

Cisco Nexus Dashboard Hardware Setup Guide for UCS-C225-M6 Servers

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CONTENTS

PREFACE

Preface v

Bias-Free Documentation v

Trademarks v

Obtaining Documentation and Submitting a Service Request vi

CHAPTER 1

Overview 1

Overview 1

External Features 2

Component Location 4

Summary of Server Features 5

CHAPTER 2

Installing the Server 11

Preparing for Installation 11

Installation Warnings and Guidelines 11

Rack Requirements 13

Grounding Requirements 13

Installing the Server in a Rack 14

Installing the Cable Management Arm (Optional) 17

Reversing the Cable Management Arm (Optional) 19

Initial Server Setup 20

Connecting to the Server Locally For Setup 20

Connecting to the Server Remotely For Setup 21

Setting Up the System With the Cisco IMC Configuration Utility 23

Updating the BIOS and Cisco IMC Firmware 24

Accessing the System BIOS 25

Smart Access Serial 25

Smart Access USB 26

CHAPTER 3 **Maintaining the Server** 27

Replacing Power Supplies 27

Replacing AC Power Supplies 27

Replacing DC Power Supplies 28

Installing DC Power Supplies (First Time Installation) 30

Grounding for DC Power Supplies 31

APPENDIX A **Server Specifications** 33

Physical Specifications 33

Environmental Specifications 33

Power Specifications 35

770 W AC Power Supply 35

1050 W AC Power Supply 36

1050 W DC Power Supply 36

1600 W AC Power Supply 37

2300 W AC Power Supply 38

Power Cord Specifications 38



Preface

This preface contains the following topics:

- Bias-Free Documentation, on page v
- Trademarks, on page v
- Obtaining Documentation and Submitting a Service Request, on page vi

Bias-Free Documentation

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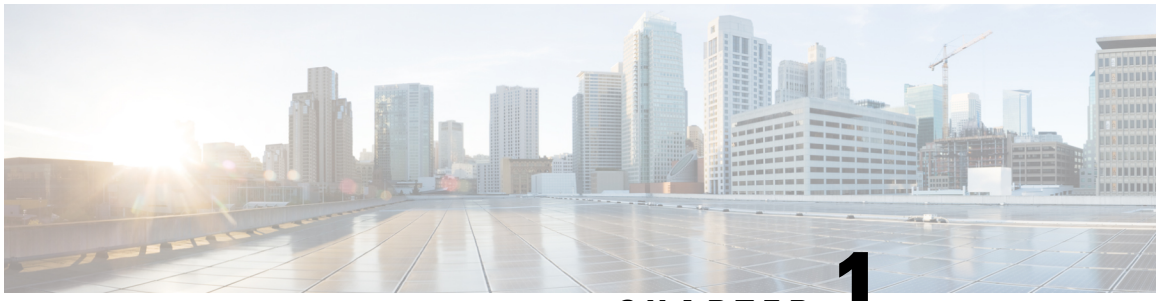
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CHAPTER 1

Overview

- Overview, on page 1
- External Features, on page 2
- Component Location, on page 4
- Summary of Server Features, on page 5

Overview

Cisco Nexus Dashboard provides a common platform for deploying Cisco Data Center applications. These applications provide real time analytics, visibility and assurance for policy and infrastructure.

The Cisco Nexus Dashboard server is required for installing and hosting the Cisco Nexus Dashboard application.

The server is orderable in the following version:

- ND-NODE-L4 — Small form-factor (SFF) drives, with 10-drive backplane. Supports up to 10 2.5-inch SAS/SATA drives. Drive bays 1 and 2 support NVMe SSDs.

Following PCIe Riser combinations are available:

- One half-height riser card in PCIe Riser 1
- Three half-height riser cards in PCIe Riser 1, 2, 3
- Two full-height riser cards Riser 1 and 3
- Riser 1—Supports Riser1. Supports single x16 PCIe supporting full height 3/4 length cards in 2 riser configuration (or) Half-height 3/4-length cards in 3 riser configuration and NC-SI from Pilot4.
- Riser 2—Supports Riser 1. Supports single x16 PCIe supporting only Half-height 3/4-length cards in 3-riser configuration.
- Riser 3—Supports Riser 3A, 3B. PCIe slot 3 with the following options:
  - Riser3A Supports single x16 PCIe supporting half height 3/4 length cards in 3 riser configuration and NC-SI.
  - Riser3B Supports single x16 PCIe supporting full height 3/4-length cards in 2 riser configuration and NC-SI.

- 2 10GBase-T Ethernet LAN over Motherboard (LOM) ports for network connectivity, plus one 1 Gigabit Ethernet dedicated management port
- One mLOM/VIC card provides 10G/25G/40G/50G/100G connectivity. Supported cards are:
  - Cisco VIC 1455 VIC PCIE – Quad Port 10/25G SFP28 (UCSC-PCIE-C25Q-04)

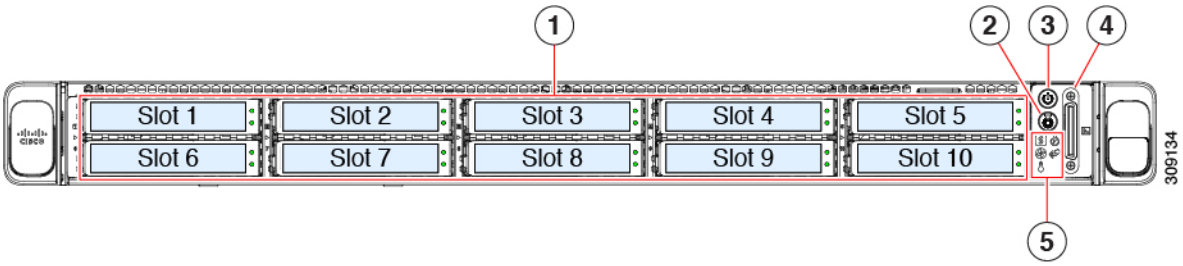
External Features

This topic shows the external features of the server versions.

Cisco ND-NODE-L4 (SFF Drives) Front Panel Features

The following figure shows the front panel features of the small form-factor drive versions of the server.

Figure 1: ND-NODE-L4 (SFF Drives) Front Panel



1 UCSC-C225-M6S Version—Drive bays 1 – 10 support SAS/SATA hard disk drives (HDDs) and solid state drives (SSDs). As an option, drive bays 1-4 can contain up to 4 NVMe drives in any number up to 4. Drive bays 5 through 10 support only SAS/SATA HDDs or SSDs. UCSC-C225-M6N Version—Drive bays 1—10 supports 2.5-inch NVMe-only SSDs.	2 Unit identification button/LED
3 Power button/power status LED	4 KVM connector (used with KVM cable that provides one DB-15 VGA, one DB-9 serial, and two USB 2.0 connectors)
5 System LED cluster: • Fan status LED • System Status LED • Power supply status LED • Network link activity LED • Temperature status LED	-

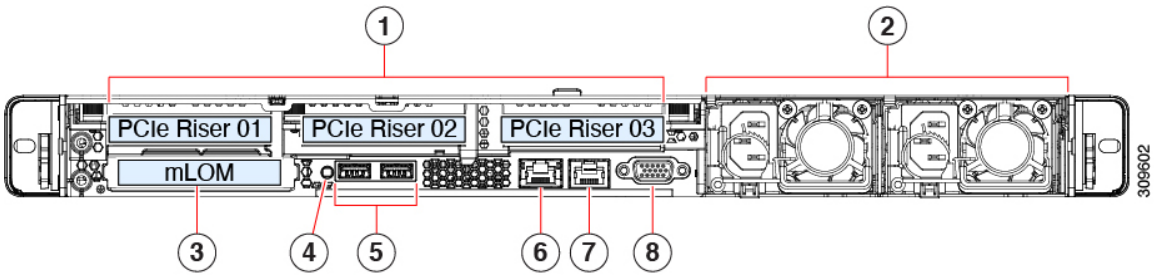
Cisco ND-NODE-L4 Rear Panel Features

The rear panel features can be different depending on the number and type of PCIe cards in the server.

By default, single CPU servers come with only one half-height riser 1 installed, and dual CPU servers support all three half-height risers.

The following figure shows the rear panel features of the server with three riser configuration.

Figure 2: Cisco ND-NODE-L4 Rear Panel Three Riser Configuration



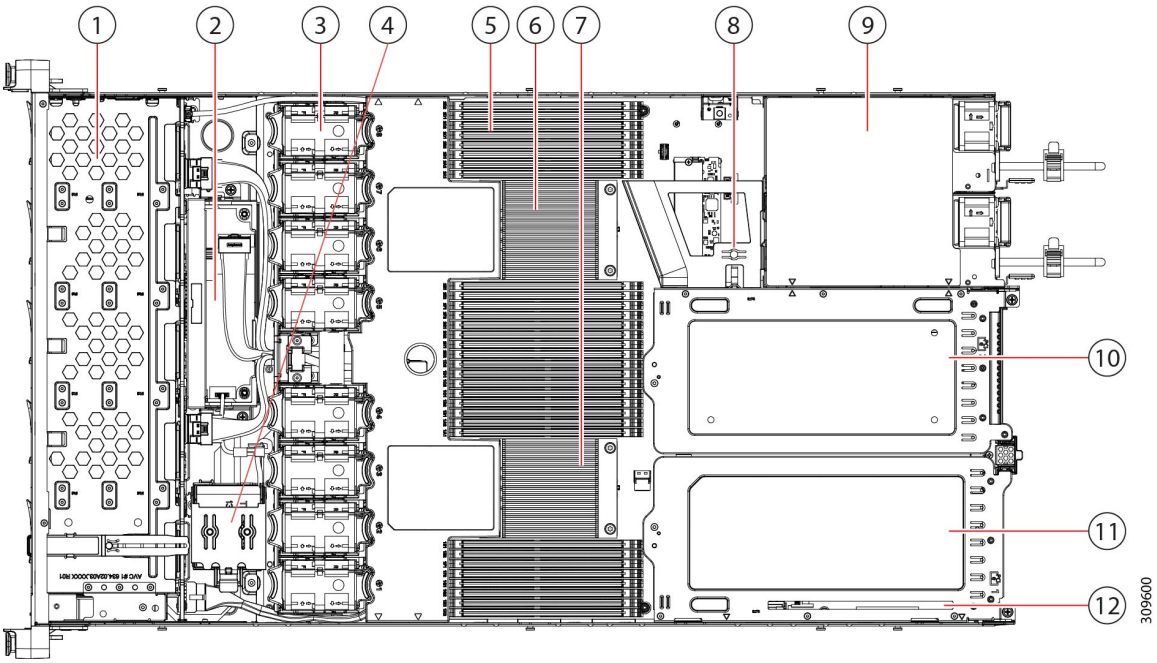
The following figure shows the rear panel features of the server with three riser configuration.

