



Catalyst 6500 Series Supervisor Engine Flash PC Card Installation Note

Product Numbers:**MEM-C6K-FLC16M(=)****MEM-C6K-FLC24M(=)****MEM-C6K-FLC64M(=)****MEM-C6K-ATA-1-64M(=)**

This installation note contains the procedure to install a Flash PC card in the Catalyst 6500 series supervisor engines.

**Note**

The 64-MB ATA Flash PC card (MEM-C6K-ATA-1-64M) requires Supervisor Engine 2 with ROMMON software release 7.1(1) or later releases. For ROMMON software upgrade details, refer to http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/relnotes/78_13488.htm.

The ATA Flash PC card is supported on Catalyst 6500 series switches running Cisco IOS Release 12.1(8a)EX or later releases on both the supervisor engine and the Multilayer Switch Feature Card (MSFC).

The ATA Flash PC card is supported on Catalyst 6500 series switches running Catalyst software release 7.5(1) or later releases on the supervisor engine and Cisco IOS on the MSFC.

**Note**

The 64-MB linear Flash PC card (MEM-C6K-FLC64M) is supported only on Supervisor Engine 1 and requires ROMMON software release 5.3(1) or later releases.

The 64-MB linear Flash PC card is supported on Catalyst 6500 series switches running Cisco IOS Release 12.1(13)E4 or later releases on both the supervisor engine and the MSFC.

The 64-MB linear Flash PC card is supported on Catalyst 6500 series switches running Catalyst software release 7.5(1) or later releases on the supervisor engine and Cisco IOS software on the MSFC.



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Supervisor Engine Flash PC Cards

The supervisor engine Flash PC cards conform with the PCMCIA format. These models are available:

- 16-MB MEM-C6K-FLC16M
- 24-MB MEM-C6K-FLC24M
- 64-MB MEM-C6K-FLC64M
- MEM-C6K-ATA-1-64M

**Note**

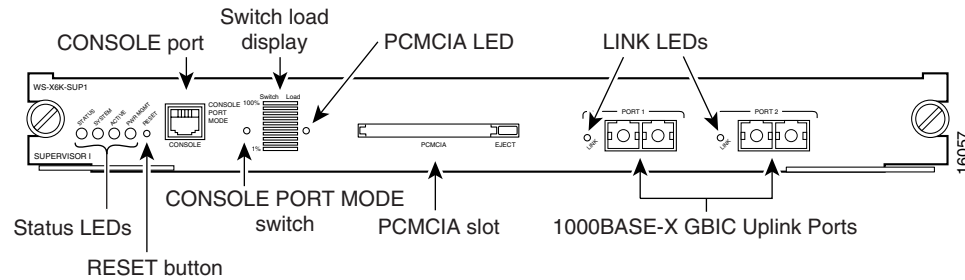
The 16-MB MEM-C6K-FLC16M and 24-MB MEM-C6K-FLC24M linear Flash PC cards are formatted for the Catalyst 6500 series supervisor engines and are ready to use.

The MEM-C6K-ATA-1-64M and 64-MB MEM-C6K-FLC64M Flash PC cards *are not* formatted. You must format these cards (See [Table 1 on page 7](#) for a description of the **format** command.) When you enter the **dir disk0:** or **dir slot0:** commands, an unformatted Flash PC card returns a “bad device block info” or “invalid magic number” error message.

**Note**

Supervisor Engine 1 and Supervisor Engine 2 do not support the same Flash PC card format. To use a Flash PC card with Supervisor Engine 2, you must format the card with Supervisor Engine 2. To use a Flash PC card with Supervisor Engine 1, you must format the card with Supervisor Engine 1.

You can use Flash PC cards to store and boot software images, or they can be used as servers to store software images for other systems. You can configure each supervisor engine with one Flash PC card in slot 0. [Figure 1](#) shows the front panel of a supervisor engine with the single PCMCIA slot, slot 0.

Figure 1 Supervisor Engine Flash PC Card Slot

For information about using the PCMCIA Flash PC cards, see the [“Using Flash PC Cards”](#) section on page 6.

Preventing Electrostatic Discharge Damage

Follow these guidelines to prevent electrostatic discharge (ESD) damage:

- Always use an ESD wrist or ankle strap, and ensure that it makes good skin contact.
- Connect the equipment end of the strap to the ESD connector on the switch.
- Place a removed Flash PC card on an antistatic surface or in a static shielding bag. If the card will be returned to the factory, immediately place it in a static shielding bag.
- Avoid contact between the card and clothing. The wrist strap only protects the card from ESD voltages on the body; ESD voltages on clothing can still cause damage.



Caution

For safety, periodically check the resistance value of the antistatic strap. The measurement should be between 1 and 10 megohms.

