Hardware Installation Guide for Cisco C-NIM-WAN-2X and C-NIM-WAN-4S Modules

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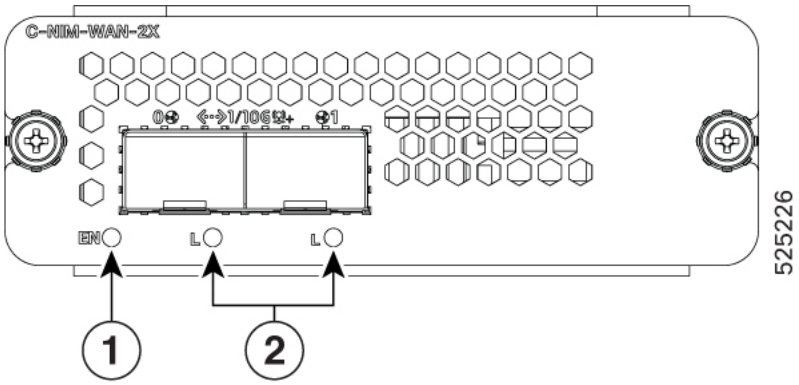
Cisco C-NIM-WAN-2X and C-NIM-WAN-4S Module Network Interface Module

The Cisco C-NIM-WAN-2X and C-NIM-WAN-4S are the next generation Form-factor WAN NIM modules that provide enhanced security, reliability, and performance. The Cisco C-NIM-WAN-2X module provides Small Form-Factor Pluggable Plus (SFP+), 10G and 1 Gigabit connectivity. The Cisco C-NIM-WAN-4Smodule provides 1 Gigabit SFP connectivity. The Cisco C-NIM-WAN-2X and C-NIM-WAN-4S modules are supported only in a NIM slot. These modules can only be supported in the SM-NIM Carrier Adapter in the non-NEBS setup.

This article describes how to install the C-NIM-WAN-2X and C-NIM-WAN-4S Network Interface modules. This chapter also includes the installation of Small-Form-Factor pluggable (SFP+) modules. It also describes how to connect the module in your network.

Figure shows the front panel of the C-NIM-WAN-2X and C-NIM-WAN-4S Network Interface modules.

Figure 1: Front Panel of Catalyst of the C-NIM-WAN-2X

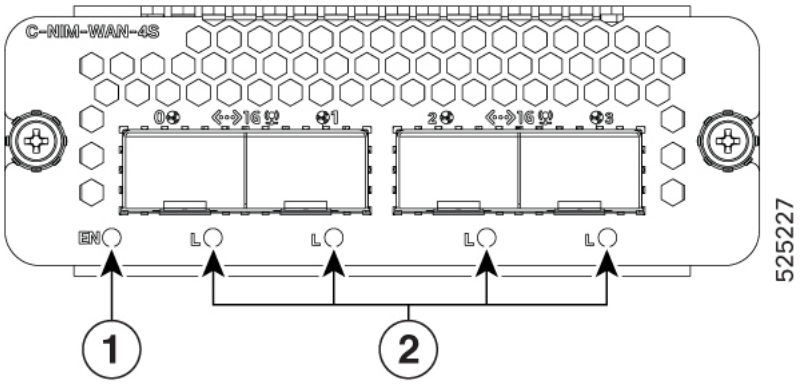


This table explains the led description for C-NIM-WAN-2X Network Interfaces:

	LED	Color	Description
1	LED EN (Enable)	Green/Amber	**Off** – Power off **Solid Green** – Power on and operate normally **Solid Amber** – Power or operating failure

	LED	Color	Description
2	SFP Ports L (Link)	Green/Amber	**Off** – No link. SFP is not detected or inserted. **Solid Green** – SFP link up **Solid Amber** – SFP is not supported or in a fault state

Figure 2: Front Panel of Catalyst of the C-NIM-WAN-4S



This table explains the led description for C-NIM-WAN-4S Network Interfaces:

	LED	Color	Description
1	LED EN (Enable)	Green/Amber	**Off** – Power off **Solid Green** – Power on and operate normally **Solid Amber** – Power or operating failure
2	SFP Ports L (Link)	Green/Amber	**Off** – No link. SFP is not detected or inserted. **Solid Green** – SFP link up **Solid Amber** – SFP is not supported or in a fault state

Supported platforms

The table provides information about the platforms that support the Cisco C-NIM-WAN-2X and C-NIM-WAN-4S modules.

