COMMSCOPE®

Product Specification

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SYSTIMAX®

SYSTIMAX 360™ iPatch® 96F LC Upgrade Kit

General

iPatch® Upgrade Kits adapt previously installed **SYSTIMAX® InstaPATCH®** LC shelves to **iPatch** fiber shelves to enable **iPatch** system high performance patching solutions. Patchcords remain connected when installing kits, so networks are not interrupted.

Note: To use the **SYSTIMAX iPatch** shelf in an existing **iPatch** System, the **iPatch** Rack and Panel Managers must be running firmware version 8.1 or later and the **imVision®** Controller must be running firmware version 10.3d or later. The System Manager software, used to manage the system, must be version 7.3.1 or later. We recommend that you upgrade the System Manager software before installing the shelf.

Ordering information is listed below:

Material ID	Part No.	Description
760168443	360G2-iP-96F-LC-SD-KIT-5PK	**SYSTIMAX 360™ iPatch** 96F-LC, sliding shelf 5 pack upgrade kit
760172221	360G2-iP-96F-LC-UHD-KIT-6PK	**SYSTIMAX 360™ iPatch** 96F-LC, UHD shelf 6 pack upgrade kit

SYSTIMAX 360™ iPatch® 96F LC Upgrade Kit

Tools Required

- Flat-blade screwdrivers, large and small
- KS-22035-L2 spudger
- Jensen tool: 419-772 or 419-769

Specifications

Fiber Optic Interface

Industry-standard LC

Compatible Fiber Size

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

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

Environmental Data

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

Parts List

Verify parts against the parts list below:

Quantity		Description
360 iPatch Upgrade Kit, 96F LC 48-port 1 kit 760168443	**360 iPatch Upgrade Kit UHD, 96F LC 48-port 1 kit 760172221**	
2	2	**iPatch** 96LC kit
1	1	Backplane kit and Cover
2	—	Backplane clip
—	1	96LC front kit with LED cable
8	8	Flat retainer clip
1	1	Panel bus jumper cable
2	2	Ribbon cable assembly
2	2	Cable retainer clip
1	1	Corrugated tubing
48	48	Dust cap
1	1	Fiber type label kit
1	1	Instruction sheet
2	—	Flat Clip

The iPatch upgrade kit is ready to use on these G2, MP and HD shelves:

Material ID	Part No.	Description
760193771	360G2-1U-MOD-SD	360G2 1U sliding modular cassette shelf
760193854	360G2-2U-MOD-SD	360G2 2U sliding modular cassette shelf
760193904	360G2-1U-MOD-IS	360G2 1U internal sliding IP360 shelf
760193763	360G2-1U-MOD-FX	360G2 1U fixed modular cassette shelf
760193847	360G2-2U-MOD-FX	360G2 2U fixed modular cassette shelf
760193888	360G2-4U-MOD-FX-16	360G2 4U fixed modular cassette 16 slot shelf
760193755	360MP-1U	360 MP-1U panel
760193920	360MP-2U	360 MP-2U panel
760193862	360MP-4U	360 MP-4U panel
760173674	360G2-1U-MOD-UHD	360G2 1U modular cassette shelf, accepts 4 modules
760173682	360G2-2U-MOD-UHD	360G2 2U modular cassette shelf, accepts 12 modules
760173690	360G2-4U-MOD-UHD	360G2 4U modular cassette shelf, accepts 24 modules
760209940	HD-1U	High-density 1U modular cassette sliding shelf, accepts (4) modules
760209957	HD-2U	High-density 2U modular cassette sliding shelf, accepts (8) modules
760209965	HD-4U	High-density 4U modular cassette sliding shelf, accepts (16) modules
760227306	UD-2U	Ultra-density 2U sliding modular cassette shelf, accepts 12 **InstaPATCH**® 360 modules or MPO panels (up to 144 duplex LC ports or 96 MPO ports)
760227314	UD-4U	Ultra-density 4U sliding modular cassette shelf, accepts 24 **InstaPATCH**® 360 modules or MPO panels (up to 288 duplex LC ports or 192 MPO ports)

Important: Limits for iPatch shelf and panel connections:

- **iPatch** LC fiber shelves are limited to a maximum number of rack units (RUs) and will not support a fully populated rack or cabinet. **iPatch** LC fiber shelves support a total of 52 **iPatch** 96F LC kits (26 rows) per rack/cabinet, such as configured for (26) 1U shelves, (13) 2U shelves, (8) 2U UHD shelves, (6) 4U shelves, (4) 4U UHD shelves, or any combination thereof. Installed **imPower** power extender will support additional **iPatch** kits, up to two times the number of kits.
- **iPatch** LC fiber shelves are limited to a maximum number of five (5) panels per panel bus male connector. Start a new panel bus chain with every sixth panel in the rack system.
- Duplex sensing only on **iPatch** 96F LC shelves.
- Do not mix MPO and LC **iPatch** kits in the same row of a rack.
- When mixing **iPatch** copper and fiber kits in a single rack, observe the following power worksheet formulas: Adding all kit types multiplied by factor should total ≤ 10,000.

imVision only

Number of iPatch kits	factor by
# of HD fiber modules	x 158
# of CU kits	x 222
# of 1U G2 LC kits	x 222
# of 96F LC or MPO kits	x 188
Maximum no. of kits in rack	≤ 10,000

ImVision with imPower

| Number of iPatch kits	factor by
# of HD fiber modules	x 138
# of CU kits	x 222
# of 1U G2 LC kits	x 222
# of 96F LC or MPO kits	x 94
Maximum no. of kits in rack	≤ 10,000

⚠️ 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

- **CommScope®** 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.

- 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** system components are for use in restricted access areas only.

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

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

Step 1 – Mount the Panel Bus

Panel Bus Mounting
on Rear Flange of Rack

Panel Bus Mounting on Side
of Vertical Cable Manager
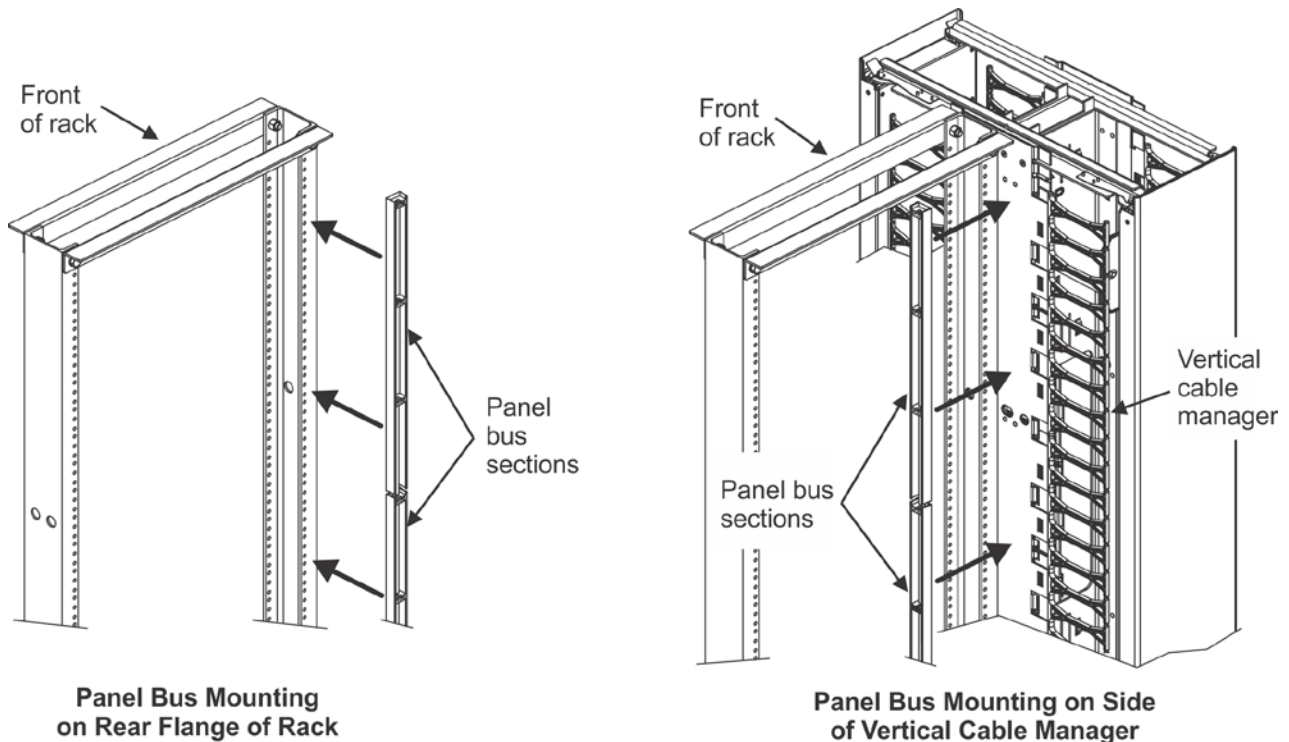
1. A panel bus must be installed on each rack where you plan to upgrade shelves. The panel bus allows the **imVision®** controller and **iPatch** shelves to communicate. Also, the **imVision** controller supplies power to the **iPatch** shelves through the panel bus.

