



# Release Notes for Catalyst 6500 Series and Cisco 7600 Series Communication Media Module Software Release 12.2(13)ZC

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Current Release: 12.2(13)ZC—July 17, 2003

This publication describes the features, modifications, and caveats for the Catalyst 6500 series and Cisco 7600 series Internet Router Communication Media Module (CMM) software release 12.2(13)ZC running Cisco IOS Release 12.1(13)E or later or Catalyst software release 7.3(1) or later.



Note

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For detailed installation and configuration procedures for the CMM, refer to the *Catalyst 6500 Series and Cisco 7600 Series Internet Router Communication Media Module Installation and Configuration Note* at the following URL:

[http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/cfgnotes/78\\_14107.htm](http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/cfgnotes/78_14107.htm)

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Note

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Except where specifically differentiated, the term “Catalyst 6500 series switches” includes both Catalyst 6500 series and Catalyst 6000 series switches.

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## System Requirements

This section describes the system requirements for the CMM software release.

### Hardware Supported

The CMM requires either a Supervisor Engine 1 or a Supervisor Engine 2. The supervisor engine can have an MSFC/MSFC2, but the CMM does not require an MSFC/MSFC2 for configuration or operation.

Product Number	Product Description	Minimum Software Version	Recommended Software Version	IOS Release	Catalyst Release
WS-SVC-CMM	Communication Media Module	12.2(11)ZC	12.2(13)ZC	12.1(13)E or later	7.3(1) or later

### Software Compatibility

Software release 12.2(13)ZC requires Cisco IOS Release 12.1(13)E or later releases or Catalyst software release 7.3(1) or later releases. The recommended Cisco IOS release is 12.1(19)E and the recommended Catalyst software release is 7.5(1).

### Cisco CallManager Support

Software release 12.2(13)ZC supports Cisco CallManager release 3.2(2) and later releases.

# Orderable Software Images

Table 1 lists the software versions and applicable ordering information for the CMM software.

**Table 1** Orderable Software Images

Software Version	Filename	Orderable Product Number <sup>1</sup>
12.2(13)ZC image	wscmm-i6s-mz.122-13.zc	S6CMVG3-12213ZC

1. Installed on system; append with “=” for spare on floppy media.

## Feature Set

Table 2 lists the supported features for the CMM interface modules.

**Table 2** CMM Interface Module Supported Features

WS-SVC-CMM-6T1 Module	WS-SVC-CMM-6E1 Module
Line code—B8ZS <sup>1</sup> , AMI <sup>2</sup>	Line code—HDB3 <sup>3</sup> , AMI
Frame format—SF <sup>4</sup> , ESF <sup>5</sup> with CRC <sup>6</sup> /no CRC	Frame format—with CRC4/no CRC4
SRST <sup>7, 8</sup>	SRST <sup>8</sup>
MGCP gateway fallback <sup>8</sup>	MGCP gateway fallback <sup>8</sup>
FDL <sup>8, 9</sup> with T1 CAS/PRI for extended super frame (only) signaling.	
MGCP and H.323 <sup>8</sup> : T1-PRI—Supports up to 18 ports <sup>10</sup> T1-CAS—Supports up to 18 ports <sup>10</sup> T1-CAS E&M <sup>11</sup> Wink Start T1-CAS E&M Delay Dial T1-CAS E&M Immediate Start <sup>12</sup> T1-CAS FXS Loop Start <sup>12</sup> T1-CAS FXO Loop Start <sup>12</sup> T1-CAS FXS Ground Start <sup>12</sup> T1-CAS FXO Ground Start <sup>12</sup> Fax Pass-through Cisco Fax Relay Modem Pass-through Music on Hold (unicast, multicast) DTMF Relay <sup>13, 14</sup> G711 codec (sampling size: 10, 20, and 30 ms) G729 codec (sampling size: 10, 20, 30, 40, 50, 60 ms) QSIG backhaul <sup>15</sup> NSF <sup>8, 15, 16</sup>	MGCP and H.323 <sup>8</sup> : E1-PRI—Supports up to 18 ports <sup>10</sup> Fax Pass-through Cisco Fax Relay DTMF Relay Modem Pass-through Music on Hold (unicast, multicast) G711 codec (sampling size: 10, 20, and 30 ms) G729 codec (sampling size: 10, 20, 30, 40, 50, 60 ms) QSIG backhaul <sup>15</sup> E1 R2 CAS signaling <sup>8, 12</sup>

