Cisco Firepower 1010 Hardware Installation Guide

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C O N T E N T S

CHAPTER 1

Overview

Features

The Cisco Firepower 1010 security appliance is an NGFW desktop product in the Cisco Firepower family of devices with Power over Ethernet (PoE+) and L2 switch support.

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Note The PoE+ and L2 switch features are supported starting with Firepower Threat Defense (FTD) Version 6.5 and ASA Version 9.13.

See the Cisco Firepower Compatibility Guide, which provides Cisco Firepower software and hardware compatibility, including operating system and hosting environment requirements, for each supported Firepower version.

See Product ID Numbers, on page 12 for a list of the product IDs (PIDs) associated with the Firepower 1010.

The following figure shows the Cisco Firepower 1010.

Figure 1: Cisco Firepower 1010

The following table lists the features for the Firepower 1010.

Table 1: Firepower 1010 Features

Feature	Description
Security standards certifications	• Common Criteria (CC) on FTD 6.4.*x* and FX-OS 2.6.*x* • Federal Information Processing Standards (FIPS) 140-2 on FTD 6.4.*x* and FX-OS 2.6.*x* • Department of Defense Information Network Approved Product List (DoDIN APL) • US Government Compliance for IPv6 (USGv6) on FTD 6.4.*x* See the "Security Certifications Compliance" topic in the "Appliance Platform Settings" chapter in the Firepower Management Center Configuration Guide, Version 6.7 for the instructions on how to enable security certifications compliance.
Form factor	1 RU
Mounting	Desktop mount Wall mount (Cisco part number 69-100647-01) Rack mount (Cisco part number 69-100648-01)
Airflow	Side-to-side No fan
Processor	One 4-core Intel CPU
Memory	8-GB DDR4 DRAM
Boot partition	8 GB (internal)
L2 switch	Marvell SOHO 88E6390 **Note** First supported in Firepower Version 6.5 and ASA Version 9.13.
Management port	One Gigabit Ethernet RJ-45 10/100/1000 BaseT Restricted to network management access; connect with an RJ-45 cable

Console port	One RJ-45
	Use to access management through an external system
USB Mini B port	One USB Mini B
	Use to access management through an external system
USB port	One USB 3.0 Type A
	Use to attach an external device such as storage
Network ports	Eight Gigabit Ethernet RJ-45 10/100/1000 BaseT
	Each RJ-45 (8P8C) copper port supports auto Medium Dependent Interface Crossover (MDI/X) as well as auto-negotiation for interface speed, duplex, and other negotiated parameters, and are MDI/X-compliant.
	The ports are numbered (from top to bottom, left to right) 1, 2, 3, 4, 5, 6, 7, 8. Each port includes a pair of LEDs, one each for connection status and link status. The ports are named and numbered Gigabit Ethernet 1/1 through Gigabit Ethernet 1/8.
	Note You can use ports 7 and 8 as PoE+ ports. PoE+ is first supported in Firepower Version 6.5 and ASA Version 9.13.
PoE+ controller card	**Note** Ports 7 and 8 are PoE+ ports; first supported in Firepower Version 6.5 and ASA Version 9.13.
Lock slot	Accepts a standard Kensington T-bar locking mechanism for securing the chassis
Reset button	A small recessed button that if pressed for longer than three seconds resets the chassis to its default state following the next reboot. Configuration variables are reset to factory default, but the flash is not erased and no files are removed.
Power switch	No
	System power is controlled by the power cord; there is no power button. To shut down the Firepower 1010, remove the AC power supply.
Power cord socket	The chassis is powered on when you plug in the AC power supply.
AC power supply	One external AC power supply
	The power supply has a total of 115 W of power. There is 55 W of +12-V system power and 60 W of -53.5-V PoE+ power.
	Note PoE+ is first supported in Firepower Version 6.5 and ASA Version 9.13.
	Note Use the power supply (part number 341-100765-01) that shipped with the chassis. It supports PoE+.

Storage	One 200-GB M.2 SATA SSD drive
	The drive is used by the software; there is no user access to the drive.
	The drive is not field-replaceable; you must return the chassis to Cisco for drive replacement.
Rubber feet	Four rubber feet on the bottom of the chassis
	Note The rubber feet are needed for proper cooling. Do not remove them.

Console Ports

The Firepower 1010 has two external console ports, a standard RJ-45 port and a USB Mini B serial port. Only one console port can be active at a time. When a cable is plugged into the USB console port, the RJ-45 port becomes inactive. Conversely, when the USB cable is removed from the USB port, the RJ-45 port becomes active. The console ports do not have any hardware flow control. You can use the CLI to configure the chassis through either serial console port by using a terminal server or a terminal emulation program on a computer.

- RJ-45 (8P8C) port—Supports RS-232 signaling to an internal UART controller. The RJ-45 console port does not support a remote dial-in modem. You can use a standard management cable (Cisco part number 72-3383-01) to convert the RJ45-to-DB9 connection if necessary.

- USB Mini B port—Lets you connect to a USB port on an external computer. For Linux and Macintosh systems, no special driver is required. For Windows systems, you must download and install a USB driver (available on software.cisco.com). You can plug and unplug the USB cable from the console port without affecting Windows HyperTerminal operations. We recommend shielded USB cables with properly terminated shields. Baud rates for the USB console port are 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200 bps.

Note For Windows operating systems, you must install a Cisco Windows USB Console Driver on any PC connected to the console port before using the USB console port. See Connect to the Console Port with Microsoft Windows, on page 37 for information on installing the driver.

External Flash Storage

The chassis contains a standard USB Type A port that you can use to attach an external device. The USB port can provide output power of 5 V and up to a maximum of 1A (5 USB power units).

- External USB drive (optional)—You can use the external USB Type A port to attach a data-storage device. The external USB drive identifier is *disk1*. When the chassis is powered on, a connected USB drive is mounted as disk1 and is available for you to use. Additionally, the file-system commands that are available to disk0 are also available to disk1, including **copy**, **format**, **delete**, **mkdir**, **pwd**, **cd**, and so on.

- FAT-32 File System—The Firepower 1010 only supports FAT-32-formatted file systems for the external USB drive. If you insert an external USB drive that is not in FAT-32 format, the system mounting process fails, and you receive an error message. You can enter the command **format disk1:** to format the partition to FAT-32 and mount the partition to disk1 again; however, data might be lost.

Package Contents

The following figure shows the package contents for the Firepower 1010. Note that the contents are subject to change and your exact contents might contain additional or fewer items.

Figure 2: Firepower 1010 Package Contents

1	Chassis	**2**	USB console cable (Type A to Mini Type B)
			Part number 37-19770-01
3	Power cord	**4**	Power supply
	See Power Cord Specifications, on page 12 for a list of the approved power cords.		
5	*Cisco Firepower 1010*		—
	This document has a URL pointing to the hardware installation guide, a URL pointing to the regulatory and safety guide, and a QR code and URL pointing to the Getting Started Guide.		

QR Code Sticker

The QR code sticker on the front panel of the chassis points to the Firepower Easy Deployment Guide for Cisco Firepower 1000 or 2100 Firewalls that explains low touch provisioning (LTP). LTP allows anyone to connect a new Firepower 1010 to a network so that the IT department can onboard the device to CDO and configure it remotely. CDO supports Firepower Threat Defense (FTD) version 6.7 and later.

The following figure shows the QR code sticker.

Figure 3: QR Code Sticker

The following figure shows the placement of the QR code sticker on the front panel of the chassis.

Figure 4: Firepower 1010 QR Code Sticker

1	QR code sticker		—
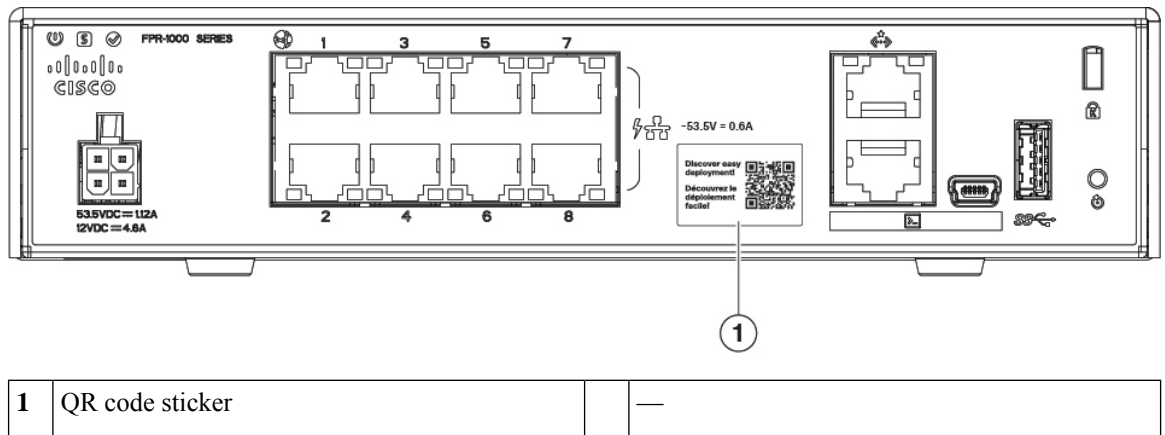
Serial Number Location

You can view the serial number and additional model information on the compliance label located on the bottom of the chassis. The following figure shows a sample compliance label.

Figure 5: Compliance Label on the Chassis
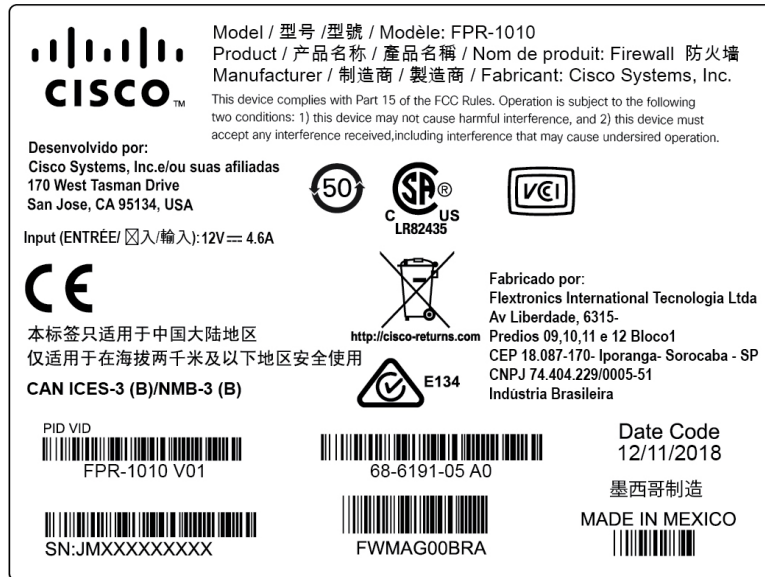
Front Panel

The following figure shows the front panel of the Firepower 1010. Note that there are no connectors or LEDs on the front panel.

