



Cisco 8300 Series Secure Routers

Cisco 8300 Series Secure Routers deliver secure networking simplified. Powered by the all-new secure networking processor and the unified Cisco secure networking platform, the Cisco 8300 Series Secure Routers deliver robust, platform-level security, advanced performance engineering thorough routing and SD-WAN, and on-premises, infrastructure-as-code, or cloud management flexibility that enables businesses to seamlessly scale and grow. Each class of secure routers is designed to deliver risk reduction, enhanced reliability, and future readiness.

Cisco 8300 Series Secure Routers are engineered for large branch locations and provide scalable, high-throughput connectivity with embedded platform-level security. With hardware-native assurance, post-quantum cryptography, and unified infrastructure as code, the Cisco 8300 Series enables large branches to support bandwidth-intensive applications and evolving threat landscapes with confidence.

For more information on the features and specifications, see the [Cisco 8300 Series Secure Routers](#) datasheet.



Note Sections in this documentation apply to all models of Cisco 8300 Series Secure Routers unless a reference to a specific model is made explicitly.

- [Chassis views, on page 1](#)
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- [Hardware features of Cisco 8300 Series Secure Routers , on page 5](#)

Chassis views

This section contains views of the power supply and I/O sides of the Cisco 8300 Series Secure Routers, showing the locations of power and signal interfaces, module slots, status indicators, and chassis identification labels:

Cisco 8300 Series Secure Routers are available in these models:

- C8375-E-G2

Figure 1: C8375-E-G2 chassis - I/O Side

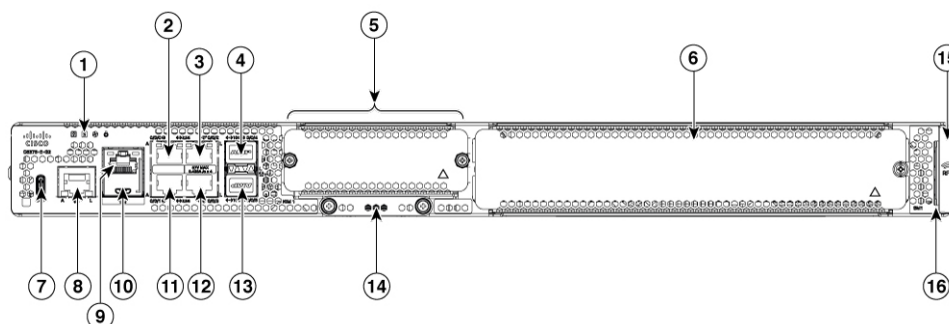


Table 1: I/O side

1	LED	2	RJ-45 mGigabitEthernet port (2.5G 0/0/0)
3	RJ-45 mGigabitEthernet port (2.5G 0/0/2)	4	SFP+/10 Gigabit Ethernet port (10G 0/0/4)
5	NIM Slot1	6	SM Slot1
7	USB Type C (3.0) (USB 0)	8	RJ-45 Gigabit Ethernet management port (1G)
9	RJ-45 Console	D	Micro-USBConsole
11	RJ-45 mGigabitEthernet port (2.5G0/0/1)	12	RJ-45 mGigabitEthernet port (2.5G0/0/3)
B	SFP+/10 Gigabit Ethernet port (10G 0/0/5)	14	M.2USB/NVMe storage
5	RFID	16	Device Label Tray

