Overview

The Cisco 8500 Series Secure Routers are designed as enterprise aggregation routers for data center or colocation deployments. These routers are powered by the 3rd generation Quantum Flow Processor (QFP) ASIC to accelerate routing and encryption in a compact 1RU form factor.

This document covers only hardware installation specific details for the following models of Cisco 8500 Series Secure Routers:

- C8550-G2

- C8570-G2

For more information on the features and specifications of Cisco 8500 Series Secure Routers, refer the …..

Hardware features

Table 1: Hardware Features for Cisco 8500 Series Secure Routers

Feature	C8570-G2	C8550-G2	
Ethernet Ports	12x SFP+ 2x QSFP28 100/40GE 2x QSFP 40GE	12x SFP+	
Rack Units	One	One	
System Memory (DRAM)	32 GB default (two DIMMS) can be upgraded to 64 GB total	32 GB default (two DIMMS) can be upgraded to 64 GB total	

Feature	C8570-G2	C8550-G2
Storage	480 GB SSD	480 GB SSD
Management Interface	RJ-45 console port	RJ-45 console port
Console Port	1xRJ45, 1x USB Micro-USB	1xRJ45, 1x USB Micro-USB
USB Ports	USB Type C	USB Type C
Rack Installation	Two post and four post	Two post and four post

Table 2: Supported Transceivers for Cisco 8500 Series Secure Routers

| Feature	C8570-G2	C8550-G2
Supported Transceivers	12x SFP+,2x QSFP28 100/40GE, 2x QSFP 40GE 1G SFP or 10G SFP+ can be configured with dual-rate 10GE ports as follows: **10G SFP+ on dual-rate 10GE Interface:** Auto-negotiation protocol is not supported, and automatic negotiation cannot be configured using **negotiation auto** command. **1G SFP on dual-rate 10GE Interface:** Auto-negotiation protocol is supported, and automatic negotiation can be configured using **negotiation auto** command. To disable auto negotiation, use **no negotiation auto** command.	12x SFP+ 1G SFP or 10G SFP+ can be configured with dual-rate 10GE ports as follows: **10G SFP+ on dual-rate 10GE Interface:** Auto-negotiation protocol is not supported, and automatic negotiation cannot be configured using **negotiation auto** command. **1G SFP on dual-rate 10GE Interface:** Auto-negotiation protocol is supported, and automatic negotiation can be configured using **negotiation auto** command. To disable auto negotiation, use **no negotiation auto** command.

Table 3: Power Supply

Power Supplies	C8570-G2	C8550-G2
AC	PWR-CH1-750WACR	PWR-CH1-750WACR
DC	PWR-CH1-950WDCR	PWR-CH1-950WDCR

Chassis views

Cisco C8570-G2 chassis views

*Figure 1: Cisco C8570-G2 Front View*
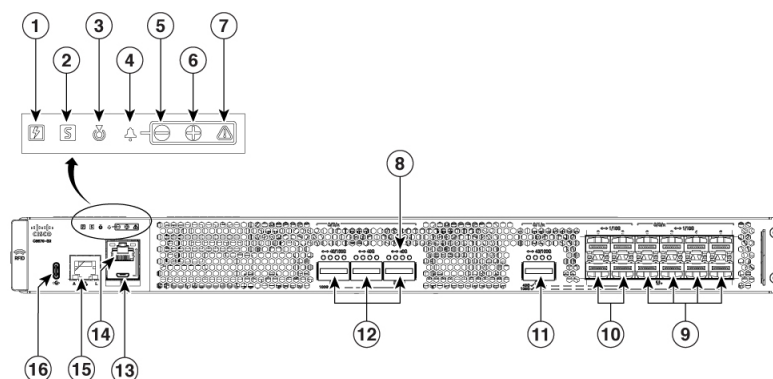
1	Power LED	11	Bay 1 : Configurable 100G or 40G
2	Status LED	12	Bay 2 : Configurable 1x100G or 3x40G
3	Beacon LED	13	Micro USB Console Port
4	Main Alarm LED	14	RJ 45 Console Port
5, 6 and 7	Minor, Major, Critical Alarm LEDs	15	Management Port (RJ 45)
8	Link Status LED	16	USB-C
9	Bay 0 : 8x 1/10 GE		
10	Bay 1 : 4x1/10 GE		

