

MULTI-CHANNEL HD/SD VIDEO ENCODER

TECHNICAL SPECIFICATIONS

FEATURES

- Real-time encoding of multiple HD/SD full motion videos (FMV)
- H.264/MPEG-4 AVC (Part 10) Baseline/Main/High Profiles
- HD/SD-SDI, HDMI, VGA, RS-343, or Composite Video Input Interface
- Resolutions up to 1920 x 1200/60p
- Primary/Secondary Video Encoding
- MPEG-2 compliant TS multiplexing
- TS/UDP and RTP/RTSP Streaming
- Fully configurable network interface for Transport Stream and Control
- Data Rates from 64Kbps to 20Mbps/Channel
- <50ms Encode Latency
- Stereo/dual-channel audio inputs per channel
- MPEG-1 Layer I/II Audio Compression
- Metadata Support
 - ◆ Synchronous VANC
 - ◆ Serial
 - ◆ Ethernet
- MISB/STANAG Compliant
- 1PPS/IRIG-B Time Input
- Serial or Ethernet port configurable
- MIL-Qualified Package



The Model 8600R Multi-Channel Video Encoder compresses high definition and standard definition video and audio signals, multiplexing them with metadata and other system information for real-time video transmission and recording applications. The 8600R is a modular design, providing flexibility in the number of encoding channels by installing or removing encoder modules. The unit is capable of simultaneously encoding up to 14 channels of video with resolutions up to 1920 x 1200p when fully populated. Utilizing the H.264 (MPEG-4 AVC Part 10) video compression algorithm, the encoder provides high quality video transmission at various resolutions and a wide range of bandwidths. The unit is built on an advanced multimedia architecture that extends encoding to multiple channels without increasing size and power. A "Primary/Secondary" encoding feature enables a second, lower resolution, lower bit rate copy of the video input to be independently configured and streamed simultaneously for a maximum of 28 streams.

Delta's 8600R is not a converted "network appliance". The unit was designed from the outset for airborne, ground-mobile, and shipboard applications. The 8600R is compliant with the full motion video (FMV) standards developed by the US Government's Motion Imagery Standards Board (MISB) and STANAG. This includes compliance with the video compression, KLV metadata, and transport stream profiles required to ensure interoperability in US and Allied processing, dissemination, and exploitation (PED) systems. Full DO-160/MIL-810 environmental, MIL-461 EMI, and MIL-704 Power qualification ensures the 8600R meets the strictest requirements.

The 8600R is easily integrated into any FMV system, providing auto-detection for digital and analog video standards. A fully configurable Ethernet interface allows for easy integration into any FMV network. Multi-format metadata interfaces are available along with serial, Telnet, or web-GUI for encoder set-up.

A division of Delta Information Systems, Inc.

747 Dresher Road, Suite 125 • Horsham, PA 19044-2247 • Tel (215) 657-5270 • Fax (215) 657-5273 • www.deltadigitalvideo.com

MULTI-CHANNEL HD/SD VIDEO ENCODER

VIDEO INPUT

Ports Up to 14
Format HD/SD-SDI, HDMI, VGA, RS-343, or Composite
Connector Circular MIL

VIDEO COMPRESSION

Algorithm H.264 /MPEG-4 AVC (Part 10)
Format Baseline/Main/High
Resolutions Up to 1920 x 1200p
Frame Rate 24-60
GOP Structure Inter/Intra; Variable Size

TRANSPORT STREAM

Ports Two (Redundant)
Protocol TS/UDP; RTP/RTSP
Video/Audio/Data
Format 10/100/1000 Ethernet IP
Configuration DHCP or Static Address
Selectable Ports
Auto Sense Full/Half Duplex
Unicast/Multicast
Data Rate 64Kbps - 20Mbps/Channel
Connector Circular MIL

METADATA INTERFACE

Ports Three (per channel)
Protocol KLV/Clear
Format SDI-VANC/Ethernet/Serial
Connector Circular MIL

TIME INTERFACE

Ports One
Protocol 1PPS Sync/Free-run/IRIG-B
Format 0-10Vp-p; 50 Ohms
Connector Circular MIL

CONTROL

Ports Two
Format Serial or Ethernet (Telnet/Web Browser)
Protocol Delta's 3-character mnemonics

AUDIO INPUT

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

AUDIO COMPRESSION

Algorithm One
Format MPEG-1 Layer I/II
Sample Rates 48Ksps
Sync Lip synchronized with video

LATENCY

Encoder <50ms (per channel)
Enc/Dec Tandem <100ms

ENVIRONMENTAL (MIL-STD-810F)

MIL-STD-810G - Temp (Op) Method 501.5, Proc I/II: 0°C to +71°C
MIL-STD-810G - Temp (Non-Op) Method 502.5, Proc I/II: -57°C to +85°C
MIL-STD-810G - LP Altitude Method 500.5, Proc I/II: -25°C to +47°C; 11K/36K
MIL-STD-810G - Exp Atmosphere Method 511.5, Proc I
MIL-STD-810G - Vibration Method 514.6, Cat. 13
Fixed wing Prop A/C
MIL-STD-810G - Functional Shock Method 516.6, Proc I: 10g, 11ms Sawtooth
MIL-STD-810G - Crash Hazard Method 516.6, Proc V: 10g, 11ms Sawtooth
RTCA/DO-160G - Temp Variation Section 5, Cat. A
10°C/min, 0°C to +50°C

EMI

MIL-STD-461F CE101, CE102, CS101, CS114-116, RE101, RE102, RS101, RS103
MIL-STD-464C DO-160G Electrical Bonding
Sections 22 (Lightning) and 25 (ESD)

POWER

Volts +18-36VDC (Nominal +28VDC)
Watts 20-70W (Depends on configuration)
MIL-STD-704A/E LDC-101, LDC104, LDC301, LDC302, LDC401, LDC601
Connector Circular MIL

SIZE / WEIGHT

Chassis 4.5"H x 11.0"W x 8.25"D / 11-15lbs.