LINK ELECTRONICS **LINK Electronics, Inc.**

Model LEI-599 SD/HD SDI Closed Caption Decoder

FEATURES

- **Decodes EIA-608 CC1-4**
- **Decodes EIA-708 S1-6**
- **Data Recovery of the Above Thru Ethernet**
- **GPI Remote Decoder on/off**
- **Field Upgradeable**
- **Caption Deletion**
- **V-chip Icon Insertion**
- **Changeable Open Caption Attributes**
- **Power off Bypass**
- **VBI or VANC for SD**

The LEI-599 will accept HD/SD SDI transport streams with embedded closed captions from either VBI (line21/22) or VANC (SMPTE 334 Caption Data Packet {CDP}) and decode them. The captions will then be “burnt” into the outgoing HD/SD-SDI stream so that the captions now appear during active video. Captions which appear in active video are called “Open” captions. The unit will pass ANC data untouched including audio to the output.

The LEI-599 can decoded (“Open”) the following channels or services; CC1, CC2, CC3, CC4, S1, S2, S3, S4, S5 and S6. The data from the selected decoded captions are also sent out the Ethernet port for “data recovery”. This data can be used for monitoring, to make a caption file, or to encode another steam. The VBI and 708 VANC closed captions can be deleted on the output. This can be used to remove unwanted captions from the SDI stream or to make sure that captions will not get double decoded when decoding with this device.

The LEI-599 latency between the open and closed captions has had every effort made to keep it to a minimum. The signal processing starts with the input SDI data being equalized and de-serializes to 20-bit parallel data streams. Any closed caption data in the video data stream will be used to select appropriate characters from a custom on-board character ROM. The characters are then digitally mixed into the visible areas of the video, just as they might appear on a typical caption enabled receiver. The new data stream, with the visible captions, are then re-serialized and re-clocked and output as SDI in the exact same format of the input transport stream. There are no scaling or format conversions used in this device. Essentially, as applied to standards and formats, all outputs follow the input format and standards.

The LEI-599 can also be used to insert V-chip icon onto the active video. It will read V-chip from Extended Data Services (XDS) for Motion Picture Association (MPA), U.S. TV parental Guideline, Canadian English Language, and Canadian French Language Rating Systems and insert the appropriate V-chip Icon, including U.S. TV flags (FV, D, L, S, and V). The V-chip icon can be set to be inserted all the time, by a timed display, or GPI controlled.

The LEI-599 will have one optically isolated GPI input for turning open captions and/or V-chip on/off. The decoder options can be viewed on the front panel 40 character (2-line) LCD display. A front panel navigation switch is used to scroll through the menus and select which of the caption channels that is to be displayed. The navigation switch will also access the LEI-599 setup menus. In the case of power failure the input data stream will be switched, unaltered, to a dedicated output. This provides an uninterrupted data path in critical path applications.

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SPECIFICATIONS

Signal Input:

Number of Inputs:.....1
Connector:.....BNC per IEC 61169-8 Annex A
Impedance: ..... 75 ohms - terminating
Standard Format: 480i, 576i, 720p, 1080i, 1080p
Quantization: 10-bits
Specified Requirements: ..... VBI (Line21/22) CC1-4, VANC (334 CDP) CC1-4 & S1-6

Outputs:

HD/SD SDI Outputs with open captions: 2
Output Standard:..... Follows Input
Quantization: ..... Follows Input
Connectors:.....BNC per IEC 61169-8 Annex A
Impedance: .....75 ohms
Signal Level:..... 800mV p-p nominal
DC Offset:..... 0V
Rise/Fall Time: .....200ps nominal
Overshoot:..... < 10% of amplitude
Return Loss:..... > 15dB up to 1.5Gb/s
Wideband Jitter: .....< 0.2UI

Connectors:

General Purpose Interface (GPI) Input: .....1 (optional output for caption presence detection)
Ethernet:..... Caption Data Recovery & Field Upgrading

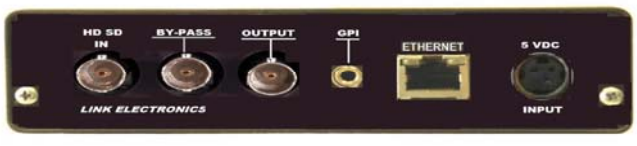
Power/ Environment:

External Power Supply:.....+5 VDC
Ambient: .....0º C to 40º C
Relative Humidity: ..... <95% non-condensing
Form-Factor: .....1RU, 1/3 rack wide, Chassis

Mechanical:

Height:.....1.0 Inch.
Width: .....5.5 Inch.
Length: .....9.25 Inch.
Weight: .....2.25 Lbs.

♦ Specifications and designs are subject to change at any time without notice.



External Power Supply

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