



EN91

MPEG4 HD Ultra Low Delay Encoder



In the blink of a human eye you can now send contribution quality HD video around the globe using IP based networks, or ASI Fiber or DVBS/S2 satellite delivery. Adtec's Super-low delay EN-91 DSNG contribution encoder/modulator combines high-efficiency AVC 4:2:2 compression with lightning-fast processing for flexible delivery of video for time sensitive and bandwidth-limited applications. Paired with Adtec's RD60 IRD, the EN-91 can deliver HD Video and sixteen channels of audio with an end-to-end latency under 100 milliseconds.

The EN-91 supports high definition and standard definition MPEG 4 AVC/H.264 video with 4:2:0 and 4:2:2 chroma sampling. It boasts up to eight-pairs of audio, TimeCode, Captions, Teletext, AFD and more are also standard features. Audio pass-through support includes PCM, DolbyE (16 and 20 Bit), Dolby AC3 (2.0 and 5.1). The EN-91 supports redundant AC power supplies, enhanced control and monitoring via front-panel, SNMP and browser. The EN-91 allows concurrent encoding and streaming to IP, ASI and L-Band or IF DVBS/S2. The DVBS/S2 modulator modes support QPSK up to 32APSK based on software licenses.

Features

- Automatic SD and HD detection
- AVC 422 Video encoding
- Sixteen (16) channels of audio encoding
- Time Code, Captions, Teletext and other VBI support
- Redundant Power Supplies
- Front Panel, Web UI, SNMP control and monitoring
- DVBS/S2 modulation with IF or L-Band
- Modulation modes from QPSK to 32APSK
- ASI and IP Transport (IP supports SMPTE 2022 FEC)

Applications

- Super Low Delay - Low Bandwidth DSNG
- Super Low Delay ASI or IP news Contribution
- SD, 2D HD or 3D HD Contribution
- Dense multiplexed or single service Tier One Contribution
- ASI or IP Trunking for full-time service delivery
- Satellite, ASI and IP redundant Contribution/Distribution
- Low bandwidth Distribution
- Interoperability with other IRD brands¹

¹ Interoperability requires normal delay mode. The RD60 automatically detects Super Low Delay or Normal delay.

²Future Adtec Digital software upgrades to include Dolby AC3 and AAC audio decoding capability.

Power
Power 1 & 2 Redundant AC Power, Standard 3 pin computer power plug (Auto range 70-240 VAC Input)

Modulator (optional)*
Main RF output, 50 Ohm BNC
L-Band Model: Frequency range 950 MHz to 1.750 GHz, Power Level -50 to -7 dBm
IF Model: Frequency range 50 MHz to 180 MHz, Power Level -30 to +5 dBm
Monitor RF output, 50 Ohm BNC
L-Band Model: Fixed power level at -45 dBm
IF Model: Fixed power level at -45 dBm, fixed frequency at 1.08 GHz
10MHz Clock BNC 50 Ohm connector for external 10MHz reference input

Processor
GigE MPEG2 or RTP multicast transport egress port (SMPTE 2022)
COM2 API Serial Communication Interface
COM1 Serial Port Used for Troubleshooting (Terminal)
Ethernet 10/100 base T ethernet interface (Monitoring/Management)
DVC Parport 9-pin parallel I/O interface for control systems
RS422 Not Currently Supported
GPIO Tally and Control Port

Encoder
ASI OUT 75 Ohm source ASI x3 per EN5000839. Up to 100 Mbps.
CVBS In 75 Ohm terminated Standard Definition Composite Video Input
SDI In 75 Ohm terminated Input, Video & Audio (SMPTE 259M for SD & SMPTE 292M for HD) BNC
AES Audio In 1-4 75 Ohm AES-3 per AES3-2003
Analog Audio In Stereo Pairs 1 and 2 (600 Ohm Balanced)

