

Introduction to Clearview® Cassettes and xPAK



At the heart of everything we do is our patented Clearview Cassette. Clearview Cassette products offer a unique, single-architecture, modular fiber management platform designed to lower the cost of broadband deployment and maintenance. This is accomplished by consolidating, protecting and distributing incoming and outgoing fiber circuits, allowing our customers to scale their operations as their subscriber revenues increase.

Clearview Blue and Clearview Black, are the core building block of every product within the FieldSmart® fiber management system. At Clearfield®, we believe fiber management needs to be different. Rather than using a fixed approach, we take a modular approach. Utilizing the Clearview Cassette provides our customers a scalable and flexible architecture that can take you from the CO all the way to the demarc. To accomplish this objective, fiber management should be designed from “the inside out.”

FieldSmart is the only fiber management platform designed around a single architecture - the Clearview Cassette family of products. FieldSmart supports a wide range of panel and cabinet configurations, densities, connectors and adapter options for the inside plant, outside plant and access network. Customers benefit from Clearfield’s innovative, scalable and modular designs that allow you to “grow-as-you-go.”

Clearfield’s portfolio of cassette products can be configured for various applications. Patch only, patch and splice (Clearfield’s in-cassette splicing solution), MPO, plug-and-play and passive optical components.

Delivering the most scalable fiber management platform in the industry, Clearfield ensures your investment in capital equipment grows alongside your take rates. With Clearfield, deployments are quicker, required inventories are reduced and technical training is virtually eliminated.



Clearview Cassettes

Introduction to Clearview[®] Cassettes and xPAK

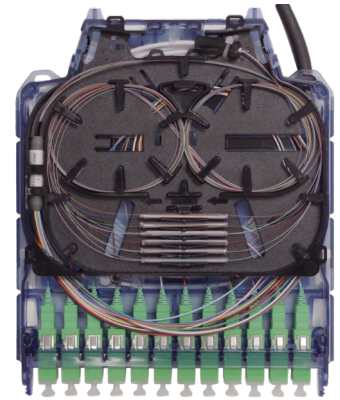


The Clearview Cassette building blocks are well suited for multiple applications in both inside plant, outside plant and access environments. For inside plant environments, high density solutions save floor space, which is always a goal in a central office, headend, data center and customer premise facility. In the outside plant environments, the Clearview Cassette can be deployed in OSP cabinets, pedestals, wall boxes and the FieldSmart[®] Makwa[™].

Configurations are available that support patch and splice (Clearfield's in-cassette splicing solution), patch only, MPO and optical component scenarios, allowing many different engineering configurations to be met using a single platform. A common platform used in multiple applications helps with technician training, making them ready to perform their work regardless of the installation environment. This saves time during initial installation, turn-up of new services or in critical repair situations.

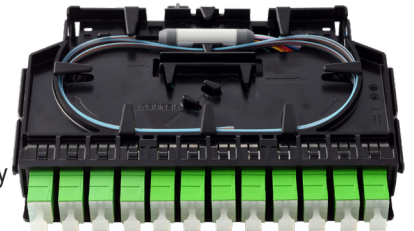
Clearview Blue

The small footprint of the Clearview Blue design minimizes space requirements thereby reducing the cost of deployment. Integrated slack management and cable routing provides for superior performance with minimal risk of fiber damage. It incorporates flexibility and scalability with configuration options supporting tool-less installation, in-cassette buffer tube/ribbon slack storage and front access only designs. Reducing the overall footprint of the fiber management element reduces real estate costs and improves density without compromising critical design elements of access, bend-radius protection, physical fiber protection, and route-path diversity.



Clearview Black

The Clearview Black Cassette is Clearfield's most compact building-block technology and retains the same cost saving features of Clearfield's current generation of cassettes, including modularity and scalability in increments of 12 fibers using industry standard SC and LC singlemode connectors. In addition, critical design elements of fiber access, bend-radius protection and route-path diversity have been maintained while occupying nearly 50% less overall size. The smaller packaging allows Clearview Black to be integrated into other Clearfield solutions like the below grade, FieldSmart Makwa. Clearview Black uses a tool free, snap-in-place mounting feature. With more and more non-specialized technicians being employed in the workforce, the scalable platform that provides the ability to "grow-as-you-go" without any installation tools is increasingly valuable.



xPAK

Engineered to land small port count fiber assemblies and optical components as conveniently and inexpensively as possible, the Clearview xPAK simplifies fiber management to the level of a consumable good. Clearview xPAK is single-piece element in which all required components for fiber protection are integrated. It is shipped flat and simply folds to shape.

The Clearview xPAK is a small footprint two, four, six or 12* port cassette. The kit comes equipped with a flat cassette, adapters, 2, 4, 6 or 12* fiber 900 μ m 1/2 meter assembly, splice sleeves, strain relief boot, grommet tape and zip ties.



* 12 port option only available as LC

Inspect and clean EVERY connector BEFORE inserting into adapter. See page 304 for cleaning instructions.

Clearview[®] Cassette

Clearview Blue



Application

The Clearview Blue provides 12-24 ports of connectivity, scaling one cassette at a time, for patch and splice (Clearfield's in-cassette splicing solution), patch only (stubbed) or plug-and-play (MPO/MTP) configurations in any network environment. A dual high 24 fiber Cassette offers additional splicing capacity for SC port count requirements greater than 12, utilizing the Clearview Expansion Ring to provide further flexibility and scalability within the same footprint. Dual MPO/MTP access is available on either side of the cassette. Additional optical components integrate into the cassette housing, supporting any input/output combination of splitting, mux, and demux strategies desired.

Description

Clearview Blue Cassettes are a core building block of nearly every product within the FieldSmart[®] fiber management system. Clearview Blue continues to incorporate flexibility and scalability, now with enhanced configuration options including tool-less installation, in-cassette buffer tube/ribbon slack storage, and front access-only designs. Reducing the overall footprint of the fiber management element reduces real estate costs and improves density without compromising the critical design elements of access, bend-radius protection, physical fiber protection and route-path diversity.

Clearview Blue is a six component tool-less system made up of a top cover, splice tray, buffer tube/ribbon slack storage, cable assembly tray and adapter plate. Parts snap together to support desired application requirements. All types of fiber cable construction can be integrated within the cassette to support all patch and splice, patch only, passive optical component hardware and plug-and-play scenarios.

