Gigabit Ethernet Media Converter

User Manual

(Version 1.2)

Beijing Fibridge Co., Ltd.

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1. Overview

FB-10/100MMC Series Media Converter can be used in the telecommunication IP MAN broadband optical network solution for its steady performance and powerful function. It convert 1000bps Ethernet copper port to optical port, up to 80Km distance on single-mode fiber without any relay device. It support auto-compatible 10\100\1000Mbps, half/full duplex topology, and MDI/MDI-X auto recognize. Selectable SC, FC, ST optical port makes the networks more flexible and feasible for the possibility of cost reduction.

FB-10/100MMC Serial Media Converter includes two types: managed and unmanaged converter. The unmanageable standalone device has power supply built in. Besides providing all of the functions of the unmanaged device, managed device can support WEB management, SNMP software management and console management. Customers conveniently view and set all the local modules and standalone via management interface.

2. Features

- Support 10Base-T,100Base-Tx,1000Base-T

- Fully compatible with IEEE802.3, IEEE802.3u, IEEE802.3x standards
- Fiber type support multimode and single-mode optional
- Up to 80Km distance on single-mode fiber without any relay device
- High-performance auto-negotiation chips make sure the data transfer with higher security, stability and without block
- Support half/full duplex mode auto-negotiate
- All the modules support hot-swap function
- Single-strand/double-strand/CWDM optical port selectable
- Two type optional: standalone unit and Modular Chassis

  Built-in double redundant power modules of 16- slot chassis make higher security and stability possible

3. Application

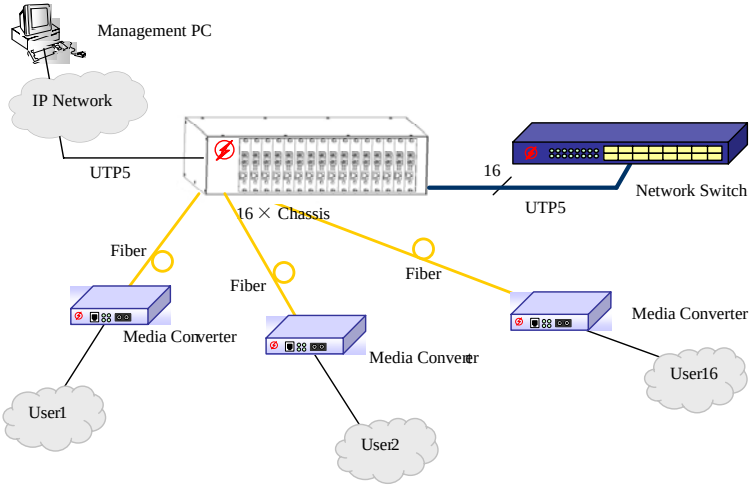


Figure1: Typical Application Topology of the Gigabit Ethernet Media Converter

4. Specification

4.1. Ethernet Port

Fully compatible with IEEE802.3、IEEE802.3u、IEEE802.3ab standards

- Data Rate: 10/100/1000Mbps auto-negotiation
- Half/full duplex mode auto-negotiation

- Connectors: RJ45 Jack
- Support automatic MDI/MDOI-X crossover

4.2. Fiber Optical Port

- Adopt standard 1×9pin optical transceiver module;
- Wavelength: 850nm, 1310nm on multi-mode, 1310nm,1550nm on single-mode;
- Up to 80Km transmission distance on single-mode;
- SC/PC, ST/PC and FC/PC are optional
- Double-strand, Single-strand and CWDM Optional

4.3. Power

- Power Input：

  AC Power: 198V~242VAC, 50/60Hz

  DC Power: -48VDC
- Power Consumption：<3W

4.4. Environment

- **Operating**

  Temperature: 0~+50℃

  Relative Humidity: 0~90% (non-condensing)
- **Storage**

  Temperature: -25~+70℃

Relative Humidity: 0~95% (non-condensing)

4.5. Dimensions

- **Dimensions:**

Standalone:

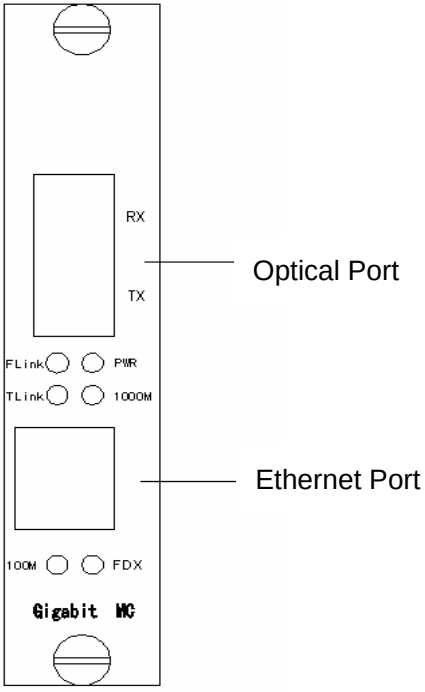
132mm(width)×36mm(height)×122mm(depth)

19-inch Chassis:

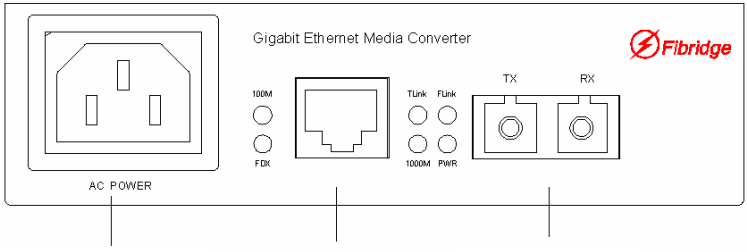
440mm(width)×125mm(height)×250mm(depth)

