

### OmniReach® 12/24 Port Indoor Fiber Distribution Panel



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## INTRODUCTION

This publication provides a description of the 12/24-Port Indoor Fiber Distribution Terminal (IFDT) plus procedures for installation and operation. The 12/24-Port IFDT provides splicing,

termination, and interconnect functions for fiber optic cables used in indoor Multiple Dwelling Unit (MDU) applications.

## Revision History

ISSUE	DATE	REASON FOR CHANGE
1	04/2008	Original.
2	04/2010	Updated to be consistent with ADCP-96-806
3	12/2011	Feed-through grounding stud and termination labels added as ship-along parts.
4	July 2016	Rebranded for CommScope

## List of Changes

PAGE	IDENTIFIER	DESCRIPTION OF CHANGE
5,6	Section 3	Updated text and Figure 3 to include feed-through grounding stud.
9	Section 5	Added section to show label installation

## Trademark Information

CommScope is a registered trademark of CommScope Inc.

## Admonishments

Important safety admonishments are used throughout this manual to warn of possible hazards to persons or equipment. An admonishment identifies a possible hazard and then explains what may happen if the hazard is not avoided. The admonishments — in the form of Dangers, Warnings, and Cautions — must be followed at all times. These warnings are flagged by use of the triangular alert icon (seen below), and are listed in descending order of severity of injury or damage and likelihood of occurrence.



**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:** *Fiber optic cables may be damaged if bent or curved to a radius that is less than the recommended minimum bend radius. Always observe the recommended bend radius limit when installing fiber optic cables and patch cords.*



**Danger:** Exposure to laser radiation can seriously damage the retina of the eye. Do not look into the ends of any optical fiber. Do not assume the laser power is turned-off or that the fiber is disconnected at the other end.

## 1 GENERAL INFORMATION

The 12/24-port IFDT is a wall-mounted cabinet that provides an ideal termination and splice solution for CATV or Telco interconnect applications. The IFDT cabinet is a fully enclosed, lockable, slim-profile, wall-mount product. The IFDT supports two modular adapter panels (equipped with SC adapters) and includes fiber routing accessories that limit bend radius and provide strain relief.

The 12/24-port IFDT may be equipped with up to two 12-fiber splice trays if splicing is required. Both feeder/provider and distribution/subscriber cables may be spliced to pigtails. Provisions for securing the splice tray are built into the rear section of the dual hinged cabinet. The termination and splice compartment is located in the rear section of the cabinet and is isolated from the interconnection compartment which is located in the front section of the cabinet.

The 12/24-port IFDT provides sealed cable entry ports for feeder/provider cables and distribution/subscriber cables and gaskets to protect against dust and water spray. The IFDT cabinet may also be ordered with a pre installed feeder cable. A drawing of the 12/24-port IFDT is shown in [Figure 1](#).

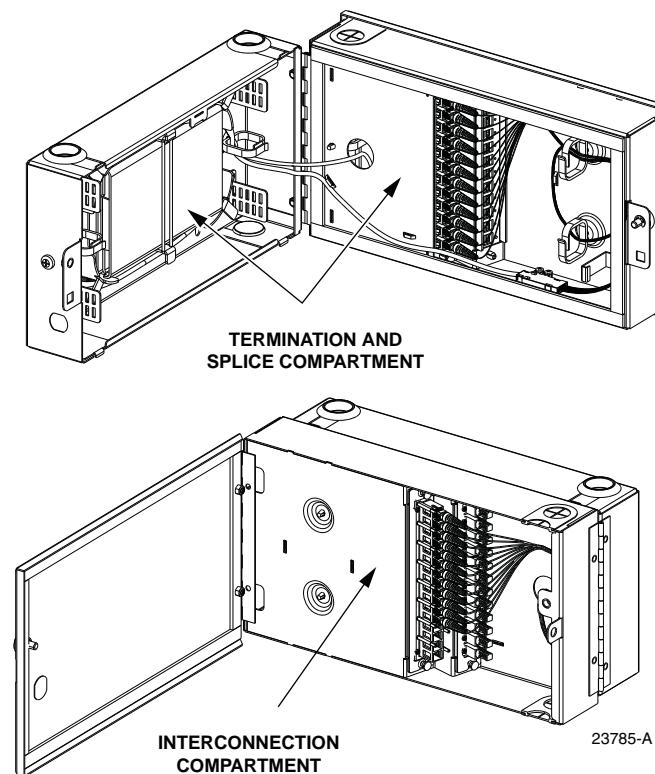


Figure 1. 12/24-Port IFDT

## 1.1 Description

The 12/24-port IFDT provides the following features and benefits

- Pre-wired with feeder stub cable (option)
- Provides 12 ports (with parking lot) or 24 ports (no parking lot)
- Separate splice and service connection compartments
- Dual hinged access
- Multiple fiber splice trays - feeder splices/distribution splices
- Fully enclosed and lockable
- Allows for added security protection

## 1.2 Options

Locks are available (either factory or field installed) for the front and/or rear doors. The rear door has a knockout that can be removed with a screwdriver.

