# Cisco ASA 5506-X Hardware Installation Guide

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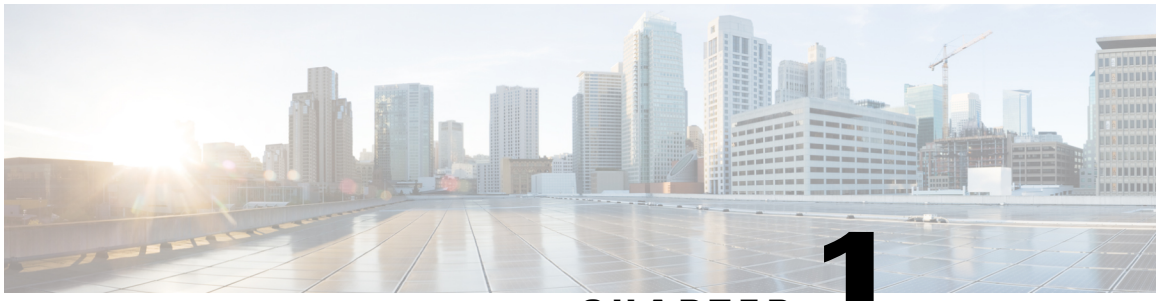

CHAPTER 1

# About the ASA 5506-X

The Cisco ASA 5506-X adaptive security appliance is part of the ASA 5500-X of next-generation mid-range ASAs and is built on the same security platform as the rest of the ASA family.

This next-generation ASA delivers unprecedented levels of defense against threats to the network with deeper web inspection and flow-specific analysis, improved secure connectivity via end-point security posture validation, and voice and video over VPN support. It also provides enhanced support for intelligent information networks through improved network integration, resiliency, and scalability.

This ASA is a smaller form-factor chassis, intended primarily for desktop or wall-mounting, although one or two can be mounted in a single rack shelf. The ASA has a standard 1 RU chassis. See http://www.cisco.com/c/en/us/products/security/asa-5500-series-next-generation-firewalls/index.html to compare the performance metrics and capabilities of the 5500-X ASAs.

**Note** Before beginning any of the procedures described in this book, be sure to read the Regulatory Compliance and Safety Information for the Cisco ASA 5506-X appliances (found at http://www.cisco.com/go/asa5506x-compliance) and follow proper safety procedures.


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- Front Panel, page 2
- Rear Panel, page 2
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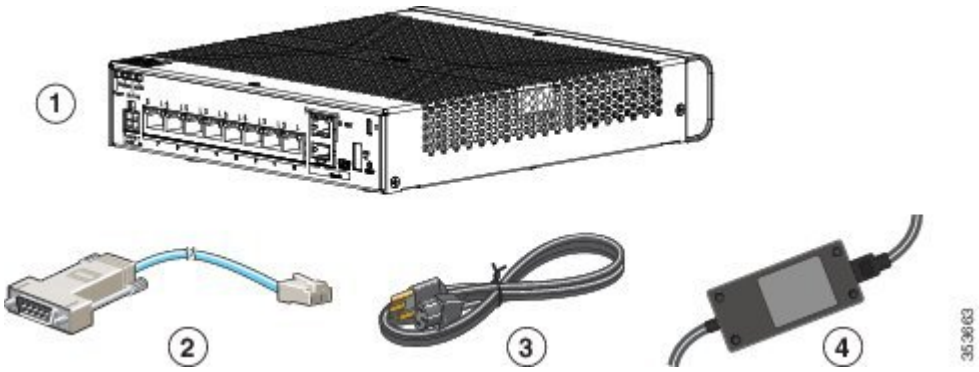
- Network Ports, page 5
- Console Ports, page 5
- Internal and External Flash Storage, page 6
- Solid State Drive, page 7
- Power Supply, page 7
- Hardware Specifications, page 7

# Package Contents

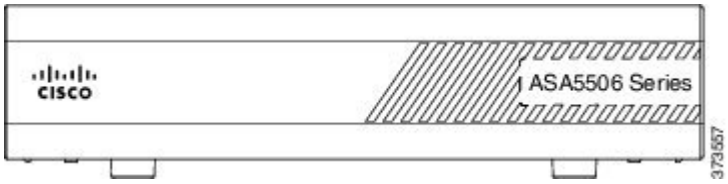
This section lists the package contents for the ASA. Note that the contents are subject to change and your exact contents might contain additional or fewer items.