5. Panel Instruction

5.1. Panel of Module

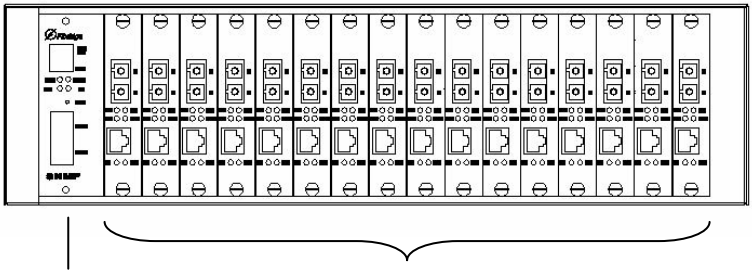


5.2. Front Panel of Standalone Device



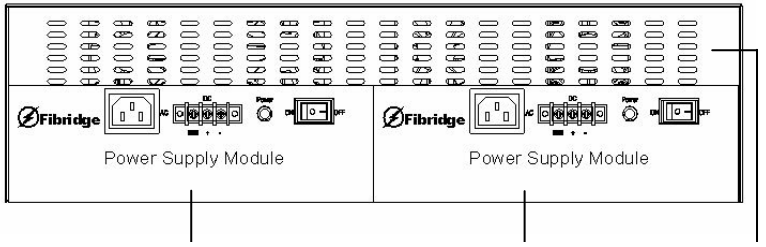
Power Supply Ethernet Port Optical Port

5.3. Front Panel of Chassis



Manage Module 16×Gigabit Media Converter Module

5.4. Back Panel of Chassis



Power Supply Power Supply Radiator

5.5. LEDs' Description

Table 1 LEDs

LED	Function	Color	Status	Description
PWR	Power Status	Green	On	Power supply OK
			Off	No power supply
Flink	Optical Port Link/Act Status	Yellow	On	Optic port linked
			Off	Optical port not linked
FDX	Full/Half Duplex	Green	On	Full duplex mode
			Off	Half duplex mode
Tlink	Twist-pair port Link/Act	Yellow	On	Twist-pair port linked
			Blink	Twist-pair port is transferring data

	Status		Off	Twist-pair port not linked
1000M	Twist-pair port speed 1000M	Green	On	Speed is1000Mbps
			Off	Speed is 10Mbps or 100Mbps
100M	Twist-pair port speed 100M	Green	On	Speed is 100Mbps
			Off	Speed is 1000Mbps or 10Mbps

6. Installation & Operation

6.1. Installation Steps

6.1.1. Preparation

- The standalone unit can be place on desktop or other place, modules must be fix to chassis.

6.1.2. Connection

- Connect the fiber strand and twist-pair cable according to the practical application environment;

6.1.3. Power ON

- Connect the power supply, the media converter will do the

self-test;

- After reset, if the line connects correctly, the LEDs PWR, Tlink and Flink will be lit on. That means the twist-pair port and fiber port connect normally, The 1000M is on while link speed is 1000Mbps at twist-pair port, or 100M is on while link speed is 100Mbps, or 1000M and 100M are both off while link speed is 10Mbps;
- If OK, then the line is correctly connected;
- When transferring data, Tlink will blink.

6.2. Something Notice

- Check the device and accessories according to Packing List when open the box. If something missing or damaged, please contact us immediately.
- Please install and operate equipments according to the instruction we provided. Equipments maybe damaged for improper installation and operation.

6.3. Faults & Solutions

6.3.1. Power LED is off

Solution: Check-up the device whether the power cable if connected correctly.

6.3.2. Tlink LED is off after power up

Solution:

(1) Check if the twist-pair cable is connected correctly.

(2) Check if the Ethernet device connected with the connector if running normally.

6.3.3. Flink LED is off after power up

Solution:

(1) check if the fiber is connected correctly.

(2) failure connection of transmitting or receiving side may lead to the Flink led off. So need to check if the TX or RX connection of the fiber port is nomal.

6.3.4. Data transfer abnormally, including transferring failure, data loss

Solution:

(1) Check if the transmit power of converter optical port is normal;

(2) Be sure no single-mode fiber is connected with multi-mode equipment.

(3) Check if it is used in pairs when single-strand converter is used.

7. Order Information

7.1. part number of module or standalone media converter

Note: X should be changed to 1 or 2. When X=1, it means unmanaged converter. When X=2, it means managed converter

P/N	Description
FX-S7022CA	Single mode, Distance: 20Km, 1310nm, SC, Standalone, 220VAC
FX-S7022CD	Single mode, Distance: 20Km, 1310nm, SC, Standalone, -48VDC
FX-S7082TM	Single mode, Distance: 20Km, 1310nm, ST, Module
FX-S7042CM	Single mode, Distance: 20Km, 1310nm, SC, Module
FX-M71CD	Multimode, 850nm, ST, Standalone, -48VDC
FX-W7042CA	Single Strand, Distance: 20Km, 1310nm, SC, Standalone, 220VAC
FX-W7042CM	Single Strand, Distance: 20Km, 1310nm, SC, Module

Above is the typical order information of 10/100/1000Mbps Media converter. For more information, please contact us.

7.2. Part Number of Chassis

P/N	Description
FC-216	16-slot chassis, support double redundant power supplies
FC-216-M	Management Card of the chassis

7.3. Part Number of Chassis power supply module

P/N	Description
FP-2100A	16-slot chassis power supply module, AC 220V input, 100Watt output
FP-2100D	16-slot chassis power supply module, DC -48V input, 100Watt output

**** We Reserve the right to vary descriptions and specifications without notice due to Fibridge's policy of continuous product improvement****

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