Figure 2: Cisco C8570-G2 Rear View
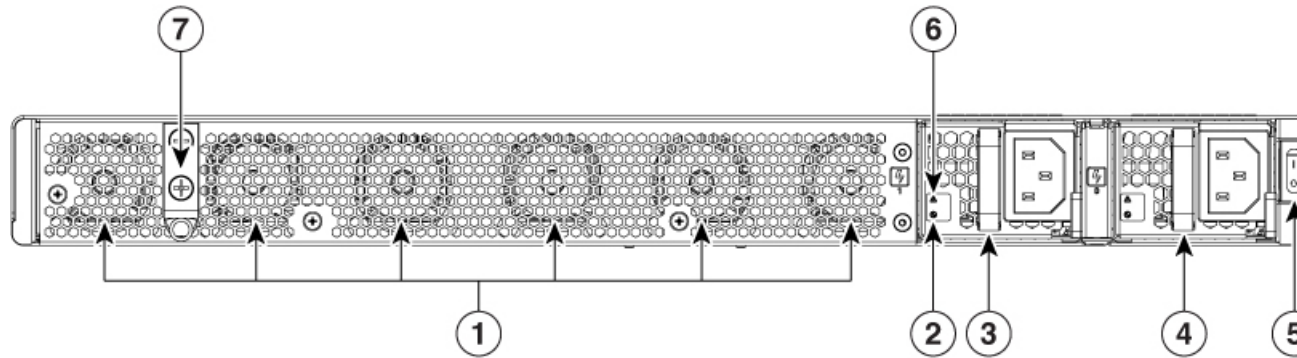
1	Fans	5	Power switch
2	Power supply AC input LED	6	Power supply failure LED
3, and 4	PEM 0, PEM 1	7	Ground Lug Attachment

**Figure 3: Cisco C8570-G2 Router LEDs**
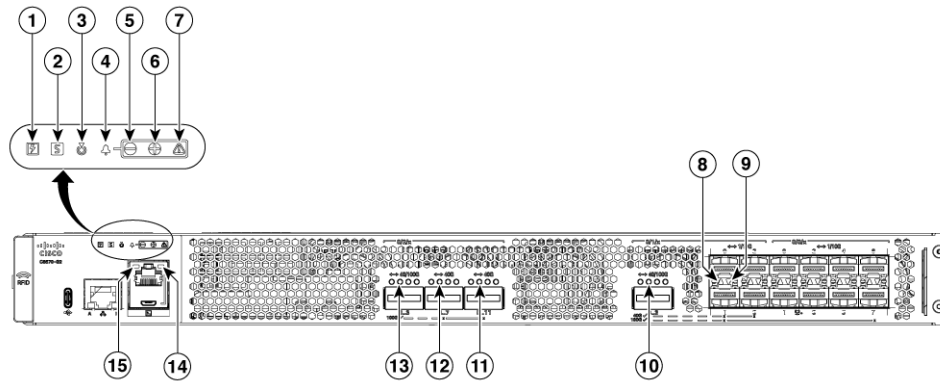
1	Power LED Off : No power to chassis. Yellow : Power On, one power supply has failed or is not plugged in. Green : All power is within specifications	8,9	Top and Bottom Port LED
2	Status LED Off : System not booted Red : System Failure Yellow : System booted to Rommon Green : System Booted to IOS	10	Bottom Port LED

| 3 | Beacon LED | 11, 12 and 13 | Link Status LED |
| 4 | Alarm LED - Main | 14 | USB Console Active LED

Left LED On indicates that USB console is acti |
| 5, 6 and 7, | Alarm LED – Minor, Major and Critical | 15 | Console RJ-45 Active LED

