



# Release Notes for Catalyst 6500 Series Switch and Cisco 7600 Series Router Supervisor Engine 720 ROMMON

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**Current Release:** 8.4(2)—May 16, 2005

**Past Releases:** 8.1(3), 7.7(1)

This publication describes how to determine if you need to upgrade the ROMMON on your Catalyst 6500 series or Cisco 7600 series router Supervisor Engine 720 and also provides the procedure to download the new ROMMON image from Cisco.com and then upgrade the ROMMON on your Supervisor Engine 720.

With this procedure, you can upgrade the ROMMON image similar to the way that you upgrade the operating system software (supervisor engine software or MSFC Cisco IOS software). Without this procedure, you have to order the upgrade kit and physically replace the ROMMON (boot ROM).



**Note**

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The ROMMON software upgrade procedure in this publication applies only to Supervisor Engine 720 with ROMMON software release 7.7(1).

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ROMMON software release 7.7(1) and later releases are supported in Catalyst 6500 and Cisco 7600 series systems that are running either of the following:

- Catalyst operating system on the Supervisor Engine 720 and Cisco IOS software on the MSFC3
- Cisco IOS software on the Supervisor Engine 720 and on the MSFC3



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## Software Images

[Table 1](#) lists the software releases for the Catalyst 6500 series switch and Cisco 7600 series router ROMMON Supervisor Engine 720 software.

*Table 1 Upgradable Modules*

Supervisor Engine 720 ROMMON Software Release	Filename
8.4(2) upgradable module ROMMON image	c6ksup3-rm2.srec.8.4.2
8.1(3) upgradable module ROMMON image	c6ksup3-rm2.srec.8.1.3
7.7(1) upgradable module ROMMON image	c6ksup3-rm2.srec.7.7.1

## ROMMON Image Overview

The Supervisor Engine 720 ROMMON consists of two modules:

- A resident module that is not changed during the upgrade procedure.
- An upgradable module that is updated during the upgrade procedure. This is the only module that you will download from Cisco.com.

# New and Changed Information

The following sections list new features:

- [Supervisor Engine 720 ROMMON Release 8.4\(2\), page 3](#)
- [Supervisor Engine 720 ROMMON Release 8.1\(3\), page 3](#)

## Supervisor Engine 720 ROMMON Release 8.4(2)

Rommon release 8.4(2) supports bootdisk.

## Supervisor Engine 720 ROMMON Release 8.1(3)

There are no new features in ROMMON release 8.1(3).

# Caveats

The following sections contain caveat information:

- [Supervisor Engine 720 ROMMON Software Release 8.4\(2\), page 3](#)
- [Supervisor Engine 720 ROMMON Software Release 8.1\(3\), page 3](#)

## Supervisor Engine 720 ROMMON Software Release 8.4(2)

- [Resolved Caveats in Supervisor Engine 720 ROMMON Software Release 8.4\(2\), page 3](#)

### Resolved Caveats in Supervisor Engine 720 ROMMON Software Release 8.4(2)

- MSFC3 ROMMON does not have adequate way to handle watchdog and timeout exceptions. This problem is resolved in ROMMON software release 8.4(2). (CSCeg87313)
- Autoboot function with Supervisor Engine 720 does not work. After entering a write erase command and reloading, the Supervisor Engine returns to ROMMON. This problem is resolved in ROMMON software release 8.4(2). (CSCed88704)
- There is no support from ROMMON to determine at run time the supervisor engine version and invoke the correct monlib vectors. This problem is resolved in ROMMON software release 8.4(2). (CSCee55664)
- Occasionally after a redundancy reset, the ROMMON image fails to come online due to an initialization problem. This problem is resolved in ROMMON software release 8.4(2). (CSCeg76624)

## Supervisor Engine 720 ROMMON Software Release 8.1(3)

- [Resolved Caveats in Supervisor Engine 720 ROMMON Software Release 8.1\(3\), page 4](#)

## Resolved Caveats in Supervisor Engine 720 ROMMON Software Release 8.1(3)

- A configuration register value is programmed incorrectly on an ASIC. This problem is resolved in Supervisor Engine 720 ROMMON software release 8.1(3). (CSCed58891)
- The wrong timer counter register is programmed at bootup. This problem is resolved in Supervisor Engine 720 ROMMON software release 8.1(3). (CSCed10938)
- An access timing parameter is programmed incorrectly on an ASIC. This problem is resolved in Supervisor Engine 720 ROMMON software release 8.1(3). (CSCed44123)
- On a Supervisor Engine 720 configured to automatically boot, if the first entry in the bootstring is incorrect (for example, the entry has an incorrect image name or device), the switch boots to the ROMMON prompt without searching the rest of the bootstring for a valid entry. This problem is resolved in Supervisor Engine 720 ROMMON software release 8.1(3). (CSCin43658/CSCec78845)
- At bootup, the following bootstrap message is incorrectly displayed:  

```
Loading bootstrap image, please wait ...
```

