MODEL 7805R
H.265 HD/SD VIDEO ENCODER, COMPACT/RUGGED

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.
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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
Data Rate: 128Kbps - 20Mbps
Enet Protocol: Transport Stream over UDP, RTSP/RTP
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: 48Kbps
Bit Rate: 64K/96K/192Kbps
Sync: Lip synchronized with video

LATENCY
Encoder: ~50ms

ENVIRONMENTAL
Temperature: -40°C to +71°C
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: MIL-STD-461 CE102
Leads

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)