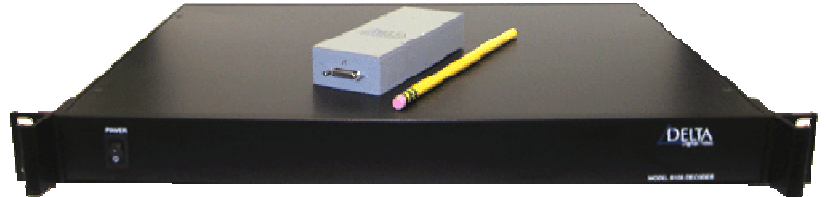


DIGITAL VIDEO OVER ANALOG ENCODING / DECODING SYSTEM

TECHNICAL SPECIFICATIONS

FEATURES

- Real-time, secure, full-motion video over any analog or digital 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)
- Range performance to the horizon
- MISB/STANAG Compliant
- Metadata Support in compliance (optional KLV Encoding)
- AES Encryption
- Reed-Solomon FEC
- <200ms 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 Encoder
- Rack-mount Decoder, 1RU
- -20°C to +71°C Operation



Delta's Video Encoding/Decoding System is designed primarily for those applications using FM video transmitters and receivers for transmission of ISR video. Delta's Models 6005R and 6105 provide the capability to convert analog video transmission to standards-compliant, digital formats with network distribution capabilities. The addition of encryption and forward error correction provides for enhanced range and security of existing datalinks. Standard Ethernet and synchronous serial interfaces also make these units drop-ins for digital datalink applications.

Utilizing MPEG-4 AVC (H.264) encoding, the 6005R/6105 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 units are configured via Ethernet or serial port and provides control for comm rate, GOP structure, video, audio, encryption, FEC, and network configuration.

These units are built around an advanced, high-speed DSP media processor, working with fully optimized codecs. Both units are 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 and with various airborne platforms and is compatible with MISB and STANAG standards.

MODEL 6005R / MODEL 6105

DIGITAL VIDEO OVER ANALOG ENCODING / DECODING SYSTEM

VIDEO

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

AUDIO

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

METADATA INTERFACE

Protocol KLV/Clear
Format RS-232/Ethernet
Connector DB-9S/RJ-45

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
Decoder
Input 96-240VAC
Watts 20W
Connector IEC-320

TRANSPORT STREAM I/O

Ports Three
Format PCM/RS-422/UDP/IP
Connector 25 Pin Micro-D/BNC/RJ-45

SIZE

Encoder 2" x 5" x 1"
Decoder 1RU 19" x 12" x 1.75"

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 <200ms

ENCRYPTION

Algorithm AES CFB-64
Key Length: 128, 196, 256

FORWARD ERROR CORRECTION

Algorithm Reed-Solomon
Format 16 Parity Bytes per 204 Byte Packet
IAW DVB-ASI

ENVIRONMENTAL (Encoder)

Temp/Alt (Op) DO-160D, Section 4, Category D2
-20°C to +71°C
Temp/Alt (Non-Op) DO-160D, Section 4, Category D2
-55°C to +85°C
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)



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