



1RU Rapid Fiber Panel



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## INTRODUCTION

This manual describes the 12-, 24, or 48-port 1 Rack Unit (1RU) Rapid Fiber Panel. The Rapid Fiber Panel has a RapidReel fiber cable spool tray. It is available with singlemode RBR, multimode OM4 plenum-rated, or indoor/outdoor (I/O) cable. Panels with a cable length exceeding the capacity of the RapidReel cable spool tray have an external spool as well. This manual describes how to install and operate this product.

## Revision History

ISSUE	DATE	REASON FOR CHANGE
1	11/2015	Original.

## Trademark Information

CommScope, CommScope (logo), Rapid Fiber, and RapidReel, are trademarks. All rights reserved.

## Standards Certification

**Telcordia:** Designed and tested to meet NEBS Level 3, GR-1435-CORE, and GR-326-CORE.

## Admonishments

Important safety admonishments are used throughout this manual to warn of possible hazards to persons or equipment. Admonishments — in the form of Dangers, Warnings, and Cautions — must be followed at all times.



**Danger:** *Danger is used to indicate the presence of a hazard that will cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



**Warning:** *Warning is used to indicate the presence of a hazard that can cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



**Caution:** *Caution is used to indicate the presence of a hazard that will or can cause minor personal injury or property damage if the hazard is not avoided.*

## General Safety Precautions



**Caution:** *When mounting equipment in the frame, make sure mechanical loading is even to avoid a hazardous condition, such as loading heavy equipment in the frame unevenly. The frame should safely support the combined weight of all equipment it supports.*

## RELATED PUBLICATIONS

Listed below are related manuals and their publication numbers. Copies of these publications can be ordered by contacting the CommScope Customer Service at 1-800-366-3891, extension 73000 (in U.S.A. or Canada) or 952-917-3000, (outside U.S.A. and Canada). All CommScope technical publications are also available on the CommScope web site at [www.commscope.com](http://www.commscope.com).

Title/Description	Publication Number
<b>Optical Fiber Connector Wet and Dry Cleaning Instructions</b>	<b>90-159</b>
<b>Multifiber-Push on Assembly Connector Cleaning Instructions</b>	<b>90-150</b>
<b>NG4access ODF Platform Rear Side Routing Guide</b>	<b>90-706</b>

## 1 DESCRIPTION

### 1.1 General Description

- **Note:** The 1RU Rapid Fiber Panel is designed to be installed in an environmentally controlled network telecommunications facility such as a Central Office, Controlled Environmental Vault, or Data Center. Only the I/O cable is rated for both indoor and outdoor use.

The 1RU Rapid Fiber Panel, shown in [Figure 1](#), is an up to 48-port, rack-mountable fiber distribution panel that incorporates CommScope's RapidReel fiber cable spool.

Each Rapid Fiber Panel consists of a metal panel shell plus a RapidReel cable spool tray that is mounted within the panel. The RapidReel cable spool tray is equipped with an integral adapter bulkhead and is wound with either a singlemode or multi-mode indoor plenum-rated cable or indoor/outdoor cable. The spooled cable is preterminated to the bulkhead on the rear side.

► **Note:** Plenum-rated cable may be used in both riser-rated and plenum environments.

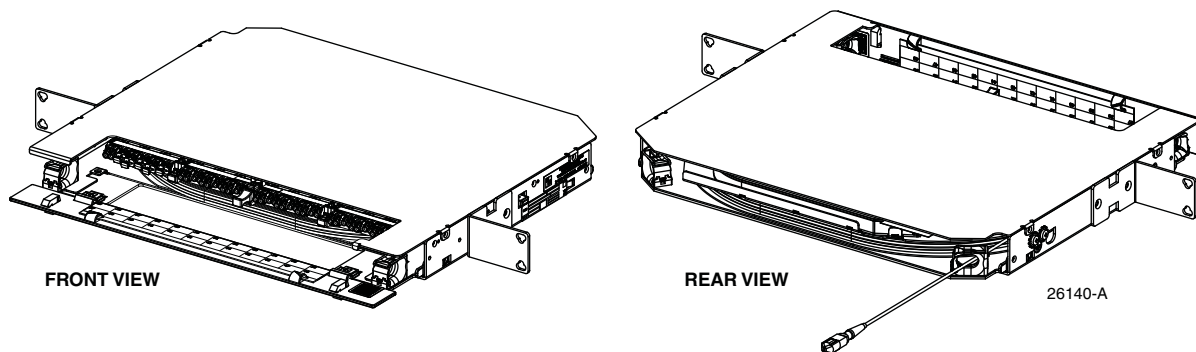


Figure 1. 1RU Rapid Fiber Panel

On a more specific level, the Rapid Fiber Panel shipped to the customer will vary depending on the options ordered, as follows:

- The shipped panel will be equipped with up to four 12-fiber indoor plenum-rated microcables. This will be singlemode G657.A2 reduced bend radius (RBR), multimode OM4 microcable, or indoor/outdoor microcable.
- The optical fibers that connect internally to the adapter bulkhead will be terminated, accordingly, with single-mode SC (UPC or APC), single-mode LC (UPC or APC), multimode SC (UPC), or multimode LC (UPC) connectors.
- The spooled cable that is paid out at the installation site will be terminated on the far end with a 12-fiber microcable with any of the following per customer order:
  - MPO connector: 12-fiber. Single-mode or multimode.

► **Note:** Microcables with stub end non-functional connectors look the same as microcables with MPO connectors. Like MPO connectors, they are housed inside of black pulling eyes; however, non-functional connectors are not optically terminated. They are crimped to the cable jacket and strength member yarns. Non-functional connectors are cut off after the cable has been fully unwound from the spool and is ready to be spliced.

- NG4access cabled module (CMOD): either 24-fiber module/s with single-mode LC (UPC or APC) or multimode LC (UPC); or 12-fiber module/s with single-mode SC (UPC or APC) or multimode SC (UPC).
- Breakout: 12 fibers, 2 mm or 900 micron in diameter, up to nine feet (2.74 m) in length, terminated with 12 individual connectors. These will be single-mode SC (UPC or APC), single-mode LC (UPC or APC), multimode SC (UPC), or multimode LC (UPC) connectors.

The 1RU Rapid Fiber Panel cable spool tray with plenum rated cable holds up to 200 feet of cable. Cable lengths of up to 1000 feet are possible through use of a temporary external spool.



When a panel with an external spool is ordered, the panel is shipped as shown in [Figure 2](#) with the RapidReel cable spool tray mounted in a box on top of the external spool. A carousel for unwinding the external spool is also provided. The carousel allows the cable on the external spool to be paid out with the RapidReel cable spool tray still mounted on top of it.

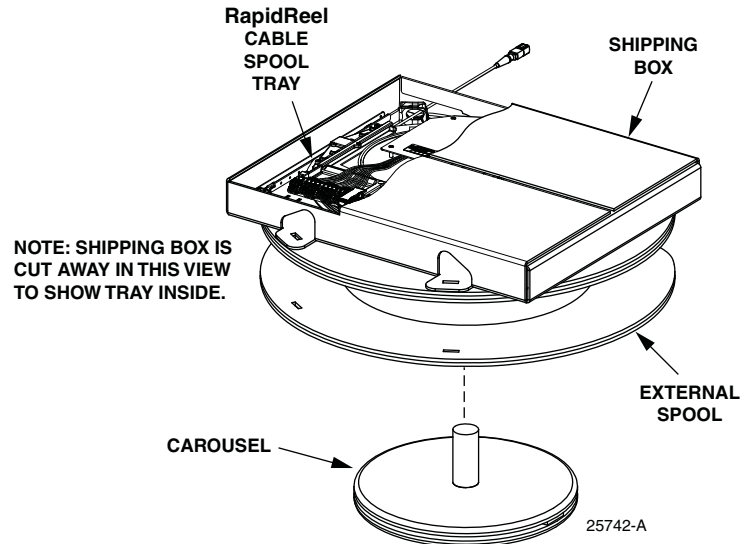


Figure 2. RapidReel Cable Spool Tray Mounted in Box on External Spool

When all of the microcable has been unwound from the external spool, the RapidReel cable spool tray is removed from the shipping box and then installed in the panel. The cable remaining on the cable spool tray may then be unwound and routed to an Optical Distribution Frame (ODF) or fiber panel.

The RapidReel cable spool tray installs in the panel from the front or rear side, as shown in [Figure 3](#). After the cable spool tray is installed, a lock on the tray holds the adapter bulkhead in a fixed position with the adapters facing toward the front. When the lock is retracted, the microcable is easily unwound by pulling it out of the spool. The adapter bulkhead rotates with the tray to prevent the cable from twisting. Excess microcable slack remains on the spool. The microcable may be withdrawn from the front or rear of the panel.

The 1RU Rapid Fiber Panel mounts in either a 19- or 23-inch, WECCO or EIA, equipment rack and requires 1.75 inches of rack space. Grounding points are provided on the left side of the panel for connecting a two-hole grounding lug.

- **Note:** If a Rapid Fiber Panel is installed above or below a non-Rapid fiber panel, 1RU of open space must be left between the panels. This space is required for accessing the rear connectors if cleaning is required.

- **Note:** When mounting multiple Rapid Fiber Panels into a rack or cabinet, be sure to calculate the total weight of all the equipment being mounted to verify that it does not exceed the rack or cabinet manufacturer's maximum weight allowance. In Zone 4 Earthquake applications, exceeding the weight rating can compromise the integrity of the rack during an earthquake.

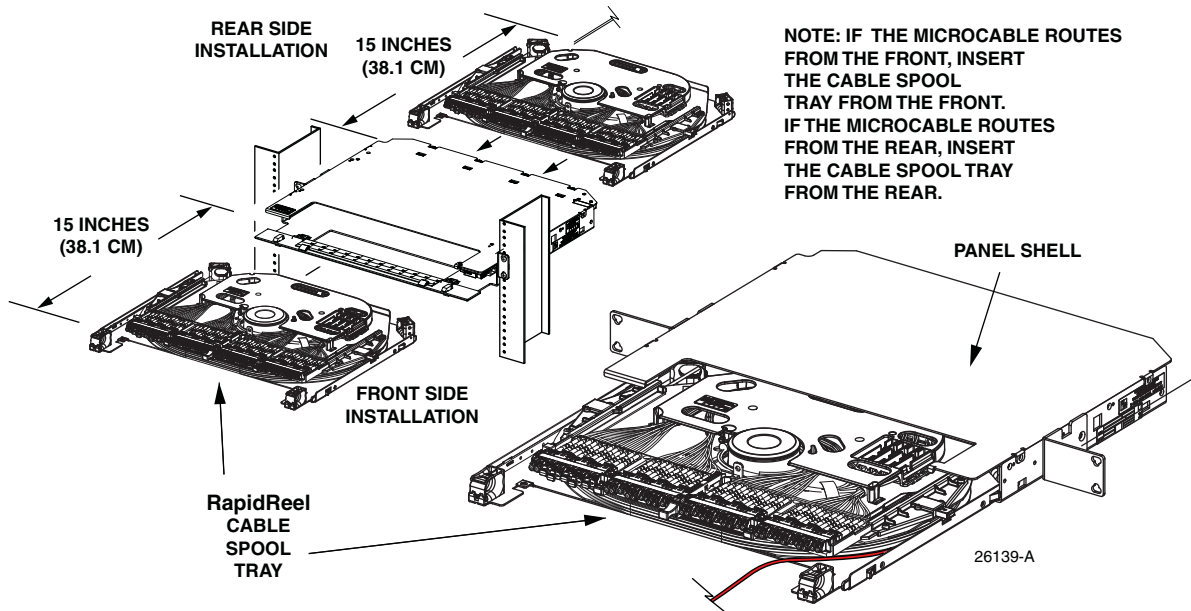


Figure 3. RapidReel Cable Spool Tray and Panel

## 1.2 Basic Components

The 1RU Rapid Fiber Panel has two high-level components: the panel shell and the RapidReel cable spool tray. These components are described in more detail in the following topics.

### 1.2.1 Panel Shell

The panel shell, shown in [Figure 4](#), provides a mounting point for the RapidReel cable spool tray. The panel shell consists of the following components:

- **Enclosure** – Houses the RapidReel cable spool tray and protects the microcable assemblies.
- **Removable Front Cover** – Protects the equipment patch cords at the point where they enter the panel and connect to the adapter bulkhead. A designation card attached to the inside of the cover provides a means for identifying and recording connections.
- **Ground Connection** – Provides a point for securing a two-hole lug (used for connecting a grounding cable) to the side of the enclosure.
- **Mounting Brackets** – Secure the panel to the equipment rack. Two sets of mounting brackets are provided, one set for 19-inch racks and one set for 23-inch racks. The mounting brackets may be installed to provide a 2-, 4-, or 5-inch recess.

- **Note:** The factory pre-installs the 23-inch mounting brackets on the panel in the 5-inch recess position. If a 2- or 4-inch recess is required, the brackets must be removed and repositioned. If the panel will be installed in a 19-inch rack, the 23-inch brackets must be removed and replaced with the 19-inch brackets.

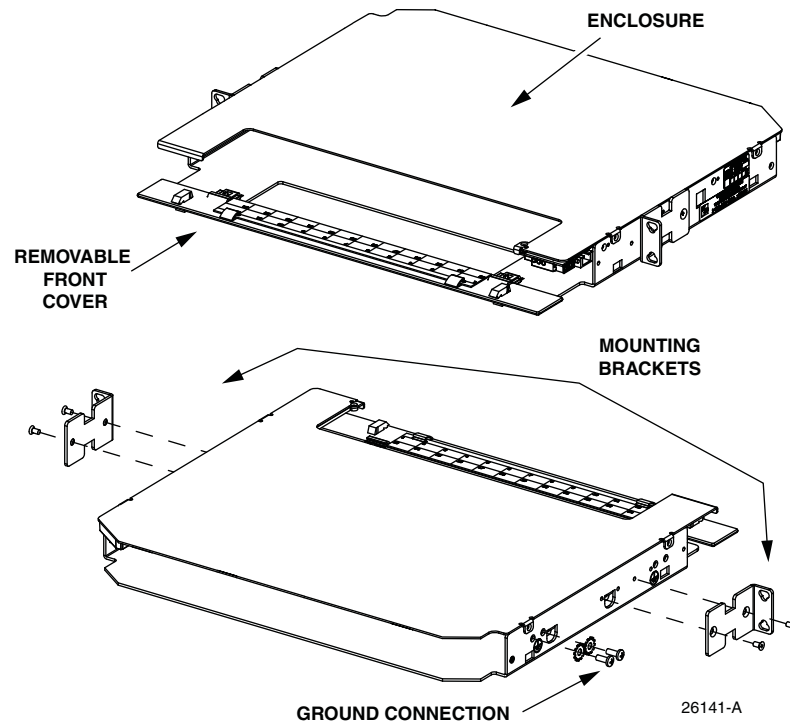


Figure 4. Panel Shell (Shown With 19-Inch Brackets)

### 1.2.2 RapidReel Cable Spool Tray

The RapidReel cable spool tray, shown in [Figure 5](#), consists of the following components:

- **Corner Cable Retainers** – Provide cable management and radius limiting functions for patch cords routed to the adapter bulkhead and for spooled cables routed to an Optical Distribution Frame (ODF) or fiber panel.
- **Spool** – Stores up to 200 feet of cable when loaded with one dual 3.0 mm plenum cable or one 12-fiber I/O cable. Stores up to 100 feet when loaded with two dual 3.0 mm plenum cable or two 12-fiber I/O cables. When the spool is unwound, the cables are routed to an ODF or fiber panel. Excess slack may be wound back onto the spool.
- **Adapter Bulkhead** – Provides a point for connecting the equipment patch cords to the cable assemblies.
- **Front Port Designation Plate** – Identifies the optical port numbers on the adapter bulkhead. The designation plate must be removed before the cables can be unwound from the spool.