Right LED On indicates that RJ-45 console is active |

Cisco C8550-G2 chassis views

Figure 4: Cisco C8550-G2 Front View
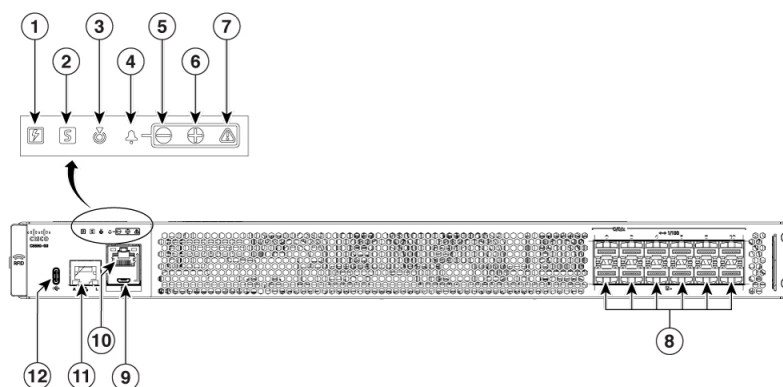
1	Power LED	8	Bay 0 : 12x 1/10GE SFP+ ports
2	Status LED	9	Micro USB Control Port
3	Beacon LED	10	RJ 45 Console Port
4	Alarm LEDs - Main	11	Management Port RJ 45
5, 6 and 7	Minor, Major, Critical Alarm LEDs	12	USB-C Micro-USB Console

The following figure shows the rear view of C8550-G2
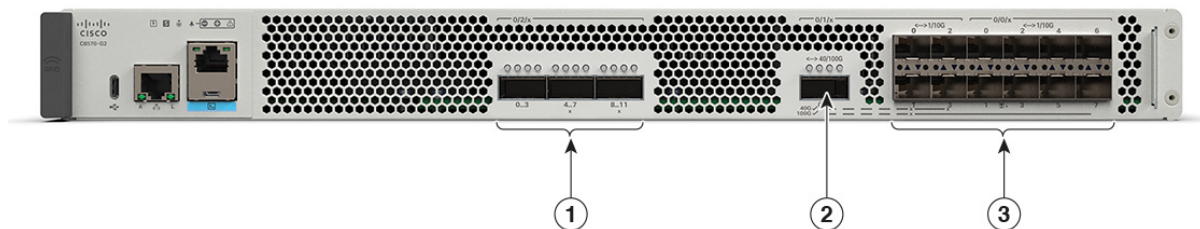
Figure 5: Cisco C8550-G2 Rear View
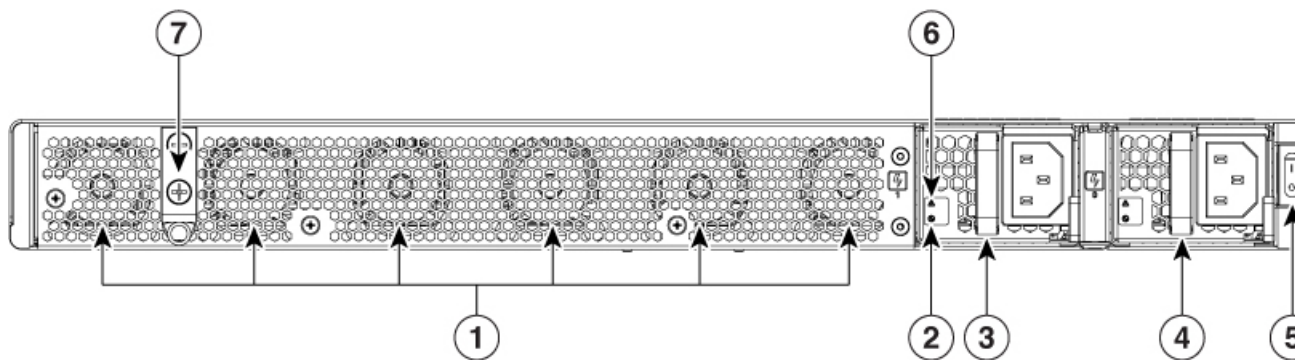
1	Fans	5	Power Switch
2	Power supply AC input LED	6	Power supply failure LED
3, and 4	PEM 0, PEM 1	7	Ground Lug Attachment

Bay configuration

Bay configuration - C8570-G2

The C8570-G2 has three bays that are configurable.