Figure 6: Firepower 1010 Front Panel

Rear Panel

The following figure shows the rear panel of the Firepower 1010. See for a description of the LEDs.
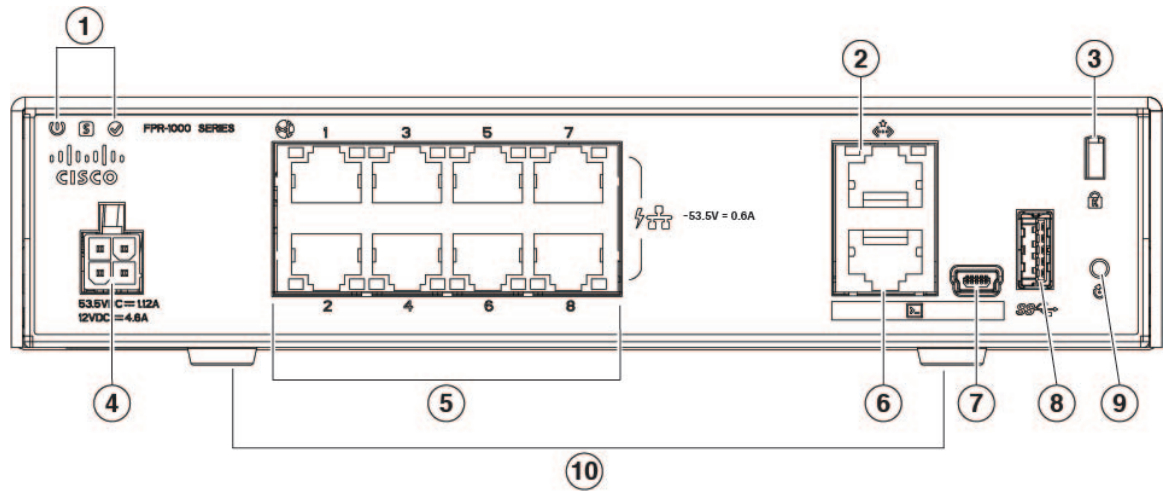
1	Status LEDs	2	Management port
3	Lock slot	4	Power cord socket
5	Network data ports	6	Console port
7	USB Mini B port	8	USB Type A port
9	Reset button	10	Rubber feet

Status LEDs

Facing the rear of the chassis, the LEDs are located on the top left edge (facing the front of the chassis, they are in the back right corner of the top). The network port LEDs are at the top sides of each network port.

The following figure shows the status LEDs on the rear panel and on the cover of the chassis.

Figure 8: Status LEDs
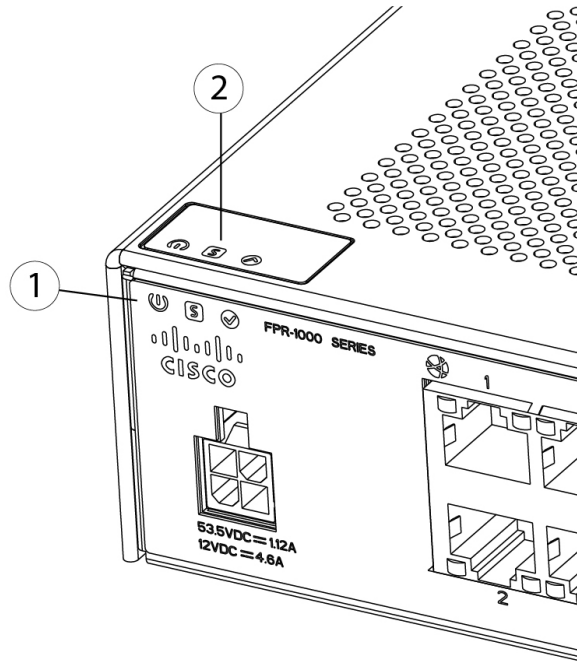
| 1 | Power, Status, and Active LEDs on rear of chassis | 2 | Power, Status, and Active LEDs on top of chassis |

The following figure shows all of the LEDs on the rear panel of the Firepower 1010 and describes their states.

Figure 9: Rear Panel LEDs

1	**Power**	2	**Status**
	Power supply status:		System operating status:
	• Off —Power supply off.		• Off—System has not booted up yet.
	• Green—Power supply on.		• Green, flashing quickly—System is booting up.
			• Green—Normal system function.
			• Amber—Critical alarm indicating one or more of the following:
			• Major failure of a hardware or software component.
			• Over-temperature condition.
			• Power voltage outside the tolerance range.
			• Green, flashing slowly (twice in 5 seconds)—Cloud connected.
			Note Cisco Defense Orchestrator (CDO) is valid for FTD 6.7 and later.
			• Green and amber, flashing—Cloud connection failure.
			• Green—Cloud disconnected.
			Note The CDO LED pattern applies to low touch provisioning (LTP). See the Firepower Easy Deployment Guide for Cisco Firepower 1000 or 2100 Firewalls for more information.
3	**Active**	4	**Network**
	Status of the failover pair:		Status of the network ports.
	• Off— Failover is not operational.		Link status (L):
	• Green—Failover pair operating normally. The LED is green always unless the chassis in a high availability pair.		• Off—No link, or port is not in use.
	• Amber—When the chassis is in a high availability pair, the LED is amber for the standby unit.		• Green—Link established.
			• Green, flashing—Link activity.

5	**Network**	—
	Status of the network ports.	
	Connection-speed status (S):	
	• Green, flashing—One flash every three seconds = 10 Mbps.	
	• Green, flashing—Two rapid flashes = 100 Mbps.	
	• Green, flashing—Three rapid flashes = 1000 Mbps.	

Hardware Specifications

The following table contains hardware specifications for the Firepower 1010.

Table 2: Firepower 1010 Hardware Specifications

Dimensions (H x W x D)	1.82 x 7.85 x 8.07 inches (4.62 x 19.94 x 20.50 cm)
Weight	3 lb (1.36 kg)
System power	30 W
	Not including any PoE devices connected to the chassis. 55 W is the maximum power for the power supply.
	Note PoE+ is first supported in FTD Version 6.5.
	Note Use the power supply (part number 341-100765-01) that shipped with the chassis. It supports PoE+.
Temperature	Operating: 32 to 104℉ (0 to 40℃)
	Derate the maximum operating temperature 1.5° C per 1000 ft above sea level.
	Nonoperating: -13 to 158°F (-25 to 70°C) maximum altitude is 40,000 ft
Humidity	Operating: 90%
	Nonoperating: 10 to 90%
Altitude	Operating: 0 to 9843 (3000 m)
	Nonoperating: 0 to 15,000 ft (4570 m)
Acoustic noise	0 dBa

Product ID Numbers

The following table lists the field-replaceable PIDs associated with the Firepower 1010. The spare components are ones that you can order and replace yourself. If any internal components fail, you must get a return material authorization (RMA) for the entire chassis. See the Cisco Returns Portal for more information.

Note See the **show inventory** command in the Cisco Firepower Threat Defense Command Reference or the Cisco ASA Series Command Reference to display a list of the PIDs for your Firepower 1010.

Table 3: Firepower 1010 PIDs

PID	Description
FPR1010-NGFW-K9	Cisco Firepower 1010 NGFW desktop appliance
FPR1K-DT-ACY-KIT	Cisco Firepower 1010 accessory kit
FPR1K-DT-PWR-AC	Cisco Firepower 1010 150-W power supply
FPR1K-DT-PWR-AC=	Cisco Firepower 1010 150-W power supply (spare)
FPR1K-DT-RACK-MNT=	Cisco Firepower 1010 rack-mount kit (spare)
FPR1K-DT-WALL-MNT=	Cisco Firepower 1010 wall-mount kit (spare)
FPR1K-DT-FIPS-KIT=	Cisco Firepower 1010 FIPS kit (spare)

Power Cord Specifications

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

If you do not order the optional power cord with the system, you are responsible for selecting the appropriate power cord for the product. Using a incompatible power cord with this product may result in electrical safety hazard. Orders delivered to Argentina, Brazil, and Japan must have the appropriate power cord ordered with the system.

Note Only the approved power cords or jumper power cords provided with the chassis are supported.

The following power cords are supported.

Figure 10: Argentina (CAB-AC-C5-ARG)
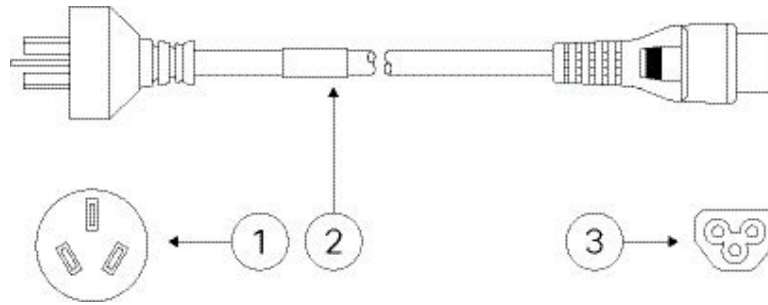
1	Plug: IRAM 2073	2	Cord set rating: 2.5 A, 250 V
3	Connector: IEC 60320/C5		

Figure 11: Australia (CAB-AC-C5-AUS)
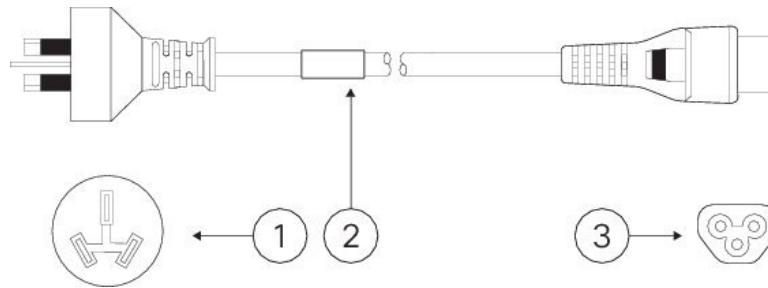
1	Plug: AUS 10S3	2	Cord set rating: 2.5 A, 250 V
3	Connector: IEC 60320/C5		

Figure 12: Brazil (CAB-AC-C5-BRA)
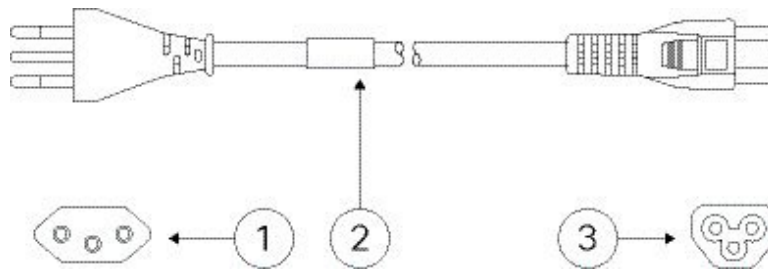
1	Plug: NBR 14136	2	Cord set rating: 2.5 A, 250 V
3	Connector: IEC 60320/C5		

Figure 13: Canada (CAB-AC-C5)
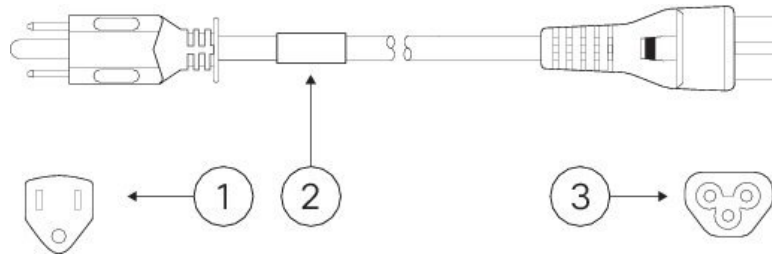
1	Plug: NEMA 5-15P	2	Cord set rating: 2.5 A, 125 V
3	Connector: IEC 60320/C5		