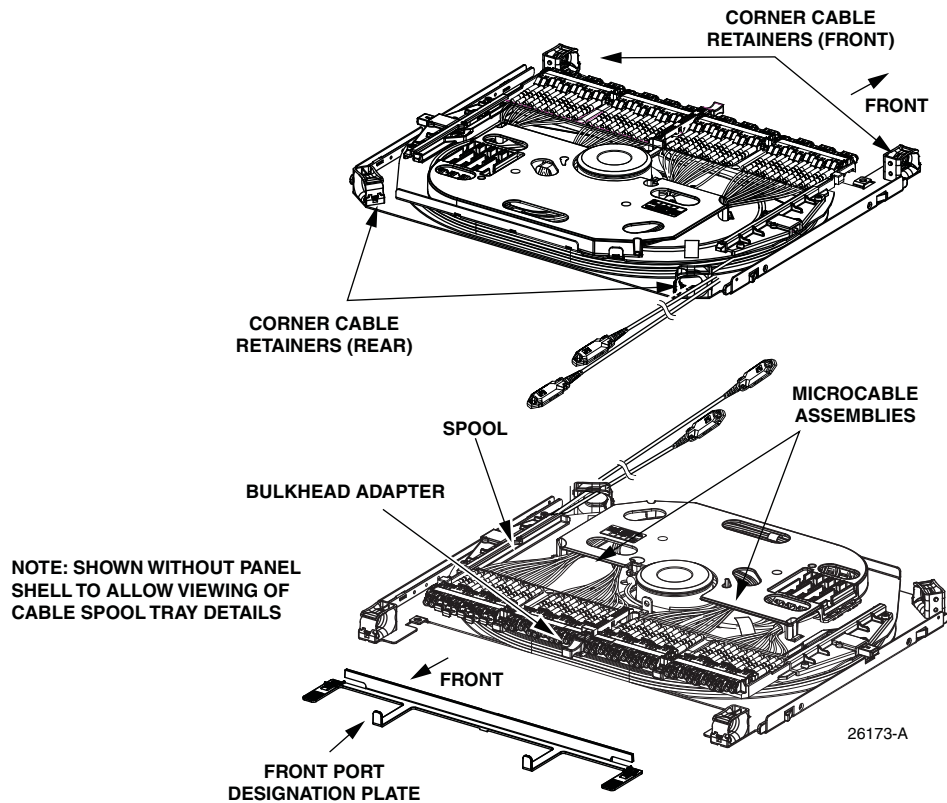


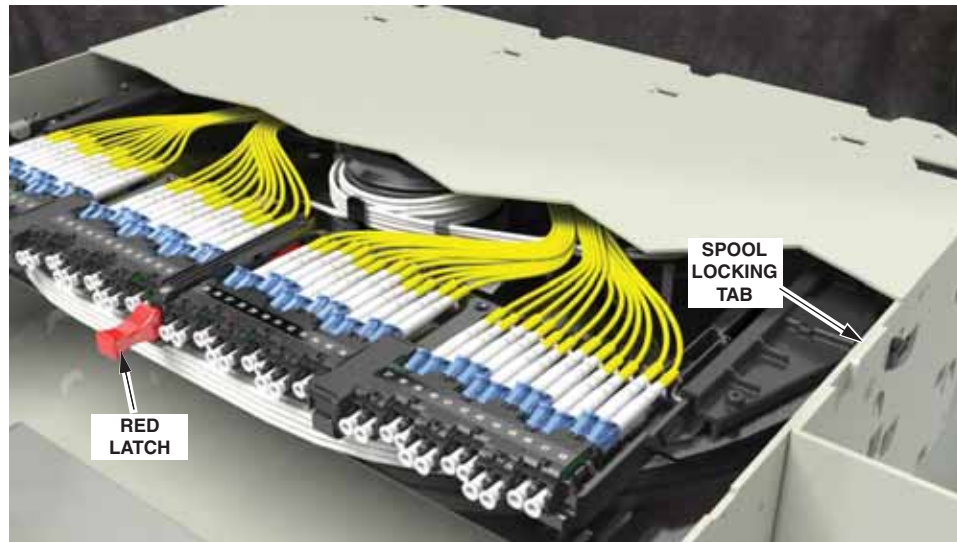
Figure 5. RapidReel Cable Spool Tray (Shown Without Panel Shell or External Spool)

- Microcable Assemblies** – Are loaded into each panel based on customer order. Options for a particular panel include either 12-fiber microcables or a dual microcable consisting of two 12-fiber subunits. The microcables may be either single-mode reduced bend radius (RBR) or multimode. The internal cable ends may be terminated with single-mode SC (UPC or APC), single-mode LC (UPC or APC), multimode SC (UPC), or multimode LC (UPC) connectors. The external cable ends may be terminated with connector fanout assemblies, NG4access cabled modules, MPO connectors, or stub end non-functional connectors.

The fanout assemblies will be 12-fiber single-mode SC (UPC or APC), single-mode LC (UPC or APC), multimode SC (UPC), or multimode LC (UPC). The NG4access cabled modules will be either one 24-fiber LC module (UPC or APC) or two 12-fiber SC modules (UPC or APC). The MPO connectors are of 12-fiber construction and equipped with a pulling eye for use in paying out the cable. The stub end non-functional connectors are of similar construction and appearance as MPO connectors, and also equipped with pulling eyes, only the connectors are not connected optically and are designed to be cut off after the cable is paid out. Each fanout assembly is also equipped with a pulling eye.

- Red Latch** – (Shown in [Figure 6](#)) is used to engage and disengage the spool locking tab to allow the internal spool to rotate and to actuate the inner linkage to allow the cable spool tray to be slid inward or outward into three positions: operation (home); cable payout; and full connector access. For a description of tray positions, refer to [Topic 7.2 on Page 47](#).

- **Spool Locking Tab** – (Shown in [Figure 6](#)) is a black tab that protrudes from the panel shell when the cable spool tray is in the payout position. For a description of tray positions, refer to [Topic 7.2 on Page 47](#).



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Figure 6. Red Latch and Spool Locking Tab

### 1.3 Specifications and Dimensions

[Table 1](#) lists specifications. [Figure 7](#) shows dimensions for the 1RU Rapid Fiber Panel.

Table 1. Rapid Fiber Panel Specifications

PARAMETER	SPECIFICATION	REMARKS
<b>Mechanical</b>		
Dimensions (HxWxD)	1.72 x 17.38 x 14.73 in.	(4.4 x 44.1 x 37.4 cm)
Mounting rack	19-inch or 23-inch	EIA or WECO
Recess options	2, 4, or 5 inches (5.08, 10.16, or 12.7 cm)	
Weight	14 lb. (6.35 kg)	Fully loaded (two cables)
Number of ports	12 (SC or LC), 24 (SC or LC), or 48 LC	
Front panel connectors	Single-mode SC or LC (UPC or APC); multimode SC or LC (UPC)	
Microcable	Single-mode RBR, multimode OM4, or Indoor/Outdoor	
Maximum pull force	40 lbs. (18.14 kg)	
Pulling eye diameter (MPO connector)	0.72 in. (1.83 cm)	Two pulling eyes can be pulled through a 1.1 in. (2.8 cm) diameter opening

Table 1. Rapid Fiber Panel Specifications

PARAMETER	SPECIFICATION	REMARKS
Microcable far-end connectors	MPO, stub, fanout with SC or LC (24 fibers maximum)	MPO (receptor); single-mode SC (UPC or APC); single-mode LC (UPC or APC); multimode SC or LC (UPC)
	NG4access LC cabled module	one 24-fiber LC (UPC or APC); or two 12-fiber SC (UPC or APC)
<b>Environmental</b>		
Operating conditions	+23°F to +131°F (-5°C to +55°C) 5% to 85% RH	No condensation
Storage conditions	-40°F to +158°F (-40°C to +70°C) 10% to 95% RH	No condensation

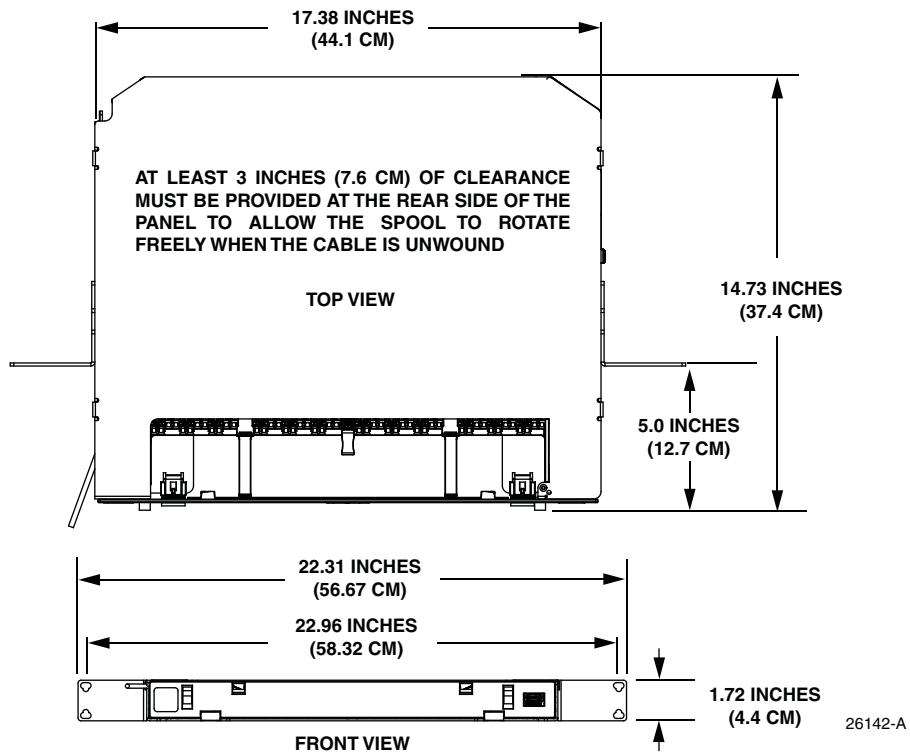


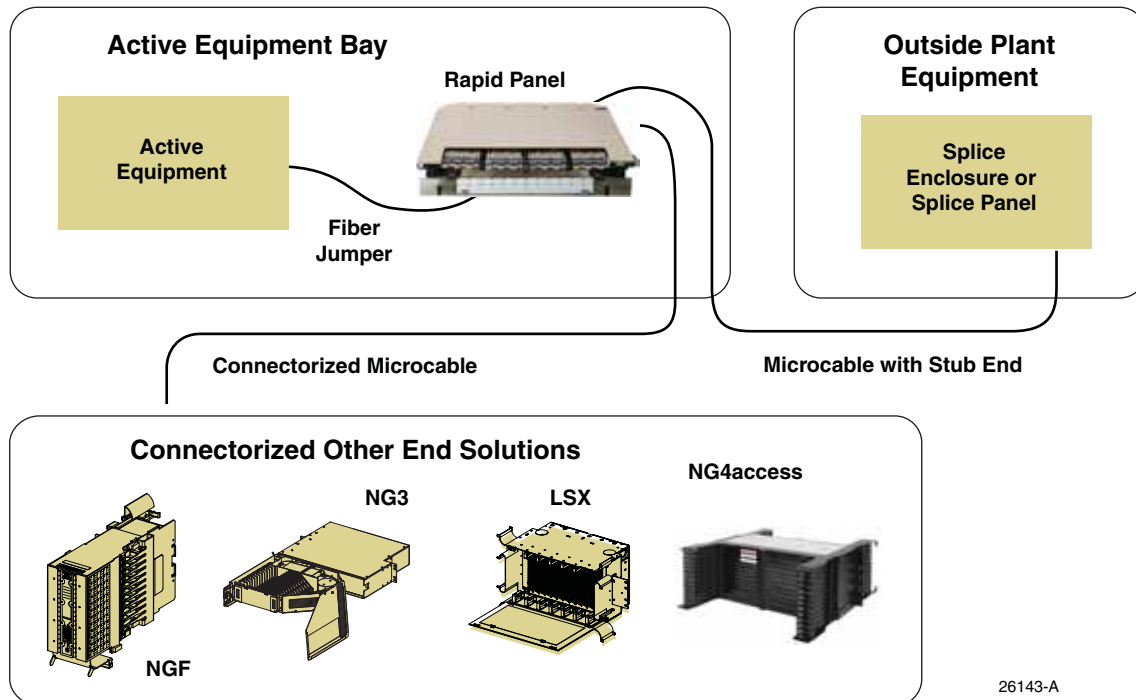
Figure 7. 1RU Rapid Fiber Panel Dimensions

### 1.4 Accessory Kits

For cables equipped with 12-connector fanout assemblies, kits are available for securing the fanouts to an Optical Distribution Frame including NGF, NG3, LSX, FCM, and NG4access. A universal kit is also available for attaching 9 foot long 2 mm fanout assemblies to a Glide or interbay management panel.

## 1.5 Typical Application

Figure 8 shows a typical application for the Rapid Fiber Panel. In the example shown, the Rapid Fiber Panel is installed adjacent to an active equipment rack. The Rapid Fiber Panel microcables are unwound from the spool and routed to an “other end” solution such as a termination panel or splice panel. The termination panel in this configuration could be a NGF, NG3, LSX, or NG4access panel in an Optical Distribution Frame or a stand-alone FPX panel. Fiber jumper patch cords are used to connect the Rapid Fiber Panel to the active equipment.



\*See NG4access Optical Distribution frame (ODF) Platform catalog (314120AE Rev 9/12)  
Note: FPX Series Fiber Panels can also be used (109156 Rev 9/10)

Figure 8. Typical Rapid Fiber Panel Application

## 2 BEFORE STARTING THE INSTALLATION

This section provides general installation considerations and unpacking and inspection procedures. In addition, it lists the tools and materials required for installation. There are separate topics for panels without and with an external spool.

- **Note:** The Rapid Fiber Panel is designed to be installed in an environmentally controlled network telecommunications facility such as a Central Office, Controlled Environmental Vault, or Data Center. Only the I/O cable is rated for both indoor and outdoor use.



- ▶ **Note:** When mounting multiple Rapid Fiber Panels into a rack or cabinet, be sure to calculate the total weight of all the equipment being mounted to verify that it does not exceed the rack or cabinet manufacturer's maximum weight allowance. In Zone 4 Earthquake applications, exceeding the weight rating can compromise the integrity of the rack during an earthquake.

## 2.1 Installation Overview for Panel Without External Spool

Installing a 1RU Rapid Fiber Panel without an external spool involves the following main tasks:

**Mounting the panel** – Mounting brackets for installing the panel in either a 19- or 23-inch rack or cabinet are provided with each panel. The brackets for 23-inch rack installations are pre-installed on the panel in the 5-inch recess position. For 19-inch rack installations, the 23-inch brackets must be removed and replaced with the 19-inch brackets, which are shipped loose. All brackets may be positioned to provide a 2-, 4- or 5-inch recess. Connection points are provided on the left side (front and rear) of the panel for connecting the panel to a ground source. A two-hole lug (not provided) is recommended for the connection.

**Unwinding microcable from the RapidReel cable spool tray**– The microcable is unwound from the RapidReel cable spool tray. Cables terminated with MPO connectors, fanouts, or cabled modules are routed to an ODF or fiber panel for connection. Stub end cables are routed to a splice enclosure for splicing. The microcable may be unwound from either the front or rear side of the panel, and it may be routed through either an open trough or conduit.

- ▶ **Note:** Due to space constraints in conduit, only cables with MPO connectors or MPO-like non-functional connectors should be routed through conduit.

## 2.2 Installation Overview for Panel With External Spool

Installing a 1RU Rapid Fiber Panel with an external spool involves the following main tasks:

**Mounting the panel shell** – Mounting brackets for installing the panel shell in either a 19- or 23-inch rack are provided with each panel. The brackets for 23-inch rack installations are pre-installed on the panel in the 5-inch recess position. For 19-inch rack installations, the 23-inch brackets must be removed and replaced with the 19-inch brackets. All brackets may be positioned to provide a 2-, 4-, or 5-inch recess. Connection points are provided on the left side (front and rear) of the panel for connecting the panel to a ground source. A two-hole lug (not provided) is recommended for the connection.

**Unwinding microcable from the external spool** – The microcable is unwound from the external spool. Cables terminated with MPO connectors, fanouts, or cabled modules are routed to an ODF or fiber panel for connection. Stub end cables are routed to a splice enclosure for splicing. The external spool must be placed on a carousel (provided loose). When the microcable is completely unwound from the external spool, the RapidReel cable spool tray is removed from the external spool shipping box. The microcable may be routed through either an open trough or conduit.

- ▶ **Note:** Due to space constraints in conduit, only cables with MPO connectors or MPO-like non-functional connectors should be routed through conduit.



- **Note:** If the microcable will exit the panel from the rear, the external spool should be placed at the rear side of the rack before the microcable is unwound. If the microcable will exit the panel from the front, the external spool is placed on the front side of the rack.

**Installing the RapidReel cable spool tray in the panel** – After the RapidReel cable spool tray has been removed from the external shipping box, the cable spool tray is installed in the panel shell. Depending on how the microcable was routed, the RapidReel cable spool tray may be installed from either the front or rear.

**Unwinding microcable from the RapidReel cable spool tray** – After the RapidReel cable spool tray has been installed in the panel shell, any additional cable length that may be required is unwound from the internal spool. Any excess slack is accumulated at the Rapid Fiber Panel by rewinding the cable spool after the cable is paid out to the termination point.

## 2.3 Unpacking and Inspection

Use the following procedure to unpack and inspect the product.

1. Before installing the product, open the shipping carton(s) and carefully unpack the contents.
2. Check the panel for damages or missing ship-along parts (per the list provided in [Section 2.4](#)). If there are damages, contact CommScope for an RMA (Return Material Authorization) and to reorder if replacement is required.
3. If a 23” mounting bracket is damaged in shipment, replace it with a 23” mounting bracket shipped loose with the panel.