1 PCIe slots Following PCIe Riser combinations are available: • One half-height riser card in PCIe Riser 1 • Three half-height riser cards in PCIe Riser 1, 2, 3 • Two full-height riser cards Riser 1 and 3 • Riser 1—Supports Riser1. Supports single x16 PCIe supporting full height 3/4 length cards in 2 riser configuration (or) Half-height 3/4-length cards in 3 riser configuration and NC-SI from Pilot4. • Riser 2—Supports Riser 1. Supports single x16 PCIe supporting only Half-height 3/4-length cards in 3-riser configuration. • Riser 3—Supports Riser 3A, 3B. PCIe slot 3 with the following options: • Riser3A Supports single x16 PCIe supporting half height 3/4 length cards in 3 riser configuration and NC-SI. • Riser3B Supports single x16 PCIe supporting full height 3/4-length cards in 2 riser configuration and NC-SI.	
2 Power supply units (PSUs), two which can be redundant when configured in 1+1 power mode.	3 Modular LAN-on-motherboard (mLOM) card bay (x16 PCIe lane)
4 System identification button/LED	5 USB 3.0 ports (two)
6 Dedicated 1 GB Ethernet management port	7 COM port (RJ-45 connector)
8 VGA video port (DB-15 connector)	

Component Location

This topic shows the locations of the field-replaceable components and service-related items. The view in the following figure shows the server with the top cover removed.

Figure 3: ND-NODE-L4 , Serviceable Component Locations



1	Front-loading drive bays 1–10 support SAS/SATA/NVMe drives	**2**	Cisco M6 12G SAS RAID card or Cisco M6 12G SAS HBA Controller
3	8 hot-swappable cooling fan modules	**4**	SuperCap module mounting bracket The SuperCap module (not shown) that mounts into this location provides RAID write-cache backup.
5	DIMM sockets on motherboard, 32 total, 16 per CPU CPUs are arranged in groups of eight sockets above the top CPU and below the bottom CPU, and 16 sockets between the CPUs.	**6**	Motherboard CPU socket two (CPU2)
7	Motherboard CPU socket one (CPU1)	**8**	M.2 module connector Supports a boot-optimized RAID controller with connectors for up to two SATA M.2 SSDs
9	2 Power Supply Units (PSUs)	**10**	PCIe riser slot 2
11	PCIe riser slot 1	**12**	Modular LOM (mLOM) card bay on chassis floor (x16 PCIe lane)

Summary of Server Features

The following table lists a summary of server features.

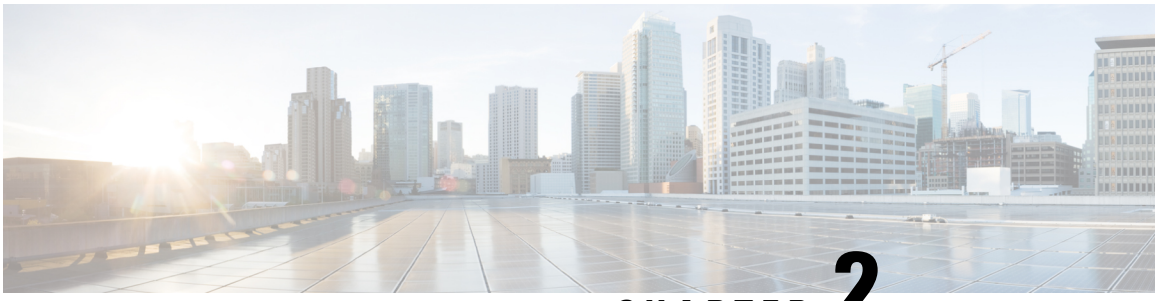
Feature	Description
Chassis	One rack-unit (1RU) chassis
Central Processor	Up to two CPUs from the Intel Xeon Processor Scalable Family. This includes CPUs from the following series: • Intel Xeon Silver 4XXX Processors Up to two Socket AMD Zen2/3 Architecture supporting Rome/Milan processors
Memory	24 DDR4 DIMM sockets on the motherboard (12 each CPU) 32 DDR4 DIMMs, up to 3200 MHz(1DPC), 2933 MHz (2DPC), with support for RDIMMs, LRDIMMs
Multi-bit error protection	Multi-bit error protection is supported
Video	The Cisco Integrated Management Controller (CIMC) provides video using the Matrox G200e video/graphics controller: • Integrated 2D graphics core with hardware acceleration • Embedded DDR memory interface supports up to 512 MB of addressable memory (8 MB is allocated by default to video memory) • Supports display resolutions up to 1920 x 1200 16bpp @ 60Hz • High-speed integrated 24-bit RAMDAC • Single lane PCI-Express host interface running at Gen 1 speed
Baseboard management	BMC, running Cisco Integrated Management Controller (Cisco IMC) firmware. Depending on your Cisco IMC settings, Cisco IMC can be accessed through the 1-Gb dedicated management port, the 1-Gb/10-Gb Ethernet LAN ports or a Cisco virtual interface card.

Feature	Description
Network and management I/O	Rear panel: • One 1-Gb Ethernet dedicated management port (RJ-45 connector) • One RS-232 serial port (RJ-45 connector) • One VGA video connector port (DB-15 connector) • Two USB 3.0 ports • One flexible modular LAN on motherboard (mLOM)/OCP 3.0 slot that can accommodate various interface cards • One KVM console connector (supplies two USB 2.0 connectors, one VGA DB15 video connector, and one serial port (RS232) RJ45 connector) • Two 1-Gb/10-Gb BASE-T Ethernet LAN ports (RJ-45 connectors) The dual LAN ports can support 1 Gbps and 10 Gbps, depending on the link partner capability. Front panel: • One KVM console connector (supplies two USB 2.0 connectors, one VGA DB15 video connector, and one serial port (RS232) RJ45 connector) • One front-panel keyboard/video/mouse (KVM) connector that is used with the KVM cable, which provides two USB 2.0, one VGA, and one DB-9 serial connector.
Modular LAN on Motherboard (mLOM)/ OCP3 3.0 slot	One dedicated socket (x16 PCIe lane) that can be used to add an mLOM card for additional rear-panel connectivity. The dedicated mLOM/OCP 3.0 slot on the motherboard can flexibly accommodate the following cards: • Cisco Virtual Interface Cards • OCP 3.0 network interface card (UCSC-O-ID10GC)
Power	One power supply: • AC power supplies 1050 W AC each Up to two of the following hot-swappable power supplies: • 770 W (AC) • 1050 W (AC) • 1050 W (DC) • 1600 W (AC) • 2300 W (AC) One power supply is mandatory; one more can be added for 1 + 1 redundancy.

Feature	Description
ACPI	The advanced configuration and power interface (ACPI) 4.0 standard is supported.
Front Panel	The front panel controller provides status indications and control buttons
Cooling	Eight hot-swappable fan modules for front-to-rear cooling.
PCIe I/O	Two horizontal PCIe expansion slots on a PCIe riser assembly. See PCIe Slot Specifications, on page 60 for specifications of the slots. Horizontal PCIe expansion slots are supported by PCIe riser assemblies. The server supports either of the following configurations: • One half-height riser card in PCIe Riser 1 • Three half-height riser cards in PCIe Riser 1, 2, 3 • Two full-height riser cards
InfiniBand	The PCIe bus slots in this server support the InfiniBand architecture.
Expansion Slots	Three half-height riser slots • Riser 1 (controlled by CPU 1): One x16 PCIe Gen4 Slot, (Cisco VIC), half-height, 3/4 length • Riser 2 (controlled by CPU 1): One x16 PCIe Gen4 Slot, electrical x8, half-height, 3/4 length • Riser 3 (controlled by CPU 1): One x16 PCIe Gen4 Slot, (Cisco VIC), half-height, 3/4 length Two full-height riser slots • Riser 1 (controlled by CPU 1): One x16 PCIe Gen4 Slot, (Cisco VIC), full-height, 3/4 length • Riser 3 (controlled by CPU 1): One x16 PCIe Gen4 Slot, (Cisco VIC), full-height, 3/4 length

