



Catalyst 6500 Series Supervisor Engine 2 Boot ROM and Bootflash Device Upgrade Installation Note

Part Number: WS-X6K-S2-KIT=

This publication describes how to determine if you need to upgrade the boot ROM on your Catalyst 6500 series Supervisor Engine 2 (WS-X6K-S2-MSFC2) and also describes how to upgrade the boot ROM and bootflash device.

This upgrade kit contains the boot ROM upgrade and bootflash device upgrade. The boot ROM upgrade will upgrade the Supervisor Engine 2 boot ROM version from 6.1(2) to 6.1(3). The bootflash device upgrade will upgrade the bootflash device from 16 MB to 32 MB.



Note

The default bootflash configuration on WS-X6K-S2-MSFC2 shipped since late January 2001, is 32 MB. Enter the **show version** command to determine what size bootflash device is installed on the Supervisor Engine 2.



Note

With WS-X6K-S2-KIT= installed, Catalyst software releases earlier than 6.1(2) support only 16 MB of the bootflash device capacity.



Caution

The supervisor engine is a required system component. If only one supervisor engine is present, removing it while the system is operating causes the system to halt.



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**Note**

The 32-MB upgrade bootflash device contains bootable versions of Catalyst software and Cisco IOS software to assist with restarting and configuring your system. Before you upgrade the bootflash device, refer to the following publications for information on configuring and booting your system after you have upgraded the bootflash device:

- The *Upgrading Software Images on the Catalyst 6000/6500 Series Switches* publication at this URL: http://www.cisco.com/en/US/products/hw/switches/ps708/products_configuration_example09186a0080116ff0.shtml
- For systems running Cisco IOS software, refer to the “System Software Upgrade Instructions” section in the *Release Notes for Cisco IOS Release 12.2(9)YO4 on the Catalyst 6500 Series and Cisco 7600 Series Supervisor Engine and MSFC* publication at this URL: http://www.pluscom.ru/cisco_product/cc/td/doc/product/lan/cat6000/relnotes/ol_2864.htm

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Safety Overview

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



Warning

IMPORTANT SAFETY INSTRUCTIONS

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

SAVE THESE INSTRUCTIONS



Warning

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

Checking the Boot ROM Version on the Supervisor Engine

These sections describe how to check the boot ROM version on the supervisor engine:

- [Checking the Boot ROM Version on the Supervisor Engine with Cisco IOS Software, page 3](#)
- [Checking the Boot ROM Version on the Supervisor Engine with Catalyst Software, page 4](#)

Checking the Boot ROM Version on the Supervisor Engine with Cisco IOS Software

To check the boot ROM version number on the Supervisor Engine 2, follow these steps:

-
- Step 1** With the Supervisor Engine 2 installed in the switch, and with the switch up and running, enter the **show module mod** command. (Refer to the *Catalyst 6500 Series Switch Module Installation Guide* for installation instructions.)
- Step 2** Check the Fw version. The Fw version number is the Supervisor Engine 2 boot ROM version. If the Supervisor Engine 2 boot ROM version is release 6.1(2), you must upgrade the boot ROM.

This example shows how to check the boot ROM version on the Supervisor Engine 2 in slot 1:

```
Router# show module 1

Mod Ports Card Type                               Model                               Serial No.
-----
1    2    Catalyst 6000 supervisor 2 (Active)      WS-X6K-SUP2-2GE                      SAD04450LF1

Mod MAC addresses                               Hw   Fw       Sw       Status
-----
1    0001.6461.39c0 to 0001.6461.39c1  1.1  6.1(2)  6.1(1)  Ok

...

Router#
```

In this example, the Supervisor Engine 2 boot ROM version is release 6.1(2).

Checking the Boot ROM Version on the Supervisor Engine with Catalyst Software

To check the boot ROM version number on the Supervisor Engine 2, follow these steps:

- Step 1** With the Supervisor Engine 2 installed in the switch, and with the switch up and running, enter the **show module mod** command. (Refer to the *Catalyst 6500 Series Switch Module Installation Guide* for installation instructions.)
- Step 2** Check the Fw version. The Fw version number is the Supervisor Engine 2 boot ROM version. If the Supervisor Engine 2 boot ROM version is release 6.1(2), you must upgrade the boot ROM. This example shows how to check the boot ROM version on the Supervisor Engine 2 in slot 1:

```
Console> show module 1

Mod Slot Ports Module-Type                               Model                               Sub Status
-----
1    1    2    1000BaseX Supervisor      WS-X6K-SUP2-2GE                      yes ok

Mod Module-Name          Serial-Num
-----
1                          SAD03436055

Mod MAC-Address(es)                               Hw   Fw       Sw
-----
1    00-30-80-f7-a5-06 to 00-30-80-f7-a5-07  1.0  6.1(2)  6.1(1)
```

In this example, the Supervisor Engine 2 boot ROM version is release 6.1(2).