## 2.4 Ship-Along Parts

The product is shipped with the following additional parts.

- Front port designation plates (1)
- 19-inch mounting brackets (2)
- 23-inch mounting brackets (2)
- #12-24 mounting screws (4) and #12-24 lock washers (4)
- #10-32 screws (2) and lock washers (4)

## 2.5 Tools and Materials Required for Installation

- #2 Phillips screwdriver
- Torque wrench with #1 and #2 Phillips screwdriver bits
- 2-hole grounding lug (0.625 inch hole spacing)
- Equipment and supplies for connecting the panel to the local facility ground bus
- Equipment and supplies for cleaning LC connectors
- Equipment and supplies for cleaning MPO connectors (panels equipped with cables terminated with MPO connectors)

### 3 INSTALLING A RAPID FIBER PANEL WITHOUT EXTERNAL SPOOL

There are two main activities involved in installing a Rapid Fiber Panel without an external spool: mounting the panel on an equipment rack, and unwinding the RapidReel cable spool tray. This section provides a procedure for each of these activities.

#### 3.1 Mounting the Panel on the Equipment Rack

- **Note:** If a Rapid Fiber Panel is installed above or below a non-Rapid fiber panel, 1RU of open space must be left between the two panels. This space is required for accessing the rear connectors if cleaning is required.

The Rapid Fiber Panel can be mounted in either a 19-inch or 23-inch rack or cabinet. Use the following procedure to mount the panel, referring to [Figure 9](#).

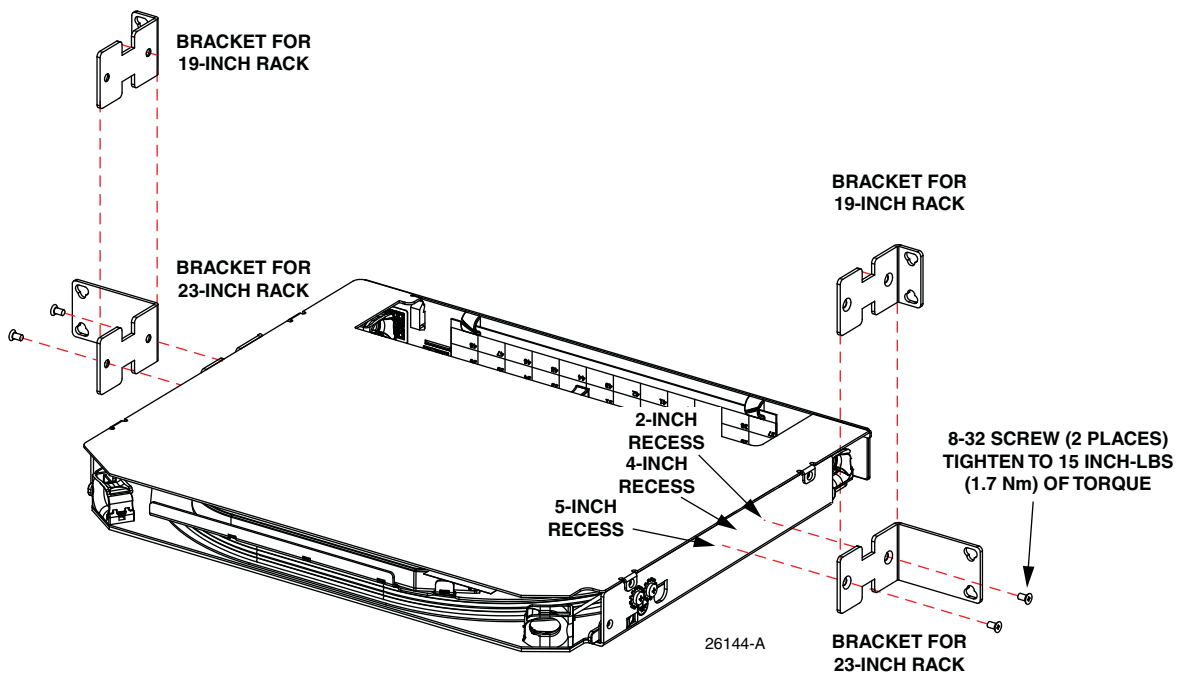


Figure 9. Mounting Bracket Installation

1. Determine if the rack or cabinet width is 19 or 23 inches. Also, determine recess required (2, 4, or 5 inches) for mounting the panel. Refer to [Figure 9](#).
2. If the panel is being installed in a 23-inch rack or cabinet in other than the 5-inch recess position, remove the 23-inch mounting brackets and re-install them at the required (2- or 4- inch) recess position, as shown in [Figure 9](#).
3. If the panel is installed in a 19-inch rack or cabinet, remove the 23-inch mounting brackets and install 19-inch brackets at the required recess position, as shown in [Figure 9](#).
4. Secure the panel to the rack or cabinet using the four #12-24 screws and #12-24 lock washers provided, as shown in [Figure 10](#).

5. Connect a grounding wire to the panel in either of the two locations shown in [Figure 11 on Page 15](#) using the two #10-32 screws and star washers provided. A two-hole grounding lug (not provided but shown here for reference) is recommended for this connection.

► **Note:** Ground the unit to the local facility CBN (Common Bonding Network) or IBN (Isolated Bonding Network) per local practice.

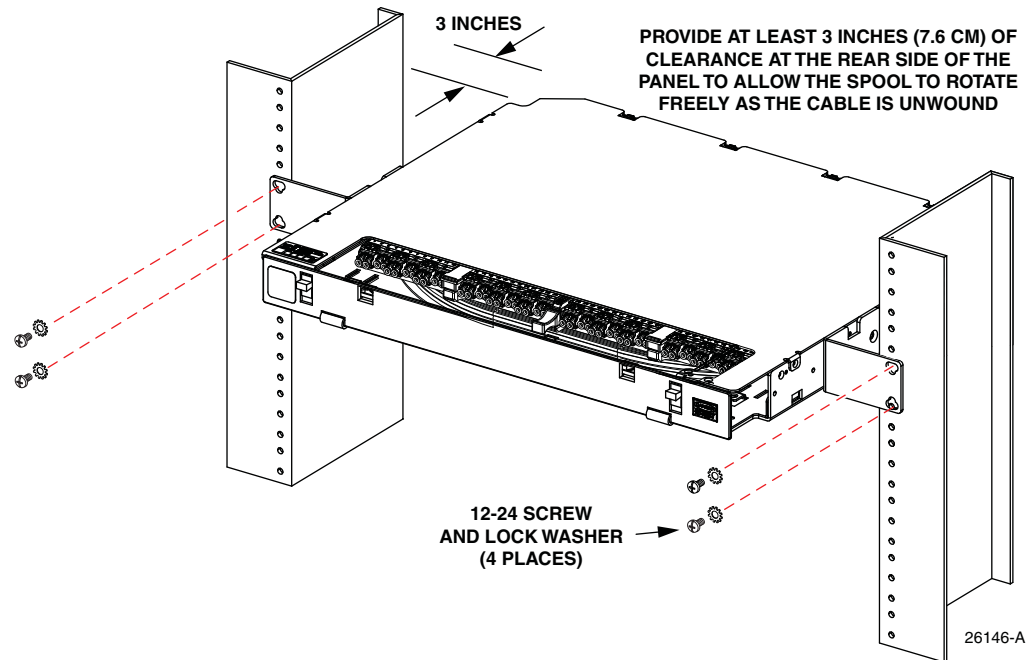


Figure 10. Mounting Panel in Rack

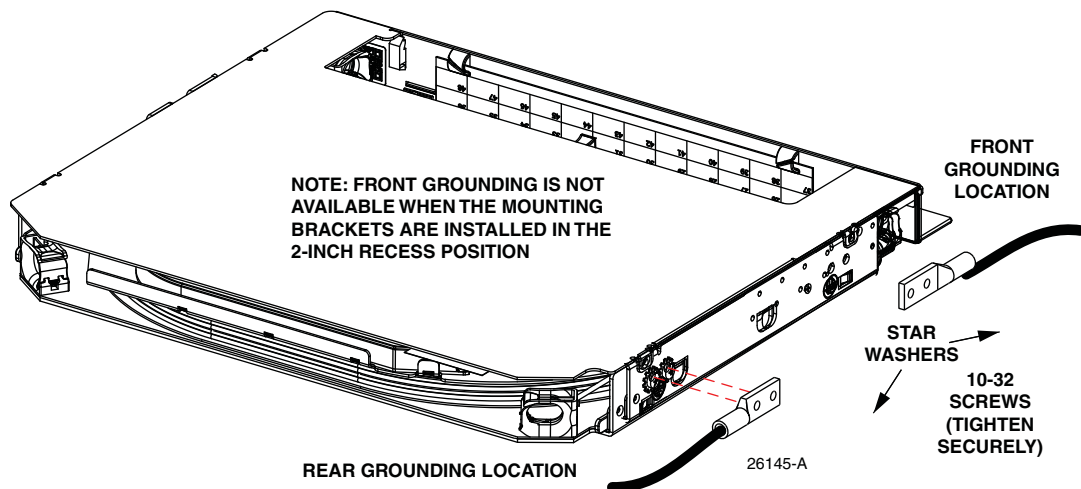


Figure 11. Grounding Rapid Fiber Panel

### 3.2 Removing the Latch Shipping Bracket

When a latch shipping bracket is present, remove it using the following procedure.

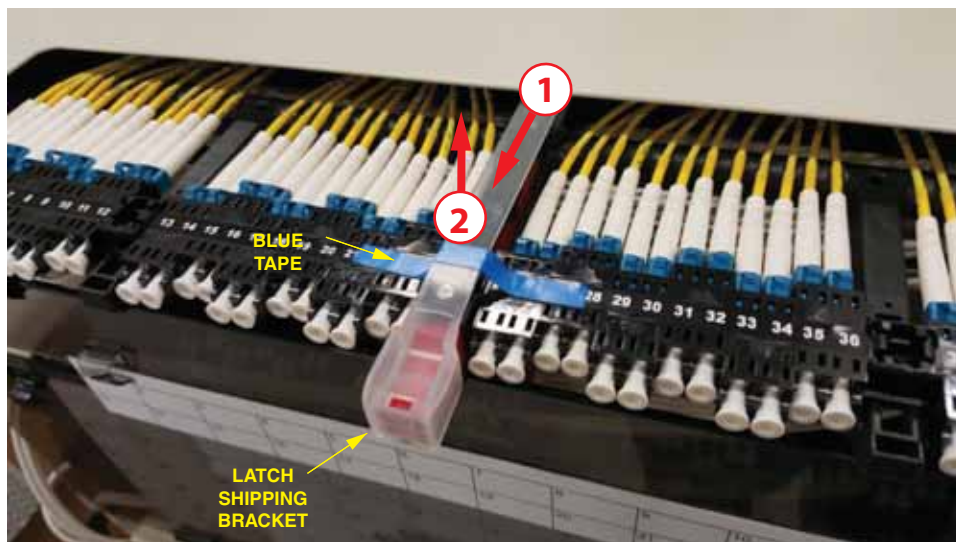
1. Remove the fiber tape from the front center of the panel as shown in [Figure 12](#).



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Figure 12. Removing Fiber Tape from Latch Shipping Bracket

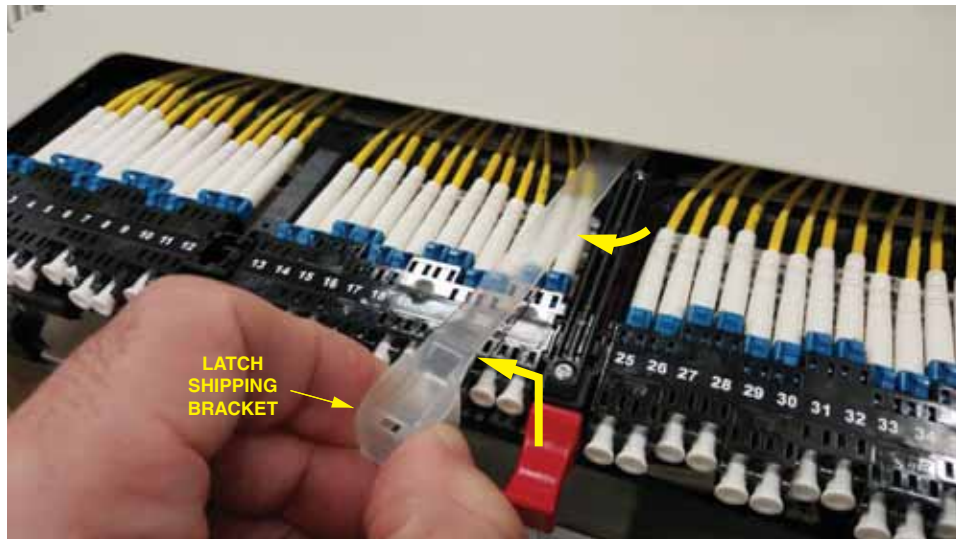
2. Pull out the cable spool tray (1) and remove the blue tape (2), as shown in [Figure 13](#).



26175-A

Figure 13. Pulling Out Tray (1) and Removing Blue Tape (2)

- Withdraw the latch shipping bracket slightly (enough to clear it from the red latch), and move the shipping bracket to one side, as shown in [Figure 14](#).



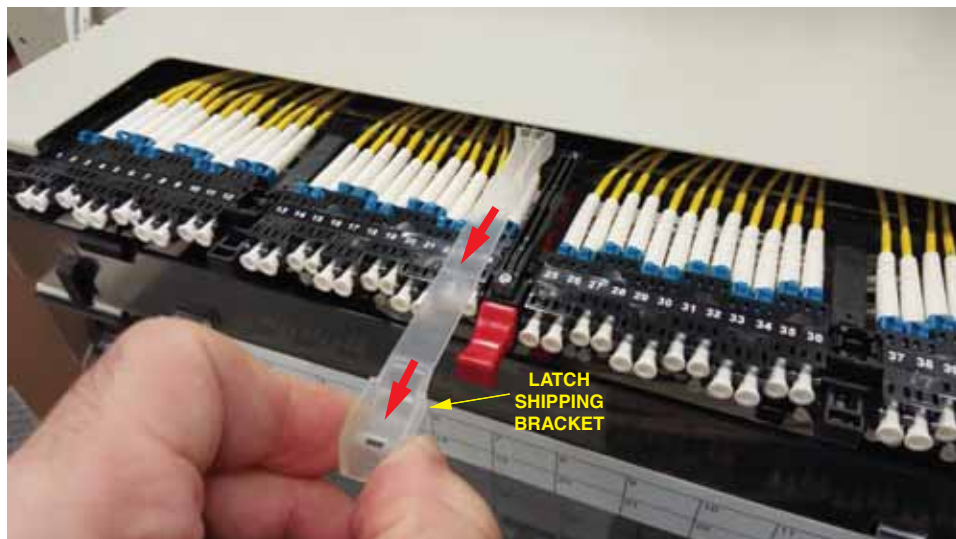
26176-A

Figure 14. Locking Tray Into Payout Position

- Slide the latch shipping bracket out of the cable spool tray as shown in [Figure 15](#) and clear it from the panel, then push the red latch and tray in to operational position.



**Caution:** When removing shipping bracket, use caution to avoid damaging fibers.



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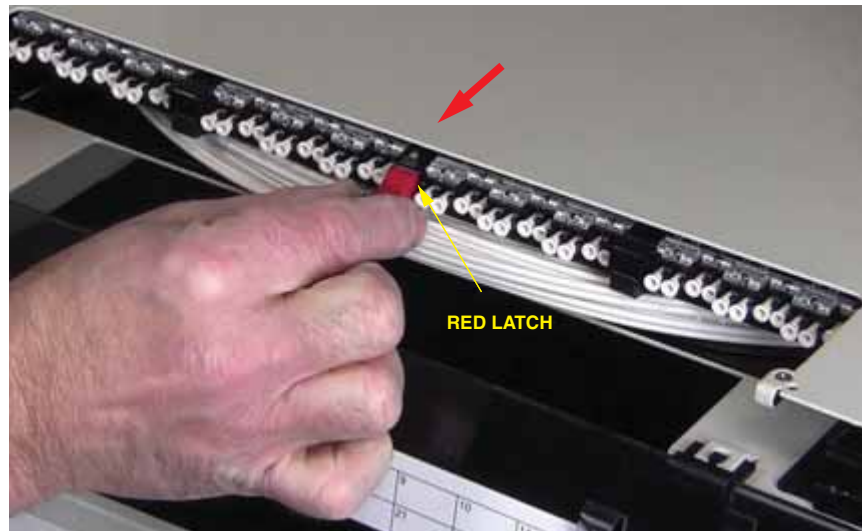
Figure 15. Removing Latch Shipping Bracket from Tray



### 3.3 Unwinding Microcable from Internal Cable Spool Tray

Use the following procedure to unwind the microcable on the RapidReel cable spool tray.

