

**TANDBERG**

**Codian IP VCR 2000  
Series & MSE 8220**

Software Release Notes

Version 2.2(1.15)

April 2008

## Introduction

The TANDBERG Codian IP VCR 2200 Series and MSE 8220 VCR blade version 2.2(1) is a new feature release. This document lists the new features supported in this release and covers the IP VCR 2200 Series and the MSE 8220 blade.

The Codian IP VCR series version 2.2(1.15) is a maintenance release that resolves a number of issues, as described in this document and adds a new API call in addition to those introduced in version 2.2(1).

If you experience any difficulties or unexpected results when using version 2.2(1.15) of the IP VCR 2200 Series or MSE 8220 Media blade, consult the online help documentation for information on using the device, and also the FAQs on the web site before contacting technical support.

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**Caution:** If you are using an MSE 8000, the Supervisor Blade **must** be upgraded to Release 1.0(1.15) *before* you upgrade the VCR blade to IP VCR Series Version 2.2(1.15) software.

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## New features and functionality in 2.2(1)

- ▶ New options for gatekeeper neighboring
- ▶ Support for AES encryption
- ▶ Gatekeeper load balancing
- ▶ Improved performance for API operations

### *New options for gatekeeper neighboring*

In Release 2.2, there are new options for the configuration of gatekeeper neighboring for the built-in gatekeeper. In addition to the behavior of Release 2.1, the built-in gatekeeper has two new features:

- ▶ It can accept Location Confirm messages (LCFs) from unconfigured gatekeepers (non-neighbors)
- ▶ When it receives a Location Request (LRQ) regarding an unknown ID, it can now forward that request on to neighboring gatekeepers with the original parameters rather than inserting its own parameters. That is, the IP VCR will keep, in the LRQ, the address of the gatekeeper that originated the request as the return address for the LCF. This means that the IP VCR will not receive the reply to its LRQ message, the reply will be sent directly back to the originating gatekeeper

The new features enable the built-in gatekeeper to be used in environments with a multiple-level gatekeeper hierarchy. For example, the ability to accept LCFs from non-neighbors is required by the national gatekeepers connected to the Global Dialing Scheme (GDS).

The configuration of the built-in gatekeeper is on the **Gatekeeper** page.

Enabling **Accept LCFs from non-neighbors** can be a significant security risk. Only use this setting with proper cause.

Forwarding Location Request (LRQ) messages using the address of the gatekeeper that originated the request can also be a significant security risk. Only enable **using received return address** with proper cause.

The default gatekeeper neighboring behavior of the IP VCR remains the same as that of Release 2.1; if you have configured gatekeeper neighboring using Release 2.1 and then you upgrade to Release 2.2, the gatekeeper neighboring behavior that you have configured will stay the same even though the option names have changed (see below).

## Notes on changes in gatekeeper neighboring since Release 2.1

In Release 2.1, there was an option called **Respond to received LRQs for registered IDs**. This has been renamed to **Accept LRQs**. The effect of the option remains unchanged: unchecked, the gatekeeper will reject all LRQs. When selected, the gatekeeper will accept LRQs and respond if the request is regarding a device registered with it.

In Release 2.1, there was an option called **Send received LRQs for unknown IDs to neighbors**. This is now covered by the option named **Forward LRQs for unknown IDs**. With this option **Disabled**, the gatekeeper will not forward LRQs for IDs not registered to it to any other gatekeeper (that is, it will not send received LRQs for unknown IDs to neighbors). With this option set to **Enabled, using local return address** the gatekeeper will forward LRQs for IDs not registered to it to its neighbors (that is, the behavior will be the same as enabling **Send received LRQs for unknown IDs to neighbors** in Release 2.1). There is now a new option for the forwarding of LRQs to neighbors with the address of the gatekeeper that originated the request (**Enabled, using received return address**). That is explained above and in the online help.

## Support for AES encryption

Release 2.2 introduces two new features on the IP VCR to support the use of encryption on your video-conferencing equipment. These are:

- ▶ the ability to record encrypted H.323 calls from endpoints and encrypted conferences on an MCU
- ▶ the ability to play back to an H.323 endpoint using an encrypted connection

Note that there is no relationship between the connection used for the origination of a recording and that used for later playback. For example, an encrypted recording can be later played back to an endpoint that is not capable of AES encryption, and similarly a non-encrypted recording can be played back on an encrypted connection at a later date.

