WaveSmart TAP Cassette
Installation Manual

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CLEARFIELD

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Application

The Clearview Blue TAP Cassette features 12 LC/UPC bi-directional transmit/receive ports and an MPO input to provide a complete plug-and-play solution for managing fibers. The LC/UPC ports connect to each BBU, while the MPO input provides an interconnect or cross-connect to FieldSmart FxDS Tie Panels. Each cassette also contains 12 custom pinned 1 x 2 (50/50 split ratio) FBT splitters. These provide 12 LC/UPC non-intrusive test access ports for live service monitoring, troubleshooting and maintenance.

Description

Clearview Blue Cassettes are a core building block of every product within the FieldSmart fiber management system. Clearview Blue is a six component tool-less system made up of a top cover, expansion ring, splice tray, buffer tube/ribbon slack storage, cable assembly tray, and 12-pack adapter plate. Parts snap together to support desired application requirements. The Clearview Blue TAP Cassette integrates optical components into the same cassette, allowing service providers to mix and match fiber modules within the same chassis.

Technical Specifications

WaveSmart TAP Cassette	
Dimension	0.81" H x 6.75" W x 8.28" D
Connector Type	LC/UPC to MPO
Port Count	12 Transmit/Receive Ports (Blue) and 12 Test Access Ports (Red)
Splitter Type	1 x 2 (50/50 Split Ratio)
Material	Polycarbonate
Mounting Options	Clearview Mounting Ears

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Packaging

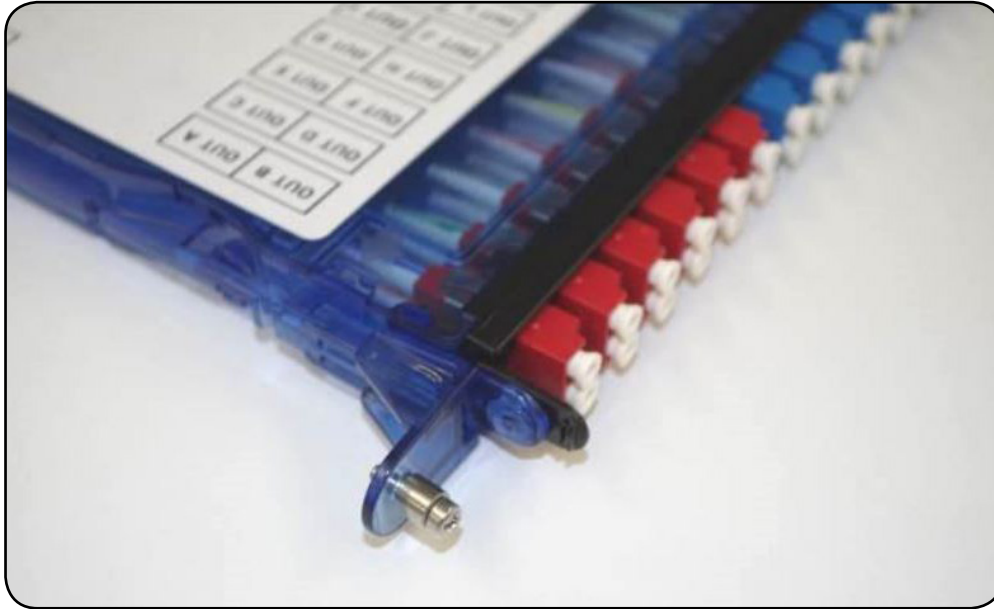WaveSmart TAP Cassettes will arrive as shown.

