

Cisco D9828 Multiple Decryption Receiver

Description

The PowerVu® Multiple Decryption Receiver receives, demodulates, and decrypts multiple PowerVu encrypted MPEG-2/DVB digital programs delivered via a satellite or terrestrial interface. Decoded composite video and balanced audio outputs are provided for monitoring purposes.

Figure 1. Cisco D9828 Multiple Decryption Receiver



Digital Cable Program Distribution

ASI and DHEI transport outputs are provided for digital tier program delivery to cable headends or direct-to-home networks. This ensures that the highest quality video programs are efficiently distributed to households equipped with digital set-top boxes.

Alarm Monitoring

A contact relay is provided for simple alarm monitoring.

Key Features

- Variable QPSK symbol rates from 1 to 45 Msymbols/s
- PowerVu conditional access with DES descrambling
- DVB-ASI transport input
- Decrypts up to 16 video programs with other services (e.g., audio or data)
- DVB-ASI and DHEI transport outputs
- 4:2:0 NTSC and PAL(B/G/I/D/M/N) video decoding for monitoring purposes
- MPEG and Dolby® Digital audio decoding for monitoring purposes
- Two balanced audio outputs providing either one stereo pair or two mono channels
- Line 21 on the monitor video output
- On-screen display for easy setup
- Front Panel LCD and pushbuttons for status monitoring
- 64 user-editable RF preset configurations

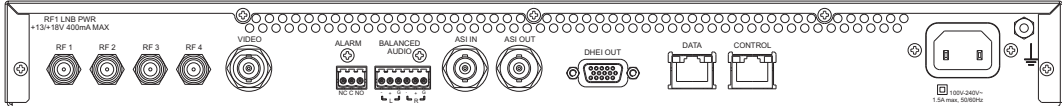
Specifications

Table 1. Product Specifications

| Parameter | Value |
|---|--|
| System | |
| Standards | MPEG-2/DVB compatible EN 300 421, EN 300 468 |
| Demodulation | 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 |
| Carrier Capture Range | $\geq \pm 3.0$ MHz (5 - 45 Msymbols) |
| Satellites | C-band and Ku-band |
| Input Impedance | 75 Ω |
| DVB-ASI Input | |
| Standard | EN50083-9, DVB-ASI coaxial |
| Supported Packet Length | 188 or 204 bytes |
| Transport Bit Rate | Up to 68.5 Mbps |
| Analog Video Output (for monitoring purposes) | |
| Number of Channels | 1 |
| Video Decompression Type | MPEG-2 4:2:0 |
| Output Level | 1.0 Vpp ± 1.0 dB |
| Output Impedance | 75 ohms |
| Video Standard | NTSC and PAL B/G/D/M/N |
| Horizontal Video Resolutions | 1080i: 1920, 1440, 1280 720p: 1280, 960, 640 |
| Video Standard | NTSC and PAL B/G/I/D/M/N |
| Frequency Response | NTSC: 0.1 – 4.2 MHz $\leq \pm 1.0$ dB PAL: 0.1 – 5.0 MHz $\leq \pm 1.5$ dB |
| Maximum Video Resolution | 720 x 576/480 |
| Maximum Video Bit Rate | 15 Mbps |
| Chroma-luma Delay | ± 30 ns |
| Field Time Distortion | $\leq 3\%$ |
| Line Time Distortion | $\leq 3\%$ |
| Luminance Nonlinearity | $\leq 5\%$ |
| Differential Gain | $\leq 4\%$ |
| Differential Phase | $\leq 4^\circ$ |
| Signal-to-Noise Ratio | ≥ 55 dB |
| Analog Audio Outputs (for monitoring purposes) | |
| Number of Channels | 1 stereo pair/2 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 ohms for 0 dBm in). Output is adjustable at the front panel by ± 6.0 dB (ref., 100 kilohms) Factory calibrated to +18 dBu (at full scale). |
| Frequency Response | ± 0.5 dB, 20 Hz to 20 kHz (ref. 100 kilohms) |

| Parameter | Value |
|--|--|
| Total Harmonic Distortion | < 0.3% at 1 kHz (ref. 100 kilohms) |
| Dynamic Range | 85 dB (CCIR/ARM weighting) |
| Crosstalk | 80 dB at 1 kHz (typical) |
| Transport Outputs | |
| Standard | EN50083-9, DVB-ASI coaxial |
| Supported Packet Length | 188 bytes |
| Interface | DHEI simplex ouput (15 pin) |
| Output Bit Rate | 27 Mbps |
| Other Outputs | |
| Ethernet Output for Control and Monitoring | RJ-45, 10/100BASE-T |
| Programmable Relay Output | Alarm or configurable to one of the 8 open collector outputs |
| Environmental Specifications | |
| Operating Temperature | 0°C - 50°C (32°F - 122°F) |
| Storage | -20°C - 70°C (-4°F - 158°F) |
| Chassis Mechanical Specifications | |
| Height | 1.75 in. (4.37 cm) 1 RU high, 19 in. EIA rack mountable |
| Width | 17.35 in. (44.07 cm) |
| Depth | 20.5 in. (52.1 cm) |
| Weight | 15 lbs (6.9 kg) approx. |
| Power | |
| Voltage Range | 100 V to 240 VAC |
| Line Frequency | 50/60 Hz |
| Power Consumption | 64 W max. |
| LNB Power on satellite input | +13 V/+18 V @ 400 mA max. |

Figure 2. Cisco D9828 Multiple Decryption Receiver



Ordering Information

Table 2. Ordering Information

| Cisco D9828 Multiple Decryption Receiver | Part Number |
|---|-------------|
| 4 RF Inputs, ASI and DHEI Out, ASI In, NA power cord | 4010231 |
| 4 RF Inputs, ASI and DHEI Out, ASI In (MDR pool ISE), NA power cord | 4008747 |
| 4 RF Inputs, ASI and DHEI Out, ASI In, indicate country-specific power cord (select from table below) | 4010233 |

Options

Table 3. Ordering Information – Options

| Cisco D9828 Multiple Decryption Receiver | Part Number |
|---|-------------|
| DHEI cable, simplex, 2-meter, 15-pin to 26-pin (for connection to Motorola IRT, Expansion Out port) | 4010239 |
| DHEI cable, simplex, 2-meter, 15-pin to 15-pin | 4009434 |

Country-Specific Power Cords

Table 4. Ordering Information – Country-Specific Power Cords

| Cisco D9828 Multiple Decryption Receiver | Part Number |
|--|-------------|
| UK power cord | 3993137 |
| Euro power cord | 3993136 |
| Australia power cord | 1001832 |
| Argentina power cord | 1001790 |
| Brazil power cord | 1001800 |
| China power cord | 745415 |



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