



Release Note – Cisco PowerVu D9858 Advanced Receiver Transcoder Software Release Version 3.50

Overview

Purpose

This document describes the changes included in software release version 3.50 for the Cisco® PowerVu D9858 Advanced Receiver Transcoder, since the previous release version, 3.02.

New Features

The following new features are included in this release version, 3.50.

- **New Web GUI** – The D9858 transcoder now utilizes a new style web GUI that enables users to control and manage the device with ease.
- **Dashboard** – A Dashboard view has been added to quickly view the status of the device based on functionality that is important to the user.
- **Settings Files** – A user can now upload or download the configuration of a D9858 transcoder through the web GUI. This will allow quick setup of a new device by simply loading a known good configuration
- **Service Selection by Name** – Service selection within the web GUI can be chosen by name rather than simply service ID for all PEs.
- **Code Update** – The D9858 transcoder now allows a user to update device code through the web GUI without any external applications.
- **Log Files** – While troubleshooting a device a user can now simply export the D9858's Alarm/Warning logs as well as diagnostic logs to a csv file for further review.

- **NTP Time** – The D9858 can now be configured to maintain local time by using an NTP server.

Older versions

V3.02 New Features

All features mentioned below are new features of the PowerVu Model D9858 Advanced Receiver Transcoder, version 3.02 since the previous release version, 2.52.

- **PreSightPlus Pre-analysis** – the D9858 transcoder now supports PreSightPlus Pre-analysis for transcoding H.264 AVC to MPEG-2 SD or HD. PreSightPlus allows the D9858 transcoder to make improved rate control decisions for MPEG-2 encoding, providing noticeable picture quality improvement from previous versions of the D9858 transcoder software.
- **HD resolution DVB subtitles** – previous releases supported SD resolution subtitles only if present in HD services. Release version 3.02 allows the decoding of HD resolution DVB subtitles to be overlaid in the baseband video output.
- **Device settings file support** – with the web interface, a user is able to send a settings file to an FTP server containing all the settings of the current unit. The receiver is also able to acquire a settings file from an FTP server and apply the configuration stored in the file to the device.
- **PNC transcoder controls** – D9858 transcoder parameters can be controlled from PowerVu uplinks when transcoder controls are enabled.
- **MPE (Multi Protocol Encapsulation) data support** – the receiver is able to de-encapsulate up to 10 Mbps of IP data from an MPE PID in the decoder service to be output on the Ethernet port.
- **Live event control** – the receiver will follow live event control commands when used in conjunction with a PowerVu uplink that has the Live Event Control (LEC) option and server installed.
- **HE-AAC audio decoding** – the receiver is able to decode a single pair of HE-AAC audio on audio 1. HE-AAC audio can be compressed and output for pass-through applications on the SD/HD-SDI or AES output.
- **Dolby Digital Plus Audio Decoding** – the receiver is able to decode a single pair of Dolby Digital Plus audio on audio 1.

- **SCTE-35 message translation to cue tones and triggers** – the receiver can translate an incoming SCTE-35 message with an embedded DTMF descriptor to the Cue Tone and Cue Trigger outputs for the decoded service.
- **Increased PMT audio selection** – the receiver is now able to decode any audio listed in the PMT up to the 64th audio via selection from the front panel.
- **Source program pass-through** – the D9858 transcoder supports P1A and P2A within DPM (Digital Program Mapping), allowing the receiver to pass the source program along with the transcoded program on the same transport output.

Older versions

V2.52 New Features

All features mentioned below are new features of the PowerVu Model D9858 Advanced Receiver Transcoder, version 2.52 since the previous release version, 2.01.

- **Active Format Descriptor (AFD) support for transcoding** – the D9858 transcoder now transcodes H.264 HD to MPEG-2 SD using down-conversion with automatic aspect ratio conversions, such as letterbox and center cut-out when using AFD data in the source program.
- **Improved Web user interface** – the web user interface has been improved to support web browsers that use more than two persistent connections, along with various improvements in performance and stability.

V2.01 New Features

All features mentioned below are new features of the PowerVu Model D9858 Advanced Receiver Transcoder, version 2.01 since the previous release version, 1.05.

