

PowerVu® Model D9858 Advanced Receiver Transcoder

Description

The PowerVu® Model D9858 Advanced Receiver Transcoder provides the ability to deliver MPEG-4 HD services to MPEG-2 CATV headends. The Model D9858 receiver extends the distribution options for



MPEG-4 AVC HD from solely MPEG-4 environments to existing MPEG-2 networks. Support for simultaneous dual-channel decryption and transcoding provides the advantage of density for locations requiring more than just a single channel. The D9858 can be utilized to provide a down-converted Standard Definition MPEG-2 program instead of one or both of the available HD transcoded programs. Video and two audio outputs are available for analog down-conversion for one of the decrypted incoming MPEG-4 HD programs.

Digital Program Distribution

The ASI and MPEGoIP transport outputs are individually configurable and provide the capability of carrying up to two decrypted transcoded programs for digital tier distribution. This helps the compressed video programs to be efficiently distributed to subscribers equipped with digital set-top boxes. Digital audio passthrough is synchronized to the transcoded program output. Compliant PSI/SI regeneration provides integration into a digital tier distribution network for two transcoded programs.

Digital Program Mapping

Digital Program Mapping allows programmers to “transparently” substitute programs at the uplink. It maintains predictable and compliant transport output during service replacement, Network Information Table (NIT) retune, channel changes, including force tunes. This feature remaps the PID information from the primary service to an alternate service allowing downstream devices to continue to operate without headend operator intervention. This helps ensure availability of alternate programming in the digital tier.

Digital Ad-insertion

Digital Program Insertion (DPI) information is available along with the video and audio PIDs (Packet Identifiers) for external ad insertion in compressed digital format on both transcoded programs.

Features

- Four L-Band inputs
- DVB-S Demodulation for QPSK
- DVB-S2 Demodulation for QPSK and 8PSK
- PowerVu conditional access with DES or DVB descrambling
- Supports Basic Interoperable Scrambling System (BISS) conditional access
- Decryption and transcoding of up to two programs for digital transport output
- Program transcoding to support down-conversion of a MPEG-4 HD program to a MPEG-2 SD program
- PSI/SI regeneration for both programs
- 4:2:0 High Definition 1080i and 720p video decoding
- AFD support for down-conversion of a decoded HD program with aspect ratio conversion
- Dolby® Digital (AC-3) audio decoding
- Closed Captioning passthrough of EIA-608 and EIA-708 for transcoded programs
- Audio passthrough synchronization for transcoded programs
- Additional ASI outputs for redundancy
- MPEGoIP output for network connectivity
- DVB subtitle passthrough with transcode programs

Features, continued

- Contact closure terminals for simple alarm monitoring
- SNMP for setup, control and monitoring
- Field upgradeable software
- Front panel LCD for control & monitoring
- Web browser interface for easy setup, control and monitoring
- Uplink addressable decoder output control (VBI, audio routing, DPI, and ASI output)
- DTMF cue tone & cue trigger outputs for ad-insertion
- Digital Program Mapping providing uplink control for service replacements in blackout areas