This problem is resolved in Supervisor Engine 720 ROMMON software release 8.1(3). (CSCed48970)

# Upgrading the Supervisor Engine 720 ROMMON Using Catalyst Operating Software Commands

To upgrade the ROMMON version on a Supervisor Engine 720 running the Catalyst operating software, perform these steps:



## Note

Before performing this procedure, you need to download the new ROMMON image from Cisco.com. The download procedure is the same procedure that you use for downloading the supervisor engine software images.

### Step 1 Check the active ROMMON information:

```
Console> (enable) rommon show

Region F1: INVALID
Region F2: INVALID
Currently running ROMMON from S (Gold) region
```

The display indicates that the active ROMMON is running in the “Gold” region.

### Step 2 Download the new ROMMON image from the TFTP server:

```
Console> (enable) copy tftp flash
IP address or name of remote host []? 23.255.254.226
Name of file to copy from []? tftpboot/rommon/c6ksup3-rm2.srec.8.1.3
Flash device [bootflash]?
Name of file to copy to [c6ksup3-rm2.srec.8.1.3]?

25081216 bytes available on device bootflash, proceed (y/n) [n]? y
CCCCCCCCCCCC
File has been copied successfully.
```

### Step 3 Program the new ROMMON image to the bootflash device on the Supervisor Engine 720:



## Note

The software automatically stores the specified image to a region other than the region that accepted the last upgraded image. For example, if the last upgrade command put the image in Region F1, the current upgrade command will store the image in Region F2 and set it as the “preferred” region when the next system reset occurs. If the last upgrade command stored the image to Region F2, the current upgrade command will store the image to Region F1.

The image that is most recently stored into the Flash memory is always labeled as the “preferred” image. If you decide that you do not want this upgrade image, you can switch to the other region or the Gold region using the **rommon prefer** or **rommon invalidate** commands.

```
Console> (enable) rommon upgrade bootflash:c6ksup3-rm2.srec.8.1.3
CCCCCCCCCCCC
ROMMON image upgrade in progress, will take a minute
Erasing flash
Programming flash
ROMMON image upgrade complete, Supervisor must be reset.
```

**Step 4** Check the new active ROMMON information:

```
Console> (enable) rommon show

Region F1: FIRST_RUN, preferred
Region F2: INVALID
Currently running ROMMON from S (Gold) region
```

The “Region F1” field should show “FIRST\_RUN, preferred.”

**Step 5** Reset the Supervisor Engine 720:

```
Console> (enable) reset
This command will reset the system.
Do you want to continue (y/n) [n]? y
. . .
Powering OFF all existing linecards
```

```
System Bootstrap, Version 8.1(3)
Copyright (c) 1994-2003 by cisco Systems, Inc.
Cat6k-Sup720/SP processor with 524288 Kbytes of main memory
```

```
Autoboot executing command: "boot bootflash:"
```

```
Self decompressing the image :
#####
#####
.
.
.
```

```
Currently running ROMMON from F1 region
ROMMON upgrade successful
Boot image: bootflash:c6ksup3-rm2.srec.8.1.3
inband gmac link is up
```

```
.
.
.
```

Note that the Supervisor Engine 720 is booted with the new ROMMON stored in the F1 region.

**Step 6** After the system comes up, check the ROMMON information again:

```
Console> enable

Enter password:
Console> (enable) rommon show

Region F1: APPROVED, preferred
Region F2: INVALID
Currently running ROMMON from F1 region
```

The “Region F1” field should show “APPROVED, preferred.” The ROMMON stored in the F1 region is now the active ROMMON.

# Upgrading the Supervisor Engine 720 ROMMON Using Cisco IOS Commands

To upgrade the ROMMON version on your Supervisor Engine 720 using Cisco IOS commands, perform these steps:



## Note

Before performing this procedure you need to download the new ROMMON image from Cisco.com. The download procedure is the same procedure that you use for downloading the supervisor engine software images.

### Step 1 Check the active ROMMON information:

```
Router# show rom-monitor slot 5 sp

Region F1:APPROVED, preferred
Region F2:INVALID
Currently running ROMMON from F1 region
Router#
```

The display indicates that the active ROMMON is running in region1.

