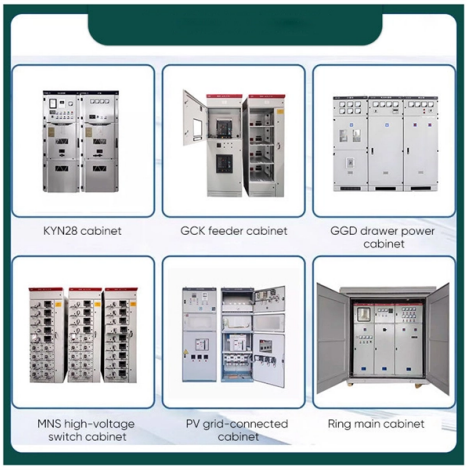
FTTH uses 19-inch chassis size parameters



Overview

This article explores how to deploy a scalable FTTH (Fiber to the Home) network using chassis OLT systems, covering technical considerations, deployment steps, and best practices.

Key Takeaways

FTTH chassis designed for 19-inch racks follow standardized width and rack unit heights, with slot configurations optimized for OLTs, service boards, and power modules. Standard 19-Inch Rack DimensionsA 19-inch rack is a standardized frame for mounting electronic equipment, where each module has a front panel width of 19 inches (482. 6 mm), including mounting ears for screws or bolts.

The height of equipment is measured in rack units (U), with 1U = 1. 75 inches (44. 45 mm).

Standard rack cabinets are typically 42U tall, though taller racks exist.

FTT

H chassis are designed to fit these racks, ensuring compatibility with telecom and data center infrastructure.

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FTTH Chassis Examples

Fiberhome AN6000-17 OLT Chassis: Occupies 11U of vertical rack space in a 19-inch cabinet. Contains 21 slots: 17 for subscriber access boards, 2 for main control and switching boards (Active/Standby), and 2 for power interface modules. Supports high-density deployment, e.g., 16-port XGS-PON boards can provide 272 10G PON ports, serving tens of thousands of subscribers with standard optical split ratios.

Features a non-blocking multi-terabit backplane for high-speed switching and reduced signal degradation. ZXA10 C320 Chassis: Occupies 2U in a 19-inch rack. Includes 2 slots for main control boards and 2 slots for GPON/XG-PON service boards.

Equipped with a dedicated fan tray and side-to-side airflow for thermal management. High availability is ensured via dual control boards in Active/Standby configuration, providing seamless failover in under 50 milliseconds.

Key Design Considerations

Slot Configuration: Chassis are designed to separate control, service, and power modules for redundancy and scalability. Power Redundancy: Dual independent -48V DC feeds are common for carrier-grade reliability. Cooling: Intelligent fan trays and airflow design prevent hot spots, especially in sealed enclosures.

Backplane Design: Non-blocking, orthogonal backplanes reduce electromagnetic interference and maintain high throughput. SummaryFTTH 19-inch chassis are rack-mountable systems with standardized width (19 inches) and variable height in U units, optimized for high-density subscriber access, redundant control and power modules, and efficient thermal management. Examples like the AN6000-17 and ZXA10 C320 illustrate the range from compact 2U units to large 11U systems, supporting thousands of subscribers while maintaining carrier-grade reliability.

Article Content

FTTH using a 19-inch telecom chassis

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FTTH Selection Guide

to serve them well. These cabinets, the cornerstone of our FTTH portfolio, enable quick subscriber turn-up and error-free, long-term management of your climbing take rates. See the following options to

19-inch rack

The 19 inch dimension includes the edges or ears that protrude from each side of the equipment, allowing the module to be fastened to the rack frame with screws or bolts. Common uses include

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Design and implementation Al-Gehad FTTH network will be illustrate using the information that has been obtained from ITPC. Figure (6) shows the network topology logical diagram that will be used to

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A 19 inch width is standard for servers and the racks that mount them. Learn how the EIA came to this conclusion and how it helps.

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