

## 10/100/1000BASE-T to 1000BASE-SX/LX Gigabit Media Converters



Providing the flexibility of 10/100/1000Mbps Ethernet Media via RJ-45 port and highly stable Gigabit fiber performance, MarStars MT-FC4100 series media converters support conversion between 10/100/1000Base-T and 1000Base-LX/SX network. There are SC/SFP/WDM connectors with single-mode or multi-mode media as required. The Ethernet signal allows three types of segments to connect easily, efficiently and inexpensively.

### Distance Extension with High Performance and Steady Network Communications

MT-FC4100 Series gigabit media converter series extends communication distance with highly Gigabit performance via fiber optic cable. The MT-FC4100 series provide media conversion between 10/100/1000Base-T and 1000Base-SX/LX interfaces such as multi-mode LC/SC connectors (500m), single-mode LC/SC connectors(20/40/60km) and single fiber connectors (WDM, 20/40/60km) for various fiber optic applications.

### Enhanced Smart Management Features

The MT-FC4100 series provides auto MDI/MDI-X on its TP port and the DIP switch to configure the Link Fault Pass through function (LFP). The LFP function includes the Link Loss Carry Forward (LLCF)/Link Loss Return (LLR). LLCF/LLR can immediately alarm administrators the problem of the link media and provide efficient solution to monitoring the net. The DIP switch can disable or enable the LFP function. The LLCF means when a device connected to the converter and the TP line loses the link, the converter's fiber will disconnect the link of transmission. The LLR (Link Loss Return) means when a device connected to the converter and the fiber line loses the link, the converter's fiber will disconnect the link of transmission. Both can immediately alarm administrators the problem of the link media and provide efficient solution to monitoring the net.

### Physical Port

- Complies with IEEE 802.3 10Base-T, IEEE802.3U 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE802.3z 1000Base SX/LX
- TP port supports 10/100/1000Base-T auto-negotiation and auto-MDI/MDI-X.
- 1000Base-SX: 50/125μm or 62.5/125μm multi-mode fiber cable, up to 500m
- 1000Base-LX: 9/125μm single-mode cable provides long distance for 20/40/60km
- 1000Base-LX WDM interface for up to 20/40/60km (single-mode fiber 9μm/125μm)
- 1000Base-T: 2-pair Cat. 5/5e/6 UTP cable, up to 100 meters.
- Store-and-Forward mechanism
- Non-blocking full wire-speed forwarding rate
- Media conversion between 10/100/1000Base-T and 1000Base-SX/LX.
- Fiber media allows:
  - Multi-mode fiber using SC/LC/WDM connector;
  - Single-mode fiber using SC/LC/WDM connector
- Wall-mountable design
- Compact size for working with series converters, easy installation
- LED indicators for easy network diagnostics
- 9K Jumbo Frame Supported
- Choice of fiber-connector from SC, LC and WDM, multi-mode / single-mode fiber for 1000Base SFP interface
- Provides DIP switch for LFP function (Disable / Enable) setting

|     |     |                                   |
|-----|-----|-----------------------------------|
| SW1 | ON  | Enable Link Fault Pass-Through    |
|     | OFF | Disable Link Fault Pass-Through   |
| SW2 | ON  | Cut through mode (9k Jumbo frame) |
|     | OFF | Store & Forward Switch mode       |
| SW3 | ON  | Flow control enable               |
|     | OFF | Flow control disable              |
| SW4 | ON  | FX Speed enforce to 100Mbps       |
|     | OFF | FX Speed 1000Mbps                 |

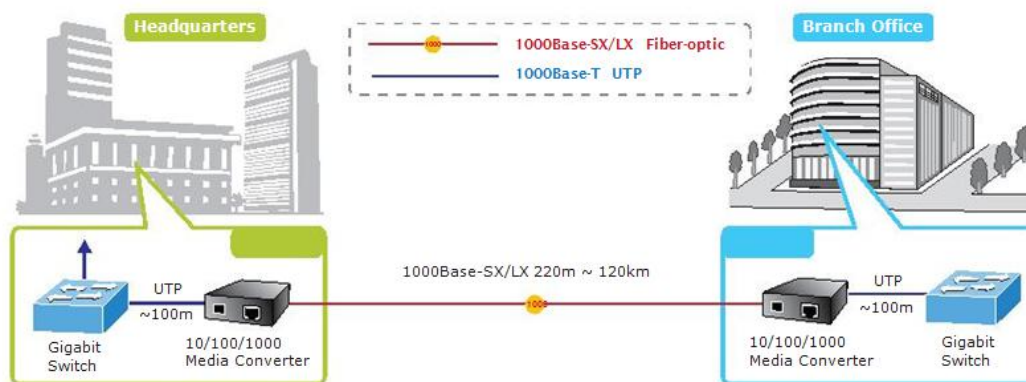
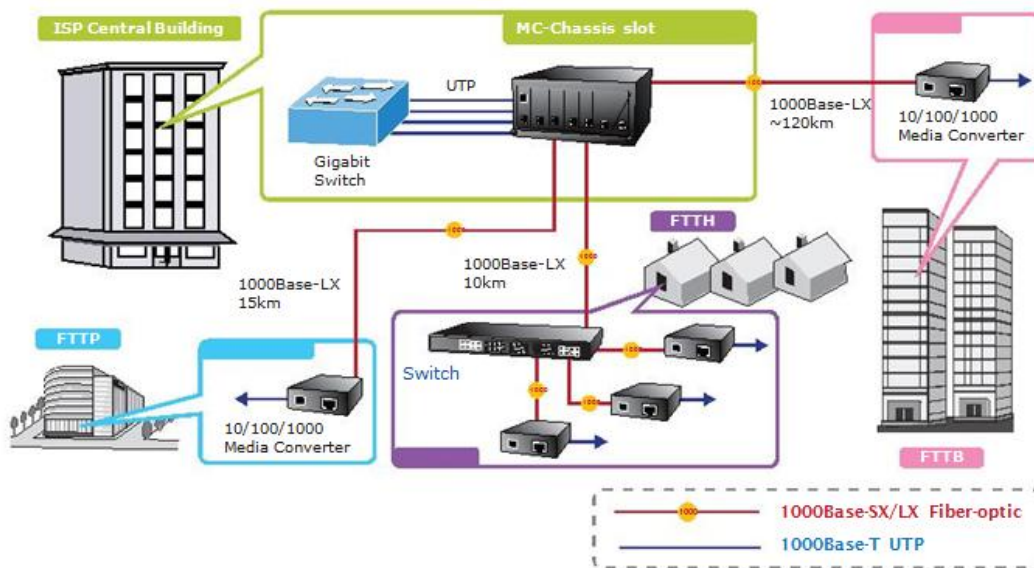
### Easy Installation

