



DD4MR-FX

DUAL MADI / SANE / VIDEO / DATA MODULE
WITH ETHERNET

The DD4MR-FX is a digital I/O unit and interface for the OPTICAL
OPTOCORE® and CAT5 SANE DIGITAL NETWORK SYSTEM.

OVERVIEW

The DD4MR-FX is a digital I/O unit and interface for the OPTICAL OPTOCORE® and CAT5 SANE DIGITAL NETWORK SYSTEM. The unit provides two MAD I input and two MAD I output ports, allowing the transmission of up to 128 input and 128 output digital audio channels. Each MAD I port can be adjusted to handle different formats according to the AES standards. The DD4MR-FX is equipped with coaxial MAD I interfaces. It is perfectly suitable for DiGiCo and AVID digital consoles.

The DD4MR-FX is equipped with two SANE ports, which enables up to 256 audio channels to be sent and received via standard CAT5 cable. SANE ports can be used to send Ethernet data as well. DD4MR-FX is equipped also with two separate LAN ports for Ethernet transmission. The DD4MR-FX unit can be used as a bridge between fiber Optocore network and CAT5 SANE.

The DD4MR-FX is the perfect I/O unit for a wide range of professional audio devices with MAD I inputs and outputs, such as digital consoles and I/O systems. The huge amount of channels exchanged by one DD4MR- FX makes it the ideal and most cost effective interface for digital console systems. In addition, the user can define the number of input channels received at each MAD I port and allocate them on the fiber for transmission. This maintains the system's high flexibility in all kinds of temporary and permanent applications, especially when long distance connections and high quality audio are required.

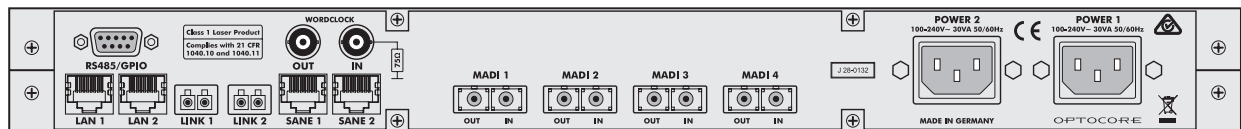
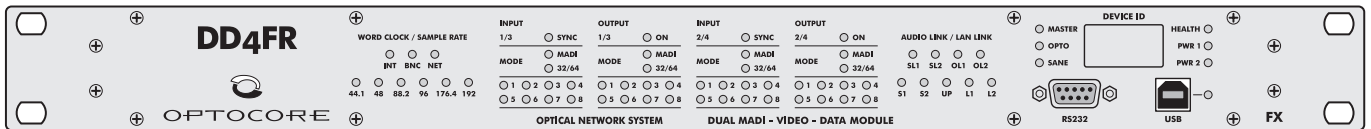
Redundant fiber connections can be established using the two optical LINK-interfaces provided. Depending on the fiber optic transceivers, distances from 700m up to 70km can be covered. The dual redundant ring structure provides maximum safety in a network with an outstanding low latency.

The DD4MR-FX is equipped with a word clock input and output, and a composite video input and output are also included. Four RS485 ports allow the transport of a wide range of standards such as RS422, DMX and MIDI. In addition to the audio signals, video and data signals are transmitted by the fiber connection. 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, including routing, naming, storage and recall of configurations on the computer, off- and online mode with real-time level display.

Due to SMD production, the DD4MR- FX fulfils the demand of highest digital standards. The FPGA (field programmable gate array) based concept of the internal logic circuitry permits updating of the hardware, ensuring a continual state-of-the-art device.

SCHEMATICS



FEATURES

- Two coaxial MADI inputs and two coaxial MADI outputs
- Up to 128 input and 128 output MADI channels
- Up to 128 input and 128 output SANE channels
- Two 100 Mbit Ethernet ports
- Four RS485 interfaces for the exchange of control data. (e.g. RS422, RS485, DMX, MIDI)
- Word clock in- and output
- Composite video in- and output
- Two optical 2 Gbps LINK interface with duplex LC connectors
- Dual power supply with automatic switchover
- USB, RS232 or 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

TECHNICAL SPECIFICATIONS

MADI Ports	Convention AES10-1991 / AES10-2003
Inputs	Number / Connectors 2 / coaxial MADI digital audio channels 56 or 64 per Input
Outputs	Number / Connectors 2 / coaxial MADI digital audio channels 56 or 64 per Input
Data rate	125 Mbps
Impedance	Termination 75 Ω
SANE & LAN ports	Convention
Audio	TIA - 568A/B, Optocore 200 Mbit/s
LAN	TIA - 568A/B, IEEE - 802.3 10/100 Mbit/s
Auxiliary Ports	Convention EIA / TIA-485
Data channels	Digital control data 4 Up to 10 Mbps Termination 330 Ω Source $\leq 10 \Omega$
Word clock	Hardware standard 75 Ω / BNC
Data rate	Depending on used sample rate 44,1 / 48 / 88,2 / 96 / 176,4 / 192 kHz
Impedance	Output 75 Ω Input 1k / 75 Ω software switch
Video	Hardware standard 75 Ω / BNC
Channels	1 x input, 1 x output
Format	Composite video

Optical Link	Input, Output, Dual – Full bandwidth
Connection	Duplex LC
Protocol	Optocore
Transmission	Full duplex
Data rate	2 x 2 Gbps
Optical wave guide cable lengths	Multimode fiber 50 μm \leq 700 m Single mode fiber 9 μm \leq 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 ... 240VAC, 50/60Hz, 10VA-typ
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 200 mm 19.2 x 1.73 x 7.87 inch
Weight	2.7 kg 6.0 lb