Required Tools

These tools are required to upgrade the Supervisor Engine 2 boot ROM:

- Antistatic mat or foam pad to support the removed Supervisor Engine 2
- Programmable logic controller chip (PLCC) extractor tool (included with this upgrade kit)
- 3/16-inch flat-blade screwdriver for the captive installation screws on the Supervisor Engine 2
- Number 1 Phillips screwdriver for the screws and cap nut that fasten the MSFC2 to the supervisor engine
- Your own ESD-prevention equipment or the disposable grounding wrist strap included with all upgrade kits, field-replaceable units (FRUs), and spares

Removing the MSFC2



Caution

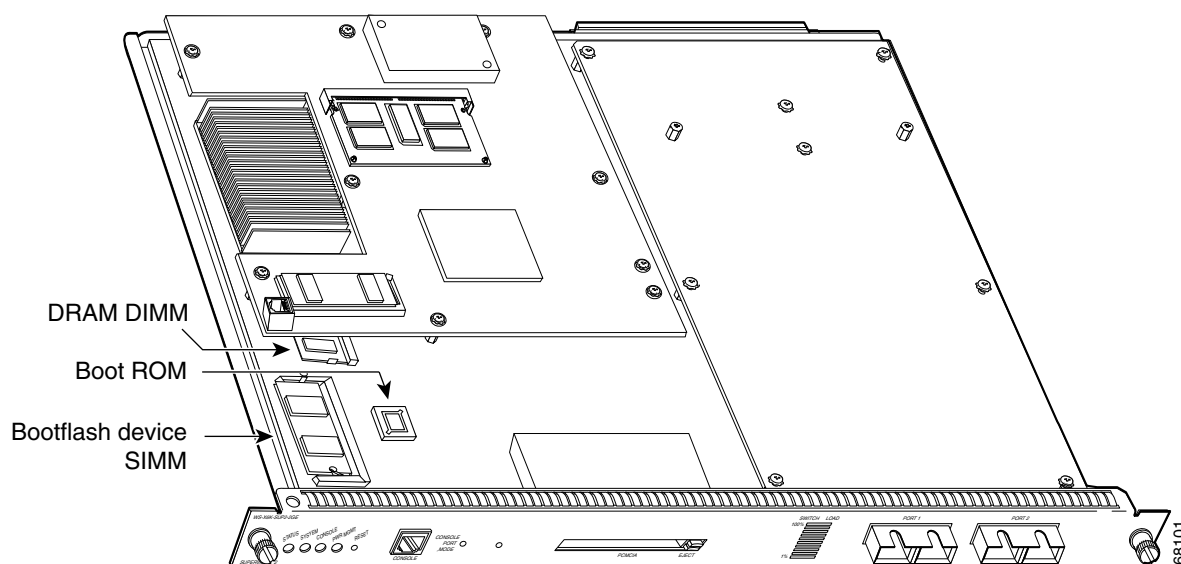
Always use an ESD wrist strap when handling modules or coming into contact with internal components.



Note

The MSFC2s shipped after November 2001 are physically smaller than the previous MSFC2s. (See [Figure 1](#).) You do not have to remove this MSFC2 from the supervisor engine to access the boot ROM or bootflash device. If you have this type of MSFC2 installed on the supervisor engine, proceed to the [“Upgrading the Supervisor Engine 2 Boot ROM”](#) section on [page 7](#) to begin the upgrade procedure.

Figure 1 Supervisor Engine 2 with MSFC2 Shipped After November 2001



Step 5 Hold the top edge of the MSFC2 with your right hand and the bottom-left edge with your left hand (see [Figure 2](#)). Gently lift the MSFC2 with both hands simultaneously and remove the MSFC2 from the Supervisor Engine 2.



Caution Use care not to damage the connectors on the Supervisor Engine 2. If you damage a connector, you will have to return the Supervisor Engine 2 to Cisco for repair.

Step 6 Place the MSFC2 on an antistatic mat or antistatic foam pad.

Proceed to the “[Upgrading the Supervisor Engine 2 Boot ROM](#)” section on [page 7](#) to install the boot ROM.

