



Release Notes for Cisco 7600 Series Router Route Switch Processor 720 ROMMON

Current Release: 12.2(33r)SRE2

Past Releases: 12.2(33r)SRD6, 12.2(33r)SRB3, 12.2(33r)SRB4, 12.2(33r)SRC3

This document describes how to determine if you need to upgrade the ROM monitor (ROMMON) on your Cisco 7600 series router Route Switch Processor 720 (RSP720). It covers the following RSP720 models: RSP720-3C-GE, RSP720-3CXL-GE, RSP720-3C-10GE, and RSP720-3CXL-10GE. This document also provides the procedure to download the new ROMMON image from Cisco.com and then upgrade the ROMMON on your RSP720.

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



Note

The ROMMON software upgrade procedure in this publication applies only to RSP720-3C-GE and RSP720-3CXL-GE with ROMMON Software Release 12.2(33r)SRB3 and later releases, or the RSP720-3C-10GE and RSP720-3CXL-10GE with ROMMON Software Release 12.2(33r)SRC3 and later releases.

ROMMON Software Release 12.2(33r)SRE2 and later releases are supported in Cisco 7600 series systems that are running the following:

- Cisco IOS software on the RSP720 and on the MSFC4

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Software Images

Table 1 lists the software releases for the Cisco 7600 series router ROMMON RSP720-3C-GE, RSP720-3CXL-GE, RSP720-3C-10GE, and RSP720-3CXL-10GE software.

Table 1 Upgradable Modules

RSP720 ROMMON Software Release	Filename
rsp720 rp Rommon 12.2(33r)SRE2 image	rsp720_rp-rm2.srec.122-33r.SRE2
rsp720 sp Rommon 12.2(33r)SRE2 image	rsp720_sp-rm2.srec.122-33r.SRE2
rsp720 10ge rp Rommon 12.2(33r)SRE2 image	rsp720_10ge_rp-rm2.srec.122-33r.SRE2
rsp720 10ge sp Rommon 12.2(33r)SRE2 image	rsp720_10ge_sp-rm2.srec.122-33r.SRE2
rsp720 rp Rommon 12.2(33r)SRE image	rsp720_rp-rm2.srec.122-33r.SRE
rsp720 sp Rommon 12.2(33r)SRE image	rsp720_sp-rm2.srec.122-33r.SRE
rsp720 10ge rp Rommon 12.2(33r)SRE image	rsp720_10ge_rp-rm2.srec.122-33r.SRE
rsp720 10ge sp Rommon 12.2(33r)SRE image	rsp720_10ge_sp-rm2.srec.122-33r.SRE
rsp720 rp Rommon 12.2(33r)SRD6 image	rsp720_rp-rm2.srec.122-33r.SRD6
rsp720 sp Rommon 12.2(33r)SRD6 image	rsp720_sp-rm2.srec.122-33r.SRD6
rsp720 10ge rp Rommon 12.2(33r)SRD6 image	rsp720_10ge_rp-rm2.srec.122-33r.SRD6
rsp720 10ge sp Rommon 12.2(33r)SRD6 image	rsp720_10ge_sp-rm2.srec.122-33r.SRD6
rsp720 rp Rommon 12.2(33r)SRD5 image	rsp720_sp-rm2.srec.122-33r.SRD5
rsp720 sp Rommon 12.2(33r)SRD5 image	rsp720_rp-rm2.srec.122-33r.SRD5
rsp720 rp Rommon 12.2(33r)SRD2 image	rsp720_rp-rm2.srec.122-33r.SRD2
rsp720 sp Rommon 12.2(33r)SRD2 image	rsp720_sp-rm2.srec.122-33r.SRD2
rsp720 10ge rp Rommon 12.2(33r)SRD2 image	rsp720_10ge_rp-rm2.srec.122-33r.SRD2
rsp720 10ge sp Rommon 12.2(33r)SRD2 image	rsp720_10ge_sp-rm2.srec.122-33r.SRD2
rsp720 10ge rp Rommon 12.2(33r)SRC3 image	rsp720_10ge_rp-rm2.srec.122-33r.SRC3
rsp720 10ge sp Rommon 12.2(33r)SRC3 image	rsp720_10ge_sp-rm2.srec.122-33r.SRC3
rsp720 rp Rommon 12.2(33r)SRC3 image	rsp720_rp-rm2.srec.122-33r.SRC3
rsp720 sp Rommon 12.2(33r)SRC3 image	rsp720_sp-rm2.srec.122-33r.SRC3
rsp720 sp Rommon 12.2(33r)SRB4 image	rsp720_sp-rm2.srec.122-33r.SRB4
rsp720 rp Rommon 12.2(33r)SRB4 image	rsp720_rp-rm2.srec.122-33r.SRB4
rsp720 rp Rommon 12.2(33r)SRB3 image	rsp720_rp-rm2.srec.122-33r.SRB3
rsp720 sp Rommon 12.2(33r)SRB3 image	rsp720_sp-rm2.srec.122-33r.SRB3