    Note: It is recommended the panel bus assembly be mounted on either the outside of the rear flange on the equipment rack or, if panels/shelves will be used that may block access to it, on the side of the vertical cable manager next to the rack. The area where the panel bus will be mounted must be free of protrusions, such as threaded inserts, nuts, and bolts.

2. To mount the panel bus on a rack other than a 7-foot (2.1m) rack or on a rack with a hole pattern other than the universal hole pattern, contact your local account representative.

3. For detailed instructions to install the panel bus for the rack, see the **SYSTIMAX® imVision® Controller Installation Instructions** (860526839).

Step 2 – Install the imVision® Controller

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

2. For instructions to install and configure the controller, see the **SYSTIMAX® imVision® Controller Installation Instructions** (860526839).

    Before upgrading the shelves in the rack, remove power from the **imVision** controller for the rack.

Step 3 – Apply Fiber Type Labels
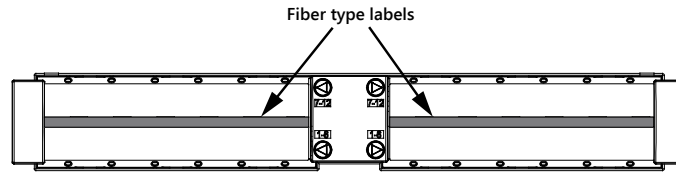
Fiber type labels

1. Apply one of the provided fiber type labels as shown to each side of the **iPatch** 96-fiber LC kit to indicate the type of fiber optic cable used for the kit.

   • Aqua – OM4/OM3 multimode with 50 µm core diameter, such as **LazrSPEED**

   • Blue – Singlemode with 8.3 µm core diameter, such as **TeraSPEED**

   • Lime Green – OM5 multimode with 50 µm core diameter, such as **LazrSPEED** WideBand.

   Note: If unsure what type of fiber cable will be used for each kit, the labels can be applied later after the shelf has been installed and the cable has been connected to the back of the kit.

Step 4 – Upgrade Fiber Shelf with the iPatch Upgrade Kit

Step 4a   Install the **iPatch** Upgrade Kit to convert **SYSTIMAX** fiber shelves for use with the **iPatch** system and connect each panel to the panel bus.

   • General instructions are provided for installation on sliding shelf.

Step 4b   Instructions for routing upgrade kit ribbon cable to backplane kit.

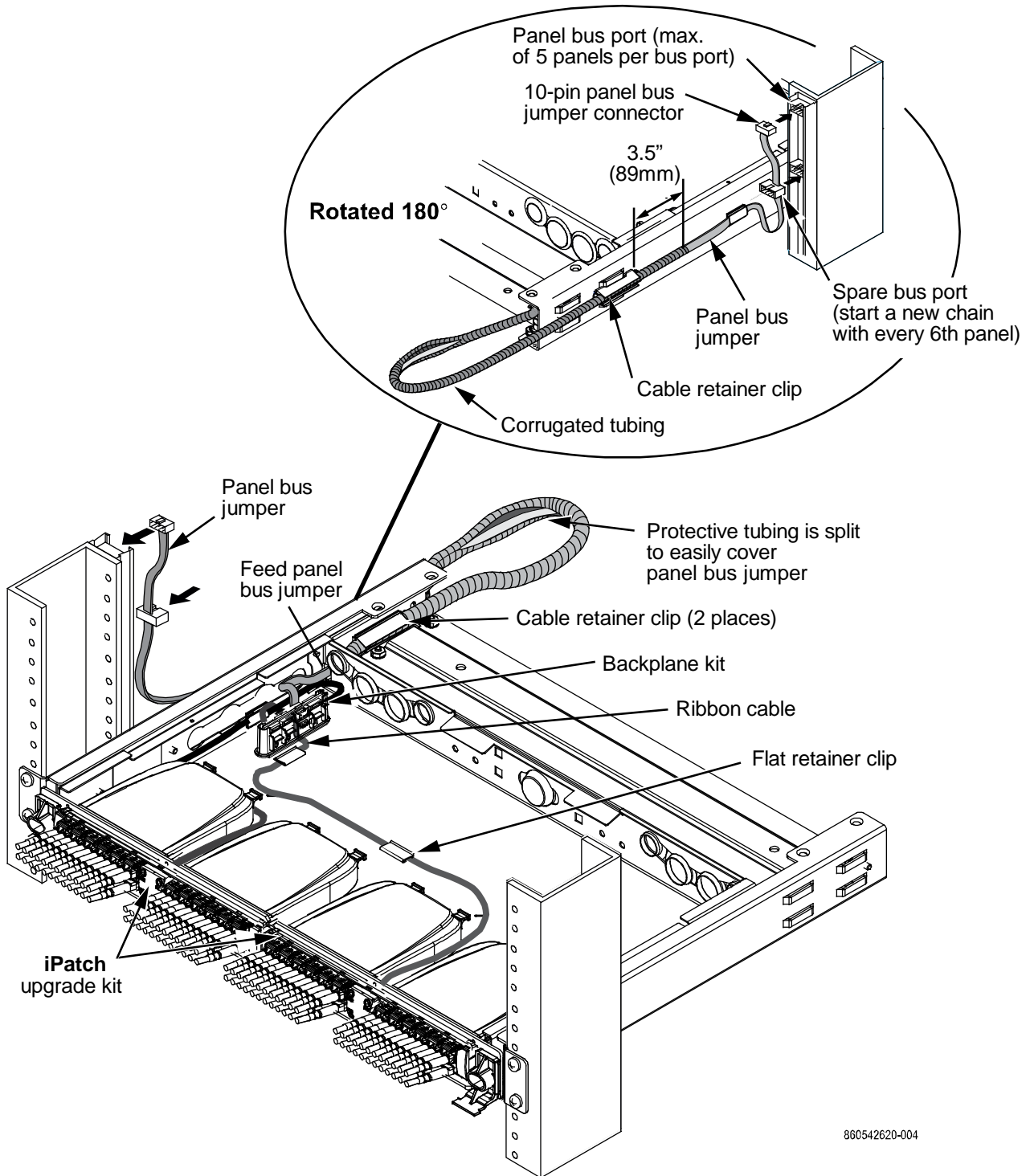**Step 4c**   Instructions specific to each type of fiber shelf.

IMPORTANT: Please read Step 4 entirely before installing kit.

Step 4a – Sliding Shelf General Instructions:

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

2. Facing equipment from rear of rack, attach one adhesive backed cable retainer clip to rear sliding rail on inside and mount a second cable retainer clip to the rear sliding rail on outside of shelf.
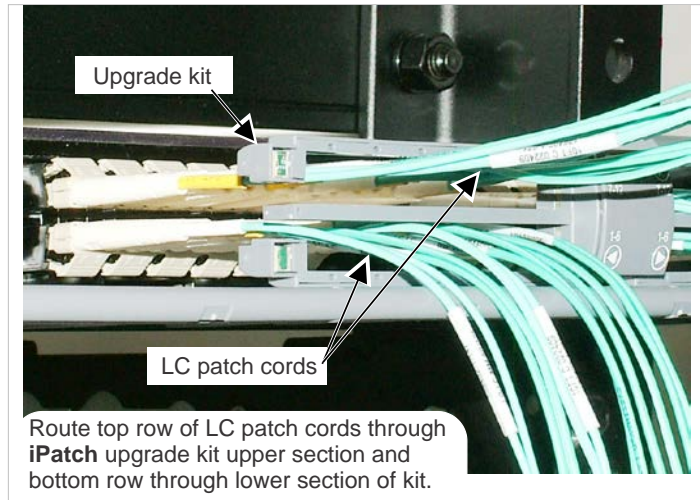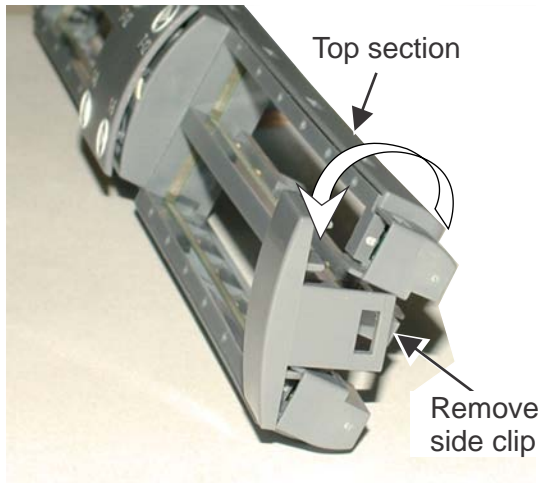
   Note: Attach cable retainer clips on the same side of shelf as panel bus is installed on equipment rack.

3. Feed the panel bus jumper into the black corrugated tubing to protect the panel bus jumper when sliding shelf in and out. Route panel bus jumper with protective corrugated tubing around end of sliding rail to outside of rail as shown.

4. Snap the panel bus jumper with protective corrugated tubing into the cable retainer clip on the outside of rail.

5. Position the corrugated tubing so that about 3.5 inches (89mm) of tubing extends past the end of cable retainer.

6. Insert the panel bus jumper 10-pin connector into the nearest cable bus port on the panel bus as shown on next page.

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

   Note: The connector is keyed. The polarized tab on the jumper connector fits into the nearest port in the panel bus.
   IMPORTANT: Make sure that the jumper connector is fully seated in the connector on the panel bus.