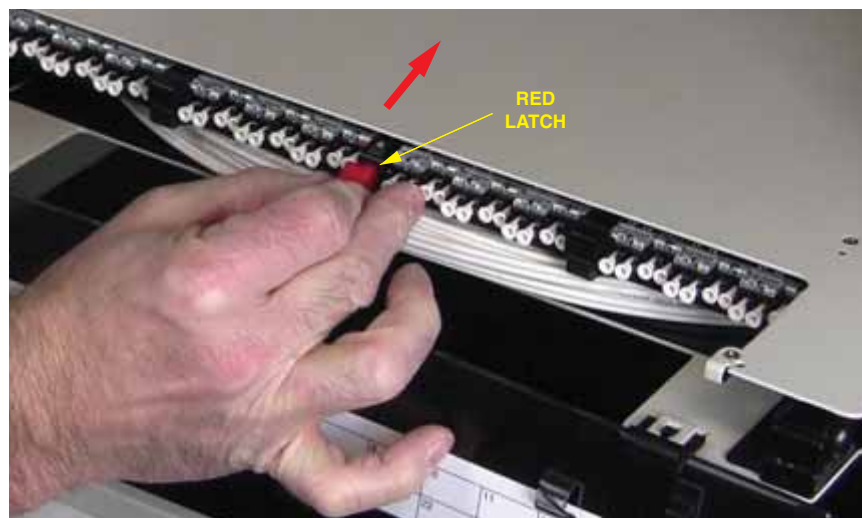
1. Open the Rapid Fiber Panel front cover to provide clearance for the spool to rotate.
2. Pull the red latch out to release the tray, as shown in [Figure 16](#).



26147-A

Figure 16. Pulling Red Latch Out to Release Tray

3. While holding the red latch out, push the tray back slightly. Continue pushing until the tray locks into the payout position as shown in [Figure 17](#).



26148-A

Figure 17. Locking Tray Into Payout Position

4. Remove the blue tape that secures the cable to the right rear of the panel as shown in [Figure 18](#).



26149-A

Figure 18. Removing Blue Tape

5. Based on the location of other equipment at the site, determine whether the cable would be best routed from the rear or front of the panel.
6. If the cable will be routed from the rear of the panel, start unwinding the internal spool by pulling on both the microcable connector pulling eye and the cable, causing the internal spool and attached bulkhead panel to rotate.

► **Note:** Provide at least 3 inches (7.6 cm) of clearance on the rear side of the panel to allow the spool to rotate freely as the microcable is unwound.



**Caution:** If the cable fails to unwind, check for obstacles or obstructions that would prevent the spool from turning. The maximum recommended pull force that may be applied to the MPO connector pulling eye, fanout assembly pulling sock stub connector pulling eye, or to the cable itself is 40 lbs. (18.14 kg).



**Caution:** Avoid using excessive force when unwinding microcable from the internal spool. Use the hand-wrap method if pulling on the cable by hand; refer to [Figure 19](#).

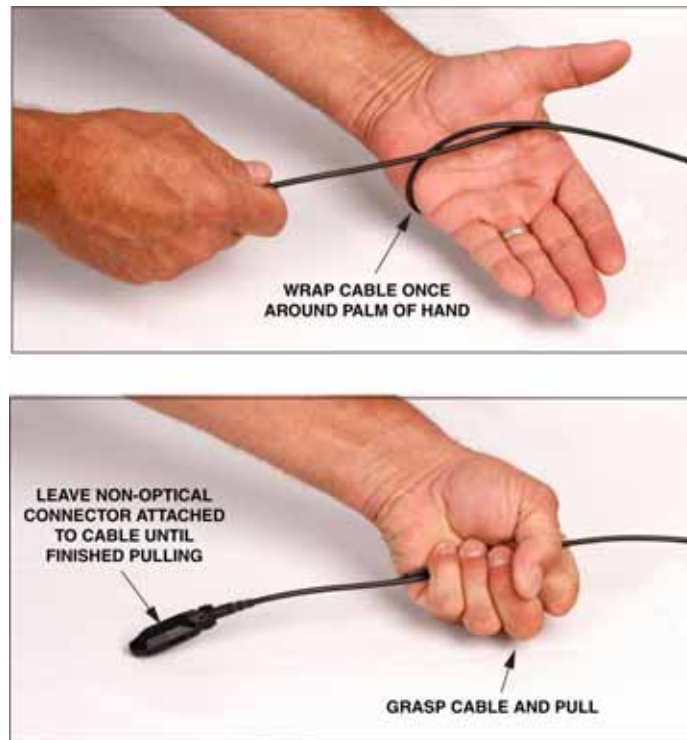


Figure 19. Hand-Wrap Method for Pulling Cable

7. To re-route a cable with MPO connectors or a stub end with non-functional connectors to the front of the panel:
  - a. Pull out enough cable to rotate the internal spool 90° as shown in [Figure 20](#).

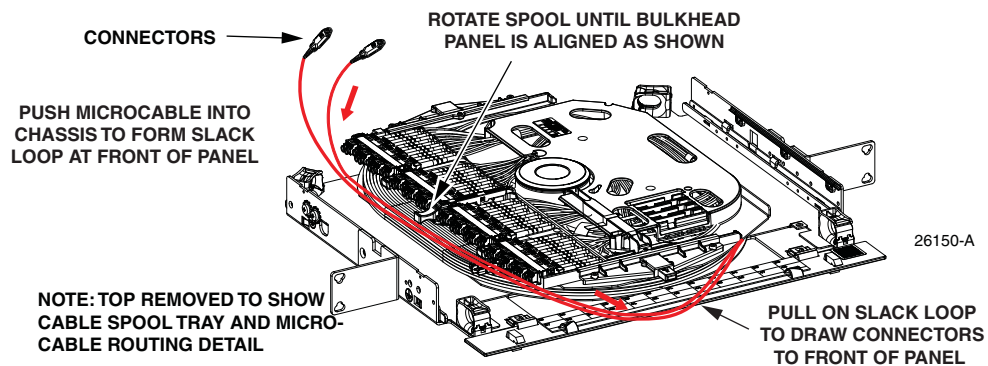


Figure 20. Pulling Microcable to Front of Panel for Front Routing

- b. Remove the microcable from the rear cable retainer and then push the connectors back into the space between the left side of the panel and the bulkhead panel. This will form a slack loop at the front of the panel.
    - c. Pull on the slack loop to draw the connectors through to the front.



8. To re-route a cable with fanout assemblies (with individual connectors) or cabled modules to the front of the panel:
  - a. Remove the two #4-40 bonding screws located on either side of the panel at the points indicated in [Figure 21](#). Save both screws for reuse.

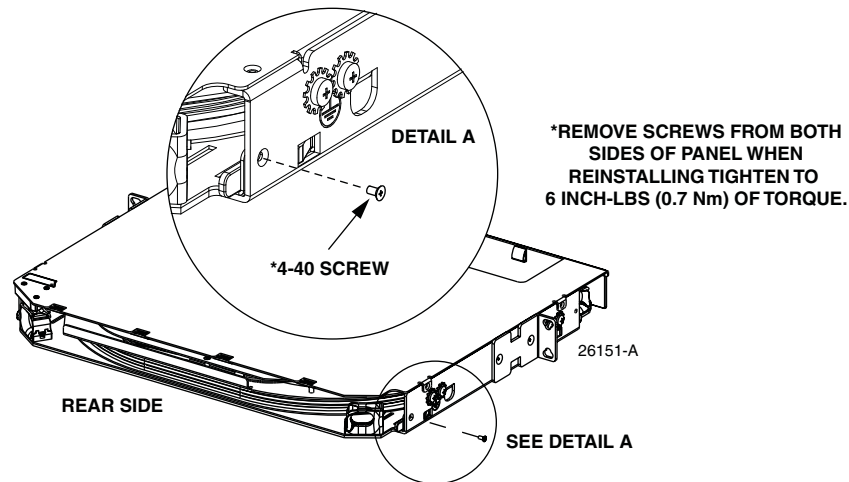


Figure 21. Location of #4-40 Bonding Screws

- b. While pressing in on release tabs (shown in [Figure 22](#)) on both side of the panel (on the rear side), pull the spool tray out from the rear of the panel.

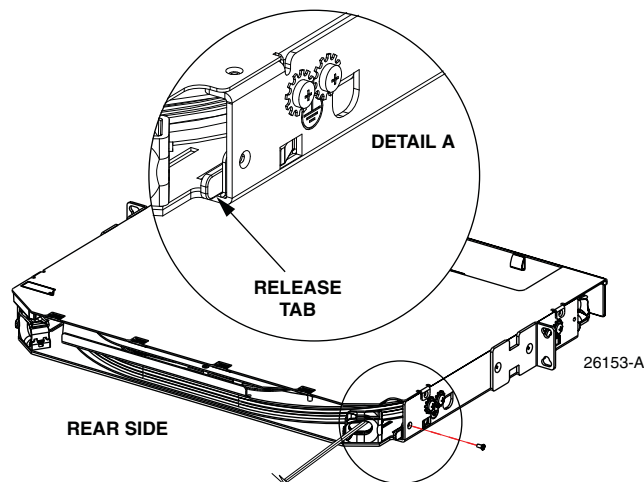


Figure 22. Pressing In Release Tabs To Withdraw Spool Tray

- c. Remove the microcable from the cable retainer at the rear side of the spool tray and route the cable to the front as shown in [Figure 23](#).

► **Note:** There is a cable retainer on each corner of the panel. Any of the cable retainers can be used.

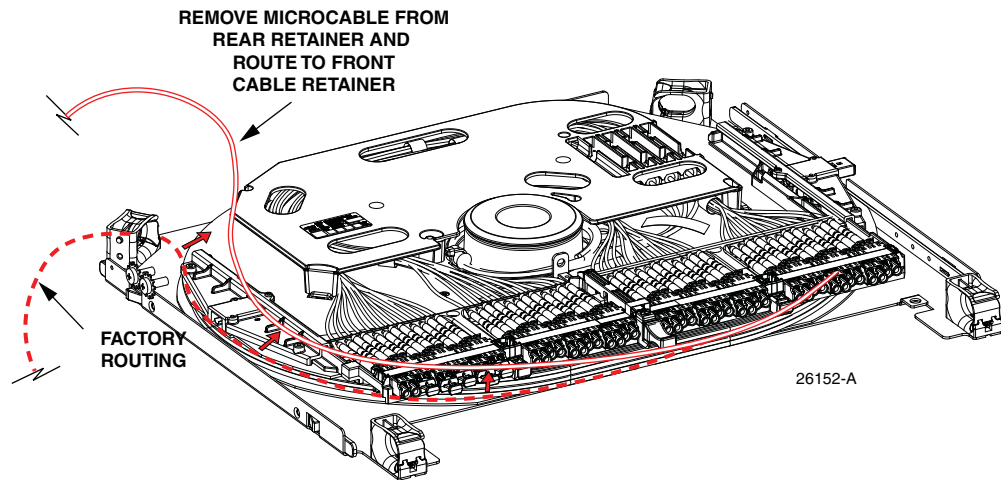


Figure 23. Removing Microcable From Rear Cable Retainer

- d. Guide the fanout assemblies or cabled module(s) into the empty panel (from rear side) and pull them through to the front as shown in [Figure 24](#). It may be necessary to flatten the assembly within the pulling sock to allow it to pass through the panel.

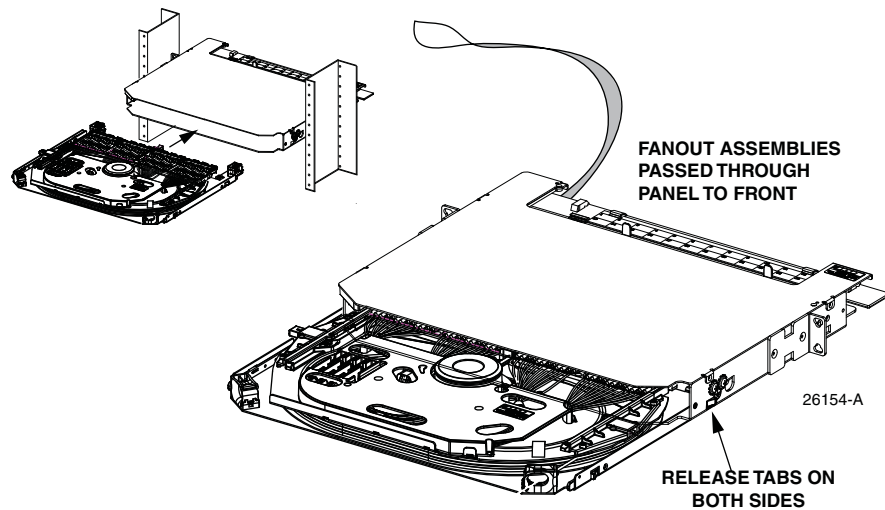


Figure 24. Inserting Cable Spool Tray Into Rear Side of Panel

- e. Align the cable spool tray with the mounting slot, as shown in [Figure 24](#), and carefully slide the spool tray into the mounting slot until the stop is reached.

► **Note:** Be sure the microcable is pulled snug around the spool tray to avoid snags as the spool tray is re-inserted into the panel.

- f. Press the black release tabs on both sides of the panel, as shown in [Figure 24](#), and then continue sliding the RapidReel cable spool tray into the mounting slot until it locks into place.

- g. Re-install the two #4-40 bonding screws (removed in step 8a) on either side of the panel (see [Figure 21](#)); tighten to 6 inch-lbs (0.7 Nm) of torque.
9. After unwinding the microcable, ensure that the microcable is still within the cable retainer at the point where the microcable exits the panel as shown in [Figure 25](#).

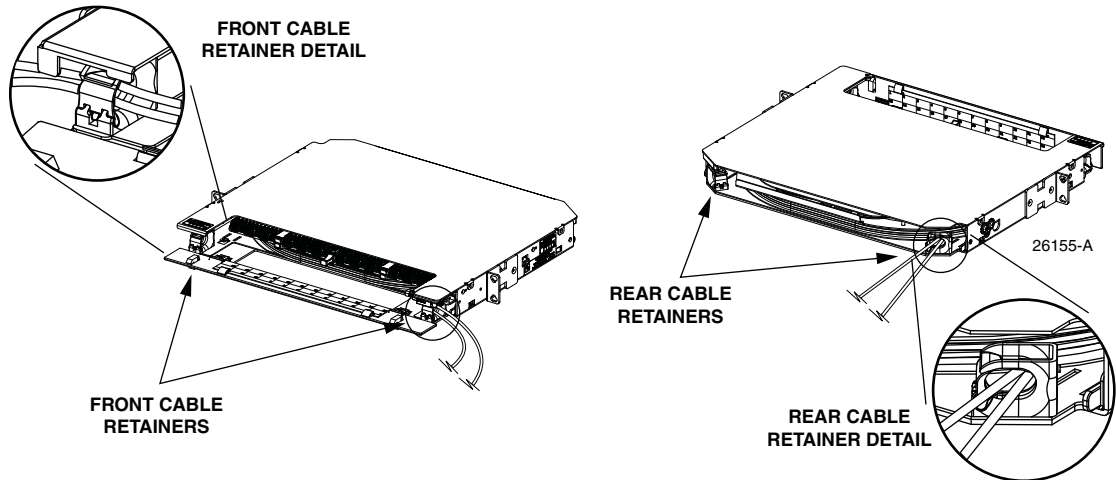


Figure 25. Placing Microcables Within Cable Retainer

10. Using the red latch, rotate the tray clockwise and pull the tray forward to the locked operation position as shown in [Figure 26](#).

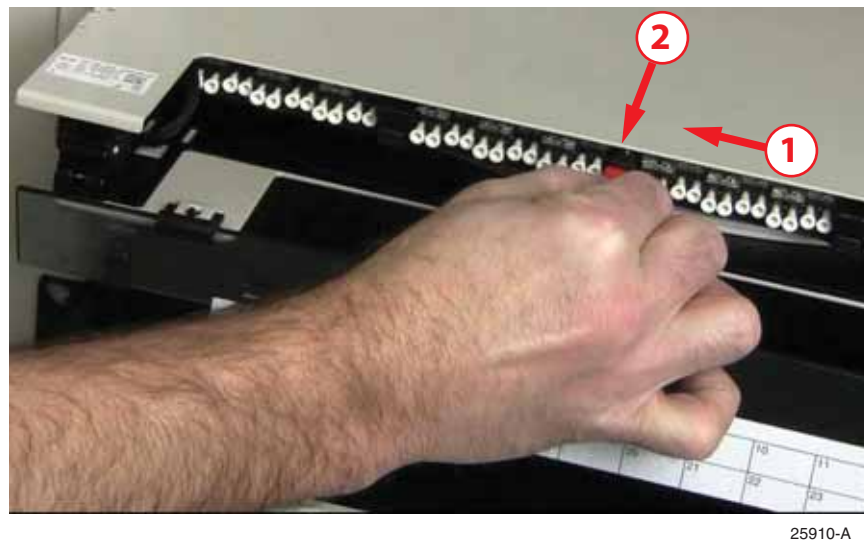


Figure 26. Pulling Tray Forward to Locked Operation Position

11. If routing the microcable through a trough or conduit, proceed to [Topic 5 on Page 33](#) for guidelines.

## 4 INSTALLING A RAPID FIBER PANEL WITH EXTERNAL SPOOL

A 1RU Rapid Fiber Panel with an external spool is shipped with a panel shell and with the RapidReel cable spool tray mounted on the external spool.