Table 1: Supported platforms for C-NIM-WAN-2X and C-NIM-WAN-4S Modules

Platforms	C-NIM-WAN-2X	C-NIM-WAN-4S
C8375-E-G2	Yes	Yes

Prepare for installation

These sections describe safety warnings, general maintenance guidelines, and safety recommendations that you must read before installing and using the module:

Safety warnings

Warning To reduce risk of fire, explosion, or leakage of flammable liquid or gas:

- Replace the battery only with the same or equivalent type recommended by the manufacturer.
- Do not dismantle, crush, puncture, use a sharp tool to remove, short the external contacts, or dispose of the battery in fire.
- Do not use if battery is warped or swollen.
- Do not store or use battery in a temperature > .
- Do not store or use battery in low air pressure environment < .

Warning Blank faceplates and cover panels serve three important functions: they reduce the risk of electric shock and fire, they contain electromagnetic interference (EMI) that might disrupt other equipment, and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place.

Warning Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

Warning Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a risk of electric shock from lightning.

Warning To reduce the risk of ignition, do not use a telephone in the vicinity of a gas leak.

Prevent electrostatic discharge damage

Electrostatic discharge can damage equipment and electrical circuitry. Electrostatic discharge occurs when electronic printed circuit cards, such as those used in Cisco service modules, are not handled properly. Improper handling can result in complete or intermittent equipment failure. Always observe the following procedures to prevent electrostatic discharge damage (ESD) when installing, removing, or replacing any electronic printed circuit cards:

- Make sure that the router chassis is electrically connected to earth ground.
- Wear an ESD-preventive wrist strap, and make sure that it makes good contact with your skin.
- Connect the wrist strap clip to an unpainted portion of the chassis frame to channel unwanted ESD voltages to ground.
- The wrist strap and clip must be used correctly to ensure proper ESD protection. Periodically confirm that the resistance value of the ESD-preventive wrist strap is between 1 and 10 megohms (Mohm).
- If no wrist strap is available, ground yourself by touching a metal part of the router chassis.

General maintenance guidelines and safety recommendations for C-NIM-WAN-2X and C-NIM-WAN-4S Module

This section outlines the general maintenance and safety recommendations for the modules.

General maintenance guidelines

- Keep the router chassis area clear and dust-free during and after installation.
- If you remove the chassis cover for any reason, store it in a safe place.
- Do not perform any action that creates a hazard to people or makes equipment unsafe.
- Keep walk areas clear to prevent falls or damage to equipment.
- Follow installation and maintenance procedures as documented by Cisco Systems, Inc.
- Always wear an electrostatic discharge (ESD)-preventive wrist strap, and ensure that it makes good contact with your skin when you remove or install an Service Module (SM). Connect the equipment end of the wrist strap to a metal part of the chassis.
- Handle the NIMs only by their edges. SMs are ESD-sensitive components and can be damaged by mishandling.

Safety recommendations

To prevent hazardous conditions, follow these safety recommendations while working with this equipment:

- Keep tools away from walk areas where you or others could trip over them.
- Do not wear loose clothing around the router. Fasten your tie or scarf and roll up your sleeves to prevent clothing from being caught in the chassis.
- Wear safety glasses when working under any conditions that might be hazardous to your eyes.

