



# Catalyst 6500 Series Wireless LAN Services Module Installation and Verification Note

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**Product number: WS-SVC-WLAN-1-K9**

This document provides installation procedures for the Catalyst 6500 series Wireless LAN Services Module and contains these sections:

- [Front Panel Description, page 2](#)
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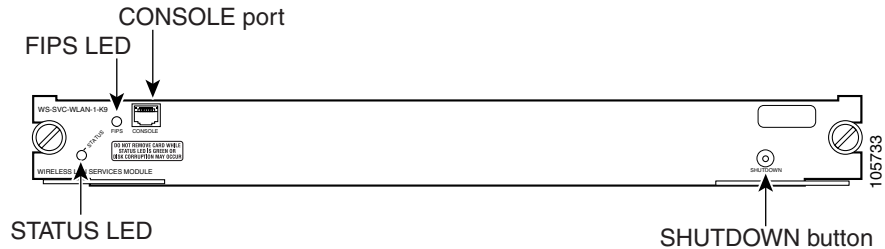
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# Front Panel Description

The Wireless LAN Services Module front panel (Figure 1) includes a STATUS LED, a Federal Information Processing Standards (FIPS) LED, a SHUTDOWN button, and a CONSOLE port.

**Figure 1** Wireless LAN Services Module Front Panel



These sections describe the Wireless LAN Services Module front panel:

- [CONSOLE Port, page 2](#)
- [STATUS LED, page 2](#)
- [FIPS LED, page 3](#)
- [SHUTDOWN Button, page 3](#)

## CONSOLE Port

The CONSOLE port is used for the initial configuration of the Wireless LAN Services Module.



**Note**

The initial Wireless LAN Services Module configuration must be made through a direct connection to the CONSOLE port. After the initial configurations, you can make an SSH or Telnet connection to the module to further configure the module.

## STATUS LED

The STATUS LED indicates the operating states of the module. Table 1 describes the STATUS LED operation.

**Table 1** STATUS LED Description

Color	State	Description
Green	On	All diagnostic tests pass. The module is receiving power.
Red	On	A diagnostic other than an individual port test failed.

**Table 1** STATUS LED Description (Continued)

Color	State	Description
Orange	On	Indicates one of three conditions: <ul style="list-style-type: none"><li>• The module is running through its boot and self-test diagnostic sequence.</li><li>• The module is disabled.</li><li>• The module is in the shutdown state.</li></ul>
	Off	The module power is off.

## FIPS LED

The FIPS LED currently is not used.

## SHUTDOWN Button



### Caution

Do not remove the Wireless LAN Services Module from the switch until the module has shut down completely and the STATUS LED is orange. You can damage the module if you remove it from the switch before it completely shuts down.

To avoid corrupting the Wireless LAN Services Module compact flash memory card, you must correctly shut down the Wireless LAN Services Module before you remove it from the chassis or disconnect the power. You can shut down the module by entering the **hw-mod module mod shutdown** command in privileged mode from the router CLI.

If the Wireless LAN Services Module fails to respond to this command, shut down the module by pressing the SHUTDOWN button on the front panel.

The shutdown procedure may require several minutes. The STATUS LED turns off when the module shuts down.

See the [“Removing the Wireless LAN Services Module” section on page 9](#) for detailed procedures on shutting down the Wireless LAN Services Module.

## System Requirements

Before you install the Wireless LAN Services Module into the Catalyst 6500 series switch, refer to the *Release Notes for Catalyst 6500 Series Wireless LAN Mobility Module* to make sure that the switch meets the hardware and software requirements.

# Safety Overview

Safety warnings appear throughout this publication in procedures that, if performed incorrectly, may harm you. A warning symbol precedes each warning statement.



Warning

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## 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

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## SAVE THESE INSTRUCTIONS

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Warning

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**Only trained and qualified personnel should be allowed to install, replace, or service this equipment.** Statement 1030

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Warning

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**Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing.** Statement 1034

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Warning

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**Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; 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.** Statement 1029

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Warning

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**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

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## Preparing to Install the Wireless LAN Services Module



Note

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Before installing the Wireless LAN Services Module, you must install the Catalyst 6500 series switch chassis and at least one supervisor engine. For information on installing the switch chassis, refer to the *Catalyst 6500 Series Switch Installation Guide*.