## 2 CABINET INSTALLATION

This section provides instructions for mounting the 12/24-port IFDT on a wall. The following tools and materials are required for mounting the cabinet:

- Screwdriver
- 1-inch #10 panhead screws (4)
- Drill and drill bit suitable for installing # 10 screws
- 3/4-inch plywood backer board and fasteners to secure backer board to wall studs
- Level
- Tape Measure

### 2.1 General Recommendations

The 12/24-port IFDT is designed for wall-mount installation. A space at least 15 inches wide by 8 inches high is required for mounting. In addition, 3 inches of free space must be provided on the hinged side of the cabinet and 19 inches of free space must be provided in front of the cabinet to allow for the swing of the cabinet front section.

The wall surface must be strong enough to support the weight of the cabinet. CommScope recommends that a 3/4-inch plywood board be firmly secured to the wall studs and used as a backer for mounting the cabinet.

### 2.2 Mounting Procedure

Use the following procedure to mount the cabinet on the wall:

1. Select a suitable mounting location for the cabinet.

2. Mount the plywood backer (not provided) on the wall and firmly secure it to the wall's interior studs.
3. Attach the template provided with the unit to the plywood backer. The cabinet dimensions are shown in [Figure 2](#).
4. Using the template as a guide, drill pilot holes for the four 3/4-inch #10 panhead screws required for mounting the cabinet.

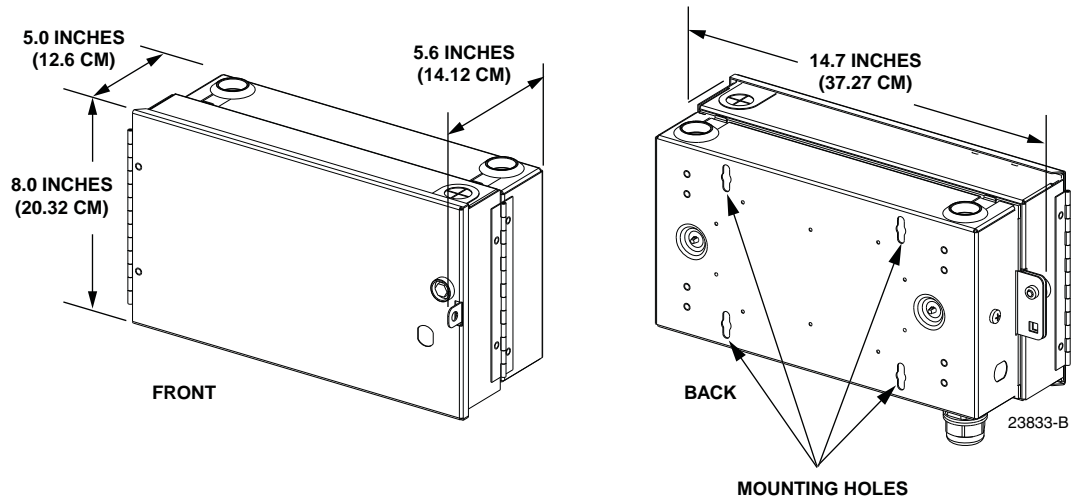


Figure 2. Cabinet Dimensions

5. Partially install the **top two** #10 screws leaving the heads protruding about 1/4-inch from the surface of the backer board. **Do not tighten.**
6. Hang the cabinet on the two installed screws using the key-hole shaped slots.
7. Level the cabinet, tighten the two top screws, and then install the remaining #10 screws.

### 3 GROUNDING THE CABINET

This section provides instructions for connecting a grounding wire to the cabinet. Use the following procedure to ground the cabinet:

1. Locate the grounding components that are provided separately with the cabinet. Both a grounding lug kit (consisting of two external tooth washers, two nuts, one screw and one lug) and a feed-through stud assembly are provided.
2. Open the hinged middle-section of the cabinet to provide access to the cabinet's termination and splicing compartment.
3. Threaded inserts are provided on the left and right sides of the cabinet. Select one of the inserts for installation of the grounding components.
4. Install the required grounding components as shown in [Figure 3](#). Tighten all nuts, screws, and studs to 40 inch-lbs (4.5 Nm) of torque.

- Use a #6 AWG copper wire to connect the cabinet to an approved earth ground source as specified by local code or practice. Avoid sharp bends in the ground wire.

