

XTF TASCAM INTERFACE BOARD

8-CHANNEL TASCAM I/O BOARD

- 8 channels
- Combined I/O board
- DSP built-in
- Output-signal re-quantizing to 16 or 20 bits with dithering and noise shaping
- I/O sample-rate converter (option)

The NEXUS TDIF 8-channel board is an interface to the TDIF format by Tascam. This format connects, for example, to the DA 88 and DA 98 digital tape machines.

The inputs and outputs can be equipped with sample-rate converters for handling asynchronous signals.

The XTF includes a signal processor allowing for various processing operations:

- Separate input-gain adjustment
- Input-phase inversion
- Output-signal re-quantization with noise shaping and dithering

VARIOUS OUTPUT FORMATS

The XTF board provides for re-quantization of NEXUS 24-bit data to 16-bit or 20-bit formats for external applications. Inaccuracies emerging from truncation errors are minimized by re-quantizing using a dithering algorithm.

In addition, a selectively engaged noise-shaping function moves the noise energy up to frequency ranges less perceivable to the human ear. The noise reduction achieved in the range below 1 kHz is approximately 15 dB. Noise shaping is computed on the integrated signal processor on the basis of a 5th-order algorithm.

SAMPLE-RATE CONVERTERS

For handling asynchronous signals, sample-rate converters are optionally available for both the input and the output. If equipped with sample-rate converters, the board handles input signals with a sample rate of 32 to 50 kHz. In this case, the output sample rate can be set to either 44.1 kHz or 48 kHz. The board includes a quartz-controlled generator producing a 44.1-kHz or 48-kHz wordclock. Accuracy is better than 50 ppm.

SEPARATE SYNCHRONISATION

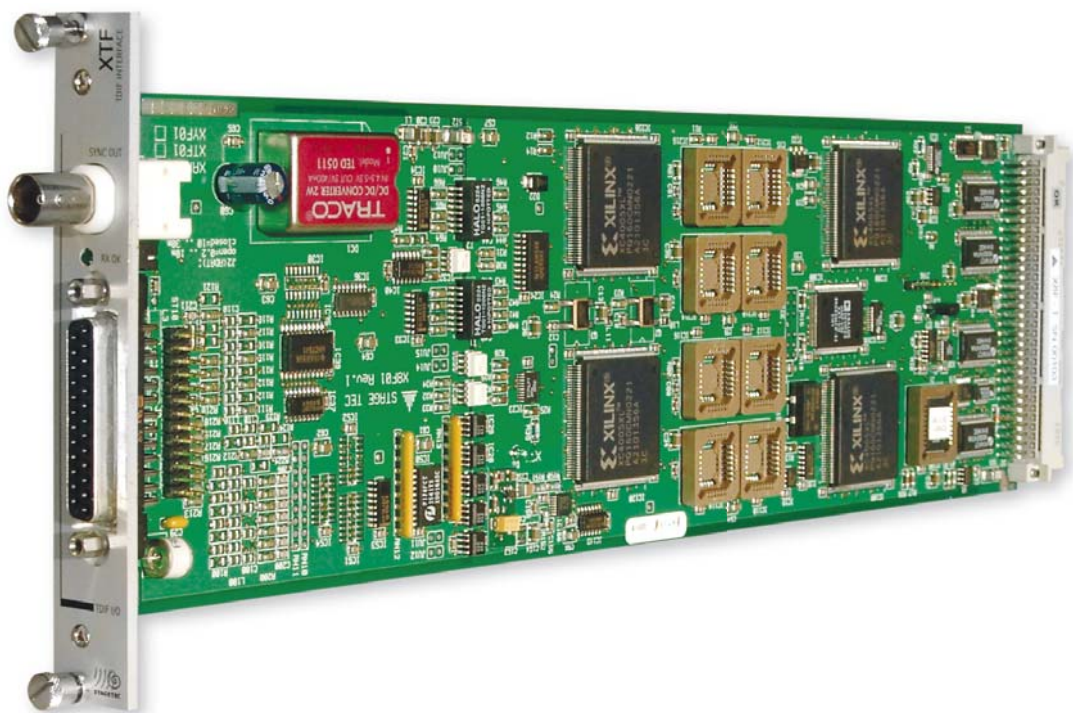
The XTF also allows the output signal to be synchronised to the input signal independent of the system clock. Thanks to the sample-rate converters, the audio signal is still available on the NEXUS system.

INDICATORS

A front-panel LED indicates the status of the input signal.

PORTS

The Tascam format uses 25-pole D-Sub ports. In addition, a BNC port is available for setting up the slave configuration of a connected unit. This port supplies a wordclock signal shifted by 90° (Tascam standard).





XTFoI SPECIFICATIONS		
Data formats	TDIF	
Audio data	24, 20, 16 bits	
Sample rates	44.1 kHz, 48 kHz	
Features (per input)	phase inversion	
	±20 dB input gain	
	sample-rate converter (option) shared by all channels	
Features (per output)	noise shaping and dithering for 16/20-bit outputs signals	
	transparent transmission of all TDIF-format user bits (with SRC disabled)	
	sample-rate converter (option) shared by all channels	
Indicators	PLL status (front-panel LED)	
Ports	wordclock output	BNC (TTL level)
	data/audio: D-Sub (8 channels, 25-pole, female)	
Propagation delay	4 samples (w / o SRC)	
	0.7 ms typ. when using SRC	
Synchronisation	to first channel	
Power supply	Voltage	+4.75 to 5.25 V
	Current	800 mA
Operating conditions	Temperature range	0 to +50 °C / 32 to 122 °F
	Humidity	90% (max.), non-condensing
Storage conditions	Temperature range	-35 to +70 °C / -31 to 158 °F
	Humidity	90% (max.), non-condensing
Physical specifications	General	board for 19" module frame; 3 U, 340 mm / 13.39"
	Front panel	4 HP (20.02 × 128.5 mm / 0.8 × 5.06")
	Required space	1
	Weight	0.28 kg

VERSIONS	
XTF	version w / o SRC
XTF-SRC	version w / SRC (inputs and outputs)