



Introduction



- Note** Explore the [Content Hub](#), the all new portal that offers an enhanced product documentation experience.
- Use faceted search to locate content that is most relevant to you.
 - Create customized PDFs for ready reference.
 - Benefit from context-based recommendations.

Get started with the Content Hub at content.cisco.com to craft a personalized documentation experience.
Do provide feedback about your experience with the Content Hub.

This Release Notes contain information about downloading and installing Cisco 1x2 / Compact Shelf RPD Software 4.1 and its maintenance releases. It also provides new and changed information, hardware support, limitations and restrictions, and caveats for Cisco 1x2 / Compact Shelf RPD Software 4.1 and its maintenance releases.

We recommend that you view the field notices for this release to see if your software or hardware platforms are affected. If you have an account at Cisco.com, you can find the field notices at http://www.cisco.com/en/US/customer/support/tsd_products_field_notice_summary.html.

If you do not have an account at Cisco.com, you can find the field notices at http://www.cisco.com/en/US/support/tsd_products_field_notice_summary.html.



- Note** Cisco 1x2 / Compact Shelf RPD Software 4.1 is generally available for field deployment. To ensure a smoother, faster, and successful field deployment, we recommend that you validate and qualify the software in a limited field trial.
-

This chapter includes the following sections:

- [System Requirements, on page 2](#)
- [New and Changed Information, on page 3](#)
- [MIBs, on page 5](#)
- [Obtaining Documentation and Submitting a Service Request, on page 5](#)

System Requirements

These sections describe the system requirements for Cisco 1x2 / Compact Shelf RPD Software and its maintenance releases:

Memory Requirements for Cisco 1x2 / Compact Shelf RPD Software 4.1



Note Memory is not configurable for the Cisco Remote-PHY device.

Table 1: Memory Recommendations for the Cisco Remote-PHY Device

Feature Set	Cisco RPHY Processor	Software Image	Fixed Memory	Runs From
CISCO RPHY 4.1	NXP LS1043A	RPD-V4-1.itb.SSA	1G Bytes	Bootflash:

Hardware Supported

For detailed information about the hardware supported in Cisco 1x2 / Compact Shelf RPD Software and its maintenance releases, see:

http://www.cisco.com/c/en/us/td/docs/cable/cbr/installation/guide/b_cbr_how_and_what_to_order.html.

Determining the Software Version for Cisco 1x2 / Compact Shelf RPD Software 4.1

To determine the version of the Cisco 1x2 RPD software running on your Cisco Remote-PHY Device, log in and enter the **show version EXEC** command:

```
R-PHY#show version
Cisco RPD Software, version v4.1, build by rpd-release, on 2018-03-21 06:53:44
Branch information:
  RPD branch: (detached from RPD_V4_1_20180321)
  OpenRPD branch: (detached from RPD_V4_1_20180321)
  SeresRPD branch: (detached from RPD_V4_1_20180321)
```



Note System image file name for a factory installed image is `/bootflash/RPD-V4.1_hardware_certificate.itb.rel.sign.SSA`. System image file name for a Secure Software Download(SSD) from the Cisco software download page is `/bootflash/RPD-V4-1.itb.SSA.act`.

New and Changed Information

The following sections list the new hardware and software features supported on the Cisco cBR Series Converged Broadband Routers in this release:

New Software Features in Cisco 1x2 / Compact Shelf RPD Software 4.1.2

Redundant Multicast DEPI Pool

The Cisco cBR router supports redundant multicast DEPI pool. As the NCS switch does not support one Group with multiple sources in a multicast group, you can assign additional multicast IP addresses to the DS controllers on the secondary line cards. When you enable the redundant multicast DEPI pool, the secondary line card is up in the redundancy line card group, the multicast IP addresses are assigned for secondary line card from the redundant multicast pool.

New Software Features in Cisco 1x2 / Compact Shelf RPD Software 4.1

Virtual Combining of Upstream Channels on Remote PHY

Virtual Combining of upstream channels helps in supporting more RPDs than the number of US SGs, similar to the way multiple physical cables are combined to same upstream RF port in I-CMTS architecture. Cisco cBR routers support the binding of multiple US ports on RPDs to the same US controller.