| | | | |
|---|---|---|---|
| **1** | Chassis | **2** | Blue Console Cable PC Terminal Adapter |
| **3** | Power cord | **4** | Brick power supply |

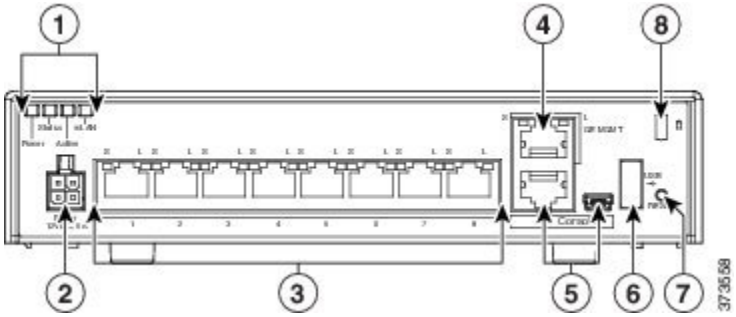
# Front Panel

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




# Rear Panel

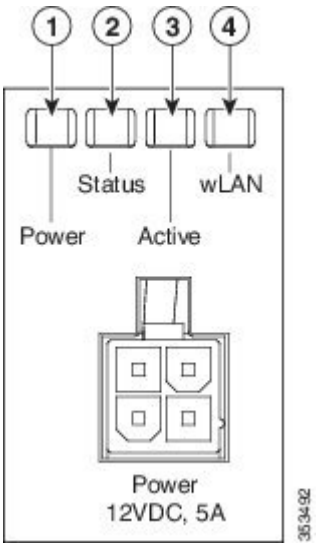
The following figure shows the rear panel.




| | LED | Description |
|---|---|---|
| **1** | Status LEDs | The locations and meanings of the status LEDs are described in Status Lights, on page 4. |
| **2** | Power cord socket | The chassis power-supply socket. See Power Supply, on page 7 for more information about the chassis power supply. (The ASA is powered on when you plug in the DC power supply.) |
| **3** | Network data ports | Eight Gigabit Ethernet RJ-45 (8P8C) network I/O interfaces. The ports are numbered (from 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. See Network Ports, on page 5 for additional information. |
| **4** | Management port | A Gigabit Ethernet interface restricted to network management access only. Connect with an RJ-45 cable. |
| **5** | Console ports | Two serial ports, a mini USB Type B, and a standard RJ-45 (8P8C), are provided for management access via an external system. See Console Ports, on page 5 for additional information. |
| **6** | USB port | A standard USB Type A port is provided that allows the attachment of an external device, such as mass storage. See Internal and External Flash Storage, on page 6 for additional information. |
| **7** | Reset button | A small recessed button that if pressed for longer than three seconds resets the ASA to its default “as-shipped” state following the next reboot. Configuration variables are reset to factory default. However, the flash is not erased and no files are removed.<br>**Note** You can use the **service sw-reset-button** to disable the reset button. The default is enabled. |
| **8** | Lock slot | The slot accepts a standard Kensington T-bar locking mechanism for securing the ASA. |

# Status Lights

Facing the rear of the chassis, the status lights 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 lights are at the top sides of each network port. The following figure shows the lights on the top left edge.




| | LED | Description |
|---|---|---|
| **1** | Power | Power supply status:<br>• Unlit – Power supply off.<br>• Solid green – Power supply on.<br>See Power Supply, on page 7 for additional power information specific to your specific ASA. |
| **2** | Status | System operating status:<br>• Green – Normal system function.<br>• Amber – Critical alarm indicating one or more of the following:<br>• Major failure of a hardware or software component.<br>• Over-temperature condition.<br>• Power voltage outside the tolerance range. |

| | LED | Description |
|---|---|---|
| **3** | Active | Status of the failover pair:<br>• Solid green – Failover pair operating normally. The LED is green always unless the ASA in an HA pair.<br>• Amber – When the ASA is in an HA pair, the LED is amber for the Standby unit.<br>• Unlit – Failover is not operational. |
| **3** | Wireless | Not in use on the ASA 5506-X. |
| **4** | Network port status | On the rear panel, a pair of LEDs (Link status and connection Status) for each of the eight Gigabit Ethernet network ports, and the Gigabit Ethernet Management port.<br>Link status (L):<br>• Unlit – No link, or port is not in use.<br>• Solid green – Link established.<br>• Flashing green – Link activity.<br>Connection-speed status (S):<br>• One blink every three seconds – 10 Mbps.<br>• Two rapid blinks – 100 Mbps.<br>• Three rapid blinks – 1000 Mbps. |

