Cisco NCS 1014 Advanced Multihaul Optical Platform - An Overview

This chapter provides an overview for Cisco NCS 1014 Advanced Multihaul Optical Platform.

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Document objective

The Cisco NCS 1014 Configuration Guide describes how to configure various card modes for the line cards that are supported in the Cisco NCS 1014 chassis.

Cisco NCS 1014 chassis and line cards

The Cisco NCS 1014 chassis is an advanced multihaul optical platform that supports transponders and line system cards.

- It is a 2RU chassis,
- delivers a universal transponder solution, and
- provides excellent performance for metro, long-haul, and submarine applications.

Cisco NCS 1014 modules and supported line cards

The NCS 1014 chassis includes these modules:

- Removable controller
- Removable backup solid state drive (SSD)
- Two replaceable power supply units (PSU)
- Three replaceable fan modules
- Four line cards

The NCS 1014 chassis supports these line cards and modules:

Table 1: NCS 1014 supported line cards and modules

From release	PID	Description
7.11.1	NCS1K14-2.4T-K9	2.4T DWDM transponder card
	NCS1K14-CCMD-16-C/L	16-port colorless multiplexer and demultiplexer optical line card.
	NCS1K4-1.2T-K9	1.2T DWDM transponder card

1.2T line cards

A 1.2T DWDM line card is a transponder that

- enables high-capacity optical transport for Cisco NCS 1014 chassis,
- secures client-side data with AES256-based Layer-1 encryption, and
- delivers flexible client and trunk configurations for 100GE and OTU4 traffic.

Key features

The NCS1K4-1.2T-K9 line card is a single-slot unit.

- It provides 12 client ports for 100GE and OTU4 traffic and two trunks, which can be configured anywhere from 100G to 600G in 50G steps.
- It supports C-band traffic.

2.4T line cards

A 2.4T line card is a coherent optics transponder and muxponder that

- fits a single slot on the Cisco NCS 1014 chassis,
- supports C-band traffic at trunk ports, and
- delivers 400GE, 100GE, and OTU4 client traffic over two trunk ports operating at speeds from 400G to 1.2T each.

CCMD-16 line cards

The CCMD-16 optical line card is a type of optical line card designed for multiplexing and demultiplexing functions in an optical network.

- It features two line ports to transmit and receive using the same LC connectors,
- includes 16 ports for add/drop functionality with LC connector-based interfaces, and
- is available in two variants: NCS1K14-CCMD-16-C (C-band) and NCS1K14-CCMD-16-L (L-band).

CCMD-16 optical line card variants and specifications

The CCMD-16 optical line card is available in two main variants, each supporting different wavelength bands:

- **NCS1K14-CCMD-16-C:** This is a C-band, 16-port Colorless Direct attach optical line card with EDFA. It can host up to 16 channels and supports any signal distribution between 191250 and 196200 GHz, for example, a 64-channel grid with 75-GHz spacing.
- **NCS1K14-CCMD-16-L:** This is an L-band, 16-port Colorless Direct attach optical line card with EDFA. It can host up to 16 channels and supports any signal distribution between 186025 and 191000 GHz, for example, a 64-channel grid with 75-GHz spacing.