



XSYNC

synchronization card



A U D I O E X C E L L E N C E

The board for synchronizing the NEXUS system to analog video sources

The XSYNC board makes it possible to synchronize a NEXUS network with external video sources. This ensures that each video frame is always assigned exactly the same number of audio samples.

If exact synchronization of the NEXUS audio network to external video equipment is required, an XSYNC card is the ideal solution. At its video-in input, the card supports both bi-level and tri-level sync, which is often distributed separately in video systems. A composite filter is provided at the video-in input, which effectively suppresses any interference on the connected sync line.

Easy handling is ensured by the automatic recognition of the video formats, whose frame rate is set in relation to the audio sampling rate. The NEXUS system ensures that exactly the same number of audio samples are sent to each video frame and this is synchronized system-wide, and the board also has a word clock-in and out, which can be used to connect an external audio master clock or output the NEXUS audio clock. Of course, the termination at the input can be configured.

Inputs for word clock and video sync

The NEXUS network can be synchronized via the XSYNC card using word clock or video sync signals; dedicated inputs are provided for this purpose.

Automatic detection of the video format

When a video sync signal is connected, the XSYNC module automatically recognizes which format is present.

Support of Bi- and Tri-Level-Sync

The video input accepts a selection of different signals, such as composite, component. In addition, modern tri-level sync signals can also be used for synchronization.

Reconstruction of ground analog sync signals

A composite filter can be activated via a jumper to suppress interference from analog signals such as noise or voltage peaks.

Configuration option for 75 and 500 Ohm

To enable the serial connection of several loads to a word clock source, the input impedance can be adjusted from 75 to 500 ohms by jumper.

Filtering of noise and voltage peaks in the applied video signal

A composite filter is provided in the video input to suppress interference from analog signals.

Synchronization of NEXUS networks with analog video systems

The NEXUS audio network is often used in conjunction with video systems and therefore requires an interface for synchronization. The XSYNC board offers a variety of ways to synchronize the NEXUS system with analog video signals: Bi- and tri-level signals can be received via the BNC video input, which can be included in both an SDI and an HD video stream..

Connections

XSYNC_01		1 x 4TE	
BNC	1x	SDI, HDSDI, 3G	Input
BNC	1x	Wordclock	Output
BNC	1x	Wordclock	Input

Technical specifications

video input

Design	galvanic isolation
Sensitivity	1 V nom. (0.5...2 VPP)
Impedance	75 ohm
Required stability	< ±100 ppm (typ. ±50 ppm, AES 11, Grade 2 compliant)
SD formats (NTSC, PAL)	525 lines interlaced, 59,94/60 Hz (NTSC) 525 lines progressive, 59,94/60 Hz (NTSC) 625 lines interlaced, 50 Hz (PAL) 625 lines progressive, 50 Hz (PAL)
HD formats (SMPTE 296M)	720 lines progressive, 50, 59,94 and 60 Hz
HD formats (SMPTE 274M, SMPTE 260M)	1035 lines interlaced, 59,94/60 Hz 1080 lines interlaced, 50, 59,94 and 60 Hz 1080 lines progressive, 23,98, 24, 25, 29,97, 30, 50, 59,94, 60 Hz

word clock input

Design	balanced, electrically separated
Sensitivity	TTL, 1...5 V
Impedance	75/500 ohm (jumper-configurable)
Sample rates	44,1 kHz, 48 kHz, 88,2 kHz, 96 kHz
Required stability	< ±150 ppm (typ. ±50 ppm, AES 11, Grade 2 compliant)

word clock output

Design	balanced, electrically separated
AC/DC coupling	jumper-configurable
Level	≥ 2.4 V on RL = 75 ohm
Impedance	75 ohm
Sample rates	44,1 kHz, 48 kHz, 88,2 kHz, 96 kHz
Frequency stability	min. ±10 ppm, typ. ±5 ppm (when using internal generator)

Operation conditions

Temperature range	0 °C bis +50 °C
max humidity	max. 90 %, non-condensing

Storage conditions

Temperature range	0 °C bis +50 °C (max. 70 °C Bauteiletemperatur)
max humidity	max. 90 %, non-condensing

Power supply

Voltage	+4,75...5,25 V
Current	ca. 0,3 A

Mechanical data

Weight	0,27 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.

Stage Tec Entwicklungsgesellschaft für professionelle Audiotechnik mbH

Tabbertstraße 10-11
12459 Berlin, Germany

P: +49 30 63 99 02-0

F: +49 30 63 99 02-32

E-mail: office@stagetec.com

www.stagetec.com



A U D I O E X C E L L E N C E