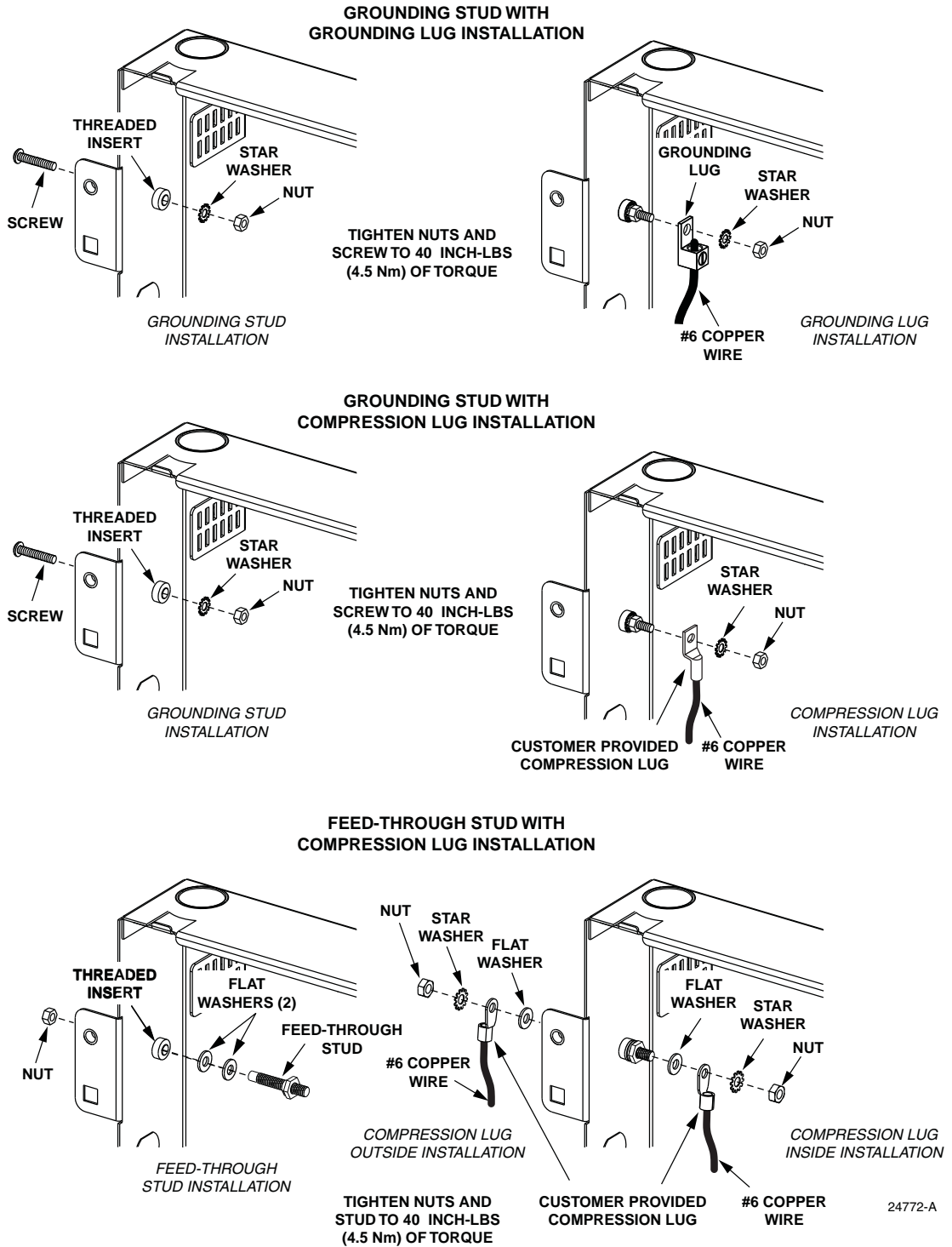


Figure 3. Typical Grounding Lug Installation

## 4 CABLE INSTALLATION

Four cable entry ports are provided in the splicing compartment section of the 12/24-port IFDT. [Figure 4](#) shows the location of the entry ports and cable tie plates. Cables may enter the cabinet from any of the four openings.

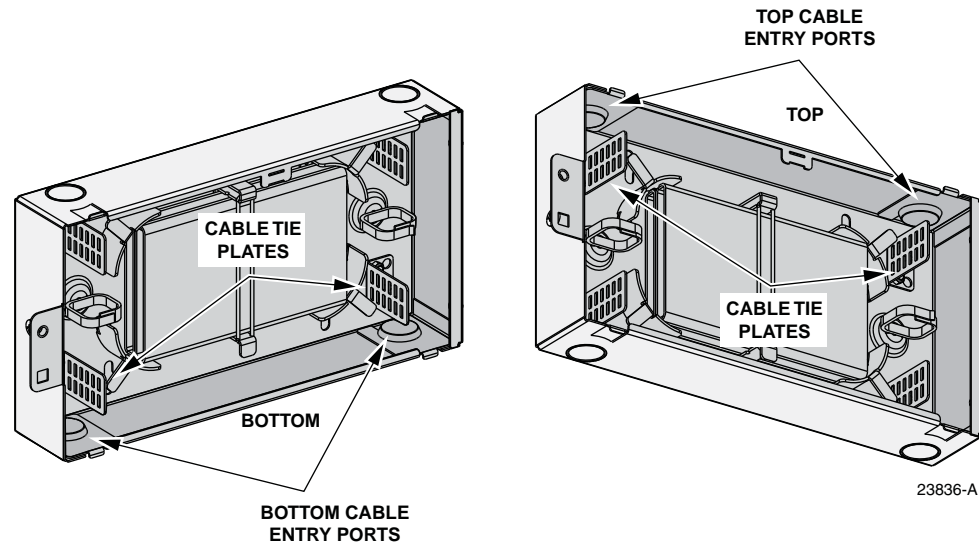


Figure 4. Cable Entry Ports

Both feeder/provider and distribution/subscriber cables may be installed using this procedure. Determine the entry point that will be used for routing the cable into the cabinet and then follow the installation procedure that is appropriate for the cable.