Figure 14: China (CAB-AC-C5-CHI)
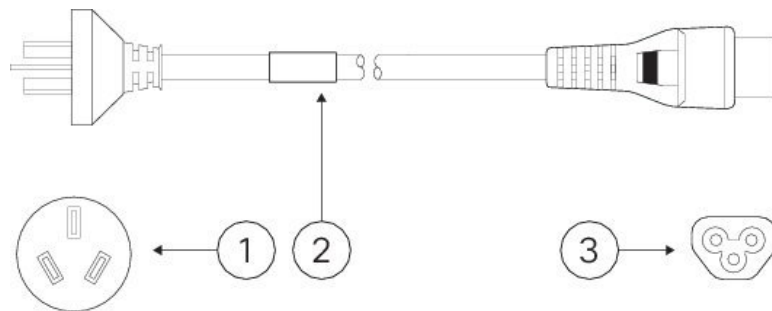
1	Plug: GB 2099.1	2	Cord set rating: 2.5 A, 250 V
3	Connector: IEC 60320/C5		

Figure 15: Europe (CAB-AC-C5-EUR)
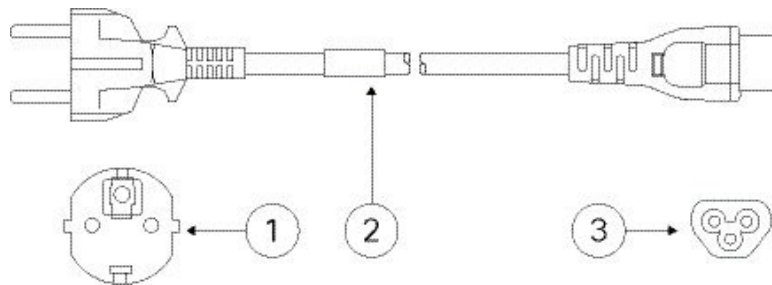
1	Plug: CEE 7 VII	2	Cord set rating: 2.5 A, 250 V
3	Connector: IEC 60320/C5		

Figure 16: India (CAB-AC-C5-IND)
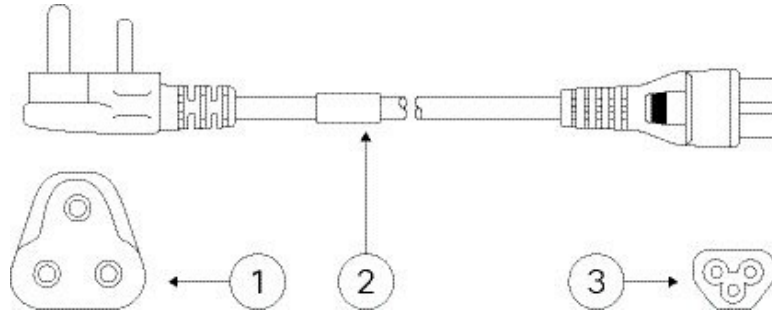
1	Plug: IS 1293	**2**	Cord set rating: 2.5 A, 250 V
3	Connector: IEC 60320/C5		

Figure 17: Italy (CAB-AC-C5-ITA)
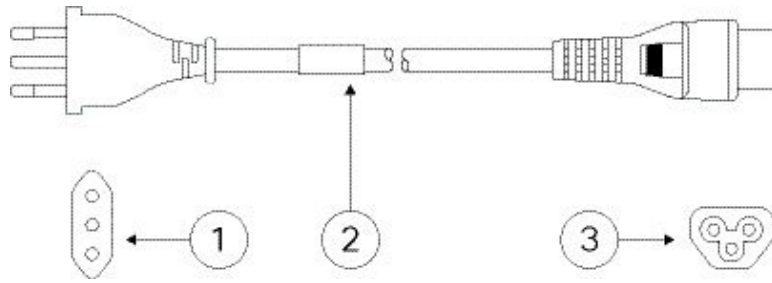
1	Plug: CEI 23-06/VII	**2**	Cord set rating: 2.5 A, 250 V
3	Connector: IEC 60320/C5		

Figure 18: Japan (CAB-AC-C5-JAP)
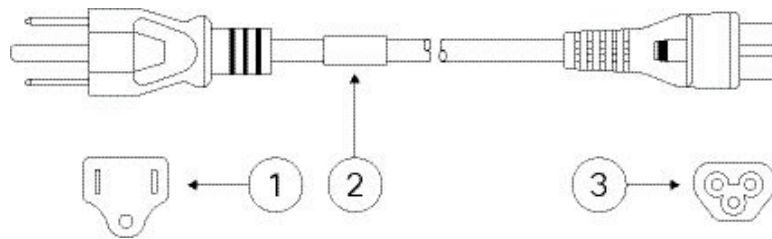
1	Plug: JIS C8303	**2**	Cord set rating: 3 A, 125 V
3	Connector: IEC 60320/C5		

Figure 19: Korea (CAB-AC-C5-KOR)
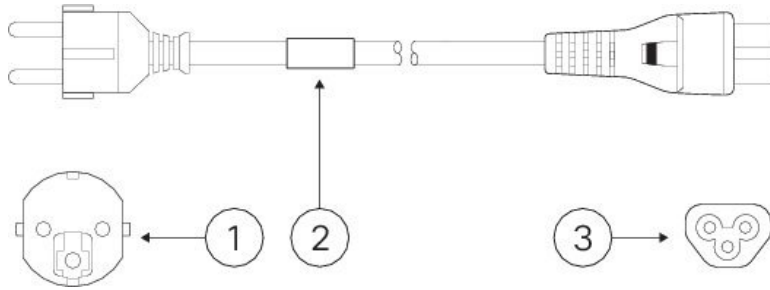
1	Plug: KSC 83205	2	Cord set rating: 3.0 A, 250 V
3	Connector: IEC 60320/C5		

Figure 20: South Africa (CAB-AC-C5-SAF)
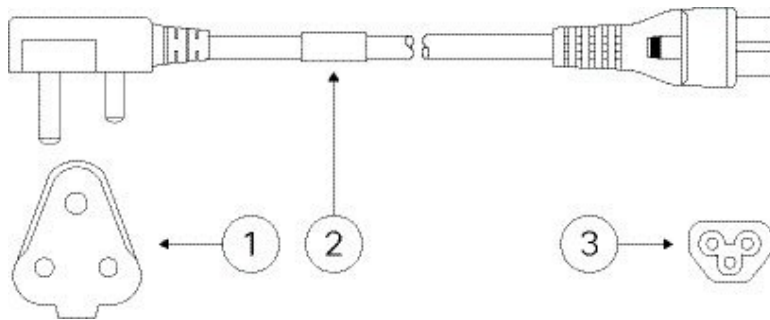
1	Plug: SABS 164-1	2	Cord set rating: 2.5 A, 250 V
3	Connector: IEC 60320/C5		

Figure 21: Switzerland (CAB-AC-C5-SWI)
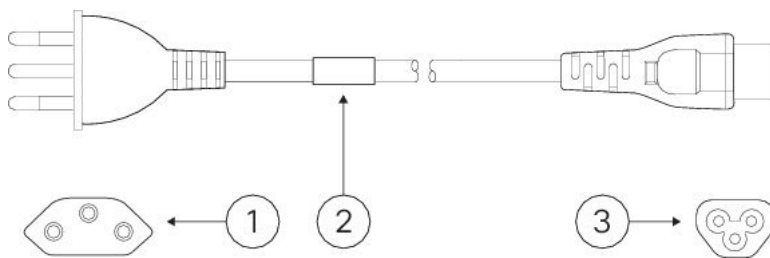
1	Plug: SEV 1011	2	Cord set rating: 2.5 A, 250 V
3	Connector: IEC 60320/C5		

Figure 22: Taiwan (CAB-AC-C5-TWN)
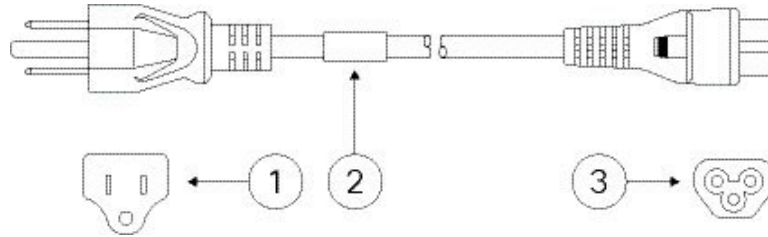
1	Plug: CNS 10917-2	2	Cord set rating: 2.5 A, 125 V
3	Connector: IEC 60320/C5		

Figure 23: United Kingdom (CAB-AC-C5-UK)
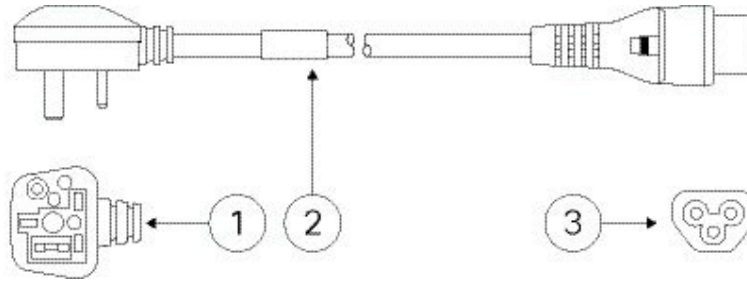
1	Plug: BS1363A/SS145	2	Cord set rating: 2.5 A, 250 V
3	Connector: IEC 60320/C5		

Installation Preparation

Installation Warnings

Read the Regulatory and Compliance Information document before installing the chassis.

Take note of the following warnings:

Warning

Statement 1071—Warning Definition

IMPORTANT SAFETY INSTRUCTIONS

Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Read the installation instructions before using, installing, or connecting the system to the power source. Use the statement number provided at the end of each warning statement to locate its translation in the translated safety warnings for this device.

SAVE THESE INSTRUCTIONS

Warning   **Statement 12**—Power Supply Disconnection Warning

Before working on a chassis or working near power supplies, unplug the power cord on AC units. Disconnect the power at the circuit breaker on DC units.

Warning   **Statement 19**—TN Power Warning

The device is designed to work with TN power systems.

Warning   **Statement 43**—Jewelry Removal Warning

Before working on equipment that is connected to power lines, remove jewelry including rings, necklaces, and watches. Metal objects heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.

Warning   **Statement 94**—Wrist Strap Warning

During this procedure, wear grounding wrist straps to avoid ESD damage to the card. Do not directly touch the backplane with your hand or any metal tool, or you could shock yourself.

Warning   **Statement 1004**—Installation Instructions

Read the installation instructions before using, installing, or connecting the system to the power source.

Warning   **Statement 1005**—Circuit Breaker

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 20 A, 120 V, and 16 A, 250 V

Warning   **Statement 1015**—Battery Handling

To reduce risk of fire, explosion or leakage of flammable liquid or gas:

- Replace the battery only with the same or equivalent type recommended by the manufacturer.

- Do not dismantle, crush, puncture, use sharp tool to remove, short external contacts, or dispose of in fire.

- Do not use if battery is warped or swollen.

- Do not store or use battery in a temperature > 60° C.

- Do not store or use battery in low air pressure environment < 69.7 kPa.

Warning   **Statement 1017**—Restricted Area

This unit is intended for installation in restricted access areas. A restricted access area can be accessed by skilled, instructed, or qualified personnel.

Warning   **Statement 1021**—SELV Circuit

To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.

Warning   **Statement 1024**—Ground Conductor

This equipment must be grounded. To reduce the risk of electric shock, never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.

Warning   **Statement 1028**—More Than One Power Supply

This unit might have more than one power supply connection. To reduce risk of electric shock, all connections must be removed to de-energize the unit.
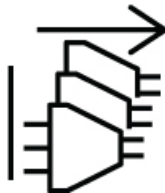
Warning   **Statement 1029**—Blank Faceplates and Cover Panels

Blank faceplates and cover panels serve three important functions: they reduce the risk of electric shock and fire; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place.