Cassette Installation

Mounting Screws

1.   Cut the zip tie on the rear of the cassette and remove the bag holding the captive mounting screws.

2. Remove the mounting screws from the bag and attach to the cassette tabs.

Mounting the TAP Cassette into the Panel

1. Determine the mounting position of the cassette.

Note: The red LC adapters should always been installed on the inside of the panel.
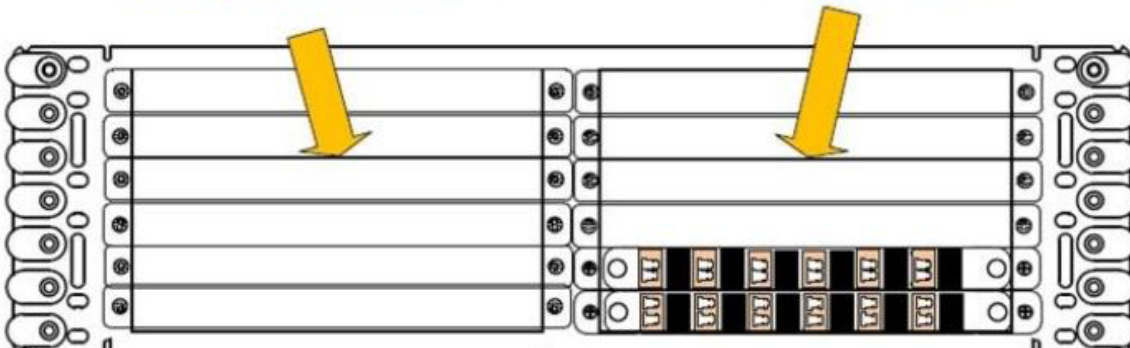
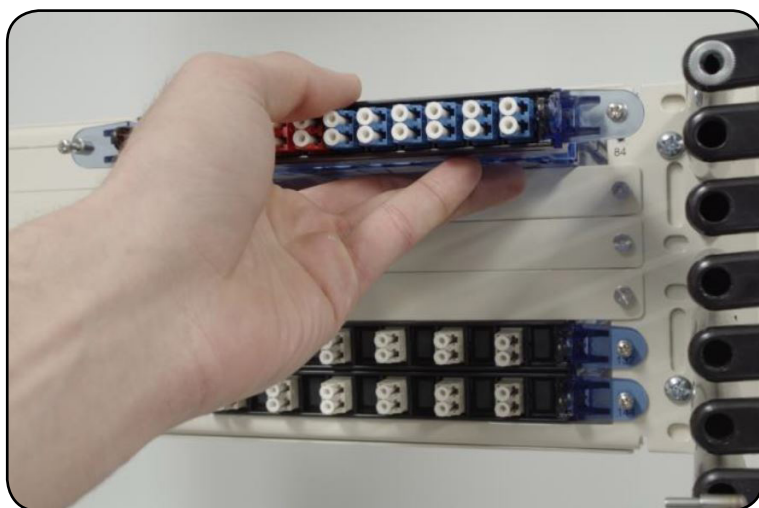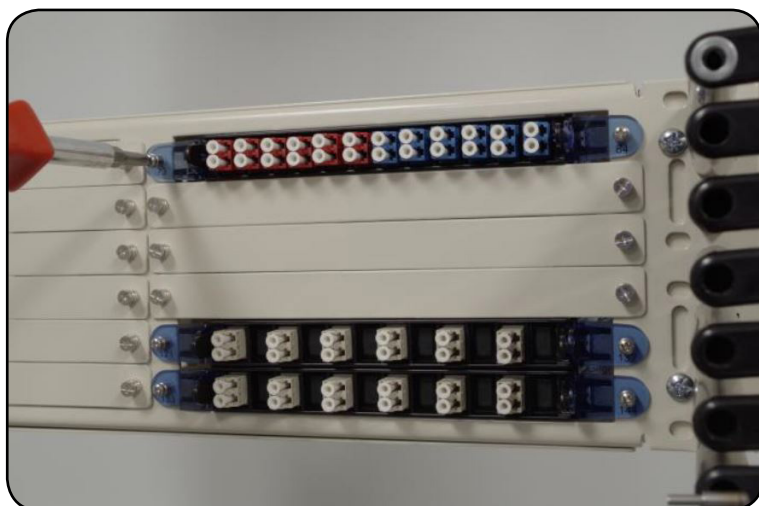**CLEARFIELD**