**Caution:** *Improper handling can damage fiber optic cables. Do not bend fiber optic cable more sharply than the minimum recommended bend radius specified by the cable manufacturer. Do not apply more pulling force to the cable than specified. Do not compress the fiber or allow it to kink.*

### 4.1 Securing Cables to the Cabinet Using a Compression Fitting

Multi-fiber jacketed cables with a diameter ranging from 0.5 to 0.71 inches may be secured at the cabinet entry point using one of the compression fittings provided. Use the following procedure to secure a cable to the cabinet using a compression fitting:

1. Remove the plastic dust cap from the selected cable entry port in the cabinet.
2. Locate one of the compression fittings that are shipped with the cabinet
3. Install the compression fitting in the cabinet as shown in [Figure 5](#).
4. Feed approximately 6 feet of the cable through the compression fitting and into the enclosure.
5. Strip away approximately 5 feet of the cable jacket to expose the buffer tubes, 900 micron fiber, or ribbon. Clean if necessary.

6. Adjust cable so approximately 2 inches of the cable sheath extends into the cabinet and then tighten the compression fitting nut to secure the cable to the cabinet.

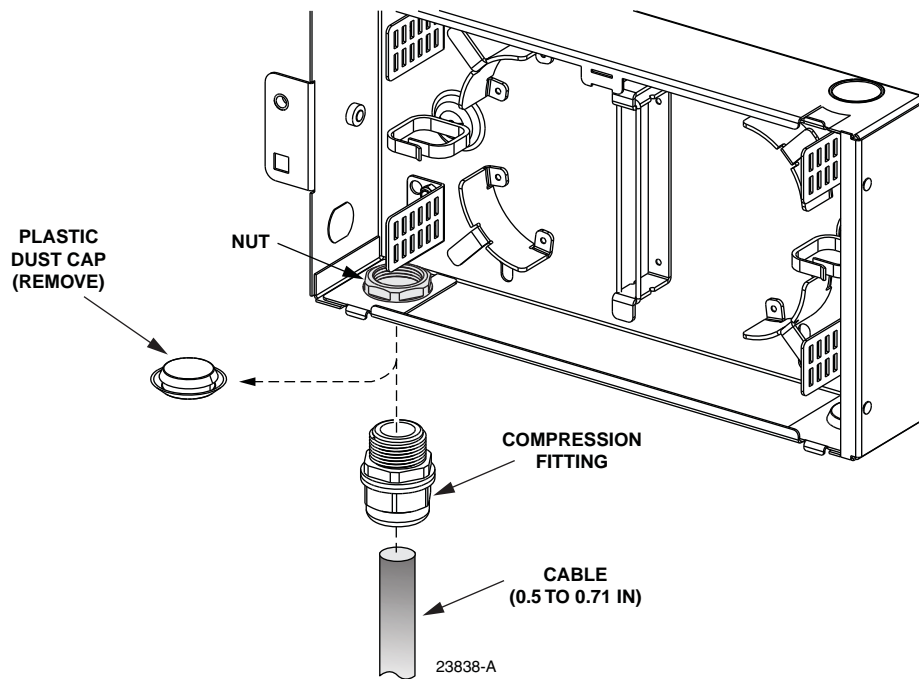


Figure 5. Compression Fitting Installation

## 4.2 Securing Cables to the Cabinet by Lashing

Cables that are too small to be secured with a compression fitting (all cables less than 0.5 inches in diameter) may be lashed to the cable tie down plate with cable ties. When using the lashing method, it is recommended that **two** cable ties be used for better retention capability. Use the following procedure to secure a cable (or several small cables) to the cabinet by lashing:

1. Cut a hole in the dust cap that is installed in the selected cable entry port. The hole should be **just** large enough to permit entry of the cable.
2. Feed approximately 9 feet of the cable through the entry port and into the cabinet.
3. Strip away approximately 8 feet of cable jacket to expose the buffer tubes, 900 micron fiber, or ribbon. Clean if necessary.
4. Adjust the cable so the cable jacket extends approximately 1/2 inch beyond the cable tie down plate.
5. Secure the cable to the cable tie down plate using two cable ties as shown in [Figure 6](#). Wrap strain relief material around the cable to prevent the cable from being excessively compressed by the cable ties. Use two cable ties to secure the cable to the bracket.



