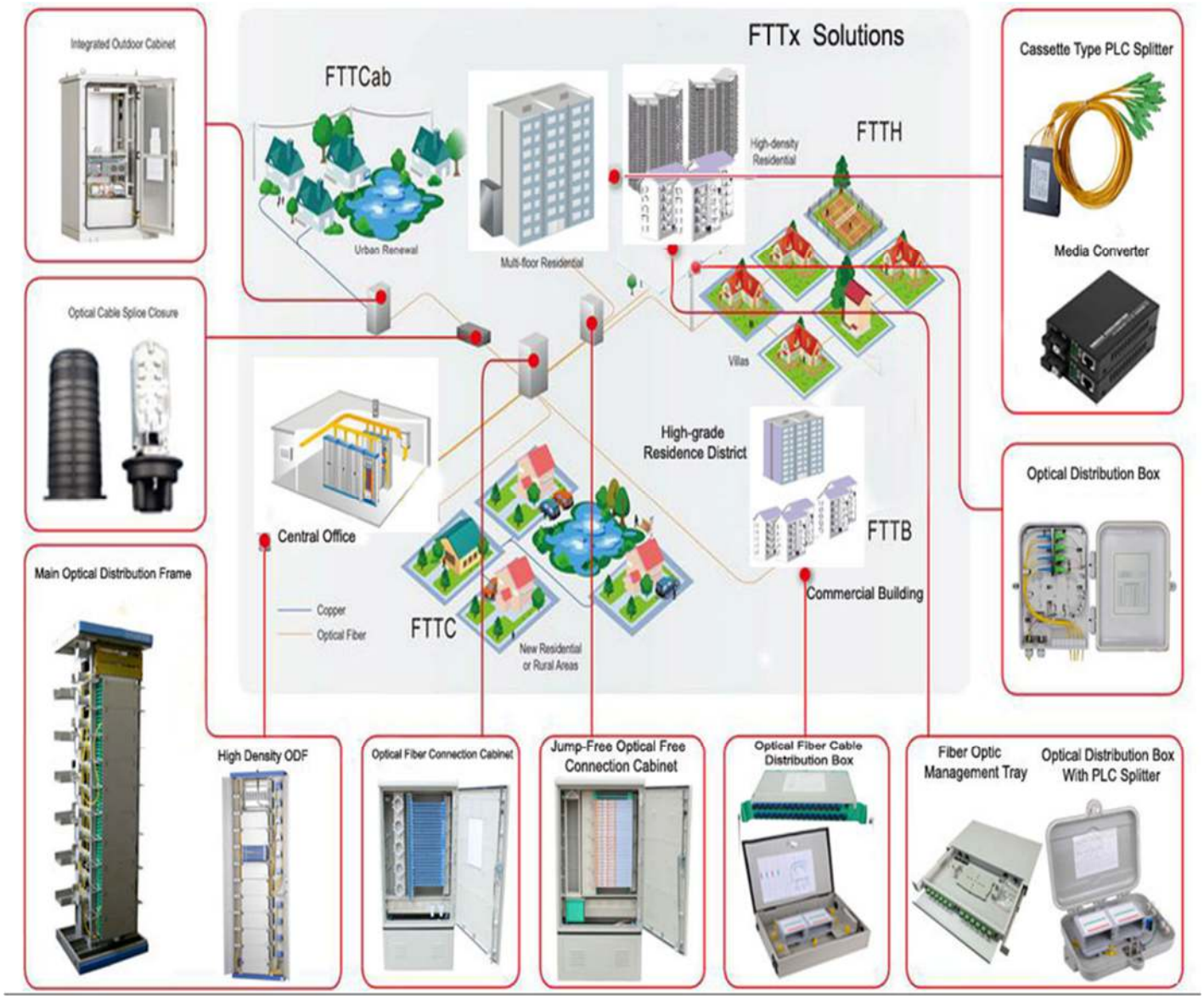
FTTx - Fiber To The x

FTTx SOLUTION

The fiber-optic communication technology had extended the switch equipment of service providers to reach around the boundary of Residential subscriber area and business office region. In order to increase profits, attract new subscriber and retain existing customers, operator and service provider need to deliver new services with rich content such triple ply services, telemedicine, interactive gaming or e-learning which needed high bandwidth data transaction. FTTx is the technical application which can provide a rich kind of services over a single network.