- Locate the emergency power-off switch in the room before you start working. If an electrical accident occurs, shut the power off.
- Before working on the router, turn off the power and unplug the power cord.
- Disconnect all power sources before doing the following:
  - Installing or removing a router chassis
  - Working near power supplies
- Do not work alone if potentially hazardous conditions exist.
- Always check that power is disconnected from a circuit.
- Remove, from your work area, possible hazards such as damp floors, ungrounded power extension cables, or missing safety grounds.
- If an electrical accident occurs to another person with you, proceed as follows:
  - Turn off power to the room using the emergency power-off switch.
  - Determine the condition of the victim and send another person to get medical aid or call for help.
  - Determine if the person needs rescue breathing or external cardiac compressions; then take appropriate action.

Software requirements for installing Cisco C-NIM-WAN-2X and C-NIM-WAN-4S Modules

Cisco IOS XE 17.18.1 or a later release is required to install the Cisco C-NIM-WAN-2X and C-NIM-WAN-4S Network Interface modules.

To determine the version of Cisco IOS software that is running on your router, log in to the router and enter the **show version** command:

```
Device# show version
Cisco IOS XE Software, Version BLD_V1718_THROTTLE_LATEST_20250513_033132_V17_18_0_38
Cisco IOS Software [IOSXE], c8kg2be Software (ARMV8EL_LINUX_IOSD-UNIVERSALK9-M), Experimental
 Version 17.18.20250513:042531
[BLD_V1718_THROTTLE_LATEST_20250513_033132:/nobackup/mcpre/s2c-build-ws 101]
Copyright (c) 1986-2025 by Cisco Systems, Inc.
Compiled Mon 12-May-25 21:26 by mcpre


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with ABSOLUTELY NO WARRANTY.  You can redistribute and/or modify such
GPL code under the terms of GPL Version 2.0.  For more details, see the
documentation or "License Notice" file accompanying the IOS-XE software,
or the applicable URL provided on the flyer accompanying the IOS-XE
software.


ROM: v17.15(1.19d).s2.cp.RSA2K
Crestone-1 uptime is 4 minutes
```

```
Uptime for this control processor is 5 minutes
System returned to ROM by Reload Command
System image file is "bootflash:c8kg2be-universalk9.17.18.01.0.700_V17_18_0_38.SSA.bin"
Last reload reason: Reload Command



This product contains cryptographic features and is subject to United
States and local country laws governing import, export, transfer and
use. Delivery of Cisco cryptographic products does not imply
third-party authority to import, export, distribute or use encryption.
Importers, exporters, distributors and users are responsible for
compliance with U.S. and local country laws. By using this product you
agree to comply with applicable laws and regulations. If you are unable
to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.


Technology Package License Information:

------------------------------------------------------------------
Technology     Type         Technology-package Technology-package
                           Current            Next Reboot
------------------------------------------------------------------
Smart License  Subscription advantage          advantage

The current crypto throughput level is 10000 kbps (Aggregate)


Smart Licensing Status: Smart Licensing Using Policy

cisco C8375-E-G2 (1RU) processor with 3703488K/6147K bytes of memory.
Processor board ID FDO2721M02R
Router operating mode: Autonomous
1 Virtual Ethernet interface
4 Gigabit Ethernet interfaces
4 2.5 Gigabit Ethernet interfaces
8 Ten Gigabit Ethernet interfaces
32768K bytes of non-volatile configuration memory.
8388608K bytes of physical memory.
20257791K bytes of flash memory at bootflash:.

Configuration register is 0x3922
```

Install Cisco C-NIM-WAN-2X and C-NIM-WAN-4S Modules

This section describes how to install the Cisco C-NIM-WAN-2X and C-NIM-WAN-4S network interface modules. This section describes the installation procedure that is common for all C-NIM-WAN-2X and C-NIM-WAN-4S modules.

