

Cisco NCS 1004 Overview

This chapter provides an overview for Cisco NCS 1004.

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Cisco NCS 1004 Overview

The Cisco NCS 1004 chassis is a 2RU chassis that delivers a universal transponder solution which provides excellent performance for metro, long-haul and submarine applications.

Cisco NCS 1004 chassis has the following modules:

- Removable controller
- Two replaceable power supply units (PSU)
- Three replaceable fan units
- Four line card slots
- Internal Storage: Two integrated SSDs, including a CPU SSD (D:13) and a Chassis SSD (D:14), each with 240 GB of storage capacity.

NCS 1004 chassis supports the following line cards:

- NCS1K4-1.2T-K9
- NCS1K4-1.2TL-K9
- NCS1K4-2-QDD-C-K9
- NCS1K4-OTN-XP
- NCS1K4-QXP-K9

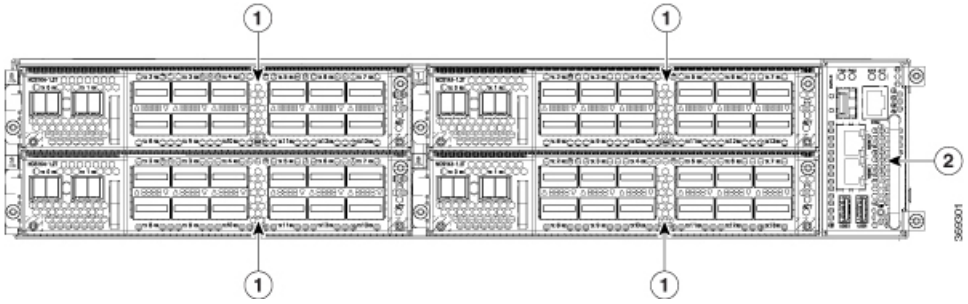
For more information about the Cisco NCS 1004 chassis, see Cisco NCS 1004 datasheet.

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Note "1.2T" refers to the NCS1K4-1.2T-K9 C-band line card, "1.2TL" refers to the NCS1K4-1.2TL-K9 L-band line card, "2-QDD-C" refers to the NCS1K4-2-QDD-C-K9 C-band line card, "OTN-XP" refers to the NCS1K4-OTN-XP line card, and "QXP-K9" refers to the NCS1K4-QXP-K9 line card.

The controller is on the front side. The PSUs and the fan units are on the rear side of the chassis. The line cards can be inserted in to the four slots as shown in the following figure.

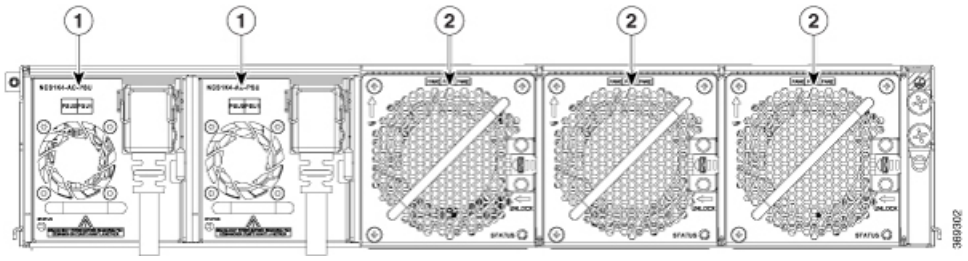
Figure 1: NCS 1004 Front View



1	Line Cards
2	Controller

The slots for the PSUs and fan units are indicated in the following figure.

Figure 2: NCS 1004 Rear View



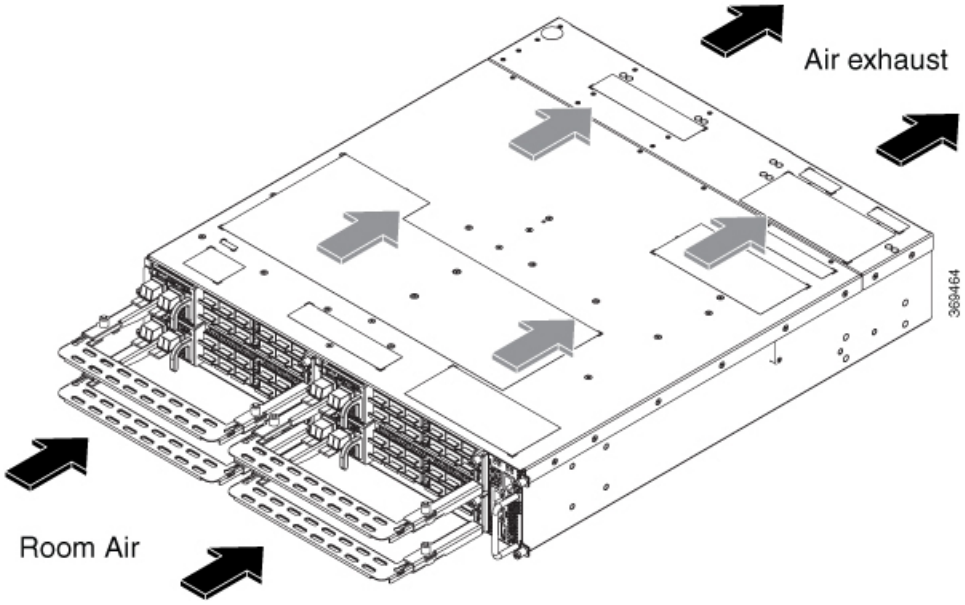
1	Power Supply Units (Slots 0 and 1)
2	Fan Units (Slots 0,1,2)

