Introducing the Cisco SNS-3515 and Cisco SNS-3595 Hardware Appliances

This chapter gives an overview of the Cisco Secure Access Control System (Cisco SNS-3515 and Cisco SNS-3595) hardware. It covers the appliance hardware, major components, controls, connectors, and front- and rear-panel LED indicators.

Product Overview

This section describes the power requirements, rack-mount hardware kit, and features of the Cisco SNS-3515 and Cisco SNS-3595 appliances.

This section contains:

Cisco SNS-3515 and Cisco SNS-3595 Appliances Overview

The Cisco SNS-3515 or 3595 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-3515 or 3595 server, the enterprise-class Cisco SNS-3515 or 3595 server further extends the capabilities of the Cisco Unified Computing System portfolio in a 1U form factor. The Cisco SNS-3515 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-3515/3595 server offers up to 64GB 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-3515 and Cisco SNS-3595 Appliances Hardware Specifications

Table 1 on page 2describes the hardware specifications of Cisco SNS-3515 and Cisco SNS-3595 appliances.

Table 1 Cisco SNS 3515 and Cisco SNS 3595 Hardware Summary

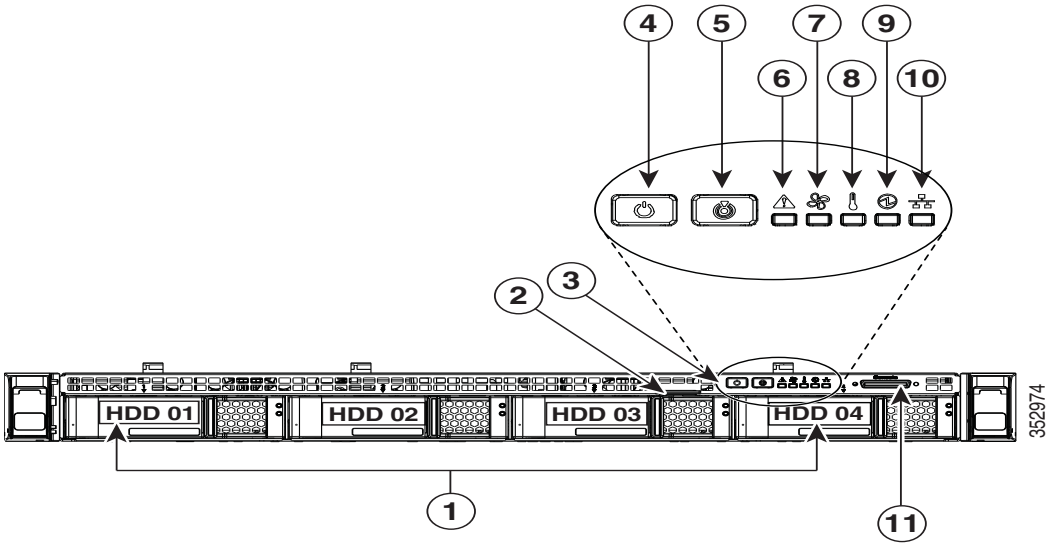
Cisco Secure ACS Appliance	Hardware Specifications	Diagrams
Cisco SNS-3515-ACS-K9	■ Cisco UCS C220 M4 ■ Single socket Intel Xeon E5-2620 v3 series CPU @ 2.40GHz, 6 total cores, 6*2 total threads) ■ 16 GB RAM ■ 1 x 600-GB disk ■ 6 GbE network interfaces ■ For physical, environmental, and power specifications, see Server Specifications, page 4.	■ Figure 1 on page 3 shows the Cisco SNS-3515 appliance., page 2 ■ Figure 2Cisco SNS-3515 or 3595 Appliance Rear View, page 3
Cisco SNS-3595-ACS-K9	■ Cisco UCS C220 M4 ■ Dual socket Intel Xeon E5-2640 v3 series CPU @ 2.60GHz, 8 total cores, 8*2 total threads ■ 64 GB RAM ■ 4 x 600-GB disks ■ RAID 10 ■ 6 GbE network interfaces ■ For physical, environmental, and power specifications, see Server Specifications, page 4.	■ Figure 1Cisco SNS-3595/3515 Appliance Front View, page 3 ■ Figure 2Cisco SNS-3515 or 3595 Appliance Rear View, page 3

Note: ACS 5.8.1 supports an optional redundant power supply unit for Cisco SNS-3515-ACS-K9.