### Step 2 Program the new ROMMON image to the Flash device on the Supervisor Engine 720:

```
Router# upgrade rom-monitor slot 5 sp file tftp://tftpboot-users/c6ksup3-rm2.srec.8.1.3

ROMMON image upgrade in progress
Erasing flash
Programming flash
Verifying new image
ROMMON image upgrade complete
The card must be reset for this to take effect
Router#
```

### Step 3 Check the new active ROMMON information:

```
Router# show rom-monitor slot 5 sp

Region F1:APPROVED
Region F2:FIRST_RUN, preferred
Currently running ROMMON from F1 region
Router#
```

### Step 4 Reload the runtime image on the Supervisor Engine 720:

```
Router# reload
Proceed with reload? [confirm]
```



## Caution

Be sure to complete Step 5 before performing an online insertion and removal (OIR) of the Supervisor Engine 720 or power cycling the Supervisor Engine 720. The ROMMON upgrade might fail if you perform either of these actions before verifying that the runtime image successfully booted.

**Step 5** After the system comes up, check the ROMMON information again:

```
Router# show rom-monitor slot 5 sp
Region F1:APPROVED
Region F2:APPROVED, preferred
Currently running ROMMON from F2 region
Router#
```

The “Region2” field should show “APPROVED, preferred.” The ROMMON stored in the Region2 is now the active ROMMON.

## Storing More Than One ROMMON Image

The procedures in this section are optional and should be used only if you have multiple versions of the upgraded ROMMON image stored on the Supervisor Engine 720. These procedures describe how to select a particular ROMMON image for booting and how to disqualify a particular ROMMON region.

These sections show how to select a stored ROMMON image for booting:

- [Selecting a Stored ROMMON image on Systems Running Catalyst Operating Software on the Supervisor Engine 720, page 8](#)
- [Selecting a Stored ROMMON Image on Systems Running Cisco IOS on the Supervisor Engine 720, page 10](#)

## Selecting a Stored ROMMON image on Systems Running Catalyst Operating Software on the Supervisor Engine 720

There are three regions (including the Gold region) where versions of the ROMMON image can be stored. You can use the **rommon prefer** and **rommon invalidate** commands to switch between regions.

The ROMMON software upgrade feature allows you to have two upgraded ROMMON images (one in region F1, the second in region F2) in addition to the “Gold” ROMMON stored on the one-time programmable (OTP) EPROM section of the ROMMON. Use the **rommon preference** command to select which ROMMON will be the preferred ROMMON the next time that the system is booted. You can change the preference as often as you like. The changes do not take effect until you reset the system.

To select a particular ROMMON image stored on the Supervisor Engine 720, perform this task:

**Step 1** Change the ROMMON preference.

```
Console> (enable) rommon prefer F2

ROMMON in region F2 now has the highest boot preference.
Supervisor must be reset for this to take effect.
Console> (enable) rommon show

Region F1: FIRST_RUN
Region F2: FIRST_RUN, preferred
Currently running ROMMON from F1 region

Console> (enable) rommon prefer F1

ROMMON in region F1 now has the highest boot preference.
Supervisor must be reset for this to take effect.
```



```

Console> (enable) rommon show

Region F1: FIRST_RUN, preferred
Region F2: FIRST_RUN
Currently running ROMMON from F1 region

```

**Step 2** You can also disqualify a specific region of ROMMON and use the other region or go back to using the “Gold” ROMMON stored in the OTP EPROM section by using the **rommon invalidate** command.

To disqualify a specific ROMMON region, enter these commands:

```

Console> (enable) rommon invalidate F1
Do you want to mark F1 region INVALID [n]?y

done!
Supervisor must be reset for this to take effect.
Console> (enable) rommon invalidate F2
Do you want to mark F2 region INVALID [n]?y

done!
Supervisor must be reset for this to take effect.
Console> (enable) rommon show

Region F1: INVALID
Region F2: INVALID
Currently running ROMMON from F1 region

Console> (enable) reset
This command will reset the system.
Do you want to continue (y/n) [n]? y
. . .
Powering OFF all existing linecards
Console> . . .

System Bootstrap, Version 6.1(3)
Copyright (c) 1994-2000by cisco Systems, Inc.
c6k_sup2 processor with 131072 Kbytes of main memory

Autoboot executing command: "boot bootflash:"

Self decompressing the image :
#####
#####
. . .

Currently running ROMMON from S (Gold) region
Boot image: bootflash:cat6000-sup2.6-1-3.bin
inband gmac link is up
.
.
.

```

The display indicates that the active ROMMON is running in the “Gold” region.

## Selecting a Stored ROMMON Image on Systems Running Cisco IOS on the Supervisor Engine 720

There are three regions (including the Gold region) where versions of the ROMMON image can be stored. You can use the **upgrade rom-monitor slot preference** and **upgrade rom-monitor slot preference** commands to switch between regions.

