



Release Notes for Catalyst 6500 Series Switch and Cisco 7600 Series Router MSFC3 ROMMON Software

Current Release: 12.2(17r)SX7—January 11, 2010

Past Release: 12.2(17r)SX6, 12.2(17r)SX5, 12.2(17r)S4, 12.2(17r)S2, 12.2(14r)S9, 12.2(14r)S8

This publication describes how to upgrade the ROMMON on your Catalyst 6500 series switch or Cisco 7600 series router MSFC3.



Note

In systems running Catalyst operating system release 8.1(1) on the Supervisor Engine 720 and Cisco IOS software on the MSFC3, the minimum required ROMMON release is 12.2(14r)S8. Due to CSCeb69141, the recommended ROMMON release for systems running Cisco IOS on both the Supervisor Engine 720 and the MSFC3 is 12.2(14r)S9. To determine if you need to upgrade the ROMMON on your system, enter the **show version** command to view the ROMMON version currently running on your system.

With this procedure, you can upgrade the ROMMON image similar to the way that you upgrade the operating system software (Catalyst operating system or Cisco IOS software).

MSFC3 ROMMON software release 12.2(14r)S8 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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System Software Requirements

The MSFC3 ROMMON software upgrade requires the following minimum system software releases:

- MSFC3 ROMMON software releases 12.2(14r)S1 or later.
- For Catalyst 6500 and Cisco 7600 series systems running Cisco IOS software on the Supervisor Engine 720 and on the MSFC3, Cisco IOS Release 12.2 (14)SX is the first software release that supports a software upgrade of the MSFC3 ROMMON.
- For Catalyst 6500 series and Cisco 7600 series systems running Catalyst operating system on the Supervisor Engine 720 and Cisco IOS software on the MSFC3, Cisco IOS Release 12.2(14)SX2 is the first software release that supports a software upgrade of the MSFC3 ROMMON.

Software Images

[Table 1](#) lists the available software releases for the MSFC3 ROMMON software.

Table 1 *Upgradable Modules*

MSFC3 ROMMON Software Release	Filename
12.2(17r)SX7 upgradable module ROMMON image	c6msfc3-rm2.srec.122-17r.SX7
12.2(17r)SX6 upgradable module ROMMON image	c6msfc3-rm2.srec.122-17r.SX6
12.2(17r)SX5 upgradable module ROMMON image	c6msfc3-rm2.srec.122-17r.SX5
12.2(17r)S4 upgradable module ROMMON image	c6msfc3-rm2.srec.122-17r.S4
12.2(17r)S2 upgradable module ROMMON image	c6msfc3-rm2.srec.122-17r.S2
12.2(14r)S9 upgradable module ROMMON image	c6msfc3-rm2.srec.122-14r.S9

ROMMON Image Overview

The MSFC3 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:

- [MSFC3 ROMMON Release 12.2\(17r\)SX7, page 3](#)
- [MSFC3 ROMMON Release 12.2\(17r\)SX6, page 3](#)
- [MSFC3 ROMMON Release 12.2\(17r\)SX5, page 3](#)
- [MSFC3 ROMMON Release 12.2\(17r\)S4, page 3](#)
- [MSFC3 ROMMON Release 12.2\(17r\)S2, page 3](#)
- [MSFC3 ROMMON Release 12.2\(14r\)S9, page 3](#)
- [MSFC3 ROMMON Release 12.2\(14r\)S8, page 3](#)

MSFC3 ROMMON Release 12.2(17r)SX7

- Support has been added to allow the RP to boot from the new mobile dual data rate (MDDR) DIMM, which is replacing the SDRAM DIMM on the Supervisor Engine 720. This support applies only to the current hardware release; previous versions of the hardware cannot use this feature.

MSFC3 ROMMON Release 12.2(17r)SX6

There are no new features in ROMMON release 12.2(17r)SX6.

MSFC3 ROMMON Release 12.2(17r)SX5

There are no new features in ROMMON release 12.2(17r)SX5.

MSFC3 ROMMON Release 12.2(17r)S4

There are no new features in ROMMON release 12.2(17r)S4.

MSFC3 ROMMON Release 12.2(17r)S2

There are no new features in ROMMON release 12.2(17r)S2.

MSFC3 ROMMON Release 12.2(14r)S9

There are no new features in ROMMON release 12.2(14r)S9.

MSFC3 ROMMON Release 12.2(14r)S8

MSFC3 ROMMON release 12.2(14r)S8 adds support for systems running Catalyst operating system on the Supervisor Engine 720 and Cisco IOS software on the MSFC3.

