DATASHEET

X6R-FX-INTERCOM-IC444
NETWORK INTERCOM UNIT

INTERCOM – SANE - FIBER INTERFACE

Product Features

- **8 Line Level audio inputs**
- **8 Line Level audio outputs**
- **8 General Purpose Inputs**
  - Optically isolated inputs
- **8 General Purpose Outputs**
  - Relay outputs
- **Auxiliary power outputs for external circuits**
- **Seamless transport of audio and GPIO control contacts**
- **Sample rates up to 192 kHz**
- **Full integration into SANE and Optocore networks**
- **Optocore FX module**
  - 2 x Optocore 2Gbps ports
  - 2 x SANE/LAN ports
  - 2 x LAN ports
  - 4 x RS485/422 ports
  - Word Clock I/O
- **Optionally redundant power supplies**
- **Passively cooled device**
- **Full control with the Optocore Control software**
- **LAN, USB and RS232 ports for configuration and control**
- **Upgradeable internal logic**
- **Comprehensive front panel status indicators**

The X6R-FX-INTERCOM-IC444 has been developed to seamlessly integrate intercom systems into Optocore and SANE, synchronous audio, video and control networks.

The X6R-FX-INTERCOM-IC444 is based on the V3R/X6R-FX series hardware platform and is intended to compliment the IC422 and IC485 variants by offering a device capable of integrating two-wire intercom interfaces with GPIOs, on-air lights, walkie-talkie remote key control etc.

The X6R-FX-INTERCOM-IC444 is equipped with 8 Line Level audio inputs, 8 Line Level audio outputs. Along with 8 optically isolated General Purpose Inputs (GPI) and 8 General Purpose Outputs (GPO).

GPIOs are routed with the line level audio on the Optocore network.

The X6R-FX-INTERCOM-IC444 is capable of providing up to 100mA of +5V DC or +12V DC auxiliary power to power external circuits.

Connectivity of the device is provided with robust 37 pin D-Sub connectors, in blocks of 4 audio and general purpose inputs or outputs.

The X6R-FX-INTERCOM-IC444 can be used as a generic networked line level audio input and output converter, as well as to transport GPIO for any purpose over Optocore and SANE networks.

The X6R-FX-INTERCOM-IC444 is a rack-mountable 1RU device.

The X6R-FX-INTERCOM-IC444 is a silent, convection cooled device.

The X6R-FX-INTERCOM-IC444 seamlessly integrates into the OPTOCORE® OPTICAL DIGITAL NETWORK SYSTEM. Transparently transmitting Line Level audio as well as General Purpose contact closure control signals over Optocore and SANE networks.

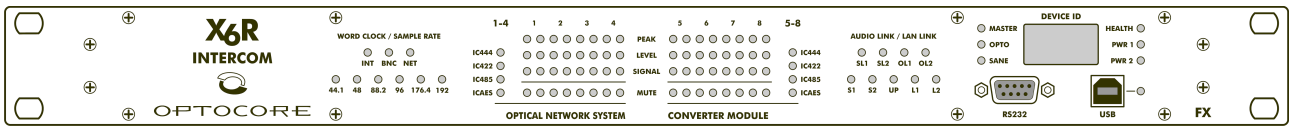
The X6R-FX-INTERCOM-IC444 is capable of receiving and transmitting any of the 1024 intercom and audio channels on the Optocore network or the 64 intercom and audio channels available on the SANE network.

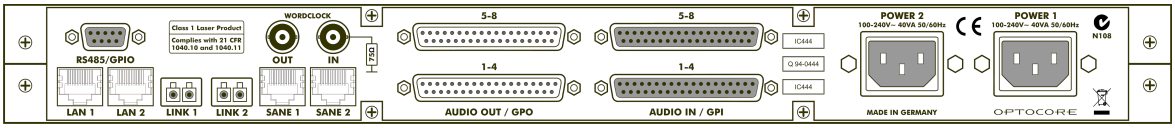
The X6R-FX-INTERCOM-IC444 can be operated over the Optocore network using the Optocore Control software, without any external data cabling. System control is provided with LAN, USB or RS232 connectors on all Optocore devices

The Word Clock IN and OUT allows the network to be synchronized from an external source. The Optocore network is capable of distributing high quality, low-jitter clock around a facility to synchronize external devices. For stand-alone applications, Optocore devices are equipped with an internal word clock generator.

The FPGA (field programmable gate array) based concept of the internal logic circuitry and microprocessors allows for field upgradeability of the device, ensuring a future proof state-of-the-art device.

Line Drawings





Technical Specifications

Audio/GPIO ports	Hardware standard: D-Sub 37 Male/Female	
Analog Line Input	Impedance	10 kΩ
	Maximum input level	+18 dBu
	SNR	115 dB (A-weighted)
	THD+N @ -1dBFS	≥ 100 dB
Analog Line Output	Impedance	45 Ω
	Maximum input level	+18 dBu
	SNR	115 dB (A-weighted)
	THD+N @ -1dBFS	≥ 98 dB
General Purpose Inputs – GPI	Optically isolated	3...48V DC, 5...7mA
General Purpose Outputs – GPO	Relay contacts	DC 30V 2A (resistive load) AC 125V 0.6A (resistive load)
Auxiliary Power	+5V DC +12V DC	≥ 100mA combined
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
Data rate		Up to 10 Mbps
Impedance	Termination	330 Ω
	Source	≤ 10 Ω
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
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 fibre 50 µm	≤ 700 m
	Monomode fibre 9 µm	≤ 70 km (on request)
Word clock	Hardware standard 75 Ω / BNC	
Data rate	44.1 kHz – 192 kHz	
Power supply	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	
Remote Control		
RS232 / USB / Ethernet	Control Interface to PC	
Dimensions		1 RU / 19”
W x H x D	483 x 44 x 200mm	19.0 x 1.73 x 7.87 inch
Weight	2.7 kg	6.0 lbs