Gemini
Dual Caption Encoder

Gemini is a three gigabit, high definition, or standard definition serial digital interface dual closed caption encoder (3G/HD/SD-SDI CC Encoder) with captions over IP. It accepts 3G/HD/SD-SDI transport streams and gives four closed caption encoded outputs of the same format as the input, with the option of two of them being decoded. The SDI outputs are re-clocked, making the SDI output eye pattern generally better than the input. It is a better re-clocker than most re-clocking Distribution Amplifiers (DA). The unit will pass ANC data untouched including audio to the output.

The Gemini will encode two SDI streams at the same time. The encoded data from the captioner(s) can be encoded to single SDI stream or to both SDI streams. Two captioners can send data to each SDI stream individually or one captioner can send data to both SDI streams. Each stream will have an SDI encoded output and a decoded SDI output. The audio from the primary SDI stream can also be used as a USB microphone when connected to a local PC and that input can be used for other streaming services (Zoom) or speech recognition software.

The Gemini will encode line 21/22 CTA-608 waveform and/or encodes SMPTE 334 Caption Data Packet (CDP) for SD. The Caption Data Packet will contain a header, CTA-608 data, CTA-708 data, caption service descriptor, and a footer. For HD it will encode the caption data packet. It has RAM that is reserved for XDS packets, the packets will be inserted into CTA-608 field 2 based on XDS packet priority and field 2 availabilities. The unit also has XDS menus for Parental Guidelines (V-Chip) and Transmission Station Identification (TSID) packets. The RAM can be filled using V-Chip software.

The Gemini has 8 GPI controls 4 for each SDI stream. For each SDI stream the GPI controls are remote encode bypass switch, encode/port switch, decode channel/service switch, and a Weather Lift (AKA Legalizer) switch, with a menu that allows you to select the number of lines to be lifted. The FCC has mandated that captions are not to be displayed over things like people's names, school closings, and so on. This has become a major issue with broadcasters. Gemini also has a decoded output and caption data recovery for quality monitoring. USB connection allows for web GUI to PC. Remote monitoring/controlling is also possible through the GUI.

Exceptional Technical Support

Gemini is backed by Link Electronics' standard 10-year warranty and 24/7 customer support. It meets the innovative, high performance, flexibility, and reliability requirements of all Link Electronics products.

Features

- 3G/HD/SD-SDI
- XDS RAM (V-Chip)
- Data Recovery
- GPI Remote "Legalizer"
- 2 CTA-708 Services Converted from 608
- Field Upgradeable
- VANC Line Selection

- Dual Encoding
- IP Captioning
- Power off Bypass
- VBI and/or VANC for SD
- USB Audio

- Decodes CC1-CC4 or S1-S6
- GUI Monitoring/Control
- Multiple GPIs
- USB serial device

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3G/HD/SD-SDI Video Input:
Connectors: .... Two 75 Ohm BNC
Embedded Audio: .... AES 48 kHz (20 or 24 bit) SMPTE ST 299-1 (HD) or SMPTE ST 272 (SD)
SMPTE: .... ST 424 (3GA), ST 372 (3GB), ST 274 (1080), ST 296 (720), and ST 259 (NTSC & PAL)
Equalization: .... Automatic, approx. 100 feet at 1.5 Gb/s, approx. 500 feet at 270 Mb/s

3G/HD/SD-SDI Video Outputs:
Connectors: .... Four 75 Ohm BNC's, One Power Off Bypassed
Standard: .... Same as input
Signal Level: .... 800 mV, Nominal
DC Offset: .... +/- 0.5 V
Rise Time: .... 200 ps, Nominal
Overshoot: .... < 10%
Timing Jitter: .... < 1.0 U
Wideband Jitter: .... < 0.2 UI

Communications/Other Connectors:
General Purpose Interface (GPI): .... One DE-15 Female with 8 dry contact pins
Serial Ports: .... Two RS-232 DE-9 One Male and One Female
USB: .... One USB Type B Female
Ethernet: .... One RJ45 modular connector, IEEE
Power: .... Two, 3 Pin Circular Socket Female

Environmental:
Temperature: .... 0 to 50 C ambient
Humidity: .... 10% to 90% non-condensing

Mechanical:
Depth: .... 7.25 Inches
Height: .... 1.75 Inches
Width: .... 19 Inches
Weight: .... 4 Pounds

Power Supply:
Input: .... Auto Detection 100 to 240 VAC at 50/60 Hz
Output: .... 5 VDC up to 5 A
Compliance: .... UL Approved
Consumption: .... 15 Watts
Dual Supplies: .... Optional

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