8. Feed the loose end of panel bus jumper into the back of the shelf through small opening at end of panel back as shown.   Carefully route the jumper under any modules or fiber, leaving it loose to be connected later.

Panel bus port (max.
of 5 panels per bus port)

10-pin panel bus
jumper connector

3.5"
(89mm)

Rotated 180°

Spare bus port
(start a new chain
with every 6th panel)

Panel bus
jumper

Cable retainer clip

Corrugated tubing

Panel bus
jumper

Feed panel
bus jumper

Protective tubing is split
to easily cover
panel bus jumper

Cable retainer clip (2 places)

Backplane kit

Ribbon cable

Flat retainer clip

iPatch
upgrade kit

860542620-004

SYSTIMAX 360G2 1U Sliding Modular Cassette Shelf

Route top row of LC patch cords through **iPatch** upgrade kit upper section and bottom row through lower section of kit.

9. Remove dust cap shutters and use spudger to remove colored bezel from modules in panel. Cut colored bezel off if patch cords interfere with removal.

10. Facing equipment from front of rack, prepare the **iPatch** upgrade kit by removing side clips. Gently twist one side of the top horizontal section in a downward motion to release the top tab on the side clip as shown. Remove side clip from module and repeat on other end of module.

11. Gently divide the upper and lower LC patch cords and insert them into top and bottom sections of upgrade kit as shown.

12. Repeat the process on opposite side of module.

13. Prepare to slide **iPatch** upgrade kit in place. Feed the black ribbon cable from the rear of the upgrade kit through the opening between the two modules on fiber shelf as shown. Route ribbon cable back between fiber modules and under individual fibers, ready to be connected later.

14. Slide the **iPatch** upgrade kit until it is flush against the fiber shelf, at the same time gently pulling the black ribbon cable through the opening to prevent it from kinking. Leave about 3 inches (76mm) of slack ribbon cable inside the panel. Securely mount upgrade kit onto bezel's latches by pushing on center and each side of the upgrade kit until it snaps in place.


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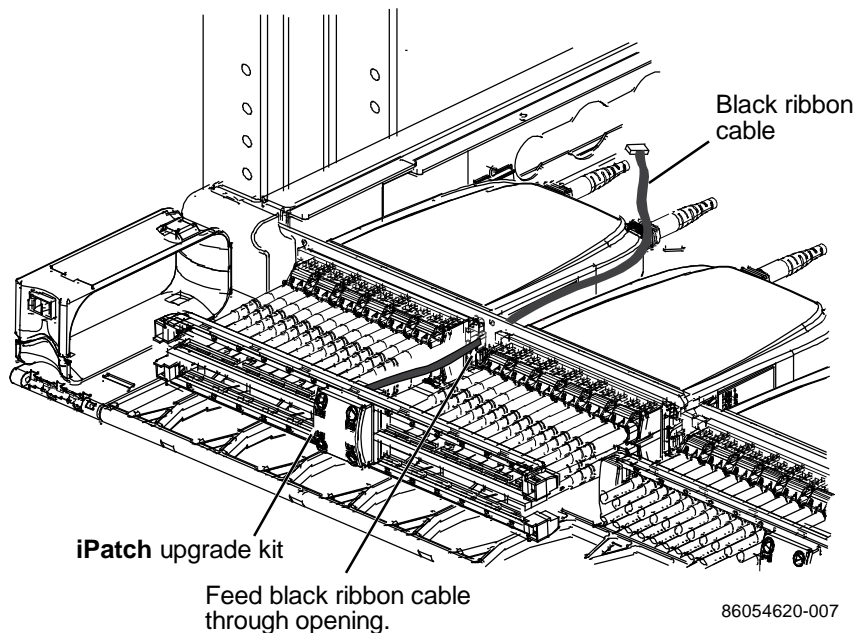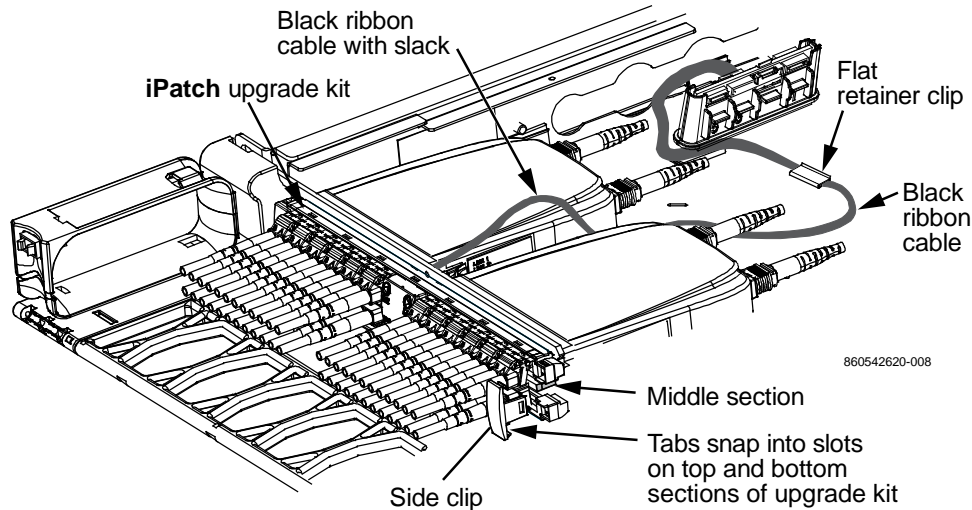
15. Snap side clips on the upgrade kit, making sure to capture the middle section of the kit into side clip and push to snap in place as shown.

16. Repeat steps 6-11 for the remaining **iPatch** upgrade kits.

17. Install provided protective dust caps over unused adapter panel ports.

18. Connect ribbon cables to each backplane kit before mounting it to shelf floor.

   Note: See **Step 4b** for cable routing description, tables and drawings.

19. Attach the panel bus jumper previously routed into back of shelf to the panel bus jumper connector on the backplane kit as shown, making sure the connector is fully seated.

20. Remove protective cover to expose adhesive on backplane kit. Mount the backplane kit to shelf floor at rear corner closest to the panel bus, or any available space.

21. Remove protective cover to expose adhesive on flat retainer clips and place on shelf floor as needed. Eight flat retainer clips are provided for each row of a shelf. Insert each ribbon cable into flat retainer clip to route any slack ribbon cables on shelf floor.

   Important: Be careful not to bend or pull any existing fibers while routing the ribbon cables. Insure the panel bus strip is installed to the rack or cabinet as described in Step 1 and replace shelf cover.

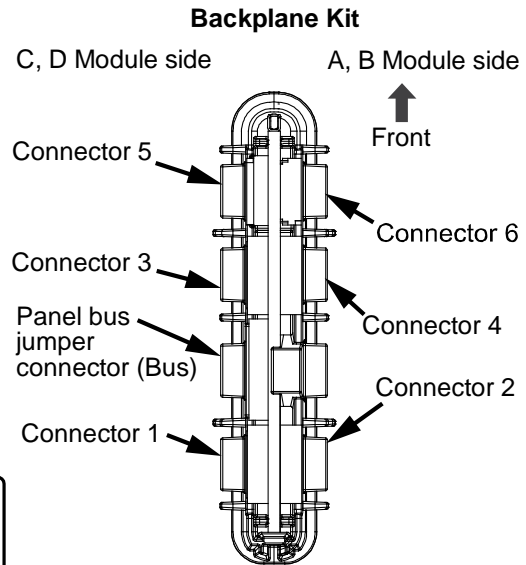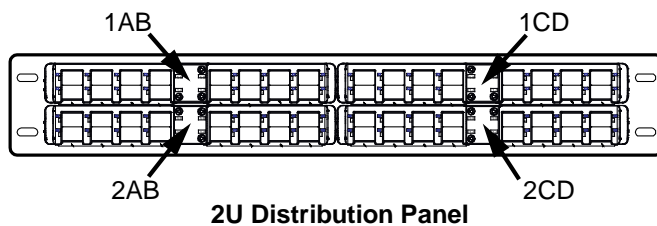860542620-009
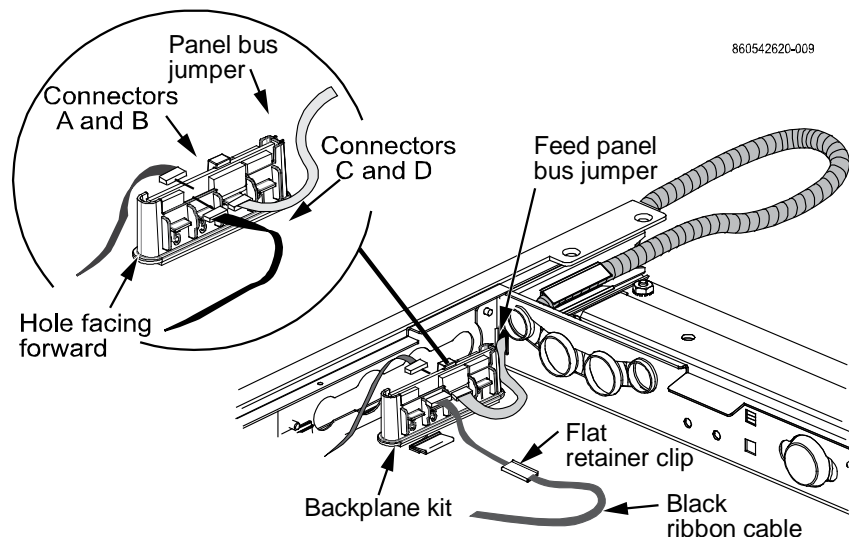
Step 4b – Routing Upgrade Kit to Backplane Kit

1. Connect upgrade kit ribbon cables to each backplane kit before mounting it to shelf floor. Use the termination table below to guide connections on a 2U distribution panel.

