5500 Configuration Optical Module



Overview

Interface and Hardware Component Configuration Guide for Cisco Instructions for configuring controllers, managing optical modules, monitoring performance.

Key Takeaways

Cisco NCS 5500 routers support a variety of optical modules including CFP2-DCO, QSFP28, SFP+, and DWDM transceivers, which can be configured via IOS XR CLI for coherent and bidirectional operation.

Supported Optical Modules

The NC

S 5500 series supports multiple optical module types depending on the chassis and line card: CFP2 and CFP-DCO: Coherent modules for 100G/200G DWDM networks, including bidirectional CFP2-DCO for single-fiber operation. QSFP+, QSFP28, QSFP-DD: High-speed Ethernet transceivers supporting 10G, 25G, 40G, and 100G connections. SFP/SFP+: Standard 1G/10G Ethernet modules.

DWD

M SFP+: For dense wavelength division multiplexing applications.

Installation Guidelines

Always disconnect fiber-optic cables before inserting or removing transceivers to prevent damage. Use ESD-preventative wrist straps and ensure the router is grounded. Keep transceivers and fiber connectors clean and dust-free to maintain signal integrity; contamination can increase attenuation above 0.

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35 dB. Avoid repeated insertion/removal to extend module lifespan.

Configuration Steps

Identify the module and slot: Controllers are represented in rack/slot/instance/port format (e.g., 0/3/0/1) and are created on startup. Clear previous configurations if replacing an optical module with a different type. Configure coherent DSP controllers for CFP-DCO modules using commands like controller coherentDSP secondary-admin-state maintenance to place controllers in maintenance mode.

Verify optics parameters with show controllers optics r/s/i/p to check laser state, admin state, and alarms. Configure bidirectional CFP2-DCO modules for Tx-Rx channel mapping, supporting 100G/200G speeds over single fiber using NC55-MPA-2TH-S or NC55-MPA-1TH2H-S MPAs. Operational ConsiderationsCFP2-DCO modules have hardware versions A0 and B0; version B0 supports 100G/Staircase FEC traffic.

Dual-rate optics may experience initial link flaps when configured at lower speeds, which stabilize automatically. Compatibility between Coherent Line Cards depends on IOS XR release versions; ensure matching versions to avoid incompatibility.

Verification

Use show controllers optics to monitor link status, laser power, and error thresholds. For bidirectional modules, verify communication between Tx and Rx channels to ensure proper operation. By following these guidelines, Cisco NCS 5500 optical modules can be safely installed, configured, and monitored for high-speed, coherent, and bidirectional network operations.

Article Content

Interface and Hardware Component Configuration Guide for Cisco

Instructions for configuring controllers, managing optical modules, monitoring performance, and replicating storage.

Interface and Hardware Component Configuration Guide for Cisco

Configuration and troubleshooting guide for 400G Digital Coherent Optics, including modulation, FEC, and alarm management.

CISCO NCS 5500 SERIES CONFIGURATION

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Cisco NCS 5500 Series Manual | ManualsLib

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When installing fiber-optic cables for a port, you must install SFP transceivers for 1-Gigabit optical ports or install SFP+ transceivers for 10-Gigabit optical ports or

Hardware Installation Guide for Cisco NCS 5500 Series Fixed-Port

The 40-Gigabit (GE) QSFP+ and 100 Gigabit (QSFP28) transceiver module is a hot-swappable, parallel fiber-optical module with four independent optical transmit and receive channels.

NCS5500 Hw-module Profiles | Ncs5500 Tutorial | XRdocs

During the 4 years of its existence, the NCS5500 has been used in a constantly growing number of network roles. The NCS 5500 resources (databases where we store prefixes, nexthop,

NCS5500 Things to Know / Q&A | Ncs5500 Tutorial | XRdocs

Changing the configuration does not require system reload and only takes a few second to become effective. During the process, the ports are shown as "not ready" in the show commands.

Displaying Optical Module Information

S1720, S2700, S5700, and S6720 V200R011C10 Configuration Guide - Device Management This document describes the principles and configurations of the Device Management features, and

Hardware Installation Guide for Cisco NCS 5500 Series Modular Routers

Hardware Installation Guide for Cisco NCS 5500 Series Modular Routers First Published: 2015-12-23 Last Modified: 2022-03-31

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When installing fiber-optic cables for a port, you must install SFP transceivers for 1-Gigabit optical ports or install SFP+ transceivers for 10-Gigabit optical ports or QSFP+ transceivers for 100-Gigabit ports

Interface and Hardware Component Configuration Guide for Cisco NCS 5500 ...

Guide to configuring QDD Optical Line Systems, including operational modes, safety features, and troubleshooting alarms.

Cisco Network Convergence System 5700 Series: 1GE

The new generation of Cisco NCS 5700 series 400GE line cards increases forwarding capacity of NCS 5500 by 2.7 times to a maximum of 153.6

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View and Download Cisco NCS 5500 Series manual online. NCS 5500 Series adapter pdf manual download. Also for: Nc55-mod-a-s, Nc55-mod-a-se-s.

Cisco Network Convergence System 5500 Series: Modular Line

All the ports can support 100G and 40G optics as well as 40G to 10G breakout. This line card uses QSFP28/QSFP+ form factor transceivers and can be used in any of the NCS 5500 Series

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User Manuals: Cisco NCS 5500 Series Convergence System

Manuals and User Guides for Cisco NCS 5500 Series Convergence System. We have 10 Cisco NCS 5500 Series Convergence System manuals available for free PDF download: Configuration Manuals,

Hardware Installation Guide for Cisco NCS 5500 Series Fixed-Port ...

The NC57-MPA-2D4H-S modular port adapter supports QSFP28 and QSFP-DD optical transceivers in the following configurations: Only one QDD-400GE transceiver is supported through

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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