Chasis Front View

Figure 1 on page 3 shows the Cisco SNS-3515 appliance.

Figure 1 Cisco SNS-3595/3515 Appliance Front View

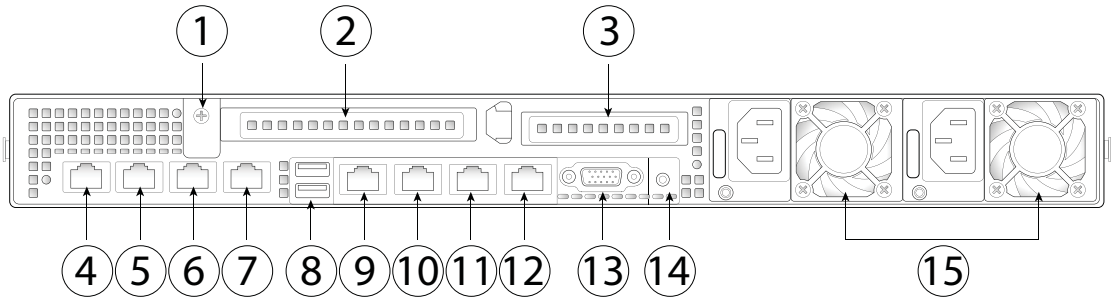


1	Drives (up to four 2.5-inch drives)	7	Fan status LED
2	Pull-out asset tag	8	Temperature status LED
3	Operations panel buttons and LEDs	9	Power supply status LED
4	Power button/power status LED	10	Network link activity LED
5	Unit identification button/LED	11	KVM connector (used with KVM cable that provides two USB 2.0, one VGA, and one serial connector)
6	System status LED		

Chasis Rear View

Figure 2 on page 3 shows the external features of the Cisco SNS-3515 and Cisco SNS-3595 appliances rear panel.

Figure 2 Cisco SNS-3515 or 3595 Appliance Rear View



1	Grounding-lug hole (for DC power supplies)	10	Serial port (RJ-45 connector)
2	PCIe riser 1/slot 1	11-12	Dual 1-GbE Ethernet ports (LAN1 and LAN2)
3	PCIe riser 2/slot 2	13	VGA video port (DB-15)

4-7	Modular LAN-on-motherboard (mLOM) card slots (4 ports)	14	Rear unit identification button/LED
8	USB 3.0 ports (two)	15	Power supplies (up to two, redundant as 1+1)
9	1-GbE Ethernet dedicated management port		

Product Serial Number Location

The serial number label is located at the top of the server near the front panel of the Cisco SNS-3515 or Cisco SNS-3595 appliance, on page 2 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