Warning   **Statement 1030**—Equipment Installation

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

⚠️

Warning **Statement 1040**—Product Disposal

Ultimate disposal of this product should be handled according to all national laws and regulations.

⚠️

Warning **Statement 1045**—Short-Circuit Protection

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.

⚠️

Warning **Statement 1074**—Comply with Local and National Electrical Codes

To reduce risk of electric shock or fire, installation of the equipment must comply with local and national electrical codes.

Position the Chassis

See Desktop-Mount the Chassis, on page 28 for information on desktop-mounting the chassis.

Figure 24: Do Not Stack the Chassis

⚠️
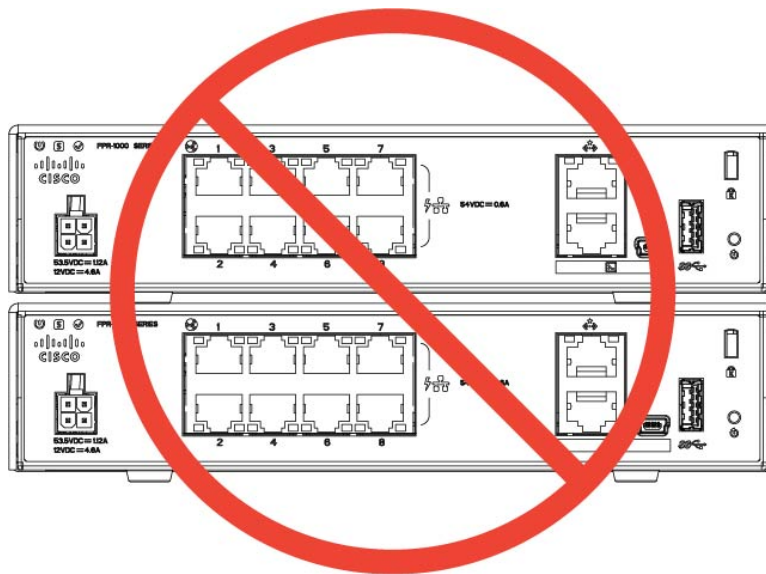
Caution Do not stack the chassis on top of another chassis. If you stack the units, they will overheat, which causes the units to power cycle.

Whether positioning the chassis on a desktop, on a closet shelf, or mounting it on a wall, consider the following:

- Be sure to choose an area where the chassis is out of the way to make sure it is not bumped or accidentally dislodged. The chassis has feet on the bottom so it does not sit flush where placed, thus allowing proper air circulation through and around it. Make sure that the chassis is not tightly enclosed or crowded by other objects that might impede proper circulation.

- Choose a location that lets you easily bring the power cord and Ethernet and console cables to the chassis, with plenty of slack and yet tucked away, so they cannot be inadvertently unplugged.

Safety Recommendations

Observe these safety guidelines:

- Keep the area clear and dust free before, during, and after installation.

- Keep tools away from walkways, where you and others might trip over them.

- Do not wear loose clothing or jewelry, such as earrings, bracelets, or chains that could get caught in the chassis.

- Wear safety glasses if you are working under any conditions that might be hazardous to your eyes.

- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.

- Never attempt to lift an object that is too heavy for one person.

Maintain Safety with Electricity

Warning   Before working on a chassis, be sure the power cord is unplugged.

Read the Regulatory and Compliance Information document before installing the chassis.

Follow these guidelines when working on equipment powered by electricity:

- Before beginning procedures that require access to the interior of the chassis, locate the emergency power-off switch for the room in which you are working. Then, if an electrical accident occurs, you can act quickly to turn off the power.

- Do not work alone if potentially hazardous conditions exist anywhere in your work space.

- Never assume that power is disconnected; always check.

- Look carefully for possible hazards in your work area, such as moist floors, ungrounded power extension cables, frayed power cords, and missing safety grounds.

- If an electrical accident occurs:

    - Use caution; do not become a victim yourself.

    - Disconnect power from the system.

    - If possible, send another person to get medical aid. Otherwise, assess the condition of the victim, and then call for help.

- Determine whether the person needs rescue breathing or external cardiac compressions; then take appropriate action.

- Use the chassis within its marked electrical ratings and product usage instructions.

- The chassis is equipped with an AC-input power supply, which is shipped with a three-wire electrical cord with a grounding-type plug that fits into a grounding-type power outlet only. Do not circumvent this safety feature. Equipment grounding should comply with local and national electrical codes.

Prevent ESD Damage

ESD occurs when electronic components are improperly handled, and it can damage equipment and impair electrical circuitry, which can result in intermittent or complete failure of your equipment.

Always follow ESD-prevention procedures when removing and replacing components. Ensure that the chassis is electrically connected to an earth ground. Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the grounding clip to an unpainted surface of the chassis frame to safely ground ESD voltages. To properly guard against ESD damage and shocks, the wrist strap and cord must operate effectively. If no wrist strap is available, ground yourself by touching the metal part of the chassis.

For safety, periodically check the resistance value of the antistatic strap, which should be between one and 10 megohms.

Site Environment

You can place the chassis on a desktop, on the wall, or in a rack. The location of the chassis and the layout of the equipment rack or wiring room are extremely important for proper system operation. Placing equipment too close together with inadequate ventilation and inaccessible panels can cause system malfunctions and shutdowns. Improper placement can also make it difficult for you to access the chassis for maintenance.

Warning

Under no circumstances should you stack one chassis on top of one another. This disrupts cooling air flow to the chassis and causes damage to the hardware.

See Hardware Specifications, on page 11 for information about physical specifications.

To avoid equipment failures and reduce the possibility of environmentally caused shutdowns, plan the site layout and equipment locations carefully. If you are currently experiencing shutdowns or unusually high error rates with your existing equipment, these considerations may help you isolate the cause of failures and prevent future problems.

Site Considerations

Considering the following helps you plan an acceptable operating environment for the chassis, and avoid environmentally-caused equipment failures.

- Electrical equipment generates heat. Ambient air temperature might not be adequate to cool equipment to acceptable operating temperatures without adequate circulation. Make sure that the room in which you operate your system has adequate air circulation.

- Ensure that the chassis cover is secure. The chassis is designed to allow cooling air to flow effectively within it. An open chassis allows air leaks, which may interrupt and redirect the flow of cooling air from the internal components.

- Always follow ESD-prevention procedures to avoid damage to equipment. Damage from static discharge can cause immediate or intermittent equipment failure.

Power Supply Considerations

See Features, on page 1 and Hardware Specifications, on page 11 for more detailed information about the power supply in the chassis.

When installing the chassis, consider the following:

- Check the power at the site before installing the chassis to ensure that it is free of spikes and noise. Install a power conditioner, if necessary, to ensure proper voltages and power levels in the appliance-input voltage.

- Install proper grounding for the site to avoid damage from lightning and power surges.

- The chassis does not have a user-selectable operating range. Refer to the label on the chassis for the correct appliance input-power requirement.

- Several styles of AC-input power supply cords are available for the chassis; make sure that you have the correct style for your site.

- Install an uninterruptible power source for your site, if possible.

Rack Configuration Considerations

See Rack-Mount the Chassis, on page 31 for the procedure for rack-mounting the chassis.

Consider the following when planning a rack configuration:

- If you are mounting a chassis in an open rack, make sure that the rack frame does not block the intake or exhaust ports.

- If your rack includes closing front and rear doors, the doors must have 65 percent open perforated area evenly distributed from top to bottom to permit adequate airflow.

- Be sure enclosed racks have adequate ventilation. Make sure that the rack is not overly congested as each chassis generates heat. An enclosed rack should have louvered sides and a fan to provide cooling air.

- In an enclosed rack with a ventilation fan in the top, heat generated by equipment near the bottom of the rack can be drawn upward and into the intake ports of the equipment above it in the rack. Ensure that you provide adequate ventilation for equipment at the bottom of the rack.

- Baffles can help to isolate exhaust air from intake air, which also helps to draw cooling air through the chassis. The best placement of the baffles depends on the airflow patterns in the rack. Experiment with different arrangements to position the baffles effectively.

Mount the Chassis

Unpack and Inspect the Chassis

Note   The chassis is thoroughly inspected before shipment. If any damage occurred during transportation or any items are missing, contact your customer service representative immediately. Keep the shipping container in case you need to send the chassis back due to damage.

See Package Contents, on page 5 for a list of what shipped with the chassis.

Step 1   Remove the chassis from its cardboard container and save all packaging material.

Step 2   Compare the shipment to the equipment list provided by your customer service representative. Verify that you have all items.

Step 3   Check for damage and report any discrepancies or damage to your customer service representative. Have the following information ready:

- Invoice number of shipper (see the packing slip)

- Model and serial number of the damaged unit

- Description of damage

- Effect of damage on the installation

Desktop-Mount the Chassis

You can mount the chassis on a desktop by placing it on a desk in a horizontal position. Make sure there are no blockages or obstructions within one inch of the top of the chassis or within .5 inches of the sides and back, so that nothing interferes with cooling. Do not remove the rubber feet included with the chassis. They are also needed for proper cooling.

Figure 25: Desk Top Mount the Chassis
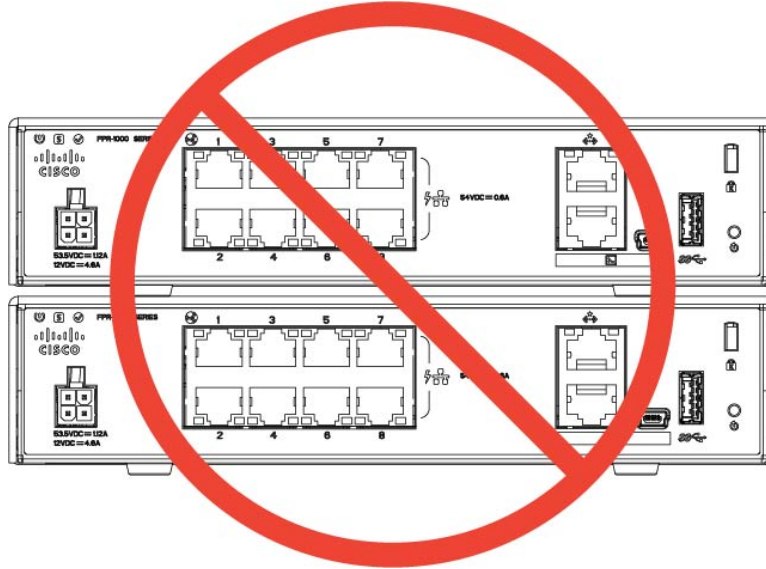
⚠️ **Caution** Do not stack one chassis on top of another chassis. If you stack the units, they will overheat, which causes the units to power cycle.

What to do next

See Install the FIPS Opacity Shield , on page 41 if you need to install a FIPS opacity shield.

Install the cables according to your default software configuration as described in the Cisco Firepower 1010 Getting Started Guide.

Wall-Mount the Chassis

You can purchase an optional wall-mount kit. You can wall-mount the chassis left-, right-, or rear panel-side up. You can use the wall-mount bracket to mark the holes for mounting it on the wall. The wall-mount bracket is 7.682 x 6 inches. You need to make two level marks on the wall where you want to hang the chassis. For vertical orientation (rear panel up), the holes should be 6.826 inches apart. For side to side orientation, the holes should be 5.154 inches apart.

