

# DIGITAL-AUDIO COMPONENTS

## XSYNC SYNCHRONISATION BOARD

### VIDEO/WCLK SYNC INPUT BOARD FOR THE NEXUS

- Video and word clock inputs
- Automatic detection of video formats
- Input filter for restoring analogue video signals
- Video-sync input (BNC) for bi-level and tri-level sync signal
- Word clock out

The XSYNC board for the NEXUS was designed for connecting to external studio systems and devices. It provides two inputs used for synchronising the NEXUS system remotely: video and word clock. The synchronising input is selected using the NEXUS control program.

#### SYNC INPUTS

**Video** External video signals are input via a standard BNC port. It is isolated galvanically and unbalanced (as specified by the format). The video input handles a number of formats: It accepts not only composite and component video but also the new HD formats, including bi-level and tri-level syncs, as the sync source. The XSYNC automatically detects the input format, so manual selection is unnecessary. It incorporates a composite filter enabled selectively for suppressing analogue interference (noise, voltage peaks).

**Wordclock** External word clock signals are input via a standard BNC port. It is isolated galvanically and balanced. The port accepts TTL signals. The nominal input impedance of 75 ohm can be changed to approx. 500 ohm. This allows for connection of multiple destinations to a single source.

#### SYNC OUTPUTS

The NEXUS system clock (referenced externally or generated internally) is made available to external units at the galvanically isolated TTL word clock output.

#### COMPATIBILITY

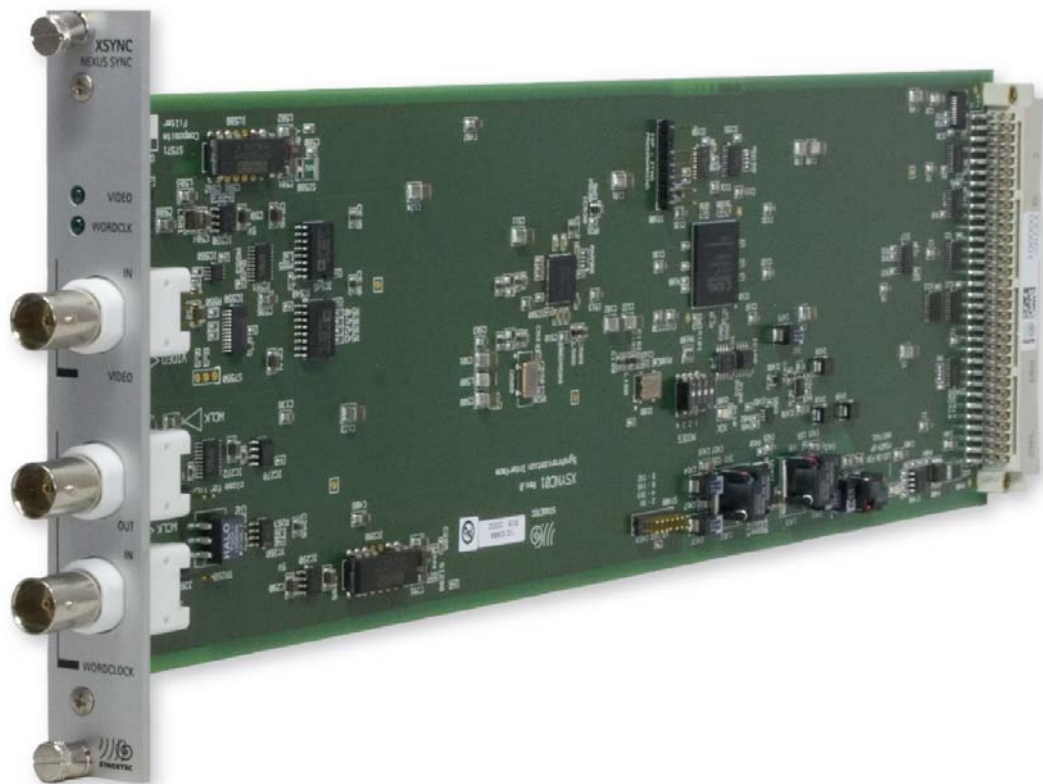
The XSYNC board requires a Matrix 4 generation or later NEXUS system. It is therefore compatible with XCPU06 controller boards or later.

#### INDICATION AND ERROR DETECTION

The XSYNC detects and indicates sync-signal failure.

#### HOT SWAP

As is usual with NEXUS components, the XSYNC board can be removed and replaced during operation. If necessary, the NEXUS switches to the next available internal or external sync source automatically.





XSYNC SPECIFICATIONS		
Video Input	Port	BNC
	Design	Galvanic isolation
	Sensitivity	1 V nom. (0.5 to 2 V <sub>pp</sub> )
	Impedance	75 ohm
	Required stability	< ±100 ppm (typ. ±50 ppm, compliant with AES 11, Grade 2)
	SD formats (NTSC, PAL)	- 525 lines interlaced, 59.94/60 Hz (NTSC) - 525 lines progressive, 59.94/60 Hz - 625 lines interlaced, 50 Hz (PAL) - 625 lines progressive, 50 Hz (PAL)
	HD formats (SMPTE 296M)	720 lines progressive, 50; 59.94 und 60 Hz
	HD formats (SMPTE 274M, SMPTE 260M)	- 1035 lines interlaced, 59.94/60 Hz - 1080 lines interlaced, 50; 59.94 und 60 Hz - 1080 lines progressive, 23.98; 24; 25; 29.97; 30; 50; 59.94, and 60 Hz
Word clock in	Port	BNC
	Design	Balanced, galvanic isolation
	Sensitivity	TTL, 1 to 5 V
	Impedance	75/500 ohm (jumper-configurable)
	Frequency	44.1, 48, 88.2, 96 KHz
	Required stability	< ±150 ppm (typ. ±50 ppm, compliant with AES 11, Grade 2)
Word clock out	Port	BNC
	Design	Balanced, galvanic isolation
	AC/DC coupling	Jumper-configurable
	Level	≥2.4 V <sub>pp</sub> on R <sub>L</sub> = 75 ohm
	Impedance	75 ohm
	Frequency	44.1, 48, 88.2, 96 KHz
	NEXUS frequency stability	min. ±10 ppm, typ. ±5 ppm (when using internal generator)
Power Supply	Supply voltage	+4.75-5.25 V
	Current intake	approx. 0.3 A
Operating Conditions	Temperature range	0-70 C
	Humidity	90 % (max.), non-condensing
Storage Conditions	Temperature range	-35-70 C°
	Humidity	90 % (max.), non-condensing
Physical Properties	General	Plug-in board for 19" module frame; 3 U, 340 mm
	Front panel	4 HP (20 mm × 130 mm)
	Slot requirements	1
	Weight	0,27kg