Introducing the Cisco SNS-3415 and Cisco SNS-3495 Hardware Appliances

This chapter gives an overview of the Cisco Secure Access Control System (Cisco SNS-3415 and Cisco SNS-3495) hardware. It covers the appliance hardware, major components, controls, connectors, and front- and rear-panel LED indicators.

- Product Overview, page 1
- LED Indicators on Cisco SNS 3415 and 3495 Appliances, page 4
- Regulatory Compliance, page 8

Product Overview

This section describes the power requirements, rack-mount hardware kit, and features of the Cisco SNS-3415 and Cisco SNS-3495 appliances.

This section contains:

- Cisco SNS-3415 and Cisco SNS-3495 Appliances Overview, page 1
- Cisco SNS-3415 and Cisco SNS-3495 Appliances Hardware Specifications, page 2
- Product Serial Number Location, page 4
- Cisco Product Identification Tool, page 4

Cisco SNS-3415 and Cisco SNS-3495 Appliances Overview

The Cisco SNS-3415/3495 server is designed for performance and density over a wide range of business workloads, from web serving to distributed databases.

Building on the success of the Cisco SNS-3415/3495 server, the enterprise-class Cisco SNS-3415/3495 server further extends the capabilities of the Cisco Unified Computing System portfolio in a 1U form factor. The Cisco SNS-3415 server does this with the addition of the Intel Xeon processor E5-2600 product family, which delivers significant performance and efficiency gains. In addition, the Cisco SNS-3415/3495 server offers up to 256 GB of RAM, 8 drives, and 2 x 1 GbE lights-out management (LOM) ports that deliver outstanding levels of density and performance in a compact package.

Cisco SNS-3415 and Cisco SNS-3495 Appliances Hardware Specifications

Table 1 on page 2describes the hardware specifications of Cisco SNS-3415 and Cisco SNS-3495 appliances.

Table 1 Cisco SNS 3415 and Cisco SNS 3495 Hardware Summary

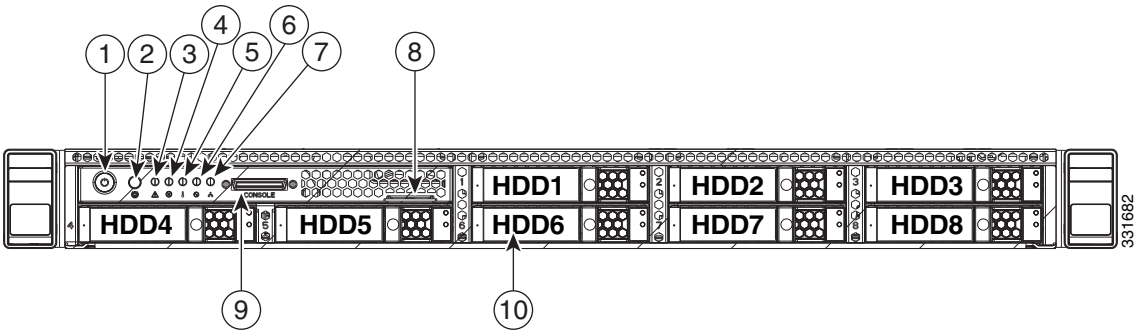
Cisco Secure ACS Appliance	Hardware Specifications	Diagrams
Cisco SNS-3415-K9	■ Cisco UCS C220 M3 ■ Single socket Intel E5-2609 2.4Ghz CPU 4 total cores, 4 total threads ■ 16 GB RAM ■ 1 x 600-GB disk ■ Embedded Software RAID 0 ■ 4 GE network interfaces ■ For physical, environmental, and power specifications, see Server Specifications, page 4.	■ Figure 1Cisco SNS-3415/3495 Appliance Front View, page 3 ■ Figure 2Cisco SNS-3415/3495 Appliance Rear View, page 3
Cisco SNS-3495-K9	■ Cisco UCS C220 M3 ■ Dual socket Intel E5-2609 2.4Ghz CPU 8 total cores, 8 total threads ■ 32 GB RAM ■ 2 x 600-GB disks ■ RAID 0+1 ■ 4 GE network interfaces ■ For physical, environmental, and power specifications, see Server Specifications, page 4.	■ Figure 1Cisco SNS-3415/3495 Appliance Front View, page 3 ■ Figure 2Cisco SNS-3415/3495 Appliance Rear View, page 3

Note: ACS 5.8 supports an optional redundant power supply unit for Cisco SNS-3415-K9.