These new features allow encryption to be used where required by other video-conferencing equipment without disrupting services provided by the IP VCR. The IP VCR makes no distinction between recordings of encrypted media and those of unencrypted media. You can choose to make any recording publically accessible or not; you can make any recording PIN protected.

The Codian Converters that convert '.codian' files into either MPEG format or Windows Media Video format are fully compatible with this feature. A recording of an encrypted call or conference can be converted in the same way as any other IP VCR recording; ensure that you have the latest version of the Codian Converters (at least version 1.0.1.1 for the WM Converter and at least version 1.1.1.1 for the MPEG Converter). For more information about the Codian Converters, refer to the Support area of the web site.

If you record an encrypted call or conference and then downgrade the IP VCR to a pre-2.2 software release, the unit will not be able to play back that recording.

The IP VCR does not support encrypted SIP.

Note that you cannot record an encrypted point-to-point call.

## **Gatekeeper load balancing**

Release 2.2 supports a method of load balancing IP VCRs. This method allows you to register more than one IP VCR with the same gatekeeper using the same prefix. If one IP VCR is busy (with all ports in use), it will deregister its prefixes from the gatekeeper. By deregistering the prefixes of one IP VCR, the gatekeeper will contact one of the other IP VCRs if another call or conference needs to be recorded.

The new option to allow this configuration is called **Deregister prefixes when all recording ports are in use** and is on the **Settings > Gatekeeper** page.

If you are intending to use this configuration, set the **Gatekeeper registration type** (also on the **Settings > Gatekeeper** page), to *Gateway*. You must also configure your gatekeeper call routing to be in “direct call” mode.

## **Improved performance for API operations**

In Release 2.2, there have been some changes to the API to enhance performance. The IP VCR can now process multiple data queries from clients more efficiently. Multiple requests and responses can now use the same TCP connection (rather than needing an individual TCP connection for each one as in the previous releases)

For customers who have written their own applications using the API, these changes are entirely backwards compatible. If you have already written an application using the API, it will work as it did using Release 2.1; conversely, if you write an application using the new API features with Release 2.2 of IP VCR software and then you downgrade your unit, the application will still be compatible.

For more information about using the API, refer to the Management API Specification available in the Documentation section of the web site.

## Upgrading software

### Using a web browser

1. Unzip the image file.
2. Browse to the current IP address of the IP VCR using an IE-compatible Web browser. Click **Click here to log in** and then **Change log in**.
3. When prompted, type in **admin** for the user name and its associated password (this is blank in a new unit).
4. Go to the **Home > Settings > Upgrade** page.
5. In the Main software image section, type in, or browse to the location of the software image file.
6. Click the **Upgrade software image** button.

The Web browser uploads the file to the IP VCR. This takes some time – dependent on your network connection. Do not move your Web browser away from the Upgrade Software page or refresh this page during the upload process; otherwise, it may abort.

After a number of minutes, the Web browser refreshes automatically and displays “Main image upload completed”. Close this window.

7. Click the **Shutdown button** on the main upgrade page. This option will now change to **Confirm IP VCR shutdown**. Click to confirm.
8. Click the **Restart IP VCR and Upgrade** button. This button only appears in the Upgrade page during this process.

The unit will reboot and upgrade itself – this also takes a number of minutes.

**Note:** If you have been logged out due to inactivity, log in again as admin and click **Restart IP VCR and upgrade** at the bottom of the Upgrade software page to complete the upgrade.

### Using FTP

1. Use an FTP client to connect to the IP VCR – e.g. **ftp <IP VCR IP Address>** from the command prompt.
2. When prompted type in **admin** as the user name and its associated password (this is blank in a new unit).
3. Upload the upgrade file – e.g. **put codian\_vcr\_2.2(1.15)** from the command prompt.
4. When the upload has completed, reboot the IP VCR to start the upgrade. This can be done using the button on the Upgrade page within the web interface.

