

FIBER DISTRIBUTION HUB SYSTEMS GUIDE

As 5G and other technologies drive fiber closer to the network edge, fiber distribution hubs are able to **replace traditional telecommunications rooms** –freeing up valuable real estate for other purposes.



COMMON APPLICATIONS

- Passive Optical LAN (POL)
- Private & Fed/Gov Campus
- Hospitality
- Education
- Healthcare/Assisted Living
- Corporate Campus

COMPATIBLE CONNECTIVITY

- Fiber Splice Cassette
- MPO Cassette
- PON Cassette
- 600-Series Adapter Plates
- 19" Copper/Fiber Rack Mount Panels
- Optical Splitters & Splice Trays

The OCC Fiber Distribution Hub (FDH) is the heart of a high bandwidth optical distribution network for deploying fiber to the edge. The FDH houses key components necessary to distribute critical data to devices, such as 5G small cell antennas, Wireless Access Points or Optical Network Terminals.

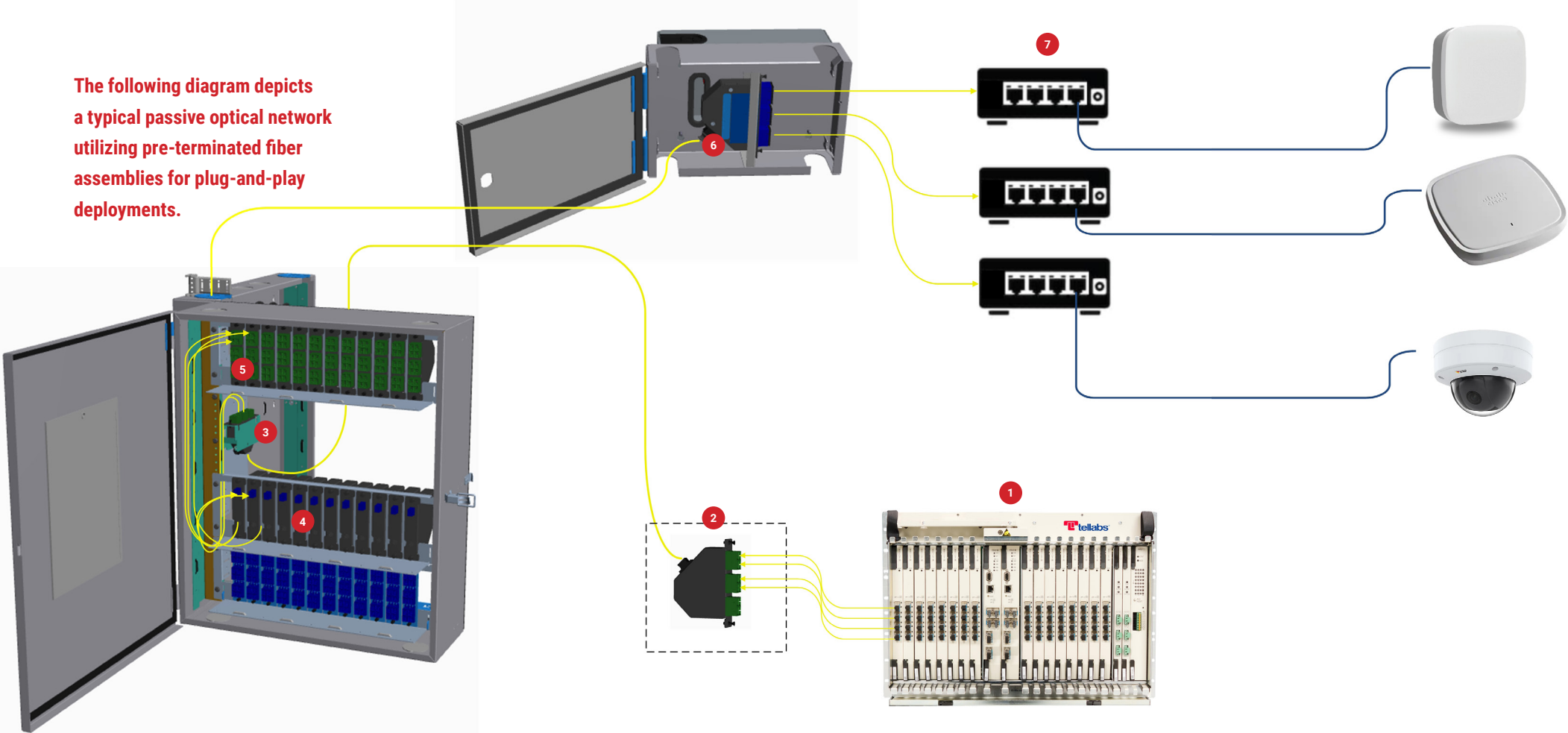
The Fiber Distribution Hub is designed to provide maximum versatility by accommodating a variety of fiber connectivity modules, such as PON/MPO/Splice cassettes, adapter plates, optical splitters and splice trays to support fiber networks utilizing traditional splicing or pre-terminated plug and play solutions.

