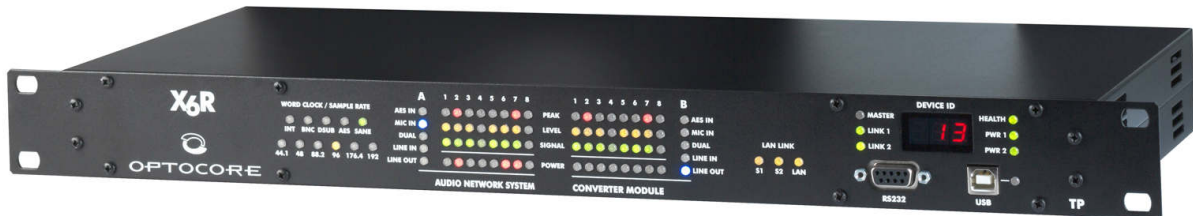


DATASHEET

X6R-TP
NETWORK
CONVERTER UNIT

ANALOGUE – SANE – AES/EBU
INTERFACE DEVICE
WITH ETHERNET



Product Features

- 16 channel converter unit in a 1 RU enclosure for SANE CAT5 Network by Optocore with AES/EBU ports
- Card slots for customized I/O configuration
- 6 types of cards with Euroblock connectors:
 - 8 mic inputs with two independent preamps each
 - 8 line inputs / 8 line outputs
 - 8 AES/EBU inputs with sample rate converters
 - 8 AES/EBU in- or outputs switchable in groups of four
- Sample rates up to 192 kHz
- Full integration into SANE network
- Mic inputs with selectable gain (-4 dB to +66 dB in true analogue 1 dB steps) and 48 V phantom power
- 2 RJ45 SANE Network Ports
- 2 AES/EBU Ports, each capable of 16 channels
- 4 RS485/GPIO Ports
- Word clock IN and OUT
- Embedded internal word clock for stand-alone applications
- USB, RS232 and LAN port for configuration and control
- Full remote access with Optocore control software
- Upgradeable internal logic
- Comprehensive status control via LED banks on the front

12 in 1, the X6R-TP is a converter unit with the highest degree of flexibility concerning the I/O configuration which can be directly integrated in a 64 channels SANE CAT5 network by Optocore. Six different card types enable to customise the card slots on the rear of the device, whether the conversion of analogue signals - 16 inputs, 16 outputs, 8 inputs and 8 outputs, dual microphone inputs with two independent adjustable gains – to AES/EBU or a sample rate converter for AES3 input signals is required. Twelve different versions are available.

The X6R-TP is especially designed for rack mounted applications and permanent installation. All cards are equipped with Euroblock connectors. These common installation interfaces provide a simple and cost-efficient connection to other audio equipment.

The X6R-TP can be seamlessly integrated into the OPTOCORE® OPTICAL DIGITAL NETWORK SYSTEM with the use of on of the – FX devices and SANE ports or DD32R-FX and AES/EBU ports. All parameters of the converters can be remote controlled and monitored with the same software application as all the other OPTOCORE devices, the OPTOCORE CONTROL software. Furthermore, by connecting the –TP devices, user can built a standalone CAT5 based network.

The X6R-TP with the dual microphone input card relieves all FOH and monitor engineers of the decision about the control of the

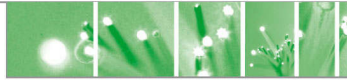
microphone preamps. Every microphone input incorporates two independent microphone preamps and both can be adjusted individually. Therefore, analogue split boxes and two stage racks to give FOH and monitor engineers the freedom to adjust their mic preamps directly at their own console can be a past.

The X6R-TP with the sample rate converters enables the connection of audio devices operating the different sample rates.

The X6R-TP with AES/EBU I/O, analogue mic input, line input and line output cards allow a customised I/O configuration. Two card slots can be equipped with two different cards, so ten combinations with 16 inputs, 16 outputs or 8 inputs and 8 outputs can be produced exactly according to the customer's requirements. Two additional fixed AES/EBU ports adds more flexibility to the system, with 32 channels which can be configured as inputs or outputs.

The microphone inputs include microphone preamp, phantom power and selectable gains in analogue 1 dB steps from -4 dB to +66 dB.

The line inputs are equipped with selectable channel levels of -9 dB, -4 dB, +0 dB, +10 dB and the line output with a selectable channel level of +4 dB, 0 dB, -6 dB, -10 dB round off the device. The high quality of the preamps, A/D- and D/A converters make the X6R-TP units ideal for the incorporation into audio systems even if no OPTOCORE



network is established. They provide a wide dynamic range with negligible distortion and extremely low noise.