   Important: The ribbon cable connector has a red dot on top of the connector. Always attach the connector with this red dot facing the top edge of kit.

1U/ 2U Backplane Termination Table

Distribution Panel Row/ Column	BACKPLANE CONNECTOR			
	1	2	3	4
1AB		X		
1CD	X			
2AB				X
2CD			X	

Modules are 1A, 1B, 1C, 1D, 2A, 2B, 2C, 2D

Backplane Kit

C, D Module side   A, B Module side

Connector 5
Connector 3
Panel bus jumper connector (Bus)
Connector 1

Front
Connector 6
Connector 4
Connector 2

1AB   1CD

2AB   2CD

2U Distribution Panel

860542620-010

Step 4c – Instructions Specific to Each Type of Fiber Shelf

> **SYSTIMAX 360G2 1U/2U Sliding Shelf**
>
> **UD 2U/4U Sliding Modular Shelf**
>
> **HD 1U/2U/4U Sliding Modular Cassette Shelf**
>
> **SYSTIMAX 360G2 1U/2U Fixed Shelf and 1U Internal Sliding LC**
>
> **SYSTIMAX 360G2 4U Fixed Shelf**
>
> **SYSTIMAX 360 MP 1U/2U/4U Modular Shelf**
>
> **SYSTIMAX 360G2 UHD 1U/2U/4U Modular Shelf**

SYSTIMAX 360G2 1U/2U Sliding Shelf iPatch Upgrade Kit Installation
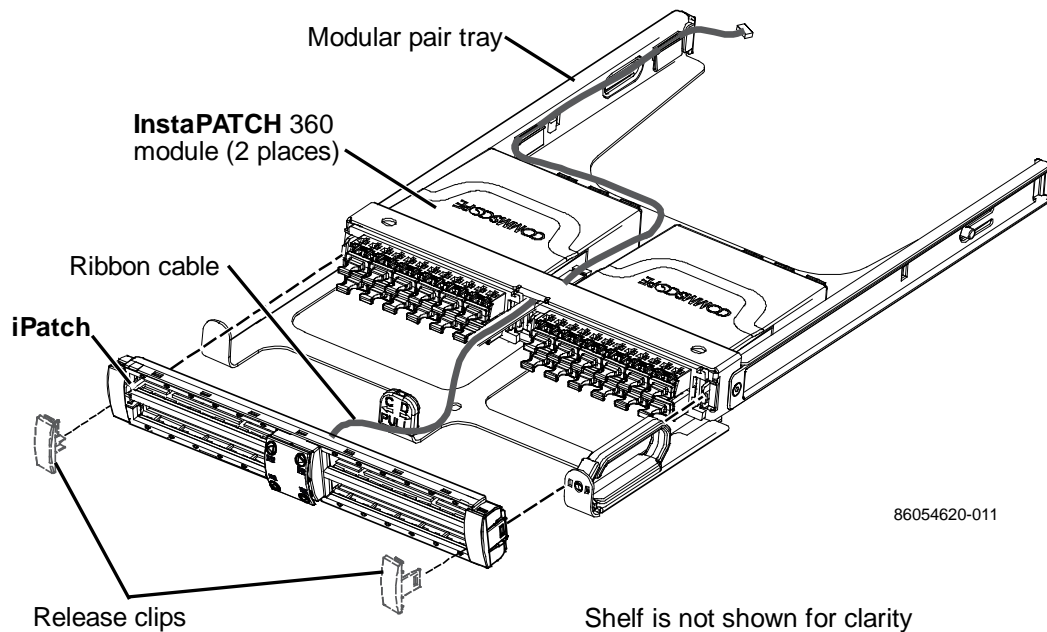
1. From the front of the rack, slide shelf forward.

2. Remove front door by gently pressing both upper corners to release the latches. Then lift the door off the trough.

3. Remove top cover by sliding toward front of shelf.

4. Refer to General Instructions, **Steps 4a** and **4b**, for detailed installation procedure.

5. To replace the shelf's top cover, position between lower and upper sets of tabs on each side of shelf and slide into place.

6. Slide shelf to stored position.
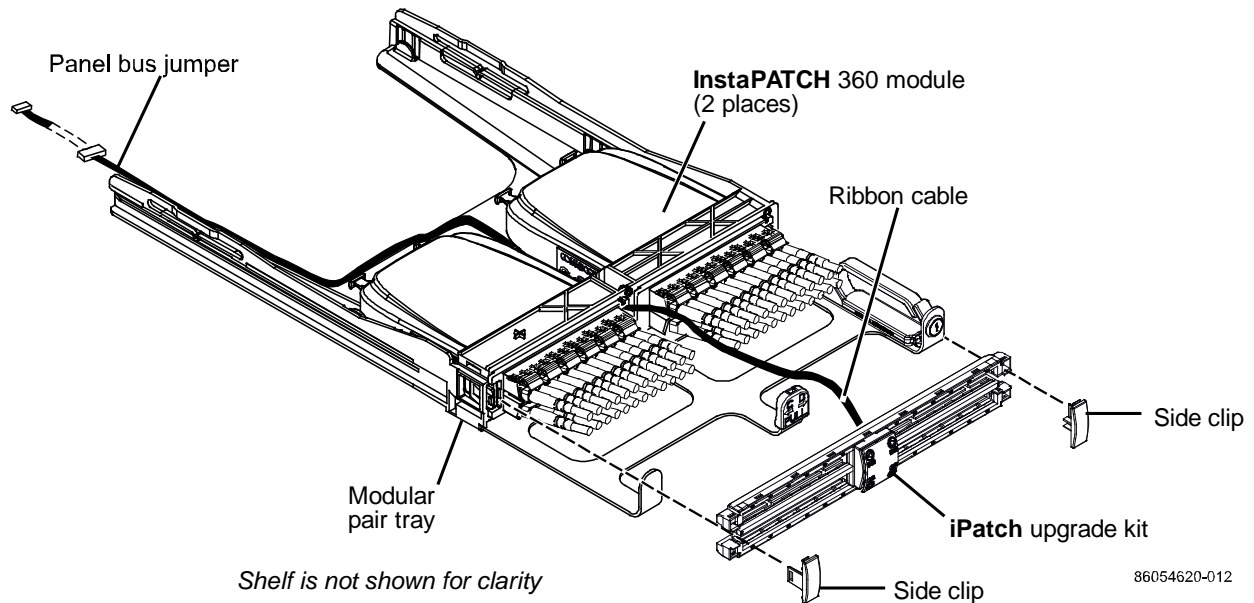
UD 2U/4U Sliding Modular Cassette Shelf

1. Slide modular pair tray forward for access. Trays slide to the front of the shelf separately until reaching stops that prevent them from sliding out.

2. Place the **iPatch** upgrade kit on the front of the tray, being careful to pull the ribbon cable through opening in the center of tray at the same time. Do not allow cable to be kinked or damaged. Cable will be pulled to back of shelf when connecting to backplane kit.

    Note: Ensure that the ribbon cable is still firmly connected to the back of the **iPatch** upgrade kit. If the connector does need re-inserting, orient it so the red dot is facing the top edge of the kit for correct alignment with the connection on the back of the kit.
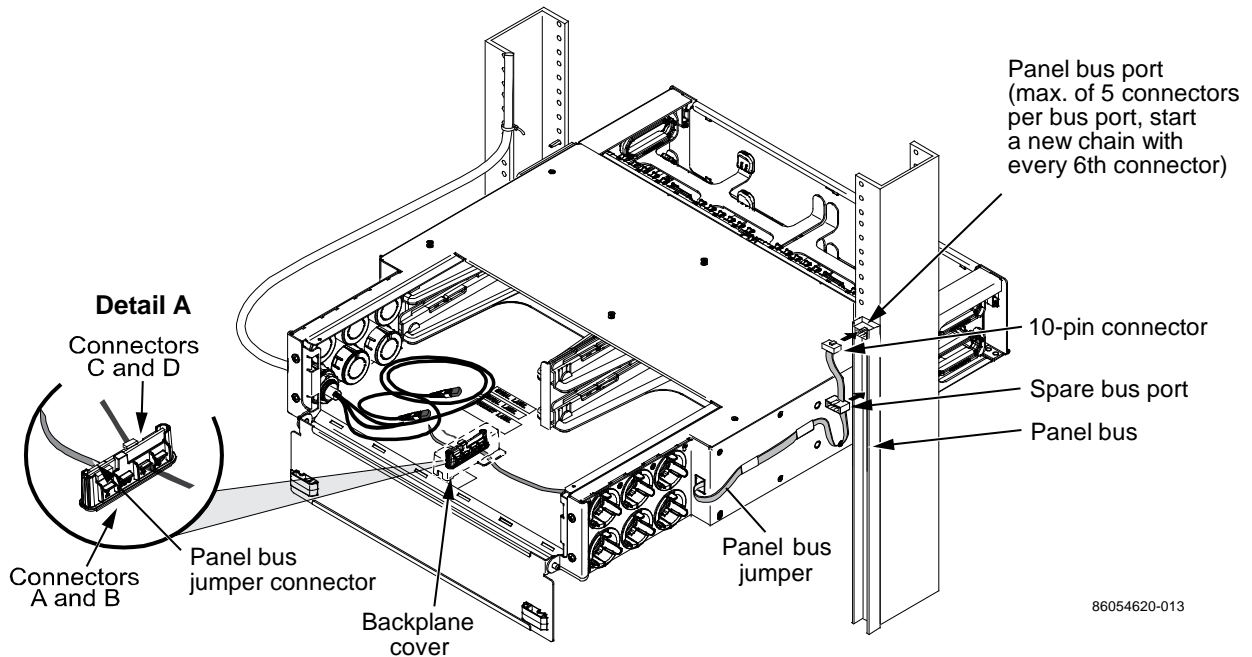
3. Once the **iPatch** upgrade kit is seated over the LC distribution panel, push on center and both release latches at sides of the kit to engage the latches and secure kit.