The wall-mount kit (part number 69-100647-01) contains the following items:

- Wall-mount bracket (part number 700-118506-01)

• Three Phillips M3 x 6 mm screws (part number 48-0460-01)

• Two Phillips #6 x 1¼ inch screws (part number 48-2289-01)

• One #8 wall anchor kit with screws (part number 51-4718-01)

Follow these steps to mount your chassis on a wall.

Step 1   Choose an orientation (left-, right-, or rear panel-side up) and a location on the wall for the chassis.

Step 2   Use a pencil, ruler, and level to mark locations for the two mounting screws (#6 x 1¼ inch). You can use the wall-mount bracket itself to mark either the top holes or the side holes.

Figure 26: Wall-Mount Bracket
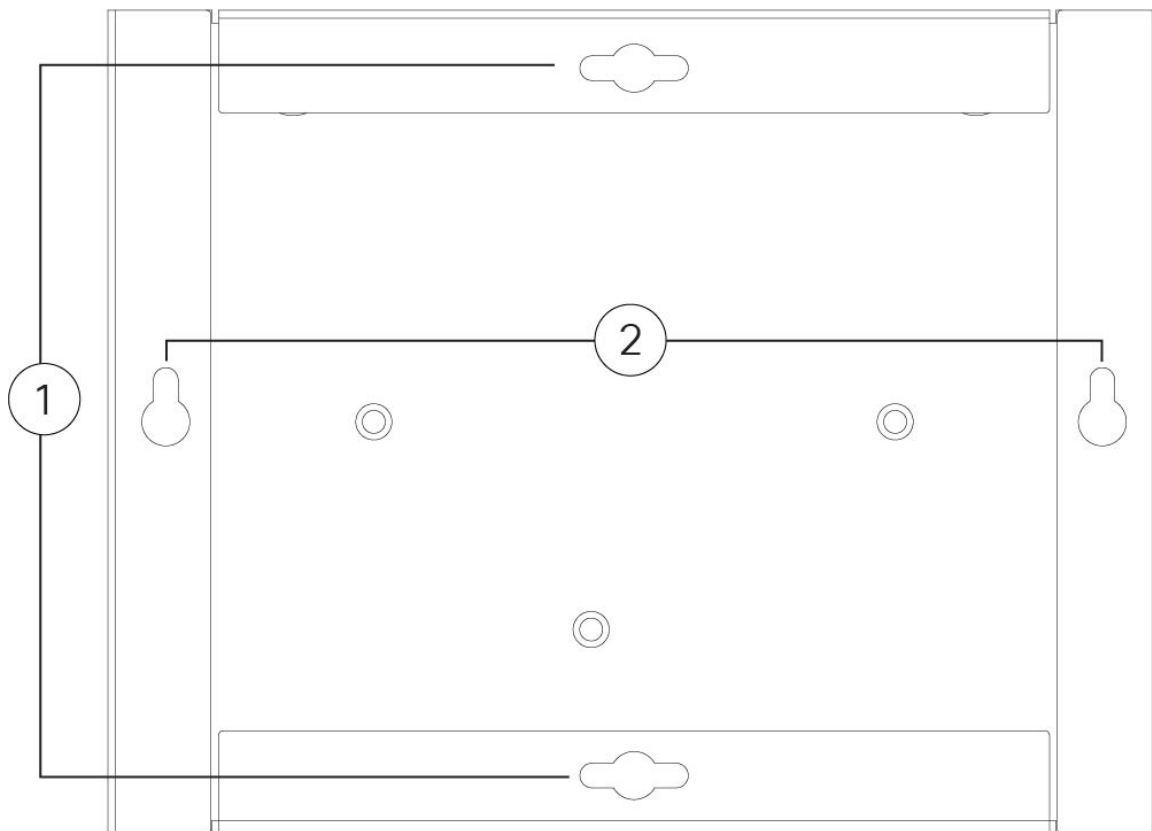
1	Horizontal mounting	2	Vertical mounting

Step 3   Attach the wall-mount bracket to the chassis using the three Phillips M3 x 6 mm screws.

Figure 27: Attach the Wall-Mount Bracket to the Chassis

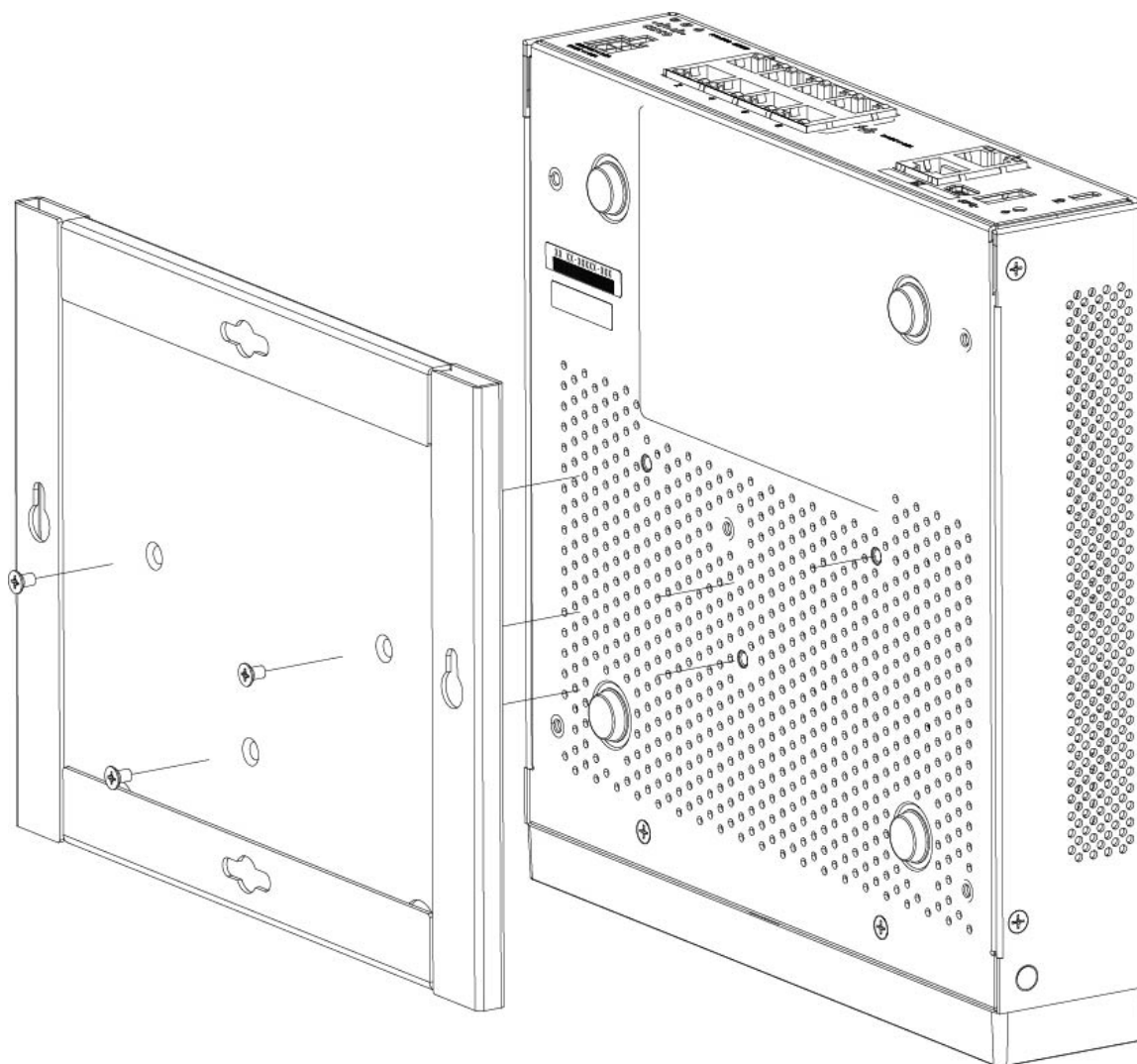

Step 4   Use the two #6 x 1¼ inch screws to drill into a stud, or use the anchors (#8 wall screw) from the dry-wall kit to hang it into dry wall.

If you are mounting the chassis onto something other than drywall, such as wood or sheet metal, anchors may not be required.

Step 5   Drill a hole into the wall at each mark that you made in Step 2.

These holes should be slightly smaller in diameter than anchors if you are using them. The recommended drill hole size is 3/16 inches.

Step 6   Insert the anchors into the holes if needed, and be sure they are properly seated.

Step 7   Fasten each screw into its anchor until it protrudes about ¼ inch.

Step 8   Pick up the chassis, align the screws in the anchors with the holes in the bottom of the wall-mount bracket, move the chassis toward the wall until the screw heads are in the wall-mount bracket, and then slide it down until it rests on the screws.

Caution   Do not mount the chassis with the rear panel facing downward. This orientation is not supported.

Step 9   To uninstall the chassis from the wall mount, slide the wall-mounted chassis from the wall, and remove the three screws from the bottom of the chassis.

What to do next

If you are installing a FIPS cover on the chassis, follow the steps in Install the FIPS Opacity Shield , on page 41.

Install the cables according to your default software configuration as described in the Cisco Firepower 1010 Getting Started Guide.

Rack-Mount the Chassis

The rack-shelf kit (part number 800-107605-01) contains the following items:

Note   There are two sets of four screws that you can use to secure the chassis to your rack. Chose the screws that fit your rack.

- Rack shelf (part number 700-122662-01)

- Sliding rack tray (part number 800-107648-01)

- Two cable guides (part number 700-122664-01)

- Six Phillips M3 x 0.5 x 10 mm screws (part number 48-0796-01); use these screws to install the cable guides.

- Six Phillips M3 x 6 mm screws (part number 48-0384-01); use these screws to secure the rack shelf onto the chassis.

- Four Phillips 12-24 x 0.75 inch screws (part number 48-0440-01); use these screws to secure the sliding-rack tray to your rack.

- Four Phillips 10-32 x 0.75 inch screws (part number 48-0441-01); use these screws to secure the sliding-rack tray to your rack.

Step 1   Install the cable guides on the sliding rack tray:

Figure 28: Attach the Cable Guides to the Sliding-Rack Tray Flange
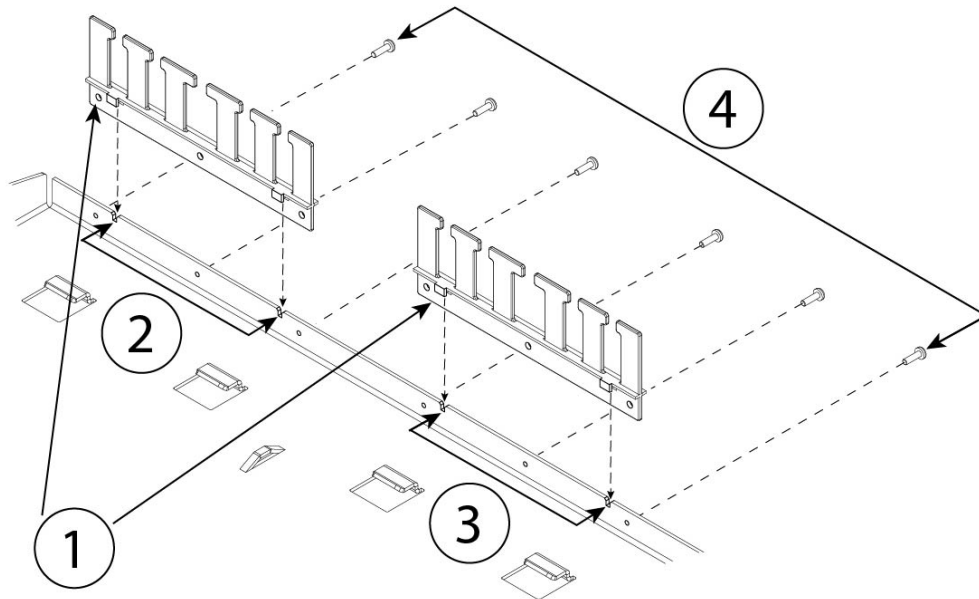
1	Two cable guides (part number 700-122664-01)	2	Left cable guide rack tray cutouts
3	Right cable guide rack tray cutouts	4	Six Phillips M3 x 0.5 x 10 mm screws (part number 48-0796-01)

a) Align the cable guides with the cutouts on the sliding-rack tray flange (see figure above).

b) At the rear of the sliding-rack tray, attach the left and right cable guides using the six Phillips M3 x 0.5 x 10 mm screws (part number 48-0796-01).