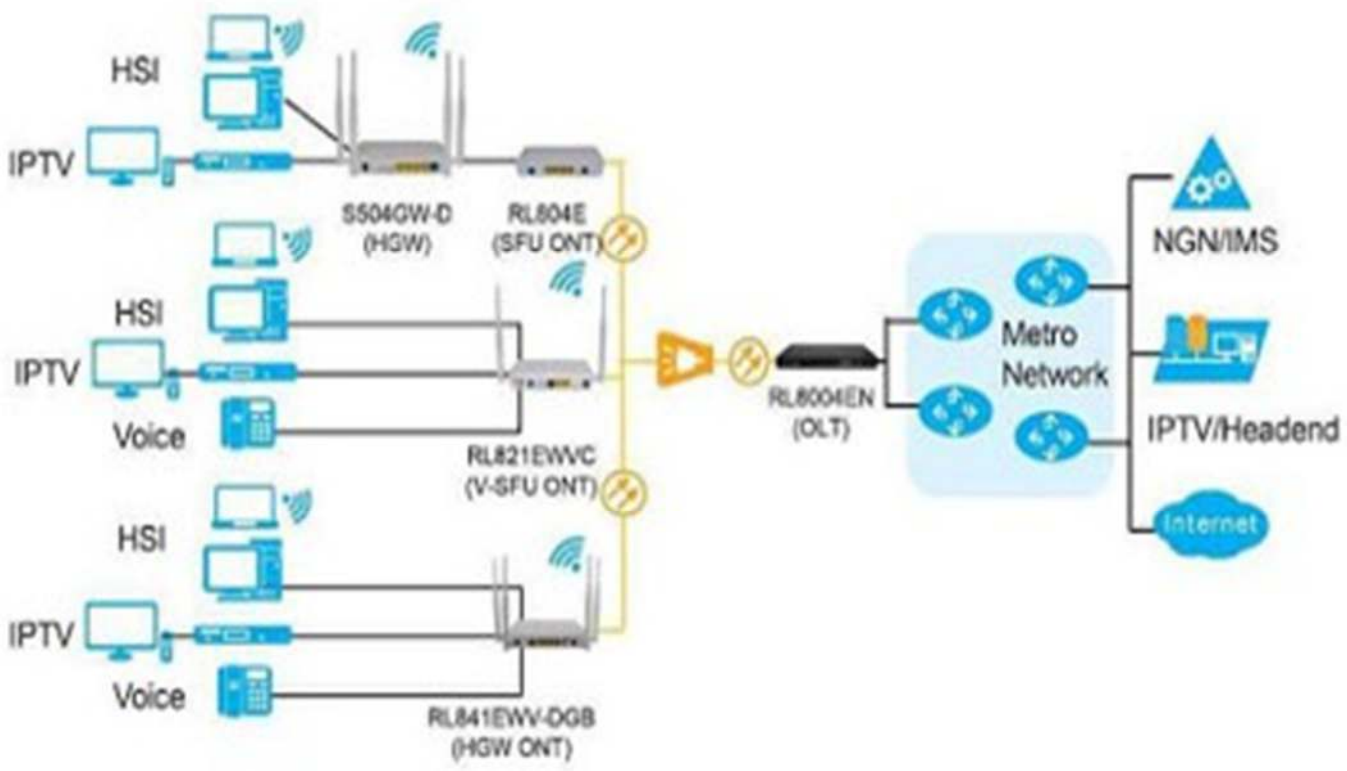


Fiber to the x

While fiber optic cables can carry data at high speeds over long distances, copper cables used in traditional telephone lines and ADSL cannot. For example, the common form of Gigabit Ethernet (1Gbit/s) runs over relatively economical category 5e, category 6 or augmented category 6 unshielded twisted-pair copper cabling but only to 100 m (330 ft). However, 1 Gbit/s Ethernet over fiber can easily reach tens of kilometres. Therefore, FTTP has been selected by every major communications provider in the world to carry data over long 1 Gbit/s symmetrical connections directly to consumer homes. FTTP configurations that bring fiber directly into the building can offer the highest speeds since the remaining segments can use standard Ethernet or coaxial cable.