2. Use a Phillips head screw driver to remove the blank plate from the panel.
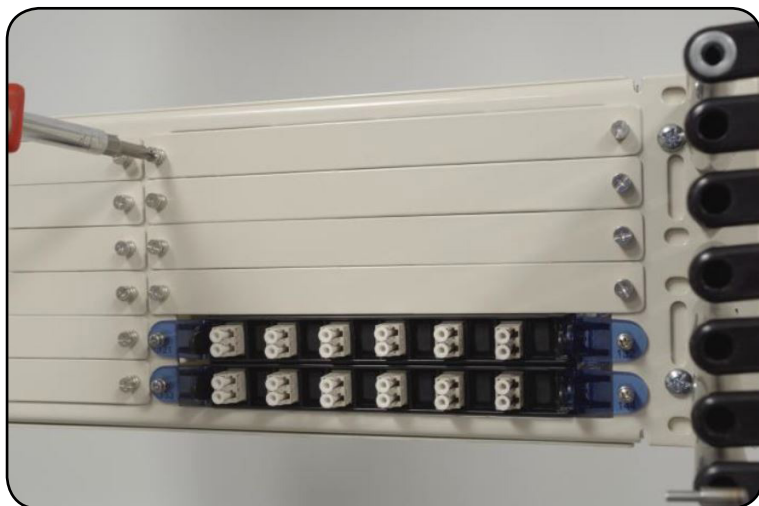
3. Slide the cassette into the panel.
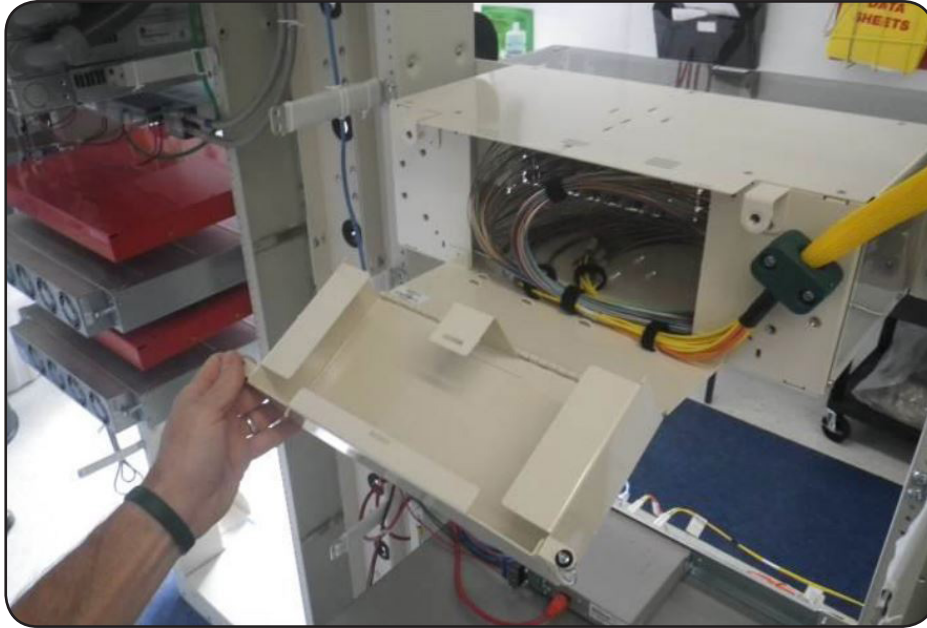

**4.** Use a Phillips screw driver to tighten the mounting screws.

Cable Routing

1.   Route the bundle of MPO cables from the tie panel to the cassette panel

2.   Scope the MPO connectors and clean if necessary, then plug the connectors into the MPO adapters on the rear of the cassette.

   Note: Store the remaining slack in the slack basket on the rear of the panel.

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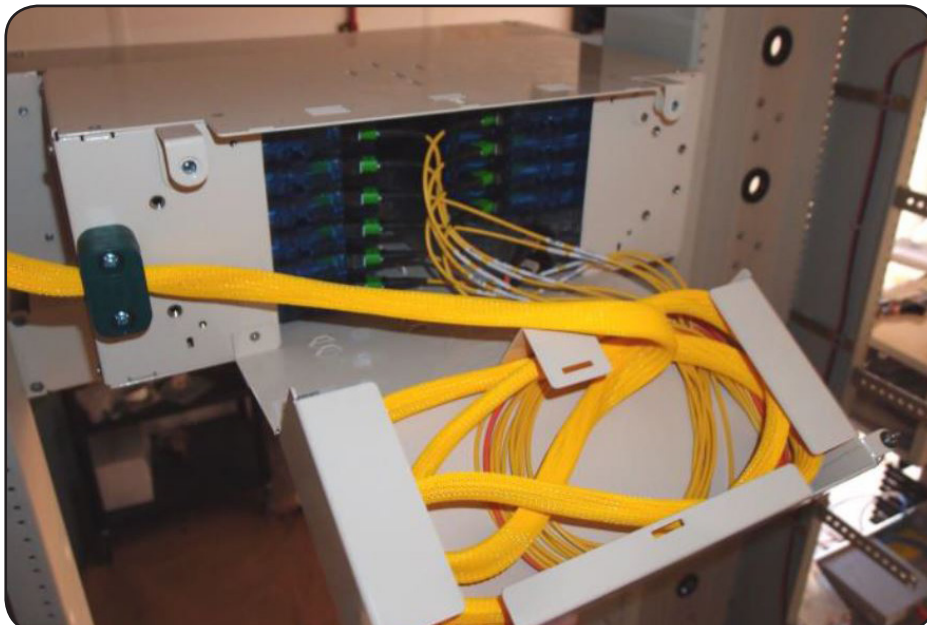
3. Once the connectors have been plugged into adapters, close the slack basket on the rear of the panel.