Installation of a panel with an external spool involves four procedures:

- The panel shell is installed in the equipment rack or cabinet ([Topic 4.1 on Page 24](#));
- The microcable is unwound from the external spool ([Topic 4.2 on Page 26](#));
- The RapidReel cable spool tray is mounted within the panel ([Topic 4.3 on Page 27](#));
- The remaining microcable is unwound from the RapidReel cable spool tray ([Topic 4.4 on Page 30](#)).

Proceed to the first procedure.

### 4.1 Mounting the Panel Shell on the Equipment Rack

- **Note:** The 1RU Rapid Fiber Panel is designed to be installed in an environmentally controlled network telecommunications facility such as a Central Office, Controlled Environmental Vault, or Data Center. Only the I/O cable is rated for both indoor and outdoor use.

The Rapid Fiber Panel can be mounted in either a 19-inch or 23-inch rack or cabinet. The panel shell is shipped with the 23-inch brackets installed in the 5-inch recess position. For a 19-inch rack installation, the 23-inch brackets must be removed and replaced with the 19-inch brackets.

- **Note:** If a Rapid Fiber Panel is installed above or below a non-Rapid fiber panel, 1RU of open space must be left between the two panels. This space is required for accessing the rear connectors if cleaning is required.

Use the following procedure to install the panel in the equipment rack:

1. Select a suitable location for mounting the panel shell in the rack. Provide a minimum of 15 inches clearance at the front or rear side of the panel for installing the RapidReel cable spool tray.
2. Determine if the rack or cabinet width is 19 or 23 inches. Also, determine recess required (2, 4, or 5 inches) for mounting the panel. Refer to [Figure 27](#).
3. If the panel shell is being installed in a 23-inch rack or cabinet in other than the 5-inch recess position, remove the 23-inch mounting brackets and re-install them at the required (2- or 4- inch) recess position, as shown in [Figure 9](#).
4. If the panel shell is being installed in a 19-inch rack or cabinet, remove the 23-inch mounting brackets and install 23-inch brackets at the required recess (2, 4, or 5 inches) position, as shown in [Figure 9](#).
5. Secure the panel shell to the rack or cabinet using the four #12-24 screws and star washers provided, as shown in [Figure 28](#).

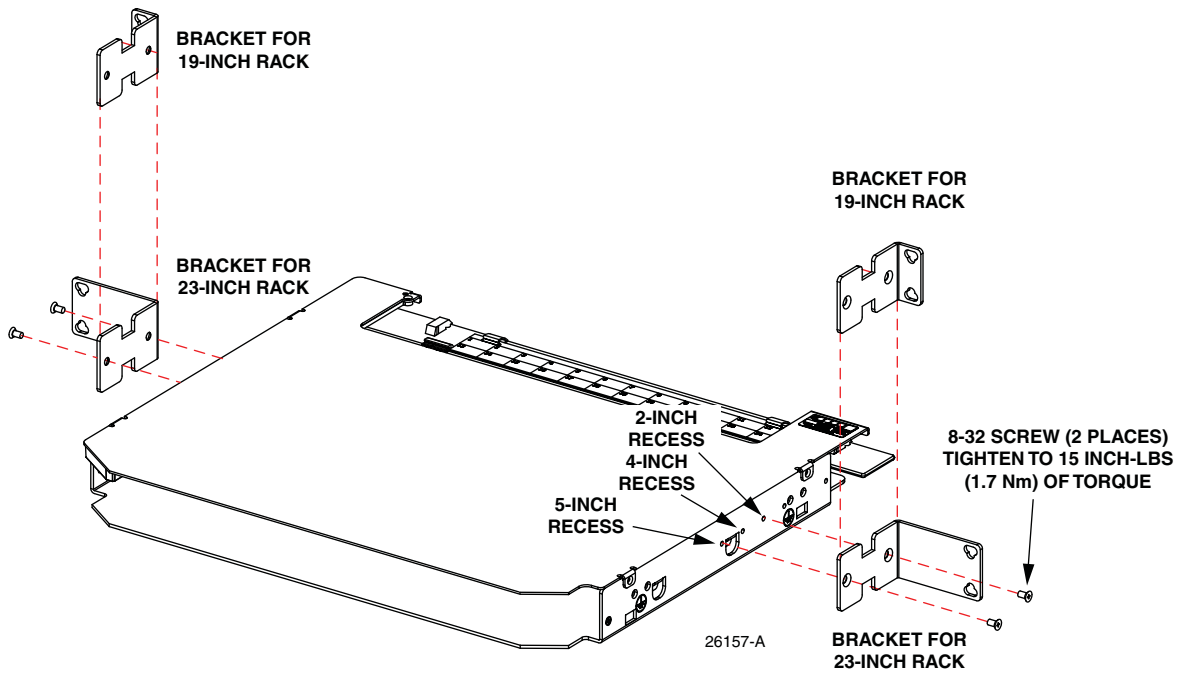


Figure 27. Mounting Bracket Installation

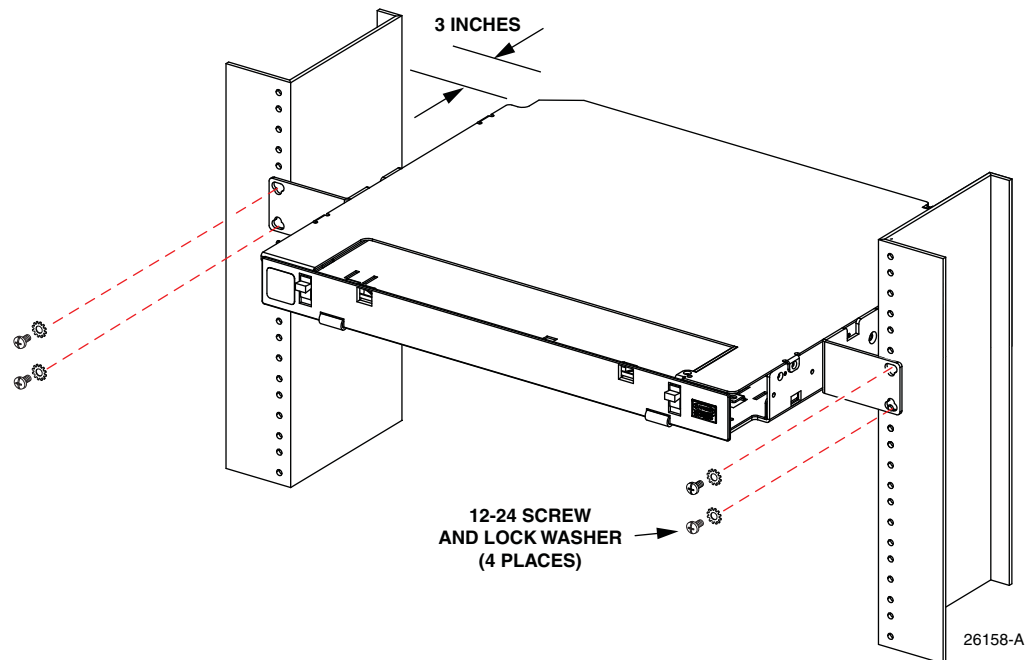


Figure 28. Mounting Panel Shell in Rack

6. Connect a grounding wire to the panel in either of the two locations shown in [Figure 29](#) using the two #10-32 screws and star washers provided. A two-hole grounding lug (not provided but shown here for reference) is recommended for the connection.

► **Note:** Ground the unit to the local facility CBN (Common Bonding Network) or IBN (Isolated Bonding Network) per local practice.

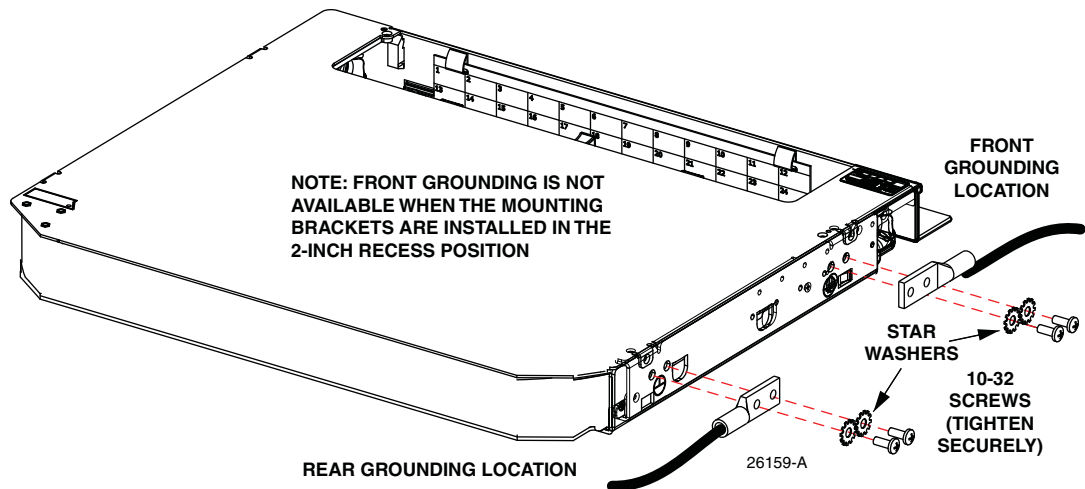


Figure 29. Grounding Rapid Fiber Panel

## 4.2 Unwinding Microcable from the External Spool

To unwind and route the microcable from the external spool to an ODF or fiber panel:

1. Position the RapidReel cable spool tray with attached the external spool close to the equipment rack where the panel is installed.
  - **Note:** If the microcable will exit the panel from the rear, place the spool at the rear side of the rack. If the microcable will exit the panel from the front, place the spool at the front side of the rack.
  - **Note:** The external spool (with attached RapidReel cable spool tray) is pre-mounted on the carousel as shown in [Figure 30](#).
2. Determine whether the cable will be routed through a trough or conduit, and select the corresponding procedure in [Topic 5 on Page 33](#). Following the instructions provided, route the microcable to as close as possible to the appropriate ODF or fiber panel.

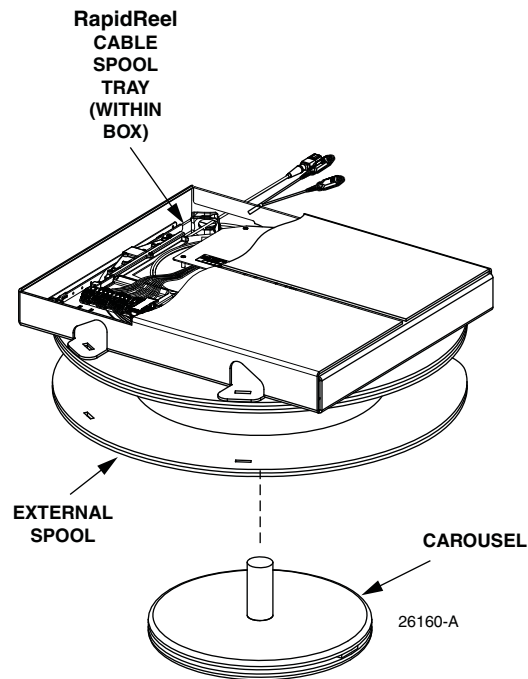


Figure 30. External Spool Placed on Carousel

- ▶ **Note:** Due to space constraints in conduit, only cables with MPO connectors or MPO-like non-functional connectors should be routed through conduit.
  - ▶ **Note:** After the microcable has been completely unwound from the external spool, an additional length of up to 200 feet will be left on the RapidReel cable spool tray.
3. When the microcable has been completely unwound from the external spool, STOP ROTATING THE SPOOL.
  4. Place the discarded spool and box in the appropriate recycling bin.

### 4.3 Mounting the RapidReel Cable Spool Tray in the Panel Shell

After the microcable has been completely unwound from the external spool, the RapidReel cable spool tray must be mounted in the panel shell. The cable spool tray may be installed in the panel shell from either the front or rear side. Use the following procedure.

1. If the RapidReel cable spool tray will be inserted into the panel from the front:
  - a. Remove the front door on the panel shell.
  - b. Route the microcable from the rear cable retainer and route it to the front cable ring as shown in [Figure 31](#).

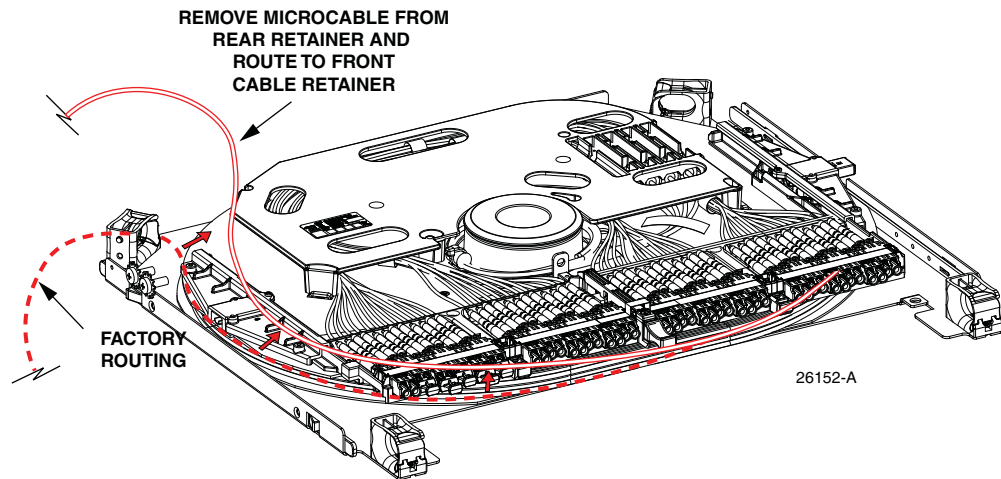


Figure 31. Routing Cable To Front of Cable Spool Tray

2. If the RapidReel cable spool tray will be inserted into the panel from the rear, align the RapidReel cable spool tray with the mounting slot, as shown in [Figure 32](#), and carefully slide the spool tray into the mounting slot until the stop is reached.