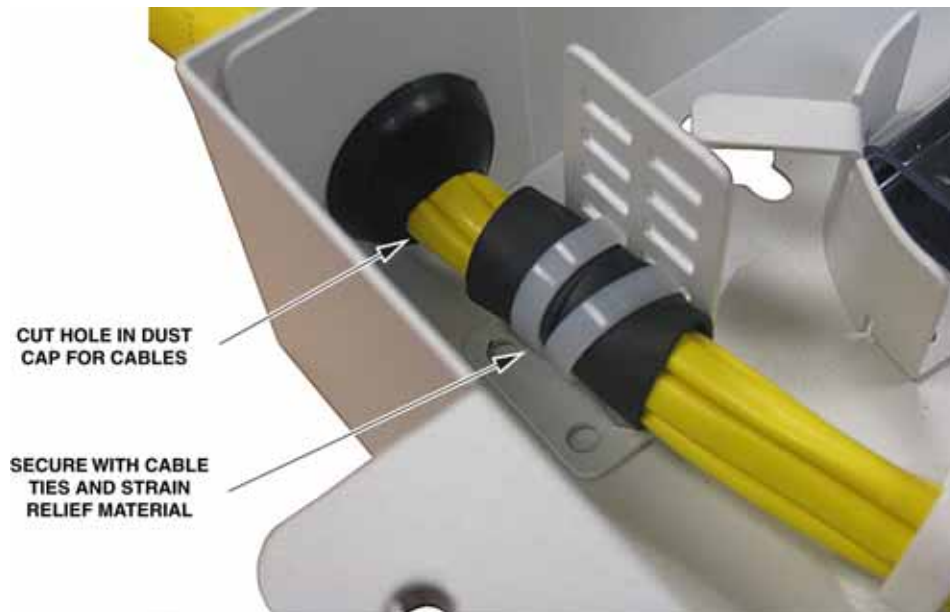


Figure 6. Lashing Cables to Cable Tie Down Plate – Typical Example

## 5 DESIGNATION LABEL INSTALLATION

A designation label is provided for identifying the optical ports. Attach the label to the cabinet door as shown in [Figure 7](#).

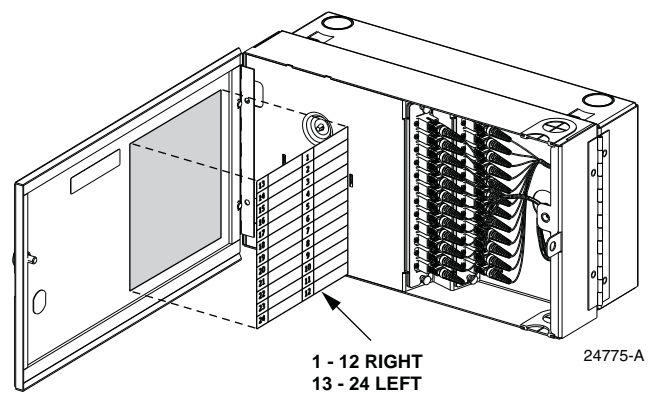


Figure 7. Designation Label Installation

## 6 ROUTING CABLE FIBERS AND SPLICING

Fibers should be routed to the individual splice trays using the cabinet space provided around the splice trays. Buffer tubes should be broken out near the cable strain relief at the entry port. Fibers can then be over-tubed up to the splice trays with more pliable tubing. The splice trays accommodate both mass fusion and individual stranded splicing.



**Caution:** *Improper handling can damage fiber optic cables. Do not bend fiber optic cable more sharply than the minimum recommended bend radius specified by the cable manufacturer. Do not apply more pulling force to the cable than specified. Do not compress the fiber or allow it to kink.*

Figure 8 shows the fully pre-wired cabinet option which includes pigtail assemblies for splicing both the feeder/provider cable and the distribution/subscriber cable. Route the fibers from the feeder/provider cable to the splice trays that have **black** protective tubing attached to them. The pigtail fibers within the black tubing are routed to the adapter panels on the inside of the center swing panel.