- **H.264 AVC HD transcoding to MPEG-2 SD** – the D9858 transcoder now transcodes H.264 HD to MPEG-2 SD using down-conversion with user-selectable aspect ratio conversions such as letterbox, and center cut-out.
- **MPEG-2 and H.264 AVC SD decoding** – this release provides support for MPEG-2 and H.264 AVC standard definition decoding to the composite output.

- **Active Format Descriptor** - the D9858 transcoder will now support the Active Format Descriptor (AFD) to select the correct aspect ratio conversion based on the desired outgoing aspect ratio for incoming high-definition and standard definition source programs with embedded AFD for the decoded program.
- **DVB-VBI and SCTE-127 VBI** - VBI decoding to composite is now supported in the D9858 transcoder for DVB-VBI and SCTE-127 services.
- **PowerVu service replacement** - service replacement is supported in the latest release, allowing PowerVu uplinks to enable blackouts with program substitution to D9858 transcoders for up to two programs.
- **Web user interface** - the web user interface is now enabled on the D9858 transcoder, allowing easy configuration of the receiver. The username and password are “admin” and “localadmin” respectively.
- **Enhanced SNMP** - the D9858 transcoder with software release v2.01, has enhanced SNMP capabilities allowing full control of the device through the SNMP MIB.
- **PowerVu cue tones and triggers** - the D9858 transcoder will support PowerVu cue tones and cue triggers from existing PowerVu Encoders with this feature enabled.
- **MPEGoIP output** - the D9858 transcoder officially supports MPEGoIP output as of v2.01.

Updates

The following enhancements and fault resolutions updates are included in this software release version, 3.50:

Tracking Number	Description
1571	An issue on the web GUI to configure the channel numbers on all program entries at the same time would cause a failure to save the channel changes has been resolved.
1813	Changed how Auto AFD operates, so that when AFD is not initially present the unit operates in AUTO mode for the aspect ratio conversion for down-conversion.
1819	Display audio Language type in the audio status menu on the web GUI.

Tracking Number	Description
1843	In some instances the actual conversion status would display none even though an aspect ratio conversion is occurring. This issue has been resolved in this version.
1961	An issue where changing the AC-3 Compression mode would result in loss of audio output has been resolved.
1964	Resolved an issue where changing channels on a service with an MPE PID would take a long period of time.
1966	When tuned to a LEC based uplink the receiver would lose the LEC time out value after a reboot, this value now persists after a power cycle.
1970	An issue where the receiver can corrupt closed captions when decoding 1080i H.264 AVC content when the stream is encoded with picture AFF and 3/2 pull down enabled on the video encoder has been resolved.
2091	Resolved an issue where the receiver would reboot if it receives a video source encoded as MPEG-2 4:2:2. The receiver will ignore any video source that is 4:2:2.
2175	The receiver will no longer initiate a LEC channel lockdown when the receiver is not a member of a LEC group.
2248	Updated DVB subtitle positioning to conform to the DVB Subtitle specification
2411	Resolved an issue where the receiver could corrupt teletext VBI in some instances.
2420	Resolved an issue where in some rare instances DVB subtitles could cause a flash of the subtitles on the decoded output.
2426	Improved the DVB subtitle display and removal for multi line subtitles so that there is a lower delay between the display and removal of the lines.
2490	Resolved an issue where an audio glitch could occur on the audio outputs at a PTS wrap point.

Older versions

V3.02 Updates

The following enhancements and fault resolutions updates are included in this software release version, 3.02:

Tracking Number	Description
860	Resolved an issue where the user would need to press the up arrow twice prior to a PE switch on the receiver front panel.
1470	Improved the performance of MPEG-2 HD decoding for bit rates above 25 Mbps.
1515	In rare occurrences, HD down conversion to a transcoded SD program would produce a black vertical bar in the video stream for a short duration, less then 3 seconds. This was due to invalid video levels producing blacker than black on the source program to the HD encoder. This has been resolved.
1645	Resolved an issue where continuous RF noise could cause the receiver to reboot.
1699	Resolved an issue where the transcoder state alarm remained set even when the transcoder was operating normally.
1701	The receiver would fail to output the correct PMT descriptor in the TS output if the incoming descriptor is unknown. The receiver now outputs the correctly regenerated PMT descriptors.
1715	Improved the video decoding performance for incoming streams with incorrect STC values.
1727	Corrected DVB subtitle positioning for SD resolution subtitles.
1763	Resolved a receiver reboot issue due to OSD banner being displayed on the decoded output.