Note: Be careful not to pinch the bundle of cables when closing the slack basket.
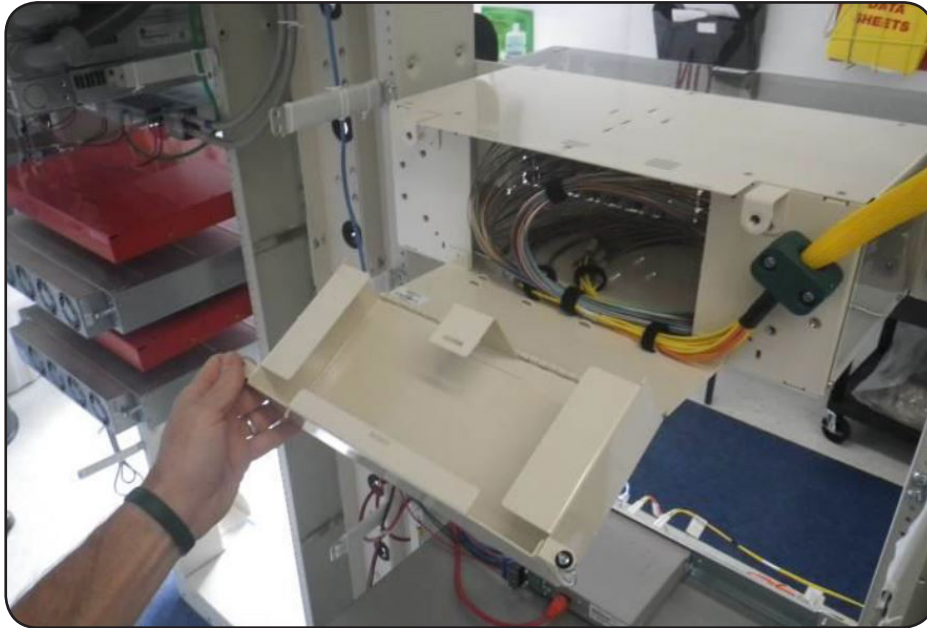
4. Next, route the LC jumper cables from the front of the cassette to the Base Band Unit (BBU) following the interbay routing guide.

Note: Make sure to scope and clean all connectors prior to mating.
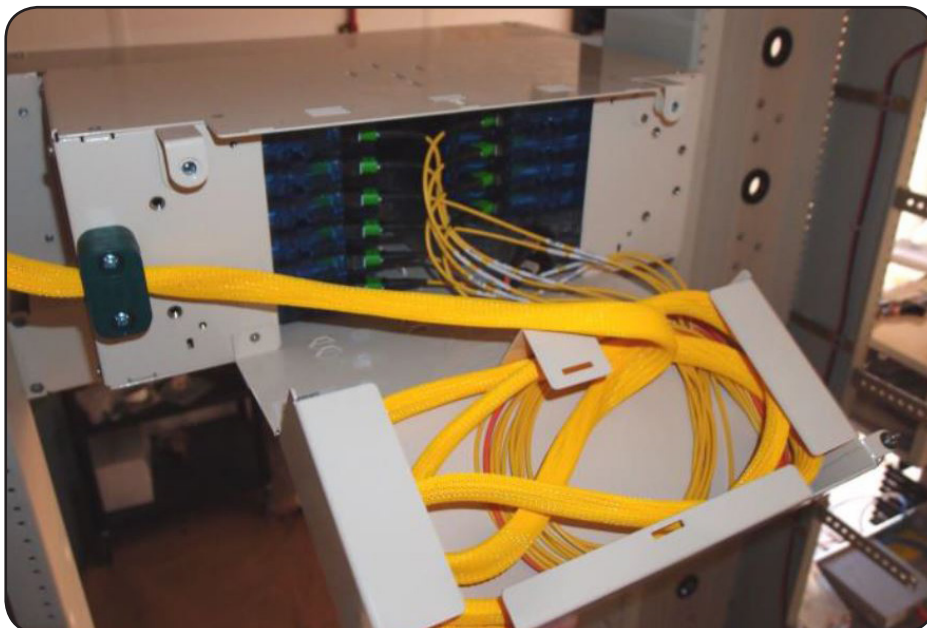
Adapter Cleaning

