Cisco NCS 520 Overview

The Cisco NCS 520 is a small form factor (1RU) next-generation Layer 2 device.

For more information on its features and benefits, see the Cisco Network Convergence System 520 Data Sheet.

Features

The Cisco NCS 520 includes these seven variants:

- N520-4G4Z-A (Base)

- N520-X-4G4Z-A (Premium)

- N520-X-4G4Z-D (Premium)

- N520-20G4Z-A (Base)

- N520-20G4Z-D (Base)

- N520-X-20G4Z-A (Premium)

- N520-X-20G4Z-D (Premium)

This subfamily of variants have fixed ENET interfaces (4 x 1GE + 4 x 10GE ports available) and (20 x 1GE + 4 x 10GE ports available), with a single or dual power supply for AC and dual power supplies for DC.
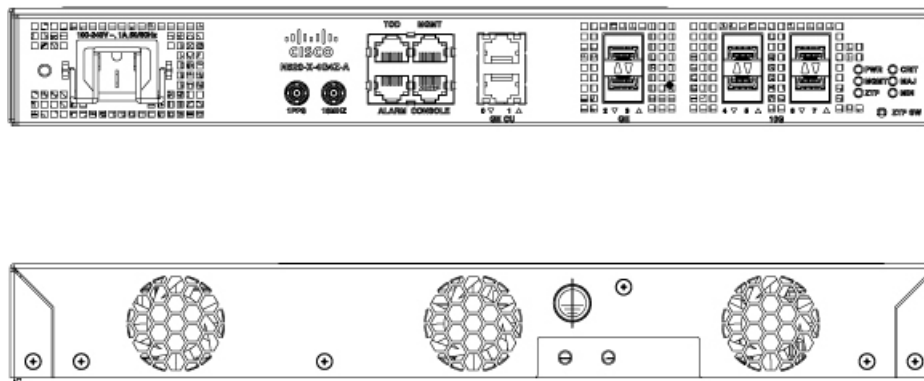
The following figures display the front and back views of the variants. The front views display the power supply, the ports, and the LEDs. The rear views display the fan vents and the ground.
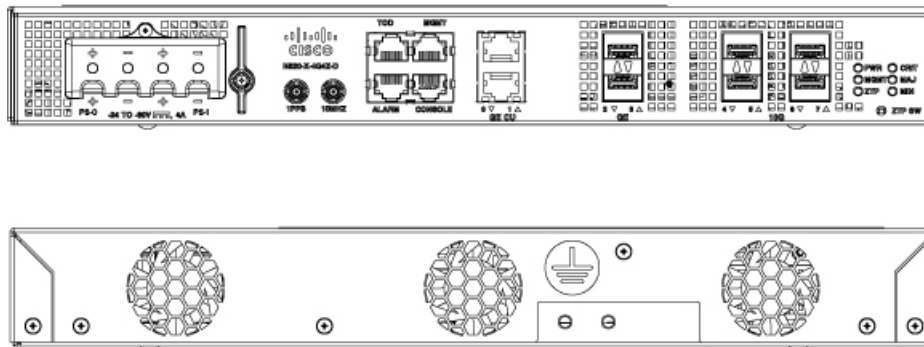
Figure 1: Cisco NCS 520 (N520-4G4Z-A)
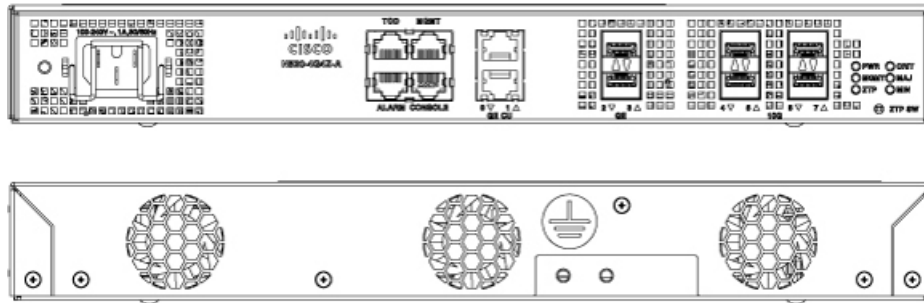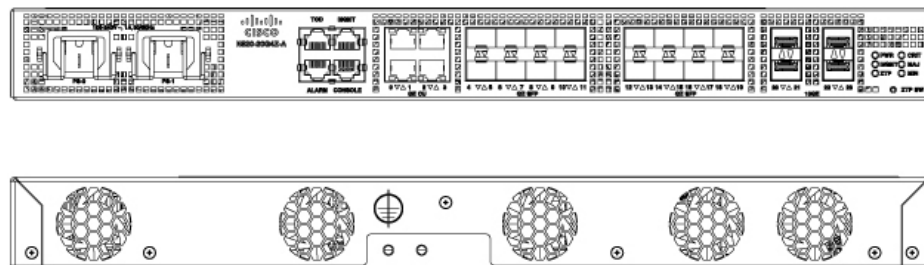

Figure 2: Cisco NCS 520 (N520-X-4GAZ-A)

Figure 3: Cisco NCS 520 (N520-X-4G4Z-D)

