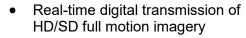


MODEL 7820R

2-CH HD/SD H.265 VIDEO ENCODER

FEATURES



- H.265 HEVC / H.264 AVC
- HD/SD-SDI or Composite Video Input Interface
- 1080p/1080i/720p/480i/576i
- Primary/Secondary Video Encoding
- TS/UDP and RTSP/RTP/UDP Protocols

CIFICATION

S P E

CHNICAL

- MPEG-2 compliant TS multiplexing
- Synchronous Serial or Ethernet TS Interfaces
- 10/100/1000 network interface
- Data Rates from 128Kbps to 20Mbps
- <50ms Encode Latency
- Stereo/dual-channel audio inputs per channel
- MPEG-1 Layer II Audio Compression
- Metadata Support
 - Synchronous VANC
 - Serial
 - Ethernet
 - KLV Encoding
- MISB/STANAG Compliant
- IRIG-B/1PPS Time Input
- Serial or Ethernet port configurable
- Rugged, MIL Qualified Package



The Model 7820R 2-Channel Encoder is an H.265 HD/SD video encoder that compresses video and audio signals, multiplexing them with metadata and other system information for real-time video transmission applications. The 7820R is capable of simultaneously encoding two channels of video with resolutions up to 1080p. Utilizing the H.265 (HEVC) video compression algorithm, the encoder provides high quality video transmission at various resolutions and a wide range of bandwidths. The H.265 compression algorithm utilizes highly bit-efficient coding to provide encoded streams at nearly half the bandwidth of its H.264 (AVC) predecessor. The unit is built on an advanced, low-power multimedia architecture that provides the horsepower for the computationally intensive H.265 algorithm, providing bandwidth efficiency for multi-channel applications. This increased efficiency allows for more channels to be transmitted over a given bandwidth, better quality video for constrained bandwidth applications, or lower bandwidth operation to extend the limits of ISR operation and reduce storage size requirements. A "Primary/ Secondary" encoding feature enables a second, lower resolution, lower bit rate copy of each video input to be independently configured and streamed simultaneously for a maximum of four streams. The 7820R also provides an H.264 mode to support legacy infrastructures while providing a future growth path to H.265.

Designed for any rugged airborne, ground-mobile, or shipboard application, the 7820R is compliant with the full motion video standards developed by the US Government's Motion Imagery Standards Board (MISB). 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-STD-810 environmental and MIL-STD-461 EMI qualification ensures the 7820R meets project requirements.

The 7820R is easily integrated into any FMV system, providing for legacy composite and all SDI standards. The unit provides Ethernet and synchronous serial transport interfaces along with multi-format metadata interfaces. Serial or Telnet control, and an easy to use web-GUI are provided for encoder set-up.

2-CH HD/SD H.265 VIDEO ENCODER

VIDEO INPUT

Ports Two independent inputs SD/HD/3G-SDI (SMPTE) or **Format**

Composite, Auto-detect format,

resolution, frame rate

Levels .3Vp-p; 75 Ohms/1Vp-p, 75 Ohms

VIDEO COMPRESSION

H.265 HEVC / H.264 AVC Algorithm **Profile** MP. MIOP / MP. HP Resolutions 1080p/1080i/720p/480i/576i

Frame Rate 1-60

GOP Structure Inter/Intra; Variable Size

TRANSPORT STREAM

Ports Ethernet or RS-422 Protocol ISO/IEC 13818-1

MPEG-2 Transport Stream containing

Video/Audio/Data 128Kbps - 20Mbps

Data Rate

Ethernet Protocol Transport Stream over UDP,

unicast or multicast RTSP/RTP over UDP

RS-422 Protocol Transport Stream over

synchronous serial interface

ETHERNET INTERFACE

10/100/1000 Base T. Format

Auto Sense Bitrate, Auto Detect

Configuration **DHCP or Static Address**

METADATA INTERFACE

Asynchronous serial (2), UDP (2), **Ports**

SDI-VANC (2)

Format KLV or unformatted data

TIME INTERFACE

Ports 1PPS/IRIG-B, SDI-VANC

1PPS Levels 0-10Vp-p; 50 Ohms

CONTROL

Ports Asynchronous Serial (1), Telnet,

Web Browser

Serial Levels RS-232/RS-422 AUDIO INPUT

Ports Two independent stereo inputs

Format Balanced (Line Level) Levels 2.8Vp-p (1Vrms)

Impedance 10K Ohms

AUDIO COMPRESSION

Channels None, Left, Right, Stereo Algorithm MPEG-1 Layer I/II or ADPCM

Sample Rates 48Ksps

LATENCY

Encoder <50ms (per channel)

Enc/Dec Tandem <100ms

ENVIRONMENTAL

Temp/Alt (Op) DO-160D, Section 4, Category D2

- 40°C to +71°C

Temp/Alt (Non-Op) DO-160D, Section 4, Category D2

- 55°C to +85°C

DO-160D, Section 6, Category B Humidity

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)

EMI

MIL-STD-461E CS101, CS114-116, RS103, RE102,

CE-102

DO-160E Section 18, AF Conducted

Susceptibility

Section 21, Conducted Emissions

POWER

Volts +28VDC Watts 20W

SIZE / WEIGHT

Chassis 2.5"H x 4.5"W x 7"D / 3.75 lbs.



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