Upgrading the Supervisor Engine 2 Boot ROM

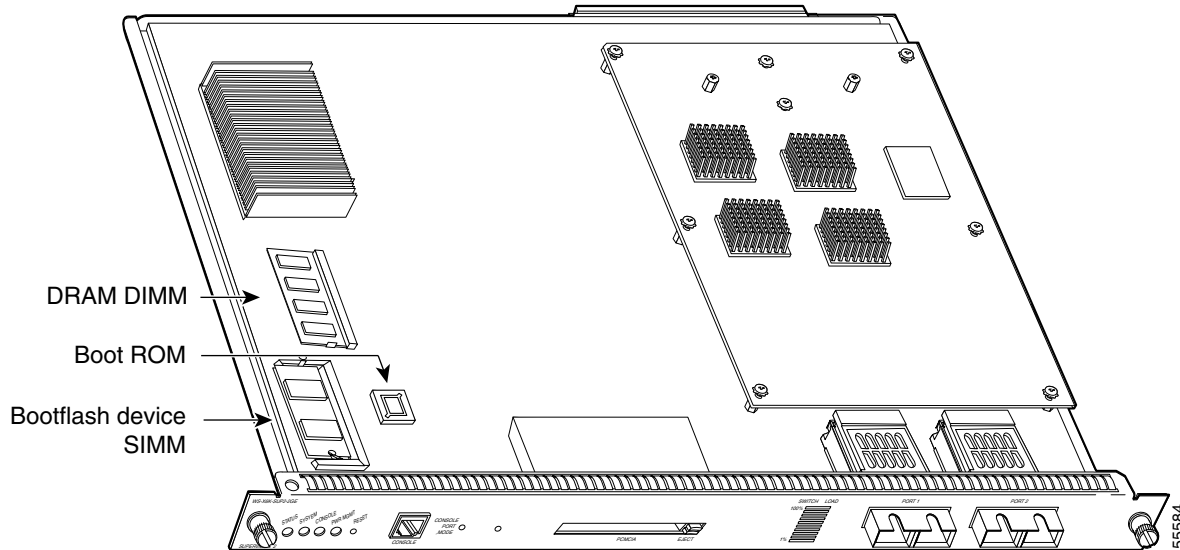


Caution Always use an electrostatic discharge (ESD) wrist strap when handling modules or when coming into contact with internal components.

To upgrade the boot ROM in the Supervisor Engine 2, follow these steps:

Step 1 Locate the boot ROM on the Supervisor Engine 2 (see [Figure 3](#)).

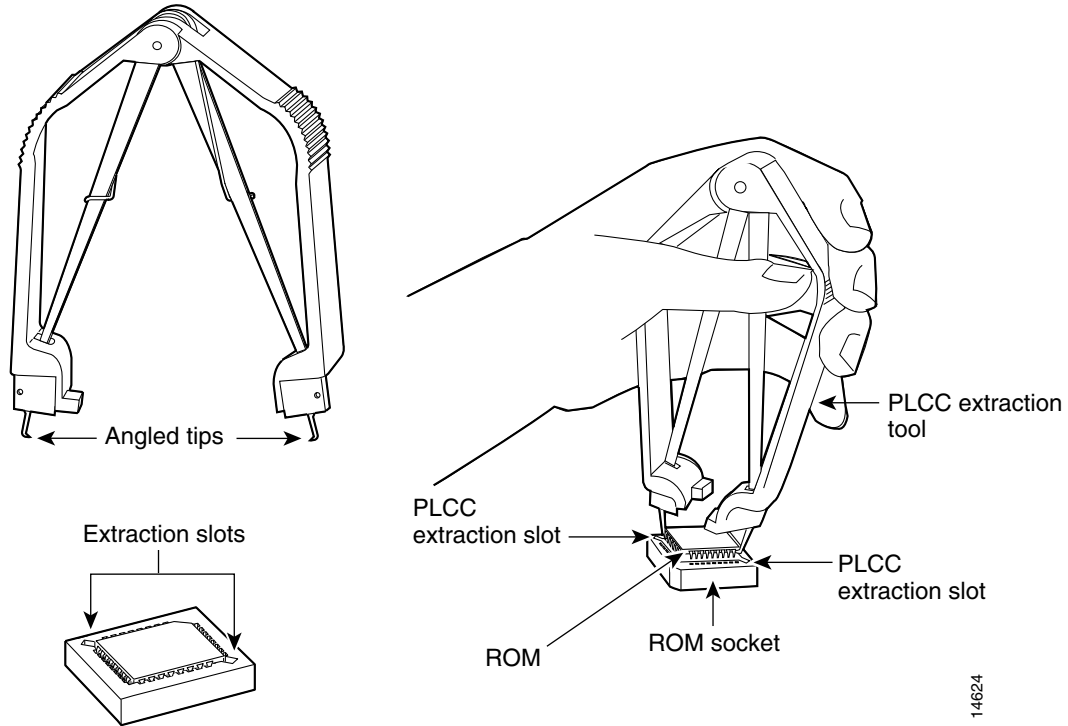
Figure 3 Supervisor Engine Boot ROM Location



Step 2 To extract the boot ROM from the motherboard, slide the tips of the PLCC extractor tool into the socket extraction slots until the angled tips are beneath the boot ROM device (see [Figure 4](#)).

Holding the tool as shown in [Figure 4](#), remove the chip from the socket by squeezing the handles of the extraction tool evenly and pulling the boot ROM device straight upward until it is released from the socket. Use care not to damage the boot ROM device or the socket.

Figure 4 Supervisor Engine Boot ROM Extraction



Step 3 Place the extracted boot ROM in an antistatic bag.

