

# XETR

**BASE DEVICE //** DIGITAL-AUDIO

NEXUS AES3 interface

# THE UNIVERSAL AES/EBU INPUT-OUTPUT CARD FOR THE NEXUS MATRIX

THE XETR AES/EBU CARDS COMBINE FOUR 2-CHANNEL DIGITAL INPUTS AND FOUR 2-CHANNEL DIGITAL OUTPUTS ON ONE NEXUS BOARD. VERSIONS WITH ONLY INPUTS AND OUTPUTS ARE AVAILABLE; VERSIONS WITH XLR OR BNC CONNECTIONS OFFER GREAT STRUCTURAL FLEXIBILITY.



XETR series cards offer four 2-channel AES/EBU inputs and outputs, each with its own sampling rate converter. NEXUS networks support the transparent transmission of AES additional data (CUVZ) over the network, allowing the inputs and outputs of XETR cards to be used to connect AES intercom systems or for other purposes. Furthermore, the combination of AES/EBU inputs and outputs on one board allows an input clock that is asynchronous to the Nexus system to be passed through unchanged to the corresponding output, while the input's sample rate converter only adapts the clock to the system clock on the NEXUS side. Of course, the entire NEXUS network can also synchronize its system clock to each of the inputs.

XETR cards are available with XLR or BNC connectors. Inputs and outputs are arranged on separate front panels and can be placed separately within a base unit. It is also possible to operate only inputs or outputs.

### Available with XLR or BNC connectors

This module can optionally be supplied with different front panels, the electrical conversion remains the same. The XLR versions are available for balanced lines and BNC for unbalanced cabling as well as a 4HP wide front panel. When using both the transmit and receive functions, a second front panel is used in both versions, which is connected to the circuit board via a ribbon cable.

### Support of S/P-DIF signals

Since the professional AES/EBU signal and the consumer format S/PDIF differ only in the electrical level, the XETR cards offer the possibility to receive both formats.

### Adjustable digital gain in inputs and outputs

For input signals with known understeering, the level can be digitally amplified by 20 dB. A reduction is also possible.

### Sampling rate converters in all inputs and outputs

The sample rate converters in the inputs can be switched on manually or operated in auto mode; the board automatically detects whether the incoming frequency corresponds to the NEXUS system clock. A sampling rate of 44.1/48 kHz; 88.2/96 kHz or 176.4/192 kHz can be set for each output. In addition, the outputs can also be synchronized to the paired input of the same module.

### Transparent transmission of additional data in the AES3 data stream

The NEXUS network is able to transparently transmit an AES3 data stream including the additional data. If no data is available in transparent mode, NEXUS internal data is output.

### CONNECTIONS

<b>Variant: XLR 1 x 8TE</b>			
XLR female	4 x	AES/EBU, S/PDIF	Input
<b>Variant: BNC 1 x 4TE</b>			
BNC	4 x	AES/EBU, S/PDIF	Input
<b>Variant: XLR 1 x 8TE</b>			
XLR male	4 x	AES/EBU, S/PDIF	Output
<b>Variant: BNC 1 x 4TE</b>			
BNC	4 x	AES/EBU, S/PDIF	Output


**TECHNICAL DATA**
**Features**

Audio data	AES/EBU professional and consumer formats compliant with AES 3-1992r (1997), IEC 60958, EIAJCP-1201, and AES 11-1997
Non-audio	The card transparently passes non-audio data through.
Amplitude resolution	24 Bit (with or without SRC)
Ancillary data	Evaluation and transparent passthrough of AES/EBU ancillary data (CUVZ)
Sample rates	NEXUS system clock (44,1 kHz, 48 kHz, 88,2 kHz, 96 kHz)   2...192 kHz with sample-rate converter enabled
Latency	7/8 Samples (48/96 kHz)   1,2...2,4 ms (2 SRCs in chain)
Configuration	Sample-rate converters for each input and output Gain (mute...+20 dB) and phase inversion per input   Gain (mute...+20 dB) per output