MPO Adapters

1.   Remove the connector cleaning attachment from the guide on the end of the cleaning pen.
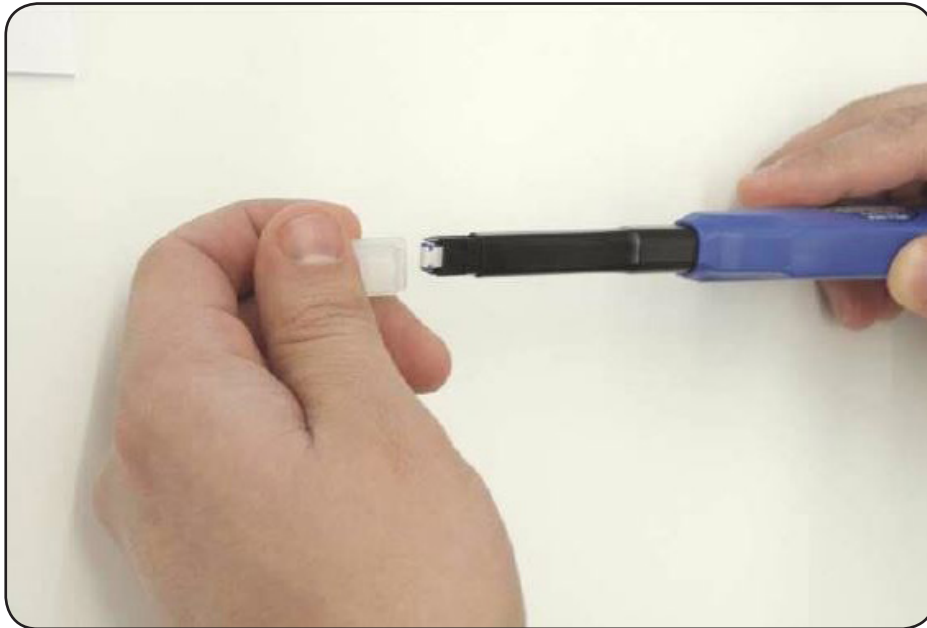
2.   Remove the dust cap from the MPO adapter on the cassette.

3. Align the MPO adapter with the cleaning pen guide key. Then, insert the guide straight into the adapter.

4. Continue pushing the cleaning pen into the MPO adapter until you hear the cleaning pen click. Next, pull the cleaning pen out of the adapter, then scope to verify that the adapter has been cleaned.

Note: If the adapter is still dirty and does not pass the scope test, repeat the process until the adapter is clean.

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

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Figure 4

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)**
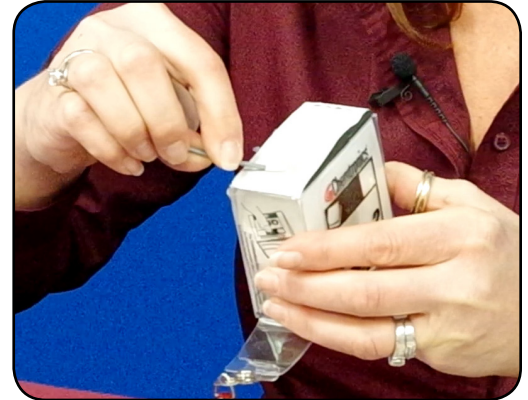