Installing and Removing a Flash PC Card

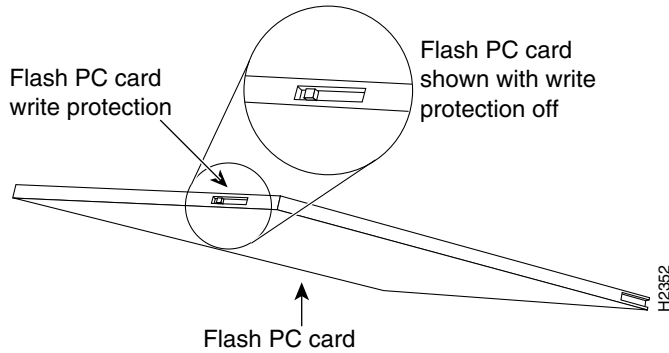
Before you install a Flash PC card, verify that the card’s write-protect switch is off. When the card is oriented with the printing side up and the edge connector end away from you, the write-protect switch is located on the front edge of the card, as shown in [Figure 2](#).



Note

Not all Flash PC cards have the write-protect switch.

Figure 2 Locating the Flash PC Card Write Protection Switch



To install and remove a Flash PC card (see [Figure 3](#)), perform these steps:



Note

You can insert and remove the Flash PC card with the power on.

- Step 1** Connect an ESD-preventive strap to the ESD connector on the switch.
- Step 2** Face the front panel of the switch, and hold the Flash PC card with the connector end toward the slot, as shown in [Figure 3](#), view A.
- Step 3** Insert the card into the slot until it completely seats in the connector at the back of the slot and the eject button pops out toward you, as shown in [Figure 3](#), view B.

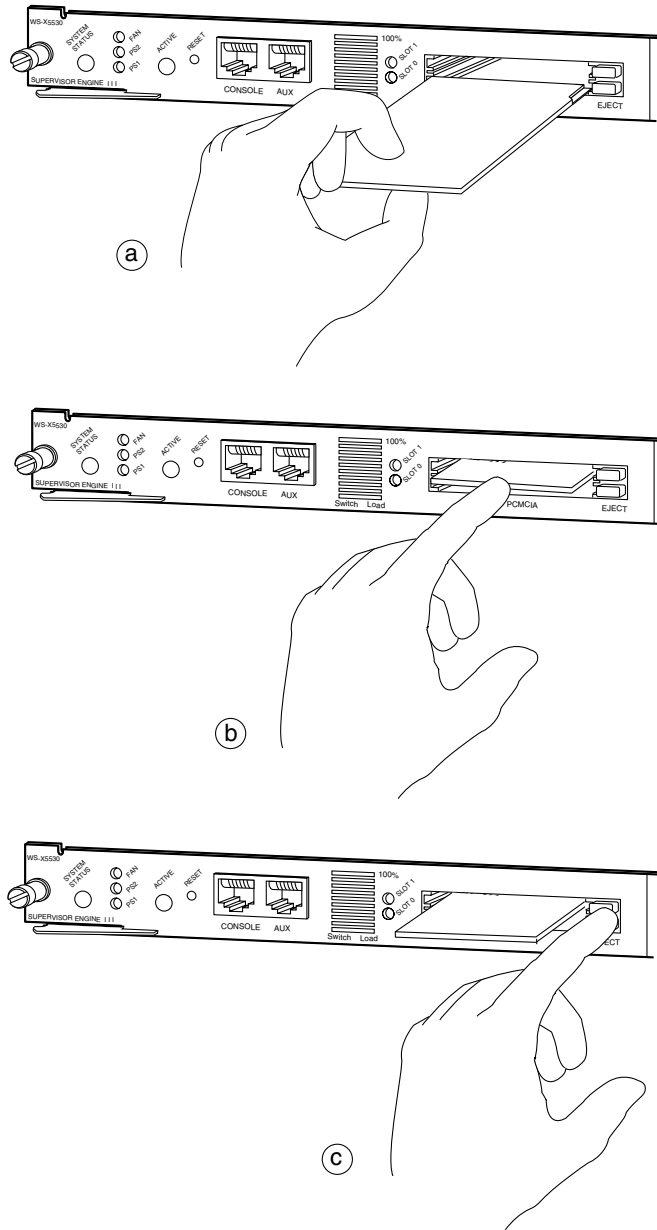


Note

The card does not insert all the way inside the slot; a portion of the card remains outside the slot. *Do not attempt to force the card past this point.*

- Step 4** To eject a Flash PC card, press the ejector button until the card is free of the connector at the back of the slot, as shown in [Figure 3](#), View C.
- Step 5** Remove the card from the slot and place it in an antistatic bag.

Figure 3 *Installing and Removing a Flash PC Card*



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Using Flash PC Cards


Note

An MS-DOS formatted ATA Flash PC card or linear Flash PC card can be accessed successfully (including the **dir** command) with the Catalyst and Cisco IOS operating systems but will not boot from ROMMON.


Note

The 16-MB MEM-C6K-FLC16M and 24-MB MEM-C6K-FLC24M linear Flash PC cards are formatted for the Catalyst 6500 series supervisor engines and are ready to use.