> **Note**   Drive the screws in while facing the back of the sliding-rack tray.

c) Set the sliding-rack tray aside. Continue with Step 2 to install the rack shelf on the chassis.

The figure in Step 8 shows the sliding rack tray with the cable guides attached.

Step 2   Place the chassis with the top facing down on a large, stable work area.

Step 3   Invert the rack shelf and position it on the chassis. You can mount the chassis with the front or rear panel facing front.

Figure 29: Install the Rack Shelf on the Chassis
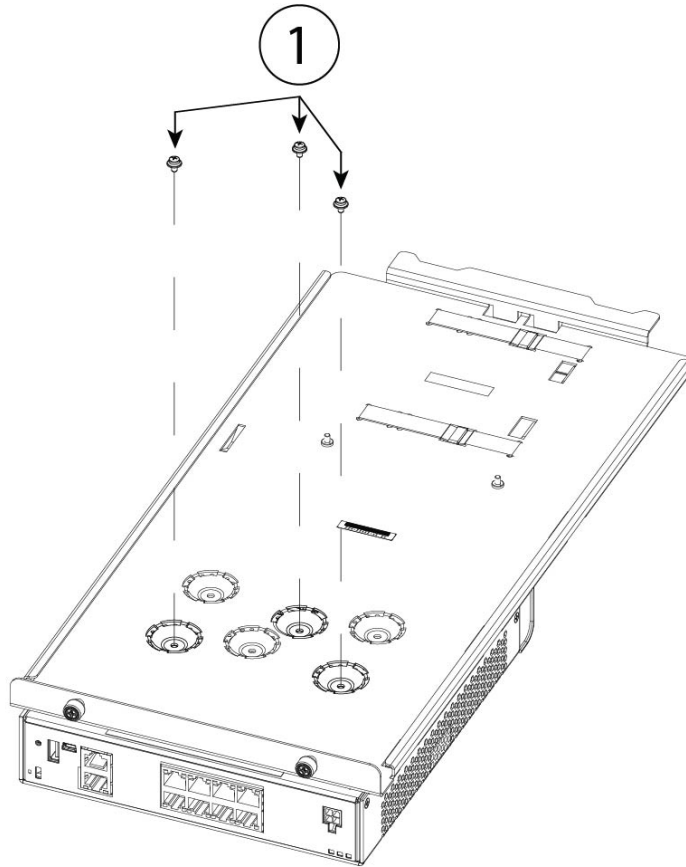
1	Three short black screws M3 x 6 mm (part number 48-0384-01)		—

Step 4   Adjust the position of the chassis and the rack shelf until the three mounting holes in the dimples in the bottom of the shelf are aligned with the mounting holes in the bottom of the chassis.
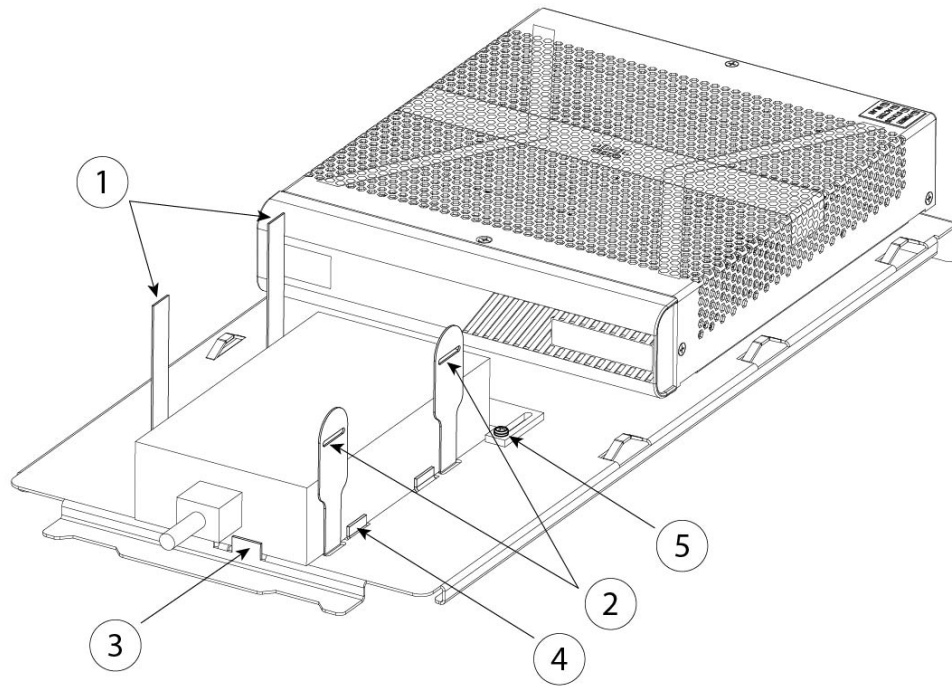
Step 5   Tighten the screws to lock the chassis into place on the rack shelf.

       Caution   Make sure you are using the short black screws (M3 x 6 mm), otherwise you will damage the chassis.

Step 6   Carefully turn the rack shelf right-side up.

Step 7   Install the power supply in the rack shelf behind the chassis.
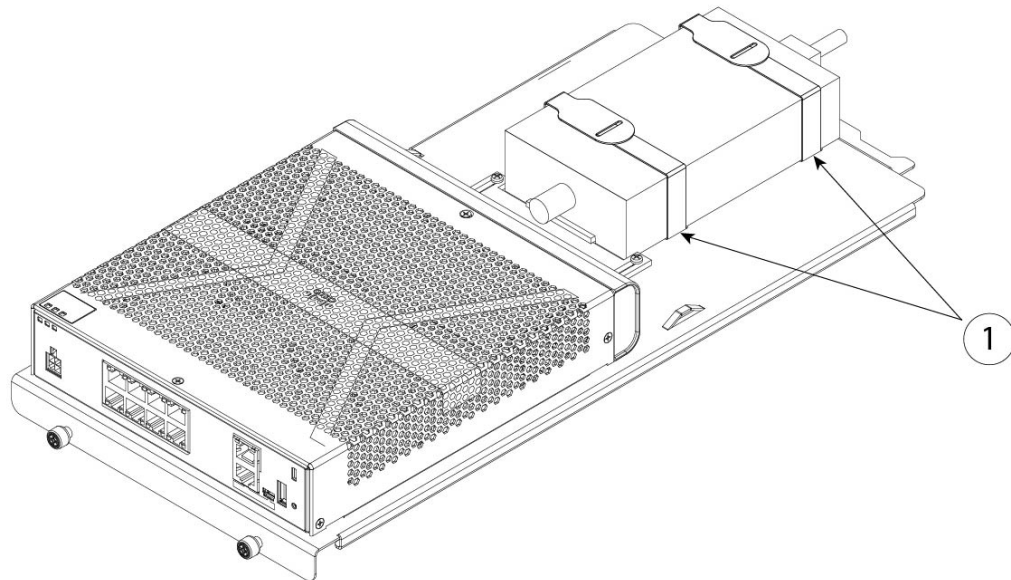
Figure 30: Install the Power Supply in the Rack Shelf

1	Velcro straps for power supply	2	Velcro straps for power supply
3	Power supply stop	4	Power supply stop
5	Rear sliding stop and screw (one of two screws on the sliding stop)		—

a) Loosen the Velcro straps and place the power supply on the rack shelf behind the chassis.

Make sure the AC inlet cord faces the rear.

b) Align the power supply to the side and rear stops.

If the rear sliding stop is not touching the power supply, loosen the two screws, slide the stop up to touch the power supply, and then retighten screws.

c) Re-engage the Velcro straps and tighten them to secure the power supply.

Figure 31: Tighten the Velcro Straps

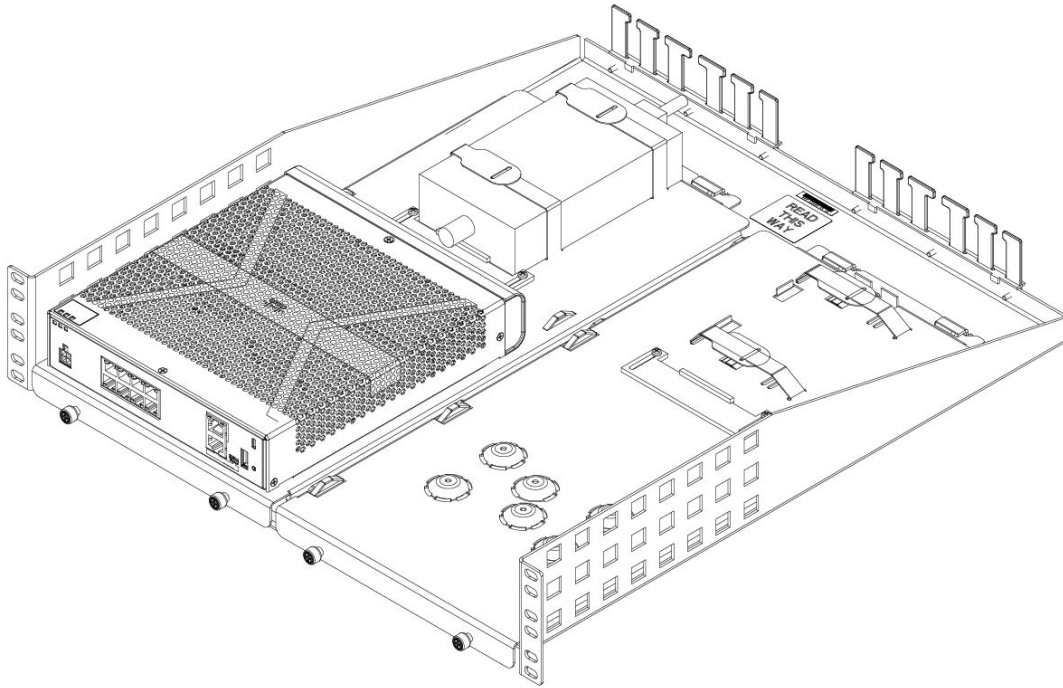| **1**	Velcro straps tightened over power supply		—

Step 8 Slide the rack shelf into the sliding-rack tray.

