DELTA
Digital Video

MODEL 6805R

H.264 HD/SD VIDEO ENCODER, COMPACT/RUGGED

TECHNICAL SPECIFICATIONS

FEATURES

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

- H.264 video compression for full-motion video even at low bit rates

- Primary/Secondary Channel Encoding

- MISB/STANAG Compliant

- Ethernet Output Interface (UDP-IP)

- Metadata Support - Synchronous/Asynchronous (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 $+70^{\circ}$C Operation

Delta's Model 6805R H.264 HD/SD Video Encoder provides for the transmission of full-motion video for ISR applications. Primarily designed for small aircraft, the 6805R is a rugged, compact unit with all the features of Delta's JITC certified video encoder products. These include, standards-compliant video compression, KLV metadata processing, and transport stream multiplexing.

Utilizing H.264 (MPEG-4 AVC) encoding, the 6805R provides flexibility for optimizing video performance for any given bit rate. User-configurable parameters permit the user to adjust the video/audio/data features in accordance with mission requirements.

The 6805R is built around an advanced, high-speed, multi-media processor working with a fully optimized codec. Delta's technology has been integrated, tested, and flown in numerous applications with various airborne platforms and is compatible with MISB and STANAG standards. It is compatible with other Delta products and 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. The 6805R is easily configured via Ethernet (web GUI or Telnet) or serial connection.

H.264 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 Optional BNC

AUDIO

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

METADATA INTERFACE

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

CONTROL

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

POWER

Input	18-36VDC
Watts	7W
Connector	Circular Mil

MECHANICAL

Size	3.6" x 3.087" x 1.177" (91.4 x 78.4 x 30.0)
Weight	8oz (.227kg)

VIDEO COMPRESSION

Algorithm	H.264 /MPEG-4 AVC (Part 10)
Format	H.264 Baseline/Main/High Profiles
GOP Structure	Inter/Intra; I/IP

AUDIO COMPRESSION

Algorithm	MPEG-1 Layer I/II
Sample Rates	8K/16Ksps
Sync	Lip synchronized with video

TRANSPORT STREAM

Ports	One
Format	Ethernet (UDP/IP)
Protocol	ISO/IEC 13818-1 MPEG-2 Transport Stream
Data Rate	64Kbps to 15Mbps
Format	10/100 Ethernet IP
Configuration	DHCP or Static Address Selectable Ports Unicast/Multicast
Connector	Circular Mil

LATENCY

Encoder	~50ms

ENVIRONMENTAL

Temperature	-40ºC to +70ºC
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