Release Notes for Cisco Remote-PHY Device for Cisco 1x2 RPD Software 1.1

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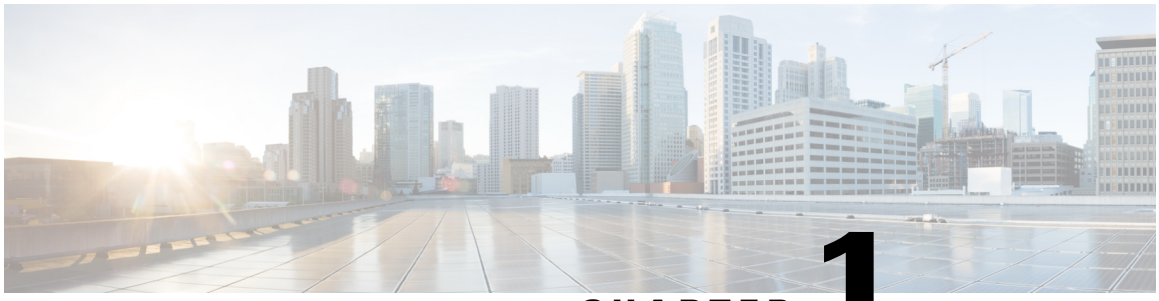
CONTENTS



CHAPTER 1

Introduction

This release notes contain information about downloading and installing Cisco 1x2 / Compact Shelf RPD Software 1.1 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 1.1 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 on Cisco.com, you can find field notices at http://www.cisco.com/en/US/customer/support/tsd_products_field_notice_summary.html .

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

Note Cisco 1x2 / Compact Shelf RPD Software 1.1 is generally available for field deployment. However, we recommend that you validate and qualify Cisco 1x2 / Compact Shelf RPD Software 1.1 in a limited field trial with your specific network configuration requirements in order to ensure a smoother, faster, and successful field deployment.

This chapter includes the following sections:

System Requirements

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

Memory Requirements

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 1.1	NXP LS1043A	[illegible]	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

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

```
R-PHY#show version
Cisco RPD_hardware_certificate Software, version RPD_hardware_certificate_V1.1_20170324183326
, build by rpd-release, on 2017-03-24 18:33:26
Branch information:
RPD branch: (detached from RPD_V1_THROTTLE_NIGHTLY_20170325_003518)
OpenRPD branch: (detached from RPD_V1_THROTTLE_NIGHTLY_20170325_003518)
SeresRPD branch: (detached from RPD_V1_THROTTLE_NIGHTLY_20170325_003518)

System image file is:
this is tftpboot image

Bootloader version:
Nonsecure: U-Boot 2016.01 (Sep 23 2016 - 03:19:57 +0800)

IOFPGA version:
IOFPGA: 0x0235

System uptime:
06:32:26 up 2 min, load average: 3.39, 0.92, 0.31

System CPU information:
processor : 0
Features : fp asimd evtstrm aes pmull sha1 sha2 crc32
CPU implementer : 0x41
CPU architecture: 8
CPU variant : 0x0
CPU part : 0xd03
CPU revision : 4

processor : 1
Features : fp asimd evtstrm aes pmull sha1 sha2 crc32
```

```
CPU implementer : 0x41
CPU architecture: 8
CPU variant : 0x0
CPU part : 0xd03
CPU revision : 4

processor : 2
Features : fp asimd evtstrm aes pmull sha1 sha2 crc32
CPU implementer : 0x41
CPU architecture: 8
CPU variant : 0x0
CPU part : 0xd03
CPU revision : 4

processor : 3
Features : fp asimd evtstrm aes pmull sha1 sha2 crc32
CPU implementer : 0x41
CPU architecture: 8
CPU variant : 0x0
CPU part : 0xd03
CPU revision : 4


System memory information:
MemTotal: 898116 kB
MemFree: 232180 kB
MemAvailable: 265496 kB
Buffers: 2292 kB
Cached: 37680 kB

Hardware Information:
Hardware Version : 2.0
Product Number (PID) : GS7K-RPD-1X2
PCA Serial Number : CAT2050E22A
Asset ID : P2F-194
System MAC Address : ba:db:ad:13:41:be
R-PHY#
```

Microcode Software

This section describes microcode software that is supported for the Cisco cBR Series Converged Broadband Routers.

