



**Description**

The EF2 is a 2 channel Ethernet to fiber converter that will accept any physical layer Ethernet input, as well as Aviom™ Pro16 input. The EF2 is normally used in applications where Ethernet must be transported distances farther than 120 meters. It is sometimes used in conjunction with a VIM-1808/0808 for drive snake applications, with the VIM-1808/0808 providing the audio transport, and the EF2 providing the Ethernet control communication.

This device provides for 2 independent channels of Ethernet. The data connection to the EF-2 is made via Neutrik EtherCon® connectors. A Yellow indication on the upper LED marked “TP RX” indicates that receive data is being detected on the twisted pair. The lower LED marked “TPLink” indicates the link status on the twisted pair. Setting the polarity switch to or sets the pinout of TX and RX to accommodate connection to various devices. With a setting of “Auto”, the EF-2 will determine the correct pinouts for the TX and RX. Optical transmit (Tx) and optical receive (Rx) are set using the directional switch. The OPT RX and OPT TX positions are both unidirectional modes. In the OPT RX position, data is received by the fiber optic input and transmitted out to the RJ-45 connector. In the OPT TX position data is received by the RJ-45 connector and transmitted to the fiber optic output. The TX/RX position is a bidirectional mode which acts as a standard Ethernet connection. A Yellow indication on the upper LED marked “OPT RX” indicates that receive data is being detected on the fiber connection.

The lower LED indicates the Link status on the fiber connection. The EF-2 is convection cooled. A green LED labeled “power” indicates that power is present. The EF-2 normally runs on a full range switching power supply. AC power is via a standard IEC connector. The unit can operate at any voltage 50-60Hz, 90-250v AC. The EF-2 can run optionally on 9-24VDC connected via the DC power connector.

**Architect’s Specifications**

The device shall be a 1U, 19” rack mount unit. It shall provide 2 independent channels of Ethernet transport over fiber optic cable. The device shall contain 2 Neutrik EtherCon® connectors for data input/output and 2 pairs of LC fiber-optic connectors for fiber input/output. The device shall contain status LED’s marked “TP RX” and “TPLink”. A yellow LED on “TP RX” indicates that receive data is being detected on the twisted pair. A yellow LED on “TPLink” indicates the link status on the twisted pair. The device shall contain a polarity switch or which sets the pinout of TX and RX to accommodate connection to various devices. With a setting of “Auto”, the device will determine the correct pinouts for the TX and RX. The device shall contain a directional switch which determines whether the channel is in optical transmit (Tx) or optical receive (Rx) mode. The OPT RX and OPT TX positions are both unidirectional modes. In the OPT RX switch position, data is received by the fiber optic input and transmitted out to the EtherCon® connector. In the OPT TX switch position data is received by the EtherCon® connector and transmitted to the fiber optic output. The TX/ RX position is a bidirectional mode which acts as a standard Ethernet connection. The device shall contain a Yellow LED marked “OPT RX” that indicates that receive data is being detected on the fiber connection, and a yellow LED indicating the Link status on the fiber connection. The device shall be convection cooled. The device shall contain a green LED labeled “power” indicates that power is present. AC power is via a standard IEC connector. The unit can operate at any voltage 50-60Hz, 90-250v AC. The device can run optionally on 9-24VDC connected via the DC power connector. The device shall be the LightViper EF-2.

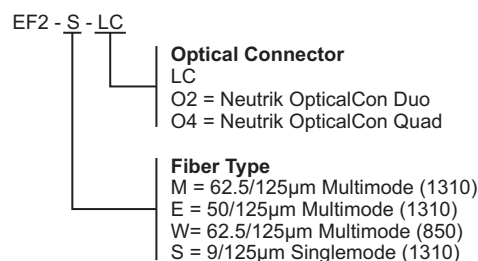
**Features & Benefits**

- Fiber runs up to 2km (Multimode), 20km (Single mode)
- Supports all physical layer Ethernet protocols
- 9-24 VDC Power Option

**Applications**

- Where Ethernet must be transported distances greater than 120m
- In conjunction with a VIM-1808/0808 drive snake system using Ethernet for control
- Performing arts centers
- Stadiums
- Cruise ships

**Ordering Information**



### General Specifications

Latency	100 ns			
Operating Temp	0 to +50°C ambient temperature.			
Power Requirements	Minimum	Typical	Maximum	Unit
AC Voltage Universal 50/60 Hz, IEC Connector	90	-	250	VAC
AC Power	-	10	-	Watts
DC Voltage	9	12	24	VDC
DC Power	-	8	-	Watts
Dimensions	1 Rack Unit X 6.5" Deep			
Weight	6 lbs			

### Data Characteristics

Data Rate	10 BASE-T	10 Mbps
	100 BASE-T	100 Mbps
Line Encoding	10 BASE-T	Manchester
	100 BASE-T	MLT3 (Multi Level Transition 3)
Interface Connector	RJ-45 (Ethercon™)	

### Optical Characteristics

Standard	Fiber	Size	Max Distance	Wavelength	Output Power	Receiver Sensitivity	Loss Budget
10BASE-FL	multimode	62.5/125 μm	2 km	1300 nm	-18 dBm	-30 dBm	12 dB
100BASE-FX	multimode	62.5/125 μm	2 km	1300 nm	-18 dBm	-30 dBm	12 dB
	singlemode	9/125 μm	20 km	1300 nm	-15 dBm	-30 dBm	15 dB