Figure 6: Bay Configuration - C8570-G2

1	Bay 2 : 3XQSFP : Individually configurable as 1x 100G or 3x 40G	3	Bay 1 : 4xSFP+/1xQSFP : Individually configurable as 1x 100G or 1x 40G or breakout 4x 10/1G
2	Bay 0 : 8xSFP+ : Individually configurable as 8x 10/1G		—

Bay configuration - C8550-G2

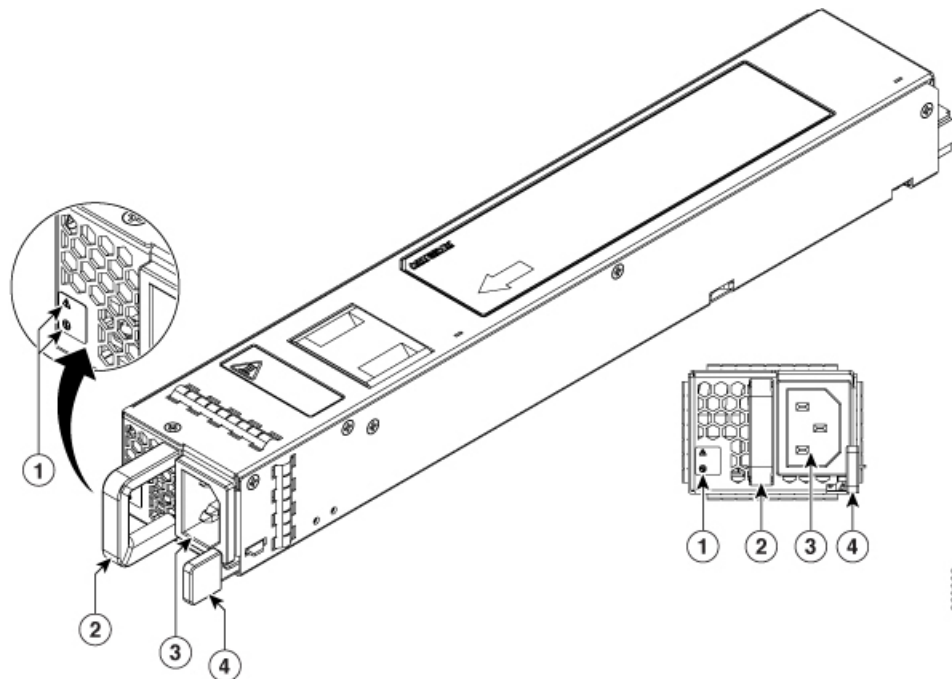The C8550-G2 has one bay with twelve configurable ports.

Figure 7: Bay Configuration - C8550-G2

1	Bay 0 : 12XSFP+:
	Individually configurable as 12X10G/1G

AC power supply

Figure 8: AC Power Supply Used in the Cisco C8570-G2 Router

1	Fail and OK LEDs	3	AC power connector
2	Handle	4	Retaining latch

DC power supply

The DC (PWR-CH1-950WDCR) input connector is a two-wire connector with connection polarity from left to right (when facing the unit) of positive (+) and negative (–).
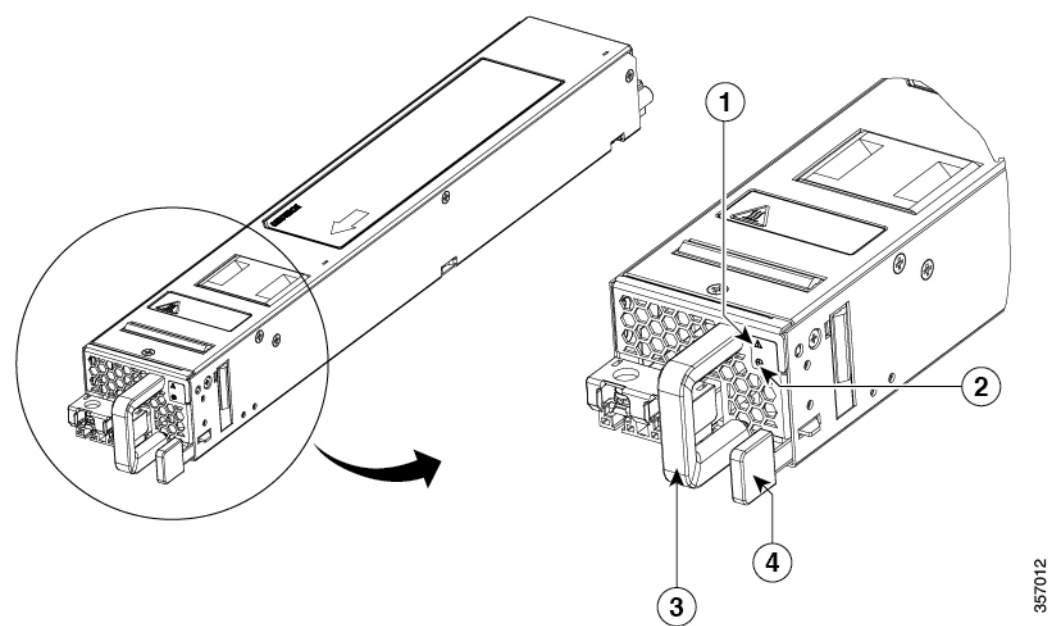
The power supply has a handle to be used for insertion and extraction. The module must be supported with one hand because of its length.

