





# DD2FR-FX

DUAL MADI / SANE / VIDEO / DATA MODULE WITH ETHERNET

The DD2FR-FX is a digital I/O unit and interface for the OPTICAL OPTOCORE® and CAT5 SANE DIGITAL NETWORK SYSTEM.

#### **OVERVIEW**

The DD2FR-FX is a digital I/O unit and interface for the OPTICAL OPTOCORE® and CA T5 SANE DIGITAL NETWORK SYSTEM. The unit provides two MADI input and two MADI output ports, allowing the transmission of up to 128 input and 128 output digital audio channels. Each MADI port can be adjusted to handle different formats according to the AES standards. The DD2FR-FX is equipped with SC multimode optical interfaces. With Soundcraft, Studer, Lawo and SSL digital consoles it is possible to control Optocore microphone preamps directly from the console.

The DD2FR-FX is equipped with two SANE ports, which enable 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. DD2FR-FX is also equipped with two separate LAN ports for Ethernet transmission. The DD2FR-FX unit can be used as a bridge between fiber Optocore network and CAT5 SANE.

The DD2FR-FX is the perfect I/O unit for a wide range of professional audio devices with MADI inputs and outputs, such as digital consoles and I/O systems. The huge amount of channels exchanged by one DD2FR-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 MADI 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 LINKinterfaces 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 DD2FR-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 DD2FR-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

$\left[ - \right]$	)	Ð		$\oplus$							$\oplus$	DEVICE	ID HEALTH (	•		$\Box$
	∕ ⊕		DD <sub>2</sub> FR	WORD CLOCK / SAMPLE RATE	 SYNC	OUTPUT 1 O ON	INPUT2	O SYNC	OUTPUT 2 O ON	AUDIO LINK / LAN LINK			PWR 1 (	-	Ð	
	Ű		-	INT BNC NET	MADI 32/64	MODE 0 MADI	MODE	MADI	MODE O MADI	0 0 0 0 SL1 SL2 OL1 OL2			PWR 2 (	5	Ű	
	æ		0						01 02 03 04	0 0 0 0 0 51 52 UP L1 L2		0		<u>,</u>	Ð	
	)	æ	OPTOCORE		 						Ŧ	R5232	USB	, The second sec	FX	

÷	Image: State of the s			<b>⊕</b>	POWER 2 100-240V- 30VA 50/60Hz	POWER 1 100-240V- 30VA 50/60Hz	•
Ð			MADI 2	<u> </u>			•

## FEATURES

- Two SC multimode optical MADI inputs and two SC multimode optical 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
- Fullremoteaccesswith OPTOCORE CONTROL software
- Comprehensive status control via LED banks on the front

## TECHNICAL SPECIFICATIONS

SFP Ports	MSA compliant Data rate up to 2 Gbps							
Optical Connection	Complies with 21 CFR 1040.10 and 1040.11							
AUX Optical Connection	1310nm single/multimode fiber tunnel (5,6 ; 13,14) 1510 nm single/multimode fiber tunnel (7,8 ; 15,16)							
Power Supply	<b>2 independent power supplies with function check and automatic switch-over</b> Type: Switch-mode, universal input Mains voltage: 100 - 240 V Frequency: 50 - 60 Hz Power consumption: 25 W Typical   32 W MAX							
Remote Control	Plug-and-play device, no configuration needed							
Dimensions (WxHxD)	1 RU / 19": 483 x 44 x 200 mm 19.2 x 1.73 x 7.87 inches							
Weight	2.83 kg 6,2 lb							



OPTOCORE GmbH Alte Allee 28 81245 München, Germany For more information on our products, please visit our website or contact us directly:

www.optocore.com inquiry@optocore.com Tel: +49 89 899 964 - 0