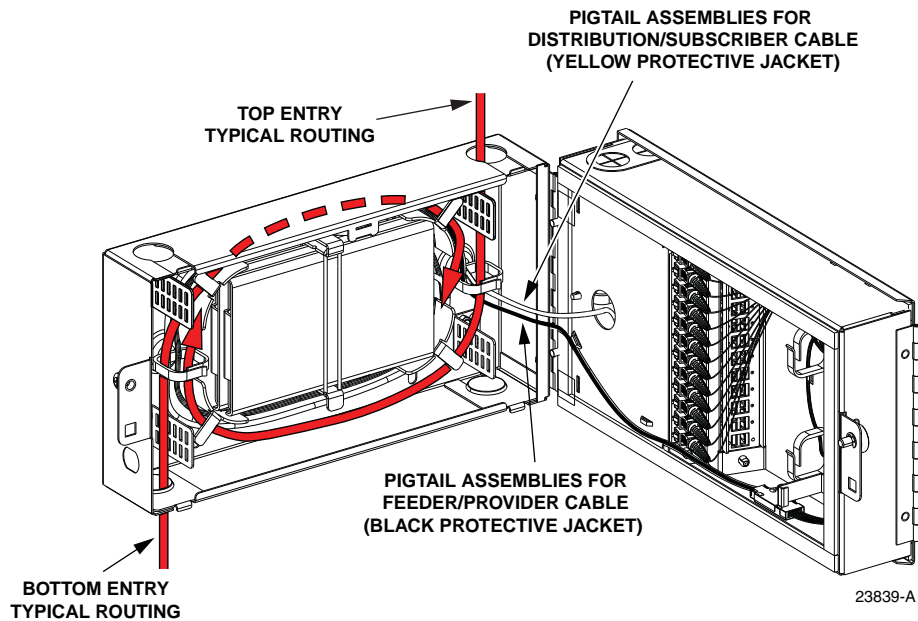


Figure 8. Routing Cable Fibers to Splice Trays (Version with Parking Lot Shown)

Route the fibers from the distribution/subscriber cable(s) to the splice trays that have individual yellow jacketed pigtail fibers attached to them. The yellow jacketed fibers are routed to the parking panels on the outside of the center swing panel.



**Warning:** *Invisible infrared radiation can seriously damage the retina of your eye. Do not look into the launching (output) end of an active fiber. A clean, protective cap or hood **MUST** be immediately placed over any radiating bulkhead receptacle or optical connector to avoid exposure to potentially dangerous amounts of radiation. This practice also helps to prevent contamination of connectors and adapters.*

Follow local practices and procedures for splicing. Splice holders for ribbon and fusion splicing are provided separately. Use cable ties to secure fibers to the splice tray as shown in [Figure 9](#). After splicing is complete manage the fiber in loops around the splice trays and secure the trays in place with the O-rings. Use caution when closing the cabinet to avoid pinching any fibers or tubes, especially along the hinged area.

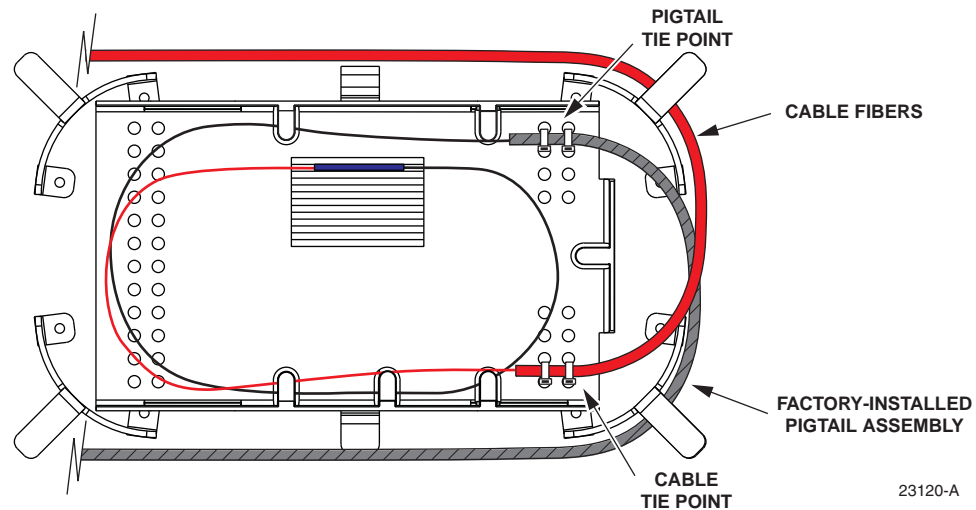


Figure 9. Splice Tray Typical Installation

## 7 INTERCONNECTIONS

The IFDT may be ordered with either 12 or 24 ports. The 12-port version includes a parking lot where the distribution/subscriber connectors may be temporarily “parked” until service is required. The 24-port version does not include a parking lot.

**12-Port IFDT with pre-installed distribution/subscriber pigtails:** The distribution/subscriber pigtail connectors are temporarily parked in the parking lot. Service is initiated when a distribution/subscriber connector is moved from the parking lot to the appropriate feeder/provider port as shown in [Figure 10](#)

**24-Port IFDT with pre-installed distribution/subscriber pigtails:** All the distribution/subscriber connectors are connected to the feeder/provider ports as shown in [Figure 11](#). Service is initiated when the subscriber equipment is activated.

**12-Port IFDT without pre-installed distribution/subscriber pigtails:** The distribution/subscriber equipment patch cord connectors are temporarily parked in the parking lot. Service is initiated when a patch cord connector is moved from the parking lot to the appropriate feeder/provider port as shown in [Figure 12](#).

**24-port IFDT without pre-installed distribution/subscriber pigtails:** Service is initiated when a distribution/subscriber equipment patch cord connector is connected to the appropriate feeder/provider port as shown in [Figure 13](#).