Features and Benefits

Integrity

- Terminations are designed and tested to Telcordia GR-326
- Clearfield[®] FiberDeep[®] Guarantee: 0.2 dB insertion loss or less, exceeding industry standards
- Supports industry standard SC, LC, ST, FC and MPO/MTP singlemode and multimode connectors
- Supports all fiber construction types (distribution, tight-buffer, loose tube and ribbon)
- Modular and scalable

Protection

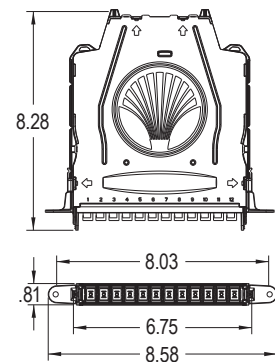
- Designed to handle the toughest operating environments, provides flexibility and reliable performance
- Slack stored, bend-radius protected and secured against accidental physical damage from handling
- Integrated buffer tube storage removes the need for traditional slack storage baskets, reels and troughs and aligns individual buffer tube to the cassette

Access

- Tool-less, snap together design makes turn-up time even faster
- Eight buffer tube/cable entry/exit paths allow the technician a high degree of flexibility in deployment
- Ability to store 10 feet (3.05 m) of exposed buffer tube in the in-cassette buffer tube storage
- Translucent housing provides quick visual inspection, while removable adapter plate allows for easy front access for maintenance, cleaning and troubleshooting
- Front-access to pre-terminated assemblies with Clearview removable adapter plate
- Integrated in-cassette buffer tube slack storage aligns slack to individual cassettes maximizing density by reducing real estate requirements

Investment

- "Grow-as-you-go"
- Scalable (increments of 12) building block to align capital expenditures to customer take rates
- Modular design allows ports to be configured to user-defined application requirements
- 25% smaller footprint than Clearview Classic, coupled with integrated buffer tube storage, allows for more density within all application environments
- Patch and splice integrated splice tray removes need for a separate chassis space or splice enclosure reducing the required real estate



Clearview[®] Cassette

Clearview Blue



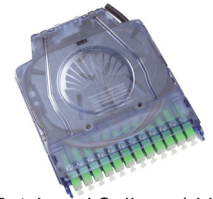
Technical Specifications

Clearview Blue Cassette	
Dimensions	Without Mounting Ears: 0.81" (20.57 mm) H x 6.03" (153.16 mm) W x 8.28" (210.30 mm) D With Mounting Ears: 0.81" (20.57 mm) H x 8.66" (219.96 mm) W x 8.28" (210.30 mm) D
Ratings	Terminations are designed and tested to Telcordia GR-326; Tested to GR-63 NEBS 3 and UL 94 V-0; Clearfield [®] FiberDeep [®] Guarantee: 0.2 dB insertion loss or less, exceeding industry standards.
Backwards Compatible	Optional mounting ears for backwards compatible to FieldSmart [®] Inside plant (FxDS), OSP and access product lines
Material	Polycarbonate
Connector Types	Supports industry standard SC, LC, ST, FC and MPO/MTP singlemode and multimode connectors
Meters/Feet of Slack Storage	Up to 10 feet of buffer tube storage in the bottom of the cassette; one meter of 250 μm used for internal splicing for patch and splice (Clearfield's in-cassette splicing solution)
Mounting Options	Clearview Building Block or Clearview Mounting Ears

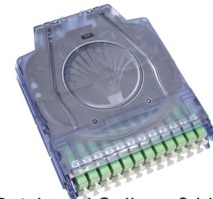
Cassette Configuration Options

Patch and Splice

The Patch and Splice cassette has a splice tray that nests into the lower tray allowing integrated splicing directly in the cassette. The integrated splice tray eliminates the need for dedicated splice chassis space thus reducing real estate. The cassette provides 12 ports of connectivity with the ability to scale one cassette at a time. Utilizing the dual snap-in splice chip option you add an additional 12 splices for a total of 24 splices in one cassette (LC connectors). The 24 port expansion cassette doubles the height and allows 24 splices in a 2 high cassette (SC connectors). Cassettes are pre-loaded with a one meter, 250 μm fiber assembly, loose tube or ribbon, which is pre-terminated and slack stored inside the cassette. For 24 fiber loose tube configurations, 40mm splices sleeves are required (60mm sleeves will not fit). Additionally, in the bottom of the cassette, there is an area to house up to 10 feet (3.05 m) of buffer tube storage with eight cable entry/exit locations for the maximum in flexibility.



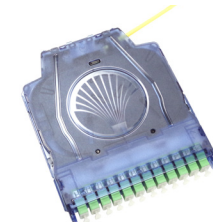
Patch and Splice - 1 high



Patch and Splice - 2 high

Patch Only

Regardless of the industry standard adapters or cable construction, the Clearview Blue handles all patch only applications using the lower tray, top cover, built in radius limiter and removable adapter plate. A patch only cassette can be configured with most industry standard adapters and cable types.



Optical Components

Clearview Blue integrates optical components into the identical cassette, allowing service providers to mix and match fiber modules with optical components in the same chassis. The front faceplate is secured to reduce the chance of accidental damage to the optical component.



MPO Plug-and-Play

MPO to industry standard connector allows for plug-and-play by mating MPO to MPO with pre-terminated multi-fiber OSP or IFC. Also available in dual MPO 24-fiber configuration.



Clearview[®] Cassette

Clearview Blue



Pre-Configured Part Numbers

Patch and Splice - 12 Port With Mounting Ears

Part Number	Description
EPZ-012-A1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, Loaded with 12 SC/UPC Adapters, Singlemode, Mounting Ears Included
EPZ-012-A2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, Loaded With 12 SC/UPC Adapters, Singlemode, Mounting Ears Included
EPZ-012-C1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, Loaded with 12 SC/APC Adapters, Singlemode, Mounting Ears Included
EPZ-012-C2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, Loaded with 12 SC/APC Adapters, Singlemode, Mounting Ears Included
EPZ-012-F1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, Loaded with 12 LC/UPC Adapters, Singlemode, Mounting Ears Included
EPZ-012-F2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, Loaded with 12 LC/UPC Adapters, Singlemode, Mounting Ears Included
EPZ-012-H1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, Loaded with 12 LC/APC Adapters, Singlemode, Mounting Ears Included
EPZ-012-H2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, Loaded with 12 LC/APC Adapters, Singlemode, Mounting Ears Included

