

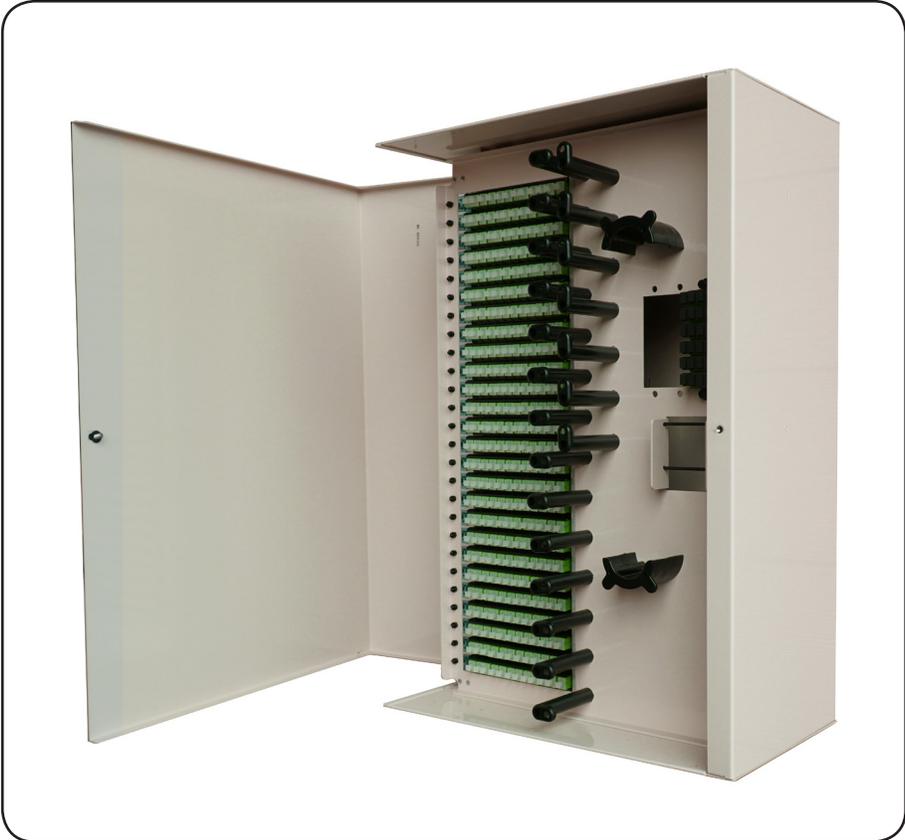
# FieldSmart FDP Indoor 288-Port Wall Box

*Installation Manual*

---



CLEARFIELD



# FieldSmart FDP Indoor 288-Port Wall Box

## Installation Manual

---



### Table of Contents

<b>Application</b> .....	<b>3</b>
<b>Description</b> .....	<b>3</b>
<b>Technical Specifications</b> .....	<b>3</b>
<b>Mounting</b> .....	<b>4</b>
<b>Cable Entrance</b> .....	<b>4</b>
<b>Splicing</b> .....	<b>8</b>
<b>Installing Cassettes and Managing Slack</b> .....	<b>11</b>
<b>Installing and Routing Splitters</b> .....	<b>12</b>
<b>Connector Cleaning Procedure</b> .....	<b>14</b>
<b>Standard Warranty</b> .....	<b>19</b>
<b>Proprietary Notice</b> .....	<b>20</b>
<b>Technical Support</b> .....	<b>20</b>



# FieldSmart FDP Indoor 288-Port Wall Box

## Installation Manual

### Application

The Indoor 288-Port Wall Box has been optimized for MDU applications. Utilizing the Clearview® Black Ribbon Cassette, the FieldSmart Fiber Delivery Point (FDP) gives service providers plug-and-play integration based upon the configuration requirements of their application. Feeder fibers, distribution fibers, splitter modules, splicing and unused splitter output storage are all contained within a single, rugged, wall-mountable enclosure. Housing a swing-out bulkhead in a compact footprint wall box, with the ability to house up to 9 high density splitters, provides for a flexible deployment of FTTH networks in an MDU environment as well as a variety of applications in carrier networks and CATV environments.



### Description

This indoor wall box is Clearview optimized, allowing the user to scale the bulkhead from 12 to 288 distributed ports and up to 24 feeder ports. This bulkhead accepts the Clearview Black Patch and Splice Cassettes (Clearfield's in-cassette splicing solution) utilizing ribbon cable. A side lock provides security enabled doors for extra protection and a solid enclosure to protect fiber terminations from damage.

Designed from conception to provide fast, easy fiber jumper routing and ease of access to all circuits, the wall box system is craft-friendly, keeping the installer's needs for quick deployment, intuitive use and ease of maintenance as the top priority. Easily wall mounts with one person; the main body of the box attaches to the wall. The bulkhead swings open for easy access to the front and rear of the cassettes.

### Technical Specifications

FieldSmart FDP Indoor 288-Port Wall Box	
Dimensions	17" W x 24" H x 9" D (431.8 mm x 609.6 mm x 228.6 mm)
Port Density	Up to 288 distributed ports and 24 feeder ports
Cassette Types Supported	Clearview® Black
Splitter	Up to 9 WaveSmart HD Splitters
Connector Types	SC/UPC, SC/APC, MPO
Cable Types	Indoor Riser, Indoor Plenum, Indoor/Outdoor, Ribbon Only
Splice Capacity	12 splice configurations in each Clearview Cassette
Material	16 gauge cold rolled steel (almond powder coating)

# FieldSmart FDP Indoor 288-Port Wall Box

## Installation Manual



### Mounting

To mount the Indoor 288-Port Wall Box, measure the horizontal distance between the top two slotted mounting holes on the back wall of the wall box. Screw your chosen hardware (not provided) into the wall at the desired height. Hang the wall box on the hardware using the slotted mounting holes. Secure the box with hardware in the lower two holes and tighten all four screws/bolts.