# Network Ports

There are eight 10/100/1000 baseT Ethernet network ports on the ASA 5506-X. Each RJ-45 (8P8C) copper port supports auto MDI/X as well as auto-negotiation for interface speed, duplex, and other negotiated parameters, and are MDI/MDIX compliant.

Looking at the rear of the ASA, where the ports are located, port 1 is on the left, and port 8 is on the right, next to the console and management ports. Each port is accompanied by a pair of LEDs, one each for link status (L) and connection status (S). The ports are named and numbered Gigabit Ethernet 1/1 through Gigabit Ethernet 1/8.

# Console Ports

The ASA has two external console ports, a standard RJ-45 port and a Mini USB Type 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 command-line interface

(CLI) to configure your ASA through either serial console port by using a terminal server or a terminal emulation program on a computer.

See Connect to a Console Terminal or PC, on page 19 for the procedure to install a console terminal.

### RJ-45 Port

The 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.

### Mini USB Type B Port

The Mini USB Type 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 19 for information on installing the driver.

# Internal and External Flash Storage

The ASA contains one internal USB flash drive, and a standard USB Type A port that you can use to attach an external device. The USB port can provide output power of 5 volts, up to a maximum of 500 mA (5 USB power units).

### Internal USB Device

An embedded eUSB device is used as the internal flash; it is identified as *disk0*.

### External USB Drive (Optional)

You can use the external Type A USB port to attach a data-storage device. The external USB drive identifier is *disk1*. When the ASA 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.

If you insert a USB drive with more than one partition, only the first partition is mounted.

### FAT-32 File System

The ASA only supports FAT-32-formatted file systems for the internal eUSB and external USB drives. 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.

# Solid State Drive

The ASA 5506-X ships with an SSD installed that provides storage support. The SSD has 50 GB of useable space and is not field-replaceable. You must return the entire ASA to Cisco for drive replacement. The SSD is used by the software; there is no user access to the SSD.

# Power Supply

The ASA 5506-X ships with a 12-V brick power supply that provides 60 W. See Power Supply Considerations, on page 13 for additional site-related power information.

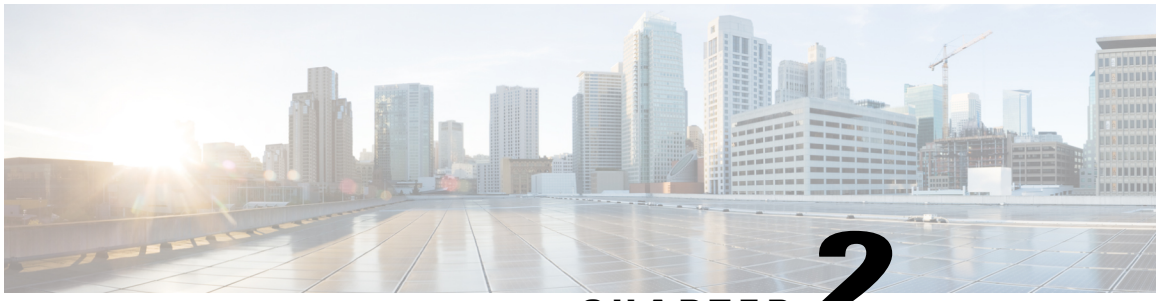
# Hardware Specifications

The following table contains hardware specifications for the ASA.