Patch and Splice - 12 Port Without Mounting Ears

Part Number	Description
EMZ-012-A1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, FxHD Frame System, Loaded With 12 SC/UPC Adapters, Singlemode, No Mounting Ears Included, Used For HD Frame
EMZ-012-A2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, FxHD Frame System, Loaded With 12 SC/UPC Adapters, Singlemode, No Mounting Ears Included, Used For HD Frame
EMZ-012-C1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, FxHD Frame System, Loaded With 12 SC/APC Adapters, Singlemode, No Mounting Ears Included, Used For HD Frame
EMZ-012-C2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, FxHD Frame System, Loaded With 12 SC/APC Adapters, Singlemode, No Mounting Ears Included, Used For HD Frame
EMZ-012-F1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, FxHD Frame System, Loaded With 12 LC/UPC Adapters, Singlemode, No Mounting Ears Included, Used For HD Frame
EMZ-012-F2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, FxHD Frame System, Loaded With 12 LC/UPC Adapters, Singlemode, No Mounting Ears Included, Used For HD Frame
EMZ-012-H1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, FxHD Frame System, Loaded With 12 LC/APC Adapters, Singlemode, No Mounting Ears Included, Used For HD Frame
EMZ-012-H2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, FxHD Frame System, Loaded With 12 LC/APC Adapters, Singlemode, No Mounting Ears Included, Used For HD Frame

Clearview[®] Cassette

Clearview Blue



Pre-Configured Part Numbers

Patch and Splice - 12 Port With Universal Mounting Kit

Part Number	Description
EYZ-012-A1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, Loaded with 12 SC/UPC Adapters, Singlemode, 2 Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Fillister Screws
EYZ-012-A2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, Loaded With 12 SC/UPC Adapters, Singlemode, 2 Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Fillister Screws
EYZ-012-C1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, Loaded with 12 SC/APC Adapters, Singlemode, 2 Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Fillister Screws
EYZ-012-C2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, Loaded with 12 SC/APC Adapters, Singlemode, 2 Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Fillister Screws
EYZ-012-F1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, Loaded with 12 LC/UPC Adapters, Singlemode, 2 Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Fillister Screws
EYZ-012-F2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, Loaded with 12 LC/UPC Adapters, Singlemode, 2 Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Fillister Screws
EYZ-012-H1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, Loaded with 12 LC/APC Adapters, Singlemode, Mounting Ears Included
EYZ-012-H2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, Loaded with 12 LC/APC Adapters, Singlemode, 2 Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Fillister Screws

Mounting Ear Kit

Part Number	Description
FMA-XXX-181	Kit, Ear Includes One Push-Pull Grommet and Plunger, and One Fillister Screw Set

Clearview[®] Cassette

Clearview Blue

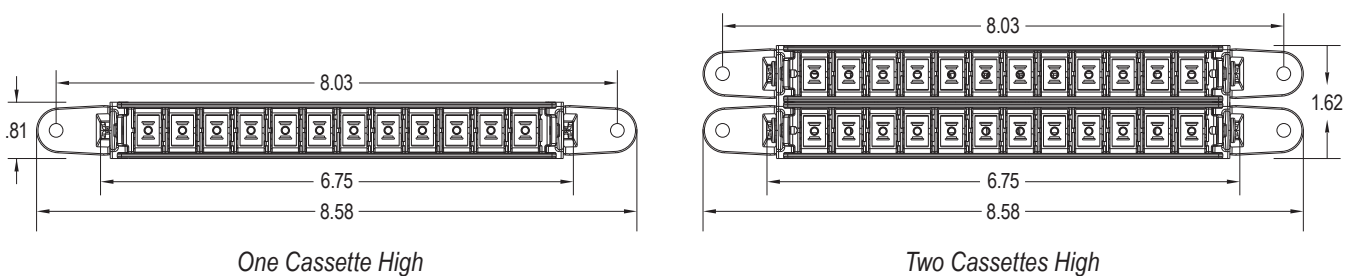


Patch and Splice - 24 Port With Mounting Ears

Part Number	Description
EPZ-024-A1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, 2 High, Loaded With 24 SC/UPC Adapters, Singlemode, Mounting Ears Included
EPZ-024-A2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, 2 High, Loaded With 24 SC/UPC Adapters, Singlemode, Mounting Ears Included
EPZ-024-C1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, 2 High, Loaded With 24 SC/APC Adapters, Singlemode, Mounting Ears Included
EPZ-024-C2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, 2 High, Loaded With 24 SC/APC Adapters, Singlemode, Mounting Ears Included
EPZ-024-F1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice High Density, 1 High, Loaded With 24 LC/UPC Adapters, Singlemode, Mounting Ears Included
EPZ-024-F2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, High Density, 1 High, Loaded With 24 LC/UPC Adapters, Singlemode, Mounting Ears Included
EPZ-024-H1F-SUB	Clearview Blue Cassette, Patch and Splice, High Density, 1 High, Loaded With 24 LC/APC Adapters, Singlemode, Mounting Ears Included
EPZ-024-H2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, High Density, 1 High, Loaded With 24 LC/APC Adapters, Singlemode, Mounting Ears Included

Patch and Splice - 24 Port With Universal Mounting Ears

Part Number	Description
EYZ-024-A1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, 2 High, Loaded With 24 SC/UPC Adapters, Singlemode, 2 Universal Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Filister Screws
EYZ-024-A2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, 2 High, Loaded With 24 SC/UPC Adapters, Singlemode, 2 Universal Mounting Ears Included, 1 Push Pull Grommet and Plunger, 2 Filister Screws
EYZ-024-C1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice, 2 High, Loaded With 24 SC/APC Adapters, Singlemode, 2 Universal Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Filister Screws
EYZ-024-C2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, 2 High, Loaded With 24 SC/APC Adapters, Singlemode, 2 Universal Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Filister Screws
EYZ-024-F1F-SUB	Clearview Blue Cassette, Loose Tube, Patch and Splice High Density, 1 High, Loaded With 24 LC/UPC Adapters, Singlemode, 2 Universal Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Filister Screws
EYZ-024-F2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, High Density, 1 High, Loaded With 24 LC/UPC Adapters, Singlemode, 2 Universal Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Filister Screws
EYZ-024-H1F-SUB	Clearview Blue Cassette, Patch and Splice, High Density, 1 High, Loaded With 24 LC/APC Adapters, Singlemode, 2 Universal Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Filister Screws
EYZ-024-H2F-SUB	Clearview Blue Cassette, Ribbon, Patch and Splice, High Density, 1 High, Loaded With 24 LC/APC Adapters, Singlemode, 2 Universal Mounting Ears, 1 Push Pull Grommet and Plunger, 2 Filister Screws



Clearview[®] Cassette

Clearview Blue



Configured Part Numbers

Patch Only

E - - - - - XXXM or XXXF

1 2 3 4 5 6

1 Select Cassette Style

E = Patch only (1 mounting ear for FxMP Panels)
 K = Patch only (without mounting ears)
 R = Patch only (with mounting ears)

2 Cable Exit

R = Right
 L = Left

3 Select Port Count

012 = 12 072 = 72
 024 = 24 096 = 96
 048 = 48 144 = 144

4 Select Connector Style

A = SC/UPC J = FC/UPC
 C = SC/APC K = FC/APC
 F = LC/UPC M = ST/UPC
 H = LC/APC

5 Select Mode / Type

1 = Singlemode – loose tube
 2 = Singlemode – ribbon
 3 = Multimode (62.5)