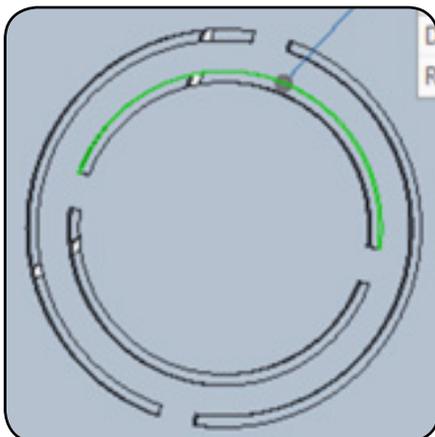


### Cable Entrance

#### Distribution Cable

For distribution cables, or feeder cables exceeding 0.5" (14mm) in diameter, you will need to use the 1" sealcons (Clearfield Kit Part Number: FST-SEALCON-KIT-1 INCH) with grommet inserts for the appropriate cable size as well as two conduit reducer washers per sealcon.

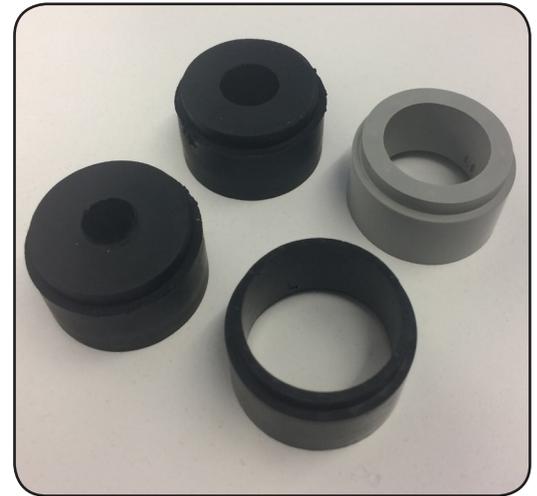
1. Remove the center (smallest) knockout within each needed cable entrance location, being sure to only remove the center and not both.



2. Remove retaining nut from base of sealcon. Place the retaining nut over the end of your cable.
3. Place one of the conduit reducer washers over the end of the cables, flange down.
4. Bring your cable up through the knockout in the base, and place another washer over the end of the cable, flange up.



5. Select the compression fitting grommet size that most nearly fits the cable to be installed. Grommet kits must be ordered separately, contact your sales rep.



Compression Fitting Grommet	Cable Size (Inches)
Small Black Grommet	0.3 - 0.4
Medium Black Grommet	0.41 - 0.5
Gray Grommet	0.51 - 0.79
Large Black Grommet	0.71 - 0.98

# FieldSmart FDP Indoor 288-Port Wall Box

## Installation Manual



6. In order to swap grommets, remove the dome nut from the sealcon and pry the current grommet out, being careful not to damage the compression fitting. Push the new one in to place. Ensure new grommets are installed with the tapered side up.



**Note:** It is sometimes easier to remove the grommet by using a blunt ended tool to push at it from the bottom, inside the sealcon. Take care not to damage the grommet.



7. Ensure the O-ring on the underside of the sealcon is present before installation.
8. Loosen, or if needed, remove the dome nut on the sealcon to allow the cable to fit through the internal sealing grommet.

**Note:** If utilizing a strength member clamp, insert the cable through the clamp before the sealcon.



9. Feed the cable through the bottom of the sealcon and bring the sealcon down the cable. Insert the threads of the sealcon into the washer over the knockout hole. Tighten the sealcon into place.

**Note:** Do **not** tighten the dome nut of the sealcon yet, just the sealcon body and retaining nut. Once fibers have been spliced, you can come back and tighten the sealcon dome nut to secure the cable in place.





# FieldSmart FDP Indoor 288-Port Wall Box

## Installation Manual

10. Pull the desired length of cable through the sealcon and prep the cable.

**Note:** Clearfield recommends a 96" cable opening.



11. If using ribbon cable and utilizing the Clearfield Fanout to protect the bare fibers, please reference the installation instructions provided with the fanout kit. If using loose tube, these fibers must be ribbonized inside the cassette prior to splicing.



### Feeder Cable

For incoming feeder cables, use the 1/2" sealcon (up to a max OD of 0.5" (14mm)). If the feeder cable exceeds this diameter, use a 1" sealcon, select the proper grommet size for the cable and use a different knockout.

1. Using the smaller sealcon, remove the retaining nut and place the sealcon into small knockout on right side of back plate. Install retaining nut and tighten.
2. Feed cable through the sealcon, open and prep the cable per local practice (once fibers have been spliced, you can come back and tighten the sealcon to secure the cable in place).