ROMMON Image Overview

The RSP720-3C-GE, RSP720-3CXL-GE, RSP720-3C-10GE, and RSP720-3CXL-10GE ROMMONs consist 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:

- [rsp720 rp Rommon 12.2\(33r\)SRE2 Image, page 4](#)
- [rsp720 sp Rommon 12.2\(33r\)SRE2 Image, page 4](#)
- [rsp720 10ge rp Rommon 12.2\(33r\)SRE2 Image, page 4](#)
- [rsp720 10ge sp Rommon 12.2\(33r\)SRE2 Image, page 4](#)
- [There are no new features in this ROMMON release., page 4](#)
- [rsp720 sp Rommon 12.2\(33r\)SRE Image, page 4](#)
- [rsp720 10ge rp Rommon 12.2\(33r\)SRE Image, page 4](#)
- [rsp720 10ge sp Rommon 12.2\(33r\)SRE Image, page 4](#)
- [rsp720 rp Rommon 12.2\(33r\)SRD6 Image, page 4](#)
- [rsp720 sp Rommon 12.2\(33r\)SRD6 Image, page 4](#)
- [rsp720 10ge rp Rommon 12.2\(33r\)SRD6 Image, page 5](#)
- [rsp720 10ge sp Rommon 12.2\(33r\)SRD6 Image, page 5](#)
- [rsp720 rp Rommon 12.2\(33r\)SRD5 Image, page 5](#)
- [rsp720 sp Rommon 12.2\(33r\)SRD5 Image, page 5](#)
- [rsp720 rp Rommon 12.2\(33r\)SRD2 Image, page 5](#)
- [rsp720 sp Rommon 12.2\(33r\)SRD2 Image, page 5](#)
- [rsp720 10ge rp Rommon 12.2\(33r\)SRD2 Image, page 5](#)
- [rsp720 10ge sp Rommon 12.2\(33r\)SRD2 Image, page 5](#)
- [rsp720 10ge rp Rommon 12.2\(33r\)SRC3 Image, page 5](#)
- [rsp720 10ge sp Rommon 12.2\(33r\)SRC3 Image, page 5](#)
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- [rsp720 sp Rommon 12.2\(33r\)SRC3 Image, page 6](#)
- [rsp720 sp Rommon 12.2\(33r\)SRB4 Image, page 6](#)
- [rsp720 rp Rommon 12.2\(33r\)SRB4 Image, page 6](#)
- [rsp720 rp Rommon 12.2\(33r\)SRB3 Image, page 6](#)
- [rsp720 sp Rommon 12.2\(33r\)SRB3 Image, page 6](#)

rsp720 rp Rommon 12.2(33r)SRE2 Image

There are no new features in this ROMMON release.

rsp720 sp Rommon 12.2(33r)SRE2 Image

There are no new features in this ROMMON release.

rsp720 10ge rp Rommon 12.2(33r)SRE2 Image

There are no new features in this ROMMON release.

rsp720 10ge sp Rommon 12.2(33r)SRE2 Image

There are no new features in this ROMMON release.

rsp720 rp Rommon 12.2(33r)SRE Image

There are no new features in this ROMMON release.

