DATA SHEET

DD32R

AES/EBU DIGITAL I/O MODULE

OPTICAL DIGITAL NETWORK DEVICE

Product Features

- **32 AES/EBU digital audio channels = 64 channels**
- **Unique switch to use as AES/EBU inputs or outputs.**
- **4 RS485 interfaces for the exchange of control data.**
- **Word clock I/O**
- **2 SANE Ports**
- **2 LAN Ports**
- **Composite video input and output**
- **2 optical 2 Gbps LINK interface with duplex LC-connectors**
- **Dual power supply with automatic switchover**
- **1 USB and 1 RS232 port for configuration and control**
- **Full remote access with OPTOCORE CONTROL software**
- **Upgradeable internal logic**
- **Comprehensive status information via LED banks on the front**

DD32R is designed to function as a digital interface, wherever AES/EBU ports are required in an OPTOCORE® OPTICAL DIGITAL NETWORK SYSTEM. The 32 principle ports feature the unique possibility to use them as AES/EBU inputs or outputs.

In combination with the other Optocore devices, the DD32R offers a great flexibility to build the network exactly suiting an applications need. In combination with X6R-FX on stage, it is the perfect interface to a digital console. A DD32R on stage can be used as an interface to all microphone preamps with AES3 outputs. The DD32R serves as I/O to the converter units of the X6-series or via Sane to X6R-TP units. With Optocore microphone preamps, the DD32R enables direct gain control of the preamps on stage from most digital consoles, including Yamaha, Digico, Studer, Soundcraft, Lawo, SSL.

Networks with several DD32R and other Optocore devices allow the transport of a huge amount of digital data, e.g. 768 audio channels with a sample rate of 48 kHz, 32 RS485 channels and 3 video channels. Distances from 350/700 m up to 70 km can be covered depending on the fiber optic transceivers.

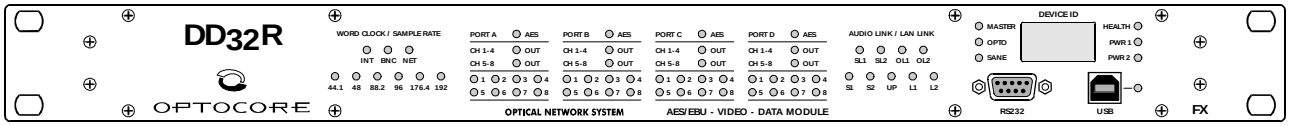
The dual redundant ring structure of the OPTOCORE® OPTICAL DIGITAL NETWORK SYSTEM provides maximum safety in a straightforward network with an outstanding low latency. It facilitates the use of the advantages of fiber optical transmission in all sorts of temporary and permanent applications, especially when long distance connections and high-quality audio is required.

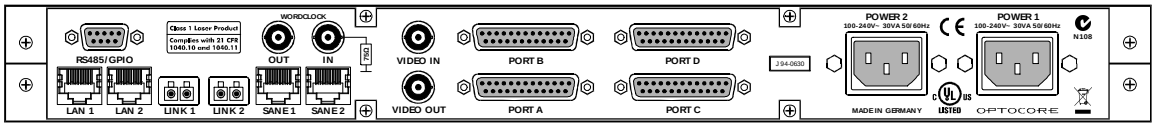
The DD32R features word clock I/O, composite video input and output, two LAN Ports and two Sane Ports. Four RS485 ports allow the transport of a wide range of standards such as RS422, DMX and MIDI. The dual power supply unit, with automatic switchover, permits a redundant power supply and safeguards against malfunctions of the unit if one power supply fails to run.

OPTOCORE CONTROL provides easy access to all configuration and control tools.

Due to carefaul design and using latest technologies, the DD32R fulfills the demand of highest digital standards occupying only one unit of a 19" rack and consuming minimal power. The unique FPGA (field programmable gate array) based concept of the internal logic circuitry permits updating of the hardware via the units remote ports, ensuring a continual state-of-the-art device.

Line Drawings





Technical Specifications

Principal Ports	Convention EIA / TIA-422	
Data channels	Digital data, AES/EBU	32
	AES/EBU audio channels	64
Impedance	Termination	110 Ω
I/O Configuration	Software configureable in 8 channel blocks	64 In / 0 Out to 0 In / 64 Out
Auxiliary Ports	Convention EIA / TIA-485	
Data channels	Digital control data	4
Impedance	Termination	120 Ω
Word Clock	Hardware standard 75 Ω / BNC	
Sample rate		44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz
Impedance	Input and Output	75 Ω
Video	Hardware standard 75 Ω / BNC	
Channels		1 x input, 1 x output
Format		Composite video
Optical Links	Input, Output, Dual – Full bandwidth	
Connection		Duplex LC
Protocol	Up to 1024 audio channels	Optocore
Transmission		Full duplex
Data rate		2 x 2 Gbps or 2 x 1Gbps
Optical wave guide cable lengths	Multimode fiber 50 µm	≤ 700m @ 1G, ≤ 350m @ 2G
	Monomode fiber 9 µm	up to 70km (on request)
Sane Links	Input, Output, Dual – Full bandwidth	
Connection		RJ45
Protocol	64 audio channels and 100Mbps LAN	Sane
Transmission, data rate		200Mbps, full duplex
Cable lenght	CAT5, CAT5E, CAT6, CAT7	≤ 100m for error free transmission
LAN Links	Switch function across the entire Optocore and Sane network	
Connection		RJ45
Protocol	10/100Mbps LAN	Ethernet, full duplex, Auto-MDIX
Power Supply	2 independent power supplies with function check and automatic switch-over	
Type	Switch-mode, universal input	
Mains voltage	100 ... 240 V	
Frequency	50 ... 60 Hz	
Power consumption	12 W typical	
Remote Control		
RS232	Convention EIA / TIA-232	RxD, TxD / 57.600 Baud
USB Port		Interface to PC
Dimensions		1 RU / 19”
W x H x D	483 x 44 x 200 mm	19.2 x 1.73 x 7.87 inch
Weight	2.7 kg	6.0 lbs