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Before installing the Wireless LAN Services Module, make sure that the following items are available:

- Catalyst 6500 series switch chassis
- Management station that is available through a console connection to perform configuration tasks

# Required Tools



**Warning**

**Only trained and qualified personnel should be allowed to install, replace, or service this equipment.** Statement 1030

These tools are required to install the Wireless LAN Services Module into the Catalyst 6500 series switch:

- Flat-blade screwdriver
- Wrist strap or other grounding device
- Antistatic mat or antistatic foam

## Installing the Wireless LAN Services Module



**Note**

Before installing the Wireless LAN Services Module, you must install the Catalyst 6500 series switch chassis and at least one supervisor engine. For information on installing the switch chassis, refer to the *Catalyst 6500 Series Switch Installation Guide*.

This section describes how to install the Wireless LAN Services Module into the Catalyst 6500 series switch.



**Note**

All modules, including the supervisor engine (if you have redundant supervisor engines), support hot swapping. You can add, replace, or remove modules without interrupting the system power or causing other software or interfaces to shut down. For more information about hot-swapping modules, refer to the *Catalyst 6500 Series Switch Module Installation Guide*.



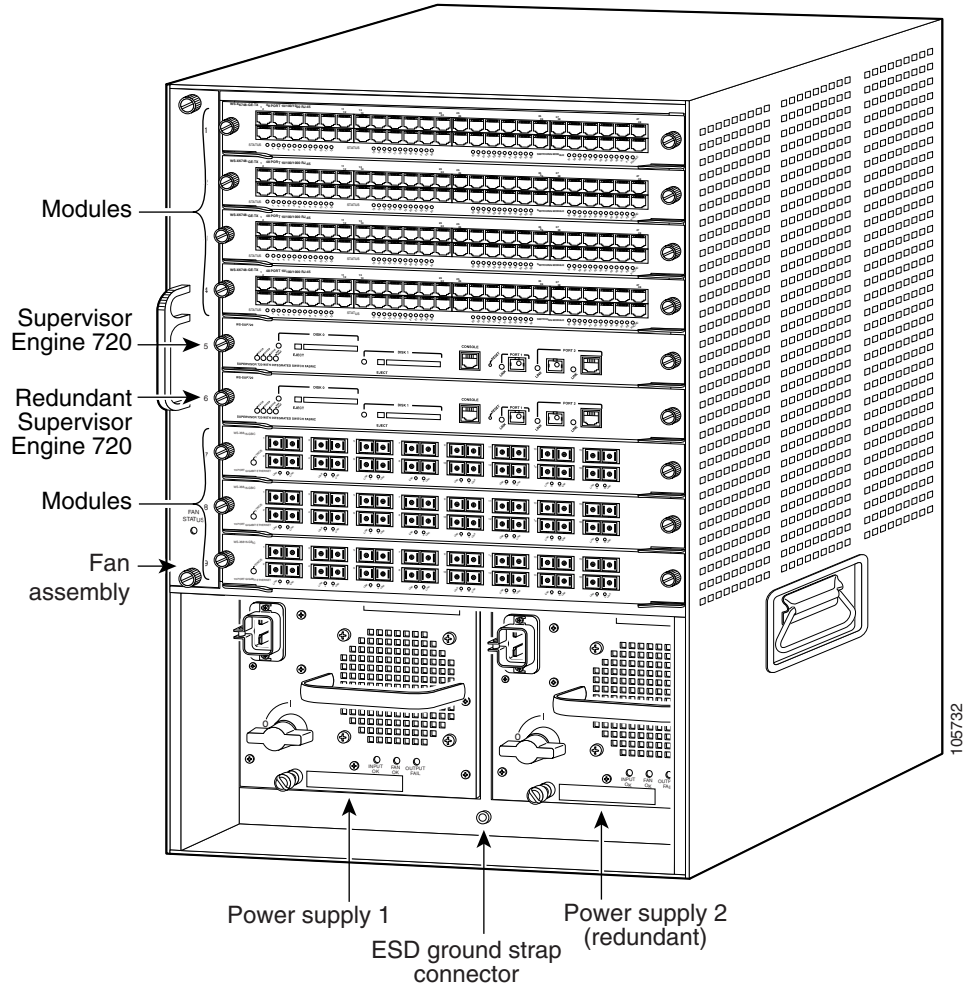
**Warning**

**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.** Statement 94

To install the Wireless LAN Services Module into the Catalyst 6500 series switch, perform these steps:

- Step 1** Make sure that you take the necessary precautions to prevent ESD damage.
- Step 2** Choose a slot for the Wireless LAN Services Module. See [Figure 2](#) for the slot numbers on a Catalyst 6500 series switch.

**Figure 2 Slot Numbers on Catalyst 6500 Series Switches**



**Step 3** Check that there is enough clearance to accommodate any interface equipment that you will be connecting directly to the supervisor engine or switching module ports.