For more information, see the Upgrading the Cisco cBR Series Converged Broadband Routers for Cisco IOS XE Everest 16.5.1 guide.

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 Hardware Features in Cisco 1x2 / Compact Shelf RPD Software 1.1

Cisco Remote-PHY Device

The Cisco Remote-PHY Device (RPD) resides inside the Cisco 1.2GHz GS7000 SHO Node (Cisco GS7000 node). The PID is GS7K-RPD-1X2.

For more information, see the What is Cisco Remote PHY document.

Cisco CCAP RF Line Card for Remote-PHY

The Cisco CCAP RF line card with no downstream and upstream PHY modules is connected with the Cisco 1.2GHz GS7000 SHO Node (Cisco GS7000 node). The PID of the line card is CBR-CCAP-LC-40G-R.

For more information, see the What is Cisco Remote PHY document.

Cisco 1.2GHz GS7000 SHO Node

The Cisco 1.2GHz GS7000 SHO Node (Cisco GS7000 node) acts as the edge QAM in the Cisco Remote-PHY architecture. It is located between the Cisco CMTS and the cable modem, and controlled by the Cisco CMTS.

For more information, see the Cisco 1.2 GHz GS7000 Node Installation and Operation Guide.

New Software Features in Cisco 1x2 / Compact Shelf RPD Software 1.1

Cisco Remote-PHY Controller Profile

This feature enables you to specify the RF channels and their RF parameters that belong to a specific profile, which includes channel type, frequency, RF output, and QAM-profile.

For more information, see the Cisco Remote-PHY Device Configuration Guide for Cisco RPD IOS 1.1 guide.

Synchronizing Time on Cisco Remote-PHY Devices

This feature synchronizes time between a CCAP core function and a series of Cisco Remote PHY devices (RPD) that enable Remote-PHY and provides support for converged DOCSIS, video, and out-of-band (OOB) services.

For more information, see the Cisco Remote-PHY Device Provisioning Guide for Cisco RPD IOS 1.1 guide.

Cisco Remote-PHY Device Support

A Cisco cBR chassis supports up to 256 Cisco Remote-PHY devices (RPD) with each line card supporting up to 32 RPDs.

DLM Support

This feature supports the DEPI Latency Measurement (DLM) packet that is a specific type of data packet used for measuring the network latency between the CCAP core and the Cisco RPD.

The following commands were introduced:

- **network-delay dlm**
- **show cable rpd dlm**

For more information, see the Cisco Remote-PHY Device Provisioning Guide for Cisco RPD IOS 1.1 guide.

Downstream Virtual Splitting

This feature is used to broadcast video delivered via MPEG QAM channels or via IP over DOCSIS.

The following commands were introduced:

- **cable depi multicast pool**

- **multicast-pool**

For more information, see the Cisco Remote-PHY Device Downstream Virtual Splitting Guide for Cisco RPD IOS 1.1 guide.

OOB 55-1

This feature facilitates the delivery of OOB streams from the headend to the customer-facing CPE via the Remote PHY architecture.

The following commands were introduced:

- **controller downstream-oob 55d1-profile**
- **controller upstream-oob 55d1-profile**
- **cable oob**
- **virtual-om**
- **virtual-arpd**

For more information, see the Cisco Remote-PHY Device Out-of-Band Configuration Guide for for Cisco RPD IOS 1.1 guide.

Service Policy on Port-Channel Interfaces

This feature configures input MQC on a port-channel interface to differentiate traffic flow and set corresponding "qos-group" features.

Large Scale Controller Support

This feature supports 32 downstream controllers and 64 upstream controllers per Cisco Remote-PHY line card.

The following commands were introduced:

- **cable downstream controller-profile**
- **cable upstream controller-profile**

Upstream 128 Channels

This feature supports 128 upstream channels per Cisco Remote-PHY line card.

Cisco Remote-PHY LCHA

This feature allows RPD to connect to active core and standby core independently to support line card redundancy.

