

Receiver

PowerVu® Model D9852 Dual Decrypt Program Receiver

Description

The PowerVu® Model D9852 Dual Decrypt Program Receiver is designed for satellite content distribution applications requiring simultaneous decryption of two programs (i.e., the decode channel and the auxiliary channel) for digital tier program distribution. A built-in decoder (for the decode channel) is capable of decoding a Standard Definition (SD) program for analog tier distribution. This receiver provides a convenient migration platform for broadcasters launching High Definition (HD) programming as it supports one SD program decoded for the analog tier and program pass-through for the digital tier. Simultaneously, a second HD program can be decrypted and passed through for the digital tier.



The Model D9852 Receiver uses a single User Address (UA), with all received programs authorized based on one UA. If the D9852 receiver is to be used to decrypt two programs, contact your service provider to verify that they will authorize a single UA for two separate programs.

Disaster recovery and service replacement are features available in the PowerVu Model D9850 Program Receiver and Model D9828 Multiple Decryption Receiver, which are not supported in the D9852 Dual Decrypt Receiver.

Analog Cable Program Distribution

Decoded SD video and balanced audio outputs can be connected to an analog modulator for analog cable distribution. Four mono audio channels or two stereo pairs are available for primary audio programs and/or secondary audio programs (SAP). For example, primary program audio can be carried on one of the stereo pairs, while SAP audio is carried on the other stereo pair. Dual-tone Multi-Frequency (DTMF) cue tone functionality are available for triggering commercial/program insertion by external equipment.

Digital Cable/Telco Program Distribution

The ASI transport output provides a number of output modes including the capability of carrying up to two decrypted programs for digital tier distribution. This helps ensure that compressed video programs are efficiently distributed to households equipped with digital set-top boxes. Digital Program Insertion (DPI) information is also available along with the video and audio PIDs (Packet Identifiers) for external ad insertion in compressed digital format. DPI PID with advanced uplink control is available for the decode channel and DPI PID pass-through is available for the auxiliary channel.

Key Features

- Four L-Band inputs
- PowerVu conditional access with DES or DVB descrambling
- Decryption of two programs for digital transport output
- 4:2:0 standard definition NTSC & PAL (B/G/I/D/M/N) video decoding
- Aspect ratio conversion (4:3, 16:9 and 14:9) with Active Format Descriptor (AFD) control
- MPEG & Dolby® Digital (AC-3) audio decoding
- Four audio outputs providing either two stereo pairs (four mono channels) of balanced audio each with the ability to use part of their output for applications such as SAP, cue tones, etc.
- Line 21 closed caption and V-chip support
- Utility data up to 38.4 kbps via RS-232
- DVB MPE IP data up to 50 Mbps via Ethernet
- DVB VBI (WST, WSS, VPS and transparent lines)
- PowerVu VBI - including North American Broadcast Teletext Standard (NABTS) and World System Teletext (WST)

Key Features, Continued

- DVB or Imitext™ subtitling
- DTMF cue tone for analog ad insertion triggering
- Eight uplink-controlled open collector outputs via cue trigger commands for device control or ad-insertion
- One programmable contact closure for device control, redundancy switching or alarm monitoring
- Fingerprint Trigger
- Field upgradeable software and security
- Front panel LCD for control & monitoring
- 64 user-editable network tuning preset configurations
- SNMP and web browser interface for setup, control and monitoring

Optional Features

- ASI input (up to 68.5 Mbps)
- SDI video output with embedded audio
- AES-3id digital audio output

Specifications

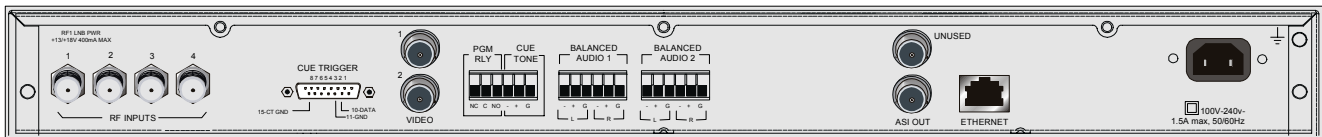
Features	Description	
System	MPEG-2/DVB Compatible EN 300 421, EN 300 468	De-modulation: QPSK FEC: Variable (1/2, 2/3, 3/4, 5/6, or 7/8)
Tuner	Number of RF Inputs: 4 (one active at a time) Input Level: -25 dBm to -65 dBm per carrier Frequency Range: 950 MHz to 2150 MHz Tuning Step Size: 125 kHz	Symbol Rate Range: 1.0 to 45 Msymbols/s Carrier Capture Range: $\geq \pm 3.0$ MHz (5-45 Msym) Satellites: C-band and Ku-band Input Impedance: 75 Ω
Analog Outputs	Analog SD Video Output Number of Channel: One (two identical outputs) Video Decompression Type: MPEG-2 4:2:0 Output Level: 1.0 Vpp \pm 5% Output Impedance: 75 Ω Video Standard: NTSC & PAL B/G/I/D/M/N Frequency Response: NTSC: 0.0-4.2 MHz \leq +0.5 dB/-0.75 dB PAL: 0.0-5.0 MHz \leq +0.5/-1.25 dB Maximum Video Resolution: 720x480/576 Maximum Video Bit rate: 15 Mb/s Chroma-luma Delay: \pm 30 ns Field Time Distortion: \leq 3% Line Time Distortion: \leq 3% Luminance Non-linearity: \leq 5% Differential Gain: \leq 3% Differential Phase: \leq 3° Signal-to-Noise Ratio: \geq 55 dB	Analog Audio Output Number of Channels: Two stereo pairs/ four mono channels Audio decompression: MPEG or Dolby Digital (AC-3) Output Level: Balanced, adjustable audio outputs are factory set for unity gain (0 dBm out over 600 Ω for 0 dBm in). Output is adjustable at the front panel by ± 6.0 dB (ref., 100 K Ω). Factory calibrated to +18 dBu (at full scale). Frequency Response: ± 0.5 dB, 20 Hz to 20 kHz (ref., 100 K Ω) Total Harmonic Distortion: $<$ 0.3% at 1 kHz (ref. 100 K Ω) Dynamic Range: 85 dB (CCIR/Arm weighting) Crosstalk: 80 dB at 1 kHz (typical)
VBI	NTSC lines 10 to 22 fields 1 and 2 Line 21 closed captions NABTS, AMOL I and II (Nielsen)	PAL lines 7 to 22 fields 1 and 2 WST, WSS, VPS, transparent lines
Data Outputs	RS-232 asynchronous data at rates up to 38.4 kb/s Rates: 300/1200/2400/4800/9600/19,200/38,400 b/s	Ethernet Output for DVB MPE IP data RJ-45, 10/100BaseT, up to 50 Mbps

