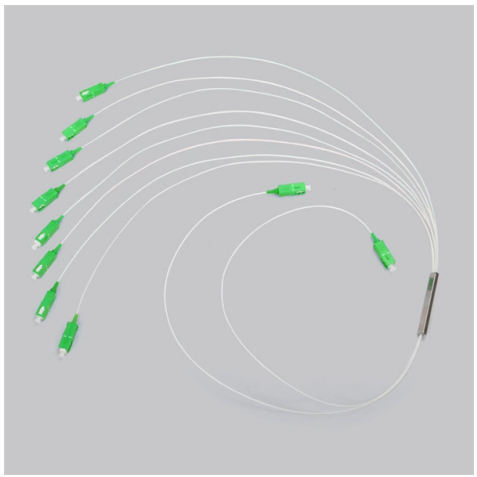
Huawei switch optical port converted to electrical port



Overview

How To Switch Optical/Electrical Mode On Huawei Router Combo PortsA Combo port, also known as an optical-electrical multiplexing port, consists of one opti.

Key Takeaways

Huawei switch optical ports can be logically converted to electrical ports using combo interfaces or hybrid optical-electrical modules, depending on the switch model and cabling setup.

Understanding Optical and Electrical Ports

Optical ports on Huawei switches use SFP or SFP+ modules to transmit data over fiber, supporting high speeds (1. 25G, 10G, 25G, 40G, 100G) and long distances up to 100 km, while electrical ports use RJ45 interfaces with Ethernet cables, typically supporting speeds up to 10G and distances up to 100 meters. Some Huawei switches feature combo interfaces, which combine one optical and one electrical port into a single logical interface.

Only one of the two ports can be active at a time.

Using Combo Interfaces

For switches with combo interfaces: Default State: The combo interface usually operates in electrical mode. Switching to Optical: Enter interface configuration mode and execute combo enable fiber to activate the optical port. Switching to Electrical: Use undo combo enable fiber to revert to the electrical port.

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Peer Configuration: Ensure the same configuration is applied on the connected device to maintain connectivity. This allows the optical port to be logically replaced by the electrical port without changing the physical cabling.

Hybrid Optical-Electrical Ports

Some Huawei switches, such as the S5731-H or S5731S-H series, support hybrid optical-electrical ports. These ports can transmit data and provide PoE simultaneously when used with hybrid cables: First-generation hybrid cables require separate connections for optical (LC connector) and electrical (RJ45 or Phoenix connector) ports. Second-generation hybrid cables use a single PDLC connector that plugs into a hybrid optical-electrical port, supporting both data and PoE at the same time.

Hybrid cables allow flexible deployment where an optical port can effectively serve electrical functions for devices like APs or remote units.

Practical Considerations

Ensure the optical module and cable type match the port specifications (single-mode vs. multi-mode, speed compatibility) to avoid connectivity issues. Electrical ports are limited in distance and speed compared to optical ports, so conversion may affect network performance if long-distance fiber links are replaced with copper. Hybrid ports and combo interfaces cannot operate both optical and electrical simultaneously; only one mode is active at a time.

By using combo interfaces or hybrid optical-electrical modules, Huawei switches provide flexibility to convert or switch optical ports to electrical ports without physically replacing the hardware.

Article Content

How To Switch Optical/Electrical Mode On Huawei Router Combo Ports

A Combo port, also known as an optical-electrical multiplexing port, consists of one optical port and one electrical port on the device panel, which share a single internal forwarding

CloudEngine S5732-H Series | Huawei Enterprise

CloudEngine S5732-H Series Hybrid Optical-Electrical Switch The CloudEngine S5732-H Series Hybrid Optical-Electrical Switch is a new generation of 10 GE

Port Numbering Conventions

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For the S5731-H and S5731S-H optical-electrical hybrid models, the four 10GE optical-electrical hybrid ports and the four 10GE SFP+ Ethernet optical ports have the same sequence numbers and are

How to Troubleshoot transceiver issue in Huawei switch/router/devices

Receiving power too low (If Current RX Power < Default RX Power Low Threshold): May cause port down or packet loss, check whether distance is too far that is over the limit of the module

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

Troubleshooting for Optical Modules on Huawei Switch

If the transmit power remains low, replace the optical module or install it in another optical port to check whether it is faulty. If the optical module is faulty, send it to ...

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

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.

6.3.9 Installing Cables and Optical Modules. Huawei E9000

Step 2 Insert the optical module and optical cable into the 10GE or 8 Gbit/s FC optical port. 1. Determine the type and installation position of the optical module based on site requirements. 2. Horizontally

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.

CloudEngine S5732-H Series Hybrid Optical-Electrical Switches

CloudEngine S5732-H Series Hybrid Optical-Electrical Switches CloudEngine S5732-H series hybrid optical-electrical switches are brand-new 10GE access switche that provides 24-port (optical) + 24

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What Is an Optical Module and Its FAQs (V200)

As an important part of fiber-optic communication, an optical module is a photoelectric converter which converts electrical signals into optical signals and vice versa.

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

What Is an All-Optical Ethernet Switch?

All-optical Ethernet switches are a type of switch that provides optical uplink and downlink ports, making them an ideal choice for building an all-optical campus network. They can function as

Optical Module Solutions for Huawei S5700/S5720 Series Switches

When using switches, we may encounter many confusions, such as what types of optical modules are needed for different models of Huawei switches, and how to resolve issues encountered

Typical Troubleshooting Cases of Optical Module

Check whether an optical module is a bogus one. An optical module delivered by Huawei is uniquely identified by an SN. If two or more optical modules have the same SN, bogus optical modules are

Optical Terminal

The OptiXstar product series extends optical connectivity to every home, enterprise, and campus, bringing families closer and making enterprise operations far more

Connecting Second-Generation Hybrid Cable

For details related to precautions for using the second-generation hybrid cable (hybrid cable 2.0), see Assembling Second-Generation Hybrid Cable. A hybrid optical-electrical switch can be directly

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