Feature	Description
Interfaces	Rear panel: • One 1Gbase-T RJ-45 management port • One RS-232 serial port (RJ45 connector) • One DB15 VGA connector • Two USB 3.0 port connectors • One flexible modular LAN on motherboard (mLOM) slot that can accommodate various interface cards Front panel: • One KVM console connector (supplies two USB 2.0 connectors, one • VGA DB15 video connector, and one serial port (RS232) RJ45 connector)
Storage, front-panel	The server is orderable in the following version. • ND-NODE-L4 , Small form-factor (SFF) drives, with 10-drive backplane. Supports up to 10 2.5-inch SAS/SATA drives. Drive bays 1 and 2 support NVMe SSDs.
Internal Storage Devices	Apart from the front panel, server supports a mini-storage module connector on the motherboard supports a boot-optimized RAID controller carrier that holds up two SATA M.2 SSDs. Mixing different capacity SATA M.2 SSDs is not supported. It also supports USB3.0 TypeA connector.
Integrated Management Processor	Baseboard Management Controller (BMC) running Cisco Integrated Management Controller (CIMC) firmware. Depending on your CIMC settings, the CIMC can be accessed through the 1GE dedicated management port, the 1GE/10GE LOM ports, or a Cisco virtual interface card (VIC). CIMC manages certain components within the server, such as the Cisco 12G SAS HBA.
Storage Controllers	The Cisco 12G SAS RAID controller or Cisco 12G SAS HBA plugs into a dedicated slot. Only one of these at a time can be used at a time. • Cisco 12G SAS RAID controller • RAID support (RAID 0, 1, 5, 6, 10, 50, 60, SRAID0, and JBOD mode) • Supports up to 10 internal SAS/SATA drives • Plugs into drive backplane • Cisco 12G SAS HBA • No RAID support JBOD/Pass-through Mode support Supports up to 10 SAS/SATA internal drives Plugs into drive backplane

Feature	Description
Modular LAN over Motherboard (mLOM) slot	The dedicated mLOM slot on the motherboard can flexibly accommodate the following cards: • Cisco Virtual Interface Cards (VICs)
Intersight	Intersight provides server management capabilities



CHAPTER 2

Installing the Server

- Preparing for Installation, on page 11
- Installing the Server in a Rack, on page 14
- Initial Server Setup, on page 20
- Updating the BIOS and Cisco IMC Firmware, on page 24
- Accessing the System BIOS, on page 25
- Smart Access Serial, on page 25
- Smart Access USB, on page 26

Preparing for Installation

This section contains the following topics:

Installation Warnings and Guidelines

Note Before you install, operate, or service a server, review the Regulatory Compliance and Safety Information for Cisco UCS C-Series Servers for important safety information.

Note Before you install, operate, or service a server, review the Regulatory Compliance and Safety Information for important safety information.

Warning

IMPORTANT SAFETY INSTRUCTIONS

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

Statement 1071

Warning **To prevent the system from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of: 35° C (95° F).**

Statement 1047

Warning **The plug-socket combination must be accessible at all times, because it serves as the main disconnecting device.**

Statement 1019

Warning **This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 250 V, 15 A.**

Statement 1005

Warning **Installation of the equipment must comply with local and national electrical codes.**

Statement 1074

Warning **This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock, and key, or other means of security.**

Statement 1017

Caution To ensure proper airflow it is necessary to rack the servers using rail kits. Physically placing the units on top of one another or "stacking" without the use of the rail kits blocks the air vents on top of the servers, which could result in overheating, higher fan speeds, and higher power consumption. We recommend that you mount your servers on rail kits when you are installing them into the rack because these rails provide the minimal spacing required between the servers. No additional spacing between the servers is required when you mount the units using rail kits.

Caution Avoid uninterruptible power supply (UPS) types that use ferroresonant technology. These UPS types can become unstable with systems such as the Cisco UCS, which can have substantial current draw fluctuations from fluctuating data traffic patterns.

When you are installing a server, use the following guidelines:

- Plan your site configuration and prepare the site before installing the server. See the Cisco UCS Site Preparation Guide for the recommended site planning tasks.

- Ensure that there is adequate space around the server to allow for accessing the server and for adequate airflow. The airflow in this server is from front to back.
- Ensure that the air-conditioning meets the thermal requirements listed in the Environmental Specifications, on page 33.
- Ensure that the cabinet or rack meets the requirements listed in the Rack Requirements, on page 13.
- Ensure that the site power meets the power requirements listed in the Power Specifications, on page 35. If available, you can use an uninterruptible power supply (UPS) to protect against power failures.

Rack Requirements

The rack must be of the following type:

- A standard 19-in. (48.3-cm) wide, four-post EIA rack, with mounting posts that conform to English universal hole spacing, per section 1 of ANSI/EIA-310-D-1992.
- The rack-post holes can be square 0.38-inch (9.6 mm), round 0.28-inch (7.1 mm), #12-24 UNC, or #10-32 UNC when you use the Cisco-supplied slide rails.
- The minimum vertical rack space per server must be one rack unit (RU), equal to 1.75 in. (44.45 mm).

Supported Cisco Slide Rail Kits

The server supports the following rail kit options:

- Cisco part UCSC-RAIL-M6= (ball-bearing slide rail kit)
- Cisco part UCSC-CMA-C220M6= (cable management arm)

Rack Installation Tools Required

The slide rails sold by Cisco Systems for this server do not require tools for installation.

Slide Rail and Cable Management Arm Dimensions

The slide rails for this server have an adjustment range of 24 to 36 inches (610 to 914 mm).

The optional cable management arm (CMA) adds additional length requirements:

- The additional distance from the rear of the server to the rear of the CMA is 5.4 inches (137.4 mm).
- The total length of the server including the CMA is 35.2 inches (894 mm).

Grounding Requirements

The switch is sensitive to variations in voltage supplied by the power sources. Overvoltage, undervoltage, and transients (or spikes) can erase data from memory or cause components to fail. To protect against these types of problems, ensure that there is an earth-ground connection for the switch. You can connect the grounding pad on the switch either directly to the earth-ground connection or to a fully bonded and grounded rack.

When you properly install the chassis in a grounded rack, the switch is grounded because it has a metal-to-metal connection to the rack. Alternatively, you can ground the chassis by using a customer-supplied grounding

cable that meets your local and national installation requirements (we recommend 6-AWG wire for U.S. installations) connected to the chassis with a grounding lug (provided in the switch accessory kit) and to the facility ground.

Note You automatically ground AC power supplies when you connect them to AC power sources. For DC power supplies, you must connect a grounding wire when wiring the power supply to the DC power source.

Installing the Server in a Rack

This section describes how to install the server in a rack using the supported rail kit (UCSC-RAIL-M6) that is sold by Cisco.

Warning **To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:**

This unit should be mounted at the bottom of the rack if it is the only unit in the rack.

When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.

If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

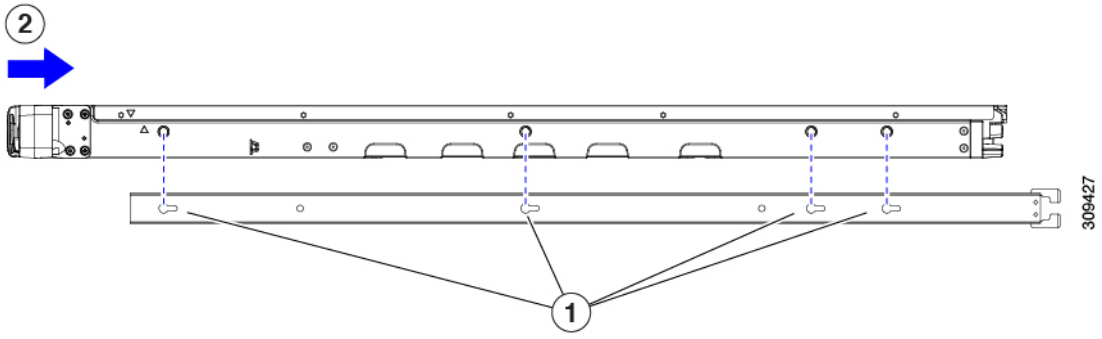
Statement 1006

Procedure

Step 1 Attach the inner rails to the sides of the server:

a) Align an inner rail with one side of the server so that the three keyed slots in the rail align with the three pegs on the side of the server.
b) Set the keyed slots over the pegs, and then slide the rail toward the front to lock it in place on the pegs.
c) Install the second inner rail to the opposite side of the server.

Figure 4: Attaching the Inner Rail to the Side of the Server

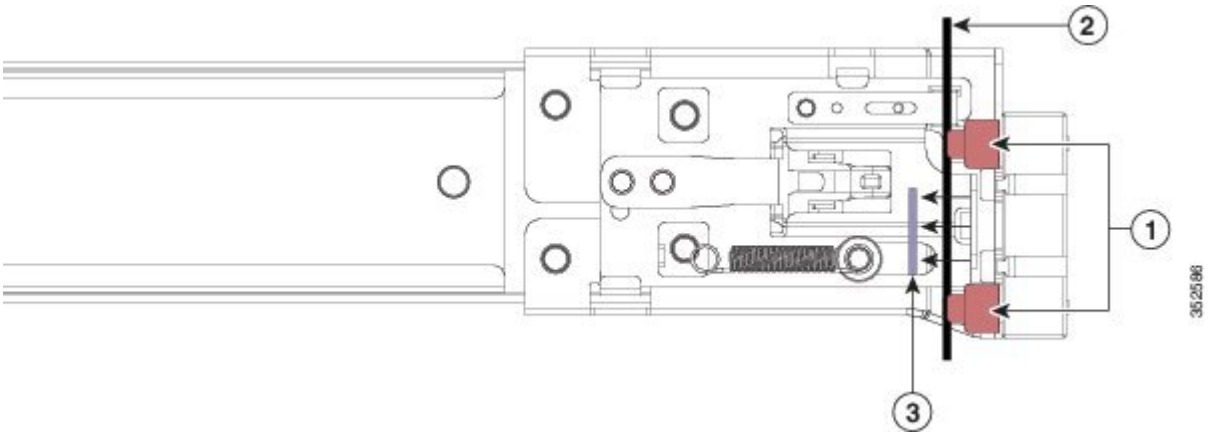


1 Keyed slots in rail	2 Front of server slides into keyed slots

Step 2 Open the front securing plate on both slide-rail assemblies. The front end of the slide-rail assembly has a spring-loaded securing plate that must be open before you can insert the mounting pegs into the rack-post holes.

On the *outside* of the assembly, push the green-arrow button toward the rear to open the securing plate.

Figure 5: Front Securing Mechanism, Inside of Front End



1 Front mounting pegs	3 Securing plate shown pulled back to the open position
2 Rack post between mounting pegs and opened securing plate	-

Step 3 Install the outer slide rails into the rack:

a) Align one slide-rail assembly front end with the front rack-post holes that you want to use.

