DATA SHEET

DD32 / DD32E

GENERAL PURPOSE DIGITAL I/O MODULE

OPTICAL DIGITAL NETWORK DEVICE

Product Features

- **32 AES/EBU digital audio channels i.e. 64 mono channels**
- **Unique possibility to use them as AES/EBU inputs or outputs.**
- **4 RS485 interfaces for the exchange of control data. (e.g. RS422, RS485, DMX, MIDI)**
- **Word clock output**
- **Word clock input at DD32E**
- **Composite video in- and output**
- **2 optical 1 Gbps LINK interface with duplex SC-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 control via LED banks on the front**

DD32E and DD32 are 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 DD32(E) offers a great flexibility to build the network exactly suiting an applications need. In combination with an LX4AP on stage, it is the perfect interface to a digital console at FOH. A DD32(E) on stage can be used as an interface to all microphone preamps with AES3 outputs. The DD32(E) serves as I/O to the converter units of the X6-series. With Optocore microphone preamps, the DD32(E) enables the gain control of the preamps on stage from a Yamaha digital console at FOH.

Networks with several DD32(E) and other Optocore devices allow the transport of a huge amount of digital data, e.g. 256 audio channels with a sample rate of 48 kHz, 32 RS485 channels and 3 video channels. Distances from 700 m up to 70 km can be covered depending on the fiber optic transceivers.

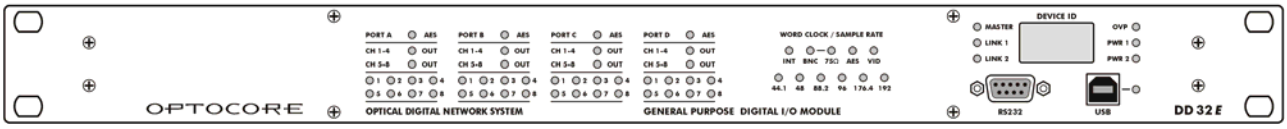
The dual redundant ring structure of the OPTOCORE® OPTICAL DIGITAL NETWORK SYSTEM provides maximum safety in a straightforward network with an outstanding low latency. It facilitates the use of the advantages of fiber optical transmission in all sorts of temporary and permanent applications, especially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

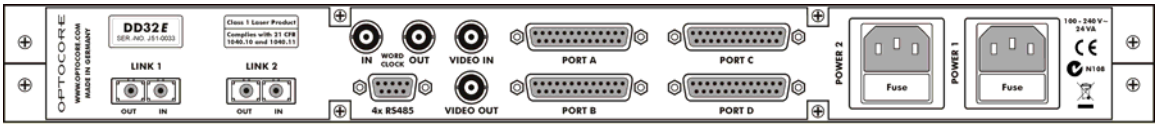
The only difference between the DD32 and DD32(E) is the word clock input, only available at the DD32E. Both devices include a word clock output, a composite video input and output. Four RS485 ports allow the transport of a wide range of standards such as RS422, DMX and MIDI. The dual power supply unit, 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 SMD production, the DD32(E) fulfills the demand of highest digital standards occupying only one unit of a 19" rack. The 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	330 Ω
	Source	≤ 10 Ω
Auxiliary Ports	Convention EIA / TIA-485	
Data channels	Digital control data	4
Impedance	Termination	330 Ω
	Source	≤ 10 Ω
Word Clock	Hardware standard 75 Ω / BNC	
Sample rate		44,1 / 48 / 88,2 / 96 / 176,4 / 192 kHz
Impedance	Output	75 Ω
	Input (only DD32E)	1k / 75 Ω software switch
Video	Hardware standard 75 Ω / BNC	
Channels		1 x input, 1 x output
Format		Composite video
Link	Input, Output, Dual – Full bandwidth	
Connection		Duplex SC
Protocol		Optocore
Transmission		Full duplex
Data rate		2 x 1 Gbps
Optical wave guide cable lengths	Multimode fiber 50 µm	≤ 700 m
	Monomode fiber 9 µm	≤ 70 km (on request)
Power Supply	2 independent power supplies with function check and automatic switch-over	
Type	Switch-mode, universal input	
Mains voltage	100 ... 240 V, 400 V_{AC} tolerant	
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		1 RU / 19”
W x H x D	483 x 44 x 136 mm	19.2 x 1.73 x 5,35 inch
Weight	2.3 kg	5.1 lbs