| | |
|---|---|
| **Physical Specifications** | |
| Mounting | Desk mountable; see Desktop Mount the ASA, on page 15 for more information.<br>Rack mountable in a rack tray. You can place two chassis side by side. See Rack Mount the ASA, on page 17 for more information.<br>Wall mountable; see Wall Mount the ASA, on page 15 for more information. |
| Dimensions | 7.87 x 9.23 x 1.94 in (19.99 x 23.44 x 4.93 cm) including the feet. |
| Weight | 4 lb |
| **Memory** | |
| DRAM | Total: 4 GB<br>Allotted to FW/VPN: 1.8 GB<br>Allotted to Module: 2.2 GB |
| Internal Flash | Total: 8 GB |
| **Power** | 60 W |
| **Environment** | |
| Temperature | Operating: 0°C to 40°C (32°F to 104°F)[1]<br>Nonoperating: -25°C to 70°C (-13°F to 158°F) |
| Relative humidity | Operating: 90%<br>Nonoperating: 10% to 90% |

| | |
|---|---|
| Maximum altitude | Operating: 3048 m (10,000 ft)<br>Nonoperating: 4572 m (15,000 ft) |

1 Derate the maximum operating temperature 1.5 degrees C per 1000 ft above sea level.



CHAPTER 2

# Prepare for Installation

This chapter prepares you to install your ASA, and contains the following topics:


- Installation Warnings, page 9
- Position the ASA, page 10
- Safety Recommendations, page 11
- Site Environment , page 12


# Installation Warnings

Be sure to read the Regulatory Compliance and Safety Information document (http://www.cisco.com/go/asa5506x-compliance) before installing the ASA.

Take note of the following warnings:

**Installation Instructions Warning**

Read all installation instructions before connecting the system to a power source. (Statement 1004)

**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. (Statement 12)

**Jewelry Removal Warning**

Before working on equipment that is connected to a power source, remove jewelry (including rings, necklaces, and watches). Metal objects will heat when connected to power and ground, and can cause serious burns or weld the metal object to the terminals. (Statement 43)

**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 receive a shock. (Statement 94)

**Work During Lightning Warning**

Do not work on the system, or connect or disconnect cables during periods of lightning. (Statement 1001)

**Short-Circuit Protection 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)

**Short-Circuit Protection 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)

**SELV Circuit Warning**

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. (Statement 1021)

**Ground Conductor Warning**

This equipment must be grounded. 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 not certain that suitable grounding is available. (Statement 1024)

**Product Disposal Warning**

Ultimate disposal of this product should be handled according to all national laws and regulations. (Statement 1040)

**Compliance with Local and National Electrical Codes Warning**

Installation of the equipment must comply with local and national electrical codes. (Statement 1074)

**TN Power Warning**

The device is designed to work with TN power systems. (Statement 19)

**Circuit Breaker (15A) Warning**

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15A U.S. (240 VAC, 10A international) is used on the phase conductors (all current-carrying conductors). (Statement 13)

**Grounded Equipment Warning**

This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use. (Statement 39)

**Safety Cover Requirement**

The safety cover is an integral part of the product. Do not operate the unit without the safety cover installed. Operating the unit without the cover in place will invalidate the safety approvals and pose a risk of fire and electrical hazards. (Statement 117)

# Position the ASA

Whether positioning the ASA on a desktop, on a non-rack closet shelf, or mounting it on a wall, consider the following:

- Be sure to choose an area where the ASA is out of the way to make sure it is not bumped or accidentally dislodged. The appliance 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 appliance 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 ASA, with plenty of slack and yet tucked away, so they cannot be inadvertently unplugged.

# Safety Recommendations

Use the information in the following sections to help ensure your safety and to protect the ASA. This information may not address all potentially hazardous situations in your working environment, so be alert and exercise good judgment at all times.

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

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

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 ASA within its marked electrical ratings and product usage instructions.

- Install the ASA in compliance with local and national electrical codes as listed in the Regulatory Compliance and Safety Information document (see http://www.cisco.com/go/asa5506x-compliance).

## Prevent Electrostatic Discharge Damage

Electrostatic discharge (ESD) occurs when electronic components are improperly handled, and it can damage equipment and impair electrical circuitry, resulting in intermittent or complete failure.

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 anti-static strap, which should be between one and 10 megohms.

# Site Environment

You can place the chassis on a desktop, mount it on a wall, or on a rack shelf. 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 more than one chassis on top of one another. This disrupts cooling air flow to the ASAs and causes damage to the hardware.

See Hardware Specifications, on page 7 for information about physical specifications.

When planning the site layout and equipment locations, consider the information in the next section to help avoid equipment failures and reduce the possibility of environmentally caused shutdowns. 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. Ensure 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 the ESD-prevention procedures described previously to avoid damage to equipment. Damage from static discharge can cause immediate or intermittent equipment failure.