For added flexibility, the Fiber Distribution Hub incorporates 19" vertical mounting rails that provide 13 rack units of space for traditional rack mount panels. For high-density applications, four 12-slot FDH shelves can be accommodated providing up to 48-slots for cassettes or adapter plates.

The Fiber Distribution Hub features front and rear hinged doors for easy accessibility and multiple cable hoops, cable clips and Velcro tie downs for neat and orderly cable management.

FIBER TO THE EDGE: PASSIVE OPTICAL NETWORK

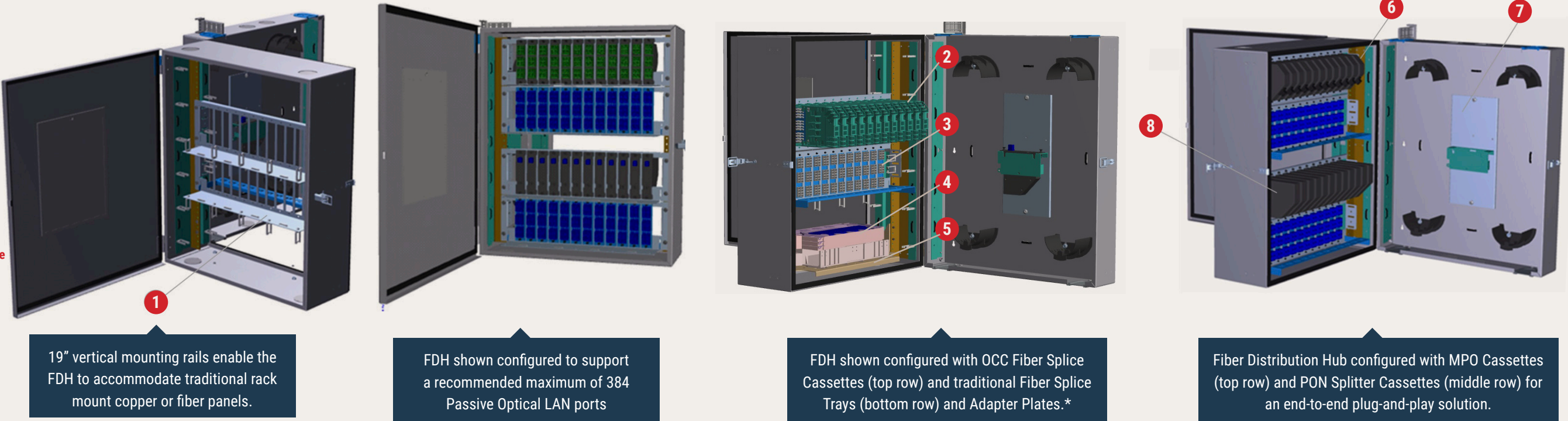
The following diagram depicts a typical passive optical network utilizing pre-terminated fiber assemblies for plug-and-play deployments.