**Note:** Clearfield installation recommendations are based on a 96" opening.

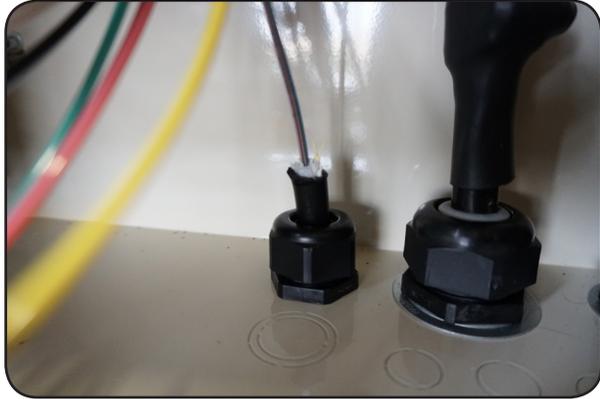


# FieldSmart FDP Indoor 288-Port Wall Box

## Installation Manual



3. If using a ribbon feeder cable, Clearfield recommends protecting the bare ribbon with a split snake-skin tubing, securing the snake-skin to the cable jacket with some tape. If using a loose tube cable, fibers will need to be ribbonized inside the cassette prior to splicing.



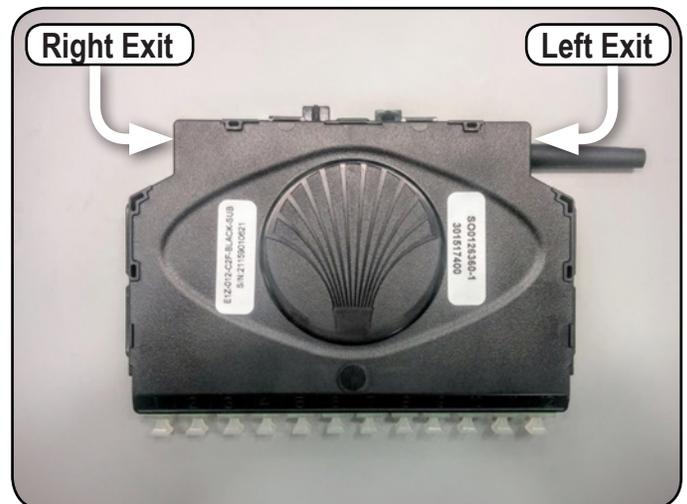
## Splicing

Clearfield recommends a 96" opening on cable(s). These directions follow that recommendation. If using ribbon cable and utilizing the Clearfield Fanout to protect the bare fibers, please reference the installation instructions provided with the fanout kit. If using loose tube, these fibers must be ribbonized inside the cassette prior to splicing.

## Ribbon Fiber

1. Remove the splice tray cover from the bottom of the cassette. Insert the ribbon through the provided rubber boot and then through "bare ribbon holder" found within the cassette. The bare ribbon holder will be heated onto the ribbon fiber at the tie down location on the fiber, as shown in the Clearview Black Cassette Installation Manual.

**Note:** The fiber will be installed into the cassette in a "Left Exit" configuration. This image shows the cassette from the top side while the following images will show the cassette from the bottom side where the splice tray is located.

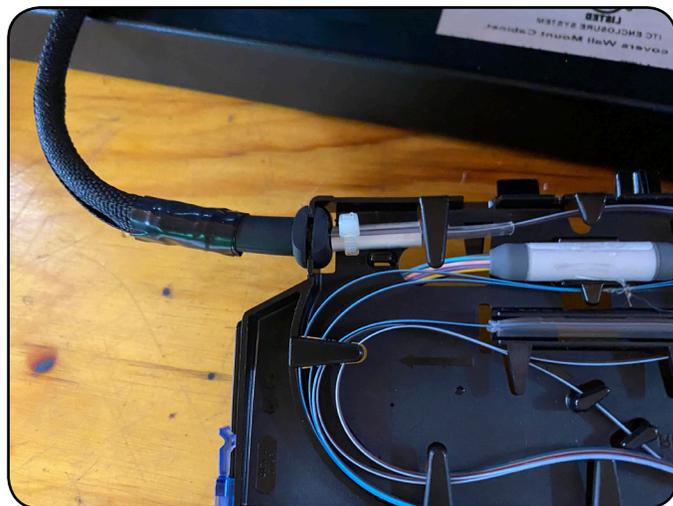


2. Insert the rubber strain relief boot into the splice tray as shown, in the “Left Exit” configuration.

**Note:** Place the strain relief boot into the cassette’s splice tray after heating the bare ribbon fiber holder into place, but before securing the fiber holder into the tray with a small cable tie.



3. Bring split snakeskin wrap up and over the rubber strain relief boot, and tape it into place.



4. You are now ready to splice your ribbon feeder fiber in the Clearview Black Cassette. For instructions on splicing in the Clearview Black Cassette, follow this link or scan the QR code.

<https://www.seeclearfield.com/assets/documents/installation-manuals/clearview-black-cassette-install-manual.pdf>



# FieldSmart FDP Indoor 288-Port Wall Box

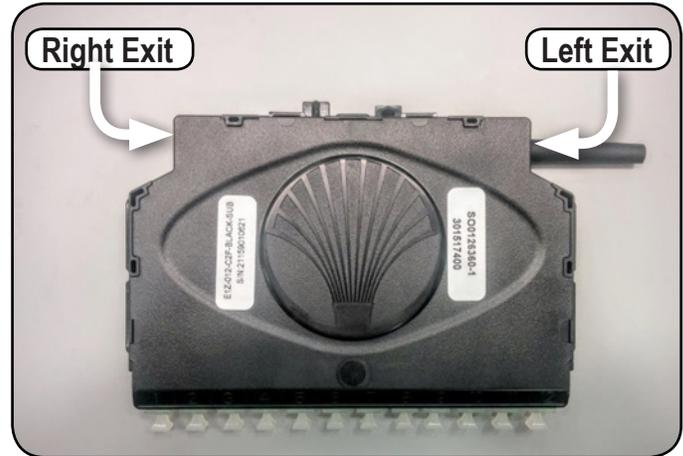
## Installation Manual



### Loose Tube Fiber/Fanout Kit

1. Remove the splice tray cover from the bottom of the cassette. Insert the buffer/fanout tube through the provided rubber strain relief boot.

