

**DATA SHEET**
**X6P-16IN  
CONVERTER UNIT**
**ANALOG – AES/EBU  
INTERFACE DEVICE**

**Product Features**

- **16 channel analog-AES/EBU converter unit**
- **Full integration into Optocore network by DD32(E) or PTP32E**
- **16 XLR analog mic/line inputs**
- **Mic pre-amps with selectable gain (0 dB to +69 dB in 1 dB steps) and 48 V phantom power**
- **2 analog post-preamp split outputs**
- **1 digital AES/EBU I/O and 1 digital AES/EBU split port**
- **Word clock IN / OUT and THRU**
- **Embedded internal word clock for stand-alone applications**
- **1 USB and 1 RS232 port for configuration and control**
- **Full remote access with OPTOCORE CONTROL software**
- **Upgradeable internal logic**
- **Comprehensive status control via LED banks on the front**

The X6P-16IN is part of the X6 series, the converter units to transform analog signals to AES/EBU and vice versa. It is equipped with 16 XLR microphone or line level inputs. The X6P-16IN can function in all kinds of applications where the A/D conversion is needed. In cooperation with Optocore's DD32(E) or PTP32E they are seamlessly integrated into the OPTOCORE® OPTICAL DIGITAL NETWORK SYSTEM. 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.

The X6 units facilitate a high flexibility to provide the number of analog inputs and outputs required at different positions in temporary or permanent applications. The high quality of the preamps, A/D- and D/A converters make the X6 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 16 XLR inputs include microphone pre-amp, phantom power and selectable gains in 1 dB steps from 0 dB to +66 dB.

All analog inputs are available at the rear panel after pre-amplification. Two analog split outputs per channel

can be sent to other devices such as an analog monitor console or recording unit.

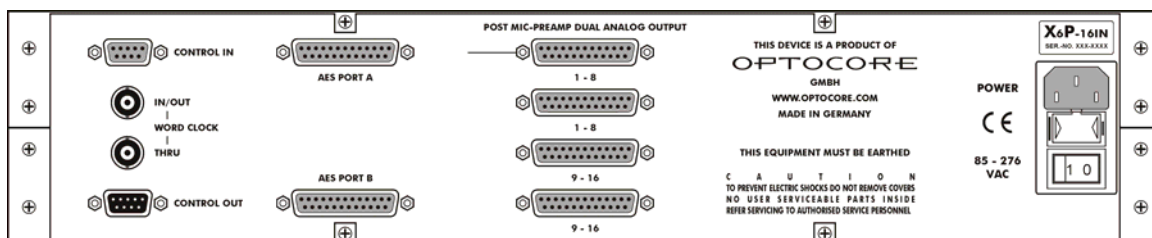
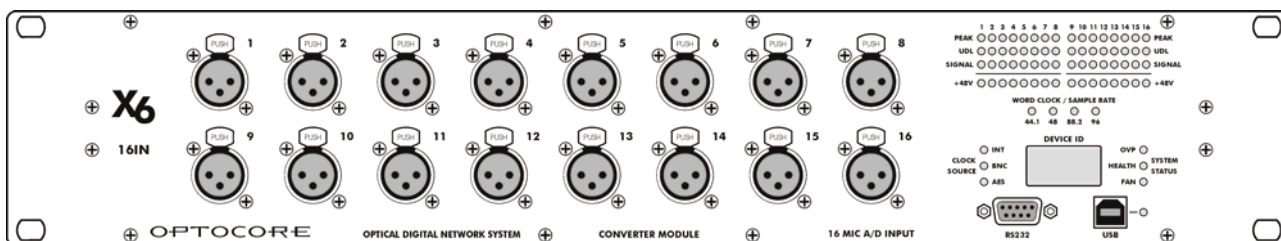
With two parallel AES/EBU ports the digital signals are split as well. They allow the transmission of the analog inputs to two different devices with digital interfaces.

The Word Clock IN / OUT and THRU 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.

Up to four X6-units can be connected to the four principle ports of one DD32(E) or PTP32E enabling the exchange of 32 AES/EBU signals (64 channels) and control data. The ports include two control data channels. Without the necessity of any external data cable the X6-units can be operated and controlled via the Optocore network with OPTOCORE CONTROL. For the control in stand-alone applications the USB or RS232 port on the front panel can be used.

The FPGA (field programmable gate array) based concept of the internal logic circuitry permits updating of the hardware by the use of the units remote ports, ensuring a continual state-of-the-art device.

## Line Drawings



## Technical Specifications

Analog Audio Inputs		Analog → ADC	
Mic / line inputs			8
Gain / steps		0 dB – +66 dB	1 dB steps
Maximum input level	@ 0 dB Gain	18 dBu	@ 66 dB Gain -48 dBu
Frequency response ( ≤ -1 dB-drop)	@ 48 kHz	15 Hz – 21 kHz	@ 96 kHz 15 Hz – 42 kHz
Input impedance			5 kΩ
Phantom power	selectable per channel		48 V
Distortion THD+N	@ 0 dB Gain	≤ 0,002% ≡ -94 dB	@ 50 dB Gain ≤ 0,025% ≡ -72 dB
Equivalent Input Noise			@ 50 dB Gain -127 dBu
Dynamics	@ 0 dB Gain	≥ 113 dB	@ 50 dB Gain 145 dB
CMR	@ 1 kHz	≥ 60 dB	@ 16 kHz ≥ 60 dB
Crosstalk	@ 1 kHz	≤ -118 dB	@ 16 kHz ≤ -100 dB
Converter			24-bit @ 48 kHz 24-bit @ 96 kHz
Delay	ADC-channels	= 39 / F <sub>s</sub>	@ 48 kHz: 0.82 ms @ 96 kHz: 0.41 ms
Post Preamp Analog Outputs			
Balanced outputs			2 x 8
Maximum output level			8 dBu
Dynamics		@ 0 dB Gain	≥ 115 dB
Word clock			
	Hardware standard 75 Ω / BNC		
Data rate	Depending on used sample rate		Up to 96 kHz
Impedance	Output / Thru		75 Ω
	Input		1k / 75 Ω software switch
Power supply			
Type	Switch-mode, universal input		
Mains voltage	100 ... 240 V, 400 V <sub>AC</sub> tolerant, 30VA-idle, 35VA-peak		
Frequency	50 ... 60 Hz		
Remote Control			
RS232	Convention EIA / TIA-232		R x D, T x D / 57 600 Baud
USB Port			Interface to PC
Dimensions			
W x H x D	483 x 88 x 221mm		19.2 x 3.5 x 8.7 inch
Weight	2.5 kg		5.5 lbs