Older versions

V2.52 Updates

The following enhancements and fault resolutions updates are included in this software release version, 2.52:

Tracking Number	Description
890	The front panel and web GUI did not display all the available PIDs in the received program, under program status. This issue has been resolved.
894	Resolved the issue where closed captioning became corrupted when programs were encoded with 3:2 pulldown.
1168	Using the web GUI to change the ASI or MPEGoIP output mode to No Output did not change the transport output mode on the receiver. The receiver now updates successfully with all the output mode changes, via the web GUI.
1191	DVB VBI or SCTE-127 PIDs that exceeded a bit rate of 280 kbps could corrupt the VBI on the composite or SDI outputs. Improvements in VBI processing have resolved this limitation.
1205	Loss of Dolby Digital (AC-3) audio after a channel change or RF interference occurred when the AC-3 stream was encoded using less than four AC-3 frames per PES packet. The D9858 transcoder can now support one or more AC-3 frames per PES packet.
1230	Resolved a chroma luma delay problem when down converting an HD source to SD.
1250	A service replacement on Program Entry 2 caused the SDT for that program to not be present on the TS output. This has been resolved.
1293	The PIDs of a transcoded program are no longer output when the source program is changed from HD to SD. The D9858 transcoder will now continue to transcode when the source changes. It is not recommended to set the source to SD when the transcoded output is set to HD.
1314	When transcoding and outputting a program entry on both ASI and MPEGoIP outputs, deleting a service in the program on the ASI output caused the MPEGoIP output to also remove the service. The D9858 transcoder will now maintain the service settings of the MPEGoIP output irrespective of the ASI output settings.
1326	Accessing the log page in the web GUI resulted in a "base_tagname 0" error. This has been resolved.

Tracking Number	Description
1360	During a service replacement, in rare circumstances, the end user was prevented from changing channels on the receiver. This has been resolved in this release.
1401	Resolved an issue where accessing the summary page in the web GUI resulted in a "base_tagname 0" error.
1406	Improved compatibility with Harmonic H.264 encoders for 720p resolution encoding.
1501	Resolved the issue where closed captioning became corrupted with 720p sources that had intermittent closed captioning data.

V2.01 Updates

The following enhancements and fault resolutions updates are included in this software release version, 2.01:

Tracking Number	Description
715	The front panel user interface displayed ASI no lock in the status menu even when there was ASI lock. This has been resolved.
716	DPM menus in the D9858 transcoder would prevent the user from deleting or inserting PIDs in the PID menu. This has been resolved.
738	LNB status and LNB power information was missing from the status menus. These items have been added to the status menu.
852	The D9858 transcoder would fail to correctly lock to the D9900 Digital Content Manager ASI output when the TS rate is over 72 Mbps in BYTE mode. This has been resolved.
914	When the D9858 transcoder lost authorization while transcoding it would output H.264 scrambled content with H.264 program descriptors. While being DVB compliant, this caused incompatibility with some multiplexers. The D9858 transcoder, while transcoding, will now stop outputting the program in case of de-authorization, and maintains an MPEG-2 descriptor for the program.
926	The D9858 transcoder status menu failed to correctly output the Dolby Digital (AC-3) audio bit rate. This has been resolved.
1008	The D9858 transcoder would become unresponsive when receiving a transport where PIDs 16 and/or 17 were not the NIT and SDT respectively as dictated by DVB standards. The D9858

Tracking Number	Description
	transcoder can now be configured to ignore the NIT and SDT in order to receive these streams.
1033	The D9858 transcoder presented decoded and transcoded freeze frames while processing certain H.264 streams. This been resolved.

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October 2010

Printed in United States of America
Part Number 7021781 Rev A