## Application

The outdoor Fiber Distribution Hub (FDH) cabinet is designed to handle fiber optic terminations and passive optical splitters in PON FTTx networks, but can also be used for Point to Point (P2P) applications or combinations of the both.

The FDH is used as a demarcation point between the feeder network and the distribution network and provides quick and easy incremental installation of distribution cable terminations and fiber optic splitters. This cabinet can handle both air–blown fiber in micro ducts, micro cables as well as drop cables and other fiber optic cables.

The FDH is intended for above ground installations but can also be mounted indoors, floor standing or wall mounted e.g. for use in a basement of a Multi Dwelling Unit. Mounting pad for outdoor installations and brackets for wall mounting are included.
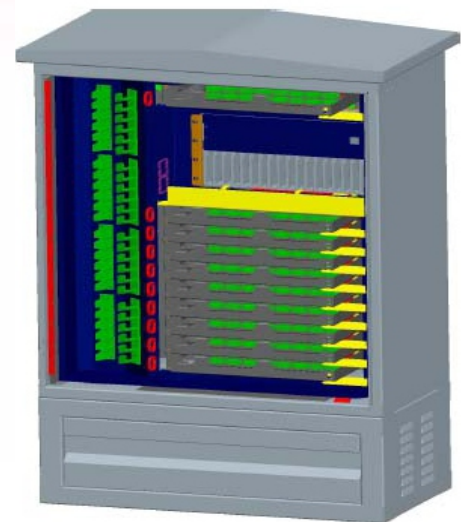
Design

This cabinet is designed with the unique feature of splicing fibers inside the cabinet in connector panel trays. This excludes the need for external manholes and splice boxes and therefore reduces installation time and installation cost. In addition to cable installation, the cabinet is designed for installation of air blown fibers in microducts which enables incremental fiber blowing to the cabinet for additional cost savings.

Other options include pre-connected stub cable for traditional fiber installations in manholes.

The product is equipped with a connector panel for up to 576 end-user as LC adaptor and 288 end users as SC connections and up to 64 LC/32 SC feeder cable terminations. There are 10 positions for connector panel trays that also accommodate fiber splices. Each tray has 32 positions for SC-cut out adapters and 32 positions for splice protection sleeves.

It is equipped with a hinged mounted middle door inside the cabinet to facilitate installation. Splitter modules are available in different splitter ratios. Splitters and connector panel trays with pigtails are ordered separately .

Features

- For PON and P2P applications

- In-cabinet splicing, no splicing in manhole

- Up to 576 LC / 288 SC terminated drops

- Up to 18 positions for mounting of splitter modules

- IP 54 rated Metallic Outer body

The cabinet is equipped with heavy duty lockable front doors with hexagonal key lock. The feeder cable and distribution cable management and routing is also provided with self-protecting rubber to retain the cabinet IP rating after installation as well.

Typical Data

Material

The fully welded housing is made of Aluminum sheets powder coated that provides excellent mechanical strength at a very low weight in combination with highest corrosion resistance. Other metallic parts such as screws, micro duct and cable holders etc. are made of stainless steel. The door gaskets are of EPDM material. Fiber adapter trays are of plastic. All materials are very high in quality.

Weight, Size and Color

Weight: 65 kg (approx.)
Dimensions (HxWxD):1050mm X 750mm X 420mm
Color: Light grey (RAL 7035)
*Height including base(without top canopy).
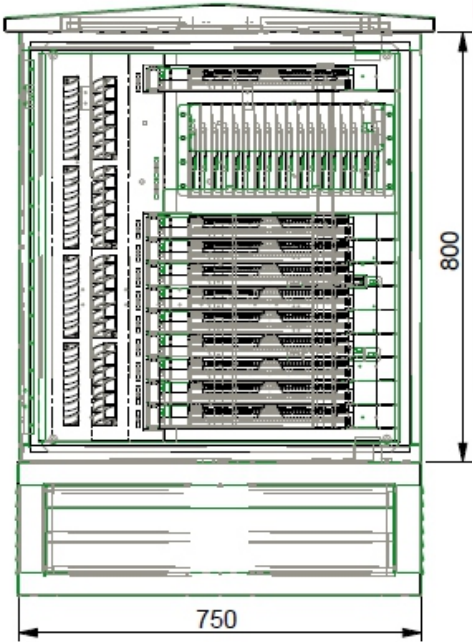
Configuration

A standard configuration for PON applications consist of four main components:

