Epon Aggregation Switch

Overview

EPON OLT 8 Port | High-Capacity Fiber Aggregation With 8 PON ports and 8 uplink interfaces (copper + SFP), this aggregation switch supports up to 512 ONUs.

Key Takeaways

An EPON aggregation switch consolidates traffic from multiple EPON access devices and forwards it to the core network, enhancing bandwidth, redundancy, and network efficiency.

Overview

An EPO

N aggregation switch is a network device designed to aggregate traffic from multiple EPON OLTs (Optical Line Terminals) or access switches and forward it to core switches or routers. It plays a critical role in fiber-to-the-home (FTTH) or fiber-to-the-building (FTTB) deployments, enabling ISPs and enterprises to manage high volumes of traffic efficiently. By combining multiple network connections into a single logical link, it reduces bottlenecks and ensures reliable data delivery.

Key Features

Link Aggregation: Supports protocols like LACP (Link Aggregation Control Protocol) and static link aggregation, allowing multiple physical ports to operate as a single logical interface. This increases bandwidth and provides failover in case of link failure.
Layer 2/3 Support: Operates at Layer 2 or Layer 3, enabling routing, forwarding, and traffic management across the network.

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High Port Density: Modern EPON aggregation switches, such as the ET0816-H, offer multiple PON ports and uplink interfaces, supporting hundreds of ONUs (Optical Network Units) for large-scale deployments. Advanced Traffic Management: Includes features like QoS, multicast control, and traffic filtering, ensuring efficient and secure data flow. Diagnostics and Fault Management: Supports auto-registration, loop-back testing, and advanced diagnostics for rapid fault detection and resolution.

Deployment ScenariosEPON aggregation switches are typically deployed in high-traffic environments such as: ISP networks connecting multiple OLTs to the core networkEnterprise or campus networks consolidating access switchesData centers requiring high-throughput, redundant links They serve as a bridge between access and core layers, offloading processing from core switches while maintaining scalability and reliability. Standards and CompatibilityEPON aggregation switches comply with IEEE 802. 3ah EPON standards and may support 10G-EPON for next-generation high-speed services.

They are compatible with both copper and fiber uplinks, providing flexibility in network design.

Summary

In essence, an EPON aggregation switch is a vital component in modern fiber networks, enabling high-capacity, reliable, and scalable connectivity. It consolidates traffic from multiple access points, supports link aggregation for bandwidth and redundancy, and provides advanced traffic management to optimize network performance.

Article Content

EPON OLT 8 Port | High-Capacity Fiber Aggregation

With 8 PON ports and 8 uplink interfaces (copper + SFP), this aggregation switch supports up to 512 ONUs, delivering carrier-grade reliability and advanced traffic

H3C S3600 Series EPON OLT Switches Installation Manual-6W100 ...

Aggregate the ports on each device to form a static link aggregation group, thus balancing incoming/outgoing traffic across the member ports. In addition, perform load sharing based on source

10G-EPON OLT

We offer 1G-EPON (Ethernet passive optical network) cards, 10G-EPON cards, and aggregation switch cards for FSU7100.

8 Port EPON OLT: Support Layer 3 Dynamic Routing

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Pizza-box EPON OLT Meets Flexible and Fixed Broadband Deployment (4/8/16 Ports) Compatible With All Brand EPON ONU. Provides Layer 3 dynamic routing

8-Port EPON OLT with 512 ONU Support & IPv6

The S-OLT-EPON-8OLT-L3D is a 1U 19-inch rack-mount EPON OLT supporting 8 EPON ports, 8 RJ45 GE ports, and 4 SFP+ 10GE uplink ports. Designed for

10G-EPON System Featuring High-Speed and High-Capacity Layer 3

The system supports 10G-EPON as well as 1G-EPON for subscriber lines, offers aggregation switch cards for EPON lines, and is capable of high-speed and high-capacity switching for 10GE-PON lines.

2026 PON Evolution Guide: EPON, GPON, XGS-PON and 10G-EPON

Learn how PON evolved from APON/BPON to EPON, GPON, XGS-PON and 10G-EPON, and how to choose right fiber access technology for FTTH, campus and hotel networks.

GigaLine 9000 PON Extender, G.hn wave2,

The GigaLine 9000 solution features a PON extender, G.hn wave2, indoor Aggregation Unit with integrated G.hn/Wi-Fi end point, delivering instant Gigabit

Fiberhome AN5516-01 OLT

The Fiberhome AN5516-01 Optical Line Terminal (OLT) represents a paradigm shift in carrier-grade access network architecture. Designed as a next-generation, high-density hybrid platform, the

H3C All-Optical Network Technology White Paper-6W100

Figure 6 Typical GPON-based POL network solution The typical GPON-based POL network solution as shown in Figure 6, similar to the EPON-based iOptic POL network solution, provide high

SmartAX MA5608T OLT MA5608T price and specs gpfd gpbd ycict

SmartAX MA5608T OLT is one of telecom operator-class Gigabit Passive Optical Network (GPON/EPON) Optical Line Terminal for large-scale aggregation and access networking. SmartAX

SPECTRA AGGREGATION SWITCH

The Aggregation Switch for Optigo Connect Spectra is designed specifically for deploying Operational Technology networks in intelligent, fiber-based buildings. It connects up to 256 Edge Switches and

10G-EPON OLT

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OVERVIEW 10G-EPON OLT Featuring High-Speed and High-Capacity Layer 3 Switching We have been providing advanced broadband technology and internet access equipment to the market. 10G

What Is Passive Optical Networking (PON)? GPON vs. EPON

Passive Optical Network (PON) is a point-to-multipoint optical access technology. Ethernet PON (EPON) and gigabit PON (GPON) are the most common PON technologies and have the

EPON, GPON, 10G EPON, 10G GPON OLT: How do They Work?

connect with the front-end (aggregation layer) switch with network cable, convert into optical signal, and interconnect with the splitter at the user end with a single fiber. realizing the

SMART AGGREGATION SWITCH

The Aggregation Switch enables the connection of up to 256 Edge Switches using a cost-effective and eficient fiber backbone that saves significant installation time, equipment, and money. The Smart

EPON Explained: Unlocking High-Speed Fiber Networks with Passive ...

EPON technology is a cornerstone of modern fiber optics, offering a blend of efficiency, scalability, and affordability. By understanding its workings and components—like optical modules

SMART AGGREGATION SWITCH

The Smart Aggregation Switch supports all protocols in use for security, building automation, and IoT, and is easily set up for redundancy with its auto-switching Active/Protect feature. ONS-S8 Smart

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