The ROMMON software upgrade feature allows you to have two upgraded ROMMON images (one in region F1, the second in region F2) in addition to the “Gold” ROMMON stored on the one-time programmable (OTP) EPROM section of the ROMMON. Use the **upgrade rom-monitor slot preference** command to select which ROMMON will be the preferred ROMMON the next time that the system is booted. You can change the preference as often as you like. The changes do not take effect until you reset the system.

To select a particular ROMMON image stored on the Supervisor Engine 720, perform this task:

---

### Step 1 Change the ROMMON preference:

```
Router# show rom-monitor slot 5 sp
Region F1:FIRST_RUN
Region F2:FIRST_RUN, preferred
Currently running ROMMON from F2 region
Router# upgrade rom-monitor slot 5sp preference region1
```

```
You are about to mark F1 region of SP ROMMON in slot 5 as the boot preference region,
proceed[n]? y
Router#
```

### Step 2 Reload the Supervisor Engine for the change to take effect:

```
Router# reload
Proceed with reload? [confirm]

<output truncated>
```

### Step 3 Verify the change:

```
Router# show rom-monitor slot 5 sp
Region F1:APPROVED, preferred
Region F2:APPROVED
Currently running ROMMON from F1 region
```

---

You can also disqualify a specific region of ROMMON and use the other region or go back to using the “Gold” ROMMON stored in the OTP EPROM section by using the **upgrade rom-monitor slot invalidate** command.

To disqualify a specific ROMMON region, perform these steps:

---

**Step 1** Disqualify a specific ROMMON region:

```
Router# show rom-monitor slot 5 sp
Region F1:FIRST_RUN
Region F2:FIRST_RUN, preferred
Currently running ROMMON from F2 region
```

```
Router# upgrade rom-monitor slot 5 sp invalidate region2
```

```
You are about to mark F2 region of SP ROMMON in slot 5 as an invalid region,
proceed[n]? y
Router#
```

**Step 2** Reload the supervisor engine for the change to take effect:

```
Router# reload
Proceed with reload? [confirm]
```

<output truncated>

**Step 3** Verify the change:

```
Router# show rom-monitor slot 5 sp
Region F1:FIRST_RUN
Region F2:INVALID
Currently running ROMMON from S (Gold) region
```

---

## Additional Documentation

The following documents are available for the Catalyst 6500 series switches:

- *Catalyst 6500 Series Switch Quick Software Configuration*
- *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*
- *Catalyst 6500 Series Switch Cisco IOS System Message Guide*
- *Catalyst 6500 Series Switch Software Configuration Guide*
- *Catalyst 6500 series Switch Command Reference*
- *Catalyst 6500 series Switch Command Reference*
- *Catalyst 6500 Series Switch System Message Guide*

# Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

## Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco websites can be accessed from this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

## Ordering Documentation

You can find instructions for ordering documentation at this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm)

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<http://www.cisco.com/en/US/partner/ordering/index.shtml>
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170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

# Obtaining Technical Assistance

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## Cisco TAC Website

The Cisco TAC website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The Cisco TAC website is available 24 hours a day, 365 days a year. The Cisco TAC website is located at this URL:

<http://www.cisco.com/tac>

Accessing all the tools on the Cisco TAC website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a login ID or password, register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

## Opening a TAC Case

Using the online TAC Case Open Tool is the fastest way to open P3 and P4 cases. (P3 and P4 cases are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Case Open Tool automatically recommends resources for an immediate solution. If your issue is not resolved using the recommended resources, your case will be assigned to a Cisco TAC engineer. The online TAC Case Open Tool is located at this URL:

<http://www.cisco.com/tac/caseopen>

For P1 or P2 cases (P1 and P2 cases are those in which your production network is down or severely degraded) or if you do not have Internet access, contact Cisco TAC by telephone. Cisco TAC engineers are assigned immediately to P1 and P2 cases to help keep your business operations running smoothly.

To open a case by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete listing of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

## TAC Case Priority Definitions

To ensure that all cases are reported in a standard format, Cisco has established case priority definitions.

**Priority 1 (P1)**—Your network is “down” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

**Priority 2 (P2)**—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Priority 3 (P3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Priority 4 (P4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

## Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Go to this URL to visit the company store:  
<http://www.cisco.com/go/marketplace/>
- The Cisco *Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:  
<http://cisco.com/univercd/cc/td/doc/pcat/>
- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press online at this URL:  
<http://www.ciscopress.com>
- *Packet* magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access Packet magazine at this URL:  
<http://www.cisco.com/packet>
- *iQ Magazine* is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:  
<http://www.cisco.com/go/iqmagazine>
- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:  
<http://www.cisco.com/ipj>
- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:  
<http://www.cisco.com/en/US/learning/index.html>

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