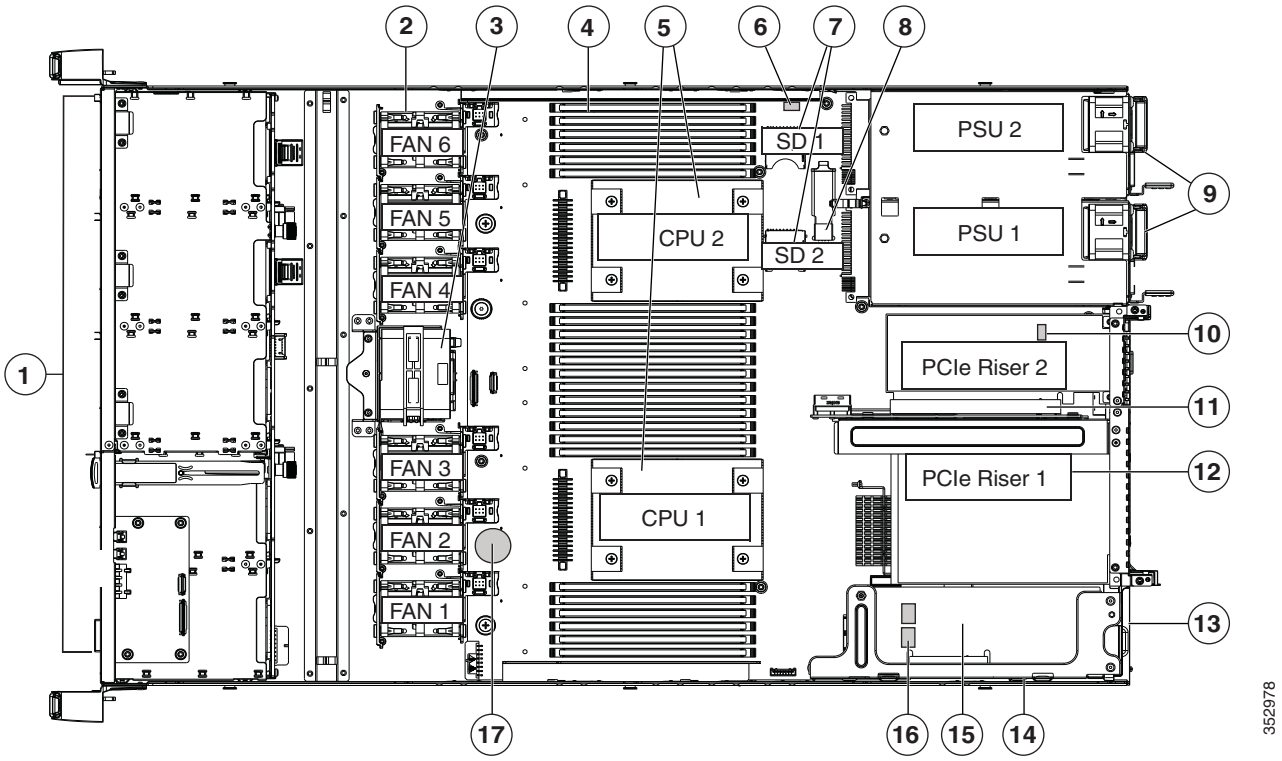
  To access the CPI tool, you require a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at:

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

Replaceable Component Locations

This section shows the locations of the field-replaceable components. The view in Figure 1-4 is from the top down with the top cover and air baffle removed.

Figure 3 Replaceable Component Locations



1	Drives (SAS/SATA drives are hot-swappable)	10	Trusted platform module (TPM) socket on motherboard (not visible in this view)
2	Cooling fan modules (six)	11	PCIe riser 2 (half-height PCIe slot 2)
3	Super cap Power Module (RAID backup) mounting bracket	12	PCIe riser 1 (full-height PCIe slot 1)
4	DIMM sockets on motherboard (24)	13	Modular LOM (mLOM) connector on chassis floor
5	CPUs and heat sinks (up to two)	14	Cisco modular RAID controller PCIe riser (dedicated riser with horizontal socket)
6	Embedded SATA RAID header for RAID 5 key	15	Cisco modular RAID controller card
7	SD card bays on motherboard (two)	16	Embedded SATA RAID mini-SAS connectors on motherboard (not visible in this view)
8	Internal USB 3.0 port on motherboard	17	RTC battery on motherboard
9	Power supplies (up to two, hot-swappable when redundant as 1+1)		

LED Indicators on Cisco SNS 3515 and 3595 Appliances

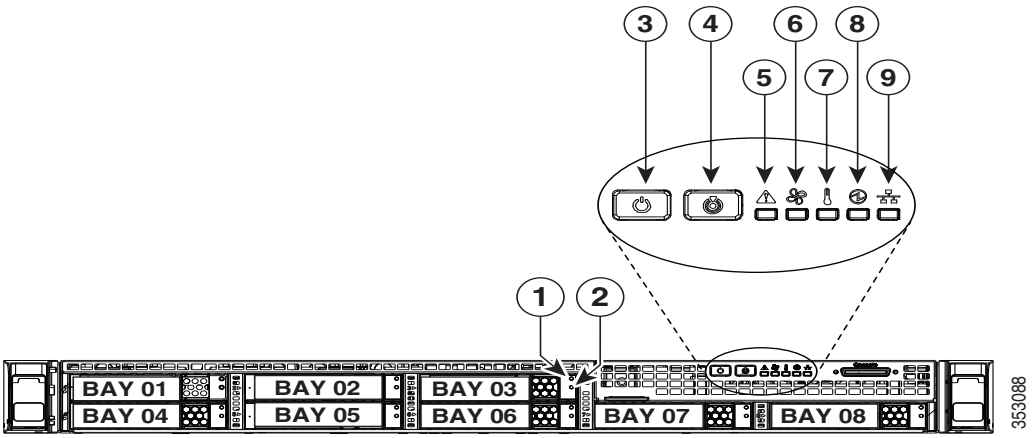
This section describes the front- and rear-panel controls, ports, and LED indicators on the Cisco SNS-3515 or Cisco SNS-3595 appliances.