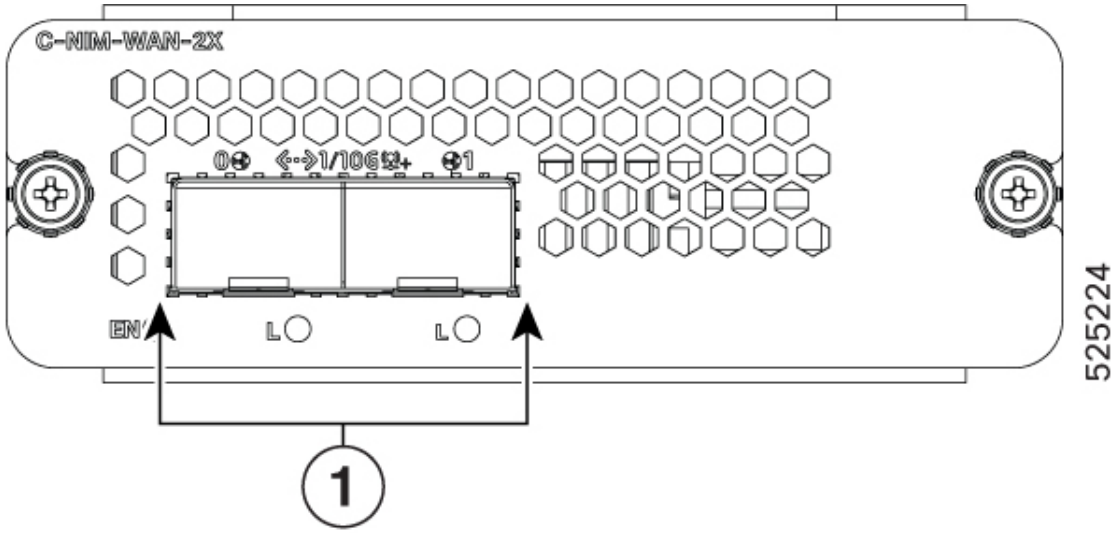


Note For illustration purposes, we have used images of C-NIM-WAN-2X and C-NIM-WAN-4S.

Caution Always wear an electrostatic discharge (ESD)-preventive wrist strap and ensure that it makes good contact with your skin when you install or remove the C-NIM-WAN-2X and C-NIM-WAN-4S network interface module. Connect the equipment end of the wrist strap to the metal part of the chassis.

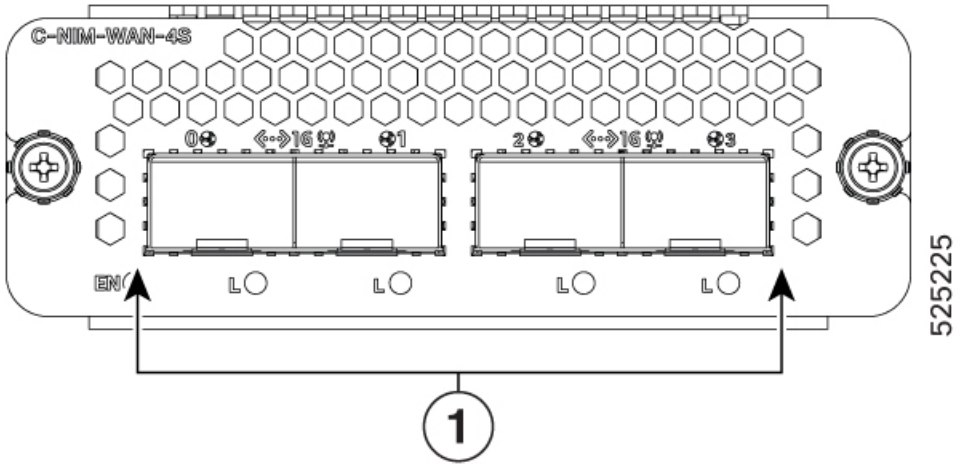
Caution Handle your network interface modules only by their edges. Network interface modules are ESD-sensitive components and can be damaged by mishandling.

Figure 3: Cisco C-NIM-WAN-2X



1	Ports with 2x 1G/10G SFP/SFP+ and WAN ports

Figure 4: Cisco C-NIM-WAN-4S



1	Ports with 4x 1G SFP, WAN ports

Use the following procedure to install the Cisco C-NIM-WAN-2X and C-NIM-WAN-4S network interface module on your router:

Procedure

Step 1 Read the Safety Warnings before you perform any module replacement.