4. Repeat for all modular pair trays.

5. Follow items 5 through 11 of the HD sliding modular cassette, shown on the next page.
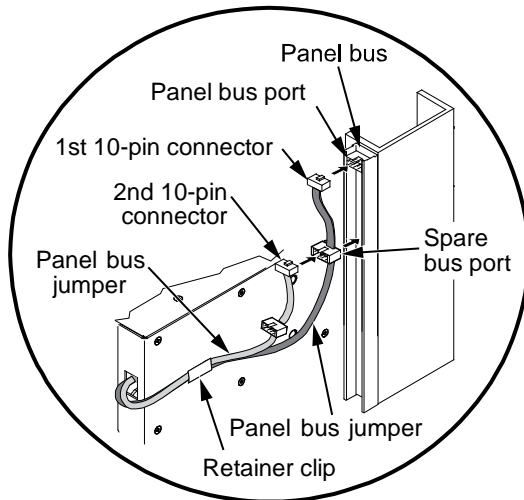
Modular pair tray

InstaPATCH 360
module (2 places)

Ribbon cable

iPatch

86054620-011

Release clips

Shelf is not shown for clarity

HD 1U/2U/4U Sliding Modular Cassette Shelf

Panel bus jumper

InstaPATCH 360 module
(2 places)

Ribbon cable

Side clip

Modular
pair tray

iPatch upgrade kit

Shelf is not shown for clarity
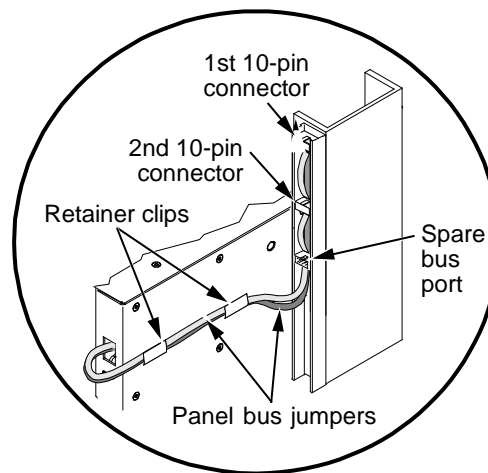
Side clip

86054620-012

1. Slide modular pair tray forward for access. Trays slide to the front of the shelf separately until reaching stops that prevent them from sliding out.

2. Place the **iPatch** upgrade kit on the front of the tray, being careful to pull the ribbon cable through opening in the center of tray at the same time. Do not allow cable to be kinked or damaged. Cable will be pulled to back of shelf when connecting to backplane kit.

   Note: Ensure that the ribbon cable is still firmly connected to the back of the **iPatch** upgrade kit. If the connector does need re-inserting, orient it so the red dot is facing the top edge of the kit for correct alignment with the connection on the back of the kit.

3. Once the **iPatch** upgrade kit is seated over the LC distribution panel or **InstaPatch** 360 modules, push on center and snap side clips at sides of the kit and push to snap in place and secure kit.

4. Repeat for all modular pair trays.

5. Insert the panel bus jumper 5-pin connector into the shelf through opening in back of side wall, to be connected to backplane kit as shown in Detail **A**, next page.

6. Connect the keyed female 10-pin connector on the panel bus jumper into the nearest cable bus port on panel bus as shown. Jumper is secured with flat retainer clips on outside of side wall.

   Important: Make sure the jumper connector is fully seated.

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

8. 4U 24LC fiber shelves use two panel bus jumpers to connect to the **iPatch** panel bus. The 2nd panel bus jumper's 10-pin connector plugs into the spare bus port on the 1st panel bus jumper, as shown in Detail **B**. Insert both connectors and 2nd jumper's spare bus port into panel bus frame as shown in Detail **C**.

9. Open rear door.

10. Reach in shelf from back to pull ribbon cables to back. Connect upgrade kit ribbon cables to backplane kit. Connect loose end of panel bus jumper to backplane kit while holding it close to opened back door.

   Note: See **Step 3b** for panel bus jumper termination table and connection diagram.

11. Remove paper cover to expose adhesive on backplane kit. After making connections with ribbon cables and panel bus jumper, mount backplane to shelf floor in available space in back of shelf.

Detail A

Connectors
C and D

Panel bus port
(max. of 5 connectors
per bus port, start
a new chain with
every 6th connector)

10-pin connector

Spare bus port

Panel bus

Connectors
A and B

Panel bus
jumper connector

Panel bus
jumper

Backplane
cover

86054620-013

Detail B – 4U only

Panel bus

Panel bus port

1st 10-pin connector

2nd 10-pin
connector

Panel bus
jumper

Spare
bus port

Panel bus jumper

Retainer clip

Detail C – 4U only

1st 10-pin
connector

2nd 10-pin
connector

Retainer clips

Spare
bus
port

Panel bus jumpers

SYSTIMAX 360G2 1U and 2U Fixed Shelves and 1U Internal Sliding LC Upgrade Kit Installation
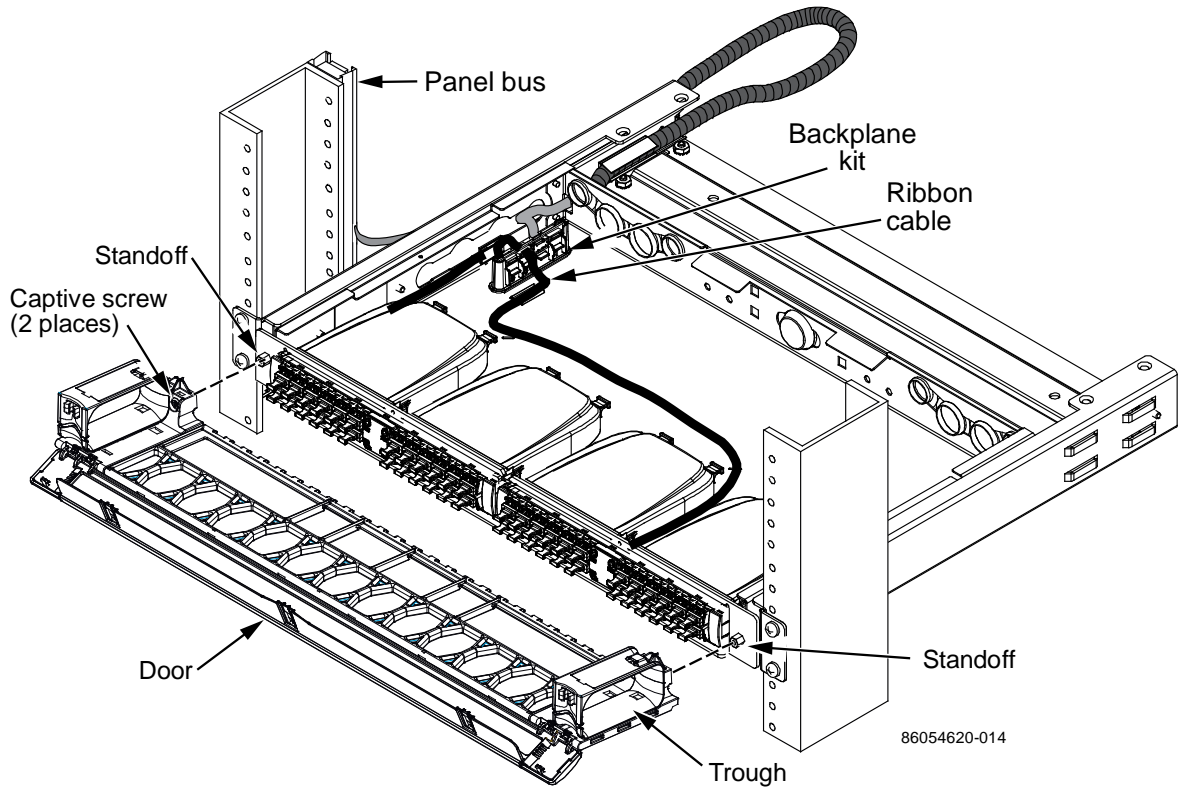
Remove Patch Cord Trough

1. From the rear of rack, remove any cable retainers and provide enough cable slack to move shelf forward.

2. From the front of the rack, remove front door.

    Note: Open the door on the patch cord trough by gently pressing both upper corners to release the latches. Then lift the door off the trough.

