Other Important Information

Feature Support

Cisco IOS XE software is packaged in feature sets that consist of software images that support specific platforms. The feature sets available for a specific platform depend on which Cisco IOS XE software images are included in a release. Each feature set contains a specific set of Cisco IOS XE features.

⚠️

Caution   Cisco IOS XE images with strong encryption (including, but not limited to 168-bit [3DES] data encryption feature sets) are subject to U.S. government export controls and have limited distribution. Strong encryption images to be installed outside the United States are likely to require an export license. Customer orders may be denied or subject to delay because of U.S. government regulations. When applicable, the purchaser or user must obtain local import and use authorizations for all encryption strengths. Please contact your sales representative or distributor for more information, or send an e-mail to export@cisco.com.

Cisco cBR-8 Software Compatibility

The Cisco cBR-8 software must be compatible with Cisco RPD and SmartPHY software. Otherwise the RPD remains in the **init(gcp)** state. The following table provides details of the compatible software versions:

Cisco cBR-8 Software Version	Compatible Cisco RPD Software Version	Compatible SmartPHY Software Version
Cisco IOS XE Cupertino 17.9.1y1	Cisco 1x2 / Compact Shelf RPD Software 10.5 Cisco 1x2 / Compact Shelf RPD Software 10.6	SmartPHY v22.4
Cisco IOS XE Cupertino 17.9.1y	Cisco 1x2 / Compact Shelf RPD Software 10.5	SmartPHY v22.4
Cisco IOS XE Cupertino 17.9.1x1	Cisco 1x2 / Compact Shelf RPD Software 10.5	SmartPHY v22.4
Cisco IOS XE Cupertino 17.9.1w	Cisco 1x2 / Compact Shelf RPD Software 10.4	SmartPHY v22.4

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:

https://mibs.cloudapps.cisco.com/ITDIT/MIBS/servlet/index

New and Changed MIB Information in Cisco IOS-XE Cupertino 17.9.1y1

There are no new or changed MIBs for Cisco IOS-XE Cupertino 17.9.1y1

New and Changed MIB Information in Cisco IOS-XE Cupertino 17.9.1y

This section provides information regarding new and updated MIBs in the Cisco IOS XE Cupertino 17.9.1y release for Cisco cBR-8 series routers.

- **Proactive Network Management Using RxPwr MIB**: Provides an estimate of the received power in a specified OFDMA channel at the F connector input of either a CMTS integrated linecard or RPD. The measurement is based on upstream probes, which are typically the same probes used for pre-equalization adjustment. For more information see, Proactive Network Management.

- **docsIfCmtsChannelUtUtilization**
  - docsIfCmtsChannelUtUtilization for OFDMA is functional and provides the same rolling average functionality
  - docsIfCmtsChannelUtilizationInterval allows the "cable util-interval" setting to be read and configured via SNMP

- **docsSubmgt3BaseCpeMaxIpv6PrefixDef**
  - **docsSubmgt3BaseCpeMaxIpv6AddressesDef**– Allows the maximum number of IPv6 addresses for the CM's CPE's.

- **docsSubmgt3BaseCpeMaxIpv6PrefixesDef**- Allows the maximum number of IPv6 IA_PDs (delegated prefixes) for the CM's CPE's.

- The existing MIB global object **docsSubmgt3BaseCpeMaxIpv6PrefixDef** is modified as follows:

  docsSubmgt3CpeCtrlMaxCpeIpv6Prefix

- The existing MIB **docsSubmgt3CpeCtrlMaxCpeIpv6Prefix** is modified as follows:

  - **docsSubmgt3CpeCtrlMaxCpeIpv6Addresses** - Permits the maximum number of simultaneous IPv6 prefixes and addresses for CPEs connected to the CM.

  - **docsSubmgt3CpeCtrlMaxCpeIpv6Prefixes**- Permits the maximum number of simultaneous IPv6 IA_PDs (delegated prefixes) for CPEs connected to the CM.

- **docsSubmgt3CpeIpType**

  The existing MIB **docsSubmgt3CpeIpType** supports more types of CPE. The types are classified as: **cpe** (Regular CPE clients), **ps** (CableHome Portal Server (PS)), **mta** (PacketCable, Multimedia Terminal Adapter (MTA)), **stb** (Digital Set-top Box (STB)), **tea** (T1 Emulation adapter (TEA)), **erouter** (Embedded Router (eRouter)), **dva** (Digital Voice Adapter (DVA)), **sg** (Security Gateway (SG)), and **card** (CableCARD).