The following commands were introduced:

- **show cable rpd lcha-cores**

For more information, see the Cisco Remote-PHY Device High Availability Configuration Guide for Cisco RPD IOS 1.1 guide.

Cisco Remote-PHY SUPHA

This feature support SUPHA on remote-PHY configuration.

For more information, see the Cisco Remote-PHY Device High Availability Configuration Guide for Cisco RPD IOS 1.1 guide.

Modified Software Features in Cisco 1x2 / Compact Shelf RPD Software 1.1

There are no modified software features in Cisco 1x2 / Compact Shelf RPD Software 1.1 release.

Integrated Software Features in Cisco 1x2 / Compact Shelf RPD Software 1.1

There are no integrated features in Cisco 1x2 / Compact Shelf RPD Software 1.1 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

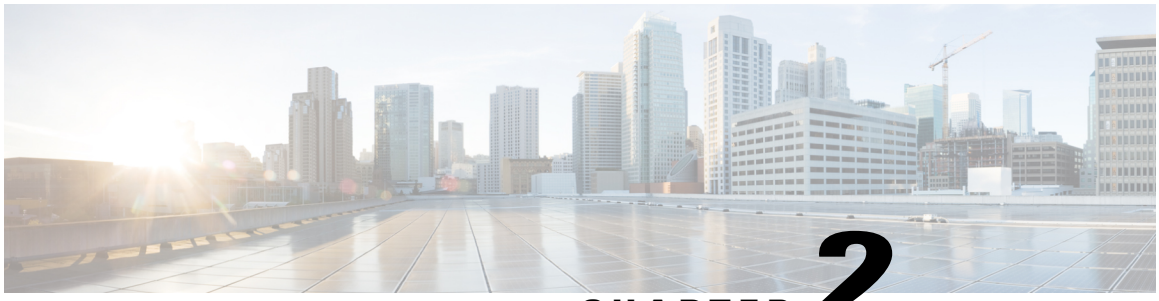
MIBs in Cisco 1x2 / Compact Shelf RPD Software 1.1

There are no new MIBs in Cisco 1x2 / Compact Shelf RPD Software 1.1 release.

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.



CHAPTER 2

Caveat List

This chapter describes open severity 1 and 2 caveats and select severity 3 caveats:

- The "Open Caveats" sections list open caveats that apply to the current release and may apply to previous releases. A caveat that is open for a prior release and is still unresolved applies to all future releases until it is resolved.

The bug IDs are sorted alphanumerically.

Note The Caveats section includes the bug ID and a short description of the bug. For details on the symptoms, conditions, and workaround for a specific caveat you must use the Bug Search Tool.

Cisco Bug Search

Cisco Bug Search Tool (BST), the online successor to Bug Toolkit, is designed to improve effectiveness in network risk management and device troubleshooting. You can search for bugs based on product, release, and keyword, and aggregates key data such as bug details, product, and version. For more details on the tool, see the help page located at http://www.cisco.com/web/applicat/cbsshelp/help.html .

Open Caveats for Cisco 1x2 / Compact Shelf RPD Software 1.1

Caveat ID Number	Description
CSCvd66805	All of the CMs drop offline and can't back online after node flapping
CSCvd29737	RPHY: SSO results in long outage for both docsis and video (8~10s)

Caveat ID Number	Description
CSCvc54588	US167761:RPHY: docsRphyRpdIpAddressTable node and TLV implementation---node side
CSCvd42344	BRCM_LY: reset LY video channel will impact other channels (brief CC error)
CSCvc37158	DS calibration:CM DS power changed a little big after change DS RF count
CSCvc69276	DS packet drop on node with full LC traffic

Resolved Caveats for Cisco 1x2 / Compact Shelf RPD Software 1.1

Caveat ID Number	Description
CSCve19967	RPD SSD download fail due to Cannot allocate memory
CSCve45623	cnir for upstream of the second port can't show out when configure two controllers in one rpd
CSCvf17069	OFDM power is different between SW mute and SW no-mute
CSCvf11078	Pilot tone power level can not be adjusted in expected range
CSCvf23411	Re-config the QAM channel will impact the existing Pilot channel setting