Figure 5

• 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)**

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)**
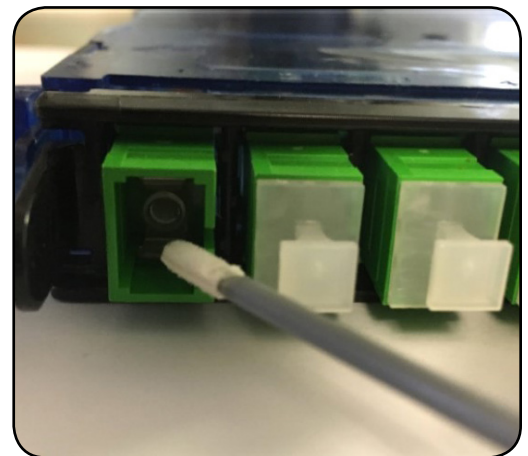

Figure 6

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.
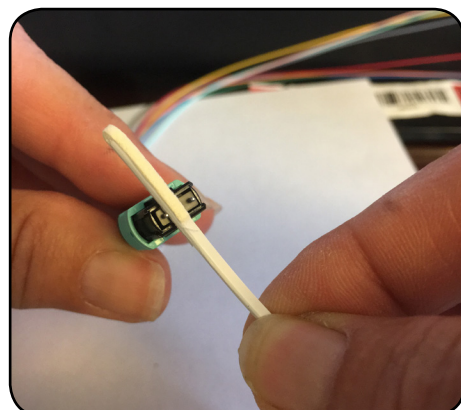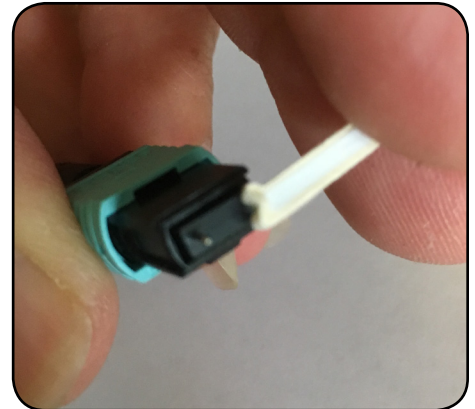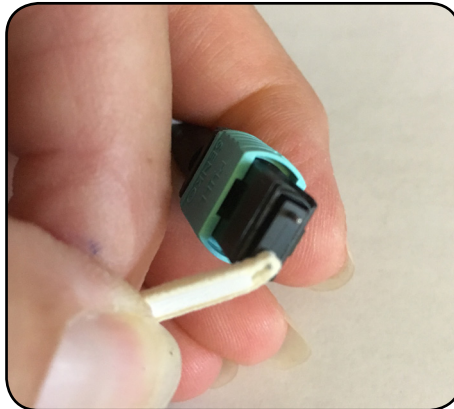
- Use the hole on end of pad to clean one alignment pin, then press the end of the swab into the other pin to clean.

- 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.
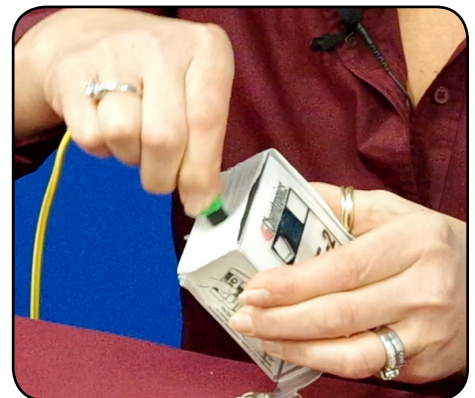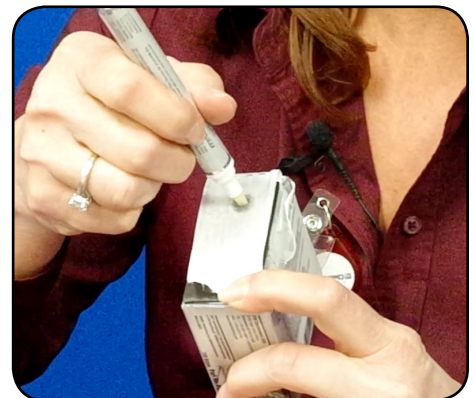
Cleaning Using a Probe-Style Cleaning Tool