1. B8ZS = binary 8-zero substitution.
2. AMI = alternate mark inversion.
3. HDB3 = high-density bipolar with three zeros.
4. SF = super framing.
5. ESF = extended super framing.
6. CRC = cyclic redundancy check.
7. SRST = Survival Remote Site Telephony.
8. Requires software release 12.2(13)ZC.
9. FDL = Facility Data Link.
10. Number of ports is based on running 12.2(13)ZC software, 20-ms packetization with VAD ON or 30-ms packetization with VAD OFF. With 20-ms packetization and VAD OFF, you are limited to 18 T1-PRI ports, 14 E1-PRI ports, and 16 T1-CAS ports.
11. E&M = ear and mouth.
12. Supported only with H.323.
13. DTMF = Dual Tone Multi-Frequency.
14. DTMF is supported; DTMF/MF is not supported.
15. Not supported with H.323.
16. NSF = Network-Specific Facilities (part of QSIG backhaul enhancement for MGCP).

## Usage Guidelines and Restrictions

This section provides usage guidelines and restrictions for the CMM.

- The recommended VAD setting for the CMM is off.
- SNMP is currently not supported on the CMM.

## Caveats

These sections describe the following release caveats:

- [Open Caveats in Release 12.2\(13\)ZC, page 4](#)
- [Resolved Caveats in Release 12.2\(13\)ZC, page 5](#)
- [Resolved Caveats in Release 12.2\(11\)ZC, page 5](#)
- [Manual Configuration in the Absence of CMM-Specific XML Files, page 6](#)
- [Related Cisco CallManager Caveats—Release 3.2\(2c\) and/or Earlier, page 7](#)

## Open Caveats in Release 12.2(13)ZC

This section describes the known limitations that exist in CMM software release 12.2(13)ZC.

- Under extreme stress conditions, using the **write memory** or **write erase** commands can cause call failures.

**Workaround:** Do not use the **write memory** or **write erase** commands under extreme stress conditions. Schedule the use of these commands during off hours. (CSCeb46179)

- Fax relay and pass-through mixed environments result in a fax call failure and VTSP-TIMEOUT messages on the gateway configured for fax pass-through.  
**Workaround:** Configure the same fax mode on both the originating and the terminating gateways. (CSCea38859)
- After a reload with the MGCP (XML) configuration download enabled, there might be a warning on the console displaying, “Warning: Primary line clock source is not operational.” Actually, the clock source line primary is configured by MGCP (XML) configuration download before and after a reload. (CSCdy33340)

## Resolved Caveats in Release 12.2(13)ZC

This section describes the resolved caveats in CMM software release 12.2(13)ZC.

- When the DSP is under heavy, extended stress testing conditions, you might see a VTSP-2-DSP\_TIMEOUT. (CSCdz70097)
- Cisco routers and switches running Cisco IOS software and configured to process Internet Protocol version 4 (IPv4) packets are vulnerable to a Denial of Service (DoS) attack. A rare sequence of crafted IPv4 packets sent directly to the device may cause the input interface to stop processing traffic once the input queue is full. No authentication is required to process the inbound packet. Processing of IPv4 packets is enabled by default. Devices running only IP version 6 (IPv6) are not affected. A workaround is available.

Cisco has made software available, free of charge, to correct the problem.

This advisory is available at

<http://www.cisco.com/warp/public/707/cisco-sa-20030717-blocked.shtml>

(CSCdz71127, CSCea02355)

## Resolved Caveats in Release 12.2(11)ZC

This section describes the resolved caveats in CMM software release 12.2(11)ZC.