rsp720 sp Rommon 12.2(33r)SRE Image

There are no new features in this ROMMON release.

rsp720 10ge rp Rommon 12.2(33r)SRE Image

There are no new features in this ROMMON release.

rsp720 10ge sp Rommon 12.2(33r)SRE Image

There are no new features in this ROMMON release.

rsp720 rp Rommon 12.2(33r)SRD6 Image

There are no new features in this ROMMON release.

rsp720 sp Rommon 12.2(33r)SRD6 Image

There are no new features in this ROMMON release.

rsp720 10ge rp Rommon 12.2(33r)SRD6 Image

There are no new features in this ROMMON release.

rsp720 10ge sp Rommon 12.2(33r)SRD6 Image

There are no new features in this ROMMON release.

rsp720 rp Rommon 12.2(33r)SRD5 Image

There are no new features in this ROMMON release.

rsp720 sp Rommon 12.2(33r)SRD5 Image

There are no new features in this ROMMON release.

rsp720 rp Rommon 12.2(33r)SRD2 Image

There are no new features in this ROMMON release.

rsp720 sp Rommon 12.2(33r)SRD2 Image

There are no new features in this ROMMON release.

rsp720 10ge rp Rommon 12.2(33r)SRD2 Image

There are no new features in this ROMMON release.

rsp720 10ge sp Rommon 12.2(33r)SRD2 Image

There are no new features in this ROMMON release.

rsp720 10ge rp Rommon 12.2(33r)SRC3 Image

Introduces support for RSP720-3C-10GE and RSP720-3CXL-10GE.

rsp720 10ge sp Rommon 12.2(33r)SRC3 Image

Introduces support for RSP720-3C-10GE and RSP720-3CXL-10GE.

rsp720 rp Rommon 12.2(33r)SRC3 Image

There are no new features in this ROMMON release.

rsp720 sp Rommon 12.2(33r)SRC3 Image

There are no new features in this ROMMON release.

rsp720 sp Rommon 12.2(33r)SRB4 Image

There are no new features in this ROMMON release.

rsp720 rp Rommon 12.2(33r)SRB4 Image

There are no new features in this ROMMON release.

rsp720 rp Rommon 12.2(33r)SRB3 Image

There are no new features in this ROMMON release.

rsp720 sp Rommon 12.2(33r)SRB3 Image

There are no new features in this ROMMON release.

Caveats

The following sections contain caveat information:

- [Resolved caveats in 12.2\(33r\)SRE2, page 6](#)
- [Resolved caveats in 12.2\(33r\)SRE2, page 6](#)
- [Resolved caveats in 12.2\(33r\)SRD6, page 7](#)
- [Resolved caveats in 12.2\(33r\)SRD5, page 7](#)
- [Resolved Caveats in 12.2\(33r\)SRD2, page 7](#)
- [Resolved Caveats in 12.2\(33r\)SRC3, page 7](#)
- [Resolved Caveats in 12.2\(33r\)SRB4, page 7](#)

Resolved caveats in 12.2(33r)SRE2

- The additional support is introduced in the ROMMON Software Release 12.2(33r) SRE2. Refer the table [Upgradable Modules](#).
- CSCug96645 RSP720 Rommon changes to support MPC8548 3.1.2 version-DDR20 Errata.

Resolved caveats in 12.2(33r)SRE

The support for NabooCR boards was not included. The support is introduced in the ROMMON Software Release 12.2(33r) SRE (CSCt120213).

Resolved caveats in 12.2(33r)SRD6

The latency values in memory controller are not proper and Processor errata DDR20 was not implemented. These problems are resolved in ROMMON Software Release 12.2(33r)SRD6 (CSCta53511 and CSCta77537).

Resolved caveats in 12.2(33r)SRD5

The latency values in memory controller are not proper and Processor errata DDR20 was not implemented. These problems are resolved in ROMMON Software Release 12.2(33r)SRD5 (CSCta53511 and CSCta77537).

Resolved Caveats in 12.2(33r)SRD2

- Original on-die termination (ODT) configuration value is not correct. This could cause dual inline memory module (DIMM) module failure upon bootup. This problem is resolved in ROMMON Software Release 12.2(33r)SRD2 (CSCsq27958).