The slide rail front-end wraps around the outside of the rack post and the mounting pegs enter the rack-post holes from the outside-front.

Note
The rack post must be between the mounting pegs and the *open* securing plate.

b) Push the mounting pegs into the rack-post holes from the outside-front.

c) Press the securing plate release button, marked PUSH. The spring-loaded securing plate closes to lock the pegs in place.

d) Adjust the slide-rail length, and then push the rear mounting pegs into the corresponding rear rack-post holes. The slide rail must be level front-to-rear.

   The rear mounting pegs enter the rear rack-post holes from the *inside* of the rack post.

e) Attach the second slide-rail assembly to the opposite side of the rack. Ensure that the two slide-rail assemblies are at the same height and are level front-to-back.

f) Pull the inner slide rails on each assembly out toward the rack front until they hit the internal stops and lock in place.

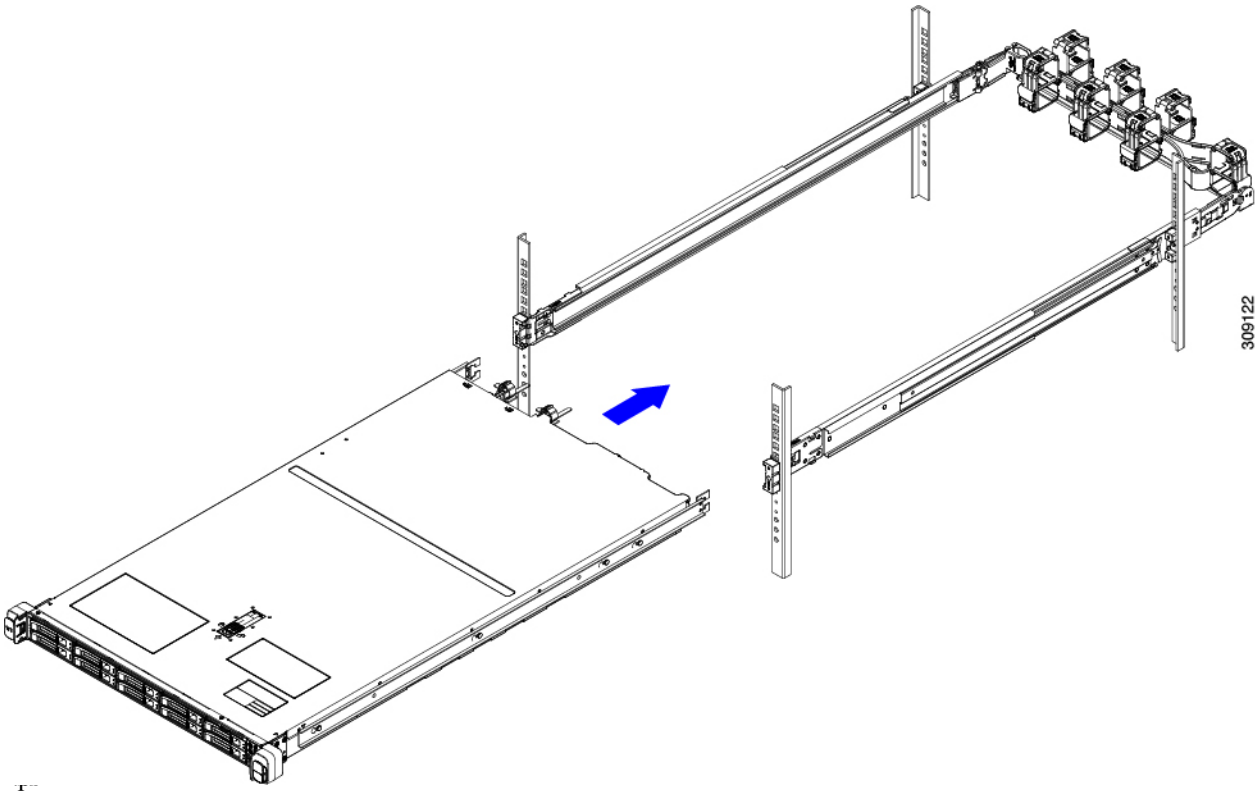
Step 4 Insert the server into the slide rails:

Caution

This server can weigh up to 60 pounds (27 kilograms) when fully loaded with components. We recommend that you use a minimum of two people or a mechanical lift when lifting the server. Attempting this procedure alone could result in personal injury or equipment damage.

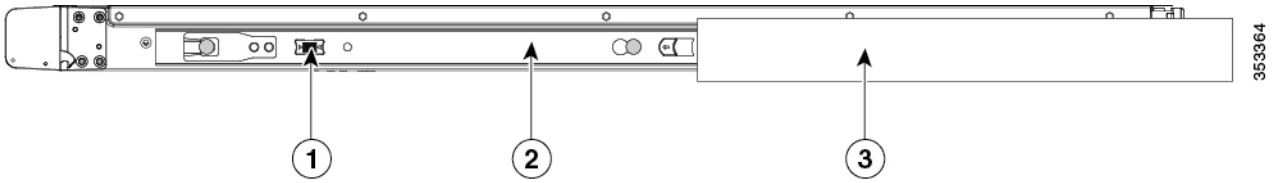
a) Align the rear ends of the inner rails that are attached to the server sides with the front ends of the empty slide rails on the rack.

b) Push the inner rails into the slide rails on the rack until they stop at the internal



c) Slide the inner-rail release clip toward the rear on both inner rails, and then continue pushing the server into the rack until its front slam-latches engage with the rack posts.

Figure 6: Inner-Rail Release Clip



1	Inner-rail release clip	3	Outer slide rail attached to rack post
2	Inner rail attached to server and inserted into outer slide rail		-

Step 5 (Optional) Secure the server in the rack more permanently by using the two screws that are provided with the slide rails. Perform this step if you plan to move the rack with servers installed.

With the server fully pushed into the slide rails, open a hinged slam latch lever on the front of the server and insert a screw through the hole that is under the lever. The screw threads into the static part of the rail on the rack post and prevents the server from being pulled out. Repeat for the opposite slam latch.

Step 6 (Optional) If applicable, do the following:

a) Attach the cable management arm. Go to Installing the Cable Management Arm (Optional), on page 17 or Reversing the Cable Management Arm (Optional), on page 19.

b) Attach the locking bezel.

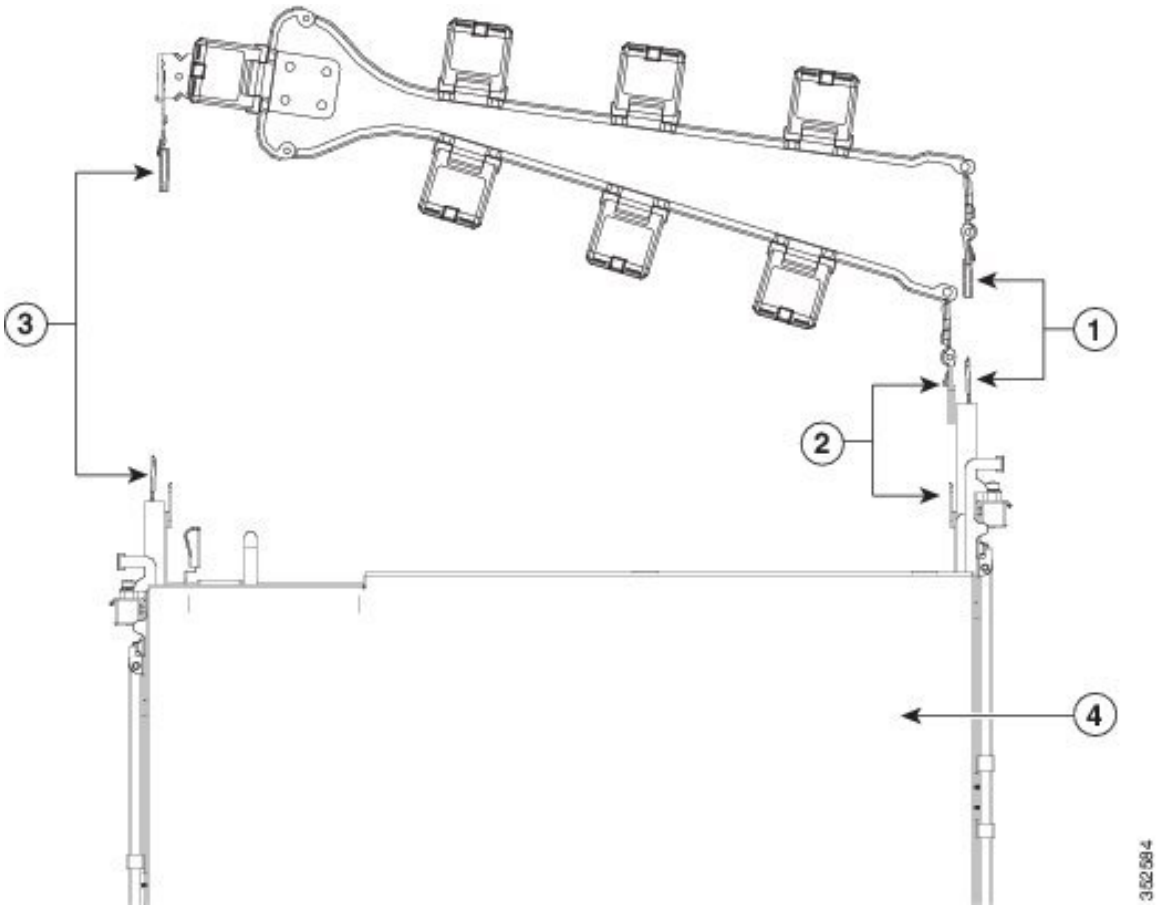
Installing the Cable Management Arm (Optional)

Note The cable management arm (CMA) is reversible left-to-right. To reverse the CMA, see Installing the Cable Management Arm (Optional), on page 17 before installation.

