

10/100Base-TX to 100Base-FX Fast Ethernet Converter Module User's Manual

(620-1231-000)

1. Overview

The MFCR100 Series is designed to convert between 10/100Base-TX and 100Base-FX Fibre Ethernet. The converter module is designed to be installed into the MCR12 Managed Media Converter Chassis.

2. Checklist

Before you start installing the Converter, verify that the package contains the following:

— The TP-Fibre Converter Module

— This User's Manual

Please notify your sales representative immediately if any of the aforementioned items is missing or damaged.



Fig. 1 Converter Module Front Panel

3. Model Description

Model	Description
MFCR100SC	10/100Base-TX to 100Base-FX Converter Module, SC Multi-Mode
MFCR100ST	10/100Base-TX to 100Base-FX Converter Module, ST Multi-Mode

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MFCR100SC.05	10/100Base-TX to 100Base-FX Converter Module, SC Single-Mode 5Km
MFCR100SC.20	10/100Base-TX to 100Base-FX Converter Module, SC Single-Mode 20Km
MFCR100SC.40	10/100Base-TX to 100Base-FX Converter Module, SC Single-Mode 40Km
MFCR100SC.60	10/100Base-TX to 100Base-FX Converter Module, SC Single-Mode 60Km
MFCR100BS5.20	10/100Base-TX to 100Base-FX Converter Module, BiDi SC Single-Mode 20Km, 1550nm
MFCR100BS3.20	10/100Base-TX to 100Base-FX Converter Module, BiDi SC Single-Mode 20Km, 1310nm
MFCR100BS5.40	10/100Base-TX to 100Base-FX Converter Module, BiDi SC Single-Mode 40Km, 1550nm
MFCR100BS3.40	10/100Base-TX to 100Base-FX Converter Module, BiDi SC Single-Mode 40Km, 1310nm
MFCR100BS5.60	10/100Base-TX to 100Base-FX Converter Module, BiDi SC Single-Mode 60Km, 1550nm
MFCR100BS3.60	10/100Base-TX to 100Base-FX Converter Module, BiDi SC Single-Mode 60Km, 1310nm

4. DIP Switch Setting

Converter TP Port 100TP	AUTO, FORCE selectable: Bit 1 of S1 a. AUTO: 10/100 Nway (default) b. FORCE: 100 FDx
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Converter LFP Function	LFP function selectable: Bit 2 of S1 a. LFP function: OFF (default) b. LFP function: ON
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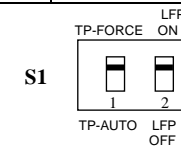


Fig. 2 S1—Bit 1, 2 Configuration and Setting

S1-1 TP port mode: AUTO (default) or FORCE
S1-2 LFP function: LFP OFF (default) or ON

5. Installing the Converter

Note: Converter modules are hot-swappable.

- ⇒ Wear a grounding device for electrostatic discharge.
- ⇒ Unscrew and remove the cover plate from the converter chassis.
- ⇒ Verify the converter module is the right model and conforms to the chassis slot.
- ⇒ Slide the module along the two guides in the slot and fasten the thumb knob, be sure the converter module is properly seated on the slot socket/connector.
- ⇒ Install the media cable for network connection.
- ⇒ Repeat the above steps, as needed, for each module to be installed into slot(s).

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Fibre Port	Default: 100FDx Attach the fibre cable. The Tx, Rx fibre cable must be paired at both ends
TP Port	Attach TP cable to TP port Mode: 10/100Mbps with NWay

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6. Link Fault Pass Through

Link Fault Pass Through allows the link fault of one device to be passed through to the connecting device. If the copper or fibre port of one converter fails then both the copper and fibre ports on the connecting media converter will also fail. This can be used as a means of determining network faults.

7. LED Description

LED	Color	Function
POWER	Green	Lit when +5V power is coming up
FX LINK/ACT	Green	Lit when fibre connection is good Blinks when any traffic is present
TP LINK/ACT	Green	Lit when TP connection is good Blinks when any traffic is present
TP SPEED	Green	Lit when 100Base-TX is active OFF: when 10Base-T is active

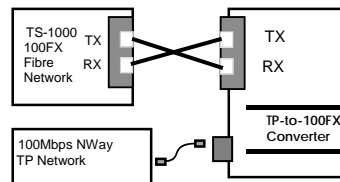


Fig. 3 Fast Ethernet Converter Network Connection 1

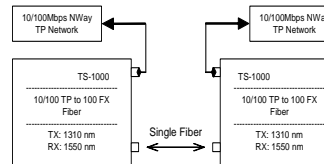


Fig. 4 Fast Ethernet Converter Network Connection 2

8. Cable Connection Parameter

- **TP Cable Limitations:** Cat. 5 and above up to 100m
- **Fibre Cable Limitations:**
 - Single-mode fibre 9/125µm and up to 60Km
 - Multi-mode fibre 62.5/125µm, 50/125µm and up to 2Km

10. TP-Fiber Technical Specifications

- **Standards:** IEEE802.3u 10/100Base-TX, 100Base-FX
- **Management:** Support remote access, remote monitor and loopback test functions through TS-1000 specification
- **UTP Cable:** Cat. 5 cable and above up to 100m
- **Fibre Cable:** 9/125µm single-mode

62.5/125µm, 50/125µm multi-mode

- **LED Indicators:** PWR, FX LINK/ACT, TP LINK/ACT, SPEED
- **Data Transfer Rate**

Speed	Forwarding Rate
100Mbps	148,800 PPS
10Mbps	14,880 PPS

- **TP** : 10/100FDX/HDX with NWay auto-negotiation
- **Fibre** : 100FDX/HDX
- **Power Requirement:** 0.46A@+3.3VDC
- **Ambient Temperature** : 0° to 40°C
- **Humidity** : 5% to 90%
- **PCB Dimensions** : 86(L) * 60(W) mm

11. TS-1000

TS-1000 function performs the loopback test between central and remote converter, the indication frames would inform its status when central or remote side has any change.

Note:
The TS-1000 function will be performed entirely only when the central and remote TS-1000 converters are supplied by the same vendor.