**Note:** The fiber will be installed into the cassette in a “Left Exit” configuration. This image shows the cassette from the top side while the following images will show the cassette from the bottom side where the splice tray is located.



2. Place a single wrap of grommet tape or felt tape around the buffer/fanout tube at the tie down location and cut away the excess, to protect the tube when tying it into the splice tray.

**Note:** See Clearview Black Cassette Installation Manual for detailed instructions on bringing buffer tubes into the cassette.



3. If applicable, open the buffer tube. Place the rubber strain relief boot into the splice tray, then tie the buffer/fanout tube into the tray with a small cable tie or wax string.

**Note:** Tie the buffer/fanout tube into the splice tray in the “Left Exit” configuration shown on the previous page.

**Note:** You **MUST** ribbonize your fibers to splice in the Clearview Black Cassette.



5. You are now ready to splice your feeder fibers in the Clearview Black Cassette. For instructions on splicing in the Clearview Black Cassette, follow this link or scan the QR code.

<https://www.seeclearfield.com/assets/documents/installation-manuals/clear-view-black-cassette-install-manual.pdf>

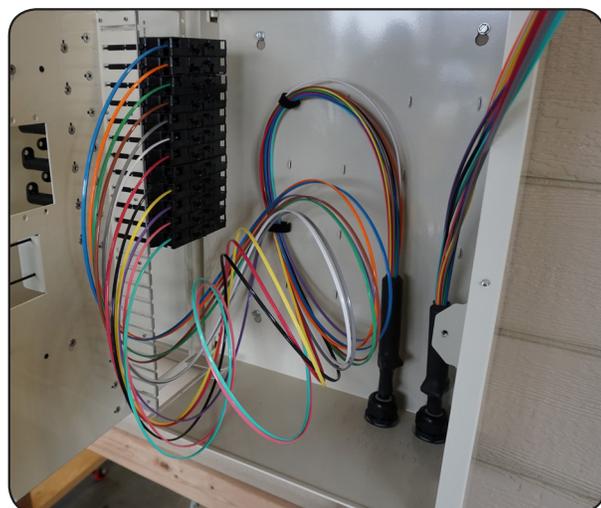
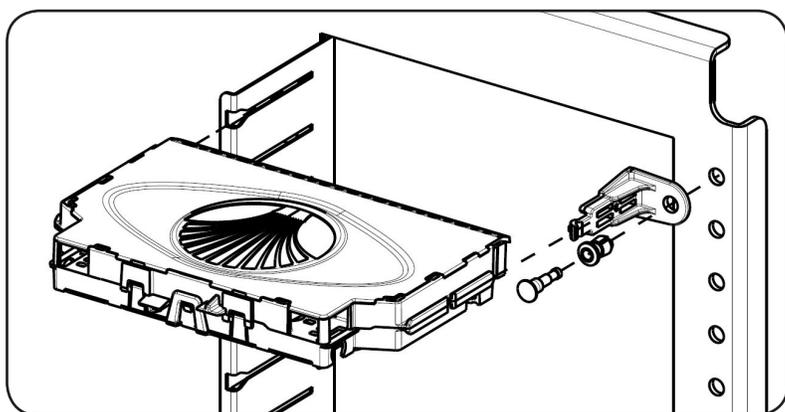


### Installing Cassettes and Managing Slack

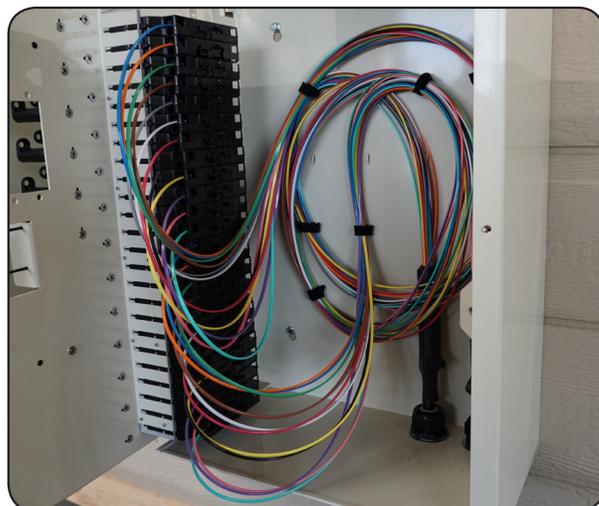
1. To install cassettes into the panel, slide the cassettes into the backside of the bulkhead in their respective places. Engage the t-rail on the side of the cassette with the channels in the bulkhead, sliding the cassette forward until it is fully seated.

**Note:** When installing the cassettes, ensure a loop is present in the cable, which will allow the slack to be stored neatly in the back of the wall box.

2. Then, push on the plunger of the push/pull grommet on the opposite side of the cassette, when it is fully inserted into the hole in the bulkhead, until it clicks, securing the cassette.