Chasis Front View

Figure 1 on page 3 shows the Cisco SNS-3415/3495 Server.

Figure 1 Cisco SNS-3415/3495 Appliance Front View

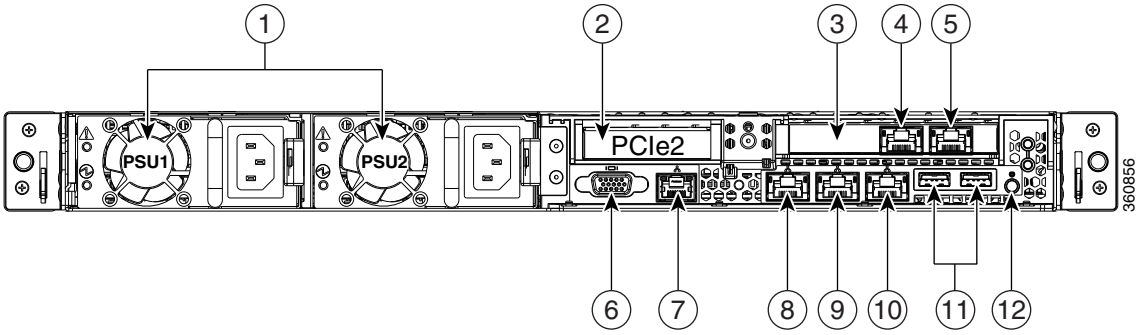


1	Power button/Power status LED	6	Power supply status LED
2	Identification button/LED	7	Network link activity LED
3	System status LED	8	Asset tag (serial number)
4	Fan status LED	9	KVM connector (used with KVM cable that provides two USB, one VGA, and one serial connector)
5	Temperature status LED	10	Drives (up to eight hot-swappable 2-5-inch drives)

Chasis Rear View

Figure 2 on page 3 shows the external features of the Cisco SNS-3415 and Cisco SNS-3495 appliances rear panel.

Figure 2 Cisco SNS-3415/3495 Appliance Rear View



1	Power supplies (up to two)	7	Serial port (RJ-45 connector)
2	Slot 2: Low-profile Peripheral Component Interconnect Express (PCIe) slot on riser (half-height, half-length, x16 connector, x16 lane width)	8	1-GB Ethernet dedicated management port used to access CIMC (labeled M)
3	Slot 1: PCIe1 card containing 1-GB Ethernet ports (GigE2 and GigE3)	9	1-GB Ethernet port 1 (GigE0) for Cisco Secure ACS management communication

4	1-GB Ethernet port 3 (GigE2)	10	1-GB Ethernet port 2 (GigE1)
5	1-GB Ethernet port 4 (GigE3)	11	USB Ports
6	VGA video connector	12	Rear identification button

Product Serial Number Location

The serial number label is located on the front panel of the Cisco SNS-3415 or Cisco SNS-3495 appliance, at the top of the server. Figure 1 on page 3 shows the location of this label.

Cisco Product Identification Tool

The Cisco Product Identification (CPI) tool helps you retrieve the serial number of your Cisco products.

Before you submit a request for service online or by phone, use the CPI tool to locate your product serial number. You can access this tool from the Cisco Support website.

To access this tool:

1. Click the **Get Tools & Resources** link.
2. Click the **All Tools (A-Z)** tab.
3. Select **Cisco Product Identification Tool** from the alphabetical drop-down list.

   This tool offers three search options:

- Search by product ID or model name.
- Browse for Cisco model.
- Copy and paste the output of the **show** command to identify the product.

  Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before you place a service call.

  You can access the CPI tool at:

  http://tools.cisco.com/Support/CPI/index.do

  To access the CPI tool, you require a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at:

  http://tools.cisco.com/RPF/register/register.do

LED Indicators on Cisco SNS 3415 and 3495 Appliances

This section describes the front- and rear-panel controls, ports, and LED indicators on the Cisco SNS-3415 or Cisco SNS-3495 appliances.

