The 8084 is a full broadcast quality Closed Caption Encoder which generates CEA-608 line 21 caption data directly into the digital bitstream. The 8084AD is a full broadcast quality Closed Caption Encoder which generates line 21 caption data directly into both analog and digital video feeds. The 8084 and 8084AD allow data to be encoded into all caption and text channels in both field 1 and field 2 of the video. It can also encode Extended Data Service (XDS) packets into field 2 supporting such services as Transmission Signal Identifier (TSID), Copy Generation Management System (CGMS-A), station name, call letter identification, program name, classification, remaining air time and content advisory ratings (compatible with V-Chip decoders).

The 8084 and 8084AD are highly configurable to guarantee maximum compatibility with a wide variety of applications and software packages. The encoder can be configured to individually manipulate each data stream independent of the others. It is also compatible with various automation and traffic programs such as Enterprise's "BMS Traffic System".
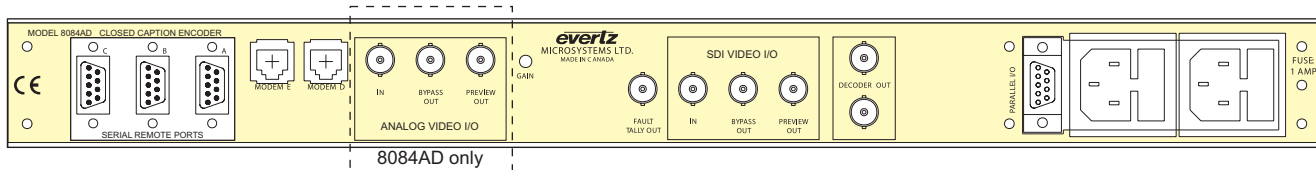
The built-in bypass relay, fault reporting output and optional redundant power supply ensure robust operation. The analog monitor output displays visible captions from any data channel, including many XDS packet types.

▶Features & Benefits

• Keys directly into a 525 line or 625 line component (4:2:2) digital video bitstream
• 8084AD also keys directly into NTSC or PAL composite analog video
• Can add captions, text, web links or Extended Data Service information to previously captioned programs
• Individual caption and text data streams can be passed, modified or removed from the incoming video
• Support for text insertion from articles stored in the one encoder by the captioning software
• Support for Extended Data Service (XDS) to encode program information including TSID, CGMS-A and V-Chip content advisory ratings
• V-Chip blocking codes selectable from front panel menus
• Selectable V-Chip default rating after timeout
• Bypass relay can be activated by GPI, front panel or automatically on power failure to allow the input video to pass through the unit unprocessed
• Three RS-232/RS-422 serial ports allow simultaneous control from three computers, for applications such as in house captioning, XDS insertion and more
• Built in modem interface for dial-up real time captioning
• Support for an optional second internal modem
• Built-in composite analog monitoring decoders provide real-time verification of encoded data. The decoded captions, text or XDS data is inserted as open captions on the monitoring video outputs
• Monitor mode allows caption data to be read directly from line 21 and output on the serial port
• Built in test message inserts data into all 9 data channels

• Composite decoder can display these XDS packet types: Network Name, Call Letters, Program Name, Program Length, Time in Show, Program Type, Program Description and Program Rating
• Ability to offset the effect of downstream component to composite encoders which add setup to line 21
• VBI Bridge function allows captions to be copied from one video source to another using two 8084 or 8084AD units
• GPI input to provide caption shift. This input can control the shift of rows 12 to 15 up to rows 1 to 4 when activated. Intended to provide compliance with FCC order prohibiting obstruction of weather warning text which often appears on the bottom of the screen
• Can encode captions on lines other than line 21 for specialized applications
• EDH Packet checksum correction ensures SDI video integrity to downstream equipment
• SMPTE 269M fault reporting output
• Optional LTC input for setting internal clock
• Supports a wide variety of caption software including the following:
  The Captioning Center - CCSQ and CCMS, Captions Inc. - Smart Encoder V 1.0b, Evertz ProCAP, Cheetah Systems - Captivator Offline Edit Version 2.1, Captivator Offline PostCAP 2.1, VITAC PostCAP 2.1, Computer Prompting and Captioning Co. -CPC-700 Version 6.20, National Captioning Institute - Text Encoding and Display System (TED) version 1.7, Autograph Systems - View level XDS controller, Rapid Caption

8084AD only

▶Specifications

SDTV Serial Digital Video Input:
Standard:	SMPTE 259M-C
Number of Inputs:	1
Connector:	BNC per IEC 61169-8 Annex A
Equalization:	Automatic 200m @ 270Mb/s Belden 1694A (or equivalent) 24m with bypass relay installed

SDTV Serial Digital Video Output:
Standard:	Same as Input
Number of Outputs:	1 program out (bypass relay protected)
Connector:	BNC per IEC 61169-8 Annex A
Signal Level:	800mV nominal
DC Offset:	0V ±0.5V
Rise and Fall Time:	470ps nominal
Overshoot:	< 10% of amplitude
Return Loss:	> 15dB
Wide Band Jitter:	< 0.2 UI

Composite Video Monitor:
Decoder:	2 BNC 1V p-p composite analog video outputs with open captions

Communications and Control:
Serial:	3 DB-9 male RS-232/RS-422 selectable 1200 baud to 38.4 kbaud 7 or 8 data bits
Modem:	2 RJ-11 telephone jacks (2nd modem optional) 1200 baud to 14.4 kbaud V.32BIS compatible
Parallel GPI:	DB-9 female

Composite Analog Video (8084AD only):
Standard:	NTSC SMPTE 170M PAL ITU-R BT.1700
Input:	BNC 75Ω terminated
Output:	BNC with bypass relay
Preview:	BNC output with open captions

Physical:
Dimensions:	19"W x 1.75"H x 18.75" (483mm W x 45mm H x 477mm D)
Weight:	8lbs (3.5kg)

Electrical:
Power:	Auto ranging 100-240 VAC 50/60Hz, 40W
Safety:	TüV listed Complies with EU safety directive
EMI/RFI:	Complies with FCC Part 15, Class A EU EMC Directive

▶Ordering Information

8084	SD-SDI Closed Caption Encoder
88084AD	Analog & SD-SDI Closed Caption Encoder

Ordering Options
+MDM2	Second internal modem option
+2PS	Redundant power supply
+LTC	Optional LTC input