Procedure

Step 1 With the server pushed fully into the rack, slide the CMA tab of the CMA arm that is farthest from the server onto the end of the stationary slide rail that is attached to the rack post. Slide the tab over the end of the rail until it clicks and locks.

Figure 7: Attaching the CMA to the Rear Ends of the Slide Rails



1 CMA tab on arm farthest from server attaches to end of stationary outer slide rail.	3 CMA tab on width-adjustment slider attaches to end of stationary outer slide rail.
2 CMA tab on arm closest to the server attaches to end of inner slide rail attached to server.	4 Rear of server

Step 2 Slide the CMA tab that is closest to the server over the end of the inner rail that is attached to the server. Slide the tab over the end of the rail until it clicks and locks

Step 3 Pull out the width-adjustment slider that is at the opposite end of the CMA assembly until it matches the width of your rack.

Step 4 Slide the CMA tab that is at the end of the width-adjustment slider onto the end of the stationary slide rail that is attached to the rack post. Slide the tab over the end of the rail until it clicks and locks.

Step 5 Open the hinged flap at the top of each plastic cable guide and route your cables through the cable guides as desired.

Reversing the Cable Management Arm (Optional)

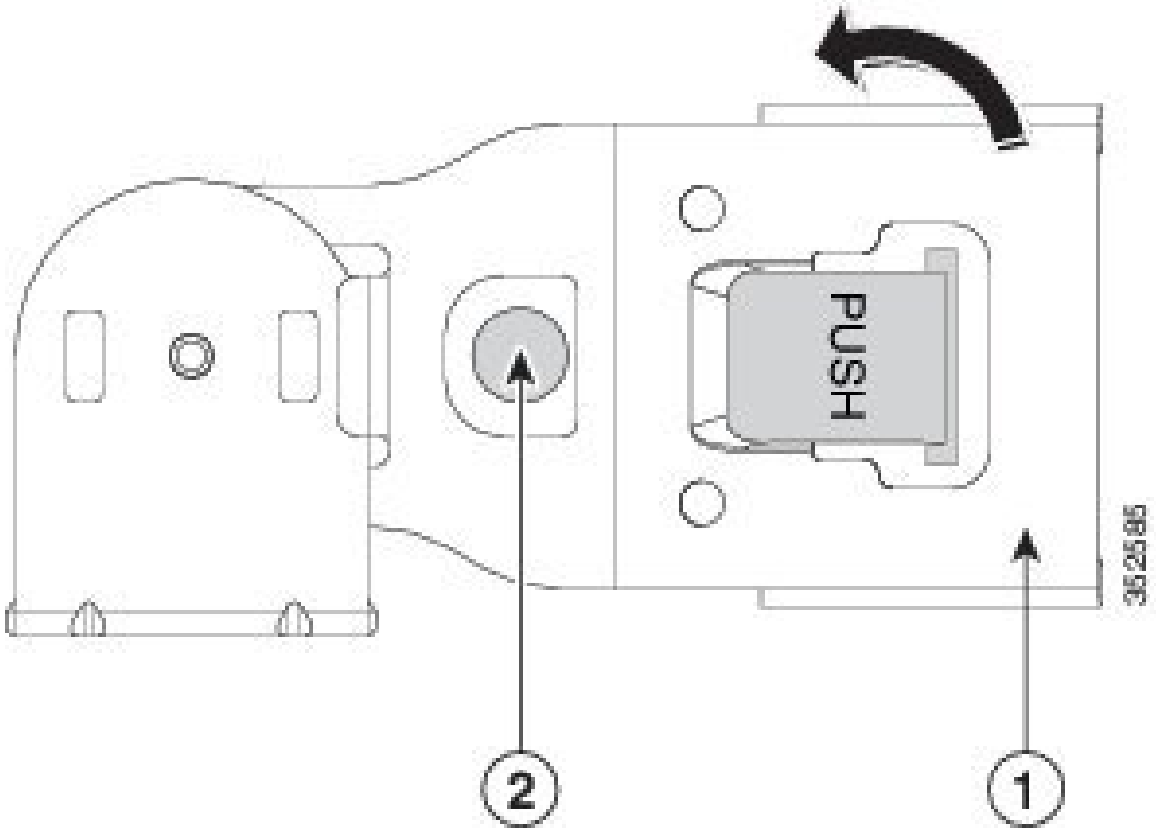
Procedure

Step 1 Rotate the entire CMA assembly 180 degrees, left-to-right. The plastic cable guides must remain pointing upward.

Step 2 Flip the tabs at the ends of the CMA arms so that they point toward the rear of the server.

Step 3 Pivot the tab that is at the end of the width-adjustment slider. Depress and hold the metal button on the outside of the tab and pivot the tab 180 degrees so that it points toward the rear of the server.

Figure 8: Reversing the CMA



1 CMA tab on end of width-adjustment slider	2 Metal button on outside of tab

Initial Server Setup

Note This section describes how to power on the server, assign an IP address, and connect to server management when using the server in standalone mode.

Server Default Settings

The server is shipped with these default settings:

- If the server does not have any VIC card, the default NIC mode is **Dedicated**. If the server has a VIC card in Riser 1 slot, the default NIC mode is **OCP**, but the VIC precedence first goes to MLOM, then Riser 1, and then Riser 2.

  If you want to use the dedicated management ports to access Cisco IMC, you can connect to the server and change the NIC mode as described in Setting Up the System With the Cisco IMC Configuration Utility, on page 23.

- In *Dedicated* mode, NIC redundancy is set to *None*. In *Cisco Card* mode, the NIC redundancy is set to *Active-Active*. All Ethernet ports are utilized simultaneously.
- DHCP is enabled.
- IPv4 and IPv6 are enabled.

Connection Methods

There are two methods for connecting to the system for initial setup:

- Local setup—Use this procedure if you want to connect a keyboard and monitor directly to the system for setup. This procedure can use the VGA and USB ports on the front of the server.
- Remote setup—Use this procedure if you want to perform setup through your dedicated management LAN.

Note To configure the system remotely, you must have a DHCP server on the same network as the system. Your DHCP server must be preconfigured with the range of MAC addresses for this server node. The MAC address is printed on a label that is on the pull-out asset tag on the front panel. This server node has a range of six MAC addresses assigned to the Cisco IMC. The MAC address printed on the label is the beginning of the range of six contiguous MAC addresses.

Connecting to the Server Locally For Setup

This procedure requires the following equipment:

- VGA monitor

- USB keyboard
- Either the supported Cisco KVM cable (Cisco PID N20-BKVM); or a USB cable and VGA DB-15 cable

Procedure

Step 1 Attach a power cord to each power supply in your server, and then attach each power cord to a grounded power outlet.

Wait for approximately two minutes to let the server boot to standby power during the first bootup. You can verify system power status by looking at the system Power Status LED on the front panel. The system is in standby power mode when the LED is amber.

Step 2 Connect a USB keyboard and VGA monitor to the server using one of the following methods:

- Connect an optional KVM cable (Cisco PID N20-BKVM) to the KVM connector on the front panel. Connect your USB keyboard and VGA monitor to the KVM cable.
- Connect a USB keyboard and VGA monitor to the corresponding connectors on the rear panel.

Step 3 Open the Cisco IMC Configuration Utility:

a) Press and hold the front panel power button for four seconds to boot the server.
b) During bootup, press **F8** when prompted to open the Cisco IMC Configuration Utility.

Note
The first time that you enter the Cisco IMC Configuration Utility, you are prompted to change the default password. The default password is either "`password`" or "`Insieme123`". The Strong Password feature is enabled.

The following are the requirements for Strong Password:

- The password can have minimum 8 characters; maximum 14 characters.
- The password must not contain the user's name.
- The password must contain characters from three of the following four categories:
  - English uppercase letters (A through Z)
  - English lowercase letters (a through z)
  - Base 10 digits (0 through 9)
  - Non-alphabetic characters !, @, #, $, %, ^, &, *, -, _, =, ‘

Step 4 Continue with Setting Up the System With the Cisco IMC Configuration Utility, on page 23.

Connecting to the Server Remotely For Setup

This procedure requires the following equipment:

- One RJ-45 Ethernet cable that is connected to your management LAN.

Before you begin



Note To configure the system remotely, you must have a DHCP server on the same network as the system. Your DHCP server must be preconfigured with the range of MAC addresses for this server node. The MAC address is printed on a label that is on the pull-out asset tag on the front panel. This server node has a range of six MAC addresses assigned to the Cisco IMC. The MAC address printed on the label is the beginning of the range of six contiguous MAC addresses.

Procedure

Step 1 Attach a power cord to each power supply in your server, and then attach each power cord to a grounded power outlet.

Wait for approximately two minutes to let the server boot to standby power during the first bootup. You can verify system power status by looking at the system Power Status LED on the front panel. The system is in standby power mode when the LED is amber.

Step 2 Plug your management Ethernet cable into the dedicated management port on the rear panel.

Step 3 Allow your preconfigured DHCP server to assign an IP address to the server node.

Step 4 Use the assigned IP address to access and log in to the Cisco IMC for the server node. Consult with your DHCP server administrator to determine the IP address.

Note
The default user name for the server is *admin*. The default password is *password*.

Step 5 From the Cisco IMC Server Summary page, click **Launch KVM Console**. A separate KVM console window opens.

Step 6 From the Cisco IMC Summary page, click **Power Cycle Server**. The system reboots.

Step 7 Select the KVM console window.

Note
The KVM console window must be the active window for the following keyboard actions to work.

Step 8 When prompted, press **F8** to enter the Cisco IMC Configuration Utility. This utility opens in the KVM console window.

Note
The first time that you enter the Cisco IMC Configuration Utility, you are prompted to change the default password. The default password is either "`password`" or "`Insieme123`". The Strong Password feature is enabled.

