

PowerVu®



Model D9850 Program Receiver

Description

The PowerVu® Program Receiver is designed for content distribution applications requiring 4:2:0 video decoding. The receiver offers the capability to receive digitally encrypted video, audio, utility data, VBI.

Analog Cable Program Distribution

Composite video and balanced audio outputs can be connected to analog modulators for analog cable distribution. Four mono audio channels are available for primary program audio and other languages carried as SAP (secondary Audio Program).

Digital Cable Program Distribution

An optional uplink-addressable transport output provides MPEG program streams for digital tier program delivery. This ensures that the highest quality video programs are efficiently distributed to households equipped with digital cable set-top boxes.

Cable Headend Ad-insertion

For different ad-insertion configuration, this receiver provides different outputs such as analog DTMF cue tone and 8 open collector cue trigger outputs.

Data Output

An asynchronous utility data up to 38.4 kb/s is available via RS-232 interface.



Key Features

- Variable QPSK symbol rates from 1 to 45 Msymbols/s
- PowerVu conditional access with DES de-scrambling
- 4:2:0 NTSC video decoding
- Dolby Digital® (AC-3) audio decoding
- 2 stereo pairs of balanced audio outputs
- Utility data via RS-232
- PowerVu VBI
- DTMF Cue Tone & cue trigger outputs for ad-insertion
- Field upgradeable software and security
- Front Panel LCD for control & monitoring

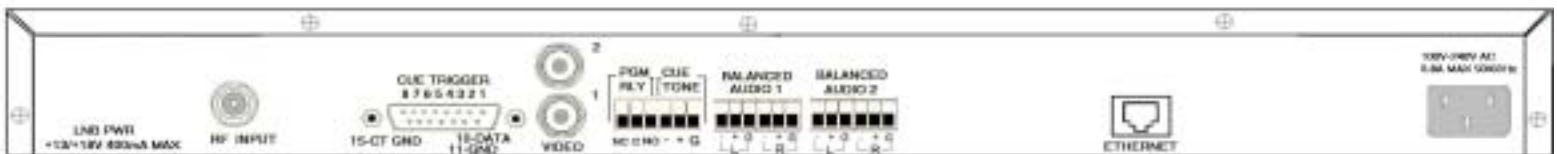
Optional Features

- up to 4 RF inputs
- Uplink addressable transport output via DVB-ASI



Technical Specifications

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	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 Step Size: 100 symbols/s	Carrier Capture Range: ± 5 MHz Carrier Acquisition Time: < 2 seconds Satellites: C-band and Ku-band Impedance: 75Ω
Analog Outputs	<i>Analog Video Output</i> Number of Channels: One (two identical outputs) Video Decompression Type: MPEG-2 4:2:0 Level: 100 IRE ± 5% (NTSC) Frequency Response: -1.5 dB at 5.0 MHz, 720 x 480/576 resolution Maximum Video Resolution: 720 x 576 Maximum Video Bit rate: 15 Mb/s Chroma-luma Delay: ± 25 ns Field Time Distortion: ≤ 3% Line Time Distortion: ≤ 1% Short Time Distortion: ≤ 2% Luminance Non-linearity: ≤ 5% Differential Gain: ≤ 2% Differential Phase: ≤ 2° Signal-to-Noise Ratio: ≥ 56 dB	<i>Analog Audio Output</i> Number of Channels: Two stereo pairs/four mono channels Audio decompression: Dolby Digital Output Level: Balanced, adjustable audio outputs are factory set for unity gain (0 dBm out for 0 dBm in). Output is adjustable at the front panel by ± 6.0 dB. Factory calibrated to +18 dBu (at full scale). Frequency Response: ± 0.5 dB, 20 Hz to 20 kHz Total Harmonic Distortion: < 0.3% at 1 kHz Dynamic Range: 85 dB (CCIR/Arm weighting) Crosstalk: 60 dB
VBI	NTSC lines 10 to 22 fields 1 and 2 NABTS, AMOL I and II (Nielsen)	
Data Outputs	RS-232 asynchronous data at rates up to 38.4 kb/s Settings: 300/1200/2400/4800/9600/19,200/38,400 b/s	
Other Outputs	<i>Cue Trigger Outputs</i> Number of Outputs: 8 Type: Open Collector <i>Programmable Relay Output</i> Alarm or configurable to one of the 8 open collector	<i>Cue Tone Output</i> Balanced audio output: -3.0 dBu ± 3 dB Output Impedance: < 50 Ohms <i>Ethernet Output for Control & Monitoring</i> RJ-45, 10/100BaseT
Optional Inputs/Outputs	<i>Multiple RF inputs (Optional)</i> Number of Inputs: 1 or 4	<i>MPEG-2 Transport Output (Optional)</i> EN 50083-9, DVB-ASI coaxial, 188 Byte Packets
Environmental/Physical	Operating Temperature: 0°C to 50°C (32°F to 122°F) Storage Temperature: -20°C to 60°C (-4°F to 140°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 (4.5kg) approx.
Power Requirements	Voltage Range: 100V to 240V ac ±10% nominal Line Frequency: 50/60 Hz	Power Consumption: 70W max. LNB Power on RF#1: +13V/+18V @ 400 mA max.



Base Unit back panel (other models offer 1 RF input with 1 ASI output; and 4 RF inputs with 1 ASI output)



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