## Notes

- ▶ In general FTP is more reliable than using the web interface for upgrades
- ▶ The progress of the upgrade can be monitored through the serial port
- ▶ Before upgrading, make sure that the IP VCR is not in use. Anyone using the IP VCR at the time of the upgrade may experience poor performance and loss of connectivity
- ▶ The time required to download and upgrade depends on the speed of your network connection. With a fast connection the total time to download, upgrade and restart the IP VCR is several minutes

## Checking for updates and getting help

It is a good idea to regularly check for updates of the software image on the web site.

If the documentation does not answer your question or you have a problem with one of our products:

1. Refer to the Troubleshooter and Technical FAQs section of the web site which are kept up to date with the latest information from our technical support team regarding the resolution of customer issues.
2. Contact your reseller. Our resellers have a wealth of experience with our products and this is often a quick way of solving a problem.
3. If your query remains unsolved, there is a web form in the Support area of the web site that you can complete. Ensure that you provide all the details requested by the form to assist the technical support team in resolving your problem:
  - a. The serial number and product model number (for example: IP VCR 2200) of the unit.
  - b. The software build number. (To find this, in the web interface, go to **Status > General**).
  - c. Where you purchased the unit.
  - d. Your contact email address or telephone number.

Note that you can also send an email to our technical support team

## Resolved Issues

The following issues have been found in previous releases and are resolved in this release.

### Resolved in version 2.2(1.15), 14 April 2008

Bug ID	Summary
4456	NFS loses synch on network problems
4522	Content video lost between MCU and VCR on loopback playing
4558	Login is required on multicast streaming while unicast doesn't require this
4591	Deleting recording while downloading/exporting doesn't remove files from disk
4707	Retranscoding very long recordings fails
4822	API method to stop recording implemented

**Note:** Bug ID 4675 Codian Converter crashes when invalid H.263 media is passed in is fixed in the Codian Converter release 1.0(1.4).

### Version 2.2(1.13) and 2.2(1.14) not published

### Resolved in version 2.2(1.12), 18 January 2008

Bug ID	Summary
3991	Very high CPU usage during multiple downloading and recording.
4111	In some circumstances, if an API application was connected to the VCR, the unit would not reboot from web interface.
4316	In some circumstances, video was corrupted when receiving H.264 SIF from a Polycom v500 in low light levels.
4394	The VCR incorrectly reported NFS disk space.
4483	The VCR displayed the message: "SIP: Error: Unrecognized unassociated message in queue 32000001" and would not reboot.

### Version 2.2(1.11) not published

### Resolved in version 2.2(1.10), 7 December 2007

Bug ID	Summary
3244	A problem in the sizing of panes in the Java applet used to stream recorded content channel video from the IP VCR to a user's web browser could result in a blank bar being shown to the right of the content video stream. The code of the downloaded Java applet has now been changed to avoid this issue.
3801	Previously, the top 1/4 of the content channel stream could occasionally appear corrupted when streaming a recording with a content channel from the web interface.

3900	Invalid data being received on SIP ports under certain circumstances could cause the IP VCR to crash. The IP VCR is now tolerant of this data.
3967	When communicating with SIP endpoints, the IP VCR did not open a port for receiving RTCP control streams associated with video and audio RTP media streams being sent to it by those endpoints. This had no effect on media quality, but could cause a large number of ICMP destination unreachable network indications to be received by the endpoint, which erroneously could be seen to indicate a network problem.
4000	If multiple attempts to backup blade configurations are made in rapid succession, the backup operation may fail, with the Supervisor blade indicating a buffer overflow error. This was due to a bug in the handling of multiple configuration backup requests, and this bug has now been fixed. This issue affects only the MSE 8220 VCR blade.
4154	Under certain conditions when decoding H.264 with incorrect RTP marker bits, zebra stripe patterns appear in the decoded video. The code to detect these bad marker bits has been updated.
4180	Previously, the IP VCR was sending a first SIP register command using port 5060 in the via header when using TCP followed by a second register with the correct port number. Now the first register uses the correct port number.
4275	A bug in the code responsible for the queuing of certain messages inside the H.323 protocol stack meant that in some rare timing circumstances the IP VCR could end up in an unresponsive state. The deadlock issue that caused this state has been corrected.
4300	Recordings with names containing Korean characters can now be deleted.
4322	Occasionally on MXP endpoints in encrypted conferences, the video stream was not displayed even though the call established correctly and therefore did not display in recordings.