# Power Supply Considerations

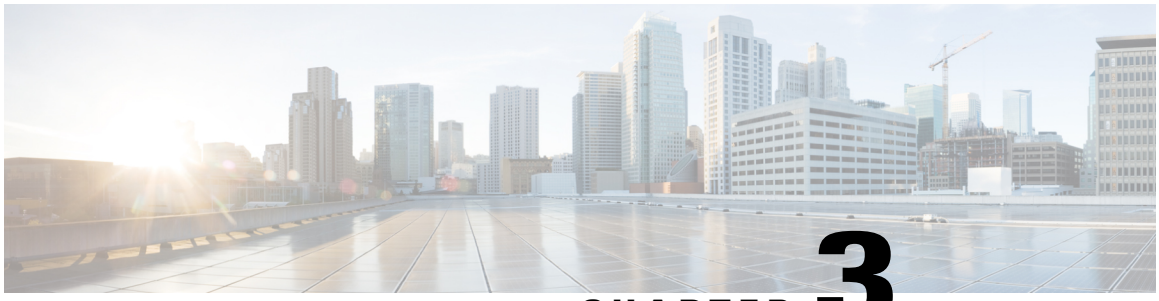
When installing the ASA, consider the following:

- Check the power at the site before installing the chassis to ensure that it is “clean” (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 ASA chassis does not have a user-selectable operating range. Refer to the label on the chassis for the correct appliance input-power requirement.
- Install an uninterruptible power source for your site, if possible.

# Equipment Rack Configuration

Consider the following when planning an equipment-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.
- 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.



CHAPTER 3

# Mount and Connect the ASA

This section describes positioning or mounting the ASA, and connecting its cords and cables. It contains the following sections:


- Mount the ASA, page 15
- Connect Cables, Turn on Power, and Verify Connectivity, page 18
- Connect to a Console Terminal or PC, page 19


## Mount the ASA

This section describes how to mount the ASA, and contains the following topics:

**Note** Do not remove the rubber feet included with the ASA because they are needed for proper cooling for all mounting orientations.

### Desktop Mount the ASA

You can mount the ASA 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 ASA or within .5 inch of the sides and back, so that nothing interferes with cooling. Do not remove the rubber feet included with the ASA. They are also needed for proper cooling.

### Wall Mount the ASA

Follow these steps to mount your ASA on a wall.

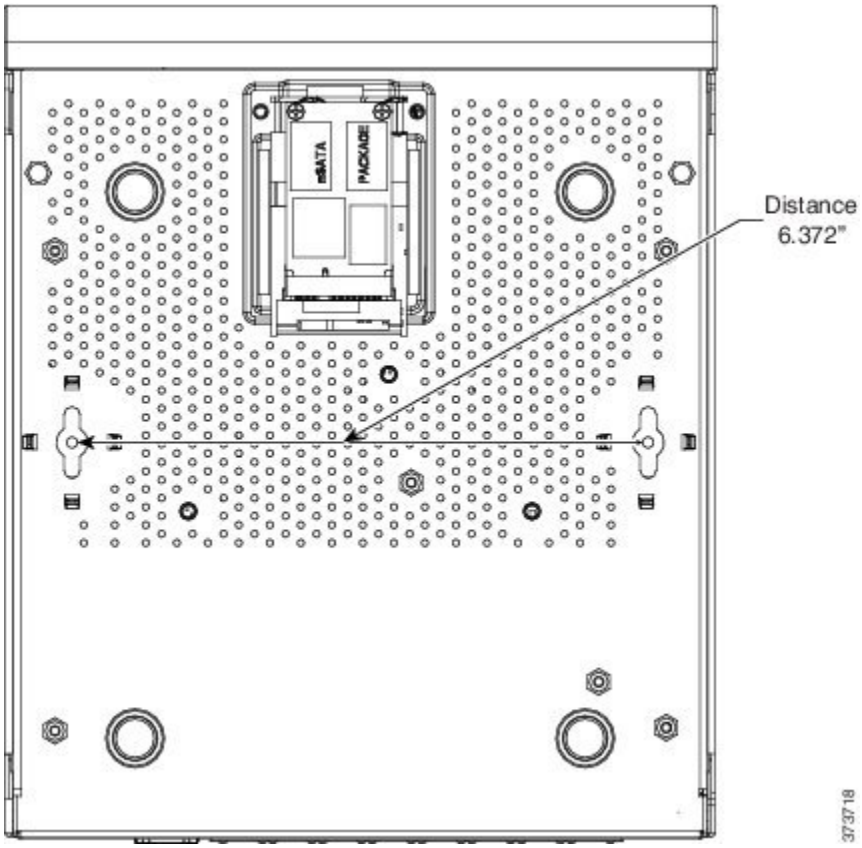
**Step 1** Choose a location on the desired wall for the ASA.