- There might be a problem when fax pass-through is configured but only when a fax or modem is in close proximity to an IP or PSTN phone. Once a call is established through the gateway, one-way audio can be triggered if either the IP phone or the PSTN phone is in close proximity to an audible fax or modem. Fax or modem tones induced into the line through the handset or speakers can trigger a PCM\_SWITCHOVER resulting in one-way audio from the PSTN side.

**Workaround:** Increase the distance between the phone and the fax/modem, or reduce the fax/modem volume. This problem is resolved in Release 12.2(11)ZC. (CSCdz14789)

- There is a problem with voice activity detection (VAD) or silence suppression when these features are enabled on G.729 calls only. A delay will occur on the 7935 Polycom phone with some of the T1 (CAS/PRI) or E1 (PRI) voice calls. The delay is heard in one direction only from the PSTN to the 7935 Polycom phone. The delay problem occurs with varying amounts of delay.

**Workaround:** Turn off VAD if you experience this delay. This problem is resolved in Release 12.2(11)ZC. (CSCdz19171)

- Voice calls fail on the CMM if the codec type configured is G711ULAW or G711ALAW with a 30-ms sampling rate. There is no problem when configured for 10-ms and 20-ms sampling rates. This problem is resolved in Release 12.2(2)YK1. (CSCdy23154)

- A periodic clicking sound might be heard when a call is put on hold. The workaround is to configure unicast Music on Hold instead of multicast Music on Hold. This problem is resolved in Release 12.2(2)YK1. (CSCdy49606)
- The temperature monitoring process has been optimized to reduce CPU utilization. This problem is resolved in Release 12.2(2)YK1. (CSCdy41750)
- This problem might affect G.729 calls. An intermittent delay might be heard in the PSTN-to-IP phone direction for calls originating from the PSTN to an IP phone. If you experience this problem, the workaround is to turn VAD off. This problem is resolved in Release 12.2(2)YK1. (CSCdy54786)
- The CMM temperature sensors on the baseboard should work as follows: The Sensor 1 field refers to the outtake temperature sensor, and the Sensor 2 field refers to the intake temperature sensor. However, the software “swaps” the temperature readings of the two sensors. This problem is resolved in Release 12.2(2)YK1. (CSCdy84013)
- With auto configuration, you might not be able to download the complete XML configuration file. As a result, the configuration is not done.

**Workaround:** Manually create the configurations on the gateway. This problem is resolved in Release 12.2(2)YK1. (CSCdy51953)

- When reconfiguring the ISDN switch type from primary-ni to primary-5ess or updating any other value with that endpoint in CCM using the gateway auto configure feature, the T1 controller gets shut down when the reconfiguration is done. As a result of the reconfiguration, the Layer 1 is deactivated.

**Workaround:** 1. Manually change the switch type rather than using the auto config feature. 2. Or manually do a no shut after the auto reconfiguration is done. This problem is resolved in Release 12.2(2)YK1. (CSCdz17090)

## Manual Configuration in the Absence of CMM-Specific XML Files

If you do not have the CMM-specific XML files or do not want to install CMM-specific XML files, you need to perform the following configuration tasks:



### Note

The problem requiring manual configuration in the absence of CMM-specific XML files has been fixed in the Cisco CallManager 3.2(2c)spF-rc3 support patch. If you load that patch, you do not need to perform the following configuration tasks.

- Configure the **clock source line primary** and **clock source line secondary** under T1/E1 controllers as per your requirements. The secondary clock source is a backup for the primary clock source and the CMM supports secondary clock sources from 1 to 17. The CMM must have **clock source line primary** and **clock source line secondary** configured to avoid any clock slips.
- The default configuration for the CMM is “Cisco Fax Relay.” To run “Fax pass through calls,” you need to supplement the default configuration with the following two commands:
  - **mgcp modem pass through voip mode cisco**
  - **no ccm fax protocol cisco**

- The default configuration for “echo cancel coverage” is set to 64 ms. This default can be changed as needed under **voice-port** configuration.
- The default configuration for “input gain” and “output attenuation” is set to 0 dB. This default can be changed as needed under **voice-port** configuration.