This section contains:

Cisco SNS-3515 or 3595 Appliance Front-Panel View

Figure 4 on page 6 shows the components of the Cisco SNS-3515 or Cisco SNS-3595 appliance front-panel view.

Figure 4 Front Panel LEDs



1	Hard drive fault LED	6	Fan status LED
2	Hard drive activity LED	7	Temperature status LED
3	Power button/power status LED	8	Power supply status LED
4	Identification button/LED	9	Network link activity LED
5	System status LED	10	

Table 2 on page 7 describes the LEDs located on the front panel of the Cisco SNS-3515 or Cisco SNS-3595 appliance

Table 2 Front-Panel LEDs

LED Name	State
Hard drive fault Note: If your controller is a Cisco UCS RAID SAS 9300-8i or 9300-8e HBA, see Cisco UCS SAS 9300-8i and 9300-8e HBA Considerations for differing LED behavior.	■ Off—The hard drive is operating properly. ■ Amber—Drive fault detected. ■ Amber, blinking—The device is rebuilding. ■ Amber, blinking with one-second interval—Drive locate function activated.
Hard drive activity	■ Off—There is no hard drive in the hard drive tray (no access, no fault). ■ Green—The hard drive is ready. ■ Green, blinking—The hard drive is reading or writing data.
Power button/LED	■ Off—There is no AC power to the server. ■ Amber—The server is in standby power mode. Power is supplied only to the Cisco IMC and some motherboard functions. ■ Green—The server is in main power mode. Power is supplied to all server components.
Unit identification	■ Off—The unit identification function is not in use. ■ Blue—The unit identification function 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 an over-temperature condition.

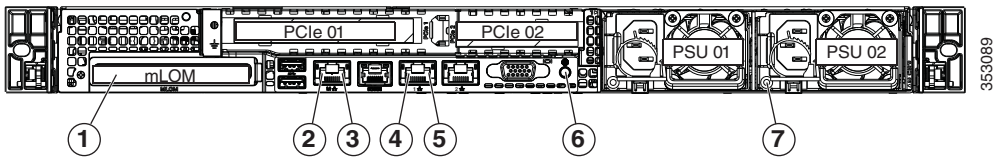
Table 2 Front-Panel LEDs (continued)

LED Name	State
Fan status	■ Green—All fan modules are operating properly. ■ Amber, steady—One or more fan modules breached the critical threshold. ■ Amber, blinking—One or more fan modules breached the non-recoverable threshold.
Temperature status	■ Green—The server is operating at normal temperature. ■ Amber, steady—One or more temperature sensors breached the critical threshold. ■ Amber, blinking—One or more temperature sensors breached the non-recoverable 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.
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.

Cisco SNS-3515 or 3595 Appliance Back-Panel View

Figure 2 on page 3 shows the components of the Cisco SNS-3515 and Cisco 3595 appliance back-panel view.

Figure 5 Front Panel LEDs



1	Optional mLOM card LEDs (see Table 3 on page 9)	5	1-GbE Ethernet link status LED
2	1-GbE Ethernet dedicated management link status LED	6	Rear unit identification button/LED
3	1-GbE Ethernet dedicated management link speed LED	7	Power supply status LED
4	1-GbE Ethernet link speed LED		

Table 3 on page 9 describes the LEDs located on the front panel of the Cisco SNS-3515 or Cisco SNS-3595 appliance.

Table 3 Back-Panel LEDs

LED Name	State
Optional mLOM 1-GbE SFP+ (there is a single status LED)	■ Off—No link is present. ■ Green, steady—Link is active. ■ Green, blinking—Traffic is present on the active link.
Optional mLOM 1-GbE BASE-T link speed	■ Off—Link speed is 10 Mbps. ■ Amber—Link speed is 100 Mbps/1 Gbps. ■ Green—Link speed is 10 Gbps.
Optional mLOM 1-GbE BASE-T link status	■ Off—No link is present. ■ Green—Link is active. ■ Green, blinking—Traffic is present on the active link.
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.
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.
Rear unit identification	■ Off—The unit identification LED is not in use. ■ Blue—The unit identification LED is activated.
Power supply status	AC power supplies: ■ Off—No AC input (12 V main power off, 12 V standby power off). ■ Green, blinking—12 V main power off; 12 V standby power on. ■ Green, solid—12 V main power on; 12 V standby power on. ■ Amber, blinking—Warning detected but 12 V main power on. ■ Amber, solid—Critical error detected; 12 V main power off.