1. Basic cabinet

2. 1 fiber adapter trays for feeder network connections

3. 9 fiber adapter trays for end user connections (distribution network)

4. Splitter modules

Pigtails, splice sleeves, adaptors etc are optional accessories required for some configurations.
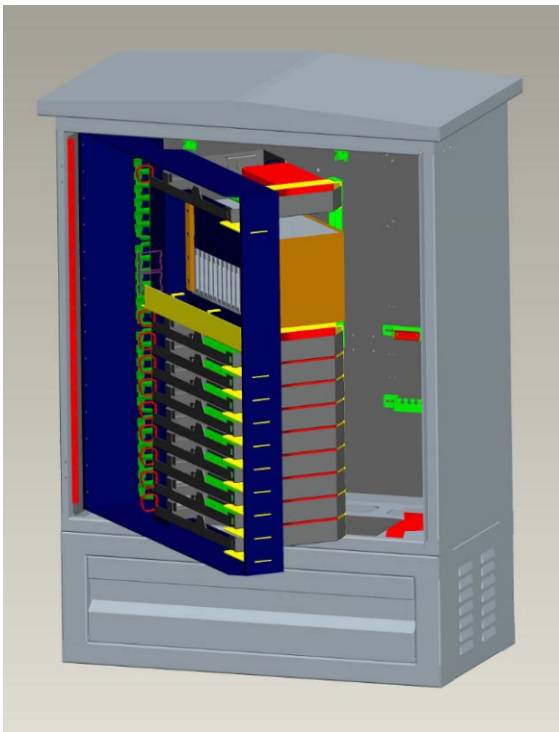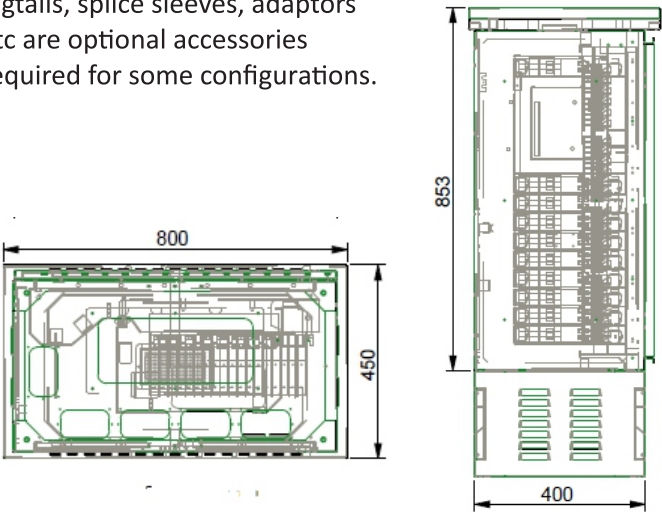
Optical Characteristics

Splitter:

Specifications:		1 x 2 50/50	2 x 2 50/50	1 x 4	2 x 4	1 x 8	2 x 8	1 x 16	2 x 16	1 x 32	2 x 32
Operating Wavelength		1260 -1620 nm									
Fiber Type		Single Mode ITU-T G657-A									
* Insertion Loss (dB)	Typical	--	--	--	--	--	--	--	--	16.2	17.2
	Max	--	--	--	--	--	--	--	--	17.0	17.5
Return Loss (dB) Min		--	--	--	--	--	--	--	--	55/50	
PDL (dB)	Typical	--	--	--	--	--	--	--	--	0.2	0.2
	Max	--	--	--	--	--	--	--	--	0.3	0.3
Directivity (dB)		--	--	--	--	--	--	--	--	55	
Wavelength Dependent Loss (dB)	Typical	--	--	--	--	--	--	--	--	0.3	0.3
	Max	--	--	--	--	--	--	--	--	0.5	0.5
Temperature Stability	Typical	--	--	--	--	--	--	--	--	0.4	0.4
-)40 °C ~ + 85 °C)	Max	--	--	--	--	--	--	--	--	0.5	0.5

Product Categorization

Model No	PLC Splitter Type * (N –X)	No of Splitters	Maximum Capacity	Loaded Capacity	Adapter Type
ATC-FDH-576-232-18	2 :32	18	576	576	* LC/APC
ATC-FDH-288-232-09	2 :32	09	288	288	* SC/APC

*N = Splitter Input 1.6 mm loose buffer, Red color.

*X= Splitter Output 1.6 mm loose buffer, Yellow color.

*ATC standard Adapter is offere d as LC/APC, SC/APC or as customer specified.