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
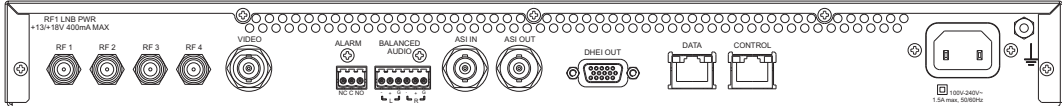- 64 user-editable RF preset configurations

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, ¾, 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	≥ ±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 ≤ ±1.0 dB PAL: 0.1 – 5.0 MHz ≤ ±1.5 dB
Maximum Video Resolution	720 x 576/480
Maximum Video Bit Rate	15 Mbps
Chroma-luma Delay	±30 ns
Field Time Distortion	≤3%
Line Time Distortion	≤3%
Luminance Nonlinearity	≤5%
Differential Gain	≤4%
Differential Phase	≤4°
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

1-800-722-2009 or 678-277-1120
www.cisco.com

Part Number 7005872 Rev C
November 2010