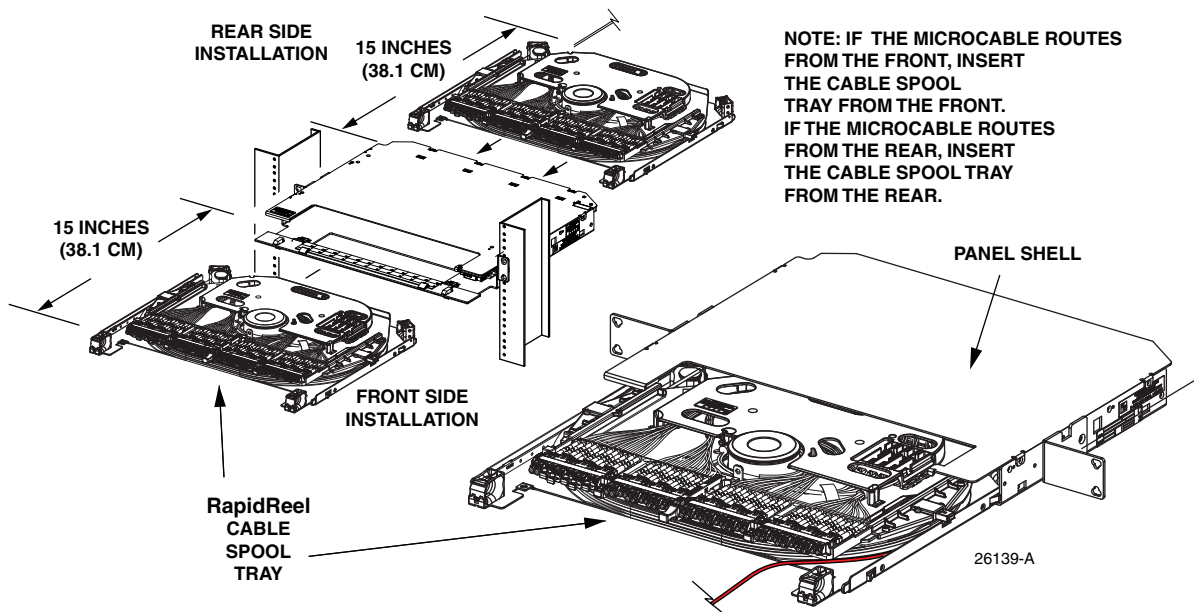


Figure 32. Aligning Cable Spool Tray With Mounting Slot



3. Press the black release tabs on both sides of the panel, as shown in [Figure 33](#), and then continue sliding the RapidReel cable spool tray into the mounting slot until it locks into place.
4. Locate the two #4-40 bonding screws that are sent separately with the ship-along parts.
5. Install the two #4-40 screws on either side of the panel at the points indicated in [Figure 34](#). Tighten to 6 inch-lbs (0.7 Newton meters) of torque

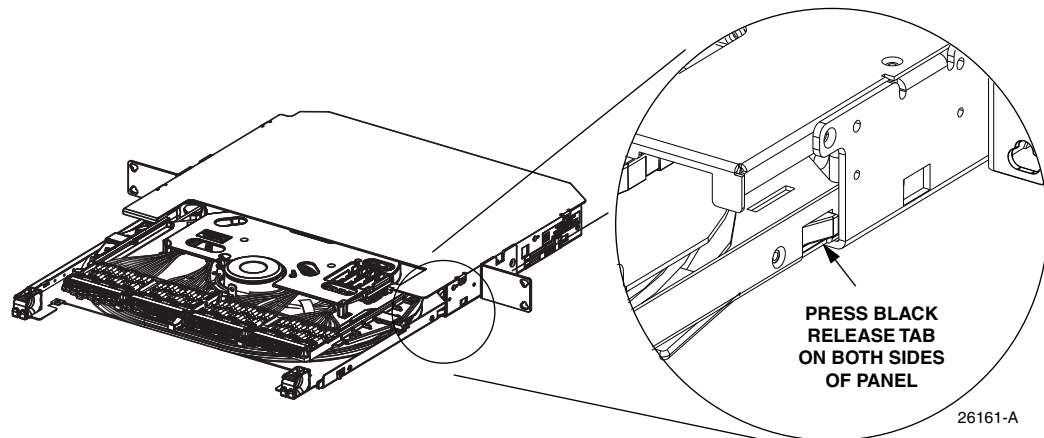


Figure 33. Pressing Black Release Tabs

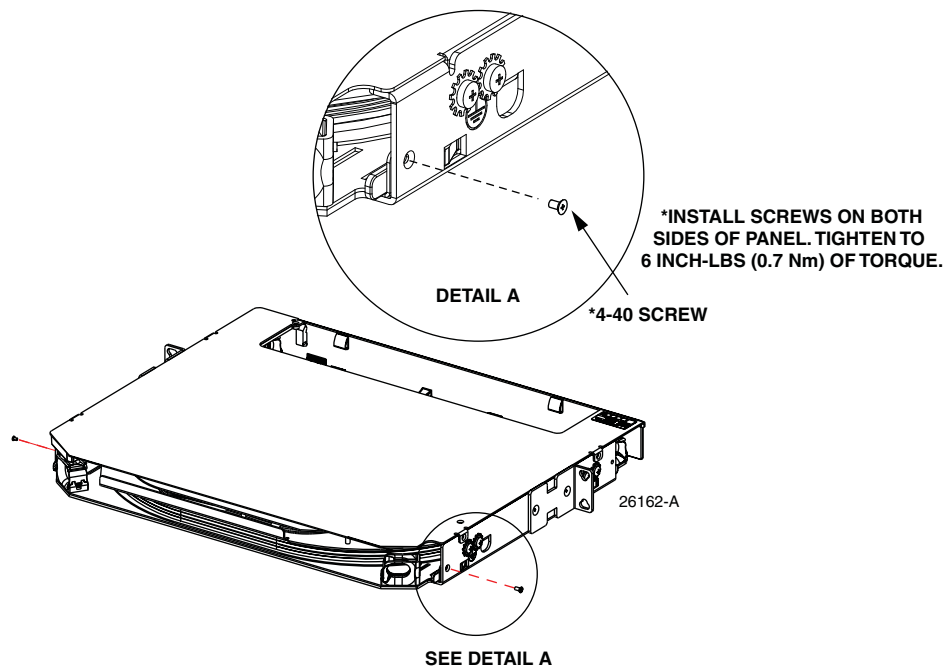
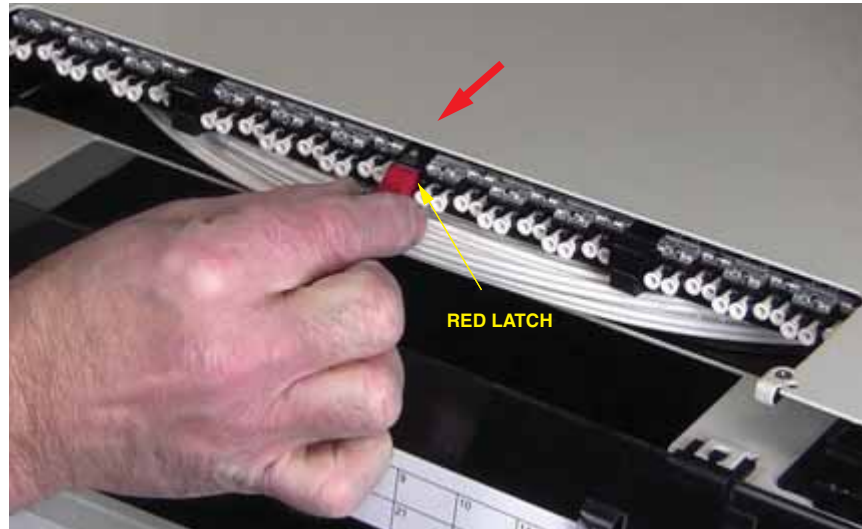


Figure 34. Installing #4-40 Bonding Screws

#### 4.4 Unwinding Microcable from the RapidReel Cable Spool Tray

Use the following procedure to unwind the microcable on the RapidReel cable spool tray.

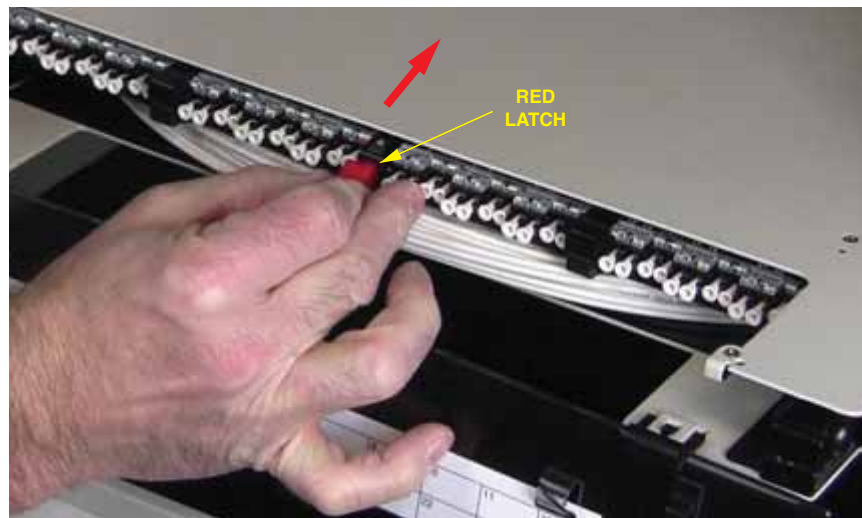
1. Open the Rapid Fiber Panel front cover.
2. Pull the red latch out to release the tray, as shown in [Figure 35](#).



26147-A

Figure 35. Pulling Red Latch Out to Release Tray

3. While holding the red latch out, push the tray back slightly. Continue pushing until the tray locks into position as shown in [Figure 36](#).



26148-A

Figure 36. Pushing the Tray Back In Slightly

4. Remove the blue tape that secures the cable to the right rear of the panel as shown in [Figure 37](#).



26149-A

Figure 37. Removing Blue Tape

5. Start unwinding the internal spool by pulling on both the microcable connector pulling eye and the cable, causing the internal spool and attached bulkhead panel to rotate.
  - ▶ **Note:** Provide at least 3 inches (7.6 cm) of clearance on the rear side of the panel to allow the spool to rotate freely as the microcable is unwound.



**Caution:** If the cable fails to unwind, check for obstacles or obstructions that would prevent the spool from turning. The maximum recommended pull force that may be applied to the MPO connector pulling eye, fanout assembly pulling sock stub connector pulling eye, or to the cable itself is 40 lbs. (18.14 kg).



**Caution:** Avoid using excessive force when unwinding microcable from the internal spool. Use the hand-wrap method if pulling on the cable by hand; refer to [Figure 38](#).

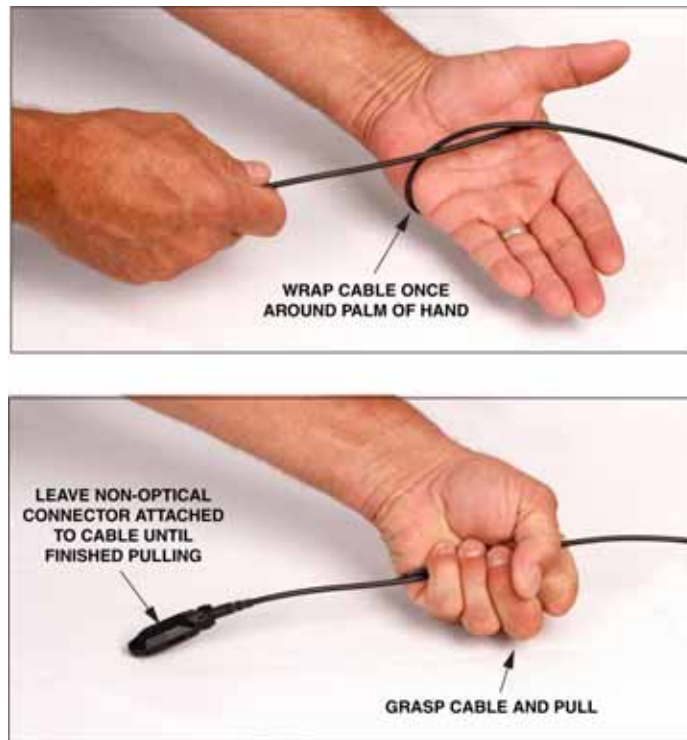


Figure 38. Hand-Wrap Method for Pulling Cable

6. After unwinding the microcable, ensure that the microcable is still within the cable retainer at the point where the microcable exits the panel as shown in [Figure 39](#).

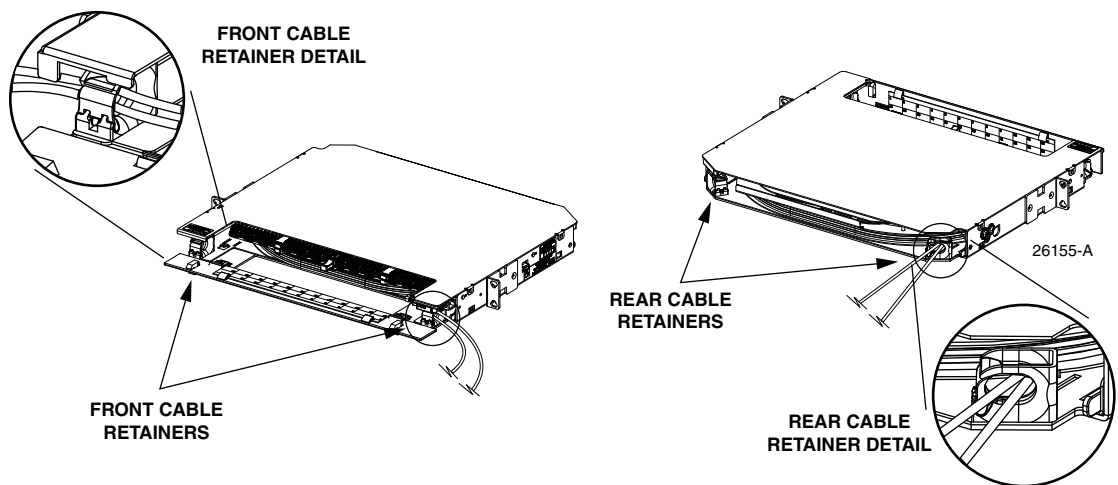
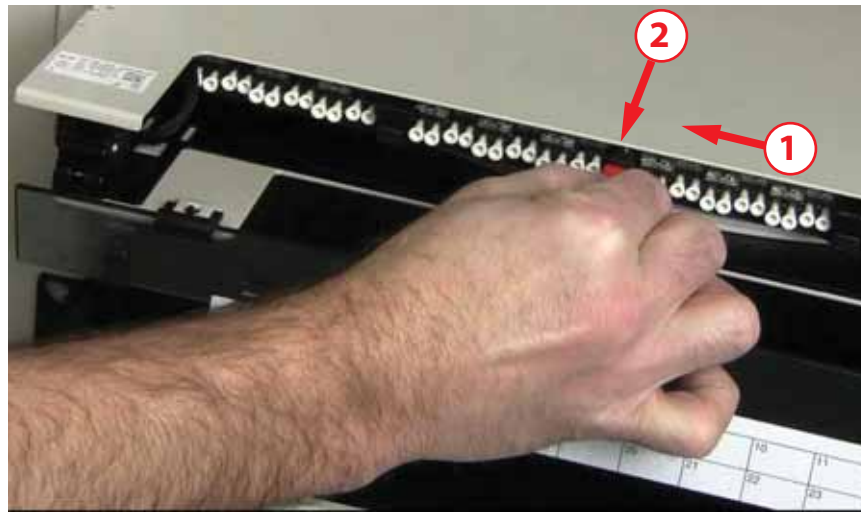


Figure 39. Ensuring Microcable is In Cable Retainer

7. Using the red latch, rotate the tray clockwise and pull the tray forward to the locked operation position as shown in [Figure 40](#).



25910-A

Figure 40. Pulling Tray Forward to Locked Operation Position

## 5 MICROCABLE UNWINDING AND ROUTING ADDITIONAL GUIDELINES

This section provides procedures for unwinding and routing microcable from the panel through an open trough system or conduit. This is done when the lead end of the cable is paid out from the RapidReel cable spool tray (if the panel has no external spool) or from the external spool (if present).

- ▶ **Note:** Due to space constraints in conduit, only cables with MPO connectors or MPO-like non-functional connectors should be routed through conduit.

### 5.1 Microcable Installed in Open Trough System

Use this procedure to route the lead end of the microcable through an open trough system:

- ▶ **Note:** This procedure begins at the point where the RapidReel cable spool tray or external spool is released and ready to be pulled as described in either [Topic 3.2 on Page 16](#) or [Topic 4.2 on Page 26](#).

1. Route the microcable to the appropriate ODF, fiber panel, or splice enclosure, placing it within the open trough system. Dress and secure microcable as specified by local practice.



**Caution:** Avoid using excessive force when unwinding microcable from the internal spool. If the cable fails to unwind, check for obstacles or obstructions that would prevent the spool from turning. The maximum recommended pull force that may be applied to the MPO connector pulling eye, fanout assembly pulling sock stub connector pulling eye, or to the cable itself is 40 lbs. (18.14 kg). Use the hand-wrap method if pulling on the cable by hand.

2. Adjust the microcable so any excess slack is accumulated at the Rapid Fiber Panel. This slack will be rewound on the cable spool tray after the cable is paid out to the termination point.
  3. Determine if the microcables are terminated with MPO connectors (connectorized cables), non-functional connectors (stub end cable), a fanout assembly (with pulling sock), or a QNG4 cabled module (with pulling sock). A special label (NON-FUNCTIONAL CONNECTOR) is attached to microcables that are terminated with non-functional connectors. The label is attached to the cable next to the connector boot.
- **Note:** Microcables with stub end non-functional connectors look the same as microcables with MPO connectors. Like MPO connectors, they are housed inside of black pulling eyes; however, non-functional connectors are not optically terminated. They are crimped to the cable jacket and strength member yarns. Non-functional connectors are cut off after the cable has been fully unwound from the spool and is ready to be spliced.
4. If the microcable is terminated with an MPO connector, proceed to step 5. If the microcable is terminated with a non-functional connector, proceed to step 6. If the microcable is terminated with connector fanout assemblies, proceed to step 7. If the microcable is terminated with an NG4access cabled module, proceed to step 8.
  5. Complete the following for each cable terminated with an MPO connector:
    - a. Remove the pulling eye from each MPO connector by inserting and twisting a screwdriver or coin as shown in [Figure 41](#).