The channels of the SANE Ports and I/O Cards can be directly routed to Optocore fibre network and vice versa.

The Word Clock IN and OUT enable the synchronization of the units to an external source and are used to pass on the word clock from one unit to

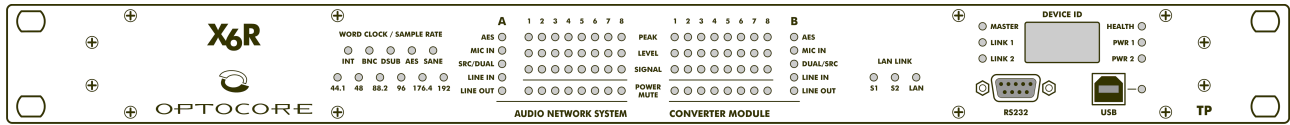
the next. For stand-alone applications, the devices are equipped with an internal word clock.

One X6R-TP can exchange up to 64 audio channels from the SANE network, 32 channels from two AES/EBU ports and 16 audio channels from the I/O Cards. The X6R-TP units can be operated and controlled via the Optocore network with Optocore Control, without the necessity of any external data cable. For control in

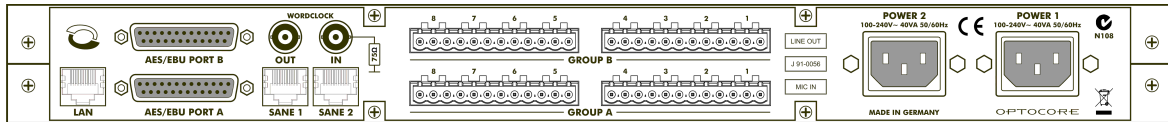
stand-alone applications, USB, RS232 or LAN port on the front / rear panel can be used.

The FPGA (field programmable gate array) based concept of the internal logic circuitry permits updating of the firmware ensuring a continual state-of-the-art device.

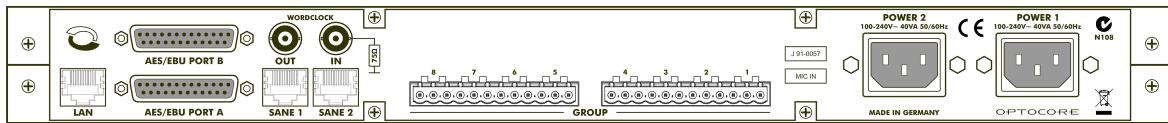
Front Panel X6R-TP



Rear Panel X6R-TP with Analogue Input- and Output Cards



Rear Panel X6R-TP with Dual Microphone Card



Technical Specifications

Analog Audio Mic Inputs	ADC			
Impedance, Gain / steps	Single and Dual	4.5kΩ	-4 dB to +66 dB	1 dB steps
Maximum input level	@ -4 dB Gain	+22 dBu	@ +66 dB Gain	-48 dBu
SNR	@ -4 dB Gain	122.5 dB(A)	@ +66 dB Gain	81.5 dB(A)
THD+N @ -1dBFS	@ -4 dB Gain	≤ -102 dB	@ +40 dB Gain	≤ -100 dB
Analog Audio Line Inputs	ADC			
Impedance, Gain / steps		10kΩ	-9, -4, 0, +10 dB	4 steps
Maximum input level	@ -9 dB Gain	+27 dBu	@ +10 dB Gain	+8 dBu
SNR	@ -9 dB Gain	127.5 dB(A)	@ +10 dB Gain	108 dB(A)
THD+N @ -1dBFS	@ -9 dB Gain	≤ -102 dB	@ +10 dB Gain	≤ -102 dB
Analog Audio Line Outputs	DAC			
Impedance, Gain / steps		22Ω	+4, 0, -6, -10 dB	4 steps
Maximum output level	@ +4 dB Gain	+22 dBu	@ -10 dB Gain	+8 dBu
SNR	@ +4 dB Gain	123 dB(A)	@ -10 dB Gain	108 dB(A)
THD+N @ 0dBFS	@ +4 dB Gain	≤ -100 dB	@ -10 dB Gain	≤ -103 dB
Word clock	Hardware standard 75 Ω / BNC			
Data rate	44.1 kHz – 192 kHz			
Power supply	2 (optional) independent power supplies with function check and automatic switch-over			
Type	Switch-mode, universal input			
Mains voltage	100...240VAC, 50/60Hz, 25VA-typ, 32VA-peak			
Remote Control	Control Interfaces to PC			
RS232 / USB / Ethernet	Control Interfaces to PC			
Dimensions	1 RU / 19"			
W x H x D	483 x 44 x 200mm		19.0 x 1.73 x 7.87 inch	
Weight	2.7 kg		6.0 lbs	