6 Select Cable Construction

A = Indoor riser rated
 B = OSP riser rated
 C = Indoor, plenum rated
 E = OSP (non-rated)
 M = OSP (armored)
 T = FLATdrop, non-toneable
 U = FLATdrop toneable
 W = FieldShield

XXXM or XXXF

XXXM = Length in meters
 XXXF = Length in feet

MPO Plug-and-Play

E - - - - - SUB

1 2 3 4 5 6

1 Select Cassette Style

N = MPO breakout (without mounting ears)
 U = MPO breakout (mounting ears)
 Q = MPO

2 Cable Exit

R = Right
 L = Left

3 Select Port Count

012 = 12
 024 = 24

Call Clearfield for ordering any port count above 12

4 Select Connector Style

A = SC/UPC J = FC/UPC
 C = SC/APC K = FC/APC
 F = LC/UPC M = ST/UPC
 H = LC/APC

5 Select Mode / Type

1 = Singlemode – loose tube
 2 = Singlemode – ribbon
 3 = Multimode (62.5)
 5 = Multimode (50) – OM2
 7 = Multimode (50) LO – OM3
 D = Multimode (50) LO – OM4

6 Select Cable Construction

F = MPO

Pre-Configured Part Numbers - MPO

Part Number	Description
EQL-012-A1F-SUB	Clearview Blue Cassette, MPO, MPO (Male) to SC/UPC, MPO Rear Access and SC/UPC Front Access Adapters, Singlemode, Left Exit, Includes Kit of 2 Ears with Universal Mounting Options
EQR-012-A1F-SUB	Clearview Blue Cassette, MPO, MPO (Male) to SC/UPC, MPO Rear Access and SC/UPC Front Access Adapters, Singlemode, Right Exit, Includes Kit of 2 Ears with Universal Mounting Options
EQL-012-C1F-SUB	Clearview Blue Cassette, MPO, MPO (Male) to SC/APC, MPO Rear Access and SC/APC Front Access Adapters, Singlemode, Left Exit, Includes Kit of 2 Ears with Universal Mounting Options
EQR-012-C1F-SUB	Clearview Blue Cassette, MPO, MPO (Male) to SC/APC, MPO Rear Access and SC/APC Front Access Adapters, Singlemode, Right Exit, Includes Kit of 2 Ears with Universal Mounting Options
EQL-012-F1F-SUB	Clearview Blue Cassette, MPO, MPO (Male) to LC/UPC, MPO Rear Access and LC/UPC Front Access Adapters, Singlemode, Left Exit, Includes Kit of 2 Ears with Universal Mounting Options
EQR-012-F1F-SUB	Clearview Blue Cassette, MPO, MPO (Male) to LC/UPC, MPO Rear Access and LC/UPC Front Access Adapters, Singlemode Right Exit, Includes Kit of 2 Ears with Universal Mounting Options
EQL-012-H1F-SUB	Clearview Blue Cassette, MPO, MPO (Male) to LC/APC, MPO Rear Access and LC/APC Front Access Adapters, Singlemode, Left Exit, Includes Kit of 2 Ears with Universal Mounting Options
EQR-012-H1F-SUB	Clearview Blue Cassette, MPO, MPO (Male) to LC/APC, MPO Rear Access and LC/APC Front Access Adapters, Singlemode, Right Exit, Includes Kit of 2 Ears with Universal Mounting Options

Clearview[®] Cassette

Clearview xPAK



Application

Engineered to land small port count fiber assemblies and optical components as conveniently and inexpensively as possible, the xPAK simplifies fiber management to the level of a consumable good. Clearview xPAK can be deployed as a stand-alone device, or with FieldSmart[®] Fiber Delivery Point (FDP) products for a wide range of network environments.

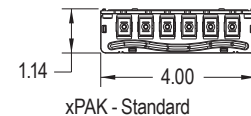
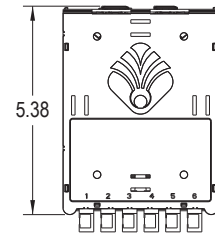
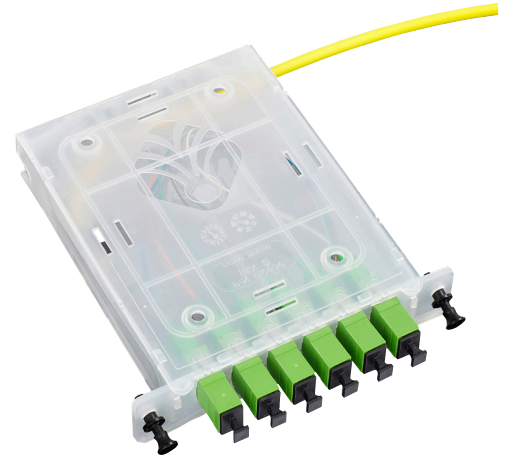
Description

At first glance, Clearview xPAK looks like any other LGX compatible package, but upon closer inspection, technicians will see a new generation of innovation in the delivery of terminated fiber assemblies. Clearview xPAK is single-piece element in which all required components for fiber protection are integrated. It is shipped flat and simply folds to shape.

The Clearview xPAK supports two, four or six ports of patch and splice (Clearfield's in-cassette splicing solution) configurations. The compact 4" x 5" (101.60 mm x 127.00 mm) solution is perfect for landing small count terminations at the fiber delivery point. The kit comes with everything you'll need: flat cassette, adapters, 2, 4 or 6-fiber 900 μ m 1/2 meter assembly, splice sleeves, strain relief boot, grommet tape, zip ties and universal mounting bracket.

Priced to allow field personnel to carry quantities of Clearview xPAK Cassettes in the field, xPAK is shipped flat and unassembled. At the deployment site, the technician will take the xPAK device, and following pictorial user instructions, will assemble the device to match his field requirements. Integrated into the footprint of the device, is an industry-compatible splicing tray, which is then surrounded with fiber protection elements that support either a two, four or six port fiber assembly as well as a range of optical component devices.

Clearview xPAK is the ideal fiber management device when up to six fibers (or us to 12 LC) are landed or an optical component device is deployed in a remote location. Application environments include cell backhaul, business class service delivery, node segmentation, fiber exhaust in a field pedestal, sub-station turn-up or fiber-to-the-desk deployment.