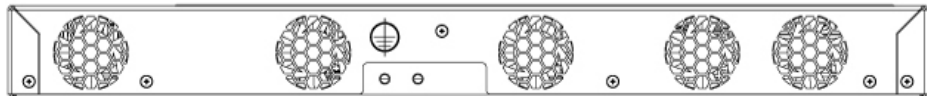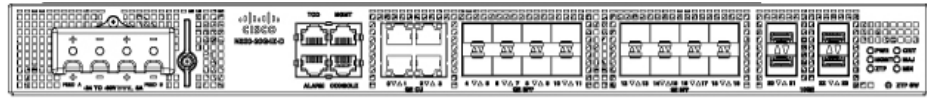Figure 4: Cisco NCS 520 (N520-20G4Z-A)

Figure 5: Cisco NCS 520 (N520-20G4Z-D)

Figure 6: Cisco NCS 520 (N520-X-20G4Z-A)
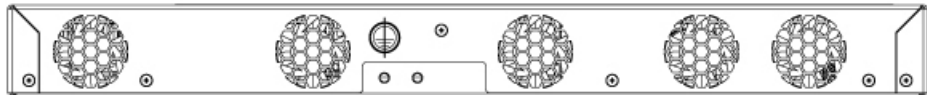
Figure 7: Cisco NCS 520 (N520-X-20G4Z-D)
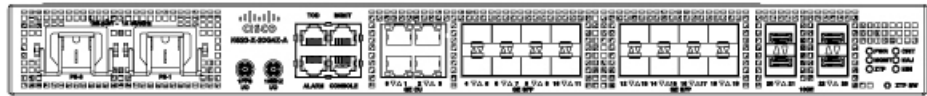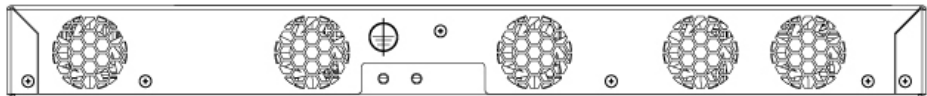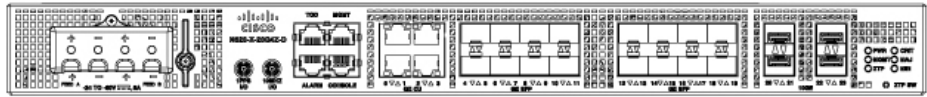

The following table lists the number and type of supported ports:

Table 1: Supported Ports

NCS 520 Subfamily	1 GE Port	10 GE Port
N520-4G4Z-A N520-X-4G4Z-A N520-X-4G4Z-D	4	4
N520-20G4Z-A N520-20G4Z-D N520-X-20G4Z-A N520-X-20G4Z-D	20	4

For more information on the following, see the Cisco Network Convergence System 520 Data Sheet:

- System specification

- Power specification

- Environment specification

- Safety and compliance

- Ordering information

External Interfaces

The Cisco NCS 520 has these external physical interfaces on the front panel:

Network Interfaces

The network interfaces are provided through these fixed ports:

- GE SFP ports—supports 100/1000 modes

- GE Copper RJ-45 ports—supports 10/100/1000 operation

- 10GE SFP+—supports 10G/1G mode depending on the SFP+/SFP in the network interface slot

External Alarm Inputs

The device supports four dry contact alarm inputs through an RJ-45 jack on the front panel.

The alarm condition is normally open, which indicates that no current flows through the alarm circuit, and the alarm is generated when the current is flowing. Each alarm input can be provisioned as being critical, major, or minor.

Management Interfaces

The Cisco NCS 520 has the following management interfaces:

Management ENET Port

A single management copper ENET port supporting 10/100/1000Base-T operation is provided at the front panel. It uses a standard RJ-45 jack.

Note The management ENET port is not a data plane port.

RS232 Console Port

The RS232 console port provides transmission (Tx), reception (Rx), and grounding (Gnd).

Zero Touch Provisioning Button

The Zero Touch Provisioning (ZTP) button on the front panel initiates the ZTP process on a short press of less than eight seconds. Pressing the ZTP button for more than eight seconds causes a system reset.

Power Supply and Fans

The Cisco NCS 520 supports either AC or DC power supplies in a 1+1 redundant configuration except N520-4G4Z-A and N520-X-4G4Z-A.

Note The power supply units are built in and are not modular.

Note This product requires surge protection as part of the building installation. This requirement is in compliance with the Telcordia GR-1089 NEBS standard for electromagnetic compatibility and safety. Provide an external surge protective device (SPD) at the AC power service equipment.

Note For DC systems, if a surge of more than 500 V is expected, add an external surge device for protection.

The Cisco NCS 520 has fixed fans as a part of the system. The system is designed to operate at its maximum operating temperature of 70ºC and at an altitude of 300 meters. If a single fan fails, the system runs at a maximum operating temperature of 65ºC. The fan is not removable and therefore, during a failure, the system must be replaced.

Note In case of power supply or fan failure, we recommend that you get a qualified technician to replace the faulty device within 96 hours.

Licensing

The Cisco NCS 520 supports the following types of licenses:

- Metro Access (default)
- Port Licensing—Port Upgrade license is available as a "Pay as you Grow" model.

  - 10G upgrade license

The following method is used to activate the licenses:

- Software Licensing—The Cisco Software License Activation feature is a set of processes and components that activate Cisco software feature sets. You can obtain and validate fee-based Cisco software licenses.

Note Licenses by the Cisco Software Licensing are tied to the UDI of the chassis, and a corresponding watchtower device certificate (WDC) is stored in the system.