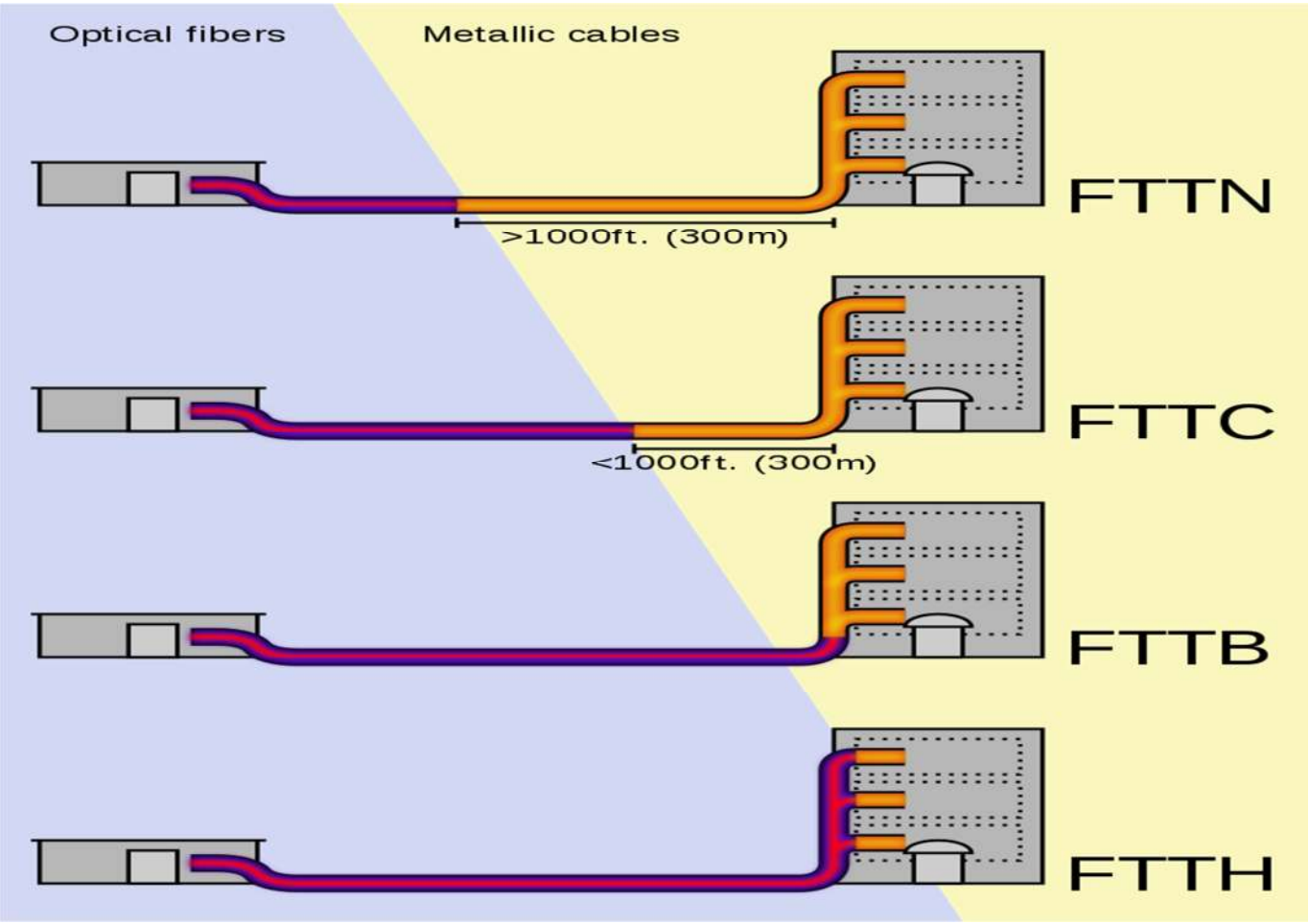
Fiber is often said to be "future-proof" because the data rate of the connection is usually limited by the terminal equipment rather than the fiber, permitting substantial speed improvements by equipment upgrades before the fiber itself must be upgraded. Still, the type and length of employed fibers chosen, e.g. multimode vs. single-mode, are critical for applicability for future connections of over 1 Gbit/s.

