make sure the kit is fully seated on the front of the panel. Tighten the screws until snug, shown on next page.

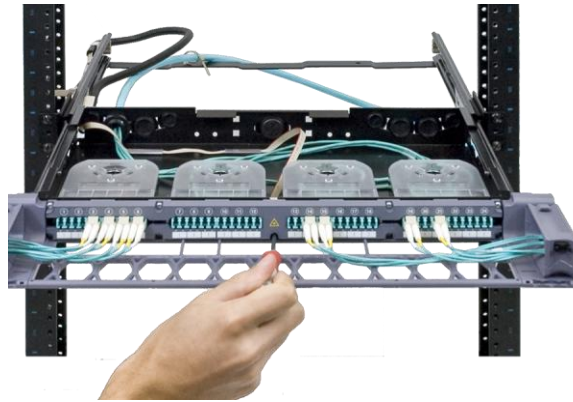


Figure 14 Tightening the Mounting Screws

Step 4 – Install Cover and Door

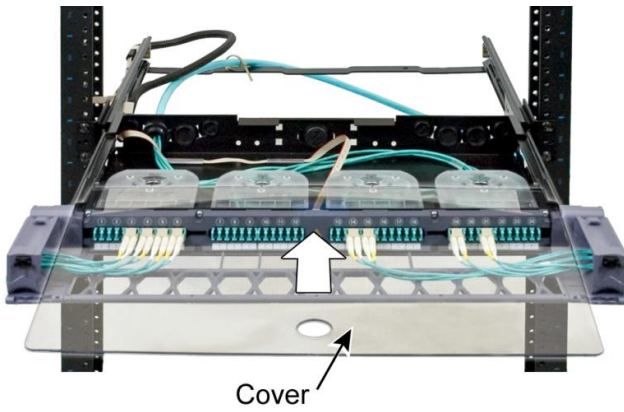


Figure 15 Installing the Cover on the Shelf

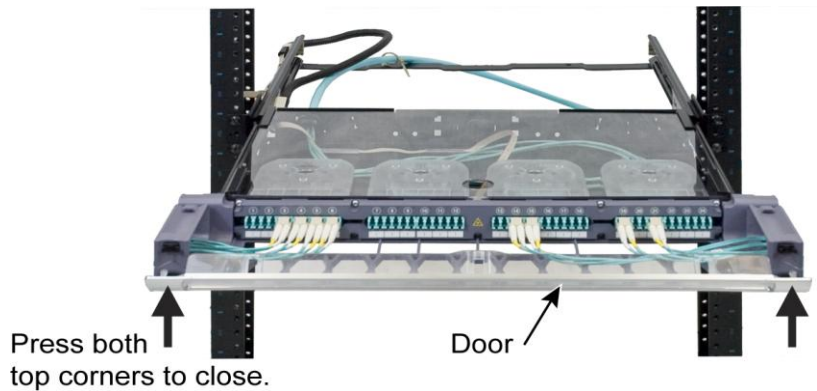


Figure 16 Installing the Door on the Patch Cord Trough

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.

Step 5 Programming the Order of Panels

After you have upgraded the shelves in the rack, you should restore power to the Panel Manager for the rack and program the order of the panels. For instructions, see the **imVision® Controller Programming of iPatch® 96F-LC and 32-MPO Shelves and Panels Instructions** (860568435).