



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.

Features:

- Four L-Band Inputs
- Variable QPSK symbol rates from 1 to 45 Msymbols/s
- PowerVu conditional access with DES or DVB descrambling (BISS) conditional access
- Supports Basic Interoperable Scrambling System
- 4:2:0 NTSC & PAL (B/G/I/D/M/N) video decoding
- MPEG & Dolby Digital® (AC-3) audio decoding
- Four audio output providing either two stereo (four mono channels) of balanced audio each with the ability to use part of their output for applications such as SAP, DTMF, etc.
- Utility data via RS-232
- IP Data output up to 50 Mbps via Ethernet
- DVB VBI (WST, WSS and VPS)
- DTMF Cue Tone & cue trigger outputs for ad-insertion
- Field upgradeable software and security
- Front Panel LCD for control & monitoring
- Web Browser interface for easy setup, control and 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	Analog Video Output 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	Analog Audio Output 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	Cue Trigger Outputs Number of Outputs: 8 Type: Open Collector Programmable Relay Output Alarm or configurable to one of the 8 open collector	Cue Tone Output Balanced audio output: -3.0 dBu ± 3 dB Output Impedance: < 50 Ohms Ethernet Output for Control & Monitoring RJ-45, 10/100BaseT
Optional Inputs/Outputs	Multiple RF inputs (Optional) Number of Inputs: 1 or 4	MPEG-2 Transport Output (Optional) 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)

