

FIM-4W2 Fiber Interface

Clear-Com Fiber Interface

Improving
Workflows



FIM-4W2

Key Features and Benefits

- Compact 2-channel interface box
- Remotely locates one or two digital matrix panels or interface models over fiber
- 24-bit digital DEMUX
- 48kHz audio sampling rate
- Sends and receives RS-422 control data
- Flat frequency response up to 20kHz, S/N >80dB
- RJ45 connectors for direct connection with matrix panels, frames and interfaces
- Can be used to extend any line level 4-wire audio signal
- Can be used to extend any RS-422 signal

The FIM-4W2 is a bi-directional optical interface that converts analog audio and serial data for transmission over Fiber.

Description

A pair of FIM-4W2 optical interface units enables the conversion and transport of up to two intercom connections over a single fiber optic single-mode or multi-mode cable. Common uses include connecting intercom panels to an Eclipse Matrix, interconnecting Clear-Com equipment across wide area workflows or interfacing to remote 3rd party equipment.

Audio

The FIM-4W2 provides two duplex line-level, balanced analog audio connections along with support for RS422 serial data over a single fiber pair. The signals from each channel are multiplexed into a single digital stream while maintaining audio quality and with near-zero latency.

Connecting Panels and Interfaces

Two FIM-4W2 interfaces are used for connecting a matrix frame to a remotely located user panel over fiber. For each connection between the frame and interface, a port is connected to one of the two matrix connectors on the FIM-4W2 using the RJ45 connectors and 4-pair CAT5 cable. At the other end, each panel is connected to one of the port connectors on the second FIM-4W2 using the same cabling. Once connected, the matrix frame can see the user panels as if they were directly connected via CAT5 cable.

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Technical Specifications

Audio

Transmission Method: Digital, TDM, 48k samples/sec
Input Impedance: >20kΩ, balanced
Output Impedance: 60Ω, balanced
Maximum Input Level: +18dBu, balanced, <1% THD+N
Maximum Output Level: +18dBu balanced; 50-20kHz>10kΩ;
<1% THD+N
Frequency Response: 50-20kHz, 0dBu +/-0.4dBu
Total Harmonic Distortion + Noise: <0.2%, across bandwidth, +8dBu
<0.007%, 1kHz, max level
Signal to Noise Ratio (SNR): <-80dB, ITU-R 468 wtd; Ref. Max level +18dBu
Port Separation (Crosstalk): <-90dB, Ref. 0dBu, 1kHz, channel to channel
Fiber Data Link Speed: 1.2288Gbps
System Delay: <1ms

Frame-to-Panel Digital Data

Transmission Rate (RS-422, Balanced TTL Levels): 0 to 250 kBits/sec
Jitter: <250ns

Connectors

Connectors: (4) RJ45
Power Connector: 2.5mm jack, screwlock, center pin positive

Power Supply

Input Voltage Range: 10-18V DC
Power Consumption: @12V per end, all channels at full level; <5 watts
A/C Adapter: Supplied

Temperature

Operating: 32°F - +113°F (0°C - +45°C)
Storage: -22°F - 158°F (-30°C - +70°C)
Humidity: 20%- 90%, non-condensing at 40°C

Dimensions

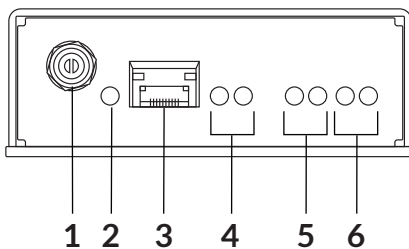
3.4 x 1.2 x 6.3in (WxHxD)
(86.4 x 30.5 x 160.02mm)

Weight

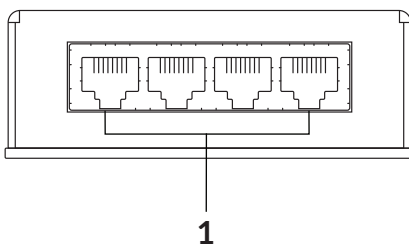
0.6lbs (0.27kg)

Side Views

FIM-4W2 Left Side Connectors



FIM-4W2 Right Side Connectors



Legend

Left

1. DC Power
2. Power Indicator
3. Fiber SFP Cage
4. Fiber Link Status Indicators
5. Port 1 Status Indicators
6. Port 2 Status Indicators

Right

1. RJ45 Connectors

Order Code

FIM-4W2

CCC-803062: FIM-4W2 with SFP-SMFO-1G-LX

CCC-803063: FIM-4W2 with SFP-MMFO-1G-SX

Optional Accessories and Spare Parts:

453G008-2: Desktop PSU

SFP-SMFO-1G-LX: Single-mode LX Fiber SFP

SPF-MMFO-1G-SX: Multi-mode SX Fiber SFP

CCC-803051: Rack Mount Shelf

WIR-00046: Cable Adapter

WIR-00047: Cable Adapter