This section contains:

- Cisco SNS-3415/3495 Appliance Front-Panel View, page 5
- Cisco SNS-3415/3495 Appliance Back-Panel View, page 6
- Internal Diagnostic LEDs, page 7

Cisco SNS-3415/3495 Appliance Front-Panel View

Figure 1 on page 3 shows the components of the Cisco SNS-3415 or Cisco SNS-3495 appliance front-panel view.

Table 2 on page 5 describes the LEDs located on the front panel of the Cisco SNS-3415 or Cisco SNS-3495 appliance

Table 2 Front-Panel LEDs

LED Name	State
Power button/Power status LED	■ Off—There is no AC power to the server. ■ Amber—The server is in standby power mode. Power is supplied only to the CIMC and some motherboard functions. ■ Green—The server is in main power mode. Power is supplied to all server components.
Identification	■ Off—The Identification LED is not in use. ■ Blue—The Identification LED is activated.
System status	■ Green—The server is running in normal operating condition. ■ Green, blinking—The server is performing system initialization and memory check. ■ Amber, steady—The server is in a degraded operational state. For example: – Power supply redundancy is lost. – CPUs are mismatched. – At least one CPU is faulty. – At least one DIMM is faulty. – At least one drive in a RAID configuration failed. ■ Amber, blinking—The server is in a critical fault state. For example: – Boot failed. – Fatal CPU and/or bus error is detected. – Server is in over-temperature condition.
Fan status	■ Green—All fan modules are operating properly. ■ Amber, steady—One fan module has failed. ■ Amber, blinking—Critical fault, two or more fan modules have failed.
Temperature status	■ Green—The server is operating at normal temperature. ■ Amber, steady—One or more temperature sensors have exceeded a warning threshold. ■ Amber, blinking—One or more temperature sensors have exceeded a critical threshold.
Power supply status	■ Green—All power supplies are operating normally. ■ Amber, steady—One or more power supplies are in a degraded operational state. ■ Amber, blinking—One or more power supplies are in a critical fault state.

Table 2 Front-Panel LEDs

LED Name	State
Network link activity	■ Off—The Ethernet link is idle. ■ Green—One or more Ethernet LOM ports are link-active, but there is no activity. ■ Green, blinking—One or more Ethernet LOM ports are link-active, with activity.
Hard drive fault	■ Off—The hard drive is operating properly. ■ Amber—This hard drive has failed. ■ Amber, blinking—The device is rebuilding.
Hard drive activity	■ Off—There is no hard drive in the hard drive sled (no access, no fault). ■ Green—The hard drive is ready. ■ Green, blinking—The hard drive is reading or writing data.

Cisco SNS-3415/3495 Appliance Back-Panel View

Figure 2 on page 3 shows the components of the Cisco SNS-3415 and Cisco 3495 appliance back-panel view.

Table 3 on page 6 describes the LEDs located on the front panel of the Cisco SNS-3415 or Cisco SNS-3495 appliance.

Table 3 Back-Panel LEDs

LED Name	State
Power supply fault	■ Off—The power supply is operating normally. ■ Amber, blinking—An event warning threshold has been reached, but the power supply continues to operate. ■ Amber, solid—A critical fault threshold has been reached, causing the power supply to shut down (for example, a fan failure or an over-temperature condition).
Power supply AC OK	■ Off—There is no AC power to the power supply. ■ Green, blinking—AC power OK, DC output not enabled. ■ Green, solid—AC power OK, DC outputs OK.
1-GbE Ethernet dedicated management link speed	■ Off—link speed is 10 Mbps. ■ Amber—link speed is 100 Mbps. ■ Green—link speed is 1 Gbps.
1-GbE Ethernet dedicated management link status	■ Off—No link is present. ■ Green—Link is active. ■ Green, blinking—Traffic is present on the active link.

Table 3 Back-Panel LEDs

LED Name	State
1-GbE Ethernet link speed	■ Off—link speed is 10 Mbps. ■ Amber—link speed is 100 Mbps. ■ Green—link speed is 1 Gbps.
1-GbE Ethernet link status	■ Off—No link is present. ■ Green—Link is active. ■ Green, blinking—Traffic is present on the active link.
Identification	■ Off—The Identification LED is not in use. ■ Blue—The Identification LED is activated.