3. Trough is positioned on shelf so that indentions behind captive screws rest on the standoffs.

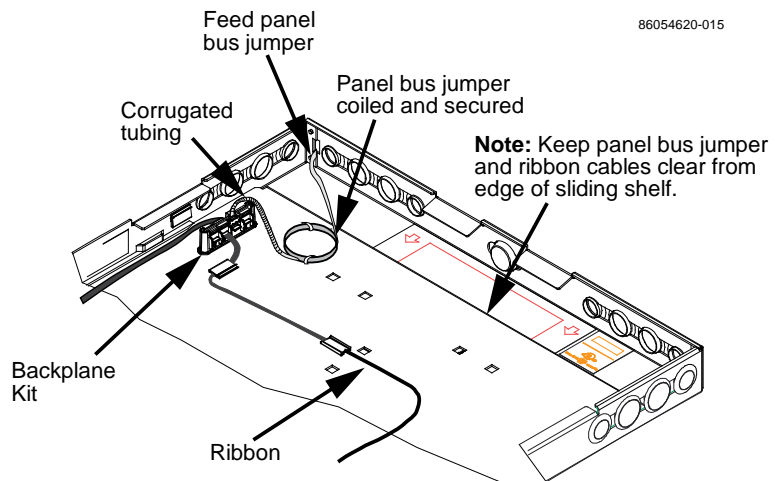4. Using a Phillips head screwdriver, loosen the captive screw on each end of trough to release it from shelf.

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

Panel bus

Backplane kit

Ribbon cable

Standoff

Captive screw (2 places)

Standoff

Door

Trough

86054620-014

5. Carefully remove shelf from rack and slide forward.

6. Remove top cover by sliding toward front of shelf.

7. Refer to General Instructions, **Steps 3a** and **3b**, for detailed installation procedure.
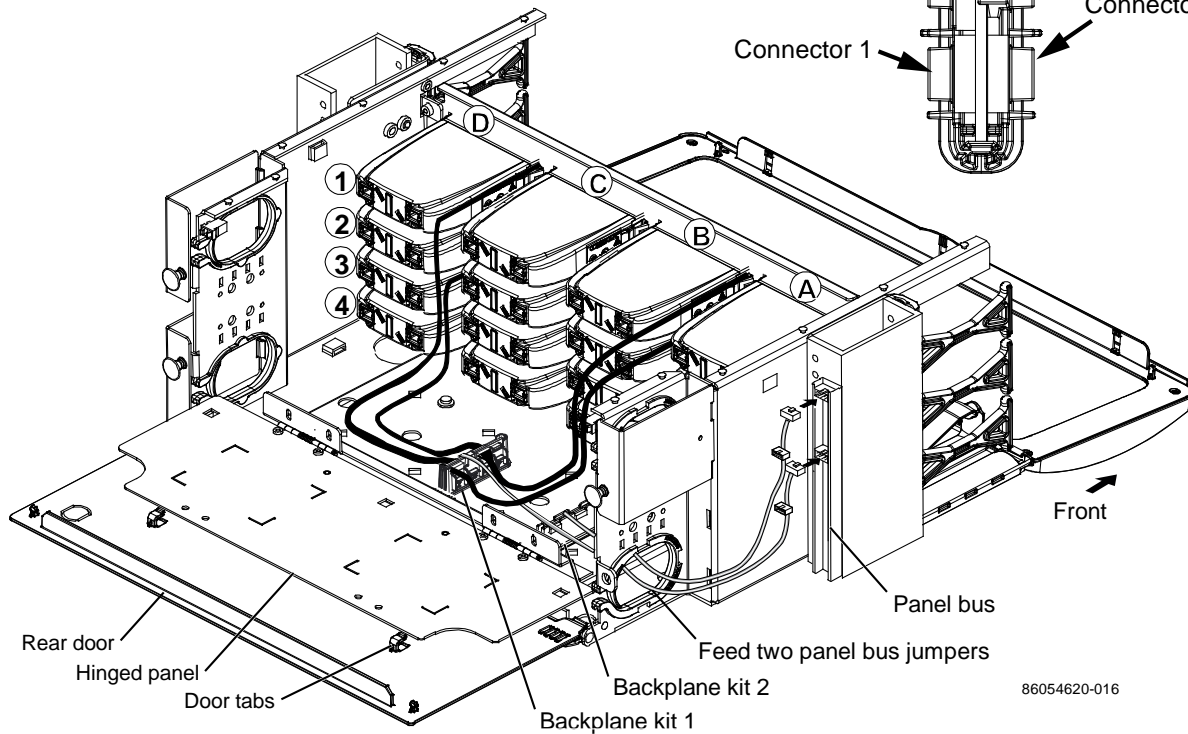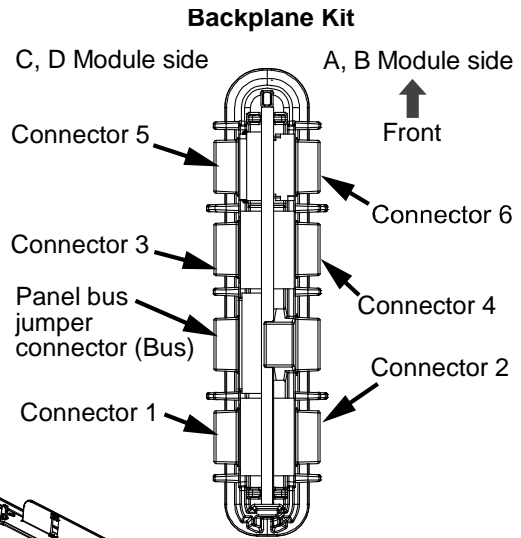
    Note: Shelf has excess panel bus jumper coiled and secured into 3" (76mm) loops with cable ties on shelf floor.

6. When working with 1U internal sliding shelf, cut corrugated tubing to fit over panel bus jumper inside of shelf to protect panel bus jumper from internal sliding shelf movement. Internal sliding shelf has excess panel bus jumper coiled and secured with cable ties on shelf floor, as shown below.

8. Return shelf to rack.

9. Replace cable trough using captive screws on each end of trough.

10. Replace the shelf's top cover.

Feed panel bus jumper

86054620-015

Panel bus jumper coiled and secured

Corrugated tubing

Note: Keep panel bus jumper and ribbon cables clear from edge of sliding shelf.

Backplane Kit

Ribbon

SYSTIMAX 360G2 4U Fixed Shelf iPatch Upgrade Kit Installation

Distribution Panel Row/Column	BackPlane Connector 1					
	1	2	3	4	5	6
1AB		X				
1CD	X					
2AB				X		
2CD			X			
	BackPlane Connector 2					
3AB		X				
3CD	X					
4AB				X		
4CD			X			

Backplane Kit

C, D Module side

A, B Module side

Front

Connector 5

Connector 6

Connector 3

Connector 4

Panel bus jumper connector (Bus)

Connector 2

Connector 1

Rear door

Hinged panel

Door tabs

Backplane kit 1

Backplane kit 2

Feed two panel bus jumpers

Panel bus

Front

86054620-016

1. From the front of the rack, open front door.

2. See General Instructions, **Step 4a**, for detailed installation procedure.

3. From rear, open rear door and secure hinged panel to rear door using door tabs as shown on next page.

4. Route ribbon cables through flat retainer clips and plug into backplane kit. Refer to cable routing table and drawings as shown next page.
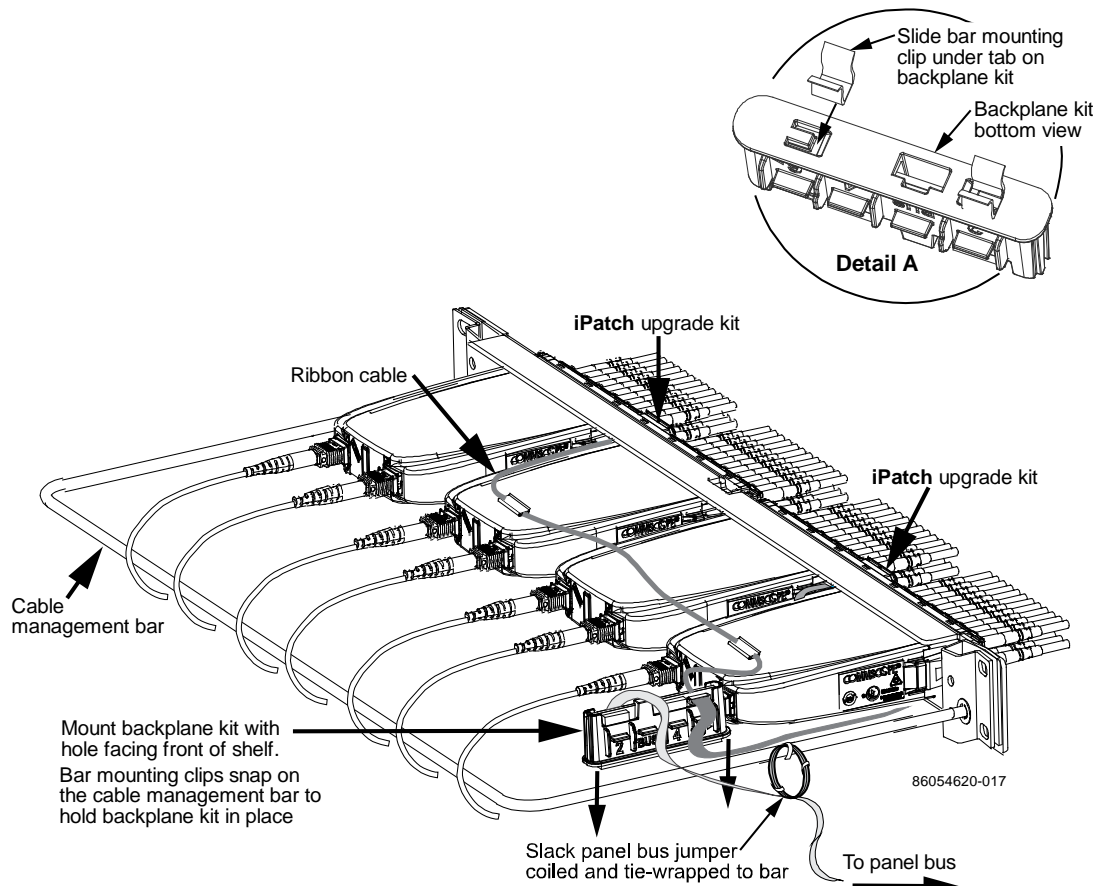
   Note: Accessories (module slots) are labeled from front as columns A, B, C, and D.
   Rows are labeled from top as 1, 2, 3, and 4.

