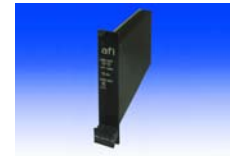


Product Line Overview



AFI Series
46,48,49,50
Ethernet Links

AFI Series 46

3 Port Module
(Switch / Media Converter)
(2) 10/100BASE-TX
(1) 100BASE-FX

Operating
Temperature
-40C to +75C

Singlemode &
Multimode

4 Port Rackcard
(supports 2 AFI edge
modules)

AFI Series 46-PoE

Supports:
PoE (IEEE 802.3af)
2 ports @ 15W each
Provided with 60W
power supply and cables
for plug&play

AFI Series 46-PoE+

Supports:
PoE+ (IEEE 802.3at)
2 ports @ 30W each
Provided with 60W
power supply and cables
for plug&play

AFI Series 46-HP

Supports:
PoE
1 port @ 60W

AFI Series 48

3 Port Module
(Switch / (Media Converter)
(2) 10/100/1000BASE-TX
(1) 1000BASE-X

Operating
Temperature
-40C to +75C

Singlemode &
Multimode

4 Port Rackcard
(supports 2 AFI edge
modules)

AFI Series 48-PoE

Supports:
PoE (IEEE 802.3af)
2 ports @ 15W each
Provided with 60W
power supply and cables
for plug&play

AFI Series 48-PoE+

Supports:
PoE+ (IEEE 802.3at)
2 ports @ 30W each
Provided with 60W
power supply and cables
for plug&play

AFI Series 48-HP

Supports:
PoE
1 port @ 60W

AFI Series 49

4 Port Drop & Repeat
(2) 10/100/1000BASE-TX
(2) 1000BASE-X

Operating
Temperature
-40C to +75C

Singlemode &
Multimode

Series 49LH Long Haul
(70 km)

AFI Series 49-PoE

Supports:
PoE (IEEE 802.3af)
2 ports @ 15W each
Provided with 60W
power supply and cables
for plug&play

AFI Series 49-PoE+

Supports:
PoE+ (IEEE 802.3at)
2 ports @ 30W each
Provided with 60W
power supply and cables
for plug&play

AFI Series 49-HP

Supports:
PoE
1 port @ 60W

AFI Series 50

4 Port Drop & Repeat
(2) 10/100BASE-TX
(2) 100BASE-FX

Operating
Temperature
-40C to +75C

Singlemode &
Multimode

AFI Series 50-PoE

Supports:
PoE (IEEE 802.3af)
2 ports @ 15W each
Provided with 60W
power supply and cables
for plug&play

AFI Series 50-PoE+

Supports:
PoE+ (IEEE 802.3at)
2 ports @ 30W each
Provided with 60W
power supply and cables
for plug&play

AFI Series 50-HP

Supports:
PoE
1 port @ 60W



Application
Note

AFI's Multi-Functional Series 46, 48, 49, 50 Ethernet Series Products

Key Features

Auto Negotiation:

All copper ports will auto negotiate with the unit that it is connected to in order to establish a connection at the highest data rate.

Auto MDI/MDIX:

All copper ports have auto MDI/MDIX which effect an automatic crossover between Tx and Rx lines as required. This eliminates the issue of requiring a straight or crossover cable depending on what type of equipment it is connected to.

Copper Ports Data Rate (Speed):

The 1000 BASE-X units (Series 48, 49) will operate at 10/100/1000Mbps at the copper ports.
The 100 BASE-FX units (Series 46, 50) will operate at 10/100Mbps at the copper ports.

IEEE Fiber Optic Standards:

The fiber ports are compatible with the IEEE Fiber Optic Standards. These standards specify the optical wavelengths, type of fiber (singlemode or multimode), and transmission distance. The IEEE Fiber Standards only specify dual fiber requirements. The AFI units are available in both single fiber and dual fiber offerings.

The table below summarizes the key IEEE Fiber Optic Standard parameters.