Two entry ports are provided (one at the top and bottom) for routing jumpers into the cabinet front section. Cable tie mounting blocks are provided separately for managing jumpers within the cabinet. Punch a hole through the soft rubber material covering the selected jumper entry port and then route the jumper into the cabinet.

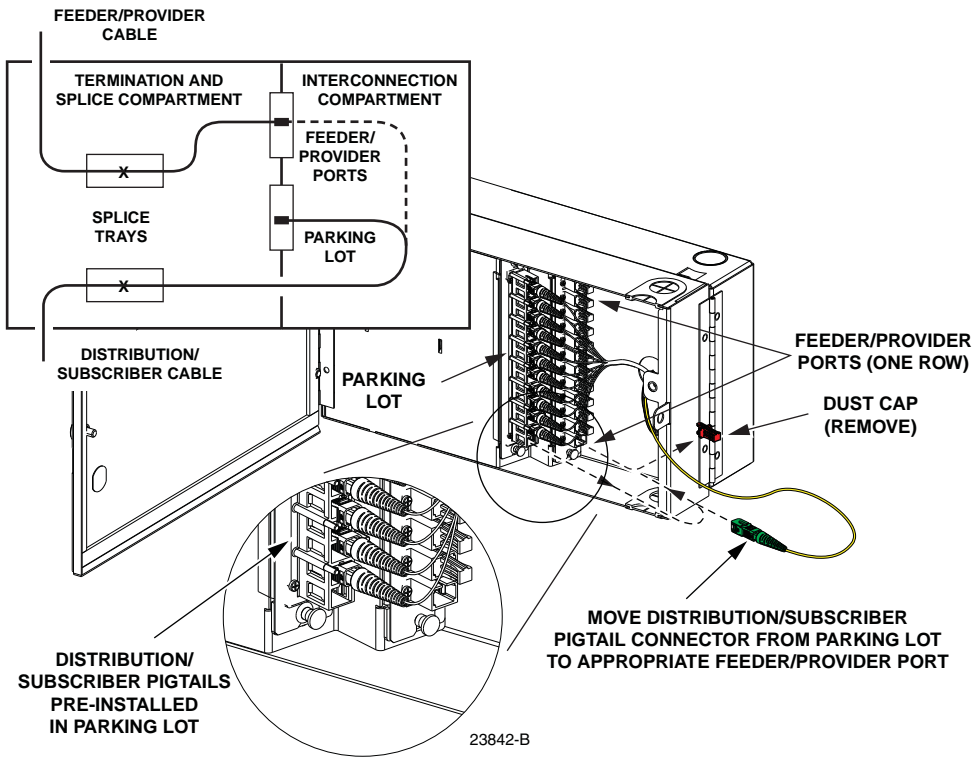


Figure 10. Interconnections - 12-Port IFDT with Pre-Installed Distribution/Subscriber Pigtails

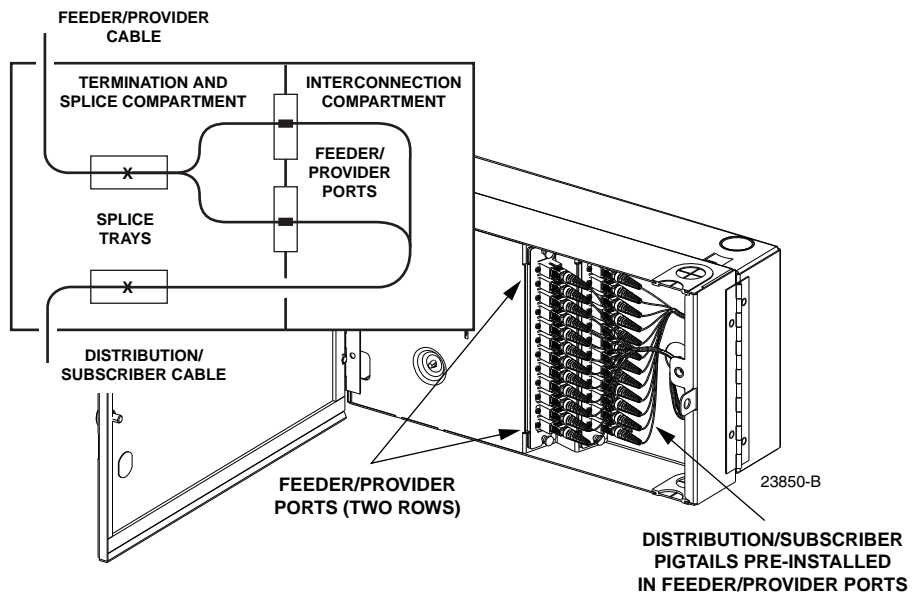


Figure 11. Interconnections - 24-Port IFDT with Pre-Installed Distribution/Subscriber Pigtails

