

EN530 HDTV Smart Encoder IV

High Definition ATSC EIA-708B Bridge/Encoder/Transcoder used to create and insert caption services for HDTV.

The Model EN530 HDTV Smart Encoder IV provides the means for captioning HDTV programming using standard EIA-608 captioning software or newer EIA-708 captioning software. It will transcode and translate EIA-608 closed caption data into EIA-708 format. The EN530 encodes SD-SDI with EIA-608B caption data & HD-SDI with EIA-708B data. It transcodes EIA-608B input data to EIA-708B and inserts the data into VANC using SMPTE 334M protocol. In addition it has a complete 470 Family Smart Encoder data interface, i.e. you can talk to it just like an EN470 or DI470 in EIA-608B and it will transcode the output to EIA-708B as above. The EN530 has two operating modes. It can operate as a SMPTE 292M VANC inserter and a SMPTE 292M VANC reader. In VANC insertion mode it inserts EIA-708B data into SMPTE 292M VANC space using SMPTE 334M protocol. SMPTE 334 VANC Insertion Mode accepts pre-existing EIA-608 caption data on a NTSC SDI feed, transcodes it to EIA-708 format and inserts the data into the Vertical Ancillary space of the 292M master video stream. In this mode the encoder can also accept local serial data formatted as EIA-608 or EIA-708, transcode it if necessary and insert it into VANC space. In VANC recovery mode it recovers SMPTE 334M VANC packets and feeds the data to an ATSC encoder using SMPTE 333M protocol. In addition it will also reinsert the EIA-608 compatibility data back into the SD-SDI output. This sister unit to the DI470DTS provides the same functionality with a HD ATSC interface. The EN530 has three RS 232 Data Ports and one RS422 Port. The user may configure these Data ports according to his operational needs. The EN530 comes with an internal Modem. The modem can be used as an alternate port in addition to the three RS232 ports.

ENCODER HD-SDI INPUT VIDEO CHARACTERISTICS

Format	SMPTE 292M 1.485 Gbit/s
Input Impedance	75 Ohms
Video Input Level	800 mV p-p \pm 10%, Out 1 bypass protected

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Format	SMPTE 292M 1.485 Gbit/s
Output Impedance	75 Ohms
Output Level	800 mV p-p \pm 10%

ENCODER SD-SDI INPUT VIDEO CHARACTERISTICS

Format	270 Mbits/s component. Complies with SMPTE 259M and CCIR 656.
Video Input Level	800 mV p-p \pm 10%, Out 1 bypass protected
Input Impedance	75 Ohms
Input Return Loss	\geq 18dB, 1-270 MHz
Input S/N Ratio	Unit will function down to 25 dB ratio (CCIR weighted) with typically one error per row at that level

ENCODER SD-SDI OUTPUT VIDEO CHARACTERISTICS

Format	270 Mbits/s component. Complies with SMPTE 259M and CCIR 656.
Output Impedance	75 Ohms
Output Level	800 mV p-p \pm 10%
Output Return Loss	\geq 18dB, 1-270 MHz.
Output Jitter	$<$ 300 pS

DATA INPUT CHARACTERISTICS

Data Ports	Three Ports via RJ 11 jacks
Serial Data Format	RS232C, settable between 1200-38400 Baud, typically 7 data bits, odd parity, 1 stop bit.
Modem	Provision for 2 modems, full duplex operation over PSTN per WECO 212A.

FRONT PANEL CONTROLS & DISPLAY

Display	2 x 24 LCD, back-lit display showing unit operating conditions.
Power (On/Off)	Push-button switch with integral circuit breaker. White band indicates Off state.
Encoder ON	Push-button switch controls bypass state. LED lit for non-bypassed state.
Reset	Flush Push-button switch, resets the encoder.

REAR PANEL CONNECTORS

SDI In	BNC connector, internal 75 Ohm termination when not by-passed.
SDI Out 1	BNC 75 Ohm connector, unity gain output. bypass protected, external termination required.
SDI Out 2	BNC 75 Ohm connector, unity gain output. not bypass protected, external termination required.
Data	Six RJ 11 Jacks for P1, P2, P3, Ma, Mb and VTR Control
Power	Standard captive 3-wire line cord, 5 feet long.

PHYSICAL CHARACTERISTICS

Height	1.75 inches (4.4 cm)
Width	19 inches (48.3 cm)
Depth	10 inches (25.4 cm)
Mounting	Designed for rack mounting with or without chassis slides.
Weight	9 lbs. (4.1kg)
Ambient Operating Temp	0øC, +50øC

POWER REQUIREMENTS

Line Frequency	50/60 Hz
Line Voltage	117 VAC 10%
Line Current	0.3 A maximum
Input Power	36 W
Circuit Protection	Internal to On/Off switch, 0.4 A.