Figure 2: C8375-E-G2 chassis - PSU/Fan tray side

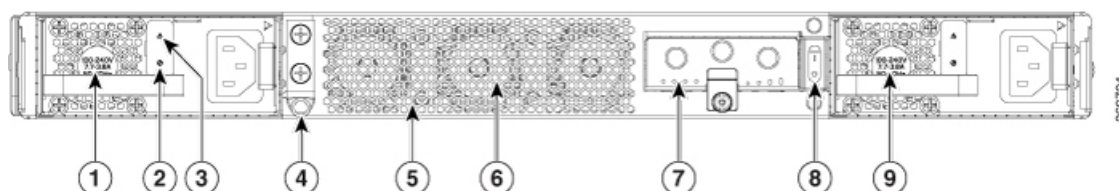


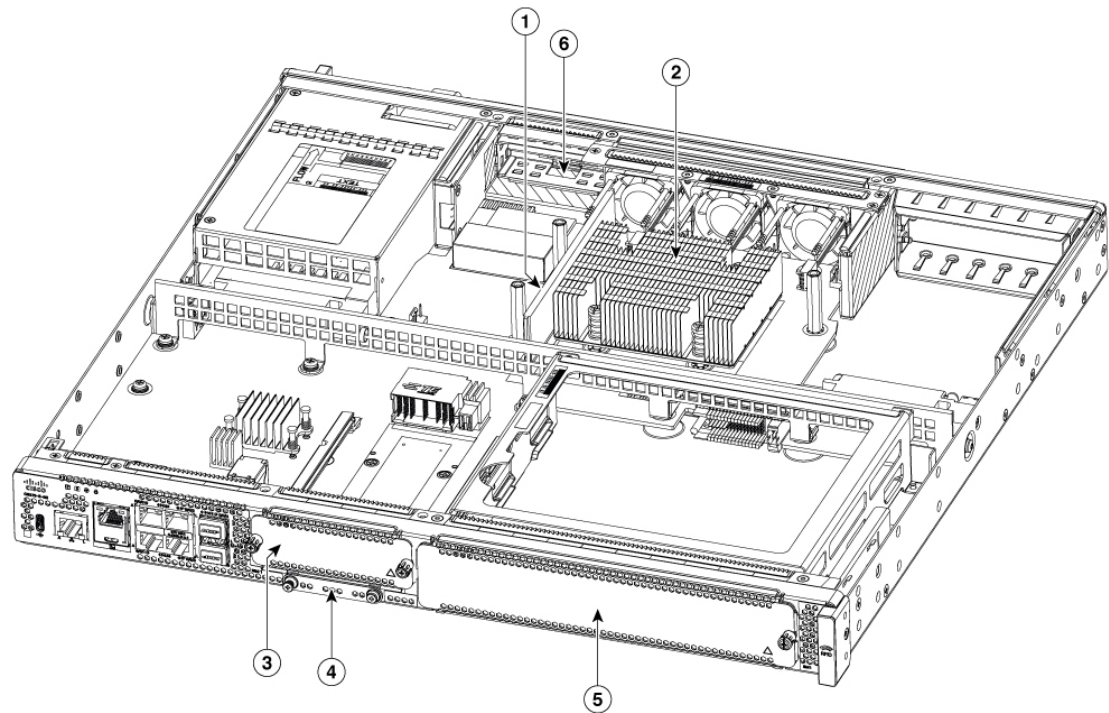
Table 2: PSU/Fan tray side

1	AC/DC power supply unit (PSU1)	2	Power, Preset, OK, LED
3	ALARM Fail LED	4	Ground lug
5	Fan tray vent	6	3-Internal Fan tray
7	PIM Slot 1	8	Power switch
9	AC/DC Power Supply Unit (PSU0)		

Platform summary

The figure shows the internal view of Cisco 8300 Series Secure Routers with components and module locations.

Figure 3: Platform summary of C8375-E-G2



1	DIMM	2	CPU
3	NIM slot	4	M.2 card slot
5	SM slot	6	PIM slot

Locating labels on Cisco 8300 Series Secure Routers

Use the Cisco Product Identification (CPI) tool to find labels on the platform. The tool provides detailed illustrations and descriptions of where labels are located on Cisco products. It includes these features:

- A search option that allows browsing for models by using a tree-structured product hierarchy
- A search field on the final results page that makes it easier to look up multiple products
- End-of-sale products clearly identified in results lists

The tool streamlines the process of locating serial number labels and identifying products. Serial number information expedites the entitlement process and is required for access to support services.