The manual configuration is lost on a reload if you set the CMM for configuration download from Cisco CallManager. If the configuration is lost, you must reconfigure it. To retain the manual configuration, disable the automatic configuration download from Cisco CallManager before doing a CMM reload.

## Related Cisco CallManager Caveats—Release 3.2(2c) and/or Earlier

This section describes the related Cisco CallManager caveats in release 3.2(2c) and/or earlier releases.



Note

The caveats listed below have been fixed in the Cisco CallManager 3.2(2c)spF-rc3 support patch.

- The global GW database xxxx.cnf.xml file (in the tftppath directory in Cisco CallManager) does not get updated after changes are made in the MGCP configuration GUI. To update this file, you need to restart “TFTP service” on the Cisco CallManager. (CSCdy10859)
- Adding a new gateway does not automatically create the corresponding xxxx.cnf.xml file (in the tftppath directory in Cisco CallManager). To create this file, you need to restart “TFTP service” on Cisco CallManager. (CSCdy11956)

## Related Documentation

For more detailed installation and configuration information, refer to the following publications:

- *Catalyst 6500 Series and Cisco 7600 Series Internet Router Communication Media Module Installation and Configuration Note*
- *Regulatory Compliance and Safety Information for the Catalyst 6500 Series Switches*
- *Catalyst 6500 Series Switch Installation Guide*
- *Catalyst 6500 Series Switch Quick Software Configuration Guide*
- *Catalyst 6500 Series Switch Module Installation Guide*
- *Catalyst 6500 Series Switch Software Configuration Guide*
- *Catalyst 6500 Series Switch Command Reference*
- *Catalyst 6500 Series Switch Cisco IOS Software Configuration Guide*
- *Catalyst 6500 Series Switch Cisco IOS Command Reference*
- *System Message Guide—Catalyst 6500 Series, 5000 Family, 4000 Family, 2926G Series, 2948G, and 2980G Switches*
- For information about MIBs, refer to  
<http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>

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Cisco provides several ways to obtain documentation, technical assistance, and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

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<http://www.cisco.com/univercd/home/home.htm>

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[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

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[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm)

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<http://www.cisco.com/go/subscription>
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- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.

- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

## Cisco TAC Website

You can use the Cisco TAC website to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC website, go to this URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco service contract have complete access to the technical support resources on the Cisco TAC website. Some services on the Cisco TAC website require a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to this URL to register:

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

If you are a Cisco.com registered user, and you cannot resolve your technical issues by using the Cisco TAC website, you can open a case online at this URL:

<http://www.cisco.com/en/US/support/index.html>

If you have Internet access, we recommend that you open P3 and P4 cases through the Cisco TAC website so that you can describe the situation in your own words and attach any necessary files.

## Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

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- *The Cisco Product Catalog* describes the networking products offered by Cisco Systems as well as ordering and customer support services. Access the *Cisco Product Catalog* at this URL:

[http://www.cisco.com/en/US/products/products\\_catalog\\_links\\_launch.html](http://www.cisco.com/en/US/products/products_catalog_links_launch.html)

- Cisco Press publishes a wide range of networking publications. Cisco suggests these titles for new and experienced users: *Internetworking Terms and Acronyms Dictionary*, *Internetworking Technology Handbook*, *Internetworking Troubleshooting Guide*, and *the Internetworking Design Guide*. For current Cisco Press titles and other information, go to Cisco Press online at this URL:  
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- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in the design, development, and operation of public and private internets and intranets. You can access the *Internet Protocol Journal* at this URL:  
[http://www.cisco.com/en/US/about/ac123/ac147/about\\_cisco\\_the\\_internet\\_protocol\\_journal.html](http://www.cisco.com/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html)
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[http://www.cisco.com/en/US/learning/le31/learning\\_recommended\\_training\\_list.html](http://www.cisco.com/en/US/learning/le31/learning_recommended_training_list.html)

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