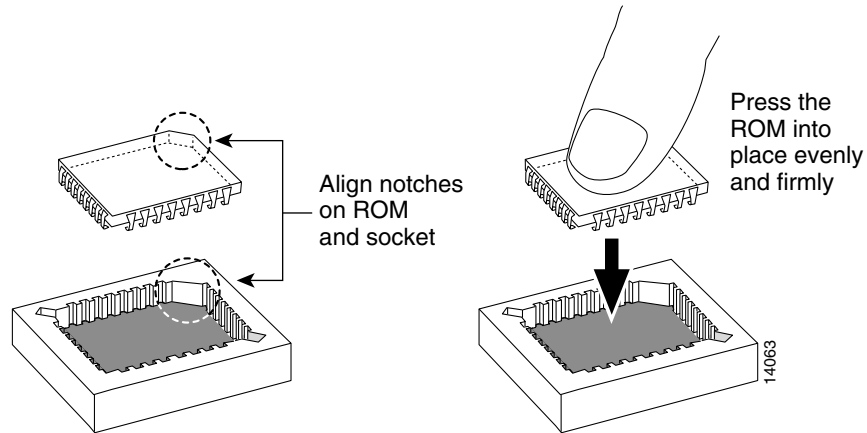
Step 4 Carefully remove the new boot ROM from its packaging.

Step 5 Insert the new boot ROM in the boot ROM socket on the motherboard. Be sure to orient the boot ROM so that the notched corner of the chip matches the notched corner of the socket (see [Figure 5](#)). Press the boot ROM into place evenly and firmly until it is completely seated in the socket.


Caution

Make sure that you orient the chip to the socket correctly. If the chip is oriented to the socket improperly, you can damage both the chip and the socket.

Figure 5 Boot ROM Insertion



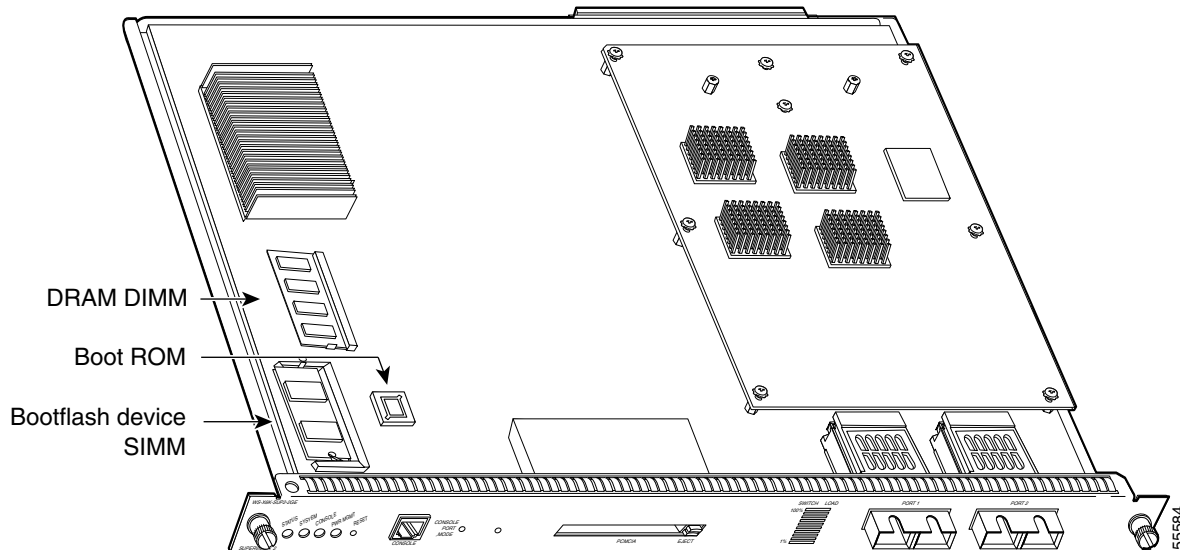
Proceed to the “[Upgrading the Bootflash Device](#)” section on page 9 to upgrade the bootflash device on the Supervisor Engine 2.

Upgrading the Bootflash Device

To upgrade the bootflash device from 16 MB to 32 MB, follow these steps:

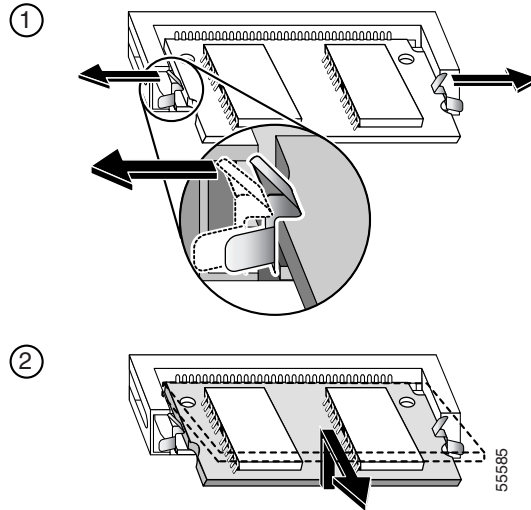
- Step 1** Note the location of the bootflash device SIMM (see [Figure 6](#)).