Labels on Cisco 8300 Series Secure Routers

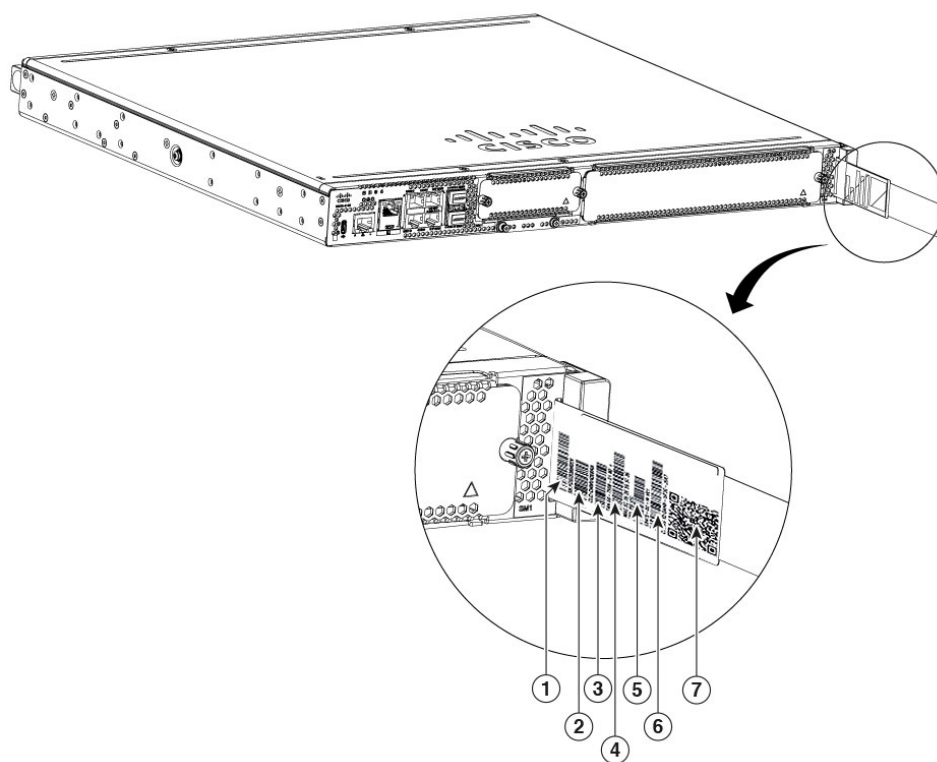
The figure shows the location of the labels on the Cisco 8300 Series Secure Routers. Labels are located at the same location on all the Cisco 8300 Series Secure Routers.

The Serial number (SN), Common language equipment identifier (CLEI), Top Assembly Number (TAN), Product ID (PID), PID version ID (VID), and Quick response (QR) code are printed on a label on the back of the platform or on a label tray located on the chassis.



Note The RFID tags on the devices are pre-fitted and does not come with spare RFID tags.

Figure 4: Label location on a C8375-E-G2



1	SN	2	CLEI
3	TAN	4	MAC
5	PIDVID	6	Cloud ID
7	QR Code		

Locate product identification details

Software license

The serial number (SN), product ID (PID), version ID (VID), Cloud ID and Common Language Equipment Identifier (CLEI) are printed on a label on the bottom of the device or on the label tray.

To obtain a software license, you need the unique device identifier (UDI) of the device where the license is to be installed.

The UDI has two main components:

- Product ID (PID)
- Serial number (SN)

The UDI can be viewed using the **show license udi** command in privileged Exec mode in Cisco Internet Operating System (IOS) software.

For additional information on the UDI, see the [Product Identification Standrad document](#) on cisco.com.

Hardware features of Cisco 8300 Series Secure Routers

This section describes the hardware features of Cisco 8300 Series Secure Routers.

Built-in interface ports

The Cisco 8300 Series Secure Routers have multiple 10/100/1000 front panel ports and Small Form Pluggables.



Warning

To comply with the Telcordia GR-1089 NEBS standard for electromagnetic compatibility and safety, connect the Management Ethernet ports only to intra-building or unexposed wiring or cable. The intra-building cable must be shielded and the shield must be grounded at both ends. The intra-building port(s) of the equipment or subassembly must not be metalically connected to interfaces that connect to the OSP or its wiring. These interfaces are designed for use as intra-building interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE) and require isolation from the exposed OSP cabling. The addition of Primary Protectors in not sufficient protection in order to connect these interfaces metalically to OSP wiring.

