RLH Industries, Inc.

DATA SHEET

RLH 10/100 Ethernet DIN Fiber Link System

The RLH 10/100 Ethernet DIN Fiber Link system is a rugged, full featured media converter. It converts copper Ethernet to fiber, and may be used to extend a copper Ethernet network up to 74 miles (120km) over fiber optic cable.

This system is designed to transport critical communications where reliability is paramount. It is environmentally hardened to operate in a wide temperature range and is standards compliant. Advanced features include link fault pass thru, IEEE 802.1q VLAN pass thru, and the ability to configure the copper ports speed and duplex settings.

The 10/100 Ethernet DIN Fiber Link system is designed and made in the USA and covered by our **Lifetime Warranty**.

RLH 10/100 Ethernet DIN Fiber Link

Key Features

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

Power
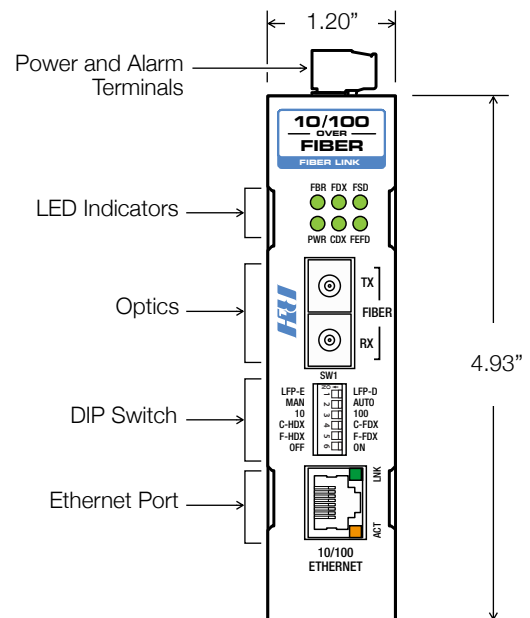Redundant power capable, local power 24/48VDC or 125VDC

Application
Available with ST or SC connectors for single or multi-mode fiber
Convenient LEDs for power, fiber, speed, and duplex status
Auto negotiate port speed and duplex settings
User friendly switch to manually set copper/fiber port speed
Pass-Through mode - low latency applications
Auto MDI-X - Detects straight through or crossover pinouts and adjusts
Critical, high voltage, remote or un-manned locations operating 24/7/365

Compatibility
IEEE 802.1q VLAN traffic pass through

Quality
Made in the USA - Lifetime Warranty

**Front Panel
Features and Dimensions**

General Specifications

Standards	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) & 100BaseFX		
Copper Connector	RJ45		
Copper Distance	100m / 328 feet		
Transmission method	Frequency modulated light via two optical fibers		
	Multimode	1310nm	
	Single-mode	1310nm/1550nm	
Maximum Fiber Attenuation / Distance*	**Single Fiber (Bi-directional)**	Multimode (62.5/125µm):	1.25 mi. / 2km range
		Multimode (50/125µm)	1.25 mi. / 2km range
		Single-mode (9/125µm):	12.4 mi. / 20km range
			37 mi. / 60km range
	Dual Fiber	Multimode (62.5/125µm):	1.25 mi. / 2km range
		Multimode (50/125µm)	1.25 mi. / 2km range
		Single-mode (9/125µm):	12.4 mi. / 20km range
			37 mi. / 60km range
			74 mi. / 120km range
	* Note: Distances equated using industry standard fiber and connector attenuation of 3dB/Km. Fiber condition, splices and connectors may affect actual range.		
Connector Type	ST or SC Multimode		
	ST or SC Single-mode		
Power Margin	8-10dB(2Km, M/M), 12dB ~ 35dB (20 ~ 120Km, S/M)		
LED Indicators	**FBR (Fiber)**	Fiber port link - ON: link OK, OFF: link fail, Blink: activity	
	FDX (Fiber)	Fiber port full duplex - ON: full, OFF: half, Blink: half & collisions	
	FSD	Fiber signal detect - ON: signal detected, OFF: fiber disconnected	
	FEFD	Far end fault detection - OFF: normal operation, Blinking: far end fault detected	
	CDX	Copper port full duplex - ON: full, OFF: half, Blink: half & collisions	
	PWR	Power - ON: power applied, OFF: no power	
	10/100	Copper port speed - ON: 100, OFF: 10	
	LINK/ACT	Copper port link - ON: link OK, OFF: no link, Blink: activity	
DIP Switch (SW1)	**Switch 1**	Link Fault Pass Through (Enable / Disable)	
	Switch 2	Copper Port Mode (Auto / Manual)	
	Switch 3	Copper Port Speed Select (10 / 100)	
	Switch 4	Copper Port Duplex Select (Half / Full)	
	Switch 5	Fiber Port Duplex Setting (Half / Full)	
	Switch 6	Reset	
Redundant Power	24~48VDC / 125VDC		
Power Consumption	150mA @ 24VDC or 3.6 Watt		
DC Input Isolation	1.5KV		
Fiber Alarm Contact	3 position terminal block (Normally Open / Normally Closed / Common)		
Protection	**Voltage Reversal**	Will operate with V+ or V- in either power terminal	
	Over Current	1.0A (Automatic Recovery)	
Temperature	**Storage**	-40℃ ~ 80℃ (-40℉ ~ 176℉)	
	Operating	-40℃ ~ 70℃ (-40℉ ~ 158℉)	
Construction	Powder coated galvanized steel, IP30 Protection		
Dimensions/Mounting	H 4.93" x W 1.20" x D 3.939" (not including DIN clip)		
	standard T-35 DIN rail mounting or wall mount		
Warranty	Lifetime		

Ordering Information

Connector	Side	Distance	Wavelength	Fiber	Part Number
Dual Fiber Multimode SC	-	2km / 1.2 mi.	1310nm	62.5/50µm	**EFD-03-2**
Dual Fiber Multimode ST	-	2km / 1.2 mi.	1310nm	62.5/50µm	**EFD-04-2**
Single Fiber Multimode SC	A	2km / 1.2 mi.	Tx 1310nm Rx 1550nm	62.5µm	**EFD-01-2**
	B	2km / 1.2 mi.	Tx 1550nm Rx 1310nm	62.5µm	**EFD-02-2**
Single Fiber Single-mode SC	A	20km / 12.4 mi.	Tx 1310nm Rx 1550nm	8~9µm	**EFD-10-2**
	B	20km / 12.4 mi.	Tx 1550nm Rx 1310nm	8~9µm	**EFD-11-2**
	A	60km / 37 mi.	Tx 1310nm Rx 1550nm	8~9µm	**EFD-14-2**
	B	60km / 37 mi.	Tx 1550nm Rx 1310nm	8~9µm	**EFD-15-2**
Dual Fiber Single-mode SC	-	20km / 12.4 mi.	1310nm	8~9µm	**EFD-40-2**
	-	60km / 37 mi.	1310nm	8~9µm	**EFD-41-2**
	-	120km / 74 mi.	1550nm	8~9µm	**EFD-45-2**
Dual Fiber Single-mode ST	-	20km / 12.4 mi.	1310nm	8~9µm	**EFD-50-2**
	-	60km / 37 mi.	1310nm	8~9µm	**EFD-51-2**
	-	120km / 74 mi.	1550nm	8~9µm	**EFD-55-2**

► Add **-A** to the end of the part number for 125VDC input power option.

► Single fiber models require an **A** Side and **B** Side unit for a complete system.

► Optic wavelength may be special ordered. Contact an RLH sales representative for availability.

► Please contact your RLH sales representative for pricing and delivery information.