3. Using velcro and the bridge-lances located on the back wall of the wall box, secure the slack loops in place neatly.
4. Install the second set of cassettes into the bulkhead of the wall box, and dress up the slack loops again using the bridge lances and velcro.

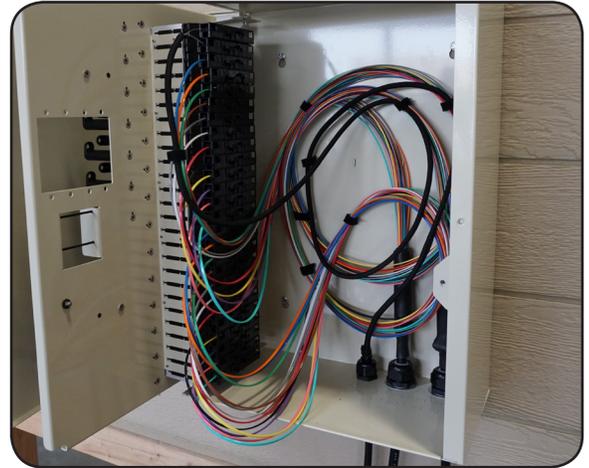


# FieldSmart FDP Indoor 288-Port Wall Box

## Installation Manual



4. Install the feeder cassettes into the bulkhead and secure the slack in the back of the wall box as you did for the distribution cables.

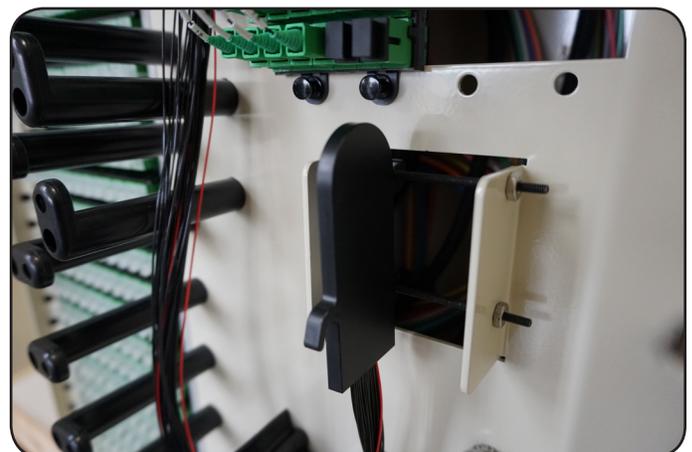
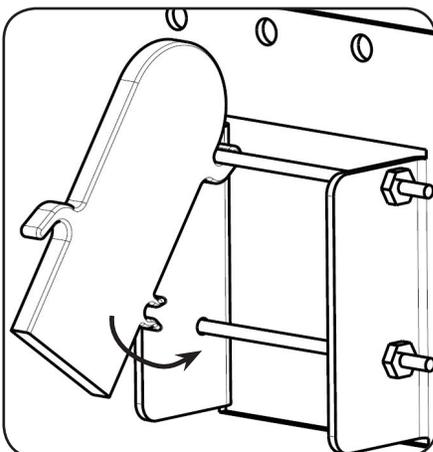


### Installing and Routing Splitters

1. Install the staging plate of the splitter into one of the two open spaces in the staging area of the bulkhead. To do this, align the push/pull grommets with the holes located at the top and bottom of the staging area. Once they are fully inserted, push on the plunger of the push/pull grommet until they click, securing the staging plate in place.

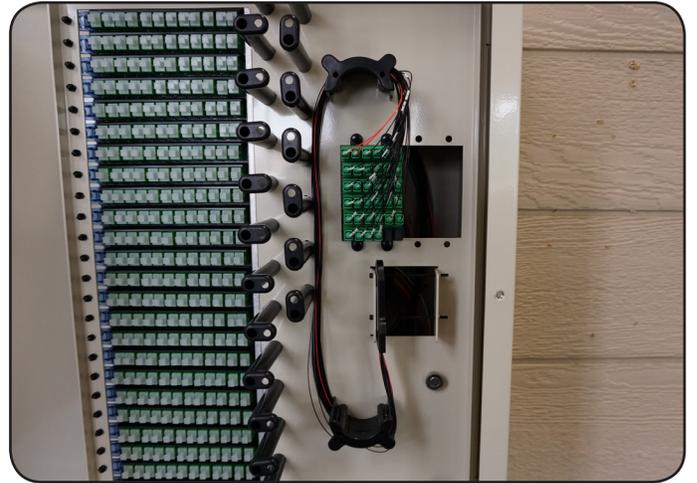


2. Install the body of the splitter into the splitter cage by hooking the top finger of the splitter underneath the top rod. Then swing the bottom of the splitter body down, engaging the clip with the lower rod of the splitter cage. Press hard until it clicks into place.