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Note   The airflow direction is front to back with ambient air drawn in from the venting located on the chassis front sides.

The following figure shows the DC power supply.

Figure 9: DC Power Supply

1	Fail LED	2	OK LED
3	Handle	4	Retaining latch

Power supply LED

The following table describes the power supply LED.

Table 4: AC and DC Power Supply LED

Power Supply Condition	Green (OK) LED Status	Amber (FAIL) LED Status
No power to all power supplies	Off	Off
Power Supply Failure (includes over voltage, over current, over temperature and fan failure)	Off	On
Power Supply Warning events where the power supply continues to operate (high temperature, high power and slow fan)	Off	1Hz (blinking once per second)
AC Present/3.3VSB on (PSU Off)	1Hz (blinking once per second)	Off
Power Supply On and OK	On	Off

Power supply fans

The fans in the power supply module are used for cooling the power supply module itself while system-level cooling is provided by fans within the chassis. The power supplies do not depend on the system-level fans for cooling. Fan failure is determined by fan-rotation sensors.

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Caution   The chassis has a front-to-rear airflow. All of the power supplies and fan modules in the same chassis must use the same airflow direction or an error will occur with possible overheating and shut down of the router. If you power up the router with more than one airflow direction, you must power down the router and replace the modules with the wrong airflow direction before powering up the router.

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Note   The fans in the power supply modules will run as soon as the power supply is plugged in, even if the power switch is in the Standby position.

Serial number and PID/VID label location

The following figure show the location of the serial number and the PID/VID label on the Cisco 8500 Series Secure Routers .

Figure 10: Cisco C8570-G2 and C8550-G2 Serial Number and PID/VID Label Location
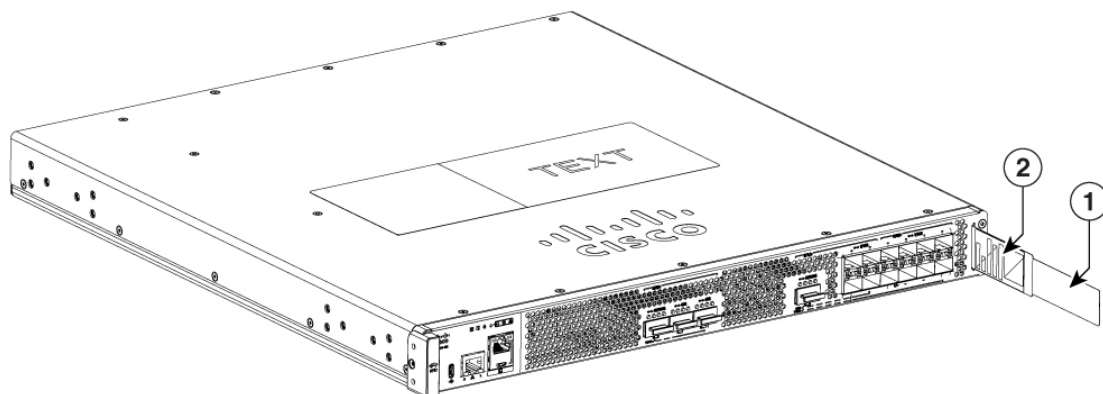
1	Label Carrier, extended from chassis	2	PID/VID Label