   Example: Ribbon cable from module 1 C-D plugs into backplane kit 2, connector C or D.
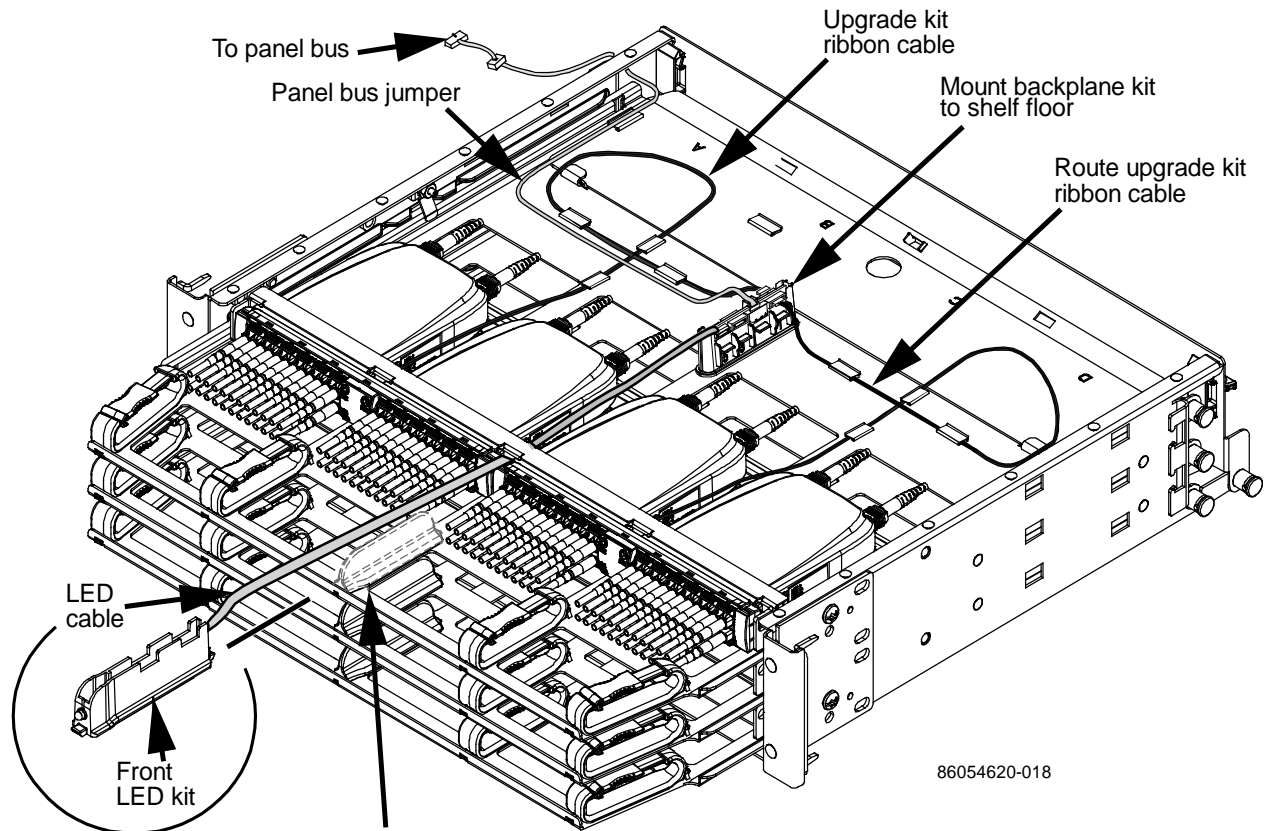
5. Remove protective cover to expose adhesive on backplane kit. Mount two backplane kits (one kit per 2 rows) to shelf floor at left rear corner as shown.

6. Route both panel bus jumpers from the two backplane kits out to panel bus through side wall openings as shown on next page.

7. Release hinged panel and close rear door. Close front door.

SYSTIMAX 360 MP 1U/2U/4U Modular Shelf iPatch Upgrade Kit Installation

1. From the front of the rack, open front door.

2. Remove the adhesive tape from backplane kit bottom and install two bar mounting clips onto the backplane kit as shown in Detail **A**, as shown on next page.

3. Insert the panel bus jumper 10-pin connector into the nearest cable bus port on the panel bus as shown. Install spare port built into jumper cordage into panel bus frame by turning it at an angle, inserting into frame, and turning it back perpendicular to frame.

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

4. Excess panel bus jumper is coiled and secured with cable ties to cable management bar as shown.

5. Facing equipment from rear of rack, prepare to install **iPatch** upgrade kit by feeding ribbon cable through opening located between two modules as shown.   Route ribbon cable back between fiber modules, gently pulling the black ribbon cable through the opening to prevent it from kinking.

6. See General Instructions, **Step 4a**, items 7 to 12, for detailed installation procedure

7. Route ribbon cables to backplane kit.

    Note: See **Step 4b** for cable routing description, tables and drawings.

8. Attach the panel bus jumper to the top connector on the backplane kit, making sure the connector is fully seated.

9. From the rear of the rack, mount backplane kits (one kit per row) by snapping kit onto rear cable management bar at the rear right corner as shown.

    Note: Mount with round hole in the backplane kit facing toward the front of the shelf.

10. Close front door.

Slide bar mounting clip under tab on backplane kit

Backplane kit bottom view

Detail A

iPatch upgrade kit

Ribbon cable

iPatch upgrade kit

Cable management bar

Mount backplane kit with hole facing front of shelf.
Bar mounting clips snap on the cable management bar to hold backplane kit in place

Slack panel bus jumper coiled and tie-wrapped to bar

To panel bus

86054620-017

SYSTIMAX 360G2 UHD 1U/2U/4U Modular Shelf iPatch Upgrade Kit Installation

To panel bus

Panel bus jumper

Upgrade kit
ribbon cable

Mount backplane kit
to shelf floor

Route upgrade kit
ribbon cable
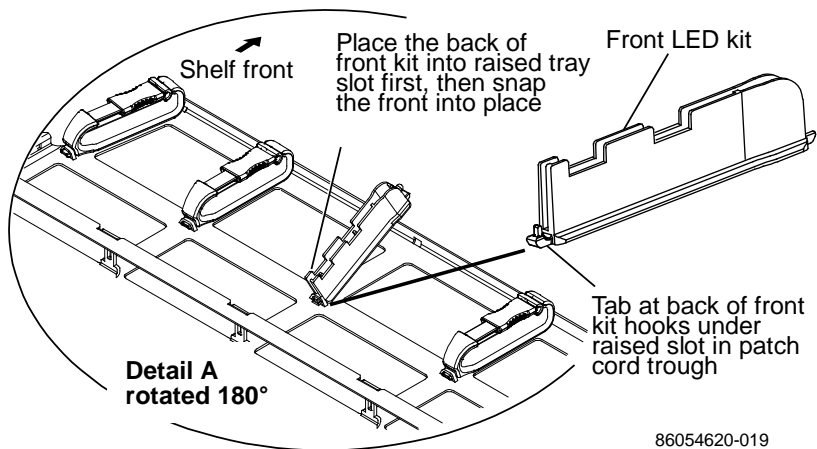
LED
cable

Front
LED kit

86054620-018

Detail A

Replace center fiber patchcord
divider with front LED kit.

1. From the front of the rack, pull a sliding tray shelf forward.

2. Lift the patch cover.

3. Prepare to install **iPatch** upgrade kit. See **Step 4a**, General Instructions.

   Note: The following items apply to the UDH modular shelf upgrade kit installation:

4. Replace center fiber patchcord divider with front LED kit as shown in Detail **A**. Use a small flat-blade screwdriver to pry the divider out and snap the front kit in place. Place the back of front kit (without LED) into tray slot first, then snap the front into place as shown   . When placing the LED kit into the center divider slot, insert back of kit into back notch and then gently snap the front (with LED light) into place to avoid breaking the front tab on LED kit.