FTTC (where fiber transitions to copper in a street cabinet) is generally too far from the users for standard ethernet configurations over existing copper cabling. They generally use very-high-bit-rate digital subscriber line (VDSL) at downstream rates of 80 Mbit/s, but this falls extremely quickly over a distance of 100 meters.



FTTx technology plays an important part in providing higher bandwidth for global networks. According to different network architectures, FTTx is divided into FTTH, FTTN, FTTC, FTTB, FTTP, etc.

A schematic illustrating how FTT**X (N**ode, **C**urb, **B**uilding, **H**ome) architectures vary with regard to the distance between the optical fiber and the end user. The building on the left is the central office; the building on the right is one of the buildings served by the central office. Dotted rectangles represent separate living or office spaces within the same building.



Optical Distribution Frame Cabinets

An optical distribution frame (ODF) is a frame used to provide cable interconnections between communication facilities, which can integrate fiber splicing, fiber termination, fiber optic adapters & connectors and cable connections together in a single unit. It can also work as a protective device to protect fiber optic connections from damage. The basic functions of ODFs provided by today's vendors are almost the same. However, they come into different shapes and specifications. To choose the right ODF is not an easy thing.

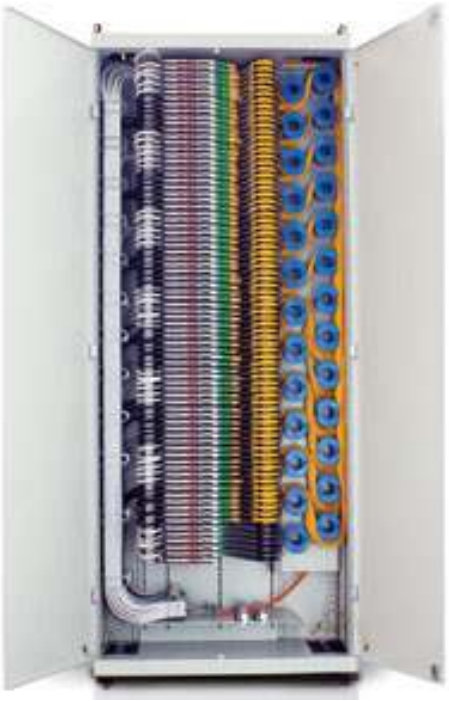
Types of ODF

According to the structure, ODFs can mainly be divided into three types, namely Wall mount ODF, Floor mount ODF and Rack mount ODF.

The selection of the ODF is not limited to the structure, many factors like applications should be considered. Some of the most important are introduced as Fiber Count, Manageability, Flexibility and Protection.

ODF Patch Panel Parameter Adaptor Type SC, FC, ST, Duplex SC, Duplex LC Capacity12, 24, 48, 72, 96, 648, 720 ...and more fibers Body Material

The ODF is the most popular and comprehensive fiber optic distribution frame which can reduce the cost and increase the reliability and flexibility of fiber optic network during both deployment and maintenance. Selecting an ODF is important and complex which requires full consideration including applications and management. The ODF which can meet the current requirements and the challenge of future growing and easing of expansion without sacrificing cable management or density can only be selected with repeated comparison and full consideration.