Figure 6 Bootflash Device SIMM Location



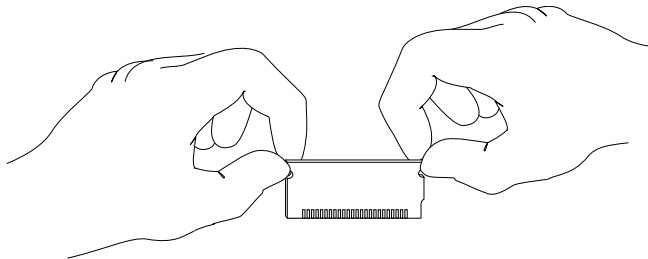
- Step 2** Pull the locking spring clips on both sides of the bootflash device SIMM holder outward and tilt the SIMM free of the clips (see [Figure 7](#)). Be careful not to break the clips on the SIMM connector.

Figure 7 Removing and Installing the Bootflash Device SIMM



Step 3 Hold the SIMM by its edges and gently lift and remove it, placing it on an antistatic mat or foam (see [Figure 8](#)).

Figure 8 Handling a SIMM



Caution

The SIMMs are sensitive components that are susceptible to ESD damage. To prevent ESD damage, handle the SIMM by the edges only; avoid touching the memory modules, pins, or traces (the metal *fingers* along the connector edge of the SIMM). (See [Figure 8](#).)

Step 4 Remove the upgrade SIMM from the antistatic container.

Step 5 Hold the SIMM by its edges (see [Figure 8](#)).

Step 6 Tilt the SIMM to approximately the same angle as the socket, and insert the connector edge into the socket.

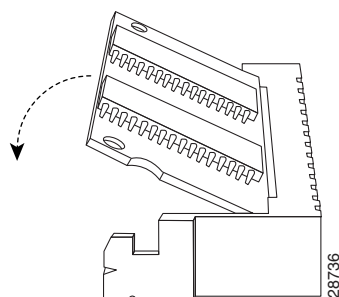


Caution

When inserting the SIMM, use firm but not excessive pressure. If you damage a socket, you will have to return the Supervisor Engine 2 to Cisco for repair.

Step 7 Press the SIMM down until it is secured by the spring clips (see [Figure 9](#)).

Figure 9 Installing the SIMM



Step 8 When the SIMM is installed, check the two alignment holes and ensure that the spring retainer is visible. If it is not, the SIMM is not seated properly. If the SIMM appears misaligned, carefully remove it and reseat it in the socket. Push the SIMM firmly back into the socket until the retainer springs snap into place.



Note

If you are upgrading the memory on the Supervisor Engine 2, do that now before you reinstall the MSFC2. For more information, refer to the *Catalyst 6500 Series Supervisor Engine 2 Memory Upgrade Installation Note*.

If you are not upgrading the memory, or if you have already upgraded the memory, proceed to the “[Installing the MSFC2](#)” section on page 11.

Installing the MSFC2



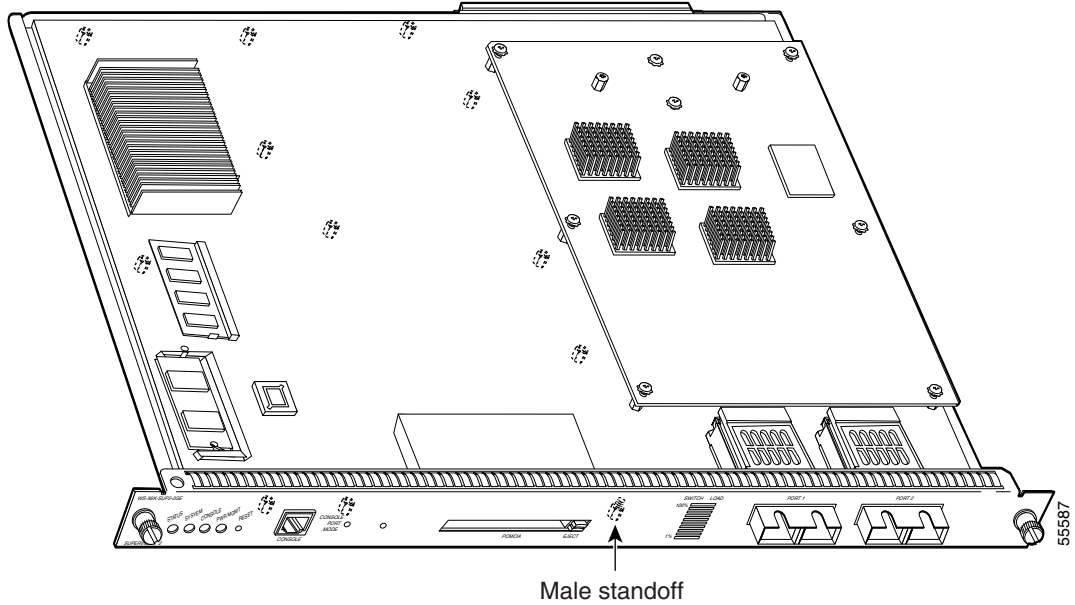
Note

If you did not remove the MSFC2 from the supervisor engine, proceed to [Step 6](#) to install the supervisor engine.

