![Delta Digital Video logo]

MODEL 6005R
H.264 VIDEO ENCODER

TECHNICAL SPECIFICATIONS

FEATURES

- Real-time, secure, full-motion video over any digital or analog datalink
- H.264 video compression for full-motion video even at low bit rates (Optional MPEG-2)
- Multiple output interfaces (Pre-mod, UDP-IP, Synchronous Serial)
- Metadata Support (optional KLV Encoding)
- MISB/STANAG Compliant
- <100ms Latency
- Fully configurable network interface
- Data Rates from 64Kbps to 6Mbps
- Stereo/dual-channel audio inputs
- MPEG-1 Layer I/II Audio Compression
- RS-232 or Ethernet port configurable
- Compact, lightweight
- -20°C to $+71^{\circ}$C Operation

Delta's Model 6005R H.264 Video Encoder provides for the transmission of full-motion video for ISR applications. Primarily designed for small aircraft, the 6005R is a rugged, compact unit with all the features of Delta's JITC certified video encoder products. These include video compression, metadata processing and transport stream multiplexing.

Utilizing MPEG-4 AVC (H.264) encoding, the 6005R 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 6005R also provides a pre-mod output for direct connection to existing analog video transmitters (i.e. FM). The encoder, combined with the companion 6105 decoder, converts these analog video links to digital formats with network distribution capabilities and without the need to replace or modify the transmitters and receivers. Standard Ethernet and synchronous serial interfaces also make these units "drop-ins" for digital datalink applications.

The 6005R is built around an advanced, high-speed DSP media processor working with fully optimized codecs. It is compatible with other Delta products and can be easily integrated with other manufacturers' standards-compliant equipment. Delta's technology has been integrated, tested, and flown in numerous applications with various airborne platforms and is compatible with MISB and STANAG standards.

VIDEO

Input/Output	Composite
Format	NTSC/PAL
Connector	25p Pin, Micro-D

AUDIO

Ports	Two
Channels	None, Left, Right, Stereo
Format	Single-ended Line Level
Levels	2.8Vp-p (1Vrms)
Impedance	10K Ohms
Connector	25p Pin Micro-D

METADATA INTERFACE

Protocol	KLV/Clear
Format	RS-232/Ethernet
Connector	25 Pin Micro-D

CONTROL

Ports	Two
Format	RS-232/TCP/IP
Protocol	Delta's 3-character mnemonics

POWER

Encoder

Input	18-36VDC
Watts	4W
Connector	25 Pin, Micro-D

TRANSPORT STREAM I/O

Ports	Three
Format	PCM/RS-422/UDP/IP
Connector	25 Pin Micro-D

SIZE

Encoder	2" x 5" x 1"

VIDEO COMPRESSION

Algorithm	H.264 /MPEG-4 AVC (Part 10)
Format	H.264 Baseline/Main Profile
Resolutions	D1/2CIF/CIF
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

Protocol	ISO/IEC 13818-1 MPEG-2 Transport Stream Video/Audio/Data
Data Rate	64Kbps to 6Mbps
Format	10/100 Ethernet IP
Configuration	DHCP or Static Address Selectable Ports Unicast/Multicast

LATENCY

Encoder/Decoder	<100ms

ENVIRONMENTAL (Encoder)

Temp/Alt (Op)	DO-160D, Section 4, Category D2 -20ºC to +71ºC
Temp/Alt (Non-Op)	DO-160D, Section 4, Category D2 -55ºC to +85ºC
Humidity	DO-160D, Section 6, Category B 5%-95% RH, non-condensing
Vibration	DO-160D, Section 8, Category S, Figure 8-3, Profile M
Shock	DO-160D, Section 7, Category A, Figure 7-2, Operational (6g, 11ms, sawtooth)