

PRODUCT LINE:

Fiber Optic Isolator

CATEGORY:

Firewire

Photo Not Yet Available

IEEE 1394a-2000

FOI-1394a-ST

FEATURES

- Supported Data Rates:
 - (S100) 98.304 Mbps
 - (S200) 196.608 Mbps
 - (S400) 393.216 Mbps
- Compliant with:
 - IEEE 1394-1995

DESCRIPTION

The FOI-1394a provides complete electrical isolation for IEEE 1394a-2000, also trademarked by Apple as FireWire and Sony as i.Link. When connected to another 1394a device, the unit will automatically determine the correct speed and operate at either S100, S200, or S400 rates. Unlike other 1394a devices, the FOI-1394a does not require a device driver to be installed on the operating system because it passes data transparently in the network.

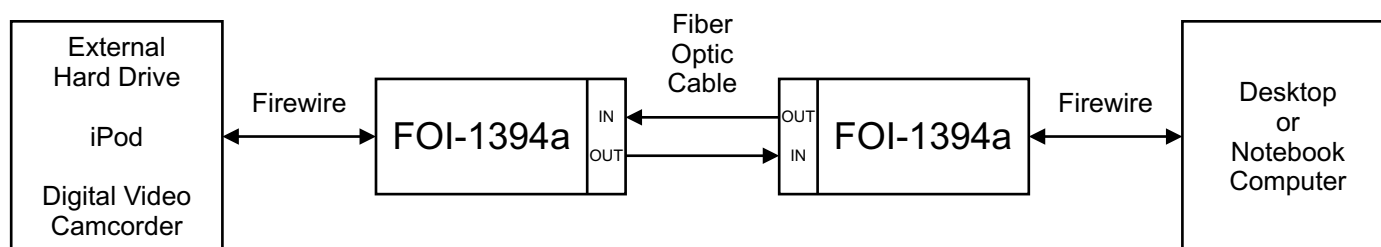
The unit can be used in areas of high electrical noise or in and out of RF shielded enclosures. The fiber optic cable is not susceptible to interference caused by impulse noise, crosstalk, or EMI. Privacy of communications is also enhanced because the fiber optic cable does not radiate any emissions.

In addition, fiber optic cable offers much longer transmission distances than copper wiring. Traditional FireWire cabling is limited to a maximum distance of 4.5m between two nodes, but multimode or singlemode optics on the unit can extend the distance to 100m. A typical link consists of two FOI-1394a, one at each end of the network, with a duplex fiber optic cable between them as shown under "[TYPICAL APPLICATION](#)".

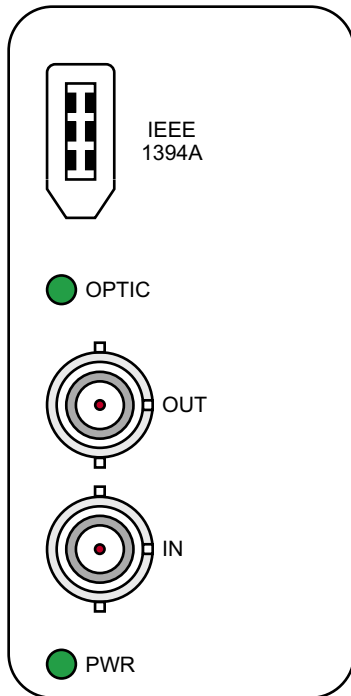
SPECIFICATIONS					
		minimum	typical	maximum	unit
Power Requirement	Voltage Range	7	9	12	V
	Supply Current	-	300	-	mA
Environmental	Storage Temperature	-40	-	85	°C
	Operating Temperature	0	-	50	°C
Data Rate	S100	98.304 Mbps			
	S200	196.608 Mbps			
	S400	393.216 Mbps			
Line Encoding	Data / Strobe Signaling				
Interface Connector	6-pin 1394a connector				
Case Dimensions	Size 4	width	height	length	unit
		1.453	2.562	4.5	inches

OPTICAL CHARACTERISTICS						
Fiber	Size	Max Distance	Wavelength	Output Power	Receiver Sensitivity	Loss Budget
Multimode	50 / 125 μ m	100 m	820 nm	-7 dBm	-17 dBm	10 dB
Singlemode	9 / 125 μ m	100 m	1300 nm	-7 dBm	-20 dBm	13 dB

TYPICAL APPLICATION

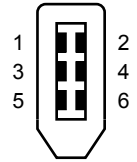


- Before using the FOI-1394a, make sure that the device drivers for the external hard drive, iPod, digital video camcorder, etc. are installed and working properly on your operating system. The FOI-1394a itself does not require any device drivers to be installed.



FOI-1394a-ST Front View

6-pin 1394a pinout		
Pin	Direction	Description
1		
2		Signal Ground
3	In / Out	TPB-
4	In / Out	TPB+
5	In / Out	TPA-
6	In / Out	TPA+



LED INDICATOR		
Label	Color	Description
PWR	Green	Power supply in FOI unit is operating properly.
	Off	No power from the PSQ power supply or open fuse inside the FOI unit. Check that the PSQ power supply is operating properly. If the PSQ power supply is good, separate the FOI unit from the PSQ power supply for 30 seconds and then reattach so that the fuse inside the FOI unit has time to reset. If the PWR led is still off or not constant, replace the FOI unit.
OPTIC	Green	Unit is in sync.
	Green Flash	Optical signal in detected, but not yet in sync.
	Off	No optical signal in or optical level too low. Check that the opposite unit has power and that the fiber optic cables are properly connected. The transmit OUT optic from one end of the network should go to the receive IN optic at the opposite end as shown under " TYPICAL APPLICATION ".