IEEE802.3z Fiber Optic Standard				
Standard	Fiber Type	Data Rate Mbs	Distance	Wavelength nm
100BASE-FX	Multi-mode: 50um or 62um	100	2 km	1310
	Single-mode: 9 um		10 km	
1000BASE-SX	Multi-mode: 50um	1000	550 m	850
	Multi-mode: 62um		220 m	
1000BASE-LX	Multi-mode: 50um or 62um	1000	550 m	1310
	Single-mode: 9 um		5 km	
1000BASE-ZX	Single-mode: 9 um	1000	70km	1550

Power Over Ethernet (PoE):

PoE is available in all the module packages. The module is typically used only at the system edge (to power the camera etc.). The mating unit would then be the non PoE version of the product which is available in module or rack card packages.

The PoE Series sources power to (PD) powered devices from the RJ45 ports over the copper connection. There are several models of PoE available (see datasheets for detailed model numbers):

Series PoE :

Both RJ45 ports may be used to deliver low power 802.3af (15 watts) to PD units.

Series PoE+:

Both RJ45 ports may be used to deliver low power 802.3af (15 watts) or high power 802.3at (30 watts) to a single PD powered device.

Series PoE-HP(60Watts):

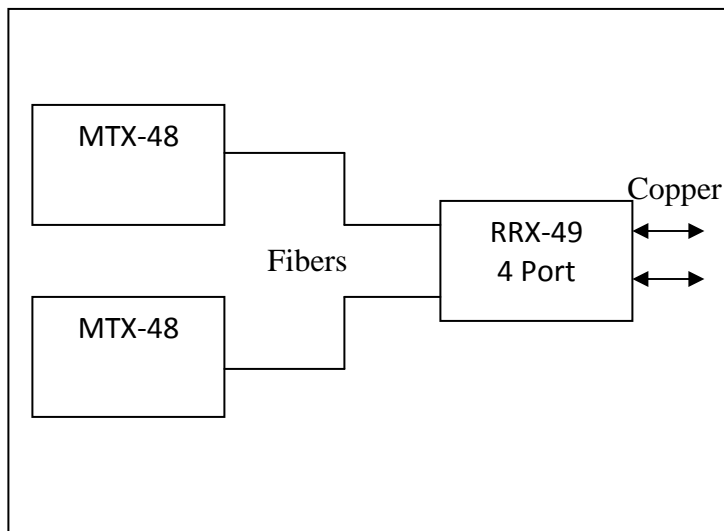
The Series-PoE-HP sources up to 60 Watts of power to a high power PD unit (typically a PTZ camera with heaters and blowers) from one RJ45 port. The power is carried over all 4 pairs of the Ethernet cable as compared to using only 2 pair as specified in the IEEE 802.3af and 802.3at standard. Therefore, this application does not conform to the IEEE standard and this requires both the power source PS and powered device PD to be compatible. The Series PoE-HP requires that the PD have independent discovery and classification interfaces for both the data pair and the spare pair of the Ethernet cable.

An external power supply with pre-wired (plug & play) cable assemblies are provided with the various PoE modules. These power supplies operate over the -40C to +75C temperature range. See photo.



Four Port Rack Card:

The American Fibertek Series 49(SL) transmits and receives 2 copper 10/100/1000 BASE-T Ethernet signals at the RJ45 ports and 2 optical 100BASE-X over 1 or 2 multimode (singlemode) fibers. This provides the benefit of using a single rack card unit to interface to (2) independent MX/MTX modules. This is also available in the Series 50(SL) which transmits and receives 2 copper 10/100BASE-T Ethernet signals at the RJ45 ports and 2 optical 100BASE-FX over 1 or 2 multimode (singlemode) fibers.





Long Haul Drop and Repeat:

The American Fibertek Series 49LH transmits and receives (2) copper 10/100/1000BASE-T Ethernet signals at the RJ45 ports and (2) optical 1000BASE-LH over 1 singlemode fiber up to a distance of 70 km. The system is comprised of two or more units forming a communications/repeater link.