To install the MSFC2 on the Supervisor Engine 2, follow these steps:

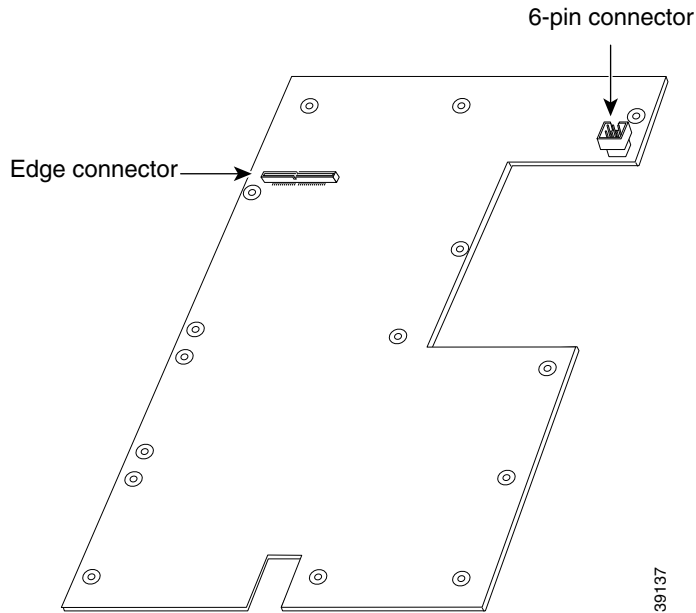
Step 1 Align the MSFC2 with the one male standoff on the Supervisor Engine 2 (see [Figure 10](#)). Make sure that the remaining mounting holes on the MSFC2 are aligned with the remaining standoffs.

Figure 10 Male Standoff Location on the Supervisor Engine



Step 2 Ensure that the connectors on the MSFC2 are aligned with the connectors on the Supervisor Engine 2 (see [Figure 11](#)).

Figure 11 MSFC2 Connectors

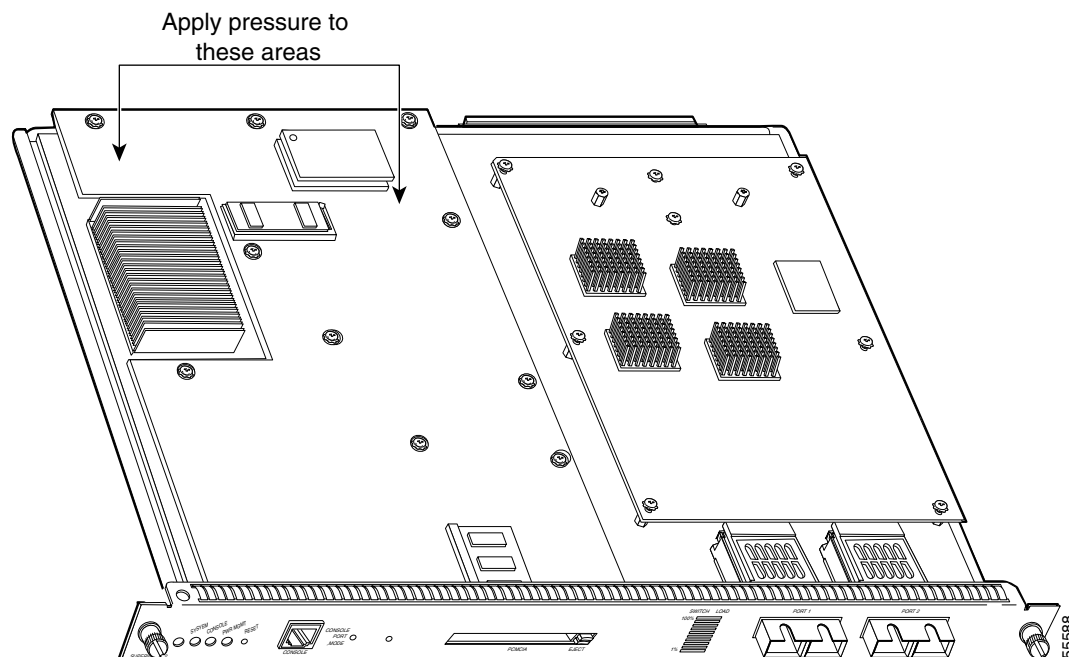


- Step 3** Carefully seat the MSFC2 onto the Supervisor Engine 2 (see [Figure 12](#)).
- Step 4** Using your thumbs, apply pressure at the locations shown in [Figure 12](#) to ensure that the MSFC2 is securely seated on the Supervisor Engine 2.

**Caution**

Use care not to damage the connectors on the Supervisor Engine 2. If you damage a connector, you will have to return the Supervisor Engine 2 to Cisco for repair.