The following are the requirements for Strong Password:

- The password can have minimum 8 characters; maximum 14 characters.
- The password must not contain the user's name.
- The password must contain characters from three of the following four categories:
  - English uppercase letters (A through Z)
  - English lowercase letters (a through z)
  - Base 10 digits (0 through 9)
  - Non-alphabetic characters !, @, #, $, %, ^, &, *, -, _, =, ‘‘

Step 9 Continue with Setting Up the System With the Cisco IMC Configuration Utility, on page 23.

Setting Up the System With the Cisco IMC Configuration Utility

Before you begin

The following procedure is performed after you connect to the system and open the Cisco IMC Configuration Utility.

Procedure

Step 1 Set the NIC mode to **Dedicated**. The dedicated management port is used to access Cisco IMC for server management.

Step 2 Choose whether to enable DHCP for dynamic network settings, or to enter static network settings.

Note
Before you enable DHCP, you must preconfigure your DHCP server with the range of MAC addresses for this server. The MAC address is printed on a label on the rear of the server. This server has a range of six MAC addresses assigned to Cisco IMC. The MAC address printed on the label is the beginning of the range of six contiguous MAC addresses.

The *static* IPv4 and IPv6 settings include the following:

- The Cisco IMC IP address.

  For IPv6, valid values are 1 - 127.

- The gateway.

  For IPv6, if you do not know the gateway, you can set it as none by entering :: (two colons).

- The preferred DNS server address.

  For IPv6, you can set this as none by entering :: (two colons).

Step 3 (Optional) Make VLAN settings.

Step 4 Press **F1** to go to the second settings window, then continue with the next step.

From the second window, you can press **F2** to switch back to the first window.

Step 5 (Optional) Set a hostname for the server.

Step 6 (Optional) Enable dynamic DNS and set a dynamic DNS (DDNS) domain.

Step 7 (Optional) If you check the Factory Default check box, the server reverts to the factory defaults.

Step 8 (Optional) Set a default user password.

Note
The default password is either "`password`" or "`Insieme123`". The Strong Password feature is enabled.

Step 9 (Optional) Enable auto-negotiation of port settings or set the port speed and duplex mode manually.

Note

Auto-negotiation is applicable only when you use the Dedicated NIC mode. Auto-negotiation sets the port speed and duplex mode automatically based on the switch port to which the server is connected. If you disable auto-negotiation, you must set the port speed and duplex mode manually.

Step 10 (Optional) Reset port profiles and the port name.

Step 11 Press **F5** to refresh the settings that you made. You might have to wait about 45 seconds until the new settings appear and the message, "Network settings configured" is displayed before you reboot the server in the next step.

Step 12 Press **F10** to save your settings and reboot the server.

Note
If you chose to enable DHCP, the dynamically assigned IP and MAC addresses are displayed on the console screen during bootup.

What to do next

Use a browser and the IP address of the Cisco IMC to connect to the Cisco IMC management interface. The IP address is based upon the settings that you made (either a static address or the address assigned by your DHCP server).

Note The factory default username for the server is *admin*. The default password is either "`password`" or "`Insieme123`".

To manage the server, see the *Cisco UCS C-Series Rack-Mount Server Configuration Guide* or the *Cisco UCS C-Series Rack-Mount Server CLI Configuration Guide* for instructions on using those interfaces for your Cisco IMC release. The links to the configuration guides are in the Cisco UCS C-Series Documentation Roadmap.

Updating the BIOS and Cisco IMC Firmware

Caution When you upgrade the BIOS firmware, you must also upgrade the Cisco IMC firmware to the same version or the server does not boot. Do not power off the server until the BIOS and Cisco IMC firmware are matching or the server does not boot.

Cisco provides the *Cisco Host Upgrade Utility* to assist with simultaneously upgrading the BIOS, Cisco IMC, and other firmware to compatible levels.

The server uses firmware obtained from and certified by Cisco. Cisco provides release notes with each firmware image. There are several possible methods for updating the firmware:

- **Recommended method for firmware update:** Use the Cisco Host Upgrade Utility to simultaneously upgrade the Cisco IMC, BIOS, and component firmware to compatible levels.

  See the *Cisco Host Upgrade Utility Quick Reference Guide* for your firmware release at the documentation roadmap link below.

- You can upgrade the Cisco IMC and BIOS firmware by using the Cisco IMC GUI interface.

See the *Cisco UCS C-Series Rack-Mount Server Configuration Guide*.

- You can upgrade the Cisco IMC and BIOS firmware by using the Cisco IMC CLI interface.

  See the *Cisco UCS C-Series Rack-Mount Server CLI Configuration Guide*.

For links to the documents listed above, see the Cisco UCS C-Series Documentation Roadmap.

Accessing the System BIOS

Procedure

Step 1 Enter the BIOS Setup Utility by pressing the **F2** key when prompted during bootup.

Note
The version and build of the current BIOS are displayed on the Main page of the utility.

Step 2 Use the arrow keys to select the BIOS menu page.

Step 3 Highlight the field to be modified by using the arrow keys.

Step 4 Press **Enter** to select the field that you want to change, and then modify the value in the field.

Step 5 Press the right arrow key until the Exit menu screen is displayed.

Step 6 Follow the instructions on the Exit menu screen to save your changes and exit the setup utility (or press **F10**). You can exit without saving changes by pressing **Esc**.

Smart Access Serial

This server supports the Smart Access Serial feature. This feature allows you to switch between host serial and Cisco IMC CLI.

- This feature has the following requirements:
  - A serial cable connection, which can use either the RJ-45 serial connector on the server rear panel, or a DB-9 connection when using the KVM cable (Cisco PID N20-BKVM) on the front-panel KVM console connector.
  - Console redirection must be enabled in the server BIOS.
  - Terminal type must be set to VT100+ or VTUFT8.
  - Serial-over-LAN (SOL) must be disabled (SOL is disabled by default).
- To switch from host serial to Cisco IMC CLI, press **Esc+9**.

  You must enter your Cisco IMC credentials to authenticate the connection.
- To switch from Cisco IMC CLI to host serial, press **Esc+8**.

Note You cannot switch to Cisco IMC CLI if the serial-over-LAN (SOL) feature is enabled.

- After a session is created, it is shown in the CLI or web GUI by the name `serial`.

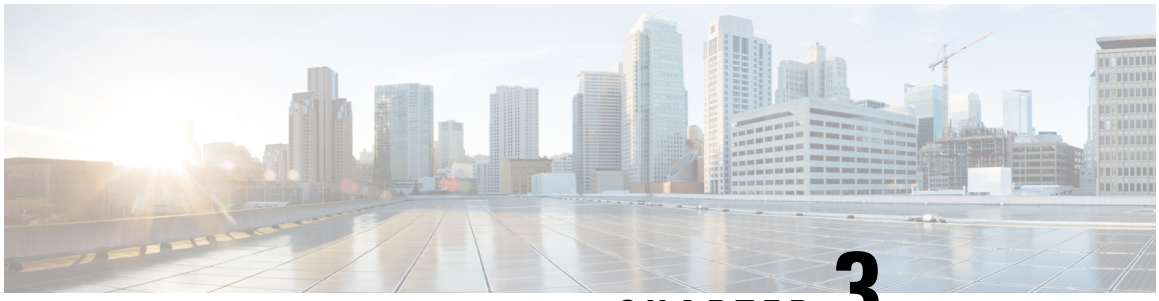
Smart Access USB

This server supports the Smart Access USB feature. The board management controller (BMC) in this server can accept a USB mass storage device and access the data on it. This feature allows you to use the front-panel USB device as a medium to transfer data between the BMC and the user without need for network connectivity. This can be useful, for example, when remote BMC interfaces are not yet available, or are not accessible due to network misconfiguration.

- This feature has the following requirements:
  - The KVM cable (Cisco PID N20-BKVM) connected to the front panel KVM console connector.
  - A USB storage device connected to one of the USB 2.0 connectors on the KVM cable. The USB device must draw less than 500 mA to avoid disconnect by the current-protection circuit.

Note Any mouse or keyboard that is connected to the KVM cable is disconnected when you enable Smart Access USB.

  - You can use USB 3.0-based devices, but they will operate at USB 2.0 speed.
  - We recommend that the USB device have only one partition.
  - The file system formats supported are: FAT16, FAT32, MSDOS, EXT2, EXT3, and EXT4. NTFS is not supported.
- The front-panel KVM connector has been designed to switch the USB port between Host OS and BMC.
- Smart Access USB can be enabled or disabled using any of the BMC user interfaces. For example, you can use the Cisco IMC Configuration Utility that is accessed by pressing **F8** when prompted during bootup.
  - Enabled: the front-panel USB device is connected to the BMC.
  - Disabled: the front-panel USB device is connected to the host.
- In a case where no management network is available to connect remotely to Cisco IMC, a Device Firmware Update (DFU) shell over serial cable can be used to generate and download technical support files to the USB device that is attached to front panel USB port.



CHAPTER 3

Maintaining the Server

- Replacing Power Supplies, on page 27

Replacing Power Supplies

The server can have one or two Titanium 80PLUS rated power supplies. When two power supplies are installed they are redundant as 1+1 by default, but they also support cold redundancy mode. Cold redundancy (CR) suspends power delivery on one or more power supplies and forces the remainder of the load to be supplied by the active PSU(s). As a result, total power efficiency is improved by best utilizing the PSU efficiency when compared to load characteristics.

- See also Power Specifications, on page 35 for more information about the power supplies.

This section includes procedures for replacing AC and DC power supply units. See Replacing AC Power Supplies, on page 27.

- Replacing DC Power Supplies, on page 28
- Installing DC Power Supplies (First Time Installation), on page 30
- Grounding for DC Power Supplies, on page 31

Replacing AC Power Supplies

Note If you have ordered a server with power supply redundancy (two power supplies), you do not have to power off the server to replace a power supply because they are redundant as 1+1.