Features and Benefits

Integrity

- Terminations are designed and tested to Telcordia GR-326
- Clearfield[®] FiberDeep[®] Guarantee: 0.2 dB insertion loss or less, exceeding industry standards
- Supports industry standard SC, LC, ST, FC and MPO/MTP singlemode and multimode connectors
- 100% performance tested for insertion loss, return loss and final mechanical inspect

Protection

- Radius protected storage for up to 1/2 meter of 900 μ m jacketed fibers
- Durable polypropylene construction (impact plastic)
- Integrated fiber management protects fiber from micro-bend and macro-bend damage

Access

- Small design facilitates ease of use in crowded environments
- Easy assembly - no tools required
- Front: 6 SC ports; Rear: 1 SC port or 1 MPO/MTP
- 9 SC port faceplate available

Investment

- Pre-configured/factory loaded, patch only factory terminated assemblies
- Patch and splice
- LGX compatible flange mount
- Wall mount capable
- One piece construction with "living hinge"
- Supports optional component integration
- Plug-and-play with MPO configurations

Clearview[®] Cassette

Clearview xPAK



Technical Specifications

Clearview xPAK	
Dimensions	1.14" H x 4" W x 5.38" D (28.96 mm x 101.60 mm x 136.52 mm)
Ratings	Terminations are designed and tested to Telcordia GR-326; Clearfield [®] FiberDeep [®] Guarantee: 0.2 dB insertion loss or less, exceeding industry standards
Backwards Compatible	N/A
Material	Durable polypropylene (impact plastic)
Connector Types	Supports industry standard SC, LC, ST, FC and MPO singlemode and multimode connectors
Meters/Feet of Slack Storage	½ meter of 900 µm tight buffer fiber used for internal splicing, 12-fiber xPAK requires ribbon splicing
Mounting Options	Standard faceplate and LGX faceplate

Cassette Configuration Options

Patch and Splice (Clearfield's In-Cassette Splicing Solution)

The 6-fiber splice tray molded into the xPAK tray is all that is needed to deliver an integrated patch and splice application. 2, 4 or 6-fiber 900 µm ½ meter assemblies are pre-terminated, pre-loaded and slack stored inside the xPAK ready for splicing.

Patch Only

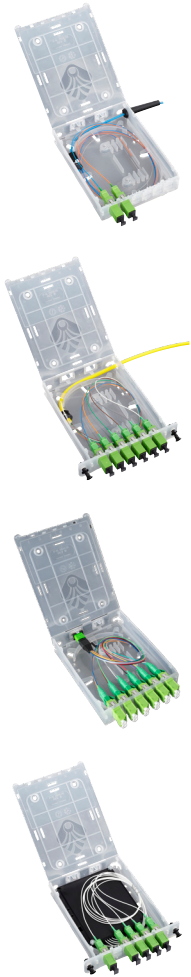
Regardless of the industry standard adapter or cable construction, the pre-terminated length of OSP or IFC cable is pre-loaded within Clearview xPAK for patch only configurations.

MPO Plug-and-Play

MPO to industry standard connectors allows for plug-and-play by mating MPO to MPO with pre-terminated multi-fiber OSP or IFC.

Optical Components

Optical components can be integrated into the Clearview xPAK.



Clearview[®] Cassette

Clearview xPAK



Pre-Configured Part Numbers

Connector Type	2 Port	4 Port	6 Port	12 Port
SC/UPC	2PAK-SC	4PAK-SC	6PAK-SC	N/A
SC/APC	2PAK-SCA	4PAK-SCA	6PAK-SCA	N/A
LC/UPC	2PAK-LC	4PAK-LC	6PAK-LC	12PAK-LC-01 (Ribbon)
LC/APC	2PAK-LCA	4PAK-LCA	6PAK-LCA	12PAK-LCA-01 (Ribbon)

Configured Part Numbers

E - - - - - 1 XXXM or XXXF

1 2 3 4 5

1 Select Mounting Option

H = LGX mounting
J = Standard mounting

3 Select Port Count

002 = 2 006 = 6
004 = 4 012 = 12 (LC Only)

5 Select Cable Construction

A = Indoor riser rated
B = OSP riser rated
C = Indoor, plenum rated
E = OSP (non-rated)
F = Patch and splice cassettes
M = OSP (armored)
W = FieldShield

2 Cable Exit

A = Side right
B = Back right
C = Side left
D = Back left

4 Select Connector Style

A = SC/UPC H = LC/APC
C = SC/APC J = FC/UPC
F = LC/UPC K = FC/APC
M = ST/UPC

XXXM or XXXF

XXXM = Length in meters
XXXF = Length in feet

Clearview[®] Cassette

Clearview Black



Application

Clearview Black provides 12 to 24 ports of connectivity for patch and splice (Clearfield's in-cassette splicing solution), patch only and plug-and-play (MPO/MTP) configurations in any network environment. It scales and multiplies to meet your specific port density and application needs. Additionally, optical components integrate into the cassette, supporting any input/output combination of splitting or mux and demux strategy desired. The Clearview Black Cassette is available for ribbon only fiber.

Description

Clearview Black incorporates the same flexibility and scalability of both the Clearview Classic and Clearview Blue in a 50% smaller footprint than the Clearview Blue. Decreasing the overall footprint of the fiber management element reduces real estate costs and improves density without compromising critical design elements of access, bend-radius protection, physical fiber protection and route-path diversity.

Clearview Black is a three component tool-less system made up of a top cover, base/splice tray and splice tray cover. Parts snap together to support the desired application requirements. All types of fiber cable construction can be integrated within the cassette to support all patch and splice, patch only, plug-and-play, and passive optical component hardware scenarios.

Each patch and splice cassette comes prepared for mass fusion splicing, with one meter of ribbonized 250 μ m fiber preloaded and prepped to splice. Each ribbonizing jig aligns and secures the loose tube fibers into correct color code order, allowing ribbonizing to be completed quickly and easily.

For patch only configurations, the pre-terminated length of OSP or IFC cable is pre-loaded within the Clearview Black Cassette. The cassettes are then preloaded into the FieldSmart[®] product when shipped.