Shelf front

Place the back of
front kit into raised tray
slot first, then snap
the front into place

Front LED kit

Tab at back of front
kit hooks under
raised slot in patch
cord trough

**Detail A
rotated 180°**

86054620-019

5. Slide the sliding tray to stored position.

6. From the rear of the rack, open rear door.

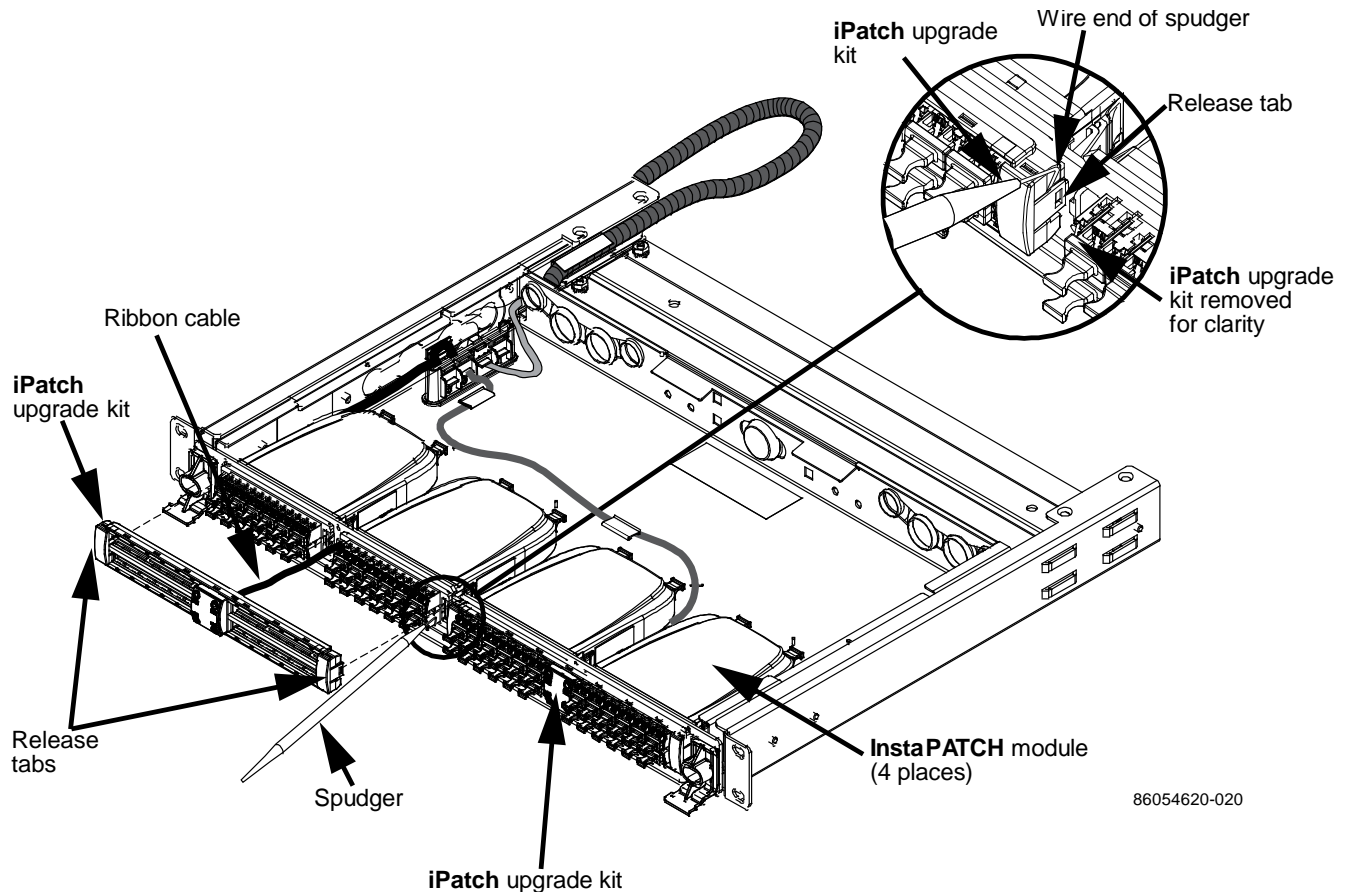7. Pull and turn the left spring plunger to the open position.

8. Pull sliding tray rearward until it stops.

9. Mount flat retainer clips on shelf floor to support **iPatch** upgrade kit ribbon cable routing to backplane kit.

10. Route front kit LED cable to backplane through front center faceplate slot. Plug LED cable into backplane LED kit connector as shown. Cables should be plugged into backplane before it is mounted to shelf floor.

11. Route ribbon cables from the front of the shelf under the fibers, through the adhesive backed flat retainer clips and to the backplane kit. Make sure all excess ribbon jumper slack is laying flat on tray floor to keep it from getting caught when tray slides in and out.

    Note: See **Step 4b** for cable routing description, tables and drawings.

12. Remove protective film on bottom of backplane kit, mount backplane kit to shelf floor as shown.

    Caution: Verify backplane kit is mounted forward of the pivoting rear tray so it does not interfere with the tray's upward movement.

13. Return sliding tray to stored position.

14. Mount cable retainer clips to rear left outside surface, one per row.

15. For sliding shelf, feed the panel bus jumper into the black corrugated tubing to protect the panel bus jumper when sliding shelf in and out.

16. Plug each panel bus jumper connector onto backplane kit and other end to panel bus located on rack.

    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.

17. Slide shelf to stored position.

18. Close the patch cover.

Step 5 – Program the Order of Panels

1. After you have upgraded the shelves in the rack, you should restore power to the **imVision** controller for the rack and program the order of the panels.

   For instructions, see the **SYSTIMAX® imVision® Controller User Guide** (860547876).

Step 6 – iPatch Upgrade Kit Removal

iPatch upgrade kit

Wire end of spudger

Release tab

iPatch upgrade kit removed for clarity

Ribbon cable

iPatch upgrade kit

Release tabs

Spudger

iPatch upgrade kit

InstaPATCH module (4 places)

86054620-020

Removing Upgrade Kit on sliding shelves or trays

1. Slide the cover off the shelf.
2. Use spudger to depress the release tab on one end of the **iPatch** upgrade kit and pull forward to release it. Repeat on other end, then pull the entire kit forward to remove it from the shelf.

    Note: If positioning the spudger is difficult, insert a small flat-blade screwdriver between the upgrade kit and trough bracket. Use the screwdriver blade to wedge space to position spudger

    Caution: Pull kit away from shelf slowly to avoid damaging internal components.

Removing Upgrade Kit on fixed shelves or modular panels

1. Use spudger to depress the release tab on one end of the **iPatch** upgrade kit and pull forward to release it. Repeat on other end, then slowly pull the entire kit forward to remove it from the shelf.

Removal Of Patchcords

1. Release the fiber connector by pulling on the connector body.
2. A spudger may be used for removal of patchcords.

Step 7 – iPatch Upgrade Kit Field Removal Methods
Method 1: Cut the iPatch kit top and bottom section before removing the kit
1. Release top snaps on both left and right side clips with a flat blade screwdriver or a spudger as shown below left. Then remove the side-clips.

Side clip
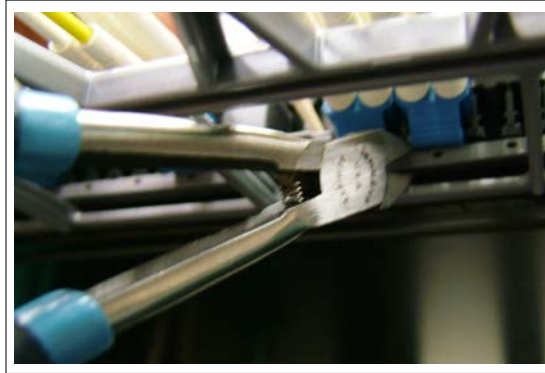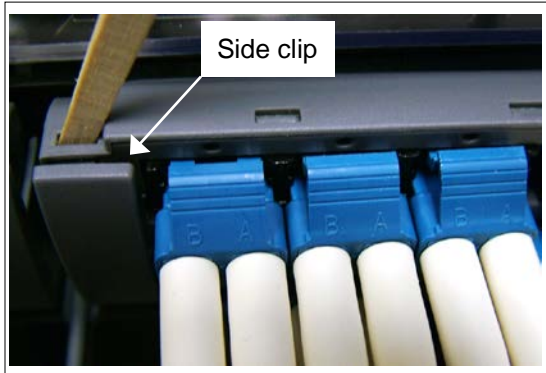
2. Cut the top and bottom sections of the i**Patch** kit. Locate the cut around middle of each section and between duplex ports. Collect the pieces from the cut, shown above right.
3. Gently press the remaining top and bottom sections upward and downward away from the patch cords. Remove the **iPatch** kit without touching/de-latching the patch cords.

Method 2: Uninstall patch cord trough before removing the iPatch kit

1. Uninstall the patch cord trough from the panel as explained on page 10.
2. Release top snaps on both left and right side clips with a flat blade screwdriver as shown above. Then remove the side-clips.
3. Bend the top and bottom sections of the **iPatch** kit upward and downward away from the patch cords. Remove the **iPatch** kit slowly without touching/de-latching the patch cords.

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