Note Do not mix power supply types or wattages in the server. Both power supplies must be identical.

Procedure

Step 1 Remove the power supply that you are replacing or a blank panel from an empty bay:

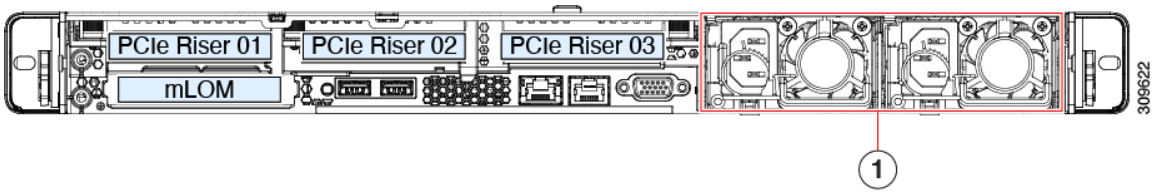
a) Perform one of the following actions:

- If your server has only one power supply, shut down and remove power from the server.
- If your server has two power supplies, you do not have to shut down the server.

b) Remove the power cord from the power supply that you are replacing.
c) Grasp the power supply handle while pinching the release lever toward the handle.
d) Pull the power supply out of the bay.

Step 2 Install a new power supply:

a) Grasp the power supply handle and insert the new power supply into the empty bay.
b) Push the power supply into the bay until the release lever locks.
c) Connect the power cord to the new power supply.
d) Only if you shut down the server, press the Power button to boot the server to main power mode.



Power Supply location.

Replacing DC Power Supplies

Note This procedure is for replacing DC power supplies in a server that already has DC power supplies installed. If you are installing DC power supplies to the server for the first time, see Installing DC Power Supplies (First Time Installation), on page 30.

Warning **A readily accessible two-poled disconnect device must be incorporated in the fixed wiring.**

Statement 1022

Warning **This product requires short-circuit (overcurrent) protection, to be provided as part of the building installation. Install only in accordance with national and local wiring regulations.**

Statement 1045

Warning **Installation of the equipment must comply with local and national electrical codes.**

Statement 1074

Note If you are replacing DC power supplies in a server with power supply redundancy (two power supplies), you do not have to power off the server to replace a power supply because they are redundant as 1+1.

Note Do not mix power supply types or wattages in the server. Both power supplies must be identical.

Procedure

Step 1 Remove the DC power supply that you are replacing or a blank panel from an empty bay:

a) Perform one of the following actions:

- If you are replacing a power supply in a server that has only one DC power supply, shut down and remove power from the server.
- If you are replacing a power supply in a server that has two DC power supplies, you do not have to shut down the server.

b) Remove the power cord from the power supply that you are replacing. Lift the connector securing clip slightly and then pull the connector from the socket on the power supply.

c) Grasp the power supply handle while pinching the release lever toward the handle.

d) Pull the power supply out of the bay.

Step 2 Install a new DC power supply:

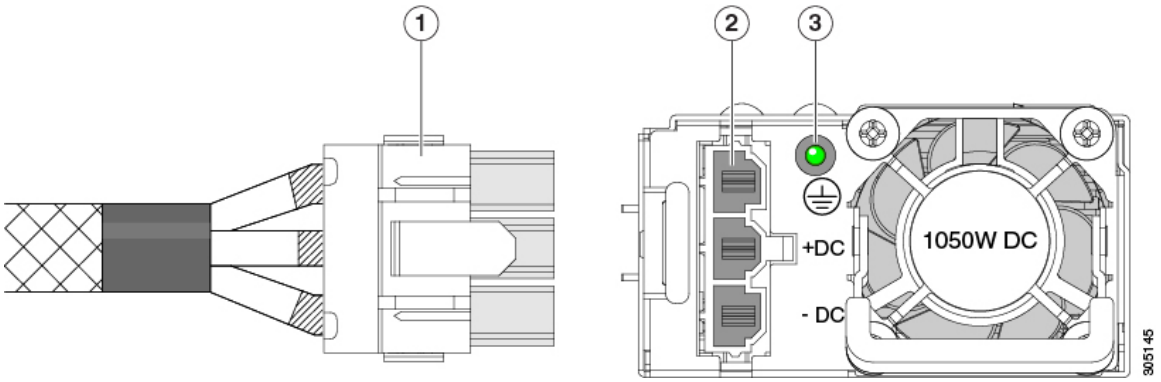
a) Grasp the power supply handle and insert the new power supply into the empty bay.

b) Push the power supply into the bay until the release lever locks.

c) Connect the power cord to the new power supply. Press the connector into the socket until the securing clip clicks into place.

d) Only if you shut down the server, press the Power button to boot the server to main power mode.

Figure 9: Replacing DC Power Supplies



1 Keyed cable connector (CAB-48DC-40A-8AWG)	3 PSU status LED
2 Keyed DC input socket	-

Installing DC Power Supplies (First Time Installation)

Note This procedure is for installing DC power supplies to the server for the first time. If you are replacing DC power supplies in a server that already has DC power supplies installed, see Replacing DC Power Supplies, on page 28.

Warning **A readily accessible two-poled disconnect device must be incorporated in the fixed wiring.**

Statement 1022

Warning **This product requires short-circuit (overcurrent) protection, to be provided as part of the building installation. Install only in accordance with national and local wiring regulations.**

Statement 1045

Warning **Installation of the equipment must comply with local and national electrical codes.**

Statement 1074

Note Do not mix power supply types or wattages in the server. Both power supplies must be identical.

Caution As instructed in the first step of this wiring procedure, turn off the DC power source from your facility's circuit breaker to avoid electric shock hazard.

Procedure

Step 1 Turn off the DC power source from your facility's circuit breaker to avoid electric shock hazard.

Note
The required DC input cable is Cisco part CAB-48DC-40A-8AWG. This 3-meter cable has a 3-pin connector on one end that is keyed to the DC input socket on the power supply. The other end of the cable has no connector so that you can wire it to your facility's DC power.

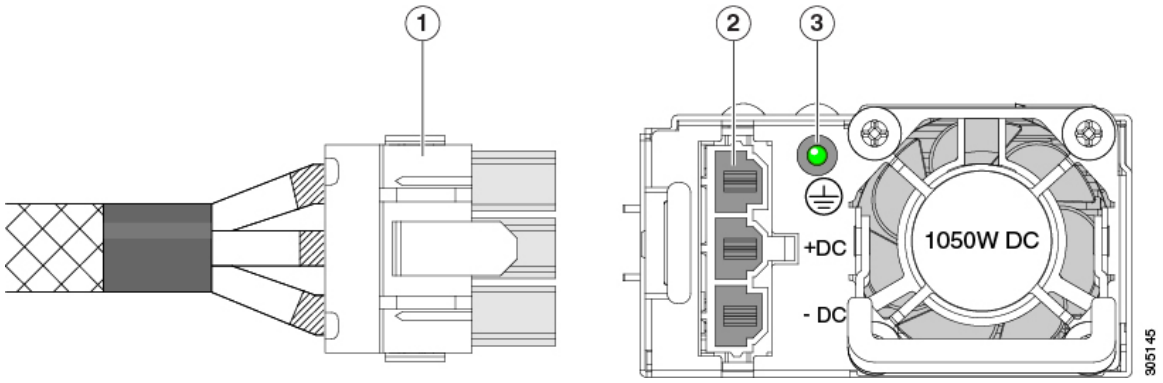
Step 2 Wire the non-terminated end of the cable to your facility's DC power input source.

Step 3 Connect the terminated end of the cable to the socket on the power supply. The connector is keyed so that the wires align for correct polarity and ground.

Step 4 Return DC power from your facility's circuit breaker.

Step 5 Press the Power button to boot the server to main power mode.

Figure 10: Installing DC Power Supplies



1 Keyed cable connector (CAB-48DC-40A-8AWG)	3 PSU status LED
2 Keyed DC input socket	-

Step 6 See Installation Grounding, page 3-66 for information about additional chassis grounding.

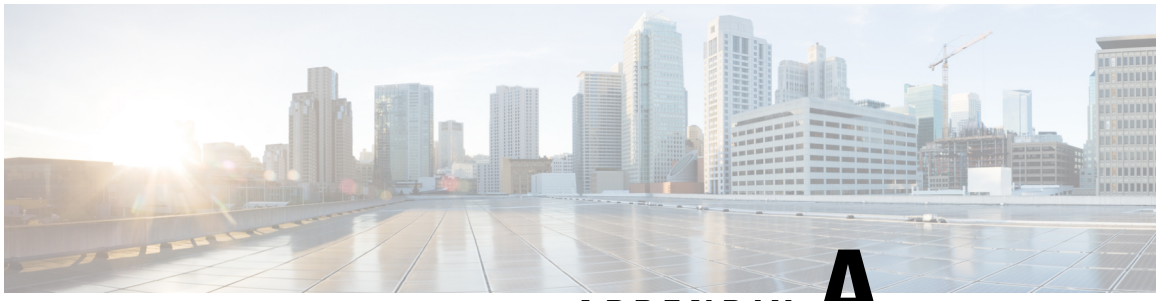
Grounding for DC Power Supplies

AC power supplies have internal grounding and so no additional grounding is required when the supported AC power cords are used.

When using a DC power supply, additional grounding of the server chassis to the earth ground of the rack is available. Two screw holes for use with your dual-hole grounding lug and grounding wire are supplied on the chassis rear panel.



Note The grounding points on the chassis are sized for 10-32 screws. You must provide your own screws, grounding lug, and grounding wire. The grounding lug must be dual-hole lug that fits 10-32 screws. The grounding cable that you provide must be 14 AWG (2 mm), minimum 60° C wire, or as permitted by the local code.



APPENDIX A

Server Specifications

- Physical Specifications, on page 33
- Environmental Specifications, on page 33
- Power Specifications, on page 35
- Power Cord Specifications, on page 38

Physical Specifications

The following table lists the physical specifications for the server.

