

Description

The FOI-4048 provides complete electrical isolation for E1 (CEPT) communications.

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, cross-talk, or EMI. Privacy of communications is also enhanced because the fiber optic cable does not radiate any emissions. FiberPlex recommends "R" units for high security applications because the units have added filtering and shielding for RFI suppression.

In addition, fiber optic cable offers much longer transmission distances than copper wiring. Traditional E1 cabling is limited to a maximum distance of 4800ft (1.46km), but multimode optics on the unit can extend the distance to 2km, while singlemode optics can further extend the distance to 20km. A typical link consists of two FOI-4048, one at each end of the network, with a duplex fiber optic cable between them as shown under "TYPICAL APPLICATION".



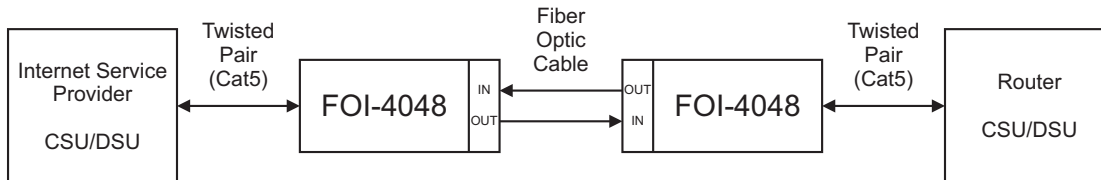
T/E Carrier

E1

Features:

- Data Rate: 2.048 Mbps
- Supports ISDN PRI (Primary Rate Interface) services, also known as PRA (Primary Rate Access)
- 30B+D data passes transparently

Typical Application

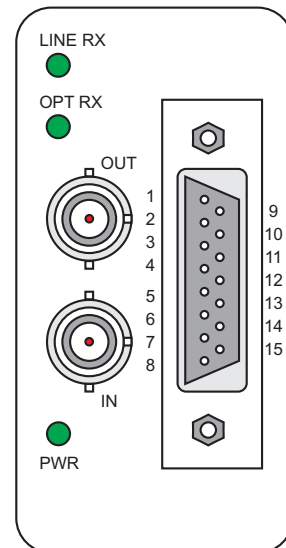


LED Indicators

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.
LINE RX	Green	Receive data is being detected on the DA-15 connector.
	Off	No receive data is being detected on the DA-15 connector. Check that the wiring on the modular adapter is pinned out correctly. The TYPICAL WIRING connections on page 4 was pinned out to be used with a straight category 5 cable.
OPT RX	Green	Optical signal in detected.
	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 connects to the receive IN optic at the opposite end as shown under "TYPICAL APPLICATION".

DA-15 Female pinout

Pin	Direction	Description
1	In	Receive Data + from Network Tip (T1)
9	In	Receive Data - from Network Ring (R1)
3	Out	Transmit Data + to Network Tip (T)
11	Out	Transmit Data to Network Ring (R)
5,13		Chassis Ground
2,4 6,7,8 10,12 14,15		Unused







FOI-4048-ST Front View

Typical Wiring of Modular Adapter to Internet Service Provider









DA-15 Male Pinout	Color Code		RJ-48C Pinout
1	Orange		2
9	Blue		1
3	Green		5
11	Red		4

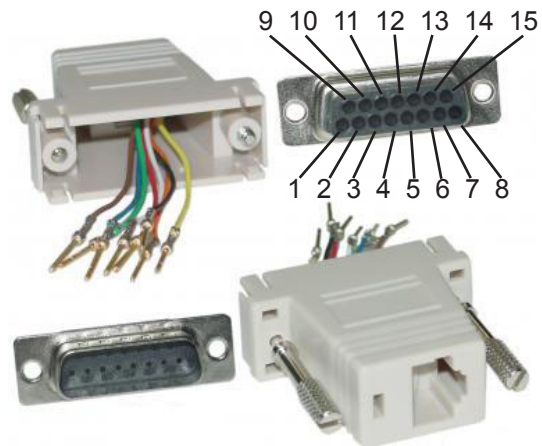
Typical Wiring of Modular Adapter to Router

DA-15 Male Pinout	Color Code		RJ-48C Pinout
1	Green		5
9	Red		4
3	Orange		2
11	Blue		1

The TYPICAL WIRING tables are pinned out to be used with a straight category 5 cable.

RJ-48C Modular Adapter pinout

Pin	Color Code	
1	Blue	
2	Orange	
3	Black	
4	Red	
5	Green	
6	Yellow	
7	Brown	
8	White	



DA-15 Male to RJ-48C Modular Adapter

Specifications

		minimum	typical	maximum	unit
Power Requirement	Voltage Range	7	9	12	V
	Supply Current	-	220	-	mA
Environmental	Storage Temperature	-40	-	85	°C
	Operating Temperature	0	-	50	°C
Data Rate	2.048 Mbps				
Line Encoding	AMI (Alternate Mark Inversion) / HDB3 (High Density Bipolar 3)				
Interface Connector	DA-15 Female				
	Each unit will be packaged with a DA-15 Male to RJ-48C modular adapter for applications requiring an RJ-48C interface connector.				
Case Dimensions	Size 4	length	width	height	weight
		4.5 in (114 mm)	1.453 in (37 mm)	2.562 in (65 mm)	2 lb (0.9 kg)

Optical Characteristics

Fiber	Size	Max Distance	Wavelength	Output Power	Receiver Sensitivity	Loss Budget
Multimode	62.5 / 125 µm	2 km	820 nm	-18 dBm	-30 dBm	12 dB
Singlemode	9 / 125 µm	20 km	1300 nm	-15 dBm	-32 dBm	17 dB

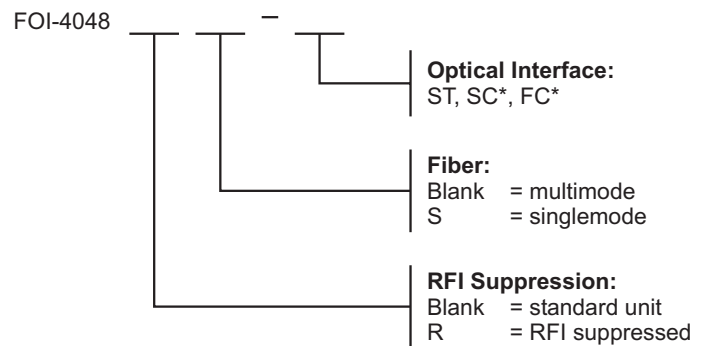
Optical Compatibility

Model	Description
FOI-2048	E1 - Size 2 Case
FOI-4048	E1 - Size 4 Case

Accessories

Model	Description
CMA-2001	Chassis Mounting Adapter for RMC-2101
CMA-3002	Chassis Mounting Adapter for RMC-3101, RMC-3102
PSQ-4910	Power Supply for FOI-4xxx series
RMC-2101	Rack Mount Chassis 3-1/2" H x 19" W, rear access
RMC-3101	Rack Mount Chassis 5-1/4" H x 19" W, front access
RMC-3102	Rack Mount Chassis 5-1/4" H x 19" W, front access with optical patch panel
WMA-2001	Wall Mount Adapter with optical patch
WMA-3002	Wall Mount Adapter

Ordering Information



* Indicates Custom Catalog Item

Standard Options:

- FOI-4048-ST FOI-4048R-ST
- FOI-4048S-ST FOI-4048RS-ST

For special applications that require custom units, please call FiberPlex for more information.