- **docsSubMgt3GrpUdcGroupIds**

  The existing MIB **docsSubMgt3GrpUdcGroupIds** is changed from read-write to read only support.

- **docsSubMgt3GrpUdcSentInRegRsp**

  The existing MIB **docsSubMgt3GrpUdcSentInRegRsp** is changed from read-write to read-only support.

- **docsSubmgt3FilterGrpGrpId**

  The existing MIB **docsSubmgt3FilterGrpGrpId** identifiers for a set of classifiers are modified (1..65535 to 1..1024).

New and Changed MIB Information in Cisco IOS-XE Cupertino 17.9.1x1

There are no new or updated MIBs in the Cisco IOS XE Cupertino 17.9.1x1 release for Cisco cBR-8 series routers.

New and Changed MIB Information in Cisco IOS-XE Cupertino 17.9.1w

In Cisco IOS XE Cupertino 17.9.1w, Cisco proprietary MIB table CISCO-CABLE-PNM-MIB is introduced to support multiple SAC capture.

Supported Transceiver Modules

For more information on the supported transceiver modules, see Transceiver Module Group (TMG) Compatibility Matrix.

Best Practice Manual of Procedure for Cisco IOS XE Cupertino 17.9.1 Upgrade

See the *Upgrading the Cisco cBR Converged Broadband Routers for Cisco IOS XE Cupertino 17.9* document at the Install and Upgrade Guides page.

Mapping CBR-DPIC-8X10G 10-Gigabit Ethernet Interface to downstream controllers

Starting from Cisco IOS XE Bengaluru 17.6.1a, when you configure the RPD with CBR-CCAP-LC-G2-R, note that the CBR-DPIC-8X10G 10-Gigabit Ethernet Interface to downstream controllers mapping has changed.

Following are the new mapping values:

10-Gigabit Ethernet Interface	Downstream Controller
<slot>/1/0 ~ 1	0..7
<slot>/1/2 ~ 3	8..15
<slot>/1/4 ~ 5	16..23
<slot>/1/6 ~ 7	24..31

The mapping changes are also for valid downstream-video controllers.

> ✎
>
> **Note** The mapping changes does not apply to the CBR-DPIC-2x100G.

The previous mapping values are:

10-Gigabit Ethernet Interface	Downstream Controller
<slot>/1/0 ~ 3	0..15
<slot>/1/4 ~ 7	16..31

Ensure that you have correctly configured the mapping to avoid error logs and error messages. Following is an example of a wrong manual configuration:

```
Router(config)#cab rpd test1
Router(config-rpd)#core-interface tenGigabitEthernet 8/1/0
Router(config-rpd-core)#rpd-ds 0 downstream-cable 8/0/9 profile 0
For RPD aaaa.bbbb.aaaa, DPIC TE interface Te8/1/0 and DS controller 9 mismatch, TE interface
 Te*/1/0 can only be associated with DS controller */*/0~7, configuration failed.
Router(config-rpd-core)#rpd-ds 0 downstream-video 8/0/9 profile 1
For RPD aaaa.bbbb.aaaa, DPIC TE interface Te8/1/0 and Video controller 9 mismatch, TE
interface Te*/1/0 can only be associated with Video controller */*/0~7, configuration failed.
Router(config-rpd-core)#
```

Following is an example of a bootup error message:

```
*Jun 10 15:53:29.108 CST: %CBR-3-TE_CONTROLLER_MISMATCH: For RPD aaaa.bbbb.aaaa, DPIC TE
interface Te8/1/0 and DS controller 9 mismatch, TE interface Te*/1/0 can only be associated
 with DS controller */*/0~7, configuration failed.

*Jun 10 15:53:29.110 CST: %CBR-3-TE_CONTROLLER_MISMATCH: For RPD aaaa.bbbb.aaaa, DPIC TE
interface Te8/1/0 and Video controller 9 mismatch, TE interface Te*/1/0 can only be associated
 with Video controller */*/0~7, configuration failed.
```

Cisco cBR-8 Documentation References

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 IOS XE Cupertino 17.9.1 is generally available for field deployment. However, we recommend that you validate and qualify Cisco IOS XE Cupertino 17.9.1 in a limited field trial with your specific network configuration requirements. This process ensures a smoother, faster, and successful field deployment.

For information on Cisco cBR-8, go through the following links:

- Cisco cBR-8 Documentation for Cisco IOS XE
- Cisco cBR-8 DOCSIS Software Configuration Guide