4 Wire Data E&M Fiber Link Card System

The 4 Wire Data E&M Fiber Link Card system provides simultaneous transmission of 4 wire data E&M over two optical fibers. The 4 wire data is full duplex and supports constant transmission up to 9600bps (9.6Kbps) in voice frequency range (300Hz-3.4KHz).

The card also interfaces with an E&M input and provides a output on the far end. The system includes convenient E&M input and output status LED indicators.

The CO (Central Office) Side Card provides the electrical-optical interface between a Central Office or PBX 4-wire copper line and two fiber strands, and the Sub (Subscriber) Side Card provides the optical-electrical interface between the fiber and a 4-wire copper line to a RTU, PBX, modem or other customer supplied equipment.

This industrial hardened system may be installed into any RLH card housings, and is covered by our **Limited Lifetime Warranty**.

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Key Features

Environment
Hardened to operate in -40°F to +158°F (-40°C to +70°C)

Power
Dual power capable, line or local 24/48VDC

Application
Available with ST or SC connectors for single or multi-mode fiber
Full duplex, constant transmission
Critical, high voltage, remote or un-manned locations operating 24/7/365
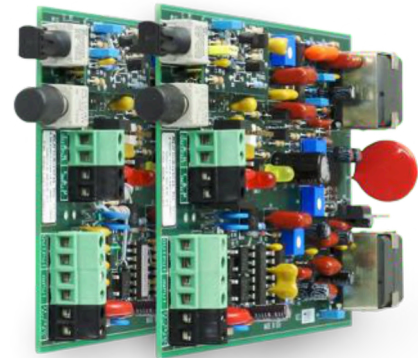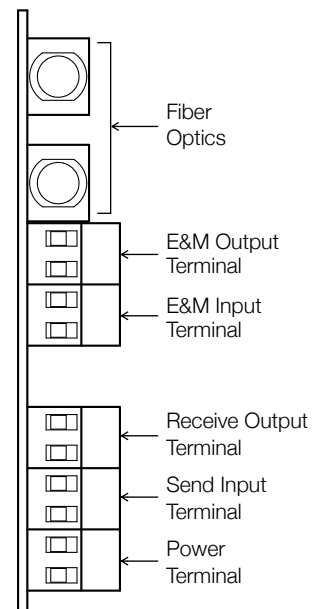
Compatibility
4 wire data E&M systems

Quality
Made in the USA
Covered by our **Limited Lifetime Warranty**

Fiber Optics

E&M Output Terminal

E&M Input Terminal

Receive Output Terminal

Send Input Terminal

Power Terminal

CO/Sub Card

Front Panel Features

RLH Industries, Inc.

Ordering Information

Optics	Distance	Fiber	Description	Part Number
Multimode ST	2km / 1.25 mi.	62.5 µm	CO Card	**8806-1238-02**
			Sub Card	**8806-1248-02**
Single-mode ST	15km / 9 mi.	8~9 µm	CO Card	**8806-1277-01**
			Sub Card	**8806-1287-01**
Single-mode SC	15km / 9 mi.	8~9 µm	CO Card	**8805-1277-01**
			Sub Card	**8805-1287-01**
Long Haul Single-mode ST	50km / 31 mi.	8~9 µm	CO Card	**8806-1277-01-LH**
			Sub Card	**8806-1287-01-LH**
Long Haul Single-mode SC	50km / 31 mi.	8~9 µm	CO Card	**8805-1277-01-LH**
			Sub Card	**8805-1287-01-LH**

▶ 62.5µm multimode fiber compatibility is standard, add **-50** to part number for 50µm

▶ A complete system requires one CO card and one Sub card

General Specifications

Transmission method	Frequency modulated light via two optical fibers	
	Multimode: 850nm	
	Single-mode: 1310nm	
Maximum Fiber Loss / Distance*	Multimode: 8dB / 1.2 miles (2km)	*Note: Distances equated using industry standard fiber and connector attenuation. (Multimode: 3.5dB/km, Single-mode: 0.4db/km, + 0.5dB per connector, + 0.3dB per splice)
	Single-mode: 8dB / 9 miles (15km)	
	SM Long Haul: 26dB / 31 miles (50km); min. 8dB	
Fiber Type	Multimode: 62.5/125µm, 50/125µm ; Single-mode: 9/125µm	
Fiber Connector Types	ST or SC	
Analog Bandwidth	300 Hz to 3.4 KHz	
Maximum Analog Data Rate	9600 bps (9.6Kbps)	
DDS Data Rate	2.4Kbps and 4.8Kbps	
E&M Input	5mA-200mA @ 6VDC, 48V Max.	
E&M Output	2500VRMS isolation by solid state relay: Closed resistance 15 Ohms (220VAC or 330VDC @ 150mA max.) Open resistance >1M Ohms	
Response Time	On: 1.4µs / Off: 1.9 msec (Dry Contact Only)	
LED Indicators	Yellow Contact Output Status (LD1)	ON: Closed, OFF: Open
	Red Contact Input Status (LD2)	ON: Closed, OFF: Open
Channel Noise	< 20dBrnC (15dBrnC typical)	
DC Resistance Limits	2000 Ohms typical for 50V DC CO battery	
Nominal Impedance	600 Ohm input and output	
Insertion Loss	0dB +/- 0.5dB each direction	
Signal Input Level	+8 to -16dBM	
Surge Protection	PTC thermistors, zener diodes and varistors	
Power Requirements	Line: 15mA ; Local: 24-56VDC, card current limits at 18mA	
Power Connector	Screw type connector terminal, 12-26 AWG	
Powering Method	Simplexed line power or local DC power supply connected to AUX. P.S.	
Operating Temperature	-40° to +158° F (-40° to +70° C), 95% non-condensing	
Dimensions	7 "x 4" x 1" Standard RLH Fiber Link Card form factor	
Warranty	Limited Lifetime *Visit* www.fiberopticlink.com *for warranty details*	