Caveats

The following sections contain caveat information:

- [Resolved Caveats in MSFC3 ROMMON Software Release 12.2\(17r\)SX7, page 4](#)
- [Resolved Caveats in MSFC3 ROMMON Software Release 12.2\(17r\)SX6, page 4](#)
- [Resolved Caveats in MSFC3 ROMMON Software Release 12.2\(17r\)SX5, page 5](#)
- [Resolved Caveats in MSFC3 ROMMON Software Release 12.2\(17r\)S4, page 5](#)
- [Resolved Caveats in MSFC3 ROMMON Software Release 12.2\(17r\)S2, page 5](#)
- [Resolved Caveats in MSFC3 ROMMON Software Release 12.2\(14r\)S9, page 5](#)
- [Resolved Caveats in MSFC3 ROMMON Software Release 12.2\(14r\)S8, page 6](#)

Resolved Caveats in MSFC3 ROMMON Software Release 12.2(17r)SX7

- If you are upgrading from a ROMMON software release prior to ROMMON software release 12.2(17r)SX6, you need to follow the hybrid NVRAM cleanup information contained in ROMMON software release 12.2(17r)SX6.
- When setting a ROMMON variable, if the ROMMON environment is full, the ROMMON variable is deleted. The expected behavior is that the new ROMMON variable value will be ignored. This problem is resolved in ROMMON software release 12.2(17r)SX7. (CSCtc29491)
- EMT call support for environment variable cleanup, current status, and size has been added to the release. The lack of this capability is resolved in ROMMON software release 12.2(17r)SX7. (CSCsz96399)

Resolved Caveats in MSFC3 ROMMON Software Release 12.2(17r)SX6

- The FlexWAN module configuration is corrupted during a Catalyst 6500 series switch or Cisco 7600 series router Cisco IOS router upgrade or during bootup. This problem is resolved in ROMMON software release 12.2(17r)SX6. (CSCsq77835)

After you upgrade the ROMMON image on systems running Cisco IOS, reload and boot the Cisco IOS or the Cisco IOS software modularity image to complete the upgrade. During the next reload from RP ROMMON, erase the hybrid NVRAM area by performing the following procedure:

```
rommon 1> priv
You now have access to the full set of monitor commands.
Warning: some commands will allow you to destroy your configuration and/or system
images and could render the machine unbootable.
rommon 2> nvram_erase
Enter in hex the start address [0xbe020000]: 0xbe020000
Enter in hex the test size of length in bytes [0x200]: 10000
rommon 3>
```



Note After erasing the NVRAM, if there is a delay in booting the RP image, the SP might reset itself.

- The **show bootvar** command might show an old boot statement after reload on a Catalyst 6500 series switch. The **show bootvar** command displays the boot variable for the route processor while it is the boot variable for the switch processor that actually determines which image to boot. This problem is resolved in ROMMON software release 12.2(17r)SX6. (CSCsv03353)
- The route processor stops responding during an image download and does not autoboot again. The route processor does not perform a retry operation during an image download. This causes the switch processor to timeout and reset itself while waiting for an acknowledgement from the route processor. This problem is resolved in ROMMON software release 12.2(17r)SX6. (CSCsu68695)
- The route processor ROMMON commands are not listed in alphabetical order. This problem is resolved in ROMMON software release 12.2(17r)SX6. (CSCsg75902)

Resolved Caveats in MSFC3 ROMMON Software Release 12.2(17r)SX5

- Some commands appear twice in the command list for the help menu. This problem is resolved in ROMMON software release 12.2(17r)SX5. (CSCsg70821)

Resolved Caveats in MSFC3 ROMMON Software Release 12.2(17r)S4

- MSFC3 ROMMON does not have an adequate way to handle watchdog and timeout exceptions. This problem is resolved in ROMMON software release 12.2(17r)S4. (CSCeg87313)
- The MSFC3 console speed cannot be set above 9600 baud. This problem is resolved in ROMMON software release 12.2(17r)S4. (CSCeg47689)
- TFTP is terminated and the MSFC3 goes to boot mode if you press Ctrl-C while loading the Supervisor Engine image from sup-disk0:. This problem is resolved in ROMMON software release 12.2(17r)S4. (CSCin83211)

Resolved Caveats in MSFC3 ROMMON Software Release 12.2(17r)S2

- A configuration register value is programmed incorrectly on an ASIC. This problem is resolved in ROMMON software release 12.2(17r)S2. (CSCed58891)
- The wrong timer counter register is programmed at bootup. This problem is resolved in ROMMON software release 12.2(17r)S2. (CSCed10938)

Resolved Caveats in MSFC3 ROMMON Software Release 12.2(14r)S9

- In a system running Cisco IOS on the Supervisor Engine 720 and MSFC2, booting the system with the 12.2(14r)S8 ROMMON image causes the redundant Supervisor Engine 720 to reset. This problem is resolved in ROMMON release 12.2(14r)S9. (CSCeb69141)
- If the system attempts to boot the ROMMON image from F2 as the active region, the ROMMON image boots, but the display says "FIRST_RUN." The display output should say "APPROVED". This problem is resolved in ROMMON release 12.2(14r)S9. (CSCea78564)

Resolved Caveats in MSFC3 ROMMON Software Release 12.2(14r)S8

- TFTP boot is not supported by the MSFC3 ROMMON. This problem is resolved in ROMMON release 12.2(14r)S8. (CSCea68829)
- CPU cache parity detection is not supported by the MSFC3 ROMMON. This problem is resolved in ROMMON release 12.2(14r)S8. (CSCea80665)
- The MSFC3 ROMMON does not support systems running the Catalyst operating system on the Supervisor Engine 720 and Cisco IOS software on the MSFC3. This problem is resolved in ROMMON release 12.2(14r)S8. (CSCdz49649)

Upgrading the MSFC3 ROMMON



Note

Before performing this procedure, you must download the new ROMMON image from Cisco.com. The download procedure is the same as downloading Catalyst operating system images.

