English

HXAD

High density analog to digital converter for stereo signals

STAGETEC

AUDIO EXCELLENCE

The high-density input card for stereo line signals up to +15 dBU

HXAD NEXUS cards offer eight analog stereo line inputs (16 audio channels). Versions with D-Sub or RJ45 connectors are available, which are particularly suitable for applications that require small sizes with high audio quality at the same time.

The HXAD board is the best way to feed larger amounts of stereo signals into a NEXUS system when space is limited. The 24-bit A/D converter can digitize 16 signals with typical line levels. This analog input board also features Stage Tec's innovative circuit design with minimal converter errors and transformer isolated input stages. The dynamic range of 112 db (A) and the extremely low distortion factor of only 0.001% at 15 dBu allow a faithful reproduction of any typical analog signal. The unbeatable amplitude frequency response of +/-0.05 dB at 20 Hz - 20 kHz and the high aliasing suppression underline the outstanding quality known from Stage Tec products. With its galvanic isolation in pairs, the high-density input board allows efficient, high-quality connection of stereophonic sources to a NEXUS network.
To keep the packing density in systems as high as possible, this 16-channel card is only available with D-sub or RJ45 connections in 4 HP width. The use of cards with RJ45 sockets makes it possible, especially in fixed installations, to have common CAT5 cables laid as an inexpensive alternative to expensive, shielded audio cables. Stage Tec's extraordinary inputs ensure that the signal quality does not suffer as a result..

"Stereo version" of the outstanding XAD+ converter card
With a dynamic range of 112 dB and a maximum input level of 15 dBU, this NEXUS board is a space-saving replacement for XAD+ when it comes to stereophonic signals.

High-density card with 16 audio channels for large numbers of inputs in confined spaces
This board offers high channel density, meeting a high demand for required inputs, especially in situations requiring portability or low weight.

Version with transformers in each input channel even with high channel density
Despite the compact circuit design, each channel is transformer isolated. The input pairs (1/2, 3/4, etc.) share a common ground potential, since the module is intended for the connection of stereo and multi-channel devices. Stage Tec's transformer-insulated inputs have significant advantages over conventional circuits: They are insensitive to magnetic fields and have a lower distortion factor, especially at high and low levels and at low frequencies. They also offer high symmetry, galvanic isolation and a lower input capacitance.

"Ground Lift" disconnectable ground connection
The connection to the common ground can be cancelled separately for each input pair (1/2, 3/4, etc.). This is done via DIP switches, which prevent the connection of the screen line to the internal analog ground.

Tenders under high cost pressure
Tenders can often be tight with the budget, but you don't want to forego quality. The HXAD input board comes with 16 high-quality line level converters in just one board, which saves space in the NEXUS base unit and also the cost of a second input board. For an effective balance of space, price and channel capacity, the HXAD card, of course in the usual Stage Tec quality. The slim 4HP wide design with D-Sub or RJ45 jacks takes up little space, in contrast to the XAD+ board in XLR design which has eight times the width required to accommodate the same number of channels. The main difference to the XAD+ card is the common mass of the channel pairs and the double number of inputs.

Connections

Variant: D-Sub	1 x 4DU		
D-Sub 25 Socked female	2x	Line Level	Input
Variant: RJ45	**1 x 4DU**		
RJ45	4x	Line Level	Input

Technical Specifications

Configuration, available separately for each channel	
	Test-tone generation Phase inversion
A/D Conversion	
Type	delta sigma converter
Resolution	24 Bit, 128-faches Oversampling
Audio Data	
Input level	15 dBu (max.)
Dielectric strength	Signal wire enclosure: < ±200 V (DC) (common-mode signal); Signal wire signal wire: < 20 V (AC) (dielectric strength RMS); Shield enclosure: < 48 V (DC)
Frequency response	20…20,000 Hz (+0.0 dB, –0.1 dB)
Input impedance	> 10 kOhm
Input Impedance CMR	120 dB@ < 100 Hz (typ.); 100 dB@1 kHz (typ.); 70 dB@15 kHz (typ.)
Gain	–20…+20 dB, digitally adjustable
Distortion factor (THD+N)	0.001 %@15 dBu (typ.); < 0.002 %@1 kHz granted; 0.01 %@–15…+15 dBu (typ.); < 0.02 % granted; < 0.3 %@–60 dBFS, 20…20,000 Hz
Dynamic range	112 dB (A)@0 dBFS = 15 dBu (typ.)
Idle channel noise	–109 dBFS (CCIR-RMS) (typ.)
Modulation noise	–110 dBFS CCIR RMS (typ.) (noise@signal presence)
Crosstalk attenuation	> 110 dB (@20…20.000 Hz)
HF resistance	HF-demodulation resistant according to IRT standards (IRT-Pflichtenheft 3/5) and European standards
Sample rates	44,1 kHz, 48 kHz, 88,2 kHz, 96 kHz
Latency	0.33 dB@48 kHz (typ.)
Operation Conditions	
Temperature range	0° C to +50° C
Max humidity	max. 90 %, non-condensing
Storage Conditions	
Temperature range	–35° C to +70° C
Max humidity	max. 90 %, non-condensing
Power Supply	
Voltage	+4,9…5,2 V
Current	500 mA
Mechanical Data	
Weight	0,25 kg

Stage Tec NEXUS: A global reference!*

*The map shows selected reference locations. To date more than 1,000 Stage Tec NEXUS systems have been delivered and installed worldwide.

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