Features and Benefits

Integrity

- Terminations are designed and tested to Telcordia GR-326
- Clearfield[®] FiberDeep[®] Guarantee: 0.2 dB insertion loss or less, exceeding industry standards
- Supports industry standard SC and LC singlemode and multimode connectors
- Supports all fiber construction types - patch and splice must be ribbonized
- Modular and scalable

Protection

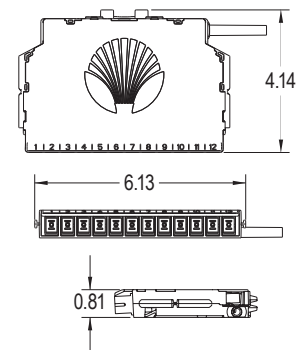
- Designed to handle the toughest operating environments, provides flexibility and reliable performance
- Slack stored, bend-radius protected and secured against accidental physical damage from handling

Access

- Tool-less, snap together design makes turn-up time even faster
- Two buffer tube/cable entry/exit paths allow the technician a high degree of flexibility in deployment
- Front-access to pre-terminated assemblies with Clearview removable lid
- Ribbonizing allows quicker troubleshooting and restoration of affected fibers, as 12 fibers are ribbonized only where the splicing needs to occur, providing single-circuit access if necessary

Investment

- "Grow-as-you-go"
- Scalable (increments of 12 ports) building block to align capital expenditures to customer take rates
- Modular design allows ports to be configured to user-defined application requirements
- Patch and splice - integrated splice tray removes the need for a separate splice enclosure/cases
- 50% smaller footprint than Clearview Blue allows for more density within all application environments
- Patch and splice integrated splice tray removes need for a separate chassis space or splice enclosure reducing the required real estate
- Ribbonizing loose tube cable allows for mass-fusion of up to 12 fibers at a time, reducing installation time and costs
- Brackets for 19" and 23" (482.60 mm and 584.20 mm) frames



Clearview[®] Cassette

Clearview Black

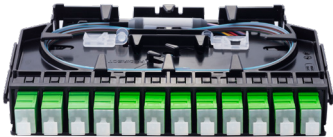


Cassette Configuration Options



Patch Only

Regardless of the industry standard adapters or cable construction, the Clearview Black handles all patch only applications using the lower tray, top cover and built in radius limiter.



Patch and Splice (Clearfield's In-Cassette Splicing Solution)

The splice tray that is molded into the lower tray is all that is needed to deliver integrated patch and splice applications. Pre-loaded with up to one meter of ribbon, 250 μ m assemblies that are pre-terminated with slack stored inside the cassette for splicing.



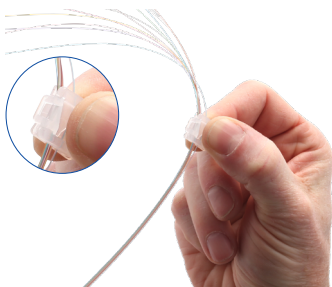
Optical Components

Clearview integrates optical components into the identical cassette, allowing service providers to mix and match fiber modules with optical components in the same chassis.



MPO Plug and Play

MPO to industry standard connectors allows for plug-and-play by mating MPO to MPO with pre-terminated multi-fiber OSP or IFC.



Clearview Ribbonizing Tool

Ribbonizing allows quicker troubleshooting and restoration of affected fibers, as 12-fibers are ribbonized only where the splicing needs to occur, providing single-circuit access as necessary. Each ribbonizing tool aligns and secures the loose-tube fibers in correct color code order, allowing ribbonizing to be completed quickly and easily. Clearfield's disposable ribbonizing tool efficiently organizes and prepares loose tube fibers to facilitate mass fusion splicing.

Clearview[®] Cassette

Clearview Black



Technical Specifications

Clearview Black Cassette	
Dimensions	0.81" H x 6.13" W x 4.14" D (20.57 mm x 155.70 mm x 105.15 mm)
Ratings	Terminations are designed and tested to Telcordia GR-326; Clearfield [®] FiberDeep [®] Guarantee: 0.2 dB insertion loss or less, exceeding industry standards
Backwards Compatible	N/A
Material	Polycarbonate
Connector Types	Supports industry standard SC and LC singlemode connectors
Meters/Feet of Slack Storage	1 meter of 250 μm used for internal ribbon splicing only
Mounting Options	Used with FieldSmart [®] BLG Pivot Bracket

Pre-Configured Part Numbers

Part Number	Description
E1Z-012-A2F-SUB	Clearview Black Cassette, Ribbon, Patch and Splice, Loaded With SC/UPC Adapters, Singlemode
E1Z-012-C2F-SUB	Clearview Black Cassette, Ribbon, Patch and Splice, Loaded With SC/APC Adapters, Singlemode
E1Z-012-F2F-SUB	Clearview Black Cassette, Ribbon, Patch and Splice, Loaded With LC/UPC Adapters, Singlemode
E1Z-012-H2F-SUB	Clearview Black Cassette, Ribbon, Patch and Splice, Loaded With LC/APC Adapters, Singlemode
E1Z-024-F2F-BLACK-SUB	Clearview Black Cassette, Ribbon, Patch and Splice, High Density, Loaded With 24 LC/UPC Adapters, Singlemode
E1Z-024-H2F-BLACK-SUB	Clearview Black Cassette, Ribbon, Patch and Splice, High Density, Loaded With 24 LC/APC Adapters, Singlemode
FMA-RIBBONIZE-KIT-12	Kit, Clearview Ribbonizing Tool, pack of 12

Configured Part Numbers

E _____ - _____ - _____ - _____ XXXM or XXXF

1 2 3 4 5 6

1 Select Cassette Style

- 1 = Patch and splice
- 2 = Patch only
- 3 = MPO breakout

2 Cable Exit

- R = Right
- L = Left
- Z = None

3 Select Port Count

- 012 = 12
- 024 = 24

4 Select Connector Style

- A = SC/UPC
- C = SC/APC
- F = LC/UPC
- H = LC/APC

5 Select Mode / Type

- 1 = Singlemode – loose tube
- 2 = Singlemode – ribbon

6 Select Cable Construction

- A = Indoor riser rated
- B = OSP riser rated
- C = Indoor, plenum rated
- E = OSP (non-rated)
- F = Patch and splice cassettes
- M = OSP (armored)
- W = FieldShield

XXXXM or XXXXF

- XXXXM = Length in meters
- XXXXF = Length in feet

Clearview[®] Cassette

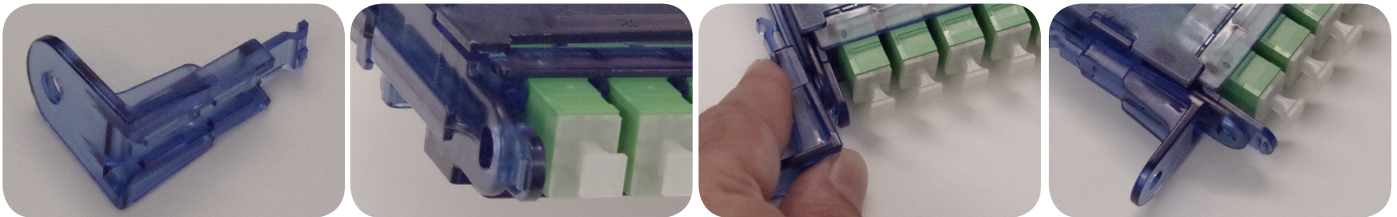
Clearview Blue Mounting Ears Instructions



The Clearview Blue Cassette is able to mount into a number of Clearfield products using a flexible system of mounting ears and retaining screws or push/pull plungers. Below you will find instructions on how to install each mounting variation and a list of products in which each variation will be used.

