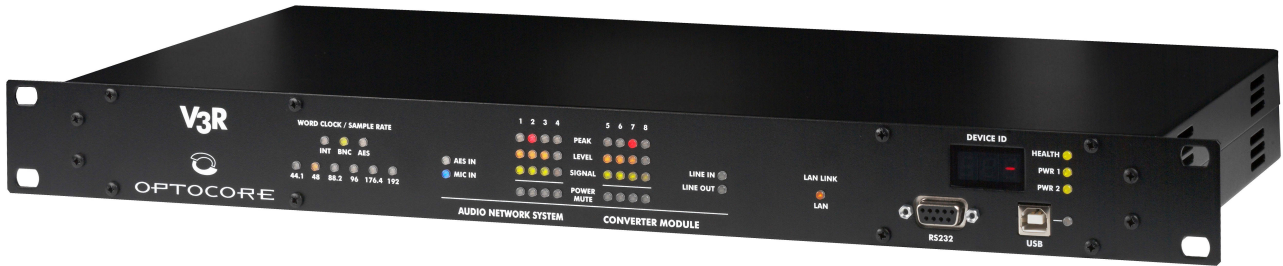


# DATASHEET

## V3R CONVERTER UNIT

## ANALOGUE – AES/EBU INTERFACE DEVICE



Product Features
<ul style="list-style-type: none"> <li>▪ <b>8 channel converter unit in a 1 RU enclosure</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Card slots for customized I/O configuration</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>3 types of cards with Euroblock connectors:</b> <ul style="list-style-type: none"> <li>- 8 mic inputs</li> <li>- 8 line inputs</li> <li>- 8 line outputs</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Sample rates up to 192 kHz</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Full integration into OPTOCORE network by DD32R-FX</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Mic inputs with selectable gain -4 dB to +66 dB in true analogue 1 dB steps) and 48 V phantom power</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>1 digital AES/EBU I/O and 1 digital AES/EBU split port</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Word clock IN and OUT</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Embedded internal word clock for stand-alone applications</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>USB, RS232 and LAN port for configuration and control</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Full remote access with OPTOCORE CONTROL software</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Upgradeable internal logic</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Comprehensive status control via LED banks on the front</b></li> </ul>

The V3R is a converter unit with a high degree of flexibility concerning the I/O configuration. Three different card types enable to customise the card slot on the rear of the device for the conversion of analogue signals - 8 microphone inputs, 8 line inputs or 8 line outputs – to AES/EBU.

The V3R 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.

In cooperation with OPTOCORE's DD32E the V3R is 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 V3R units facilitate a high flexibility to provide the number of analogue 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 V3R 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 microphone inputs include microphone preamp, phantom power and selectable gains in true 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.

With two AES/EBU ports the digital signals are split as well. The second port allows the transmission of the analogue inputs together with the incoming AES/EBU signals to other devices with digital interfaces.

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.

Up to eight V3R can be connected to the four principle ports of one DD32E enabling the exchange of 32 AES/EBU signals (64 channels) and control data. The ports include two control data channels.

V3R Versions
<ul style="list-style-type: none"> <li>▪ <b>8 microphone inputs</b></li> <li>▪ <b>8 line inputs</b></li> <li>▪ <b>8 line outputs</b></li> </ul>

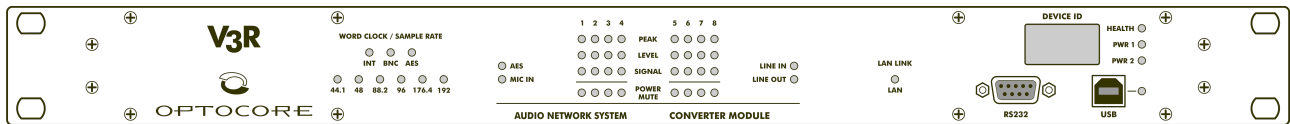
The VR3 units can be operated and controlled via the OPTOCORE network with OPTOCORE CONTROL, without the necessity of any external data cable. For the

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

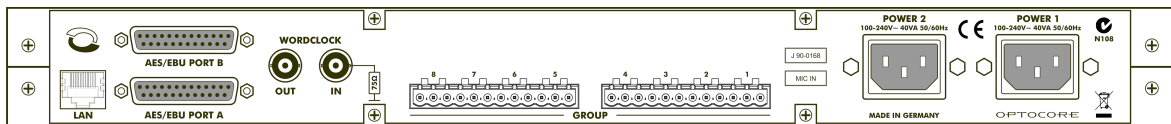
logic circuitry permits updating of the firmware ensuring a continual state-of-the-art device.

The FPGA (field programmable gate array) based concept of the internal

### Front Panel V3R



### Rear Panel V3R



### Technical Specifications

<b>Analog Audio Mic Inputs</b>	ADC		
Impedance, Gain / steps	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
<b>Analog Audio Line Inputs</b>	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
<b>Analog Audio Line Outputs</b>	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
<b>Word clock</b>	Hardware standard 75 Ω / BNC		
Data rate	44.1 kHz – 192 kHz		
<b>Power supply</b>	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		
<b>Remote Control</b>	Control Interfaces to PC		
<b>Dimensions</b>	1 RU / 19"		
W x H x D	483 x 44 x 200mm	19.0 x 1.73 x 7.87 inch	
Weight	2.6 kg	5.7 lbs	