**Step 2** Use the two Cisco-provided screws and anchors.

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

**Step 3** Use a pencil, ruler and level to mark locations for the two mounting screws.
The width and length of the ASA are 7.87 x 9.23 inches ( 20 x 23.44 cm). The mounting holes in the chassis are in the middle length-wise (that is, 6.372 inches from front and back), while the holes are inset from the opposite edges 0.75 inches (1.9 cm).

Thus, you need to make two level marks 6.37, or approximately 6-3/8, inches (16.18 cm) apart.




**Step 4** Drill a hole into the wall at each mark.
These holes should be slightly smaller in diameter than your anchors.

**Step 5** Insert the anchors into the holes and be sure they are properly seated.

**Step 6** Fasten each screw into its anchor until it protrudes about 3/8 inch (0.95 cm).

**Step 7** Pick up the ASA, align the screws in the anchors with the holes in the bottom of the chassis, move the ASA toward the wall until the screw heads are in the chassis, and then slide the ASA down until it rests on the screws.
You can only mount the chassis with the front panel oriented toward either the ceiling or the floor. Wall mounting in other orientation is not supported.

### What to Do Next

You can now install the cables and power cord, as described in Connect Cables, Turn on Power, and Verify Connectivity, on page 18.

# Rack Mount the ASA

Follow these steps to mount the ASA to a rack-mount shelf.

**Step 1** Place the ASA upside down on a large, stable work area. If you are installing two ASAs in the shelf, place the second ASA beside the first, also upside down.

**Step 2** Invert the sliding trays and position them on top of the ASA(s) such that the front of the device(s) and the front of the tray are in the same direction.

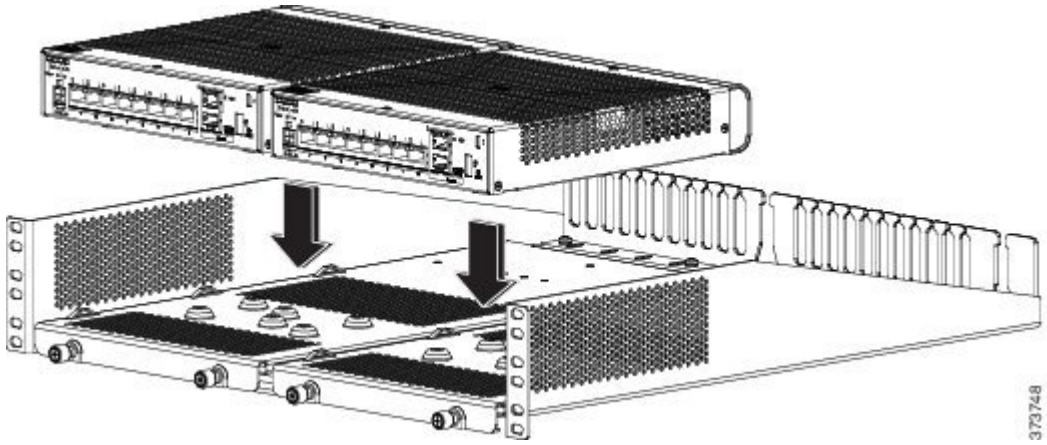
**Step 3** Flip the tray right side up and mount the power supply clamp to the tray using the two screws.

**Step 4** Install the power supply in the clamp.

**Step 5** Slide the trays back into the shelf.

**Step 6** Adjust the position of the first ASA and the tray 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 ASA.

**Step 7** Insert mounting screws through the shelf and screw it into the ASA.




**Step 8** If mounting a second ASA, repeat Steps 3 and 4.

**Step 9** Carefully turn the shelf over and place it on your work surface.

**Step 10** Slide the power-supply adapter block into the brackets near the back of the rack-mount tray. Repeat for the second ASA if necessary.