Upgrade Procedure for Systems Running Cisco IOS on the Supervisor Engine and MSFC

To upgrade the ROMMON version on your MSFC3 in a system that is running Cisco IOS software on the Supervisor Engine 720 and on the MSFC3, perform these steps:

Step 1 Check the active ROMMON information:

```
Router# show rom-monitor slot 1 rp

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

The display indicates that the active ROMMON is running in Region F1.

Step 2 Program the new ROMMON image to the flash device on the MSFC3:

```
Router# upgrade rom-monitor slot 1 rp file
tftp://dirt/tftpboot-users/c6msfc3_rm2.srec.122-14r.S9
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 1 rp
Region F1:APPROVED
Region F2:FIRST_RUN, preferred
Currently running ROMMON from F1 region
Router#
```

Step 4 Reload the system:

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

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

```
Router# show rom-monitor slot 1 rp
Region F1:APPROVED
Region F2:APPROVED, preferred
Currently running ROMMON from F2 region
Router#
```

The “Region F2” field should show “APPROVED, preferred.” The ROMMON stored in the Region F2 is now the active ROMMON.

Upgrade Procedure for Systems Running Catalyst OS on the Supervisor Engine and Cisco IOS on the MSFC

To determine the existing ROMMON version running on your system, enter the **show version** command. To support a system running Catalyst OS 8.1(1) and later on the Supervisor Engine 720, the minimum required ROMMON version is 12.2(14r)S8.

To upgrade the ROMMON version on your MSFC3 in a system that is running Catalyst operating system on the Supervisor Engine 720 and Cisco IOS software on the MSFC3, perform these steps:

Step 1 Copy the ROMMON image to the MSFC3 bootflash:

```
Router# upgrade rom-monitor slot rp_slot_number rp file
bootflash:c6msfc3-rm2.srec.122-14r.S9
00:01:17:ROMMON image upgrade in progress
00:01:17:Erasing flash
00:01:19:Programming flash
Router#
00:01:21:Verifying new image
00:01:21:ROMMON image upgrade complete
```

Step 2 Before reloading, specify the configuration register:

```
Router(config)# config-register 0x2102
```

Step 3 Confirm the configuration register setting:

```
Router# show boot
BOOT variable does not exist
CONFIG_FILE variable does not exist
BOOTLDR variable does not exist
Configuration register is 0x2102
```



Note If the configuration register is not set correctly, the MSFC3 will revert to ROMMON after the reload.

Step 4 Reload the system:

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

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

```
Router# show rom-monitor slot rp_slot_number rp
Region F1:APPROVED, preferred
rommon upgrade
Region F2:INVALID
Currently running ROMMON from F1 region
```

Storing More Than One ROMMON Image

The procedure in this section is optional and should be used only if you have multiple versions of the upgraded ROMMON image stored on the MSFC3. These procedures describe how to select a particular ROMMON image for booting and how to disqualify a particular ROMMON region.

Selecting a Stored ROMMON Image on the MSFC3

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** command 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 write-protected section of the ROMMON Flash. Use the **upgrade rom-monitor slot preference** command to select which ROMMON will be the preferred ROMMON the next time 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 MSFC3, perform these steps:

Step 1 Change the ROMMON preference:

```
Router# show rom-monitor slot 1 rp
Region F1:FIRST_RUN
Region F2:FIRST_RUN, preferred
Currently running ROMMON from F2 region
Router# upgrade rom-monitor slot 1 rp preference region1
```

```
You are about to mark F1 region of RP ROMMON in slot 1 as the boot preference region,
proceed[n]? y
Router#
```

Step 2 Reload the MSFC3 for the change to take effect:

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

<output truncated>

Step 3 Verify the change:

```
Router# show rom-monitor slot 1 rp
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 write-protected 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 1 rp
Region F1:FIRST_RUN
Region F2:FIRST_RUN, preferred
Currently running ROMMON from F2 region
```

```
Router# upgrade rom-monitor slot 1 rp invalidate region2
```

```
You are about to mark F2 region of RP ROMMON in slot 1 as an invalid region,
proceed[n]? y
Router#
```

Step 2 Reload the MSFC3 for the change to take effect:

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

<output truncated>

Step 3 Verify the change:

```
Router# show rom-monitor slot 1 rp
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 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*
- *Cisco 7600 Series Router Cisco IOS Software Configuration Guide*
- *Cisco 7600 Series Router Cisco IOS 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 documents listed in the [Additional Documentation, page 9](#) section.

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