- 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.
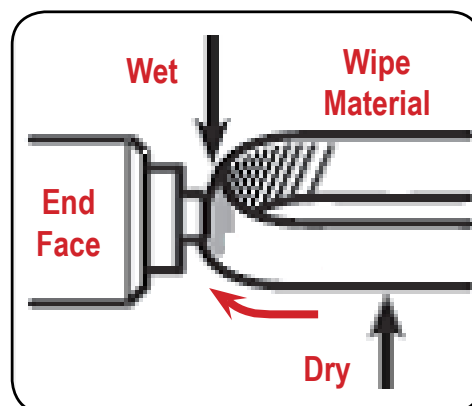
- Insert connector or insert probe though adapter and click 2-3 times to move past the wet area and allow material to dry wipe.
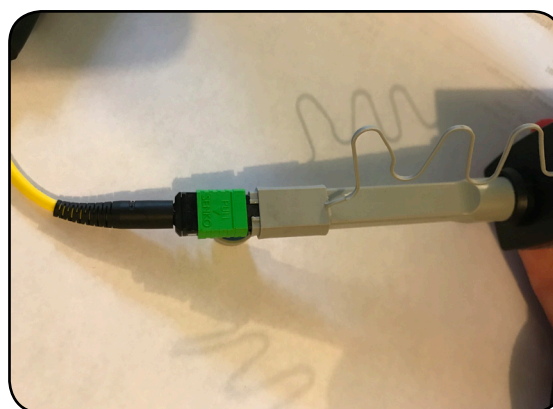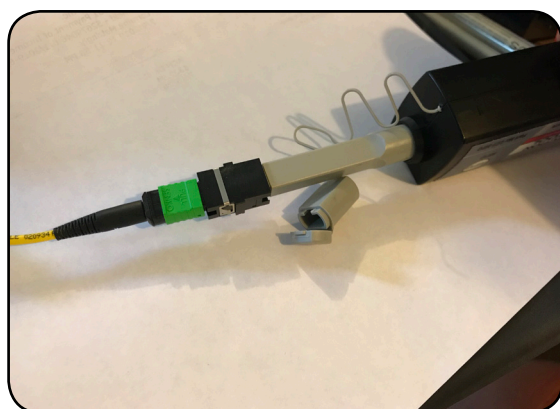
- Inspect connector, repeat if necessary (following standards)

- If cleaning a male connector, clean the pins (see above)

LC Connectors

Regardless of whether fiber assemblies are factory terminated or field spliced, clean connectors are essential for proper system operation. Even the smallest dust particle can cause transmission problems for the customer. As a result, for optimal network performance it is best to clean all connectors and adapters prior to mating.

Note: Dust covers should never be removed until immediately before the connector is inserted into an adapter.

Using Isopropyl Alcohol

The most widely used method in the industry to clean a connector is to wipe the connector ferrule with a lint-free paper or fabric wipe moistened with isopropyl alcohol. Isopropyl alcohol helps to dissolve any contamination that may be present on the ferrule. However, if the connector is allowed to air dry, any contaminates dissolved in the alcohol remain deposited on the ferrule after the alcohol evaporates. As a result, it is important to dry wipe the ferrule after cleaning with alcohol.

Cleaning Procedure

1.   To clean fold a lint-free wipe two to four plies high and place a couple drops of a 99% isopropyl alcohol on the wipe.

      Note: Make sure to leave a dry portion on the outside area of the lint-free wipe, so that the alcohol deposit is wiped from the connector during the cleaning swipe. Continuously rubbing the connector on a piece of dust could scratch the glass, causing permanent damage to the connector.

2.   Holding the wipe in your hand, place the connector face in the center of the wet area of the wipe. Carefully slide the connector from the wet area to the dry area. It is best to repeat a couple times following a different swipe path each time.

      Note: Do not touch the connector ferrule with anything other than the lint-free wipe. Even the oils from your "clean" fingertips can contaminate the connection.

3.   After adequately cleaning with alcohol, take a clean dry wipe and wipe the ferrule dry. Once dry, the connection should either be inserted into a termination port or re-capped with a dust cap to prevent recontamination.

      Note: Specialized solvents specifically designed to remove contaminates such as pulling lubricants and water blocking gels are also available. However, these solutions are not required because fiber installation does not require the use of assist lubricants.

Other Methods

Many in the industry recommend dry methods, such as rubbing a lint-free cloth over the connector face in a figure-eight motion, as a first step in cleaning. Dry cleaning cassettes with an advancing tape and cleaning cubes or cards that dispense small single-use pieces of cleaning wipes are also available and can work well. Regardless of preferred method, properly cleaning the connector and adapter prior to initial mating can minimize the amount of troubleshooting later on.

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 at 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

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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.

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