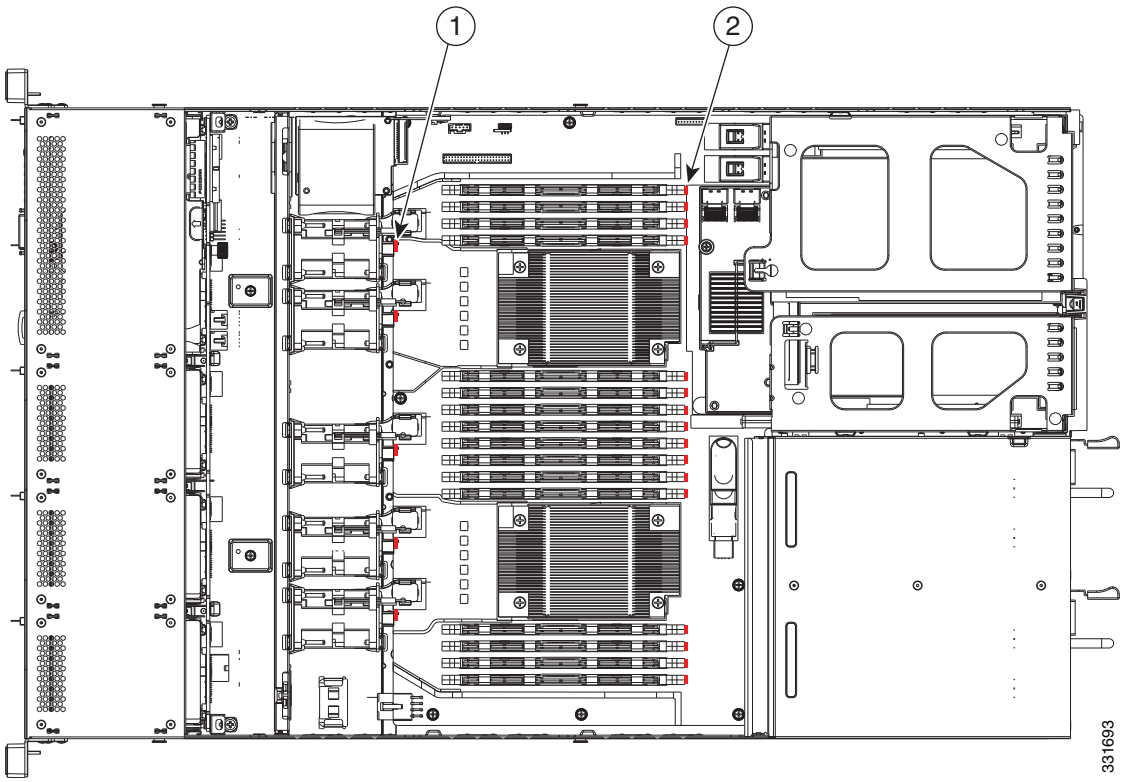
Internal Diagnostic LEDs

The server has internal fault LEDs for fan modules and DIMMs. The LED lights amber to indicate a failed component.

Note: Power must be connected to the server for these LEDs to be operate.

Figure 3 on page 7 shows the locations of these internal LEDs in Cisco SNS-3415 or Cisco SNS-3495 appliance.

Figure 3 Cisco SNS-3415 Internal Diagnostic LED Locations



The following table describes the callouts in Figure 3 on page 7

1	Fan module fault LEDs (one next to each fan connector on the motherboard)	2	DIMM fault LEDs (one next to each DIMM socket on the motherboard)

Table 4 on page 8 describes the internal diagnostic LEDs located inside the Cisco SNS-3415 or Cisco SNS-3495 appliance.

Table 4 Internal Diagnostic LEDs

LED Name	State
Internal diagnostic LEDs (all)	■ Off—Component is functioning normally. ■ Amber—Component has failed.

Regulatory Compliance

For regulatory compliance and safety information, see *Regulatory Compliance and Safety Information for Cisco Secure Access Control System*.

For more information, see Obtain Documentation and Submit a Service Request, page 11.