RJ45 mGIG ports or SFP+ ports

The GE and SFP ports available on the Cisco 8300 Series Secure Routers are:

mGIG ports

The mGIG RJ-45copper interface ports support 100BASE-TX, 1000BASE-T, and 2500BASE-T.

SFP+ ports

The enhanced small-form-factor pluggable (SFP) ports support 10 Gbps SFP+ modules.

Removable and interchangeable modules and cards

Service Modules (SMs), Network Interface Modules (NIMs), Pluggable Interface Modules (PIMs) and M.2 USB/NVMe storage fit into external slots and can be removed or replaced without opening the chassis.

Internal slots

List of internal slots for C8375-E-G2:

- Memory

See the Cisco 8300 Series Secure Routers product page on [cisco.com](https://www.cisco.com) for a list of supported modules and interface cards.

Memory

Cisco 8300 Series Secure Routers contain DIMMs that store running configuration and routing tables and are used for packet buffering by the network interfaces.

Memory in C8375-E-G2:

- Boot/NVRAM—Stores the bootstrap program (ROM monitor) and the configuration register. The boot/NVRAM is not serviceable.
- Internal memory—Internal bootflash memory
- Removable M.2 card—Available in 32GB M.2 USB, 600GB M.2 NVMe SSD and 2TB M.2 NVMe SSD
- DRAM options
 - 1x 16GB DDR5 (default)
 - 1x 32GB DDR5 (upgrade)

Power supply

Cisco 8300 Series Secure Routers support a variety of power supply configurations. These devices have power supplies that are field replaceable and externally accessible. The table summarizes the power options:

Table 3: Field replaceable unit power options

Model	AC Input PSU	PSU with Integrated PoE	Dual, Hot Swap	DC Input PSU
C8375-E-G2	Y	Y	Y	Y

LEDs for Cisco 8300 Series Secure Routers

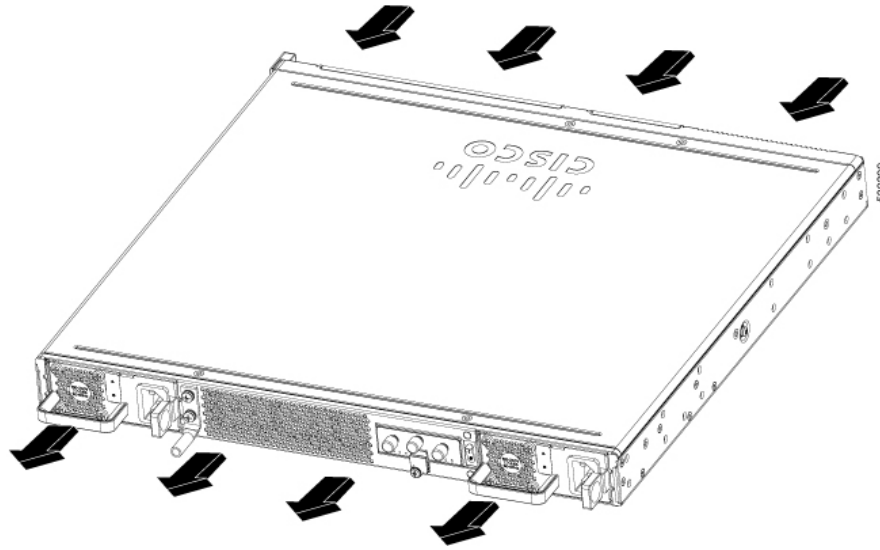
Table 4: LED indicators for C8375-E-G2

LED	Color	Description
PWR	Green/Amber	Power Supply Status Off: The system is powered off Amber: A Power Supply in the system is not functioning correctly Green: All installed PSUs are operating correctly
STATUS	Green/Amber/Red	System Status Blinking Amber: The system is booting Blinking Red: The system has failed a hardware integrity error Amber: Rommon has completed booting and system is at Rommon prompt or booting platform software Green: Normal System Operation
ENV	Green/Amber/Red	Environmental Status Off: Monitor is not active Red: The system has detected a critical overcurrent event and may shut down Blinking Amber: One or more temperature sensors in the system are outside the acceptable range Amber: One or more fans in the system are outside the acceptable range Green: All temperature sensors and fans in the system are within acceptable range
BEACON	Blue	Off: System is normal Blinking Blue: Beacon purpose
USB CON	Green	USB Console Active Green indicates that the active console port is USB