Both the power supply modules should be AC or DC. Mixed configuration is not allowed.

Cisco NCS 1004 has a front to back airflow scheme. The air inlet is at the front side of the chassis and the exhaust is on the rear side. Ensure that the airflow is not obstructed or impeded by any object as it may lead to reduced airflow in the system, causing components to operate at a higher temperature.

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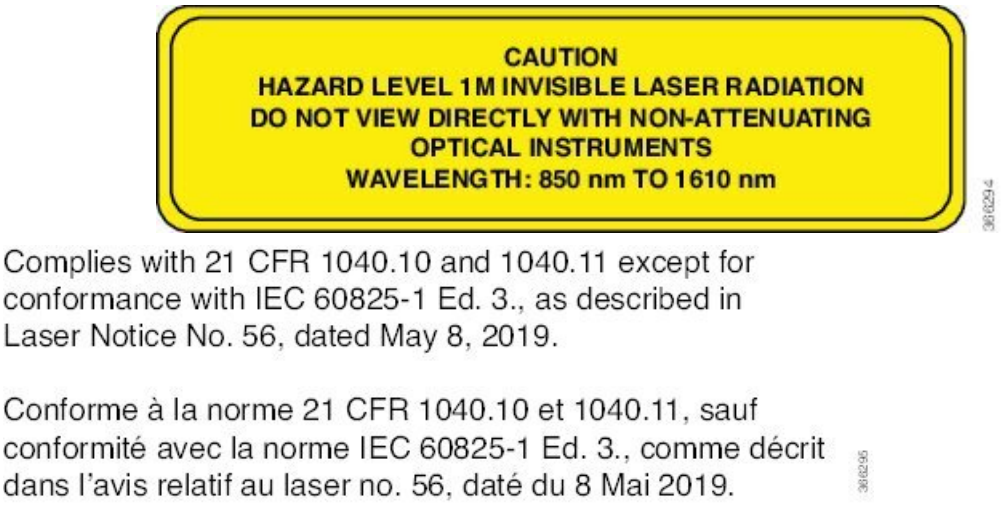
Figure 3: Airflow in NCS 1004



Class 1M Laser Product Label

The Class 1M Laser Product label is shown in the following figure.

Figure 4: Class 1M Laser Product Label



Supported Pluggables

Table 1: Feature History

Feature Name	Release	Description
Pluggables Support	Cisco IOS XR Release 24.3.1	The QDD-4X100G-FR-S pluggable is now supported on the QXP line card.
Pluggables Support	Cisco IOS XR Release 24.1.1	The ONS-QC-4X3G-LW pluggable is supported on the OTN-XP card.
Pluggables Support	Cisco IOS XR Release 7.10.1	The following pluggables are supported on the QXP card: • DP04QSDD-HK9 • DP01QSDD-LK9 These are Cisco 400G QSFP-DD High-Power (Bright) Optical Modules.
Pluggables Support	Cisco IOS XR Release 7.5.2	The following pluggables are supported: • QSFP-100G-LR-S • DP04CFP2-M25-K9 (supported only on OTN-XP card)
Pluggables Support	Cisco IOS XR Release 7.3.2	The QSFP-100G-DR-S pluggable is supported.
Pluggables Support	Cisco IOS XR Release 7.3.1	The following pluggables are supported: • QSFP-40/100-SRBD • QSFP-100G-ER4L-S • QSFP-DD QDD-400G-FR4-S • QDD-400-AOCxM

The following table provides you the list of client and trunk plaggables supported by the NCS 1004 cards and the releases from which they are supported:

Table 2: Supported Client and Trunk Pluggables

Pluggables	Pluggable Type	NCS1K4 -1.2T-K9	NCS1K4 -1.2TL-K9	NCS1K4 -2-QDD-C-K9	NCS1K4 -OTN-XP	NCS1K4 -QXP-K9
QSFP 28 BiDi	Client optics	7.3.1	7.3.1	—	—	—
QSFP-100G-ER4	Client optics	7.3.1	7.3.1	—	7.3.1	—
QSFP-100G-ER4L-S	Client optics	7.3.1	7.3.1	—	7.3.1	—
QSFP DR-S	Client optics	7.3.2	7.3.2	7.3.2	—	—
QSFP-100G-FR-S	Client optics	7.2.1	7.2.1	—	7.3.1	7.7.1
QSFP-100G-SM-SR	Client optics	7.0.1	7.2.1	7.3.1	7.3.1	—
QSFP-100G-CWDM4-S=	Client optics	7.0.1	7.2.1	7.3.1	7.3.1	7.8.1
QSFP-100G-LR4-S=	Client optics	7.0.1	7.2.1	7.3.1	7.3.1	7.7.1
QSFP-100G-SR4-S	Client optics	7.0.1	7.2.1	7.3.1	7.3.1	7.8.1
ONS-QSFP28-LR4=	Client optics	7.1.1	7.2.1	7.5.1	7.2.1	7.7.1
QSFP-100G-AOC1M	Client optics	7.2.1	—	7.3.1	7.3.2	—
QSFP-100G-AOC3M	Client optics	7.2.1	—	—	7.3.1	—
QSFP-100G-AOC10M	Client optics	7.2.1	—	—	7.3.1	—
QSFP-100G-AOC20M	Client optics	7.2.1	—	—	7.3.1	—
QSFP-100G-AOC25M	Client optics	7.2.1	—	—	7.3.1	—
QSFP-100G-CU1M	Client optics	7.2.1	—	—	—	—
QSFP-100G-CU2M	Client optics	7.2.1	—	—	—	—

Pluggables	Pluggable Type	NCS1K4 -1.2T-K9	NCS1K4 -1.2TL-K9	NCS1K4 -2-QDD-C-K9	NCS1K4 -OTN-XP	NCS1K4 -QXP-K9
QSFP-100G-CU3M	Client optics	7.2.1	—	—	—	—
QSFP-100G-CU5M	Client optics	7.2.1	—	—	—	—
QSFP-100G-AOC3M	Client optics	7.2.1	7.2.1	7.3.1	7.3.2	—
QSFP-100G-AOC1M	Client optics	7.2.1	7.2.1	7.3.1	7.3.2	—
QSFP-100G-AOC10M	Client optics	7.2.1	7.2.1	7.3.1	7.3.2	—
QSFP-100G-AOC20M	Client optics	7.2.1	7.2.1	7.3.1	7.3.2	—
QSFP-100G-AOC25M	Client optics	7.2.1	7.2.1	7.3.1	7.3.2	—
QDD-400G-FR4-S	Client optics	—	—	7.3.1	7.3.1	7.7.1
QDD-400G-DR4-S	Client optics	—	—	7.3.2	7.3.1	7.7.1
ONS-QSFP-4X10-MLR	Client optics	—	—	—	7.2.1	—
QSFP-40G-SR4	Client optics	—	—	—	7.2.1	—
QSFP-100G-LR-S=	Client optics	7.5.2	—	—	7.5.2	7.7.1
QDD-400-AOC15M	Client optics	—	—	7.3.2	7.3.2	7.7.1
ONS-QC-16GFC-SW	—	—	—	—	7.5.2	—
QDD-4x100G-LR-S	Client optics	—	—	—	—	7.7.1
QDD-4X100G-FR-S	Client optics	—	—	—	—	24.3.1
QSFP-100G-DR-S	Client optics	7.3.2	7.3.2	7.3.2	7.3.2	7.7.1
DS-SFP-4X32G-SW	—	—	—	—	7.5.2	—

Pluggables	Pluggable Type	NCS1K4 -1.2T-K9	NCS1K4 -1.2TL-K9	NCS1K4 -2-QDD-C-K9	NCS1K4 -OTN-XP	NCS1K4 -QXP-K9
ONS-QC-4X32G-LW	—	—	—	—	24.1.1	—
ONS-QC-4X3G-LW	—	—	—	—	24.1.1	—
DP04QSDD-HK9	Client optics	—	—	—	—	7.10.1
DP01QSDD-LK9	Client optics	—	—	—	—	7.10.1
QSFP-40/100-SRBD	Client optics	7.3.1	7.3.1	—	—	—
QDD-400G-FR4-S	Client optics	—	—	—	7.3.1	7.10.1
QDD-400G-DR4-S	Client optics	—	—	—	7.3.1	7.10.1
QDD-400G-LR8	Client optics	—	—	—	7.3.2	—
QDD-400G-ZRP-S	Trunk optics	—	—	—	7.3.2	7.7.1
ONS-CFP2D-400G-C	Trunk optics	—	—	—	7.3.1	—
DP04CFP2-M25-K9	Trunk optics	—	—	—	7.5.2	—
CFP2-WDM-DETS-1HL	Trunk optics	—	—	—	7.8.1	—