Figure 12 Seating the MSFC2 on the Supervisor Engine 2

**Caution**

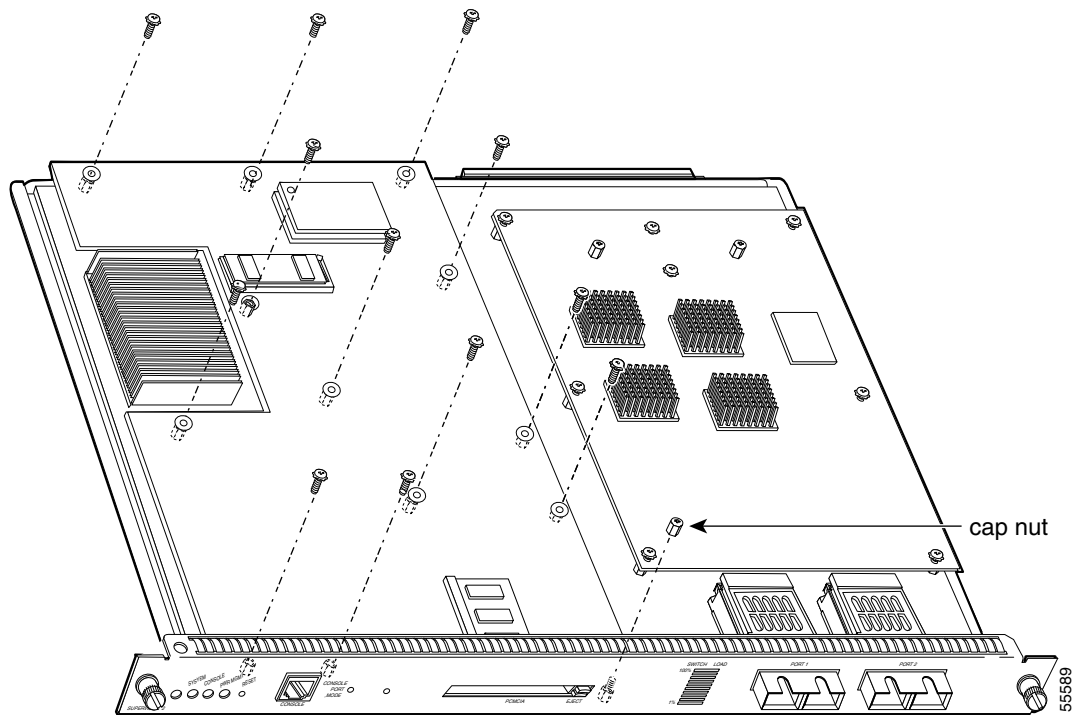
Ensure that the MSFC2 is securely seated before you install and tighten the cap nut and securing screws. If you use the screws to seat the MSFC2, you could possibly warp the card.

- Step 5** Use a Phillips-head screwdriver to install the screws and cap nut that secure the MSFC2 to the Supervisor Engine 2 (see [Figure 13](#)).

**Caution**

You *must* install the cap nut and all screws. The screws provide grounding between the MSFC2 and the Supervisor Engine 2. Failure to install the cap nut and all screws will invalidate the safety approvals and can cause fire and electrical hazards.

Figure 13 Installing the Screws and Cap Nut



- Step 6** Install the Supervisor Engine 2 in the Catalyst 6500 series switch (refer to the *Catalyst 6500 Series Switch Module Installation Guide* for installation instructions).
- If you have a redundant Supervisor Engine 2, go to the [“Removing the MSFC2”](#) section on page 5 and follow the directions to upgrade the boot ROM and bootflash device on the redundant Supervisor Engine 2.
- Step 7** Enter the **show module mod** command to verify that the Supervisor Engine 2 Fw version is release 6.1(3).
- Step 8** Format the newly installed bootflash device (refer to the *Catalyst 6500 Series Switch Software Configuration Guide*).

Translated Safety Warnings

This section repeats in multiple languages the basic warnings that appear in this publication.

Statement 1030—Equipment Installation



Warning

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

Waarschuwing

Deze apparatuur mag alleen worden geïnstalleerd, vervangen of hersteld door bevoegd geschoold personeel.

Varoitus

Tämän laitteen saa asentaa, vaihtaa tai huoltaa ainoastaan koulutettu ja laitteen tunteva henkilökunta.

Attention

Il est vivement recommandé de confier l'installation, le remplacement et la maintenance de ces équipements à des personnels qualifiés et expérimentés.

Warnung

Das Installieren, Ersetzen oder Bedienen dieser Ausrüstung sollte nur geschultem, qualifiziertem Personal gestattet werden.

Avvertenza

Questo apparato può essere installato, sostituito o mantenuto unicamente da un personale competente.

Advarsel

Bare opplært og kvalifisert personell skal foreta installasjoner, utskiftninger eller service på dette utstyret.

Aviso

Apenas pessoal treinado e qualificado deve ser autorizado a instalar, substituir ou fazer a revisão deste equipamento.

¡Advertencia!

Solamente el personal calificado debe instalar, reemplazar o utilizar este equipo.

Varning!

Endast utbildad och kvalificerad personal bör få tillåtelse att installera, byta ut eller reparera denna utrustning.

