Studer has released a new generation of AES/EBU I/O cards with ZCU bit transparency.

Some intercom systems use a standard AES stream to link control panels to the main base station. In addition to the audio, control data is encoded into the user bits of the AES stream.

In order to allow an intercom remote control panel to be transmitted from a Studer stagebox to the base station, a special mode is available on these AES cards. The usage and position of channel status and user bits are set with DIP switches on the receiver and transmitter side.

The ZCU bits are inserted/extracted either in the LSB of the audio or in the spare bits. If the ZCU bits are embedded into the audio, the audio word length is reduced to 20 bits.

The AES/EBU 16 ch I/O card is available in three different versions:
- A949.0454 – without SRCs (Vista applications only)
- A949.0455 – with input SRCs
- A949.0456 – with input and output SRCs.

Selectable output sampling rates are 96 kHz, 48 kHz, 44.1 kHz or external reference (22 – 108 kHz). Depending on the version, input or input/output sampling rate converters (SRCs) can be individually bypassed per channel pair.

Output dither and word length are selectable for every AES/EBU output to 24, 20, 18 or 16 bit. Settings are made with DIP switches. Inputs and outputs are on standard 25-pin female D-type connectors.

Technical Specifications
- Input / output impedance 110 Ω
- Input sensitivity min. 0.2 V
- Output level (into 110 Ω) 4.0 V
- THD + noise max. –115 dB
- SRC range 22-108 kHz
- Current consumption (3.3 V) A949.0454 / .0455 / .0456: 0.43 / 0.67 / 0.94 A
- Current consumption (5 V) 0.45 A
- Operating temperature 0-40 °C