Fiber Optic Cross Connect Cabinets - FDH

Outdoor cross connection **Standard cabinets** and **Without Jumper (Patch Free)** are the device used at the joint point of the feeder cables and distribution cables in fiber access network.

It is used to connect feeder cables and distribution cables or connect and distribute the feeder cables directly. It is also applicable for diversified XPON construction needs and could provide large capacity for fiber optic splitter installation.

The cabinet features high strength, reliable outdoor protection performance and resistant to harsh outdoor environment. Under environmental temperature -40℃~+60℃, it is waterproof, dustproof, aging-resistant, anti-theft and anti-condensation, besides, it can also bear physical collision.

Fiber optic terminal box

Fiber optic terminal box is an equipment that mainly used for the optical cable distribution, the fusion of optical cable and pigtail, and the storage and protection of the fiber. It is suitable for the direct and branch connection of the optical fiber cable and protects the optical fiber connector.

We produce plastic and metal fiber optic terminal box that 2, 4, 8, 12, 16, 24, 48, 96 fibers capacity. The box can be different adapter panel SC, FC, LC, ST ... And some boxes can load PLC splitter, they are often used in FTTH projects.



FTTH drop cable protection box




Fiber optic patch panel

Fiber optic patch panel is a modular design box that used for optical fiber splicing, distribution, terminal connection and management. It is 19inch rack mounted type and applicable to existing systems.

We produce plastic and metal fiber optic patch panel. There are fixed type, drawer type and rotary type for option.

Features:

- 19 inch standard size, fit for 19 inch rack
- Standard height 1U, 2U, 3U, 4U ...
- 12, 24, 48, 72, 96, 144 ports available
- Different adapter panel SC, LC, FC, ST ...



Fiber optic splice closure

Fiber optic splice closure is an equipment that used for optical fiber cable splicing, joint and protection. It is water proof and dust proof and suitable for outdoor aerial hanged, pole mounted, wall mounted, duct, buried application.

We produce inline (horizontal) type and dome (vertical) type fiber optic splice enclosure.

Features:

- High quality ABS, PP, PC plastic material
- Used in fiber optic cable straight-through and branch application
- Splice tray can be increased or reduced as per using capacity
- Perfect appearance, thunder, erosion and aging resistance
- Repeat open available after sealing

Fiber optic splitter box

Fiber optic splitter box is used to load optical splitter for fiber distribution, connection and protection. There are rack mounted type, wall mounted type and pole mounted type for option. Except rack mounted type, It is often installed in outdoor pole, corridor, basement, room and building's outer walls.

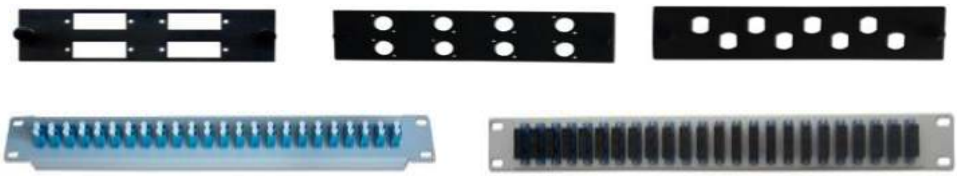
Below fiber optic terminal box and splice closure can load optical splitter, we can use them as optical splitter box.

Fiber Optic Splitter Cassette

Fiber Optic Splice Tray

Fiber optic splice tray is used to protect the bare fiber after fusion and has function to accept a little re-dundant bare fiber. It is mainly used in fiber optic distribution box, fiber optic splice closure and termination box.

Fiber Optic Adapter Panel



Fiber Optic Splitter

Fiber optic splitter is used to split a fiber optic beam into several beams at a certain splitting ratio. It is an important passive device in passive optical network (EPON, GPON, BPON, FTTX, FTH, etc.)

Fiber Optic Attenuator

Fiber optic attenuator is a device used to reduce the power level of an optical signal. There are Connector (male to female) type, Adapter (female to female) type, In-line type and Variable type.