**Step 11** Attach the rack-mount tray to the rack using the supplied screws.

### What to Do Next

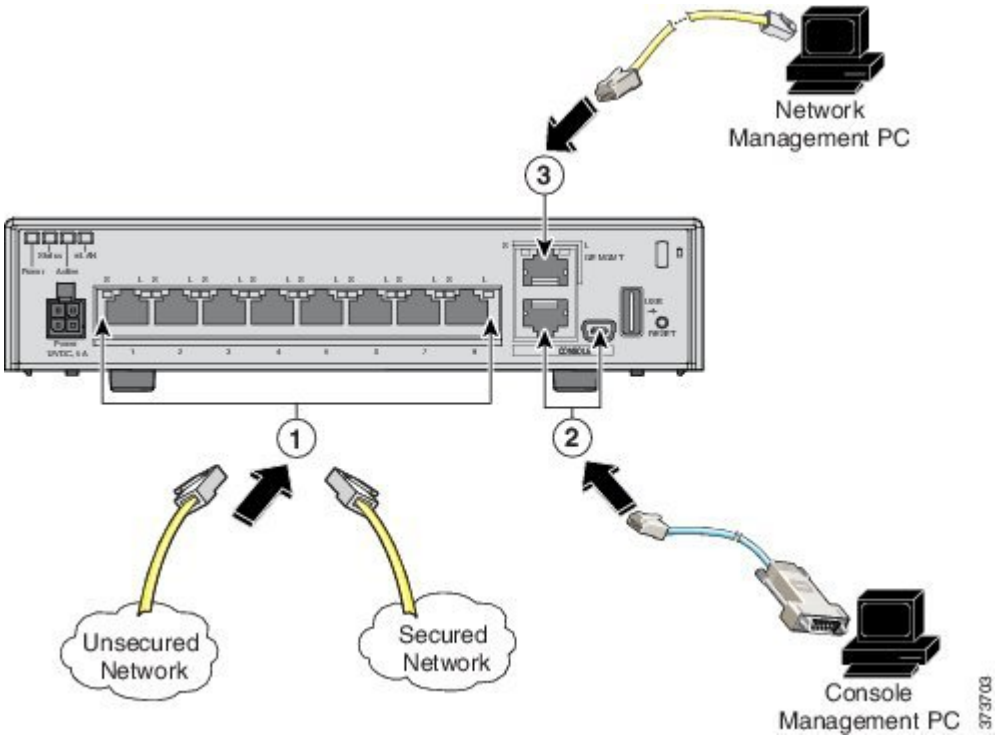
You can now install the cables and power cord, as described in Connect Cables, Turn on Power, and Verify Connectivity, on page 18.

# Connect Cables, Turn on Power, and Verify Connectivity

After positioning or mounting the ASA, follow these steps to connect cables, turn on power, and verify connectivity:

**Step 1** Connect the network cables:

a) Management interface – Using this Management 1/1 Gigabit Ethernet port, you can connect a management computer directly with an Ethernet cable, or you can connect the computer and the ASA to the same management network. Be sure the PC is configured to obtain an IP address using DHCP.
You can configure any of the Gigabit Ethernet interfaces to be a management-only interface using the **management-only** command. However, you cannot disable management-only mode on the Management 1/1 interface.
The following figure shows how to connect the network cables.




| | | | |
|---|---|---|---|
| **1** | Gigabit Ethernet data interface (RJ-45) | **2** | Console port (RJ-45 or Mini USB Type B) |
| **3** | Management 1/1 interface (RJ-45) | | |

b) (Optional) Console port – For use with the CLI. Connect a computer or terminal server using a serial console cable to either the RJ-45 or Mini USB Type B 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 Mini USB Type B port, the RJ-45 port

becomes active. See Connect to a Console Terminal or PC, on page 19 for specific instructions for connecting the console port.

c) Gigabit Ethernet ports – For the network interfaces; use standard RJ-45 Ethernet cables.

**Step 2** Connect the power cord to the ASA, and plug the other end to your power source.

**Note** The ASA 5506-X does not have an on/off switch; the device powers on when you plug it into a power source.

**Step 3** Check the Status LED on the ASA chassis.
When it is solid green, the ASA has passed power-on diagnostics.

### What to Do Next

You can now proceed to configuration of the ASA, as described in the Quick Start Guide, found at http://www.cisco.com/go/asadocs.