**Note** If possible, place switching modules between the empty slots that contain only switching-module filler plates (Cisco part number 800-00292-01).



**Warning**

**Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; 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.**

Statement 1029

- Step 4** Loosen the captive installation screws that secure the switching module filler plate (or an existing switching module) to the desired slot.
- Step 5** Remove the switching module filler plate (or an existing switching module).
- Step 6** Hold the handle of the Wireless LAN Services Module with one hand, and place your other hand under the carrier support. Do not touch the printed circuit boards or connector pins.
- Step 7** Place the Wireless LAN Services Module in the slot. Align the notch on the sides of the switching module carrier with the groove in the slot. (See [Figure 3](#).)
- Step 8** Keep the Wireless LAN Services Module at a 90-degree angle to the backplane and carefully slide the Wireless LAN Services Module into the slot until the switching module faceplate contacts the ejector levers. (See [Figure 4](#).)
- Step 9** Using the thumb and forefinger of each hand, simultaneously push in the left and right levers to fully seat the Wireless LAN Services Module in the backplane connector.



**Caution**

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Always use the ejector levers when installing or removing the Wireless LAN Services Module. A module that is partially seated in the backplane will cause the system to halt and subsequently crash.

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**Note**

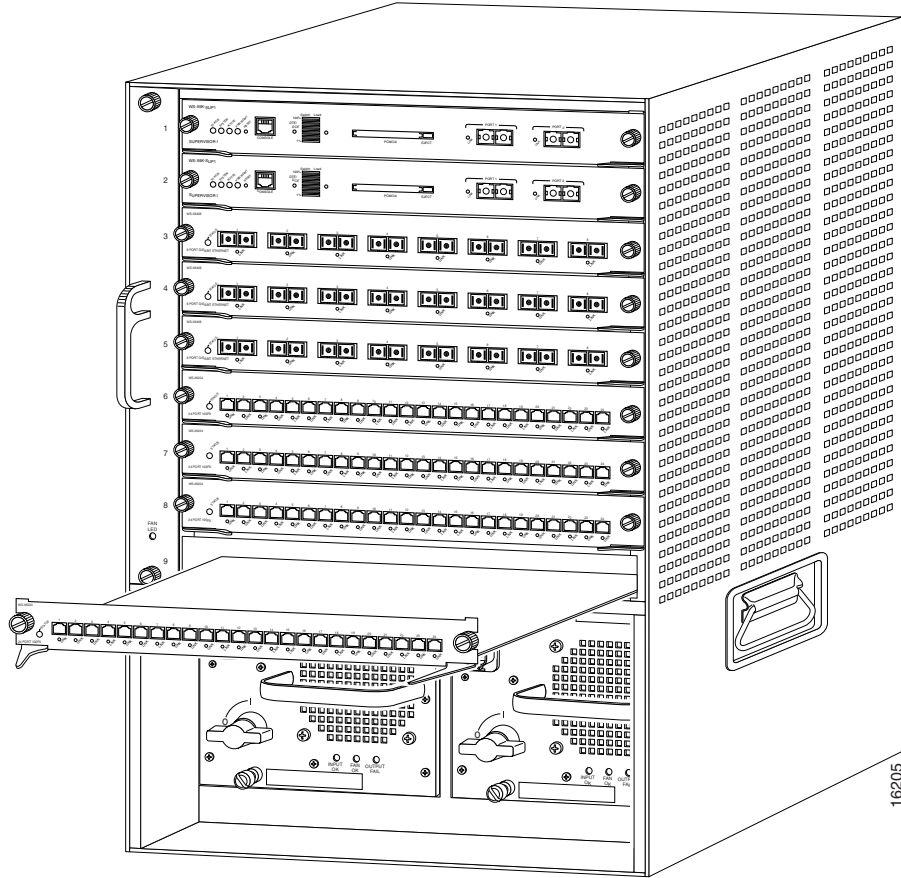
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If you perform a hot swap, the console displays the message “Module *n* has been inserted.” This message does not appear if you are connected to the Catalyst 6500 series switch through a Telnet session.