Installing Mounting Ears

From the front of the cassette, slide the mounting ear's channel onto the t-rail on the side of the cassette. Push the mounting ear until it snaps into place.



Mounting Option	Products
No Mounting Ears	FxHD Frame System, Flex Box, KIS Box, NDP Wall Box, 5.5" Deep Indoor/Outdoor SCD Wall Box
One Mounting Ear	FxMP Panels, 144 PON Pedestal Insert
Two Mounting Ears	All other products (special cassette mounting instructions may be included with product)

Installing Retaining Screws

To mount cassettes into products utilizing retaining screws, insert the retaining screws into the holes in the mounting ears. Depending on the product, retaining screws will be inserted in either the front or the back of the mounting ear. Screw the cassette into place in the product using the retaining screws.

Mounting Option	Products
Front Installed Retaining Screws	FxDS Panels, FxDS PON Insert, 96 & 144 PON Pedestal Inserts
Back Installed Retaining Screws	FSC & FDH Cabinets, 24 & 48 Outdoor Wall Boxes, 36, 96 & 144 Indoor Wall Boxes



Installing Push/Pull Plungers

Push/pull plungers are used in FxMP Panels. Push the grommet piece through the hole in the mounting ear, then the plunger. Push the plunger until it clicks, then pull back to release the expansion. To install cassettes into the product, insert the push/pull plunger through the hole and push the plunger to expand the grommet and secure the cassette into place.

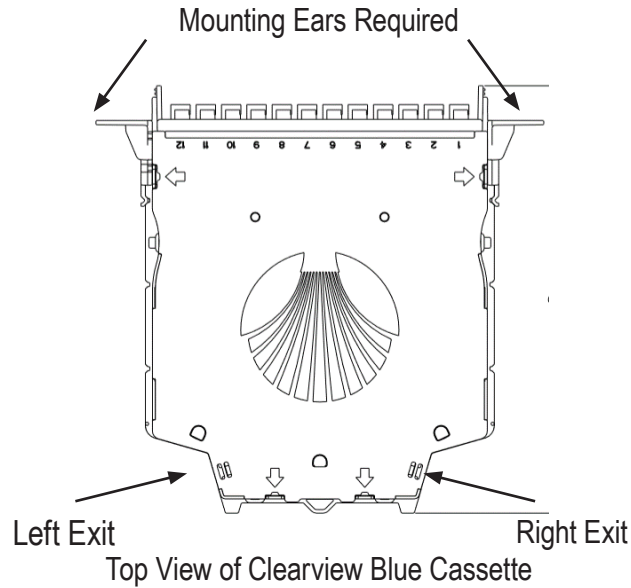


Clearview[®] Cassette Exits

Adding Patch Only Cassettes to Partially Loaded FieldSmart Cabinets —

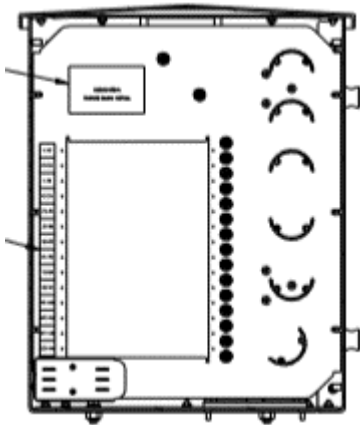


Cassette Exit Diagram



FieldSmart 144 PON FDH

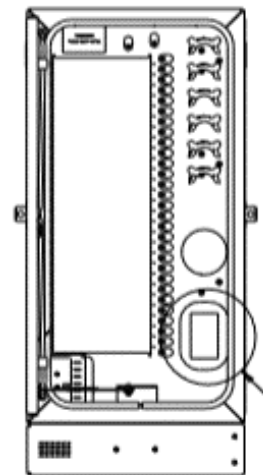
144 PON FDH	Port Designation	Cassette Exit
Feeder Ports	1-24	Left Exit
Distribution Ports	1-144	Left Exit



Front View of Cabinet

FieldSmart 288 PON FSC

288 PON FSC	Port Designation	Cassette Exit
Feeder Ports	1-48	Left Exit
Distribution Ports	1-288	Left Exit



Front View of Cabinet

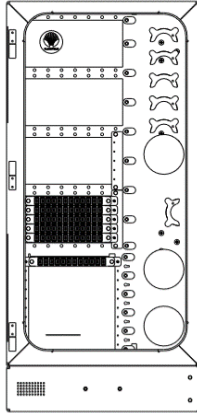
Clearview® Cassette Exits



Adding Patch Only Cassettes to Partially Loaded FieldSmart Cabinets —

FieldSmart HCC

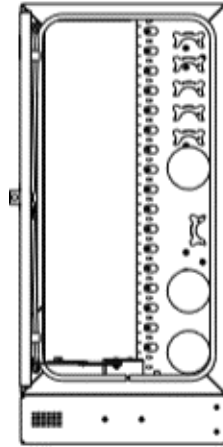
HCC Cabinet	Port Designation	Cassette Exit
Distribution Ports	1-120	Left Exit
Additional Cassettes	TBD	Left Exit



Front View of Cabinet

FieldSmart 432 Cross-Connect FSC

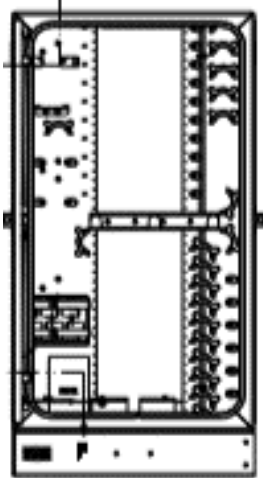
432 CC	Port Designation	Cassette Exit
Feeder/ Distribution	1-432	Left Exit



Front View of Cabinet

FieldSmart 432 PON FSC

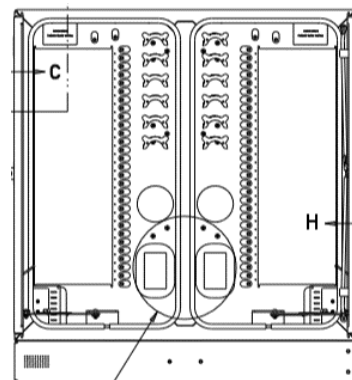
432 PON	Port Designation	Cassette Exit
Feeder Ports	1-48	Right Exit
Distribution Ports	1-432	Right Exit



