Huawei optical port of Layer 3 switch



Overview

An Ethernet interface works as a Layer 2 interface in Layer 2 mode and a Layer 3 interface in Layer 3 mode.

Key Takeaways

Huawei Layer 3 switches feature all-optical ports for high-speed connectivity, including GE downlink ports and 10GE uplink ports, supporting advanced Layer 3 routing and campus or data center deployment.

Optical Port Overview

Huawei Layer 3 switches, such as the CloudEngine S5736-S and S5735-S-V2 series, are designed as all-optical switches. They typically provide: Downlink optical ports: 24 or 48 Gigabit Ethernet (GE) optical ports for connecting end devices or access switches. Uplink optical ports: 4 x 10GE ports for high-speed aggregation or core network connections.

Stacking ports: Some models include 2 stack ports to interconnect multiple switches for unified management and higher throughput. These optical ports support pluggable SFP/SFP+ modules, allowing flexible deployment with single-mode or multi-mode fiber depending on distance and network requirements. Layer 3 CapabilitiesHuawei Layer 3 switches integrate advanced routing features alongside optical connectivity: Routing protocols: OSPF, IS-IS, BGP, and VRRP for resilient Layer 3 networks.

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VLA

N routing: Inter-VLAN routing is supported, enabling communication between different network segments. Multicast support: PIM SM, PIM DM, PIM SSM, and IGMP snooping for video and broadcast traffic. IPv6 support: Mature IPv6 features for modern network deployments.

Deployment Scenarios

These switches are suitable for: Campus networks: As access or aggregation switches connecting multiple VLANs and providing high-speed uplinks. Metropolitan Area Networks (MANs): For high-speed optical access and aggregation. Data centers: As access switches with all-optical connectivity for servers and storage networks.

Additional Features

Right To Use (RTU) licenses: Allow upgrading access ports from GE to 10GE without hardware changes, protecting investment. Telemetry and network analytics: Real-time monitoring via Huawei's CampusInsight or iMaster NCE for proactive fault detection. High reliability: Dual pluggable power supplies and intelligent O&M for continuous operation.

In summary, Huawei Layer 3 switches with optical ports provide flexible, high-speed connectivity with robust Layer 3 routing, making them ideal for enterprise, campus, and data center networks. The combination of all-optical downlink ports, 10GE uplinks, and advanced routing features ensures efficient inter-VLAN communication and scalable network design.

Article Content

Layer 3 Switching

In a summary, a Layer 3 switch provides high-speed Layer 3 switching through one routing process (forwarding the first packet to the CPU and creating a hardware Layer 3 forwarding entry) and

Switching an Interface to Layer 3 Mode

An Ethernet interface works as a Layer 2 interface in Layer 2 mode and a Layer 3 interface in Layer 3 mode. To switch between Layer 2 and Layer 3 modes on multiple interfaces, run the portswitch batch

OPTICAL MODULES FOR HUAWEI S SERIES SWITCHES

A switch must use optical or copper modules that have been certified for use on Huawei switches. Non-certified optical or copper modules cannot ensure transmission reliability and may affect service

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How To View Optical Transceiver Information On Huawei Switches

Optical transceivers are widely applied in switches, network cards, routers and other communication devices. Checking transceiver parameters allows users to monitor real-time

Huawei Switches Viewing Optical Port Receiving and Sending

Use the command display transceiver to view the optical module information of all optical ports, and use the command display transceiver interface interface-type interface-number to view the

Optical Module Solutions for Huawei S5700/S5720 Series Switches

This article summarizes several solutions for using optical modules with switches and common problems encountered during usage, along with specific solutions.

Huawei S3700, S5700 and S6700 Switches Support Guide, Manuals

S3700&S5700&S6700 Series: Access product manuals, HedEx documents, product images and visio stencils.

Huawei Layer 3 Switch Layer 2 and Layer 3 Port Switching

The port of Huawei''s Layer 3 switch works in Layer 2 mode by default and is added to vlan1. When the interface is changed from Layer 2 to Layer 3, the device will not exit vlan1 immediately, and will exit

Checking TX / RX optical power for Huawei Switches and Routers

Here is an example on how to query or display optical power of an interface in a Huawei Router. This is tested using NetEngine40E Universal Service Router or NE40E running version 8.x OS.

Huawei CloudEngine S5732-H Series Hybrid Optical-Electrical

CloudEngine S5732-H hybrid optical-electrical switch is brand-new full-10GE switch developed by Huawei for the Wi-Fi 6 era. The CloudEngine S5732-H builds on Huawei''s unified Versatile Routing

Core, Aggregation, or Access Switches? Choose the

Discover the crucial differences between core, aggregation, and access switches. Find out which type can best transform your network''s performance in 2025.

Huawei 24-Port Switch Buying Guide

The Huawei Quidway 24-port switch market is characterized by a transition from legacy models like the S2300 and S3700 series toward high-performance, energy-efficient Gigabit and 10GbE solutions like

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HUAWEI eKitEngine S210I Series Extended-Temperature Switches

Product Overview Huawei eKitEngine S210I series extended-temperature switches (S210I for short) are Layer 2 switches that are independently developed and controllable. The switches provide flexible

Groundbreaking SuperPoD Interconnect: Leading a New Paradigm ...

There is 100-ns-level fault detection and protection switching on optical paths, making any intermittent disconnections or faults of optical modules imperceptible at the application layer. We

Huawei S310-48P4S 48-Port Gigabit Managed Switch Price in Kenya

Description Huawei S310-48P4S 48-Port Gigabit PoE+ L3 Managed Switch – 380W Huawei S310-48P4S is an advanced Layer 3 managed PoE+ access switch designed to deliver high-performance

S5735S-H24T4X-A Switch for Huawei Enterprise Level 24 GE Ports 4

S5735S-H24T4X-A Switch for Huawei Enterprise Level 24 GE Ports 4 SFP+ Ports Stackable Dual Power Supply 3 Layer Core Switch

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The Ultimate Guide to Huawei MA5800 OLT Configuration:

The Huawei SmartAX MA5800 OLT is more than an access device; it is a high-density aggregation platform that redefines the capabilities of the edge network. By integrating a distributed architecture,

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