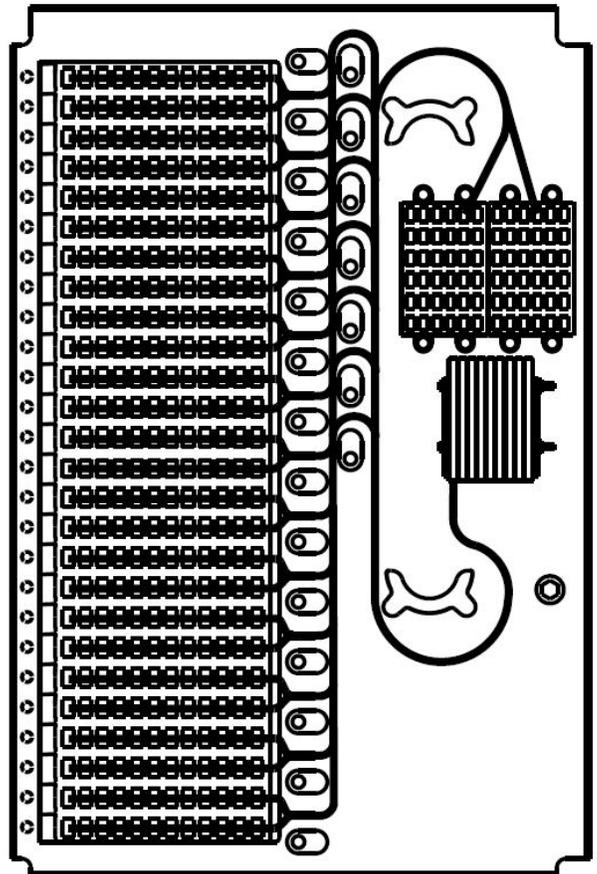
- Route the splitter legs around the radius protection spools at the top and bottom, taking up the extra slack.

**Note:** Install splitters from left to right in the splitter cage and staging area.



- Utilize the routing diagram shown here to connect splitter legs. Remove the connectors from the staging plate, route the fiber over the radius finger in the first row that best takes up the amount of slack needed, and between the two radius fingers in the second row that most closely align with the intended port.

**Note:** Inspect and clean connectors, if necessary, prior to connection.



# FieldSmart FDP Indoor 288-Port Wall Box

## Installation Manual



### Connector Cleaning Procedure

Whether factory terminated or field spliced, clean connectors are essential for proper system operation. Even the smallest dust particle can cause transmission problems, so for optimal network performance inspect, and if necessary, clean connectors and adapters prior to mating.

#### Inspect Then Connect

These are Clearfield recommended products/applications. Use the product you feel will complete your cleaning procedures. Create a “best practice” for your company and follow those procedures.

The use of Chemtronics end face and bulkhead cleaning products and techniques ensures a clean end face, no matter the type of contamination.

Before cleaning any connector, be sure you know what type of contaminate you are cleaning (dry, fluidic, or combination). All the available products are good, it's the process that you need to be aware of. Using a dry cleaning method to clean “dirt” can lead to scratching of the end face. Learn the process of cleaning properly.

**Note:** It is **NOT** recommended to use isopropyl alcohol to clean the end face.

### Cleaning an SC/LC Connector

#### Cleaning the End Face

- Place one wiping paper on QbE-2 FiberSafe™ Cleaning Platen. (Figure 1)
- Apply small amount of precision cleaner (about 1” in diameter) with Electro-Wash MX pen on to one end of the wipe. (Figure 2)
- Hold end face at a 90 degree angle. For APC connection, adjust by slightly tilting the container or end face. Angle is correct when no drag is felt on the end face. (Figure 3)
- Draw end face from wet to dry part of the wipe 3 times. Use just enough pressure to ensure complete contact between end face and the wipe.

**Note:** **DO NOT** retrace previous step.



Figure 1



Figure 2



Figure 3

### Cleaning the Ferrule

- Lightly moisten the fiber optic swab (2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the swab, 1 side down to the wetted area and hold for a count of 1-2-3-4-5. (Figure 4)



Figure 4

- Insert swab into side of ferrule, wet side to the ceramic ferrule and circle around 2-3 times and remove. Turn swab to dry side and repeat. (Figure 5)



Figure 5

### Cleaning the Mate Through an Adapter AND the Adapter Itself

- Lightly moisten the fiber optic swab (2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the tip of the swab onto the wetted area and hold for a count of 1-2-3-4-5.
- Insert the swab into the adapter to the connector, press lightly against the connector, twist 2-3 times, remove and discard.
- Dry with a second dry swab.
- Inspect, repeat cleaning if necessary, and test for signal strength.
- Use additional swabs to clean inside the actual adapter. Moisten swab, like above, and insert through hole and remove while twisting. (Figure 6)

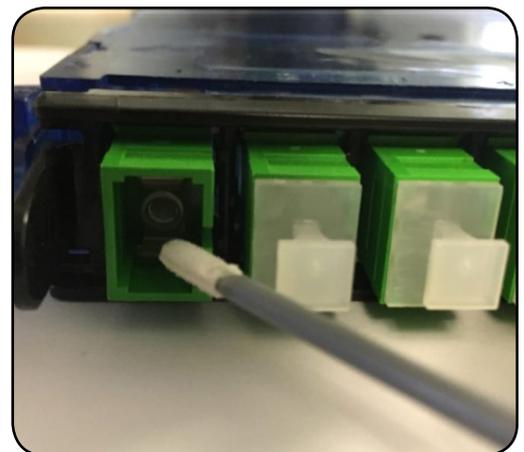


Figure 6

# FieldSmart FDP Indoor 288-Port Wall Box

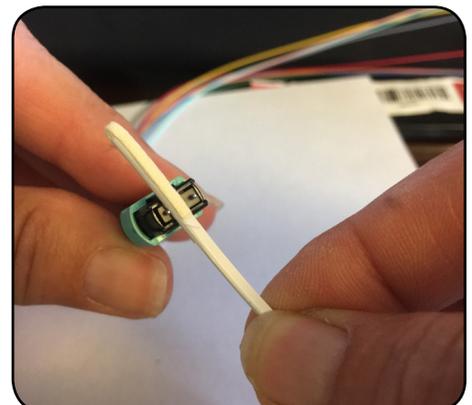
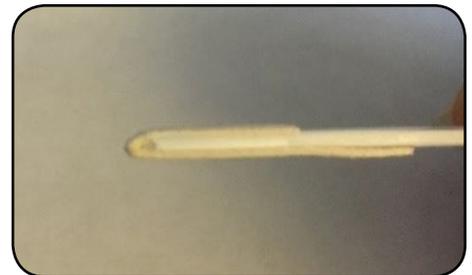
## Installation Manual



