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”.

### 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 modal 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
- Repeat data to be encoded into all caption and text channels in both field 1 and field 2 of the video
- Support for an optional second internal modem
- 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
- 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
- Built in modal 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:

### Specifications

#### SDTV Serial Digital Video Input:
- Standard: SMPTE 259M-C
- Connector: BNC per IEC 61169-B 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-B 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
  - Modem: 2 RJ-11 telephone jacks
  - V.32BIS compatible
  - DB-9 female

#### Composite Analog Video (8084AD only):
- Standard: NTSC SMPTE 170M
- Connector: BNC 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: TUV listed
- EMI/RFI: Complies with FCC safety directive

### Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8084</td>
<td>SD-SDI Closed Caption Encoder</td>
</tr>
<tr>
<td>8084AD</td>
<td>Analog &amp; SD-SDI Closed Caption Encoder</td>
</tr>
</tbody>
</table>

### Ordering Options

- **+MDM2**: Second internal modem option
- **+2PS**: Redundant power supply
- **+LTC**: Optional LTC input