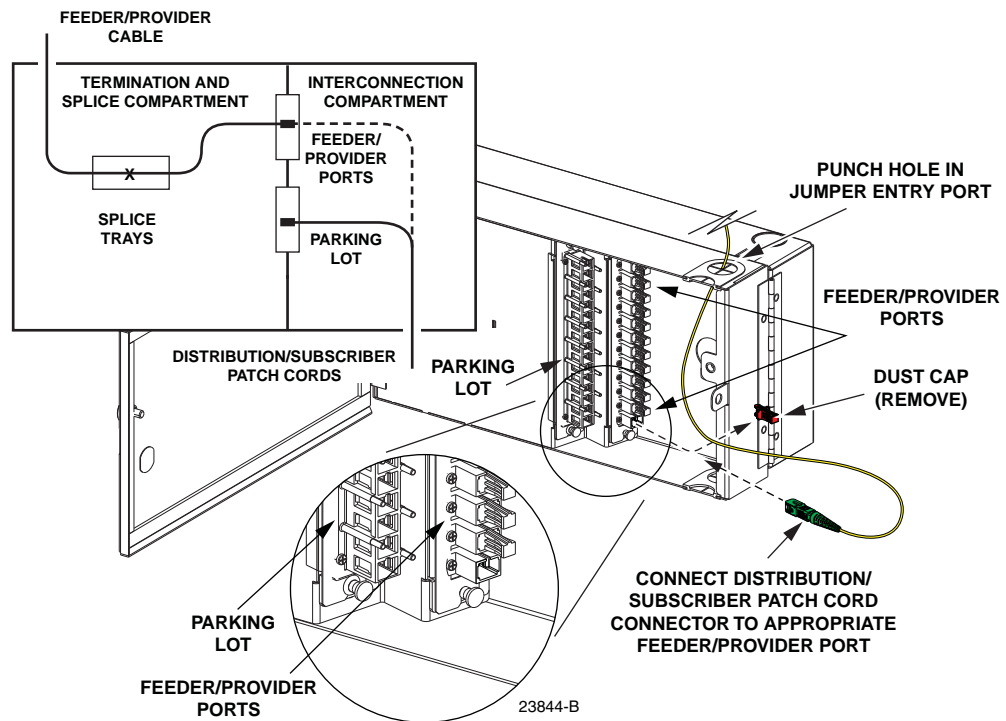


Figure 12. Interconnections - 12-Port IFDT Without Pre-Installed Distribution/Subscriber Pigtails

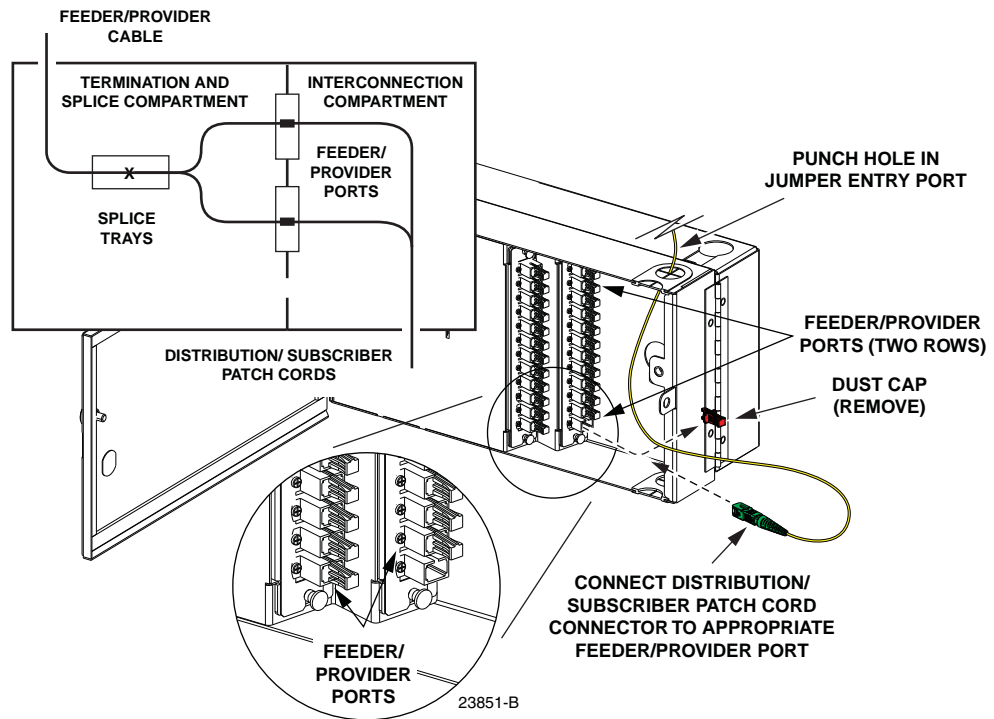


Figure 13. Interconnections - 24-Port IFDT Without Pre-Installed Distribution/Subscriber Pigtails

## 8 TECHNICAL ASSISTANCE

Contact the **Technical Assistance Center (TAC)** for technical question. Call 800.830.5056 or send an email to [TAC.Americas@commscope.com](mailto:TAC.Americas@commscope.com).