DELTA
Digital Video

MODEL 7805R

H.265 HD/SD VIDEO ENCODER, COMPACT/RUGGED

TECHNICAL SPECIFICATIONS

FEATURES

- Real-time, HD or SD, Full-motion Video (FMV) compression up to 1080p resolution

- H.265/HEVC or H.264/AVC video compression even at low bit rates

- Primary/Secondary Channel Encoding including simultaneous H.265/H.264

- MISB/STANAG Compliant

- Ethernet or PCM Output Interfaces

- Metadata Support - VANC/Serial/Ethernet (optional KLV Encoding)

- <50ms Encode Latency

- Fully configurable network interface

- Data Rates from 64Kbps to 15Mbps

- Stereo/dual-channel audio inputs

- MPEG-1 Layer I/II Audio Compression

- RS-232 or Ethernet port configurable

- Compact, lightweight Chassis

- -40°C to +71°C Operation

Delta's Model 7805R H.265 HD/SD Video Encoder provides for the transmission of full-motion video for ISR applications. Designed for operation in harsh environments, the 7805R is a rugged, compact unit with all the features of Delta's MISB/JITC certified video encoder products. These include, standards-compliant video compression, KLV metadata processing, and transport stream multiplexing.

Utilizing H.265/HEVC encoding, the 7805R provides flexibility for optimizing video performance for any given bit rate. The H.265 algorithm is proven to provide 50% more bandwidth efficiency than H.264/AVC. User-configurable parameters permit the user to adjust the video/audio/data parameters in accordance with mission requirements.

The 7805R is built around an advanced, high-speed, multi-media processor working with fully optimized codecs. Despite the high-performance, the encoder power comes in at just under 10 Watts. Delta's technology has been integrated, tested, and operated in numerous airborne, ground, and shipboard applications and is compatible with MISB and STANAG standards. The 7805R can be easily integrated with standards-compliant processing, dissemination, and exploitation (PED) systems.

The unit has a fully-configurable network interface for transport stream transmission making it a "drop-in" for digital datalink applications. In addition, the 7805R offers a PCM interface for systems requiring a synchronous serial interface. The 7805R is easily configured via Ethernet (web GUI or Telnet) or serial connection.

H.265 HD/SD VIDEO ENCODER, COMPACT/RUGGED

VIDEO

Input	SDI/Composite
Format	SMPTE/NTSC/PAL
Resolutions	1080p29/30; /720p59/60;1080i59/60; 480i29/30; 576i25
Connector	Circular MIL or BNC

VIDEO COMPRESSION

Algorithm	H.265 HEVC/H.264 AVC
Format	MP, M10P/MP, HP
GOP Structure	Inter/Intra; I/IP, Variable Size

TRANSPORT STREAM

Ports	Ethernet or RS-422
TS Protocol	ISO/IEC 13818-1 MPEG-2 Transport Stream containing Video/Audio/Data
Data Rate	128Kbps - 20Mbps
Enet Protocol	Transport Stream over UDP, RTSP/RTP Unicast or Multicast
PCM Protocol	Transport Stream over synchronous serial interface (RS-422)
Connector	Circular Mil

METADATA INTERFACE

Protocol	SDI-VANC/KLV/Clear
Format	RS-232/Ethernet
Connector	Circular Mil

CONTROL

Ports	Two
Format	RS-232: Terminal Emulation
Format	TCP/IP: Web Browser/Telnet

AUDIO

Ports	Two
Channels	None, Left, Right, Stereo
Format	Differential Line Level
Levels	2.8Vp-p (1Vrms)
Impedance	10K Ohms
Connector	Circular MIL

AUDIO COMPRESSION

Algorithm	MPEG-1 Layer I/II
Sample Rates	48Ksps
Bit Rate	64K/96K/192Kbps
Sync	Lip synchronized with video

LATENCY

Encoder	~50ms

ENVIRONMENTAL

Temperature	-40ºC to +71ºC
Altitude	35,000 Feet MSL
Humidity	95% RH, non-condensing
Vibration	HALT Testing Profile
Shock	21.5g Peak, Half-sine, 8ms
Salt Fog	MIL-STD-810 Method 509.4

Electromagnetic Environments

Radiated Emissions	MIL-STD-461 RE102
Conducted Emissions	MIL-STD-461 CE101
Conducted Power Leads	MIL-STD-461 CE102

POWER

Input	18-36VDC
Watts	10W
Connector	Circular Mil

MECHANICAL

Size	3.84"D x 3.62"W x 1.18" (97.53 x 92.0 x 29.97)
Weight	8oz (.227kg)

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