Resolved Caveats in 12.2(33r)SRC3

- After the non-volatile RAM (NVRAM) battery is switched, the route processor (RP) rommon cannot boot with an image download. This problem is resolved in ROMMON Software Release 12.2(33r)SRC3 (CSCsm03389).

Resolved Caveats in 12.2(33r)SRB4

- The RSP720 and RSP720-10GE default RP ROMMON configuration register is set to 0x8000 instead of to 0x8002 to autoboot. This problem is resolved in ROMMON Software Release 12.2(33r)SRB4 (CSCsi92364).

Upgrading the RSP720 ROMMON Using Cisco IOS Commands

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 route switching processor software images.

To download RSP720 ROMMON image from Cisco.com:

Step 1 To download Cisco 7600 Series Route Switch Processor 720 with 1 Gigabit Ethernet Uplinks, click: <http://www.cisco.com/cisco/software/type.html?mdfid=281997386&flowid=230>

Cisco 7600 Series Route Switch Processor 720 with 10 Gigabit Ethernet Uplinks is available at: <http://www.cisco.com/cisco/software/type.html?mdfid=281939433&flowid=229>

Step 2 Under **Select a Software type**, click **IOS ROMMON Software**.

Step 3 Under **Select a Release**, click on the required version number.

Step 4 Click **Download Now**.

To upgrade the ROMMON version on your RSP720-3C-GE, RSP720-3CXL-GE, RSP720-3C-10GE, or RSP720-3CXL-10GE using Cisco IOS commands, perform these steps:

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 RSP720:

```
Router# upgrade rom-monitor slot 5 sp file
tftp://tftpboot-users/rsp720_sp-rm2.srec.122-33r.SRB4

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 RSP720:

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



Caution

Be sure to complete Step 5 before performing either or the following actions:

—An online insertion and removal (OIR) of the RSP720.

—A power cycling of the RSP720. 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 RSP720.

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 RSP720, 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 5 sp 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 route switching processor 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 route switching processor 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
```

Related Documentation

This section refers you to other documentation that also might be useful as you configure your Cisco 7600 series router. The documentation listed below is available online.

Cisco 7600 Series Router Documentation

An overview of the Cisco 7600 series router features, benefits, and applications can be found in the *Cisco 7600 Series Internet Router Essentials* document located at the following URL:

http://www.cisco.com/en/US/products/hw/routers/ps368/products_quick_start09186a0080092248.html

Some of the following other Cisco 7600 series router publications might be useful to you as you configure your Cisco 7600 series router.

- *Cisco 7600 Series Cisco IOS Software Configuration Guide*
http://www.cisco.com/en/US/products/hw/routers/ps368/products_installation_and_configuration_guides_list.html
- *Cisco 7600 Series Cisco IOS Command Reference*
http://www.cisco.com/en/US/products/hw/routers/ps368/prod_command_reference_list.html

- *Cisco 7600 Series Cisco IOS System Message Guide*
http://www.cisco.com/en/US/products/hw/routers/ps368/products_system_message_guides_list.html
- *Cisco 7600 Series Internet Router MIB Specifications Guide*
http://www.cisco.com/en/US/products/hw/routers/ps368/prod_technical_reference_list.html

Several other publications are also related to the Cisco 7600 series router. For a complete reference of related documentation, refer to the *Cisco 7600 Series Routers Documentation Roadmap* located at the following URL:

http://www.cisco.com/en/US/products/hw/routers/ps368/products_documentation_roadmaps_list.html

Other Cisco IOS Software Publications

Your router and the Cisco IOS software running on it contain extensive features. You can find documentation for Cisco IOS software features at the following URL:

http://www.cisco.com/en/US/products/ps6922/products_feature_guides_list.html

Cisco IOS Release 12.2SR Software Publications

Documentation for Cisco IOS Release 12.2SR, including command reference and system error messages, can be found at the following URL:

http://www.cisco.com/en/US/products/ps6922/tsd_products_support_series_home.html

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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