Step 2 Shut down the electrical power to the slot in the device, turn off the electrical power to the device. Leave the power cable plugged-in to channel ESD voltages to ground.

Step 3 Remove all network cables from the rear panel of the device.

Step 4 Remove the blank faceplates installed over the network interface module slot that you intend to use.

Note
Save blank faceplates for future use.

Step 5 Align the module with the guides in the chassis walls or slot divider and slide it gently into the NIM slot on the device..

Step 6 Push the module into place until you feel the edge connector seat securely into the connector on the router backplane. The module faceplate should contact the chassis rear panel

Step 7 Using a number 1 Phillips screwdriver, tighten the captive screws on the network interface module.

Remove C-NIM-WAN-2X and C-NIM-WAN-4S Network Interface Module

Use the following procedure to remove the Cisco C-NIM-WAN-2X and C-NIM-WAN-4S network interface module from your router:

Procedure

Step 1 Read the Safety Warnings before you perform any module replacement.

Step 2 Shut down the electrical power to the slot in the device, turn off the electrical power to the device. Leave the power cable plugged-in to channel ESD voltages to ground. .

Step 3 Using a number 1 Phillips or flat-blade screwdriver, unscrew the captive mounting screws on the module faceplate.

Step 4 Slide the Cisco C-NIM-WAN-2X or the Cisco C-NIM-WAN-4S network interface module out of the chassis.

Step 5 If you are not replacing the module, install a blank faceplate over the empty slot to ensure proper air flow.

Step 6 Place the service module in an antistatic bag to protect it from electrostatic discharge (ESD) damage.

Verify the Cisco C-NIM-WAN-2X and C-NIM-WAN-4S Network Interface Modules Installation

Use the **show platform** command to verify that the Cisco C-NIM-WAN-2X and C-NIM-WAN-4S Network Interface modules are installed. The following example shows that the C-NIM-WAN-2X and C-NIM-WAN-4S Network Interface module are installed and recognized by the system.

This is a sample output of the **show platform** command.

```
Device#show platform
Chassis type: C8375-E-G2

Slot      Type                State                 Insert time (ago)
--------- ------------------- --------------------- -----------------
0         C8375-E-G2          ok                    00:05:25
0/0      4M-2xSFP+           ok                    00:04:20
0/1      C-NIM-4X            ok                    00:04:20
1         C-SM-NIM-ADPT       ok                    00:04:24
1/0      C-NIM-WAN-2X        ok                    00:04:10
1/1      C-NIM-WAN-4S        ok                    00:04:09
R0        C8375-E-G2          ok, active            00:05:25
F0        C8375-E-G2          ok, active            00:05:25
P0        PWR-CC1-400WAC      ok                    00:04:42
P1        Unknown             empty                 never
P2        C8300-FAN-1R        ok                    00:04:41

Slot      CPLD Version        Firmware Version
--------- ------------------- ------------------------------------
0         2408272B            v17.15(1.19d).s2.cp.RSA2K
1         2408272B            v17.15(1.19d).s2.cp.RSA2K
R0        2408272B            v17.15(1.19d).s2.cp.RSA2K
F0        2408272B            v17.15(1.19d).s2.cp.RSA2K
```

Related documentation

- Hardware Installation Guide for Cisco 8300 Series Secure Routers
- Cisco C-NIM-WAN-2X and C-NIM-WAN-4S Modules Configuration Guide
- Release Notes for Cisco 8300 Series Secure Routers

Commands

Cisco IOS XE commands are identical in look, feel, and usage to Cisco IOS commands on most platforms. To find reference information for a specific Cisco IOS XE command, see the Cisco IOS Master Command List, All Releases document.

Features

The router runs Cisco IOS XE software which is used on multiple platforms. To verify support for specific features, use the Cisco Feature Navigator tool. For more information, see Cisco Feature Navigator.