Front View of Cabinet

FieldSmart 576 PON FSC

576 PON	Port Designation	Cassette Exit
Feeder Ports - Left Side of Cabinet	1-48	Left Exit
Feeder Ports - Left Side of Cabinet	1-288	Left Exit
Feeder Ports - Right Side of Cabinet	49-96	Right Exit
Distribution Ports - Right Side of Cabinet	289-576	Right Exit



Front View of Cabinet

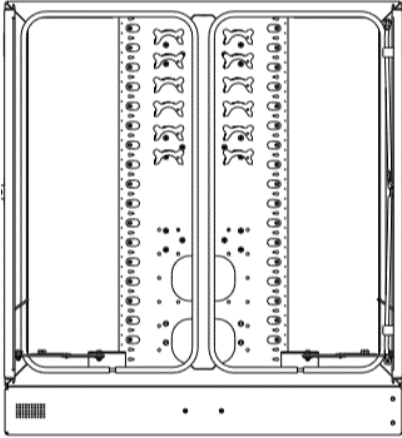
Clearview® Cassette Exits



Adding Patch Only Cassettes to Partially Loaded FieldSmart Cabinets — CLEARFIELD

FieldSmart 864 Cross-Connect

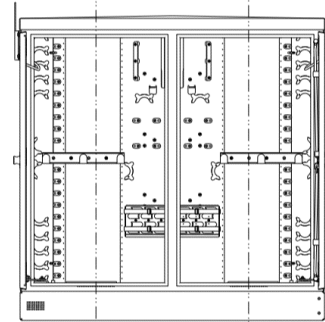
864 CC	Port Designation	Cassette Exit
Left Side of Cabinet	1-432	Left Exit
Right Side of Cabinet	433-864	Right Exit



Front View of Cabinet

FieldSmart 864 PON FDH

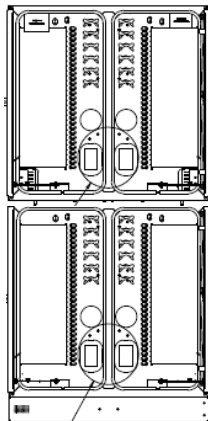
864 PON	Port Designation	Cassette Exit
Feeder Ports - Left Side of Cabinet	1-48	Left Exit
Feeder Ports - Left Side of Cabinet	217-432	Left Exit
Feeder Ports - Right Side of Cabinet	49-96	Right Exit
Distribution Ports - Right Side of Cabinet	433-864	Right Exit



Front View of Cabinet

FieldSmart 1152 PON FSC

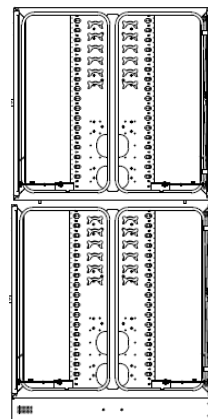
1,152 PON	Port Designation	Cassette Exit
Left Side of Cabinet	All Feeder/Distribution Ports	Left Exit
Right Side of Cabinet	All Feeder/Distribution Ports	Right Exit



Front View of Cabinet

FieldSmart 1728 Cross-Connect

1,728 CC	Port Designation	Cassette Exit
Left Side of Cabinet	All Feeder/Distribution Ports	Left Exit
Right Side of Cabinet	All Feeder/Distribution Ports	Right Exit



Front View of Cabinet

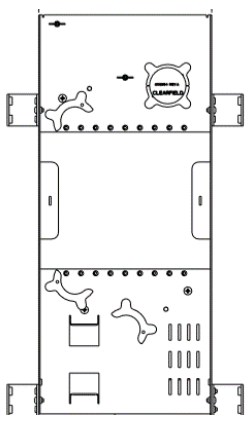
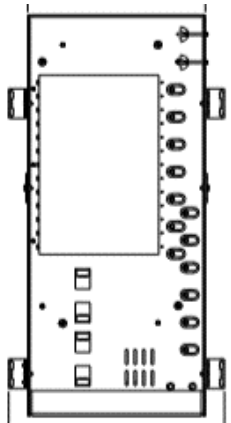
Clearview[®] Cassette Exits

Adding Patch Only Cassettes to Partially Loaded FieldSmart Cabinets —



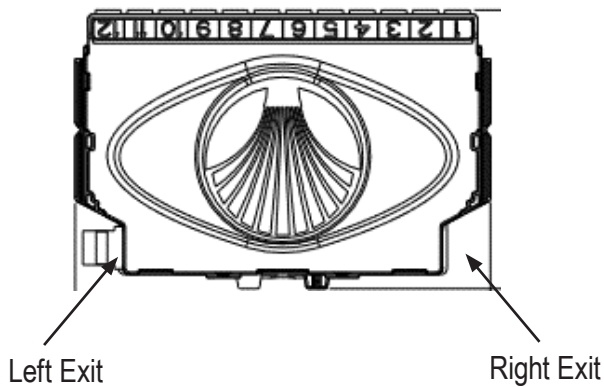
FieldSmart 96 and 144 PON in a Ped Insert

Ped Insert	Port Designation	Cassette Exit
All Feeder/ Distribution Ports	All Ports	Left Exit

Front View of 96 & 144 PON Inserts

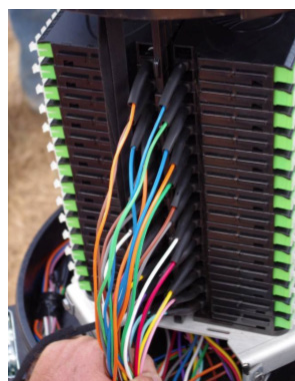
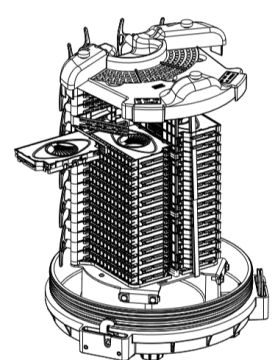
Cassette Exit Diagram



Top View of Clearview Black Cassette
(Only use in the Makwa)

FieldSmart Makwa

Makwa	Port Designation	Cassette Exit
Left Side of Cabinet	All Ports	Left Exit
Right Side of Cabinet	All Ports	Right Exit

Front View of Makwa

Clearview[®] Cassette Exits

Adding Patch Only Cassettes to FieldSmart Wall Boxes



Wall Boxes - Left Exit

Wall Boxes	Cassette Exit
Outdoor 24 and 48 Port	Back Left Exit
Indoor 36 Port	
KIS Wall Boxes	

Wall Boxes - Right Exit

Wall Boxes	Cassette Exit
Indoor 96 and 144 Port	Back Right Exit
Flex Box	
SCD Wall Box	

Top Views of Clearview Blue Cassette