# Fast Ethernet Converter

It is fast Ethernet fiber optic transmission equipment which can converter between two different network cables and optical fiber transmission medium. Supporting 10/100 Mbps network bandwidth, this product can be used in pairs and also can be used with other equipments. It is widely used in surveillance, home network fiber, etc.

Application
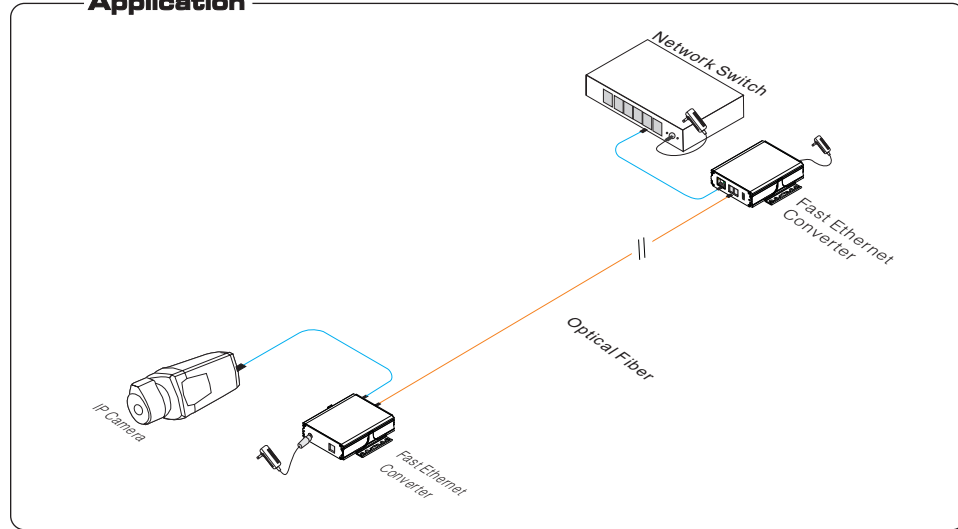
■Feature

- Provide 1 100 Mbps fiber optic and 1 network port which can converter between network data, fiber optic and power;
- Using X9 fiber modules and SC interface, with the single mode double optical fiber, up to 20 km transmission distance;
- Compatible with IEEE 802.3 10 BASE-T, IEEE 802.3 u 100 BASE-TX/FX Ethernet standards;
- Support 10/100 Mbps full/half duplex automatic adaptation and automatic MDI/MDIX;
- Excellent circuit protection, effectively improved lightning protection, anti-static products and anti-interference ability;
- Dynamic LED status indicator, real-time display of current working status, simple working status and troubleshooting;
- Support wide voltage DC12V~24V input;
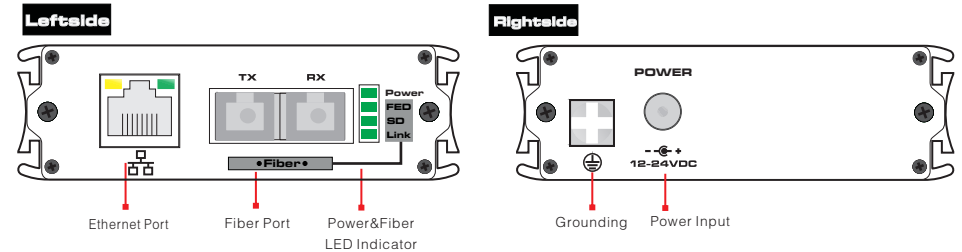- MIT compact aluminum shell structure design, convenient racks, desktop, wall-hung style installation.

⚠ Caution

1) Transmission distance is related to the connecting cable. We suggest to use standard Cat5e/6 network cable to get 150m transmission distance.

2) If using optical port, customer need to purchase SFP module additionally.

3) The equipment must connect anti-thunder ground, otherwise the protection level of the equipment will be greatly reduced; please use 20th or over wire connect ground port to the ground

■Board Diagram

Leftside

Ethernet Port   Fiber Port   Power&Fiber LED Indicator

Rightside

Grounding   Power Input

Instruction：

1) Power refers to Power LED indicator; Optical fiber interface LED indicator of FED, SD, the LINK is refer to:

Link--indicating fiber port connection status. Bright: connection OK; Off: connection fail; Flicker: connection OK and have the data.