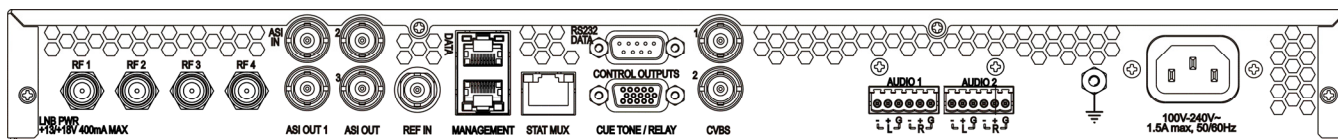
Specifications

Features	Description	
System	MPEG-2/DVB Compatible EN 300 421, EN 300 468	De-modulation: DVB-S QPSK, DVB-S2 QPSK & 8PSK
Tuner	Number of RF Inputs: 4 (one active at a time) Input Level: -25 dBm to -65 dBm per carrier Frequency Range: 950 MHz to 2150 MHz	Symbol Rate Range: DVB-S: 1.0 to 45 MSymbols/s DVB-S2: 10.0 to 30 MSymbols/s 1.0 to 10 MSymbols/s - contact SA Carrier Capture Range: ≥ ±3.0 MHz (1-10 Msym) ≥ ±5.0 MHz (10-30 Msym) Satellites: C-band and Ku-band Input Impedance: 75 Ω
Analog Outputs	Analog SD Video Output Number of Channel: One down-converted source HD program Video Decompression Type: MPEG-4 4:2:0 Output Level: 1.0 V pp ± 5% Output Impedance: 75 Ω	Analog Audio Output Number of Channels: Two stereo pairs/ four mono channels Audio decompression: MPEG or Dolby Digital (AC-3)
Transcoder Channel Inputs	HD Video Input Compression Format: MPEG-4 part 10 V Resolutions: 1080, 720 H Resolutions: 1080i: 1920, 1440 720p: 1280, 960 Input Bit rate: 3 Mb/s to 20 Mb/s Main Profile 3 Mb/s to 25 Mb/s High Profile	Audio Input Number of Channels: Two Audio Channels Compression Format: MPEG or Dolby Digital (AC-3) VBI Data Input Transmission Format: EIA-708 and 608
Transcoder Channel Outputs	HD Video Output Compression Format: MPEG-2 V Resolutions: Same as input H Resolutions: 1080i: 1920, 1440 720p: 1280, 960 Output Bit rate: 10 Mb/s to 25 Mb/s Down-converted SD Video Output Compression Format: MPEG-2 V Resolutions: 480, 576 H Resolutions: 720/704/544/528 Output Bit rate: 2 Mb/s to 15 Mb/s SD Output Aspect Ratios: 4:3, 16:9 Aspect Ratio Conversions: 4:3 : 16:9 Letterbox, 14:9 Letterbox, Center Cutout 16:9: Center Cutout	Audio Output Number of Channels: Two Audio Channels Compression Format: Same as input VBI Data Output Transmission Format: EIA-708 and 608

Specifications, continued

Features	Description	
Environmental/ Physical	Operating Temperature: 0°C to 50°C (32°F to 122°F) Storage Temperature: -20°C to 70°C (-4°F to 158°F)	Physical Dimensions: 1.75 in. H x 19.0 in. W x 20.5 in. D (4.4 cm H x 48.3 cm W x 52.1 cm D) 1RU high, 19 in. EIA rack mountable Weight: 16 lbs (7.2 kg) approx.
Power	Voltage Range: 100 V to 240 V AC Line Frequency: 50/60 Hz	Power Consumption: 110 W max. LNB Power on RF#1: +13 V/+18 V @ 400 mA max.
Inputs/Outputs	MPEG-2 Transport Input EN50083-9, DVB-ASI coaxial, 188/204 byte packets	MPEG-2 Transport Output EN50083-9, DVB-ASI coaxial, 188 byte packets MPEGoIP Output Ethernet Type: 1000 Base-T Format: UDP/IP or RTP IP Addressing: Multicast TS Streaming: MPTS
Other Outputs	Cue Trigger Outputs Number of Outputs: 8 Type: Open Collector Cue Tone Output Balanced audio output: -3.0 dBu ±3 dB, 600 Ω Output Impedance: < 50 Ω	Programmable Relay Output Alarm or configurable to one of the 8 open collector outputs

PowerVu Model D9858 Advanced Receiver Transcoder



Ordering Information

Description	Part Number
2 Channel Transcode 4 RF Inputs, ASI In, 3 ASI out MPEGoIP out, NA ² power cord.	402476600030001 ¹
2 Channel Transcode 4 RF Inputs, ASI In, 3 ASI out MPEGoIP out, (ATP ³ ISE) NA power cord.	402476601030001 ¹

1) The last two digits of part number denote the power cord. When ordering, refer to the table below for your country-specific power cord.

2) NA – North American

3) ATP – Advanced Transcoder Pool

Country-Specific Power Cords

Description	Part Number
No power cord	00
North American (NA)	01
Japan	02
China	03
Australia	04
European (EU)	05
Russia	06
Brazil	07
Chile	08
India	09
South Africa	10
Israel	11
Mexico	12
Argentina	13
UK	14
Ireland	15
Singapore	16
Taiwan	17
Switzerland	18
Korea	19



Cisco, Cisco Systems, the Cisco logo, the Cisco Systems logo, Scientific Atlanta, and PowerVu are trademarks or registered trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries.

Dolby and the double-D symbol are trademarks of Dolby Laboratories.

The DVB logo is a registered trademark of the DVB Digital Video Broadcasting Project.

All other trademarks mentioned in this document are property of their respective owners.

Specifications and product availability are subject to change without notice.

© 2009 Cisco Systems, Inc. All rights reserved.



Cisco Systems, Inc.
1-800-722-2009 or 678-277-1120
www.scientificatlanta.com

Part number 7012540 Rev F
February 2009