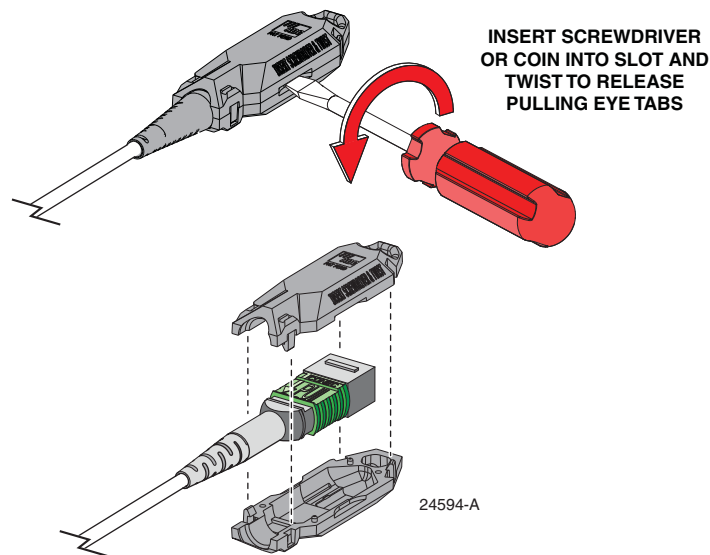


Figure 41. Removing a Pulling Eye

- b. Remove the connector dust cap and clean the MPO connector as specified in the Multifiber-Push On Assembly Connector Cleaning Instructions (ADCP-96-150).
- c. Connect the microcable MPO connector to the appropriate equipment MPO connector. Labels are attached to each microcable, as shown in [Figure 42](#), that identify the cable number and the range of optical ports associated with the MPO connector.

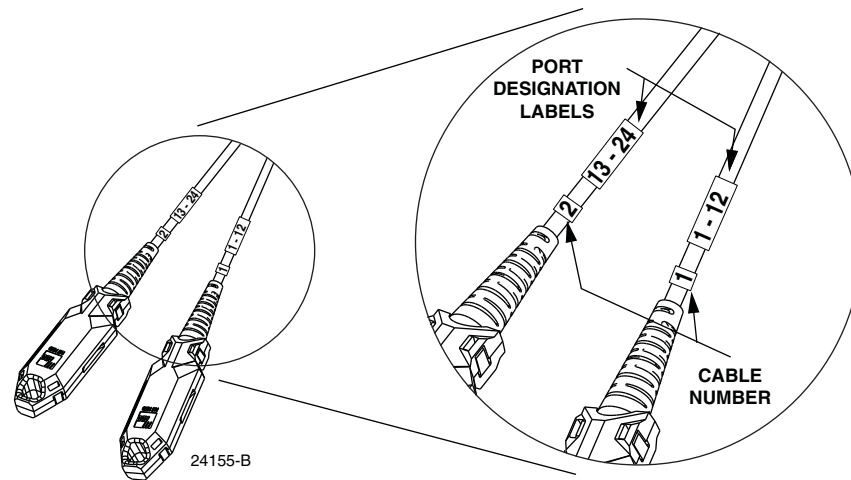


Figure 42. Cable Number and Optical Port Designation Labels

- d. When all the microcable MPO connectors are connected to the equipment MPO adapters, proceed to step 9.
6. Complete the following for each microcable terminated with a stub end non-functional connector:
  - ▶ **Note:** Do not cut off the non-functional connector before cable installation has been completed or the integrity of the cable may be compromised.
    - a. Record the label information (cable number, range of optical ports, and serial number) that is applied to each cable and then tag each cable so it can be identified when the cable jacket is removed for splicing.
    - b. Cut off the non-functional connector and discard.
    - c. Determine the point at which the microcable will be attached to the splice tray and then strip back the cable jacket to expose the optical fibers.
    - d. Splice the microcable optical fibers to the appropriate optical fibers following local policies and procedures. Refer to [Table 2](#) to determine the optical port designations for the microcable optical fibers.

Table 2. Optical Port Designation

MICRO CABLE	OPTICAL PORT	FIBER COLOR	MICRO CABLE	OPTICAL PORT	FIBER COLOR
1	1	Blue	2	13	Blue
1	2	Orange	2	14	Orange
1	3	Green	2	15	Green
1	4	Brown	2	16	Brown
1	5	Slate	2	17	Slate
1	6	White	2	18	White
1	7	Red	2	19	Red
1	8	Black	2	20	Black



Table 2. Optical Port Designation

MICRO CABLE	OPTICAL PORT	FIBER COLOR	MICRO CABLE	OPTICAL PORT	FIBER COLOR
1	9	Yellow	2	21	Yellow
1	10	Violet	2	22	Violet
1	11	Rose	2	23	Rose
1	12	Aqua	2	24	Aqua

- e. When the microcables with non-functional connectors have been spliced, proceed to step 9.
7. Do the following for each microcable terminated with 12-connector fanout assemblies:
- ▶ **Note:** For cables equipped with 12-connector fanout assemblies, kits are available for securing the fanouts to an Optical Distribution Frame including NGF, NG3, LSX, FCM, and NG4access. A universal kit is also available for attaching 9 foot long 2 mm fanout assemblies to a Glide or interbay management panel.
    - a. If the fanout is wrapped within a pulling sock, such as shown in [Figure 43](#), remove the pulling sock from the end of the microcable by first peeling away the tape and then cutting the two cable ties at the point shown. Next, slide the sock off the cable assembly and remove the pink bag from the connectors. If a pipe protection is also present (used for fanout assemblies with 900 micron fibers only), remove the pipe (refer to [Figure 44](#)).
    - b. Before connecting an individual connector to the ODF or fiber panel, remove the ferrule dust cap from the connector and clean the connector as specified in the Optical Fiber Connector Wet and Dry Cleaning Instructions (ADCP-90-159).

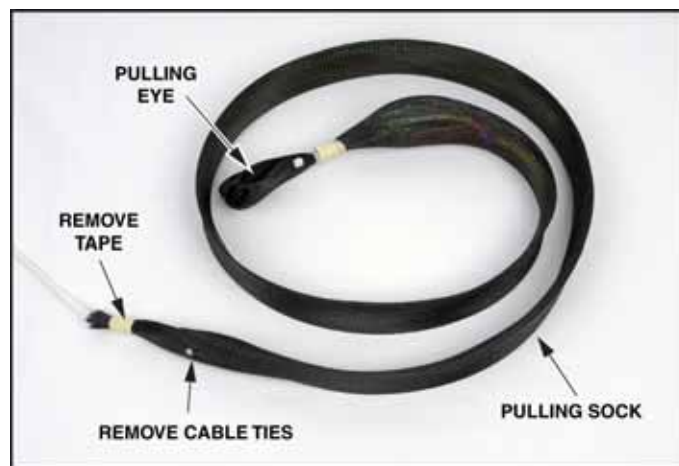


Figure 43. Removing Pulling Sock from Fanout Assemblies





Figure 44. Removing Pipes from 900 mm Fanout Assemblies

- c. Connect each connector to the appropriate adapter. A label applied near the connector boot, shown in Figure 45, indicates the connector's optical port.
- d. When all the individual connectors are connected to the terminating adapters, proceed to step 9.

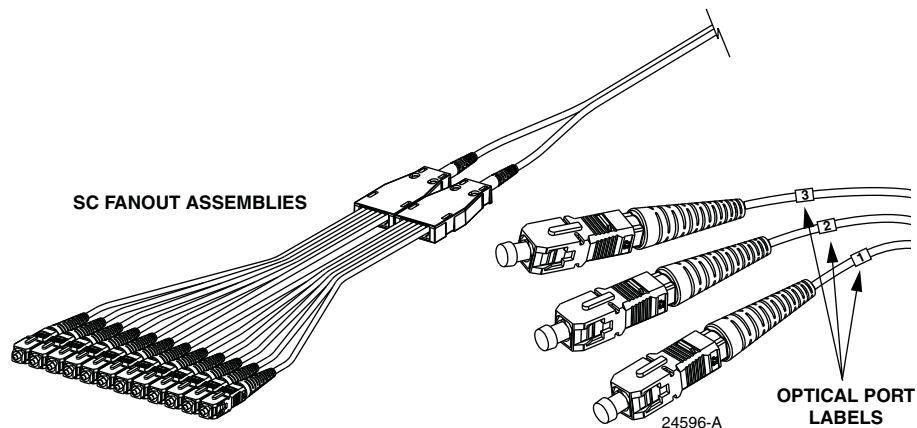
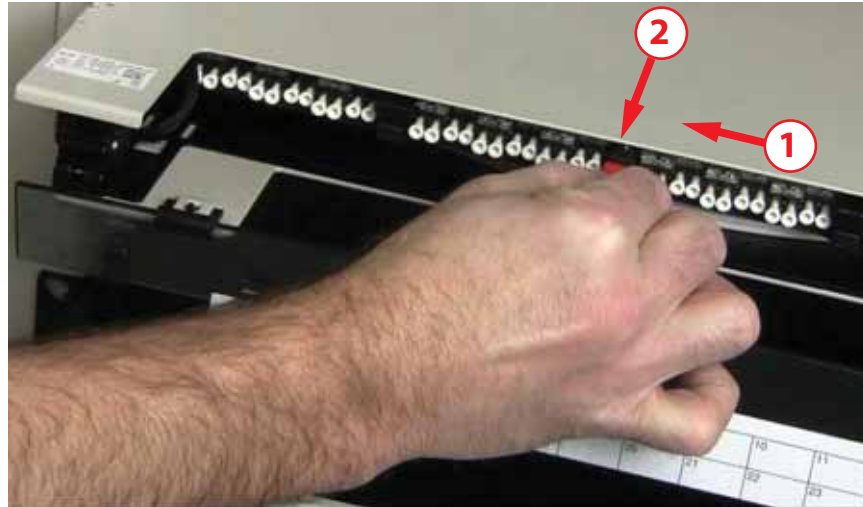


Figure 45. Connector Optical Port Designation Labels  
(Shown for Reference Only)

8. If the microcable is terminated with a NG4 cabled module, proceed as follows:
  - a. If the microcable is being routed to a NG4 universal panel mounted on a QNG4 frame, refer to the laminated cards on the rear of the frame for instructions on how to route the cable on the frame and install the cabled module.

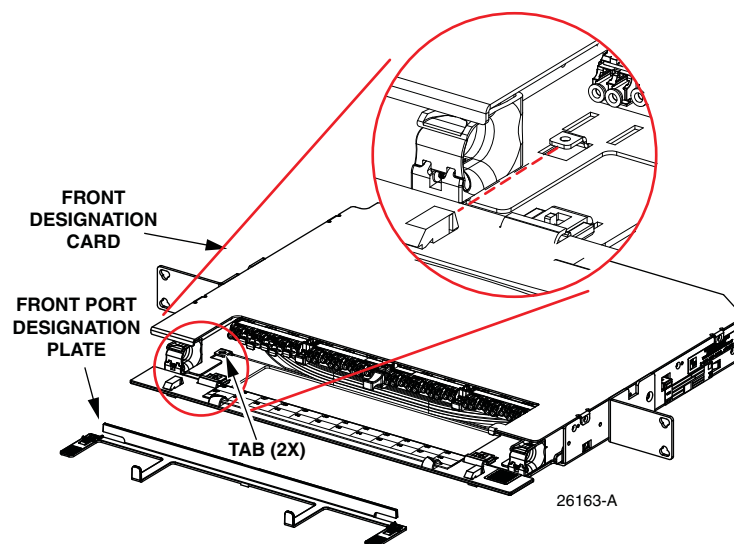
- b. If the microcable is being routed to a NG4 universal panel mounted on a non-NG4access frame, refer to the labels on the panel for instructions.
9. Rewind any remaining slack on the spool tray. Apply a small amount of tension to the microcable as the slack is being rewound on the spool. Make sure the cable is wound snug inside the spool tray so the cable doesn't snag on anything.
10. Using the red latch, rotate the tray clockwise and pull the tray forward to the locked operation position as shown in [Figure 46](#).



25910-A

Figure 46. Pulling Tray Forward to Locked Operation Position

11. Locate and install the front port designation plate as shown in [Figure 47](#). Slide in the designation plate until it reaches the detents and snaps into place



26163-A

Figure 47. Installing Front Port Designation Plate

## 5.2 Microcable Pulled Through Conduit

- ▶ **Note:** Due to space constraints in conduit, only cables with MPO connectors or MPO-like non-functional connectors should be routed through conduit.

Use this procedure to route the lead end of the microcable through conduit.

1. Route the microcable to the point where it will enter the conduit.
2. Insert the leading cable connector into a cable pulling swivel such as the one shown in [Figure 48](#).

- ▶ **Note:** The swivel will ensure that proper pulling force is applied to the cable and will reduce the possibility of binding or tangling the cables within the conduit.

3. Wrap several layers of vinyl tape around the pulling swivel mesh and the trailing connector as shown in [Figure 49](#).

- ▶ **Note:** This will allow the connectors to slide smoothly within the conduit.

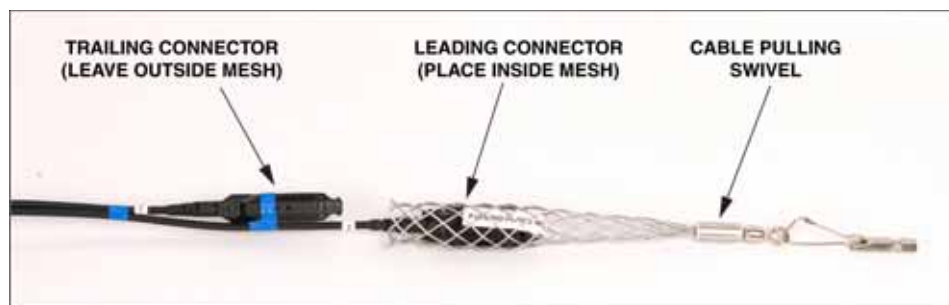


Figure 48. Inserting Microcable Lead Connector into Pulling Eye



Figure 49. Wrap Pulling Swivel and Connectors with Vinyl Tape



**Caution:** *Avoid using excessive force when unwinding microcable from the internal spool. If the cable fails to unwind, check for obstacles or obstructions that would prevent the spool from turning. The maximum recommended pull force that may be applied to the MPO connector pulling eye, fanout assembly pulling sock stub connector pulling eye, or to the cable itself is 40 lbs. (18.14 kg). Use the hand-wrap method if pulling on the cable by hand.*

4. Attach a draw wire or tape to the pulling swivel and then carefully guide the pulling swivel with attached connectors into the conduit. Continue to guide the cable into the conduit while the cable is being pulled.

▶ **Note:** The minimum recommended conduit or firebreak hole diameter is 1.1-inch.

5. Pull the cable through the conduit until the pulling swivel appears at the end of the conduit.
6. Disconnect the pulling wire from the pulling swivel and remove the vinyl tape and pulling swivel from the end of the cable.

▶ **Note:** If the cable will be routed to a splice enclosure for splicing, **do not** cut-off the non-functional connector at this time. Removing the non-functional connector before pulling has been completed may compromise the integrity of the cable.

7. Use the hand-wrap method to pull the cable to the point where the cable will be spliced or connected. Dress and secure microcable at the termination point as specified by local practice.
8. Adjust the microcable so any excess slack is accumulated at the Rapid Fiber Panel and then rewind the slack on the spool.

▶ **Note:** After the cable has been pulled through the conduit, the remaining segments of cable that are not protected by the conduit should be placed in an open trough system such as the FiberGuide System, a cable rack system, or flexible tubing.

9. Determine if the microcables are terminated with MPO connectors (connectorized cable), or non-functional connectors (stubbed cable). (A special label (NON-FUNCTIONAL CONNECTOR) is attached to microcables that are terminated with non-functional connectors. The label is attached to the cable next to the connector boot.) If the microcable is terminated with an MPO connector, proceed to step 10. If the microcable is terminated with a non-functional connector, proceed to step 11.

▶ **Note:** Microcables with stub end non-functional connectors look the same as microcables with MPO connectors. Like MPO connectors, they are housed inside of black pulling eyes; however, non-functional connectors are not optically terminated. They are crimped to the cable jacket and strength member yarns. Non-functional connectors are cut off after the cable has been fully unwound from the spool and is ready to be spliced.

10. Complete the following for each cable terminated with an MPO connector:
  - a. Remove the pulling eye from each MPO connector by inserting and twisting a screwdriver or coin as shown in [Figure 41 on Page 34](#).
  - b. Remove the connector dust cap and clean the MPO connector as specified in the Multifiber-Push On Assembly Connector Cleaning Instructions (ADCP-96-150).

- c. Connect the microcable MPO connector to the appropriate equipment MPO connector. Labels are attached to each microcable, as shown in [Figure 50](#), that identify the cable number and the range of optical ports associated with the MPO connector.