SD--Fiber port signal detection. Bright: optical fiber connection correct; Off: optical fiber connection fail.

FED--Remote fault mode receiving. Bright: 80 ms; Off: 20 ms; Often Off: Not receive.

2) Diagnosis of LED indicator fault as follow:

LED Indicators of Power & Ethernet	Fiber Link	Fiber SD	Fiber FED	Status
Bright	Bright	Bright	Off	Connect well
Flicker	Flicker	Bright	Off	Connect well, with data transmission
Off	Off	Bright	Off	Remote power port unable to connect
Off	Off	Off	Off	Fiber optical RX drops, TX/RX drops
Off	Off	Bright	Flicker	Fiber optical TX/RX drops

■Installation

Please check the following items before installation. If any missing, please contact the dealer.

- Fast Ethernet Converter   1pc
- Power Adapter   1pc
- MIT Hanger   2pcs
- User Manual   1pcs

Installation Steps

1) Please turn off the signal source and device power before installation; Installation with power on may damage the device;

2) Please check if the network cables being taken up by other devices;

3) Use network cable to connect RJ45 Port of Fast Ethernet Converter with NVR or network devices like computer;

4) Use two single mode optical fibers tor connect two fiber ports of two Fast Ethernet Converters. Pay attention to that the optical fibers connecting RX and TX line should be CROSS connected. That is: if one end of optical fiber line connected to the module TX interface, the other end should be connected to the RX interface;

5) Please check if the installation is correct and power the system;

6) Please check if the network is working.

■ Specification

Item		Description
Power	Power supply	Power adapter
	Voltage range	DC12V~24V
	Consumption	<2W
Ethernet port parameter	Ethernet port	Ethernet port：10/100Mbps
	Transmission distance	Ethernet port：0~100m
Optical port parameter	Optical port	Double fiber SC port
	Bandwidth	155Mbps
	Transmission distance	Single module fiber：20km；Multi module fiber：2km
Ethernet exchange specification	Ethernet standard	IEEE802.3 10BASE-T,IEEE802.3u 100BASE-TX/FX
Status indicator	Power indicator light	1 pc green
	Network indicator light	1 pc green in RJ 45 port
	Fiber indicator light	3 pcs green light in FED、SD、LINK
Protection level	ESD	3 level，Standard：IEC61000-4-2
	Protection level	3 level，Standard：IEC61000-4-5
Operation environment	Working temperature	0℃~55℃
	Storage temperature	-40℃~85℃
	Humidity (Non-condensing)	0~95%
Mechanical	Dimension (L×W×H)	103mm×82mm×25mm
	Material	Aluminum alloy
	Color	Black
	Weight	180g

Product are subject to change without prior notice

■ Trouble Shooting

Please find the following solution when the device doesn't work

● Please confirm if the installation is correct;

● Please confirm if the RJ45 cable order is in accordance with the EIA/TIA568A or 568B industry standards;

● The maximum transmission distance depends on the signal source and cable quality, please do not exceed the maximum transmission distance;

● Please replace a failure device with a normally working device to check if the device is broken;

● If the problem still exists, please contact the factory.

■ RJ 45 Making Method

Instruments to be used: wire crimper, network tester.

Wire sequence of RJ45 plug should conforms with EIA/TIA568A or 568B standards.

1) Shuck off about 2cm long of the insulating layer to expose the 4 pairs UTP cables;

2) Seperate the 4 pairs UTP cables and straighten them up;

3) Line up the 8 pieces of cables per EIA/TIA 568A or 568B standards;

4) Brunt cut the cables to leave 1.5cm wire exposed and make sure the wire ends are leveled off;

5) Plug 8 cables into RJ45 plug, make sure each cable is in each pin;

6) Then use wire crimper to crimp it;

7) Repeat above 5 steps to make the another end;

8) Using network tester to test the cable .

pin	color
1	white/green
2	green
3	white/orange
4	blue
5	white/blue
6	orange
7	white/brown
8	brown

EIA/TIA 568A

pin	color
1	white/orange
2	orange
3	white/green
4	blue
5	white/blue
6	green
7	white/brown
8	brown

EIA/TIA 568B

⚠️

● Make sure if one end is EIA/TIA568A,the other end should also be EIA/TIA568A.

● Make sure if one end is EIA/TIA568B,the other end should also be EIA/TIA568B.