LED	Color	Description
RJ-45 CON	Green	Serial Console Active Green indicates that RJ-45 is the active console port
RJ-45 Ethernet Ports A (Active)	Green	Activity status Off: No data Blinking Green: Tx/Rx data
RJ-45 Ethernet Ports L (Link)	Green/Amber	Link status Off: No data Green: Link up Amber: POE power fault and link is down Note The C8375-E-G2 supports 2 PoE Ports (802.3bt, 90W per port) on port 0/0/2 and 0/0/3
SFP Ports L (Link)	Green/Amber	SFP port 0/1 Link LED Off: No Link (or SFP not present) Green: Link established Amber: The SFP is not supported, or it is in a fault state

Chassis ventilation

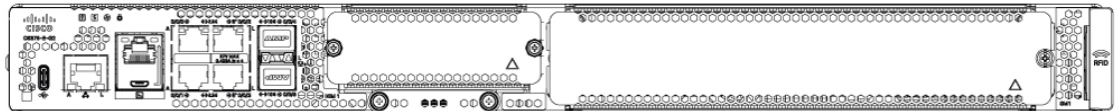
The chassis temperature is regulated with internal fans. An onboard temperature sensor controls the fan speed. The fans are always on when the device is powered on. Under all conditions, the fans operate at the slowest speed possible to conserve power and reduce noise. When necessary, the fans operate at higher speeds under conditions of higher ambient temperature and altitude.

Figure 5: Airflow of C8375-E-G2

Slots, subslots-bay, ports, and interfaces

The Cisco 8300 Series Secure Routers support interface modules: Service Modules (SM) and Network Modules (NIMs) and Pluggable Interface Modules (PIMs).

The C8375-E-G2 router supports Service Modules (SM) and Network Modules (NIMs) and Pluggable Interface Modules (PIMs).

Figure 6: C8375-E-G2 interfaces

In all cases, the device designates its interfaces using a 3-tuple notation that lists the slot, bay, and port. The 3-tuple value is zero based. An example of a 3-tuple is 0/1/2. This refers to slot 0, the second bay in slot 0 (the first bay is 0 so the second bay is 1), and the third port in bay 1. See the following table for more examples.

Table 5: Slot, subslot-bay and port numbering

3-Tuple Example	Slot	Bay	Port
0/1/2	0	2nd	3rd
0/0/1	0	1st	2nd
1/1/1	1	2nd	2nd

- Slots and bays are numbered from the left to the right, and from the top to the bottom.
- The USB port is named USB0. It doesn't have slot or bay numbers.



Note USB0 can be used to insert flash drives.

Slot numbering

Slots are numbered 0, 1, and 2.

Slot 0

These are the main features about Slot 0:

- Slot 0 is reserved for integrated ports and NIMs, it can be used for either SM or NIM.
- NIMs are designated by the number of the first slot that they occupy. A double-wide SM occupies two slots, but its designation is only the left-most slot number.
- The ten GE ports (or native interface ports) always reside in slot 0 and bay 0. The ports are called Gigabitethernet 0/0/0, Gigabitethernet 0/0/1, Gigabitethernet 0/0/2, and Gigabitethernet 0/0/3 (up to as many ports supported on the particular router).

Subslot and bay numbering

- Integrated devices, also known as integrated ports or FPGEs, and NIMs reside in a fixed section of bay 0.
- Motherboard NIMs bays start at bay 1 because the integrated devices and integrated NIMs take up bay 0.