For more information, see the [Cisco Remote PHY Device Provisioning Guide for Cisco 1x2 / Compact Shelf RPD Software 4.1](#) guide.

GCPP Support for Remote PHY

The Cisco Remote PHY architecture supports Generic Control Protocol Principal (GCPP) as the core. GCPP core provides containerized services for automating deployments, managing applications, the initial authentication of the RPDs, and configuring RPD features and video services.

For more information, see the [Cisco Remote PHY Device Configuration Guide for Cisco 1x2 / Compact Shelf RPD Software 4.1](#) guide.

Daisy Chain Architecture

Cisco Remote PHY devices support the daisy chain architecture. The daisy chain architecture includes multiple RPDs connected in series.

For more information, see the [Cisco Remote PHY Device System Overview for Cisco 1x2 / Compact Shelf RPD Software 4.1](#) guide.

Modified Software Features in Cisco 1x2 / Compact Shelf RPD Software 4.1.2

There are no modified software features in Cisco 1x2 / Compact Shelf RPD Software 4.1.2.

Modified Software Features in Cisco 1x2 / Compact Shelf RPD Software 4.1

Fault Management Enhancement

Fault management on RPD is required for remote monitoring, detection, diagnosis, reporting, and correcting the issues. Currently, the Fault management module provides the following support:

- RPD can send events to the CCAP core
- CCAP core can get events from RPD
- On the CCAP core, view log in to the CLI
- SNMP poll events are supported

Starting from RPD 4.1 Release, you can enable RPD event traps to send RPD events using SNMP traps.

Integrated Software Features in Cisco 1x2 / Compact Shelf RPD Software 4.1.2

There are no new integrated software features in Cisco 1x2 / Compact Shelf RPD Software 4.1.2.

Integrated Software Features in Cisco 1x2 / Compact Shelf RPD Software 4.1

DOCSIS 3.1 Downstream Resiliency for Remote PHY

When DOCSIS 3.1 cable modem reports non-primary RF channel failure for SCQAM or OFDM channel, actions performed by downstream resiliency is the same as DOCSIS 3.0 cable modem.

Dynamic Bonding Group for RPHY

The Dynamic Bonding Group (DBG) feature enables the system to create bonding groups of different sizes automatically based on the cable modem's capacity.

New Software Features in Cisco 1x2 / Compact Shelf RPD Software 4.1.2

Redundant Multicast DEPI Pool

The Cisco cBR router supports redundant multicast DEPI pool. As the NCS switch does not support one Group with multiple sources in a multicast group, you can assign additional multicast IP addresses to the DS controllers on the secondary line cards. When you enable the redundant multicast DEPI pool, the secondary line card is up in the redundancy line card group, the multicast IP addresses are assigned for secondary line card from the redundant multicast pool.

New Hardware Features in Cisco 1x2 / Compact Shelf RPD Software 4.1

There are no new hardware feature for Cisco 1x2 / Compact Shelf RPD Software 4.1 release.

MIBs

To locate and download MIBs for selected platforms, Cisco IOS XE releases, and feature sets, use Cisco MIB Locator found at the following URL:

<http://tools.cisco.com/ITDIT/MIBS/servlet/index>

To access Cisco MIB Locator, you must have an account on Cisco.com. If you have forgotten or lost your account information, send a blank e-mail to cco-locksmith@cisco.com. An automatic check verifies that your e-mail address is registered with Cisco.com. If the check is successful, account details with a new random password is e-mailed to you. Qualified users can establish an account on Cisco.com by following the directions found at this URL:

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

MIBs in Cisco 1x2 / Compact Shelf RPD Software 4.1.2

There are no new MIBs in RPD Software 4.1d.

MIBs in Cisco 1x2 / Compact Shelf RPD Software 4.1

There are no new MIBs in RPD Software 4.1.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see [What's New in Cisco Product Documentation](#).

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the [What's New in Cisco Product Documentation RSS feed](#). The RSS feeds are a free service.