A berendezést csak szakképzett személyek helyezhetik üzembe, cserélhetik és tarthatják karban.

Предупреждение

Установку, замену и обслуживание этого оборудования может осуществлять только специально обученный квалифицированный персонал.

警告

只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。

警告

この装置の設置、交換、保守は、訓練を受けた相応の資格のある人が行ってください。

Statement 1071—Warning Definition



Warning

IMPORTANT SAFETY INSTRUCTIONS

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

SAVE THESE INSTRUCTIONS

Waarschuwing

BELANGRIJKE VEILIGHEIDSINSTRUCTIES

Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van de standaard praktijken om ongelukken te voorkomen. Gebruik het nummer van de verklaring onderaan de waarschuwing als u een vertaling van de waarschuwing die bij het apparaat wordt geleverd, wilt raadplegen.

BEWAAR DEZE INSTRUCTIES

Varoitus

TÄRKEITÄ TURVALLISUUSOHJEITA

Tämä varoitusmerkki merkitsee vaaraa. Tilanne voi aiheuttaa ruumiillisia vammoja. Ennen kuin käsittelet laitteistoa, huomioi sähköpiirien käsittelyyn liittyvät riskit ja tutustu onnettomuuksien yleisiin ehkäisytapoihin. Turvallisuusvaroitusten käännökset löytyvät laitteen mukana toimitettujen käännettyjen turvallisuusvaroitusten joukosta varoitusten lopussa näkyvien lausuntonumeroiden avulla.

SÄILYTÄ NÄMÄ OHJEET

Attention

IMPORTANTES INFORMATIONS DE SÉCURITÉ

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

CONSERVEZ CES INFORMATIONS

Warnung WICHTIGE SICHERHEITSHINWEISE

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

BEWAHREN SIE DIESE HINWEISE GUT AUF.

Avvertenza IMPORTANTI ISTRUZIONI SULLA SICUREZZA

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

CONSERVARE QUESTE ISTRUZIONI

Advarsel VIKTIGE SIKKERHETSINSTRUKSJONER

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslene som fulgte med denne enheten.

TA VARE PÅ DISSE INSTRUKSJONENE

Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

GUARDE ESTAS INSTRUÇÕES

¡Advertencia! INSTRUCCIONES IMPORTANTES DE SEGURIDAD

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES

Varning! VIKTIGA SÄKERHETSANVISNINGAR

Denna varningssignal signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanliga förfaranden för att förebygga olyckor. Använd det nummer som finns i slutet av varje varning för att hitta dess översättning i de översatta säkerhetsvarningar som medföljer denna anordning.

SPARA DESSA ANVISNINGAR**FONTOS BIZTONSÁGI ELOÍRÁSOK**

Ez a figyelmeztető jel veszélyre utal. Sérülésveszélyt rejtő helyzetben van. Mielőtt bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplő figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján kereshető meg.

ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!**Предупреждение ВАЖНЫЕ ИНСТРУКЦИИ ПО СОБЛЮДЕНИЮ ТЕХНИКИ БЕЗОПАСНОСТИ**

Этот символ предупреждения обозначает опасность. То есть имеет место ситуация, в которой следует опасаться телесных повреждений. Перед эксплуатацией оборудования выясните, каким опасностям может подвергаться пользователь при использовании электрических цепей, и ознакомьтесь с правилами техники безопасности для предотвращения возможных несчастных случаев. Воспользуйтесь номером заявления, приведенным в конце каждого предупреждения, чтобы найти его переведенный вариант в переводе предупреждений по безопасности, прилагаемом к данному устройству.

СОХРАНИТЕ ЭТИ ИНСТРУКЦИИ**警告 重要的安全性说明**

此警告符号代表危险。您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾提供的声明号码来找到此设备的安全性警告说明的翻译文本。

请保存这些安全性说明

警告 安全上の重要な注意事項

「危険」の意味です。人身事故を予防するための注意事項が記述されています。装置の取り扱い作業を行うときは、電気回路の危険性に注意し、一般的な事故防止策に留意してください。警告の各国語版は、各注意事項の番号を基に、装置に付属の「Translated Safety Warnings」を参照してください。

これらの注意事項を保管しておいてください。

Related Documentation

For additional information on Catalyst 6500 series switches and command-line interface (CLI) commands, refer to the following publications:

- *Regulatory Compliance and Safety Information for the Catalyst 6500 Series Switches*
- *Catalyst 6500 Series Supervisor Engine 2 DRAM Upgrade Installation Note*
- *Catalyst 6500 Series Switch Installation Guide*
- *Catalyst 6500 Series Switch Module Installation Guide*
- *Catalyst 6500 Series Switch Software Configuration Guide*
- *Catalyst 6500 Series Switch Command Reference*
- *Catalyst 6500 Series Switch Cisco IOS Software Configuration Guide*
- *Catalyst 6500 Series Switch Cisco IOS Command Reference*

Obtaining Documentation and Submitting a Service Request

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

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