- 1 The Optical Line Terminal (OLT) provides the capability to distribute voice, data and video services to multiple users over a single strand of fiber at distances up to 20km.
- 2 12-Fiber MPO cassette (can be accommodated in OCC rack or wall mount enclosures) is used to distribute up to 12 OLT PON ports to the Fiber Distribution Hub (FDH).
- 3 The Fiber MPO cassette located in the FDH is used to distribute 12 OLT ports to the inputs of Passive Optical Splitters. A single FDH co-located in the equipment room with the OLT may be sufficient to serve an entire facility. Alternatively, multiple FDHs may be located throughout a large facility or campus, often replacing telecommunications rooms and freeing up valuable real estate for other uses.
- 4 PON splitters are used to split the OLT port into multiple duplicate signals for distribution to Optical Network Terminals (ONT) located throughout a facility (Example: 1x32 PON Splitters can multiply 12 OLT ports to serve up to 384 ONTs).
- 5 Up to 12 splitter outputs can be connected to each MPO cassette for distribution over a 12 fiber MPO cable assembly to various zones within a facility
- 6 The MPO cassette located in the zone enclosure is used to breakout the inputs for distribution to ONTs located in each zone
- 7 ONTs provide the capability to distribute voice, data and video service over Category 6/6A cabling to/from devices such as 5G small cells, wireless Access Points, IP Cameras, etc. The ONTs also have the capability to provide PoE power to these devices.

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- 1 FDH12APBH, FDH Bulkhead
- 2 FSCS, Fiber Splice Cassette
- 3 6124 Adapter Plate
- 4 Splice Tray
- 5 FDH-SHELF, FDH Shelf
- 6 PONCMT12SCAPC2, MPO Cassette
- 7 FDHSCB1U, Stackable Cassette Mounting Bracket
- 8 PON Splitter



19" vertical mounting rails enable the FDH to accommodate traditional rack mount copper or fiber panels.

FDH shown configured to support a recommended maximum of 384 Passive Optical LAN ports

FDH shown configured with OCC Fiber Splice Cassettes (top row) and traditional Fiber Splice Trays (bottom row) and Adapter Plates.*

Fiber Distribution Hub configured with MPO Cassettes (top row) and PON Splitter Cassettes (middle row) for an end-to-end plug-and-play solution.

*Typical capacity utilizing traditional splice trays is 288 fibers. Alternate configurations are available for different capacity requirements.

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CONFIGURATION OPTIONS

The versatile design enables the Fiber Distribution Hub to be easily configured for a variety of applications such as traditional splicing and patching or passive optical networking using pre-terminated plug-and-play cassettes.

DESCRIPTION	PART NO.
Fiber Distribution Hub (FDH)	FDH13RU

FEATURES

- » (13) 1.75" vertical rack units
- » Accommodates 19" rack mountable panels/equipment
- » Accommodates up to (4) FDH12APBH 12-slot bulkheads (Not included) for fiber cassettes/adaptor plates
- » Rear cable entry door
- » Detachable
- » Hinged
- » Lockable
- » Rear door accommodates optional splice tray or stackable cassette bracket mounting plate (FDHSCB1U)
- » Can be wall mounted or rack mounted in 23" racks with optional FDH13BKT23 mounting brackets
- » Provisions for multiple cable management clips (front and rear)
- » Includes (4) cable management hoops for rear door
- » Hasp for padlock (front and rear doors)
- » Dimensions: 24.5"H x 21"W x 10.75"D



DESCRIPTION	PART NO.
23" Rack Mounting Brackets, FDH	FDH13BKT23

FEATURES

- » Enables FDH13 to be mounted to 23" rack
- » Package of (4) brackets



DESCRIPTION	PART NO.
Shelf, FDH	FDH-SHELF

FEATURES

- » 19" Rack Mountable
- » Accommodates splice trays and stackable cassette brackets:
- » PONSCH1U
- » LGXSCB1U



DESCRIPTION	PART NO.
Bulkhead, 12-Slot, FDH	FDH12APBH

FEATURES

- » 19" Rack Mountable
- » Accommodates (12) 600-series adaptor plates, PON splitters, MPO cassettes or splice cassettes
- » 3" front shelf with (4) bridge lances for cable management
- » Includes (4) cable management clips for integrated cable management
- » Hook-style rear cable management bar included. For use with adaptor plates.



DESCRIPTION	PART NO.
Mounting Plate, Stackable Cassette Bracket, FDH	FDHSCB1U

FEATURES

- » Mounting Plate
- » Includes (1) PONSCH1U, Stackable Cassette Bracket (additional brackets can added depending on configuration)
- » Mounts to rear door of FDH13RU
- » Accommodates 600-series adaptor plates and cassettes
- » Primary Application: Accommodate MPO cassettes used to distribute input signals to 12 PON Splitters. Can also be used with an OCC LGX Combiner (LGXSCB1U).



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