Table 1: Physical Specifications

Description	Specification
Height	1.7 in. (43.2 mm)
Width	16.9 in. (429.0 mm)
Depth (length)	Server only: 30 in. (762 mm) Server with slide rail: 31.5 in (800.1 mm)
Weight	• Maximum, fully configured with rail kit: 42.43 lb (19.30 kg) • Maximum with 1 HDD, 1 CPU, 1DIMM, and 1 1600 W PSU, no rail kit: 22.32 lb (10.13 kg)

Environmental Specifications

The table lists the environmental requirements and specifications for the server.

Table 2: Physical Specifications

Description	Specification

Temperature, Operating	10° C to 35° C (50° F to 95° F) with no direct sunlight Derate the maximum temperature by 1°C per every 300 meters of altitude above sea level. **Note** Although the ASHRAE guidelines define multiple classes with different operating ranges, the *recommended* temperature and humidity operating range is the same for each class. The *recommended* temperature and humidity ranges are: • Operating Temperature: 64.4°F to 80.6°F (18°C to 27°C) For general information, see the Cisco Unified Computing System Site Planning Guide: Data Center Power and Cooling.
Temperature, non-operating (when the server is stored or transported)	Below -40° C or above 65° C (below -40° F or above 149° F) Maximum rate of change (operating and non-operating) 20° C/hr (36° F/hr)
Extended Operating Temperature	5° C to 40° C (41° F to 104° F) with no direct sunlight Maximum allowable operating temperature derated 1° C/175 m (1° F/319 ft) above 950 m (3117 ft) 5° C to 45° C (41° F to 113° F) with no direct sunlight Maximum allowable operating temperature derated 1° C/125 m (1° F/228 ft) above 950 m (3117 ft) System performance may be impacted when operating in the extended operating temperature range. Operation above 40° C is limited to less than 1% of annual operating hours. Hardware configuration limits apply to extended operating temperature range.
Humidity (RH), operating	8 to 90% and 24° C (75o F) maximum dew-point temperature, non-condensing environment
Humidity (RH), non-operating (when the server is stored or transported)	Below 5% or above 95% and 33o C (91o F) maximum dew-point temperature, non-condensing environment
Altitude, operating	0 to 10,000 feet
Altitude, non-operating (when the server is stored or transported)	0 to 40,000 feet
Sound power level Measure A-weighted per ISO7779 LwAd (Bels) Operation at 73°F (23°C)	5.8

Sound pressure level Measure A-weighted per ISO7779 LpAm (dBA) Operation at 73°F (23°C)	43

Power Specifications

Note Do not mix power supply types or wattages in the server. Both power supplies must be identical.

You can get more specific power information for your exact server configuration by using the Cisco UCS Power Calculator:

http://ucspowercalc.cisco.com

The power specifications for the supported power supply options are listed in the following sections.

770 W AC Power Supply

This section lists the specifications for each 770 W AC power supply (Cisco part number UCSC-PSU1-770W).

Table 3: 770 W AC Specifications

Description	Specification
AC Input Voltage	Nominal range: 100–120 VAC, 200–240 VAC (Range: 90–132 VAC, 180–264 VAC)
AC Input Frequency	Nominal range: 50 to 60Hz (Range: 47–63 Hz)
Maximum AC Input current	9.5 A at 100 VAC 4.5 A at 208 VAC
Maximum input volt-amperes	950 VA at 100 VAC
Maximum inrush current	15 A (sub-cycle duration)
Maximum hold-up time	12 ms at 770 W
Maximum output power per PSU	770 W
Power supply output voltage	12 VDC
Power supply standby voltage	12 VDC
Efficiency rating	Climate Savers Platinum Efficiency (80Plus Platinum certified)
Form factor	RSP2

Input connector	IEC320 C14

1050 W AC Power Supply

This section lists the specifications for each 1050 W AC power supply (Cisco part number UCSC-PSU1-1050W).

Table 4: 1050 W AC Specifications

Description	Specification
AC Input Voltage	Nominal range: 100–120 VAC, 200–240 VAC (Range: 90–132 VAC, 180–264 VAC)
AC Input Frequency	Nominal range: 50 to 60Hz (Range: 47–63 Hz)
Maximum AC Input current	12.5 A at 100 VAC 6.0 A at 208 VAC
Maximum input volt-amperes	1250 VA at 100 VAC
Maximum inrush current	15 A (sub-cycle duration)
Maximum hold-up time	12 ms at 1050 W
Maximum output power per PSU	800 W at 100–120 VAC 1050 W at 200–240 VAC
Power supply output voltage	12 VDC
Power supply standby voltage	12 VDC
Efficiency rating	Climate Savers Platinum Efficiency (80Plus Platinum certified)
Form factor	RSP2
Input connector	IEC320 C14

1050 W DC Power Supply

This section lists the specifications for each 1050 W DC power supply (Cisco part number UCSC-PSUV2-1050DC).

Table 5: 1050 W DC Specifications

Description	Specification

DC Input Voltage	Nominal range: -48 to -60 VDC (Range: -40 to -72 VDC)
Maximum DC input current	32 A at -40 VDC
Maximum input wattage	1234 W
Maximum inrush current	35 A (sub-cycle duration)
Maximum hold-up time	5 ms at 100% load (1050 W main and 36 W standby)
Maximum output power per PSU	1050 W on 12 VDC main power 36 W on 12 VDC standby power
Power supply output voltage	12 VDC
Power supply standby voltage	12 VDC
Efficiency rating	≥ 92% at 50% load
Form factor	RSP2
Input connector	Fixed 3-wire block

1600 W AC Power Supply

This section lists the specifications for each 1600 W AC power supply (Cisco part number UCSC-PSU1-1600W).

Table 6: 1600 W AC Specifications

Description	**Specification**
AC Input Voltage	Nominal range: 200–240 VAC (Range: 180–264 VAC)
AC Input Frequency	Nominal range: 50 to 60Hz (Range: 47–63 Hz)
Maximum AC Input current	9.5 A at 200 VAC
Maximum input volt-amperes	1250 VA at 200 VAC
Maximum inrush current	30 A at 35° C
Maximum hold-up time	80 ms at 1600 W
Maximum output power per PSU	1600 W at 200–240 VAC
Power supply output voltage	12 VDC
Power supply standby voltage	12 VDC

Efficiency rating	Climate Savers Platinum Efficiency (80Plus Platinum certified)
Form factor	RSP2
Input connector	IEC320 C14

2300 W AC Power Supply

This section lists the specifications for each 2300 W AC power supply (Cisco part number UCSC-PSU1-2300).

Table 7: 2300 W AC Specifications

Description	Specification
AC Input Voltage	Nominal range: 100–230 VAC (Range: 90–264 VAC)
AC Input Frequency	Nominal range: 50 to 60Hz (Range: 47–63 Hz)
Maximum AC Input current	13 A at 100 VAC
Maximum input volt-amperes	2515 VA at 208 VAC
Maximum inrush current	30 A at 35° C
Maximum hold-up time	80 ms at 1600 W
Maximum output power per PSU	2300W at 220-240V input and 1200W at 110-120V
Power supply output voltage	12 VDC
Power supply standby voltage	12 VDC
Efficiency rating	Climate Savers Platinum Efficiency (80Plus Platinum certified)
Form factor	RSP2
Input connector	IEC320 C20

Power Cord Specifications

Each power supply in the server has a power cord. Standard power cords or jumper power cords are available for connection to the server. The shorter jumper power cords, for use in racks, are available as an optional alternative to the standard power cords.



Note Only the approved power cords or jumper power cords listed below are supported.

Table 8: Supported Power Cords

Description	Length (Feet)	Length (Meters)
CAB-48DC-40A-8AWG DC power cord, -48 VDC, 40 A, 8 AWG Three-socket Mini-Fit connector to three-wire	11.7	3.5
CAB-C13-C14-AC AC power cord, 10 A; C13 to C14, recessed receptacle	9.8	3.0
CAB-250V-10A-AR AC power cord, 250 V, 10 A Argentina	8.2	2.5
CAB-C13-C14-2M-JP AC Power Cord, C13 to C14 Japan PSE Mark	6.6	2.0
CAB-9K10A-EU AC Power Cord, 250 V, 10 A; CEE 7/7 Plug Europe	8.2	2.5
CAB-250V-10A-IS AC Power Cord, 250 V, 10 A Israel	8.2	2.5
CAB-250V-10A-CN AC power cord, 250 V, 10 A PR China	8.2	2.5
CAB-ACTW AC power cord, 250 V, 10 A Taiwan	7.5	2.3
CAB-C13-CBN AC cabinet jumper power cord, 250, 10 A, C13 to C14	2.2	0.68
CAB-C13-C14-2M AC cabinet jumper power cord, 250 V, 10 A, C13 to C14	6.6	2.0

CAB-9K10A-AU AC power cord, 250 V, 10 A, 3112 plug, Australia	8.2	2.5
CAB-N5K6A-NA AC power cord, 200/240 V, 6 A, North America	8.2	2.5
CAB-250V-10A-ID AC power Cord, 250 V, 10 A, India	8.2	2.5
CAB-9K10A-SW AC power cord, 250 V, 10 A, MP232 plug Switzerland	8.2	2.5
CAB-250V-10A-BR AC power Cord, 250 V, 10 A Brazil	8.2	2.5
CAB-9K10A-UK AC power cord, 250 V, 10 A (13 A fuse), BS1363 plug United Kingdom	8.2	2.5
CAB-9K12A-NA AC power cord, 125 V, 13 A, NEMA 5-15 plug North America	8.2	2.5
CAB-AC-L620-C13 AC power cord, NEMA L6-20 to C13 connectors	6.6	2.0
CAB-9K10A-IT AC power cord, 250 V, 10 A, CEI 23-16/VII plug Italy	8.2	2.5
R2XX-DMYMPWRCORD No power cord; PID option for ordering server with no power cord	NA	NA