**Outputs**

Differential output voltage	3,3 V
Impedance	110 Ω
Recommended cable length	Max. 100 m

**Inputs**

Differential input sensitivity	Min. 150 mV
Impedance	110 Ω
Recommended cable length	Max. 100 m

**Sample rate converter (Separately available for each input and output port)**

Output frequency	Synchronization of the out rate to the rate present at the input Free-running (controlled by internal quartz oscillator), 44,1/48 kHz, 88,2/96 kHz, 176,4/192 kHz
Distortion factor (THD+N)	-130 dB (typ.), -115 dB (max.)
Latency	1,2 ms at 48 kHz (SRC output frequency)   0,6 ms at 96 kHz (SRC output frequency)   0,3 ms at 192 kHz (SRC output frequency)
Sample rates	30...200 kHz (32...192 kHz guaranteed)

**Operation conditions**

Temperature range	0 °C to +50 °C
Humidity	Max. 90 %, non-condensing

**Storage conditions**

Temperature range	-35 °C to +70 °C
Humidity	Max. 90 %, non-condensing

**Power supply**

Voltage	Typ. +5 V
Current	220 mA, no active inputs/outputs 240 mA, at 48 kHz, 4 active AES inputs, SRCs off 400 mA, at 48 kHz, 4 active AES inputs, SRCs (In and Out) on 270 mA, at 96 kHz, 4 active AES inputs, SRCs off 440 mA, at 96 kHz, 4 active AES inputs, SRCs (In and Out) on 500 mA, at 192 kHz, 4 active AES inputs, SRCs (In and Out) on 20 mA, per active SRC

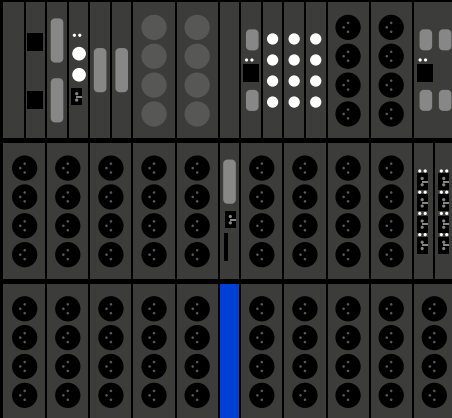
**Mechanical data**

Weight	0,25 kg   0,27 kg (with SRCs)
Note	In the XLR version, the two front panels are connected with a ribbon cable.

# NEXUS // NETWORKED AUDIO MATRIX

**NOW, IT'S TIME FOR YOU TO DEFINE YOUR SYSTEM'S FUTURE.**

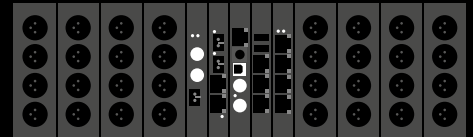
Every installation is unique, requiring a system that aligns perfectly with its specific requirements. Our commitment to customised solutions ensures that each scenario receives the ideal system configuration. Are you looking for a modular design that offers flexibility and seamless expansion? Or do you prefer the stability and simplicity of a fixed system? Perhaps a combination of both, blending flexibility with permanence, will best meet your needs. Would you like to continue using your proprietary system or network via IP? NEXUS supports both options, keeping you always up-to-date with maximum freedom and performance. With STAGETEC, our NEXUS networked audio matrix systems will serve as the reliable heartbeat of your installation.



NEXUS modular



NEXUS compact



NEXUS 4split

## STAGETEC

Sales and Services GmbH & Co. KG  
Ottostraße 11 | 96047 Bamberg | Germany  
T. +49 (0)30 / 63 99 02-850  
info@stagetec.com  
www.stagetec.com

## STAGETEC GmbH

Tabbertstraße 10-11 | 12459 Berlin | Germany  
T. +49 (0)30 / 63 99 02-0