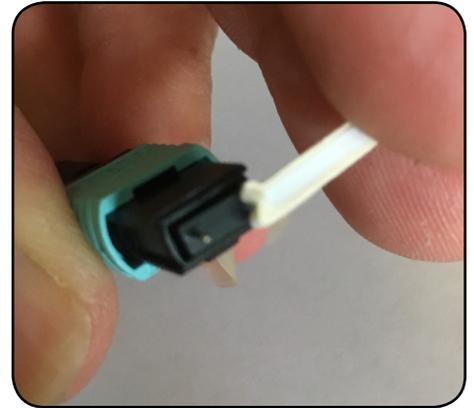
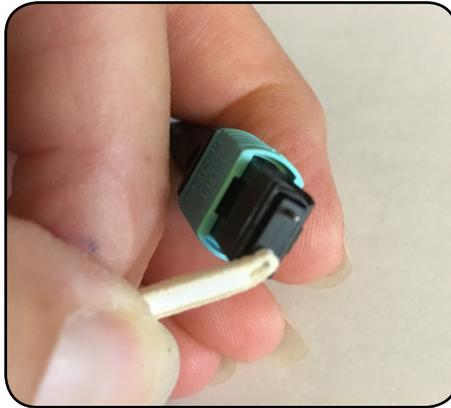
### Cleaning an MPO/MTP Connector

#### Male Connector

- Use of Chemtronics MTP Connector Cleaning Swabs (CC505F) is recommended. Even after cleaning with a probe cleaner, you should always clean the pins with this (or an equivalent) type swab. Cleans ALL MTP/MPO connector end faces. This swab also cleans the “pins” of the male connector
- Lightly “spot” a QbE-2 wipe on the platen with Electro-Wash PX Fiber Optic Cleaner, the FiberWash or MX Pen.
- Lightly touch short side of the MTP/MPO Connector Swab to the wetted area (3-5 secs) to absorb some cleaning solution (DO NOT over saturate the swab).
- Wipe connector areas to be cleaned, sliding pad from bottom of pad across and forward to tip of swab, from 1 side to the other, turn over and use long side to dry in same movement.

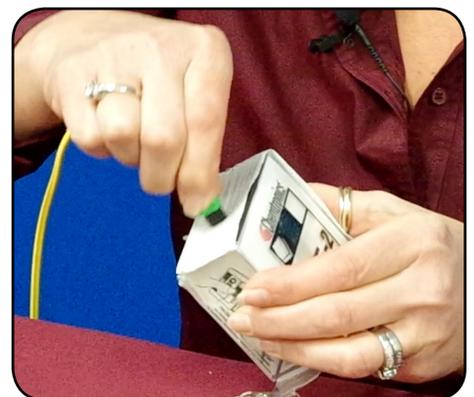


- Use the hole on end of pad to clean one alignment pin, then press the end of the swab into the other pin to clean.
- Check your work with a fiber scope. This can take several attempts to get the endface clean.



### Female Connector (without pins)

- Cleaned like a single fiber connector, using a cleaning platform. The receptacles will be cleaned as long as you are using a combination cleaning process as recommended.
- Again, using a platen, moisten the platen with cleaning solvent on one end to accommodate 3 swipes of the MPO female endface.
- Holding the connector (If APC, slightly at an angle to accommodate for 8° angle) swiping with medium pressure, from the wet area into the dry area 3 times, without wiping over previous area.
- Inspect, and if clean, make the connection. If NOT, repeat above steps until clean or if determined that the end face is damaged (based on standards of 5 cleanings per connection), replace.



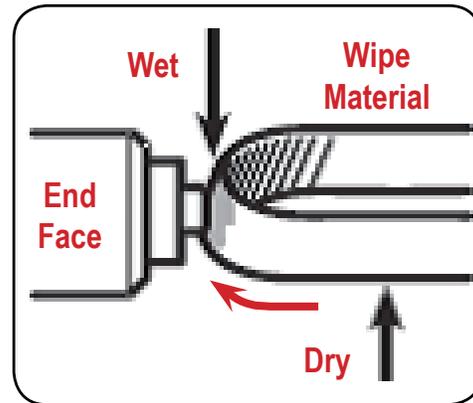
# FieldSmart FDP Indoor 288-Port Wall Box