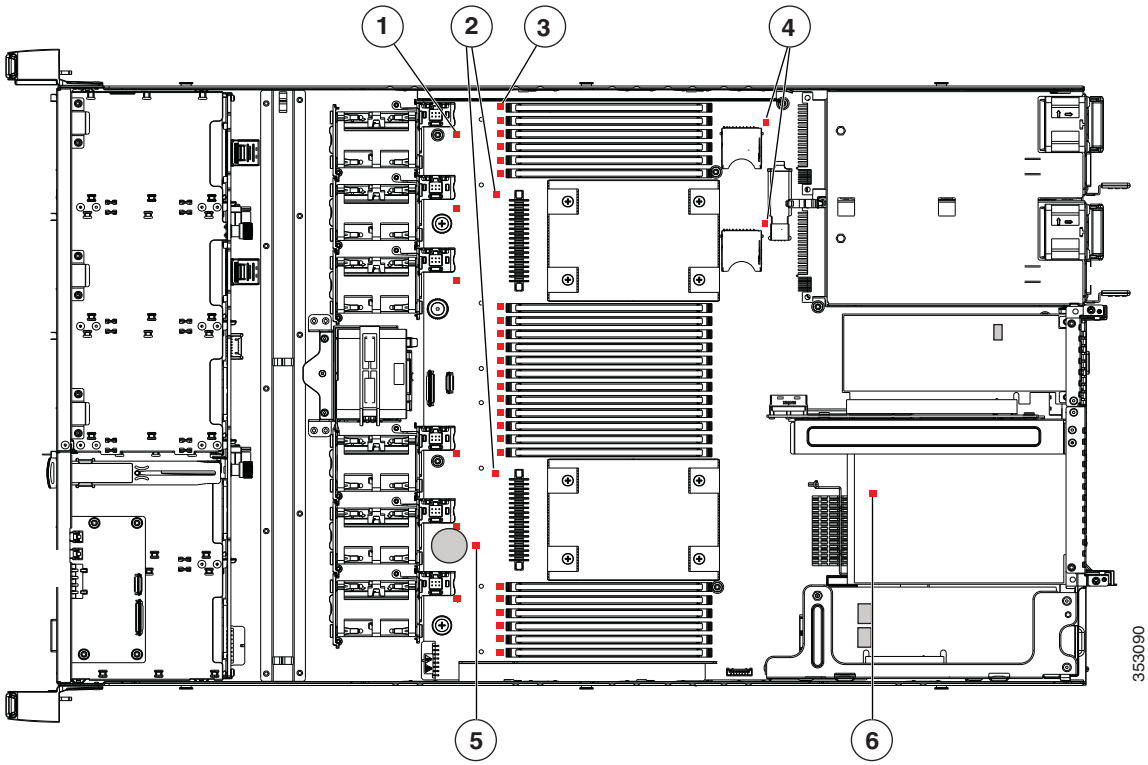
Internal Diagnostic LEDs

The server has internal fault LEDs for CPUs, DIMMs, fan modules, SD cards, the RTC battery, and the mLOM card. These LEDs are available only when the server is in standby power mode. An LED lights amber to indicate a faulty component.

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

Figure 6 on page 10 shows the locations of these internal LEDs in Cisco SNS-3515 or Cisco SNS-3595 appliance.

Figure 6 Cisco SNS-3515 or 3595 Internal Diagnostic LED Locations



The following table describes the callouts in Figure 6 on page 10

1	Fan module fault LEDs (one next to each fan connector on the motherboard)	4	SD card fault LEDs (one next to each bay)
2	CPU fault LEDs (one in front of each CPU)	5	RTC battery fault LED
3	DIMM fault LEDs (one in front of each DIMM socket on the motherboard)	6	mLOM card fault LED (on motherboard next to mLOM socket)

Table 4 on page 10 describes the internal diagnostic LEDs located inside the Cisco SNS-3515 or Cisco SNS-3595 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 12.