Cisco D9896 4:2:2 10-Bit AVC Decoder

The Cisco D9896 4:2:2 10-Bit AVC Receiver Decoder (Figure 1) is a full-featured MPEG-2 and Advanced Video Coding (AVC) receiver decoder designed to support contribution applications. The D9896 complements the Cisco D90964:2:2 10-Bit AVC Encoder and is capable of decoding 4:2:2 AVC 10-bit encoded content.

The Cisco D9896 also supports decoding MPEG-2 and AVC-I content for fixed contribution applications that need to support a variety of codecs, bitrates, and use cases.

Figure 1. Cisco D9896 4:2:2 10-Bit AVC Receiver Decoder

The Cisco D9896 has a comprehensive audio feature set, with the ability to decode up to eight audio packet identifiers (PIDs) and output eight audio channels in the embedded Serial Digital Interface (SDI) and four channels in the Audio Engineering Standard (AES) outputs. The D9896 decoding engine is capable of decoding MPEG Layer 2 audio and passing Dolby Digital E, Dolby Digital, Dolby Digital Plus, Advanced Audio Coding (AAC), High-Efficiency AAC (HE-AAC), and pulse-code modulation (PCM) audio.

The D9896 front panel has an alphanumeric keypad and assignable shortcut keys, which streamline operations when a web-browser is not available. A thin film transistor (TFT) display on the front panel shows the decoded video service for confidence monitoring. An intuitive web interface meets all operational expectations, and the Cisco ROSA® Video Services Manager (VSM) offers management, monitoring, and redundancy for the D9896.

Input Features

- Asynchronous Serial Interface (ASI) and IP input capability
- Multicast and unicast input with support of Internet Group Management Protocol (IGMP) v3
- SMPTE-2022 CoP3 forward error correction (FEC) receive support

Output Features

- Decoding of standard-definition (SD) and high-definition (HD) MPEG-4 AVC, with 4:2:0 8-bit and 4:2:2 8- and 10-bit support
- Low-latency mode for sensitive contribution applications
- Decoding of up to 8 channels of audio
- Four AES outputs for discrete audio

Ease of Use Features

- Single configuration that supports all capabilities (no options, no licenses)
- Single page-status view on the web GUI
- Confidence-monitoring TFT display of decoded input on the front panel
- Front-panel-assignable shortcut keys for ease of use
- Up to 64 profiles storable on the unit for quick reconfiguration
- Boot-up in 8 seconds
- Usable video from ASI input in 10 seconds
- Redundancy support through Cisco ROSA VSM
- Greater than 40 dB of noise
- Front-to-back airflow

Specifications

Table 1 lists specifications for the Cisco D9896 Receiver Decoder.

Table 1.   Product Specifications

Feature	Description
Video Specifications	
Video decoding	MPEG-4 AVC/H.264 (4:2:0/4:2:2 8-bit, 4:2:0/4:2:2 10-bit), MPEG-2 (4:2:0/4:2:2 8-bit) SD: 0.5 to 30 Mbps, HD: 1 to 80 Mbps
Resolutions and frame rates	1080i at 25, 29.97, 30 Hz/1080p at 23.97, 24, 25, 50, 59.94 Hz 720p at 50, 59.94, 60 Hz 576i at 25 Hz/480i at 29.97, 30 Hz
Audio Specifications	
Audio decoding	MPEG-1 Layer 2: 4 audio pairs decoded Dolby Digital E, DD, DD+, AAC, HE-AAC, PCM - 12 audio pairs passthrough (eight embedded SDI and four AES outputs)
Input/Output Specifications	
TS input	1 GbE port for out-of-band for management 2 GbE ports input for MPEGoIP (UDP or RTP with SMPTE-2022 CoP3 FEC) 2 DVB-ASI inputs (75-ohm BNC connector)
Output Interfaces	
Video output	3 x SDI 3G-SDI selectable between: SD-SDI (SMPTE 259M-C) HD-SDI (SMPTE292M) 3G-SDI (SMPTE-424M)
TS output	2 DVB-ASI outputs (75-ohm BNC connector)
Audio output	Embedded in SDI (up to 4 pairs) AES-EBU outputs on BNC (up to 4 pairs)
Configuration and Management	
	HTML web GUI Front panel with LCD menus and 12 keys for input and navigation SNMP (MIB v2c) and Cisco ROSA VSM support

Feature	Description
Physical and Environmental	
	Dimensions (1RU): 19 in. x 1.73 in. x 12.8 in. (482 mm x 44 mm x 325 mm)
	Weight: 8.5 lb. (3.9 kg)
	Cooling airflow from front to back, and user-serviceable air filters
	Redundant power supply: 100-240 VAC, 50/60 Hz
	Typical consumption: 40W
	Operating temperature: 41°to 131 °F (5°to 55 °C)
	Storage temperature: 32°to 158 °F (-20°to 70 °C)
	Operating humidity: 5 to 90% (noncondensing)

Ordering Information

Table 2 lists ordering information.

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Part Number	Description
D9896-DEC	D9896 4:2:2 AVC 10-bit Receiver Decoder

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