Model D9852 Dual Decrypt Program Receiver

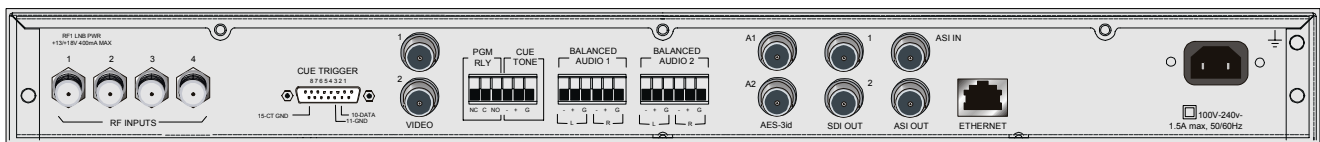
Features	Description	
Other Outputs	Cue Trigger Outputs Number of Outputs: 8 Type: Open Collector DTMF Cue Tone Output Balanced audio output: -3.0 dBu ±3 dB, 600Ω Output Impedance: < 50Ω	Ethernet Output for Control & Monitoring (same connector is used for data) RJ-45, 10/100BaseT MPEG-2 Transport Output EN 50083-9, DVB-ASI coaxial, 188 byte packets Programmable Relay Output Alarm or configurable to one of the 8 open-collector outputs
Optional Inputs/Outputs	MPEG-2 Transport Input EN50083-9, DVB-ASI coaxial, 188/204 byte packets Two SDI Video Outputs (with embedded audio, same video channel) BNC, SMPTE-259MC	Two Digital Audio Outputs (one stereo channel each) BNC, AES-3id
Environmental/Physical	Operating Temperature: 0°C to 50°C (32°F to 122°F) (without SDI option) Storage Temperature: -20°C to 70°C (-4°F to 158°F)	Physical Dimensions: 1.75 in. H x 19.0 in. W x 15 in. D (4.4 cm H x 48.3 cm W x 38.1 cm D) 1RU high, 19 in. EIA rack-mountable Weight: 10 lbs (4.5 kg) approx.
Power	Voltage Range: 100 V to 240 V AC Line Frequency: 50/60 Hz	Power Consumption: 50 W max. LNB Power on RF#1: +13 V/+18 V @ 400 mA max.

PowerVu Model D9852 Dual Decrypt Program Receiver

Base Model



With ASI input, SDI and AES outputs



Model D9852 Dual Decrypt Program Receiver



Ordering Information

Part Number	Description
4015886.000.001	4 RF Inputs, 50 Mbps IP, NA power cord
4015886.000.011	4 RF Inputs, 50 Mbps IP, (NAP ISE), NA power cord
4015886.000.000	4 RF inputs, 50 Mbps IP, indicate country-specific power cord (select from table below)
4015886.000.101	4 RF Inputs, 50 Mbps IP, SDI video, AES-3id audio, ASI In, NA power cord
4015886.000.111	4 RF Inputs, 50 Mbps IP, SDI video, AES-3id audio, ASI In, (NAP ISE), NA Power cord
4015886.000.100	4 RF Inputs, 50 Mbps IP, SDI video, AES-3id audio, ASI In, indicate country-specific power cord (select from table below)

Country-specific Power Cords

Part Number	Description
3993137	UK power cord
3993136	Euro power cord
1001832	Australia power cord
1001790	Argentina power cord
1001800	Brazil power cord
745415	China power cord

NA - North American

EU - European

NAP ISE - North American Pool Inboard Security Element



Scientific Atlanta, the Scientific Atlanta logo and PowerVu are registered trademarks of Scientific-Atlanta, Inc. Cisco, Cisco Systems, and the Cisco Systems logo are 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 registered trademarks of Dolby Laboratories.

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

All other trademarks mentioned are trademarks of their respective companies.

Specifications and product availability are subject to change without notice.

© 2007 Scientific-Atlanta, Inc. All rights reserved.

Scientific-Atlanta, Inc.
1-800-722-2009 or 770-236-6900
www.scientificatlanta.com



Part Number 7010515 Rev A
January 2007