#### Versions 2.2(1.4) to 2.2(1.9) not published

#### Resolved in version 2.2(1.3), 28 September 2007

Bug ID	Summary
3866	Under certain error conditions when communicating with a remote NFS location, a bug in the IP VCR software used to report that failure could cause the IP VCR to crash. This bug has now been fixed.
3933	In certain cases when recording a point-to-point call with an IP VCR, if one of the endpoints being recorded is using H.239 for a content video channel, that H.239 channel may fail to be established. This is due to a defect in the IP VCR software whereby it fails to handle a H.323 token request if that request is sent very early in the call. This defect has now been corrected.
3965	When uploading replacement help files, for instance when producing a localized version of the online documentation in a language other than English, the IP VCRs accept Unicode text files in order that characters outside of the ASCII range may be used. Prior to this release those Unicode files were required to use the UTF-8 encoding; help files written using editing software that generated UTF-16 format Unicode files would be rendered incorrectly and be unreadable. The IP VCR software has now been enhanced to allow the use of the UTF-16 Unicode encoding in localized help files.

#### Versions 2.2(1.1) to 2.2(1.2) not published

#### Resolved in version 2.2(1), 13 September 2007

Bug ID	Summary
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1937	'Failed to allocate H225-RAS socket 2222' message appears in the Event log
2719	Calls from the Avaya softphone to the MCU as well as the MCU to the softphone connect with audio but no video in either direction
3285	The IP VCR would not allow 400 UDP live streaming connections due to a limit. This limit has been removed and 400 UDP streams can be watched
3559	Possible garbled G.722.1C audio in point-to-point recordings
3771	Audio and video are not replayed for every second seek when streaming a recording to RealPlayer
3810	Live streaming of a recording uses the lower of the Streaming recording video bit rate settings

## Outstanding limitations and bugs

### *Windows Media Player*

- ▶ Streaming a recording or live conference with Windows Media Player in multiple windows or tabs on the same browser will crash the browser. This is a known issue with Windows Media Player. If you need to stream more than one recording/conference simultaneously, a different player such as QuickTime or Real Player should be used.
- ▶ Windows Media Player 11 (WMP11) can display streams incorrectly when used as an embedded player with browsers other than Internet Explorer. This is a known incompatibility. In some cases, setting the video size of the main streaming video window (the Video size field in the Streaming page) to Large will correct the problem. To work around this you can use QuickTime or RealPlayer instead of WMP, or use Internet Explorer instead of your normal browser.

### *Windows Media Player and RealPlayer*

- ▶ MPEGs downloaded from the Codian IP VCR can be reported to have incorrect lengths when played back in RealPlayer and Windows Media Player. This will be addressed in a future release.

### *Streaming to QuickTime7 causes problems with some browsers*

Streaming to an embedded QuickTime player using the QuickTime 7.0 plus later option for the Player format on the IP VCR can cause certain browsers to crash or remain in the 'negotiating' state indefinitely. Affected browsers include: IE6; Firefox 1.5 (Mac and PC); Safari 2.0.3 and earlier, and Camino. IE7 and Safari 2.0.4 do not appear to be affected by this. Using the QuickTime 6.5 plus later option for the Player format on the IP VCR will allow streaming to QuickTime using any browser that supports a QuickTime plugin.

### *Interoperability problems with an Emblaze-VCON HD3000, HD2000 and HD600*

No video is received in either direction when connecting to and from the HD3000/HD2000/HD600 running software version 2.6 using H.263+. The Codian IP VCR will report 100% frame errors. One possible workaround is to go to **Settings > Connections** and disable H.263+ on the IP VCR; however, this is a unit-wide setting and therefore may not be appropriate. This problem is being investigated by Emblaze-VCON.

### *Japanese localization*

A few Japanese characters are displayed incorrectly. We plan to make a change to improve our support for localization character sets and to fix this issue in a future release.

### *Distortion or discoloration of part of the image when streaming live*

Sometimes when streaming live; that is while a recording is being made, part of the image is distorted or discolored. There is a work around for this in release 2.1 onwards. Go to **Recordings**, click on the recording file. Then click to **Transcode to streaming media**. This re-transcodes the recording and deletes the current file.