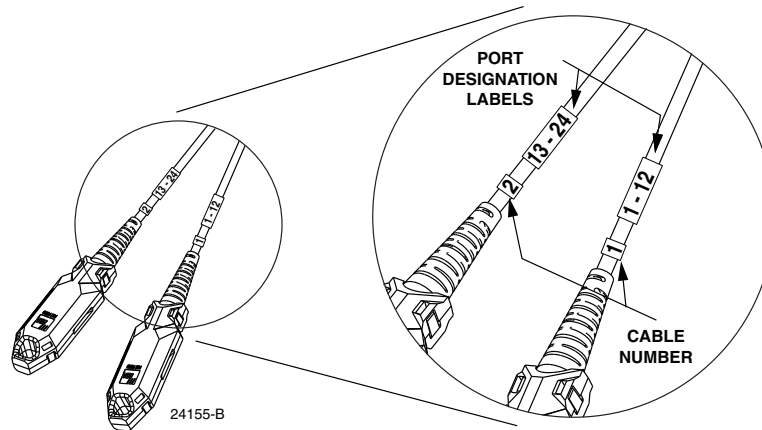


Figure 50. Cable Number and Optical Port Designation Labels

- d. When all the microcable MPO connectors are connected to the equipment MPO connectors, proceed to step 14.
11. Complete the following for each stub end terminated with a non-functional connector:
- ▶ **Note:** Do not cut off the non-functional connector before cable installation has been completed or the integrity of the cable may be compromised.
    - a. Record the label information (cable number, range of optical ports, and serial number) that is applied to each cable and then tag each cable so it can be identified when the cable jacket is removed for splicing.
    - b. Cut off the non-functional connector and discard.
    - c. Determine the point at which the microcable will be attached to the splice tray and then strip back the cable jacket to expose the optical fibers.
    - d. Splice the microcable optical fibers to the appropriate optical fibers following local policies and procedures. Refer to [Table 3](#) to determine the optical port designations for the microcable optical fibers.

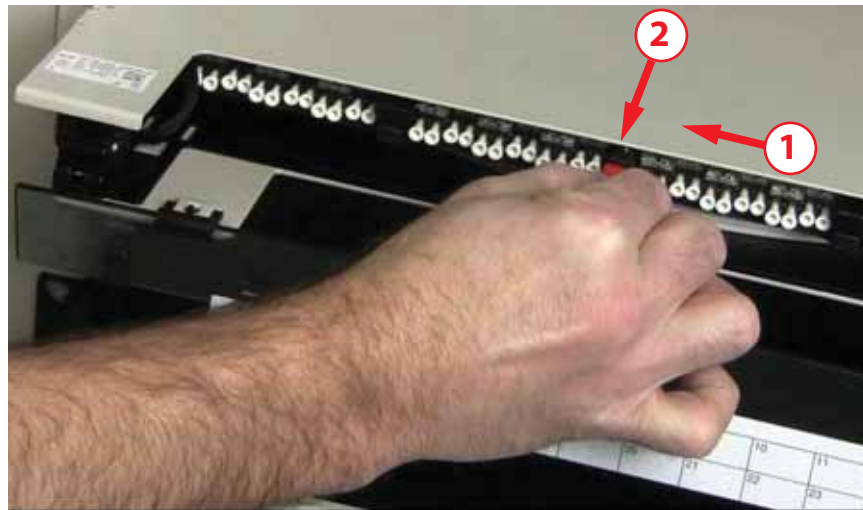
Table 3. Optical Port Designation

MICRO CABLE	OPTICAL PORT	FIBER COLOR	MICRO CABLE	OPTICAL PORT	FIBER COLOR
1	1	Blue	2	13	Blue
1	2	Orange	2	14	Orange
1	3	Green	2	15	Green
1	4	Brown	2	16	Brown
1	5	Slate	2	17	Slate
1	6	White	2	18	White
1	7	Red	2	19	Red

Table 3. Optical Port Designation

MICRO CABLE	OPTICAL PORT	FIBER COLOR	MICRO CABLE	OPTICAL PORT	FIBER COLOR
1	8	Black	2	20	Black
1	9	Yellow	2	21	Yellow
1	10	Violet	2	22	Violet
1	11	Rose	2	23	Rose
1	12	Aqua	2	24	Aqua

- e. When the microcables with non-functional connectors have been spliced, proceed to step 14.
12. Rewind any remaining slack on the spool tray. Apply a small amount of tension to the microcable as the slack is being rewound on the spool. Make sure the cable is wound snug inside the spool tray so the cable doesn't snag on anything.
13. Using the red latch, rotate the tray clockwise and pull the tray forward to the locked operation position as shown in [Figure 51](#).



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Figure 51. Pulling Tray Forward to Locked Operation Position

14. When done, be sure to pull the center red latch forward to first locking position. This will lock the tray to prevent further spool rotation.
15. Locate and install the front port designation plate as shown in [Figure 52](#). Slide in the designation plate until it reaches the detents and snaps into place



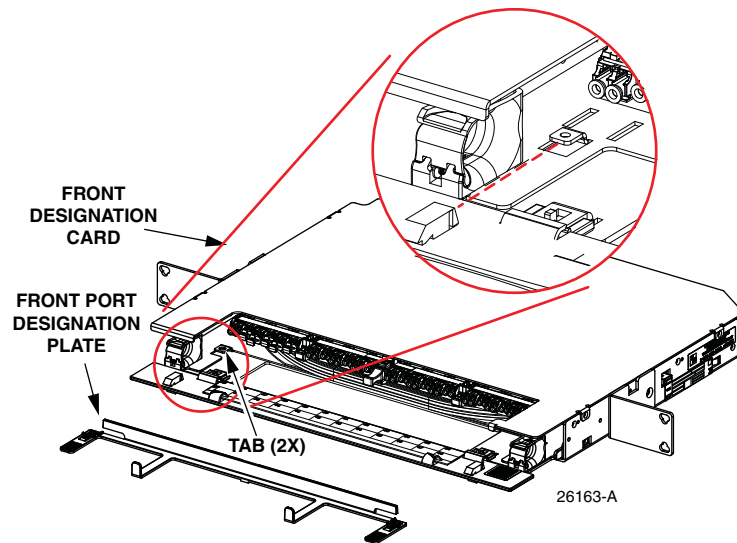


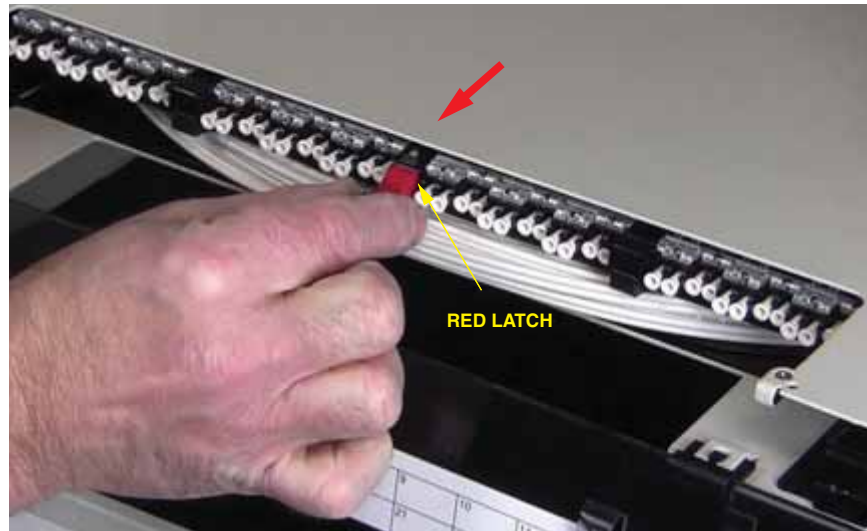
Figure 52. Installing Front Port Designation Plate

## 6 BULKHEAD ADAPTER ACCESS PROCEDURE AND SERIAL NUMBER LOCATIONS

### 6.1 Accessing the Bulkhead Adapter Rear Connectors

If required, the adapter bulkhead may be moved forward to access the connectors at the rear of the adapter bulkhead. This should only be done following **initial installation** of the Rapid Fiber Panel and only if testing indicates that **a connector may require cleaning**. Use the following procedure to access the connectors at the rear of the adapter bulkhead:

- ▶ **Note:** When accessing rear connectors for cleaning, if a non-Rapid fiber panel is installed above or below there needs to be 1RU of space.
1. Using the red latch, carefully pull the adapter bulkhead forward until the stop position is reached. See [Figure 53](#) and [Figure 54](#).
  2. Locate the optical connector that requires cleaning and carefully disconnect it from the rear side of the bulkhead adapter.
  3. Clean the connector as described in the Optical Fiber Connector Wet and Dry Cleaning Instructions (ADCP-90-159).
  4. Reinsert optical connector into bulkhead adapter and retest as specified by local practice.
  5. When testing indicates satisfactory connector performance, carefully slide the adapter bulkhead back into its operational position.



26147-A

Figure 53. Pulling Red Latch Out to Release Tray



Figure 54. Tray in Out Position

## 6.2 Panel, Cable Spool Tray, and Microcable Serial Number Labels

A superlabel that provides the product catalog number, part number, revision, and date code is attached to the panel. In addition, a serial number label is attached to both the RapidReel cable spool tray and the microcables. The locations of the various labels are shown in [Figure 55](#).

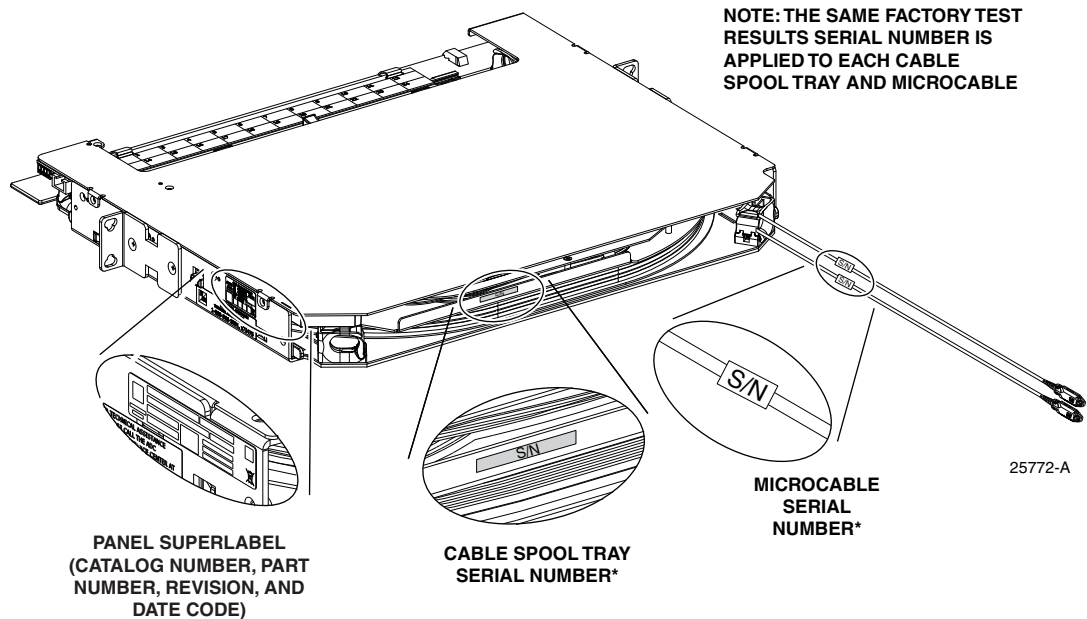


Figure 55. Serial Number Locations

## 7 OPERATION

### 7.1 Connecting Patch Cords

In a typical application, patch cords are connected between the adapters at the front of the panel and the active equipment on a nearby frame. Use the following procedure.



**Danger:** *Infrared radiation is invisible and can seriously damage the retina of the eye. Do not look into the ends of any optical fiber. Do not look directly into an optical adapter. Exposure to invisible laser radiation may result. An optical power meter should be used to verify active fibers. A protective cap or hood MUST be immediately placed over any radiating adapter or optical fiber connector to avoid the potential of dangerous amounts of radiation exposure. This practice also prevents dirt particles from entering the adapter or connector.*

1. Open the cover at the front of the Rapid Fiber Panel, and locate the optical port that will be connected to the optical equipment and remove the dust cap from the bulkhead adapter.
2. Select a patch cord for connection. Patch cords may be 1.7 mm or 2 mm in diameter.
3. Remove the ferrule dust cap from the patch cord connector; clean the connector as specified in Optical Fiber Connector Wet and Dry Cleaning Instructions (ADCP-90-159).
4. Insert the patch cord connector into the appropriate bulkhead adapter and record the connection on the designation card attached to the front cover.
5. Repeat steps 2 through 5 for any remaining connections that may be required.

- Route the patch cords from the center of the panel outward to either side of the panel as shown in [Figure 56](#) or to one side as shown in [Figure 57](#).

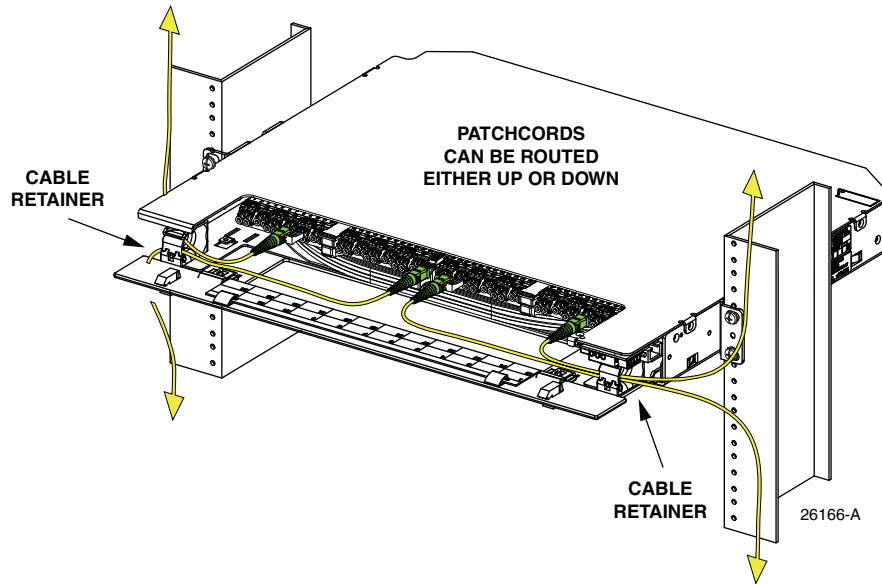


Figure 56. Patch Cord Routing To Both Sides

- Place patch cords within panel's corner cable retainers and close the panel front cover.

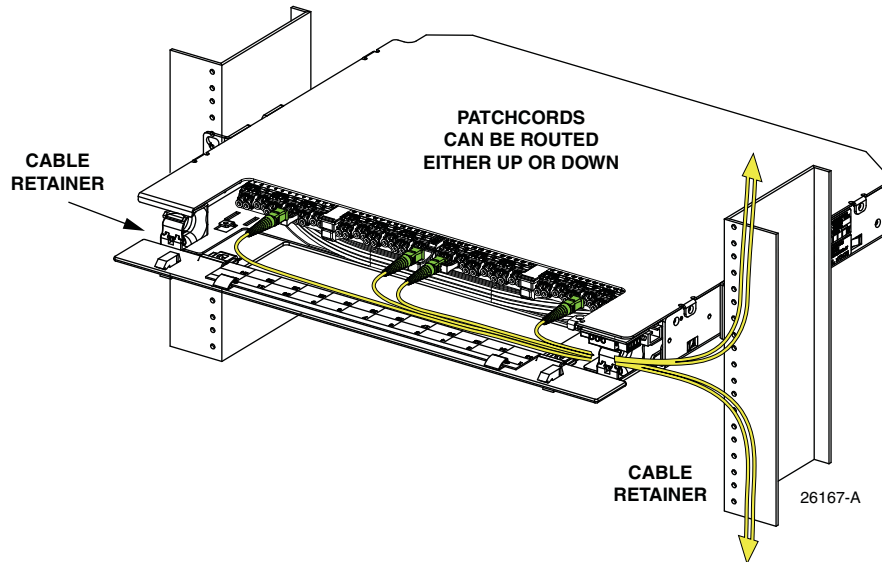


Figure 57. Patch Cord Routing To One Side

## 7.2 Cable Spool Tray Positions and How to Use Them

The cable spool tray has three positions: operation (home); cable payout; and full connector access. The panel ships in the operation position with the spool locking tab protruding through the right side of the panel shell as shown in [Figure 58](#).



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Figure 58. Operation (Home) Position  
(Panel Shown With Top Cover Removed)

To move the panel into the cable payout position, pull out the red latch slightly and while holding it out, slide the tray into the panel as far as it will go until it locks into place. At this point, the spool locking tab will no longer be protruding from the side of the panel and the cable can be paid out.

For a description of the connector full access position, refer to [Topic 6.1 on Page 43](#).

## 8 CUSTOMER INFORMATION AND ASSISTANCE

For CommScope Customer Service, call 1.800.366.3891, extension 73475 (direct 1.952.917.3475). To email for technical service, use [telnet@te.com](mailto:telnet@te.com). CommScope's website address is [www.te.com](http://www.te.com).

## 9 QR CODE ACCESS

The QR code printed on the first page of this manual, affixed as a label to the physical product, and reproduced below, can be accessed using a visual recognition app on a smartphone. The QR code links to a web page containing links to videos showing the procedures documented in this user manual.



Figure 59. QR Code for Rapid Fiber Panel