# Connect to a Console Terminal or PC

The serial ports provide administrative access to the ASA either with a console terminal or a PC. To configure the ASA through the CLI, you must establish a connection between the ASA console port and either a terminal or a PC.

This section describes how to connect to a console terminal or a PC, and contains the following topics:

## 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 serial port on the ASA, otherwise the connection fails.

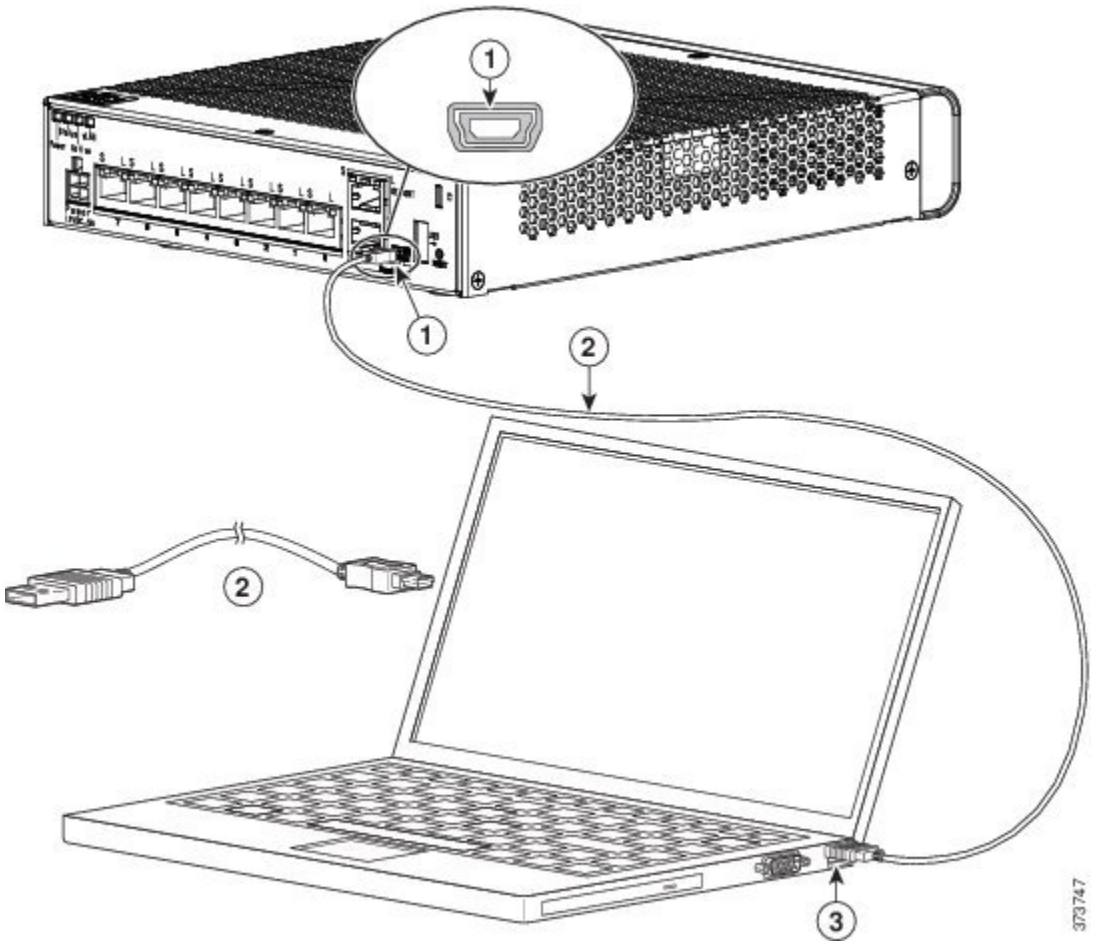
To uninstall the driver, use the Add Remove Programs utility or the Setup-exe program.

**Note** Disconnect the ASA 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 ASA model from the Cisco Download Software site, USB Console Software category.

**Step 2** Install the driver.

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




| | | | |
|---|---|---|---|
| **1** | Mini USB Type B console port | **2** | Mini USB Type 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 ASA, 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 ASA.

**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 ASA USB port speed:

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

**Step 5** Enter **Ctrl-z** followed by **Ctrl-** 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 ASA.

**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 ASA 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**.