Figure 32: Slide the Rack Shelf into the Sliding-Rack Tray
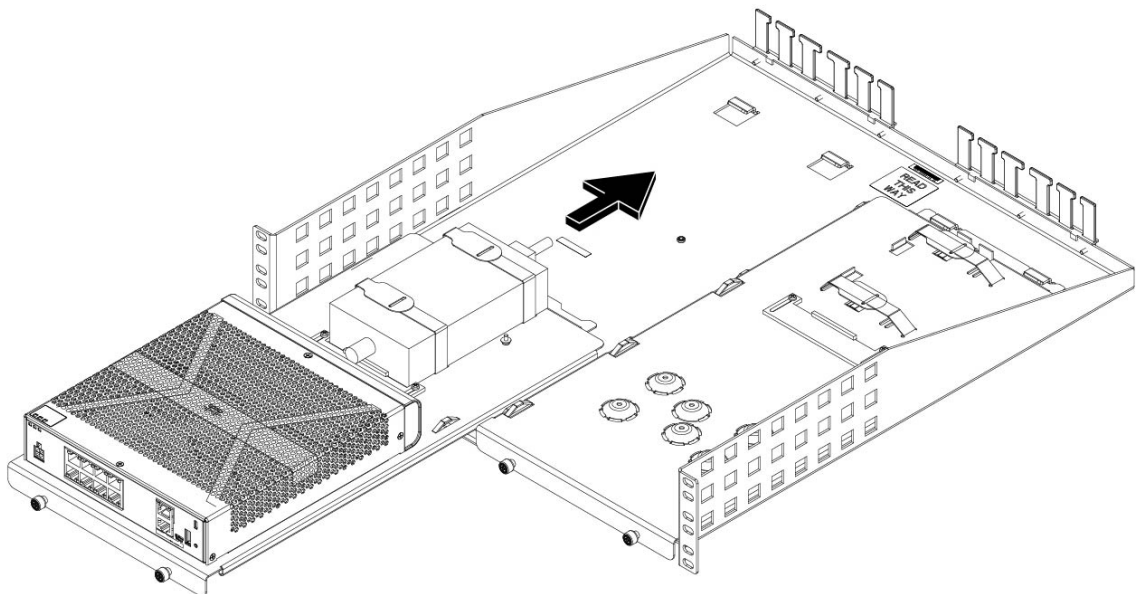
Step 9 The chassis is now installed in the rack shelf, which is installed in the sliding-rack tray. Repeat Steps 1 through 8 to install a second chassis.

Figure 33: Completed Rack Shelf/Tray Installation

Step 10 Install the sliding-rack tray into your rack using the correct screws (12-24 x 0.75 inch or 10-32 x 0.75 inch) from the rack-mount kit that fit your rack type.

You can now attach your power supply cord and run it through the cable guides.

What to do next

Install the cables according to your default software configuration as described in the Cisco Firepower 1010 Getting Started Guide.

CHAPTER 4

Connect to the Console Port

Connect to the Console Port with Microsoft Windows

You must install a USB device driver the first time a Microsoft Windows-based PC is connected to the USB console port on the chassis, otherwise the connection fails.

To uninstall the driver, use the Add Remove Programs utility or the Setup-exe program.

Note   Disconnect the console terminal before uninstalling the driver.

Step 1   Obtain the appropriate driver (Cisco_usbconsole_driver_X_X_zip, where X is a revision number) for your model from the Cisco Download Software site, USB Console Software category.

     Note   The download site redirects you to a router download section where the drivers are also applicable to Firepower products. The drivers are OS-specific and not tied to the vendor of the console cable manufacturer.

Step 2   Install the driver.

Step 3   Connect a 5-pin USB Mini B to the console port as shown in the following figure.

Figure 34: Console Port Connection
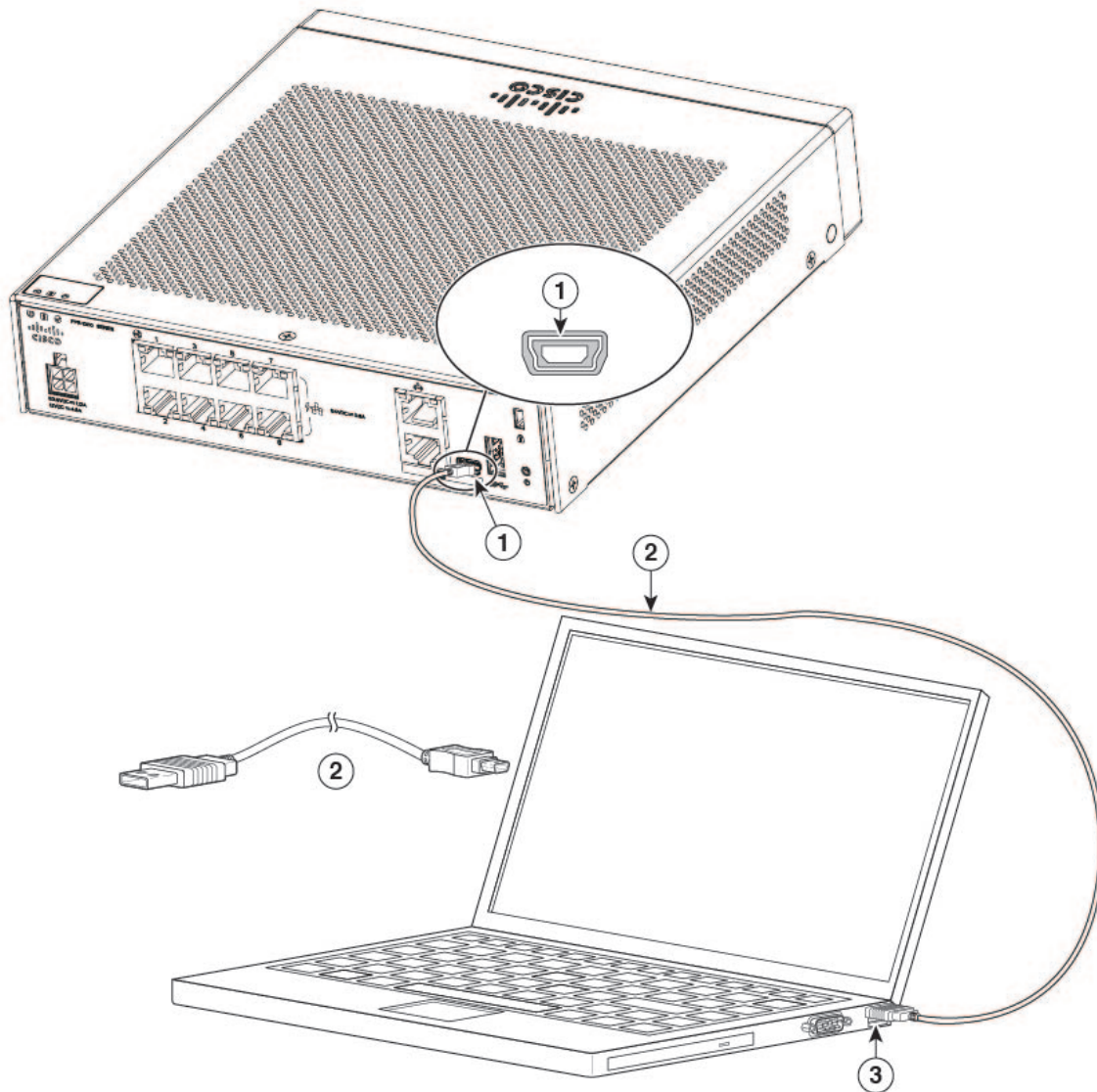
1	USB Mini B console port	2	USB Mini B to USB Type A console cable
3	USB Type A		—

Step 4 Connect the end of the cable with the DB-9 connector (or USB Type A) to the terminal or PC. If your terminal or PC has a console port that does not accommodate a DB-9 connector, you must provide an appropriate adapter for that port. The LED for the console port turns green and within a few moments the Found New Hardware Wizard appears.

Step 5 Follow the instructions to complete the driver installation.

Step 6 To communicate with the chassis, start a terminal emulator application. This software should be configured with the following parameters:

- 9600 baud
- 8 data bits

- no parity
- 1 stop bit
- no flow control

Connect to the Console Port with Mac OS X

Follow these steps to connect a Mac OS X system USB port to the console using the built-in OS X Terminal utility, or alternatively you can use a separate terminal emulator application.

Step 1   Use the Finder to go to **Applications > Utilities > Terminal**.

Step 2   Connect the OS X USB port to the chassis.

Step 3   Enter the following commands to find the OS X USB port number:

Example:

```
macbook:user$ cd /dev
macbook:user$ ls -ltr /dev/*usb*
crw-rw-rw- 1 root wheel 9, 66 Apr 1 16:46 tty.usbmodem1a21
DT-macbook:dev user$
```

Step 4   Connect to the USB port with the following command followed by the chassis USB port speed:

Example:

```
macbook:user$ screen /dev/tty.usbmodem1a21 9600
```

Step 5   Enter **Ctrl-a** followed by **d** to disconnect the OS X USB console from the Terminal window.

Connect to the Console Port with Linux

Follow these steps to connect a Linux system USB port to the console using the built-in Linux Terminal utility.

Step 1   Open the Linux Terminal window.

Step 2   Connect the Linux USB port to the chassis.

Step 3   Enter the following commands to find the Linux USB port number:

Example:

```
root@usb-suse# cd /dev
root@usb-suse /dev# ls -ltr *ACM*
crw-r--r-- 1 root root 188, 0 Jan 14 18:02 ttyACM0
root@usb-suse /dev#
```

Step 4   Connect to the USB port with the following command followed by the chassis USB port speed

Example:

```
root@usb-suse /dev# screen /dev/ttyACM0 9600
```

Step 5   To disconnect the Linux USB console from the Terminal window, enter **Ctrl-a** followed by : then **quit**.

CHAPTER 5

Installation, Maintenance, and Upgrade

Install the FIPS Opacity Shield

Note Because the FIPS opacity shield covers the serial number on the chassis, the CO should copy the serial number and store it in a secure place. The serial number is needed when you call Cisco TAC. See Serial Number Location, on page 6 for the location of the serial number.

Note You can *only* install the FIPS opacity shield with the desktop mount or wall mount. The rack mount does not support the FIPS shield. See Desktop-Mount the Chassis, on page 28 and Wall-Mount the Chassis, on page 28 for more information.

Before you begin

Caution This procedure should be performed only by the Crypto Officer (CO).

You need the following to install the FIPS opacity shield:

- #1 Phillips head screwdriver
- The following items from the FIPS kit (part number 69-100649-01):
    - One FIPS opacity shield (part number 800-106088-01)
    - Three M3 x 66 mm (part number 48-0384-01) screws used to attach the FIPS opacity shield to the chassis
    - Nine Tamper Evidence Labels (TELs) (part number 47-25553-01)

✎

| **Note**	The TELs are made of a special thin gauge vinyl with self-adhesive backing. Once the CO attaches them on the chassis, any attempt to open the chassis damages the TELs or the chassis cover. Because the TELs have nonrepeated serial numbers, the CO can inspect them for damage and compare them against the applied serial numbers to verify whether the chassis has been tampered with. TELs with curled corners, rips, and slices indicate tampering. The word "FIPS" or "OPEN" may appear if the label has been peeled back.

Step 1 Copy the serial number and store in a secure place.

Step 2 If the chassis is mounted on a wall, uninstall it by following Steps 9-10 in .

Step 3 Install the FIPS cover by holding the chassis right-side up and sliding the chassis into the FIPS cover front panel first.