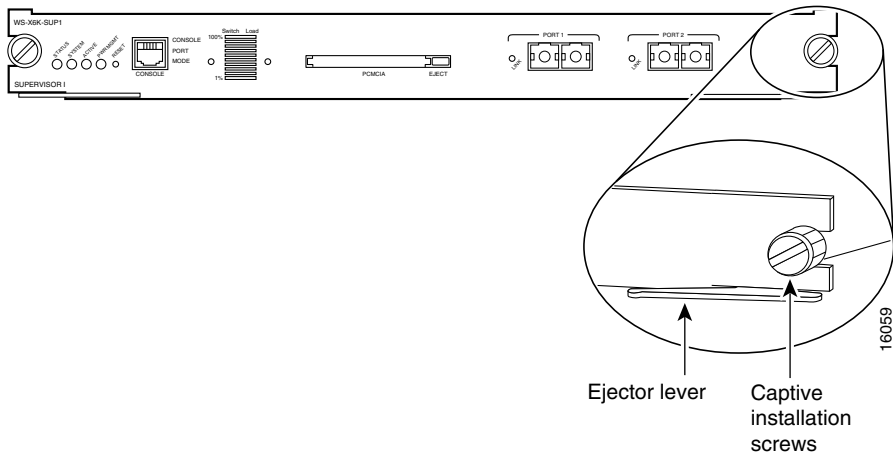
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- Step 10** Use a screwdriver to tighten the captive installation screws on the left and right ends of the Wireless LAN Services Module.

**Figure 3** *Installing Modules in the Catalyst 6500 Series Switch*



**Figure 4** *Ejector Levers and Captive Installation Screws*



This completes the Wireless LAN Services Module installation procedure.



# Verifying the Installation

When you install the Wireless LAN Services Module into the Catalyst 6500 series switch, the module goes through a boot sequence that requires no intervention. At the successful conclusion of the boot sequence, the green STATUS LED will light and remain on. If the STATUS LED is not green, or is a different color, see [Table 1 on page 2](#) to determine the status of the module.

Enter the **show module** command to verify the installation:

```
Router# show module
Mod Ports Card Type                               Model                               Serial No.
-----
  1   16 SFM-capable 16 port 10/100/1000mb RJ45 WS-X6516-GE-TX SAL064893ST
  2    6 Firewall Module                               WS-SVC-FWM-1   SAD0707017D
  4    8 Intrusion Detection System                 WS-SVC-IDSM-2   SAD072001DF
→  5    1 Wireless LAN Module                       WS-SVC-WLAN-1-K9 SAD074901K2
  6    2 Supervisor Engine 720 (Active)           WS-SUP720-BASE SAD07260096

...

Mod Online Diag Status
-----
  1 Pass
  2 Pass
  4 Pass
→  5 Pass
  6 Pass
Router#
```

# Removing the Wireless LAN Services Module

This section describes how to remove the Wireless LAN Services Module from the Catalyst 6500 series switch.



Do not remove the Wireless LAN Services Module from the switch until the module has shut down completely and the STATUS LED is orange or off. You can damage the module if you remove it from the switch before it completely shuts down.



**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.** Statement 94

To remove the Wireless LAN Services Module, perform these steps:

**Step 1** Shut down the module by one of these methods:

- In privileged mode from the router prompt, enter the **hw-mod module *mod* shutdown** command.



**Note** If you enter this command to shut down the module, you will have to enter the following commands in config mode to restart (power down, and then power up) the module:

```
Router# no power enable module mod
Router# power enable module mod
```

- If the module does not respond to any commands, press the SHUTDOWN button located on the front panel of the module.



**Note** Shutdown may require several minutes.

**Step 2** Verify that the Wireless LAN Mobility Module shuts down. Do not remove the module from the switch until the STATUS LED is off or orange.

**Step 3** Use a screwdriver to loosen the captive installation screws at the left and right sides of the module.

**Step 4** Grasp the left and right ejector levers. Simultaneously, pull the left lever to the left and the right lever to the right to release the module from the backplane connector.

**Step 5** As you pull the module out of the slot, place one hand under the carrier to support it. Avoid touching the module itself.

**Step 6** Carefully pull the module straight out of the slot, keeping one hand under the carrier to guide it. Keep the module at a 90-degree orientation to the backplane (horizontal to the floor).

**Step 7** Place the removed module on an antistatic mat or antistatic foam.



**Warning**

**Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; 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.** Statement 1029

**Step 8** If the slot is to remain empty, install a module filler plate to keep dust out of the chassis and to maintain proper airflow through the module compartment.

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## Related Documentation

For more detailed installation and configuration information, refer to the following publications:

- *Release Notes for Catalyst 6500 Series Wireless LAN Services Module*
- *Catalyst 6500 Series Switch Installation Guide*
- *Catalyst 6500 Series Switch Module Installation Guide*
- *Catalyst 6500 Series Switch Cisco IOS Software Configuration Guide*
- *Catalyst 6500 Series Switch Cisco IOS Command Reference*
- *Regulatory Compliance and Safety Information for the Catalyst 6500 Series Switches*
- *Site Preparation and Safety Guide*

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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