MT-FC4100 series allows two types of the segment to connect easily. It can be used as a standalone unit when powered by its DC adapter. As the Gigabit Media Converter fully complies with IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T and IEEE 802.3z 1000Base-LX/SX, the Gigabit media conversion installation is quite quick and easy with its plug and play feature. It also supports flow control and back pressure in half-duplex to eliminate packet loss.

## Applications

### Fiber-optic Networking for ISPs, Enterprises, and homes

With high performance of data transmission and easy installation, MT-FC4100 series can build the ISP network solution of FTTH (Fiber to the Home) or FTTC (Fiber to the Curb) for ISPs and FTTBs (Fiber to the Building), for small office network environment of enterprises.



## Specifications

|                        |                                                                                                                |
|------------------------|----------------------------------------------------------------------------------------------------------------|
| Product                | MT-FC4100 Series Gigabit Fiber Media Converter                                                                 |
| Standards              | IEEE 802.3, 10BASE-T<br>IEEE 802.3u, 100Base-TX<br>IEEE 802.3ab, 1000Base-T<br>IEEE 802.3z, 1000Base-SX/LX     |
| Ports                  | 1 x 10/100/1000Base-T port,<br>1 x 1000Base-SX/LX port                                                         |
| Copper Interface       | RJ-45 port (Auto-MDI/MDI-X) Twisted Pair                                                                       |
| Optical Interface      | LC(SFP), SC(1x9)                                                                                               |
| LED Indicator          | <ul style="list-style-type: none"> <li>• PWR</li> <li>• TP LINK/ACT, 1000</li> <li>• Fiber LINK/ACT</li> </ul> |
| DIP Switch             | LFP function (Disable / Enable) setting                                                                        |
| OAM                    | TS-1000 and IEEE 802.3ah Terminal mode                                                                         |
| Multi-mode Cable       | 50/125, 62.5/125 $\mu$ m                                                                                       |
| Single-mode (SM) Cable | 9/125 $\mu$ m                                                                                                  |
| Jumbo Packet Size      | 9K                                                                                                             |
| Power Consumption      | 4.6 watts / 15 BTU (maximum)                                                                                   |
| Power Input            | DC 5V / 1A                                                                                                     |
| Dimensions (W x D x H) | 26 x 70 x 97 mm                                                                                                |
| Weight                 | 0.2kg                                                                                                          |
| Operating Environment  | Temperature: 0~50° C<br>Humidity: 5~90% non-condensing                                                         |
| Storage Environment    | Temperature: -40~70 degrees C<br>Humidity: 5~90% non-condensing                                                |
| Emissions              | FCC Class A, CE Class A                                                                                        |

## Ordering Information

|                  |                                                                      |
|------------------|----------------------------------------------------------------------|
| MT-FC4100-05     | Gigabit 10/100/1000M Media Converter 500m MM Dual Fiber              |
| MT-FC4100-20     | Gigabit 10/100/1000M Media Converter 20km SM Dual Fiber              |
| MT-FC4100-40     | Gigabit 10/100/1000M Media Converter 40km SM Dual Fiber              |
| MT-FC4100-60     | Gigabit 10/100/1000M Media Converter 60km SM Dual Fiber              |
| MT-FC4102-05     | Gigabit 10/100/1000M Media Converter 500m +2 RJ45 port MM Dual Fiber |
| MT-FC4102-20     | Gigabit 10/100/1000M Media Converter 20km +2 RJ45 port SM Dual Fiber |
| MT-FC4100SFP     | Gigabit 10/100/1000M Media Converter with one SFP slot               |
| MT-FC4102SFP     | Gigabit 10/100/1000M Media Converter with 2 RJ45 port + one SFP slot |
| MT-FC4100D-20A/B | Gigabit 10/100/1000M Media Converter 20km WDM SM Single Fiber        |
| MT-FC4100D-40A/B | Gigabit 10/100/1000M Media Converter 40km WDM SM Single Fiber        |
| MT-FC4100D-60A/B | Gigabit 10/100/1000M Media Converter 60km WDM SM Single Fiber        |

## Related Products

|           |                                                       |
|-----------|-------------------------------------------------------|
| MT-R14-2A | 14 Slots Dual power supply, 19"2U, Rack Mount Chassis |
| MT-R16-2A | 16 Slots Dual power supply, 19"2U, Rack Mount Chassis |