## Installation Manual

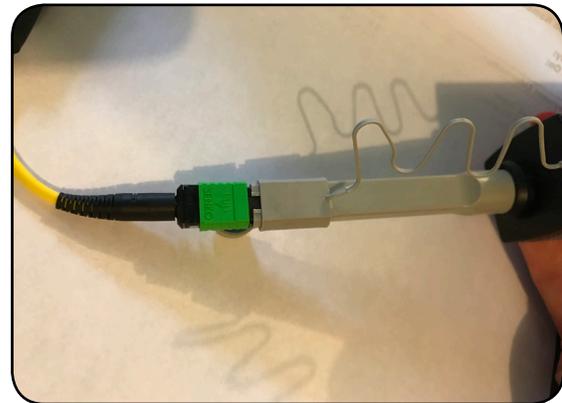
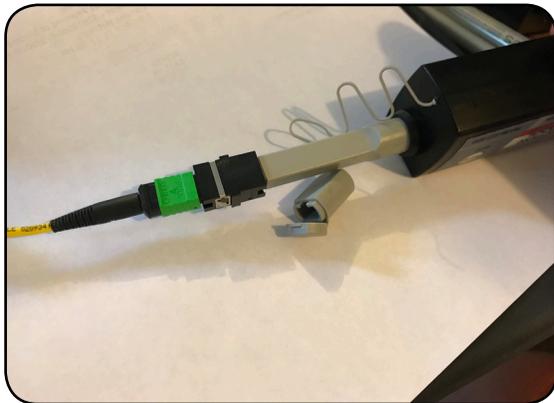


### Cleaning Using a Probe-Style Cleaning Tool

- The probe style cleaning tools are capable of cleaning a connector end face separately or through the adapter.
- Slightly engage probe by pulling back but do not allow to click. Lightly “spot” a QbE-2 wipe on the platen with Electro-Wash PX Fiber Optic Cleaner, this will help alleviate “over saturation” of the material.
- Lightly touch the tip of probe and release.



- Insert connector or insert probe through adapter and click 2-3 times to move past the wet area and allow material to dry wipe.



- Inspect connector, repeat if necessary (following standards)
- If cleaning a male connector, clean the pins (see above)



# FieldSmart FDP Indoor 288-Port Wall Box

## *Installation Manual*

### Standard Warranty

Clearfield warrants to the original purchaser of the Product sold hereunder is free from defects in material and workmanship under normal use and service, subject to exceptions stated herein. Product purchased is warranted as follows: Clearfield designed and branded Products are warranted for three (3) years; Products manufactured by Clearfield to customer prints and/or specifications are warranted for one (1) year; and any Product Clearfield acquires from or through a third-party manufacturer or distributor and resells to Customer as the original customer will carry the manufacturer's pass-through warranty, if any. In all cases, the warranty period commences on the date of shipment to the original purchaser.

### Warranty Claim Procedure

If any Product purchased from Clearfield is found defective under the above warranty, the following basic procedure must be followed:

1. Customer must contact Clearfield and obtain a Return Materials Authorization
2. Following authorization, the Customer ships the product-freight collect to Clearfield's manufacturing facility
3. Clearfield shall repair or replace the defective Product at its sole option and discretion, and return the repaired or replacement Product to Customer's site, freight prepaid

Note: If the Product is not found to be defective by Clearfield, the product will be returned to the Customer and the customer billed for freight in both directions.

View our warranty policy here: <https://www.seeclearfield.com/warranty.html>

### Limitations of Warranty

Correction of defects by repair or replacement, at the option of Clearfield Inc, shall constitute the exclusive sole remedy for a breach of this limited warranty. Clearfield shall not be liable under any circumstances for any special, consequential, incidental, punitive, or exemplary damages arising out of or in any way connected with the product or with agreement to sell product to buyer, including, but not limited to damages for lost profits, loss of use, or for any damages or sums paid by buyer to third parties. The foregoing limitation of liability shall apply whether the claim is based upon principles of contract, warranty, negligence or other tort, breach of statutory duty, principles of indemnity or contribution, the failure of any limited or exclusive remedy to achieve its essential purpose, or otherwise.

Clearfield will not be responsible for any labor or materials costs associated with installation or incorporation of Clearfield products at customer sites, including any costs of alteration, replacement or defective product, or any field repairs.

### Other Limitations

Clearfield assumes no warranty liability regarding defects caused by:

1. Customer's modification of Product, excepting installation activities described in Clearfield documentation
2. Customer re-packaging of Product for shipment to third parties or destinations other than those originally shipped to by Clearfield, or any defects suffered during shipping where the Product has been re-packaged
3. Customer's installation or maintenance, excepting activities described in and performed in accordance with Clearfield documentation
4. Customer's improper or negligent use or application of Product
5. Other causes external to the Product, including but not limited to accidents, catastrophe, acts of God, government action, war, riot, strikes, civil commotion, sovereign conduct, or the acts or conduct of any person or persons not party to or associated with Clearfield
6. Environmental factors and weathering resulting in aging and damage not necessary or applicable to the function of the product

# FieldSmart FDP Indoor 288-Port Wall Box

## *Installation Manual*

---



### Proprietary Notice

Information contained in this document is copyrighted by Clearfield, Inc. and may not be duplicated in full or part by any person without prior written approval of Clearfield, Inc.

Its purpose is to provide the user with adequately detailed documentation to efficiently install the equipment supplied. Every effort has been made to keep the information contained in this document current and accurate as of the date of publication or revision.

However, no guarantee is given or implied that the document is error free or that it is accurate with regard to any specification.

### Technical Support

Clearfield, Inc. can be contacted for any issues that arise with the supplied product.

If you need to return the supplied product, you must contact the Clearfield, Inc. Customer Service Department to request a Returned Materials Authorization (RMA) number.

Clearfield, Inc.  
7050 Winnetka Ave N  
Minneapolis, MN 55428

Toll Free: 800.422.2537  
Phone: 763.476.6866  
Fax: 763.475.8457

Customer Support: [sales@seeclearfield.com](mailto:sales@seeclearfield.com)  
Technical Support: [techsupport@seeclearfield.com](mailto:techsupport@seeclearfield.com)