



EN-20

& 7\ UbbY` HD/SD Encoder



FEATURES | BENEFITS

- 2-Channel high definition encoding
- Automatic SD and HD detection
- SDI and CVBS Video Interfaces
- Optional QAM modulation and RF up-conversion
- MPEG-2 and MPEG-4 encoding hardware options available
- EAS, Time Code, Captions, Teletext and other VBI support
- Front Panel, Web UI, SNMP control and monitoring
- ASI and IP Transport (IP supports UDP, RTP, and SMPTE 2022 FEC)
- Simultaneous ASI, IP, and QAM transport

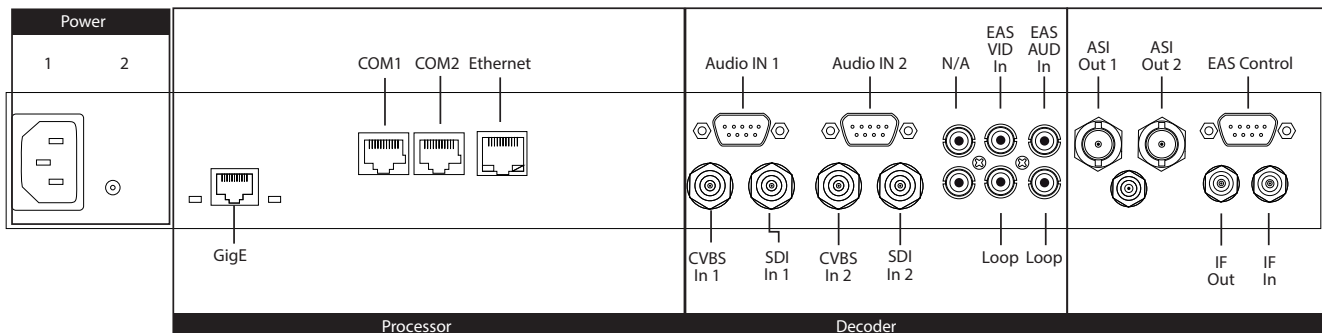
APPLICATIONS

- ATSC, DVB Distribution
- Tier Two/Three Contribution
- Private and MSO Cable Systems
- Campus, Hospitality, Education

The EN-20 is a two-channel High and Standard definition distribution encoder supporting ATSC and DVB via QAM, ASI and IP distribution platforms with MPEG-2 and AVC/H.264/MPEG-4 hardware options.

It inherits Adtec's broadcast quality compression, advanced feature set, service performance and reliability in the new dense two-channel platform targeted towards broadcasters, cable and IP compression applications.

The device automatically detects video and audio from two sources (combination of HD and SD acceptable), encodes, multiplexes and sends them back out as one combined TS via IP, ASI or optional QAM. Closed captioning and support for Emergency Alert (EAS) are standard.



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VIDEO ENCODER PROFILES: *

EN-20-MP2 (MPEG2)

MPEG 2 SD Profile: ISO13818-2 MP@ML (1 – 15Mb/s) and 422P@ML (1 – 50Mb/s)

MPEG 2 HD Profile: ISO13818-2 MP@HL (7 – 59.5Mb/s)

EN-20-MP4 (MPEG4/AVC)

H.264 SD Profile: ISO/IEC14496 MP@L3.0 (0.5 – 10Mb/s)

H.264 HD Profile: ISO/IEC14496 HP@L4.0 (2 – 30Mb/s)

Supported Resolutions: 1920/1440x1080i@59.94/50, 1280x720p@59.94/50, NTSC (720x480i59.94) and PAL (720x576i50)

VIDEO INPUT:

Composite:

Interface: SD Composite Analog (CVBS) NTSC and PAL

Connector: 2x BNC (75 Ohm)

SDI:

SD-SDI (SMPTE 259M - 270 Mbits) with embedded audio per SMPTE 272M

HD-SDI (SMPTE 292M - 1.485 Gbits) with embedded audio per SMPTE 299M

Interface: HD/SD-SDI Auto frame rate and resolution detection

Connector: 2x BNC (75 Ohm)

AUDIO ENCODER PROFILES:

Supported Audio: (1 audio pair per video encoder) *
MPEG 1 Layer 2 encode
Dolby Digital 2.0 (AC-3) encode
Dolby Digital 2.0 (AC-3) passthrough
Dolby E and LPCM passthrough
Audio can be purposed for radio service feature

AUDIO INPUT:

Interface: SDI (embedded), Analog

Connector: 2x BNC (75 Ohm) and 2x DB9

EMERGENCY ALERT SYSTEM (EAS) INPUT:

EAS Video Interface: Terminated D1 Composite Input with loop

EAS Audio: Mono audio channel with loop

EAS Triggering: GPI, Web UI, XCP

CONDITIONAL ACCESS: BISS 0/1/E standard w/ unique PID control

TRANSPORT I/O:

All outputs can operate concurrently (ASI, IP and RF)

ASI Output

Connector: 2x BNC (75 Ohm)

ISO13818-1 MPEG 2 TS per EN 50083-9:1997

Transport Over IP (TSoIP) Output

Connector: 2x RJ45 10/100/1000 GigE

ISO13818-1 MPEG 2 TS per EN 50083-9:1997

UDP, RTP, TCP, and SMPTE 2022 (COP3 FEC)

RTMP for direct CDN delivery

4x IP Destinations, MPTS or SPTS user definable

VBI / VANC PROCESSING:

Waveform / Analog (Composite or SD-SDI)

Closed Captions per CEA-608-C (2005)

Wide Screen Signaling (WSS) per ETSI 0294 V1.4.1 (2003-04)

Teletext per ETSI EN 300472 V1.3.1 (2003-05)

**High throughput teletext via composite only*

Ancillary (ANC) per SMPTE 291M (Native via SD/HD-SDI)

Closed Captions per CEA-708 (SMPTE 291 M), Teletext per OP47,

VITC per SMPTE 12M, EBU Teletext/Subtitles,

WSS/Teletext/NABTS/CEA-608/TVG2X/AMOL48/96,

AFD/Bar Data/Pan Scan per SMPTE 2016

Waveform Bridging and Conversion of Video User Data

CEA 608 to CEA 708 up-conversion

Caption Bridging: CEA-608 via Composite merged with video via SDI (Similar frame rates required)

Teletext Bridging: Waveform Teletext via Composite merged w/video via SDI

WSS Bridging: Waveform WSS via Composite merged w/video via SDI

Transport Stream User Data Carriage SCTE 127-2007, ETSI EN 301 775, v1.2.1 (2003-05)

QAM MODULATOR (QAM-01) - Optional:

Requires factory installation

QAM Modulation Schemes supported:

Annex A (8 MHz)

Annex B (6 MHz)

QAM constellations: Annex A: 64, 256

Annex B: 64, 256

Main Power: 45dBmV to 56dBmV, in 1 dBmV increments

MER: 38.0 dB minimum (average)

L-Band Frequency: 50 - 862 MHz

IF Frequency: 44 MHz (USA) and 36.125 MHz (Europe)

Connector: F-style RF female jack

PHYSICAL:

Operating Temperature: 0 to +50°C/+32 to +122°F

Power Supply (nominal): 100 - 240 VAC

Power Consumption (nominal): 33.6W (120V @280mA)

Weight: 6 lbs

Measurements: (H X W X D) 1.73" X 19" X 13.32"

MANAGEMENT:

Front Panel Control

Browser-based Web Interface

SNMP v2c available for NMS integration

*Software keys are required to unlock full hardware support. There may be some constraints depending on configuration. Specifications are subject to change. Please contact your sales person for more info.