The MEM-C6K-ATA-1-64M and 64-MB MEM-C6K-FLC64M Flash PC cards *are not* formatted. You must format these cards (see [Table 1 on page 7](#) for a description of the **format** command.) When you enter the **dir disk0:** or **dir slot0:** commands, an unformatted Flash PC card returns a “bad device block info” or “invalid magic number” error message.


Note

Supervisor Engine 1 and Supervisor Engine 2 do not support the same Flash PC card format. To use a Flash PC card with Supervisor Engine 2, you must format the card with Supervisor Engine 2. To use a Flash PC card with Supervisor Engine 1, you must format the card with Supervisor Engine 1.

[Table 1](#) shows many of the commands that are available for using and managing Flash devices, including the Flash PC cards. To perform specific tasks, use these commands either alone or combined with other commands. For example, to copy a file from a TFTP server to a Flash PC card, set the BOOT environment variable so that the system will boot from this new image and then verify the boot sequence as shown in the following steps:


Note

The following commands listed in [Table 1](#) are not applicable to the ATA Flash (disk0:) PC card: **undelete**, **squeeze**, **show flash devices**, **show flash**, and **verify**.


Note

The ATA Flash PC card is accessed through disk0: and the 16-MB, 24-MB, and 64-MB Flash PC cards are accessed through slot0:. An error formatting slot0, **Can not find flash algorithm**, will occur if the ATA cards are formatted using disk0 instead of slot0. The following procedure uses slot0:.

Step 1 Copy a file from a TFTP server to the Flash PC card in slot0:

```
Console (enable) copy tftp slot0:
```

Step 2 Set the BOOT environment variable so that the system boots from slot0:

```
Console (enable) set boot system flash slot0:cat6000-sup-5-1-1-CSX.bin prepend
```

Step 3 Display the contents of the BOOT environment variable:

```
Console (enable) show boot
```

For complete descriptions of these commands and how to use them, refer to the *Catalyst 6500 Series Software Configuration Guide* and the *Catalyst 6500 Series Command Reference* publication.

Table 1 **Commands for Using and Managing Flash Devices**

| Task | Command |
|---|---|
| Copy a Flash file to a TFTP server, another Flash device, or to the running configuration. | copy <i>m/device:filename</i> { tftp flash <i>m/device:filename</i> config } |
| Copy a file from a TFTP server to a Flash device or to the running configuration. | copy tftp { flash <i>m/device:filename</i> config } |
| Copy a file from Flash memory to a TFTP server or to a Flash device, or to the running configuration. | copy flash { tftp <i>m/device:filename</i> config } |
| Copy the running configuration to another Flash device or to a TFTP server. | copy config { flash <i>m/device:filename</i> tftp } |
| Set the BOOT environment variable. | set boot system flash <i>device:[filename]</i> [prepend] <i>[mod_num]</i> |
| Format a Flash PC device. | format [<i>spare spare-number</i>] [<i>m/</i>] <i>device1</i> : [[<i>device2</i> :] <i>[monlib-filename]</i>] |
| Specify the boot field in the configuration register, which determines the boot method the switch will use at the next startup. | set boot config-register boot { rommon bootflash system } [<i>mod_num</i>] |
| Display the contents of the BOOT environment variable. | show boot [<i>mod_num</i>] |
| Clear a specific image from the BOOT environment variable. | clear boot system flash <i>device:[filename]</i> [<i>mod_num</i>] |
| Clear the entire BOOT environment variable. | clear boot system all [<i>mod_num</i>] |
| Display a list of files on a Flash device. | dir [[<i>m/</i>] <i>device:</i>] <i>[filename]</i> [all deleted long] |
| Set the default Flash device for the system. | cd [[<i>m/</i>] [bootflash: slot0:] |
| Verify the default Flash device for the system. | pwd [<i>mod_num</i>] |
| Delete a file on a Flash device. | delete [[<i>m/</i>] <i>device:</i>] <i>filename</i> |
| Undelete a file on a Flash device. | undelete <i>index</i> [[<i>m/</i>] <i>device:</i>] |
| Permanently remove all deleted files on a Flash device. | squeeze [<i>m/</i>] <i>device:</i> |
| Identify the supported Flash devices on the system. | show flash devices |
| Display information about the Flash PC. | show flash [[<i>m/</i>] <i>device:</i>] [all chips filesystems] |
| Verify the checksum of a file on a Flash device. | verify [[<i>m/</i>] <i>device:</i>] <i>filename</i> |

Additional Documentation

Refer to the following documents for additional information on supervisor engine Flash devices:

- *Release Notes for Catalyst 6500 Series and Cisco 7600 Series Internet Router Supervisor Engine 2 ROMMON*
- *Catalyst 6500 Series Software Configuration Guide*
- *Catalyst 6500 Series Command Reference*

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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This document is to be used in conjunction with the *Catalyst 6500 Series Software Configuration Guide* and the *Catalyst 6500 Series Command Reference* publications.

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