Figure 35: Install Chassis into FIPS Cover
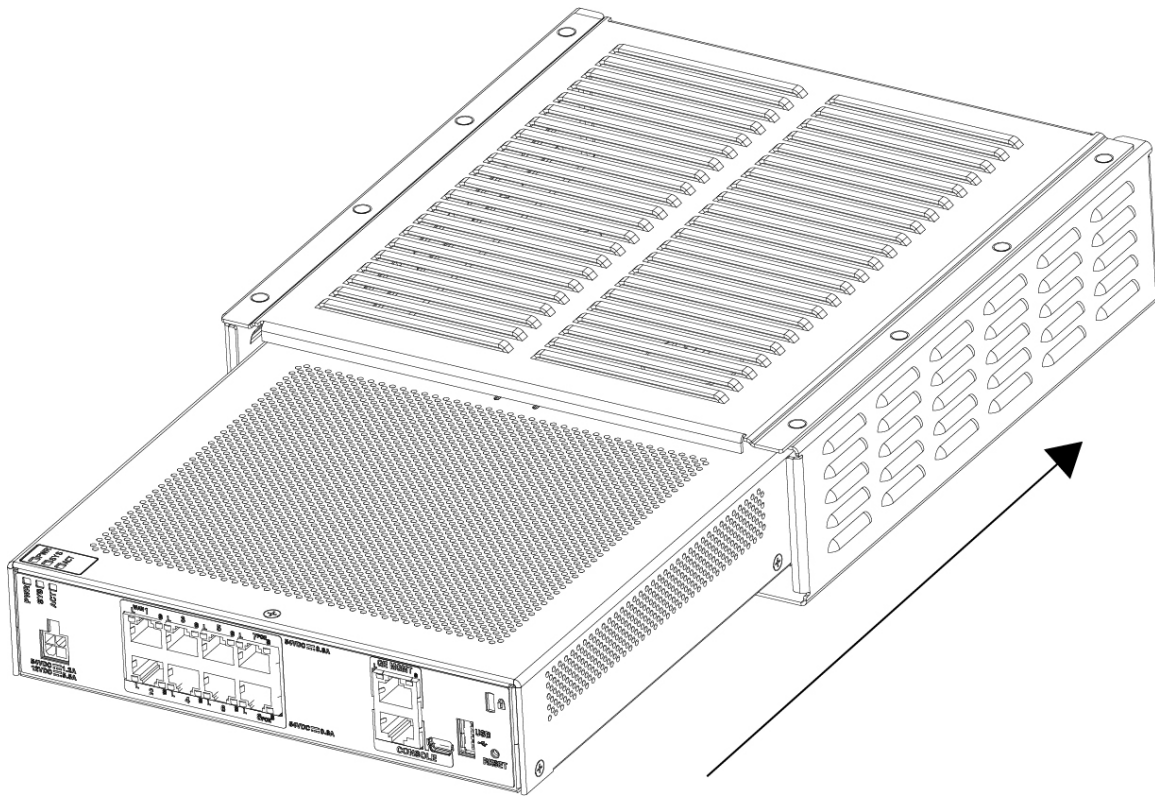
Step 4 Turn the chassis with the FIPS cover installed over and install the three screws.

Figure 36: Install Screws on the Bottom of the FIPS Cover
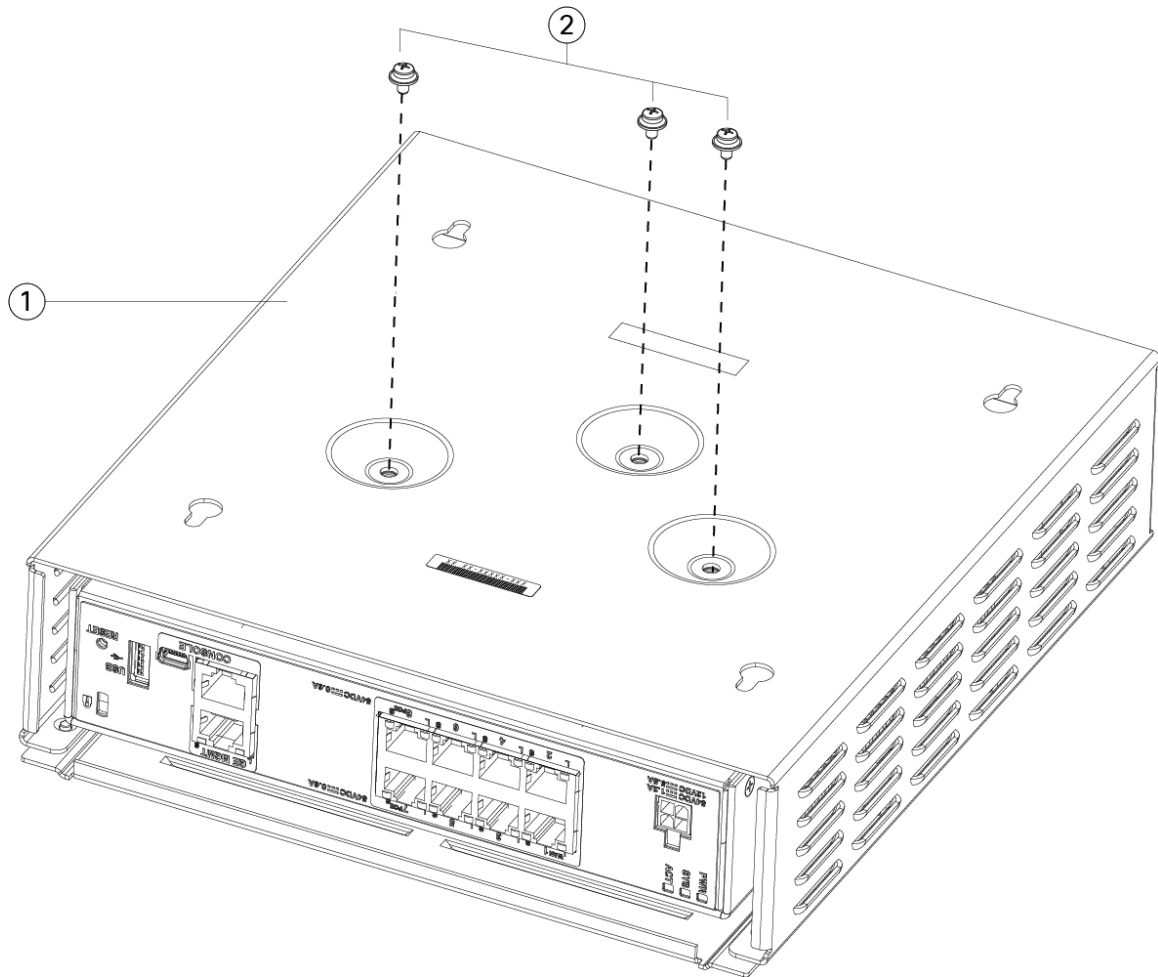
1	FIPS opacity shield	2	Three M3 x 66 mm Phillips screws

Step 5 Before you attach the TELs, clean the chassis and FIPS cover of any grease, dirt, or oil with alcohol-based cleaning pads.

Step 6 Attach four of the TELs, three on the bottom of the chassis over the screws and one on the front of the chassis. See the figure below for the correct placement. The figure shows the bottom of the chassis where you place three of the TELs. Allow the TELs to cure for a minimum of 12 hours.

> **Caution** Any deviation in the placement of the TELs means the chassis is not in FIPS mode.

Figure 37: TELS Placement on the Rear Panel and Bottom of the FIPS Cover
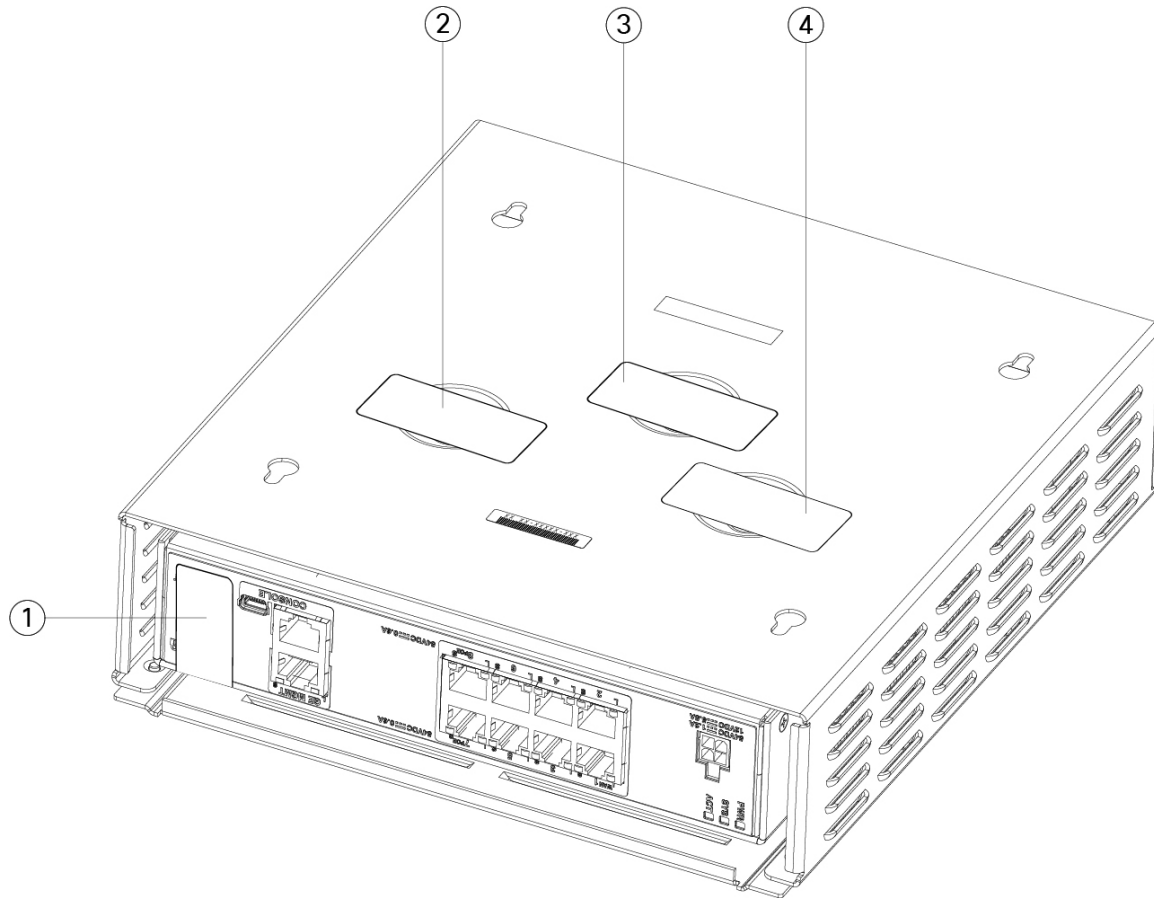
1	TEL 1 on the rear panel of the chassis	2	TEL 2 on the bottom left of the FIPS cover over the screw
3	TEL 3 on the bottom center of the FIPS cover over the screw	4	TEL 4 on the bottom right of the FIPS cover over the screw

Step 7   Reinstall the chassis in the wall mount if you are using a mount. See Wall-Mount the Chassis, on page 28 for the procedure.

Step 8   Attach the power cable to the chassis and connect it to an electrical outlet.

Step 9   Press the power switch on the rear panel.

Step 10   Check the power LED on the front panel. See Status LEDs, on page 8 for a description of the power LED. Solid green indicates that the chassis is powered on.

Step 11   Place the chassis in FIPS mode.

See the following procedures for how to place the chassis in FIPS mode:

• See the "Security Certifications Compliance" chapter in the Firepower Management Center Configuration Guide, Version 6.7 for the procedure to enable FIPS mode.

• See the **fips enable** command in the Cisco ASA Series Command Reference, A-H Commands for the ASA procedure to enable FIPS mode.

What to do next

See the Cisco Firepower 1010 Getting Started Guide for further configuration information.