Palm Media Converter
Fast Ethernet 10/100Base-TX(RJ-45)
To 100Base-FX(ST/SC)
User's Manual

1. Overview

The Converter is a 10/100Base-TX to 100Base-FX media converter, which features LFP (Link Fault Pass through) function for easily tracing the network link fail. LFP function can enhance the integrity and conformity of the TP-Fiber linking to improve the maintainability of the network. Two LED's are provided to monitor the operation status of the converter.

2. Checklist

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

— The TP-Fiber Converter
— AC-DC Power Adapter
— This User's Manual

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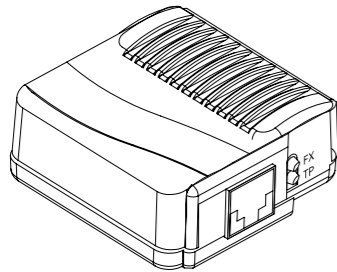

Fig. 1 The View of LFP Palm Media Converter

3. Model Description

The 100Mbps Fiber Transceiver	Wavelength
ST/SC multi-mode 2Km	1310nm
SCS.05/20/40/60Km single-mode	1310nm
SCS.80/100Km single-mode	1550nm

Single Fiber Model	TX, RX Wavelength	
1310nm Single-Mode 20Km	TX (Transmit)	1310nm
* 40/60Km models are option	RX (Receive)	1550nm
1550nm Single-Mode 20Km	TX (Transmit)	1550nm
* 40/60Km models are option	RX (Receive)	1310nm

Note:
The 1310nm and 1550nm models must be installed in pairs, i.e., install 1310nm model at one end and 1550nm model at the other one.

4. Installing the Converter

TP-Fiber Converter with AC-DC Power Adapter

⇒ Verify that the AC-DC adapter conforms to your country AC power requirement and then insert the power plug
⇒ Install the media cable for network connection

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TP Port	**Default**: AUTO TP AUTO mode is always enabled.
	Attach TP Cat. 5 cable to TP port, and the distance can be up to 100m. Use the straight-through cable to connect the switch or workstation, the 10/100 TP port can support AUTO MDI-X sensing.
Fiber Port	**Default**: 100FDX Fiber FDX/HDX function is auto sense, depend on link partner status. If link partner is the same converter, then duplex function will be assigned to FDX mode.
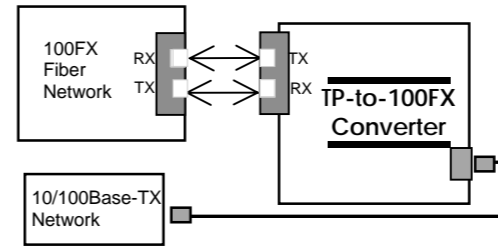
Fig. 2 Basic Network Connection
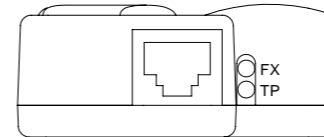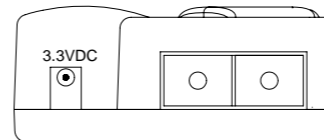

Fig. 3 Palm Media Converter Front Panel

Fig. 4 Palm Fiber Converter Rear Panel

5. Link Fault Pass Through

This media converter supports link fault pass through (LFP) in TX/FX converter application. Link status on one port is propagated to the other port to notice the remote nodes. If TP port is unplugged, this converter stops transmission on fiber port. This causes the remote fiber node link to fail. LED shows the link failure on both TP and fiber ports. If fiber link fails, this converter restarts auto-negotiation on TP port but always stays in the link failure state. This causes the remote TP node link to fail. LED also shows the link failure on both TP and fiber ports. Refer to Fig. 7 shown below for the normal status when the link succeeds. Also refer to Fig. 8 and Fig. 9 for the erroneous status when TP Cable A, Fiber Cable B or Fiber Cable C fails to connect.
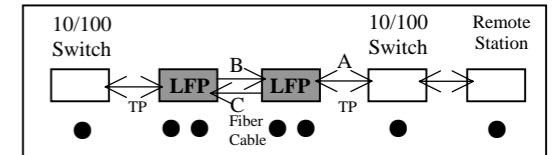

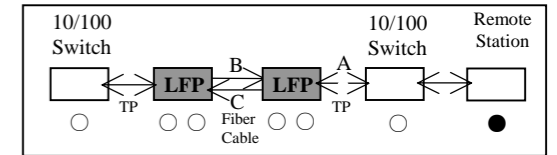Fig. 7 Normal status via a pair of LFPs

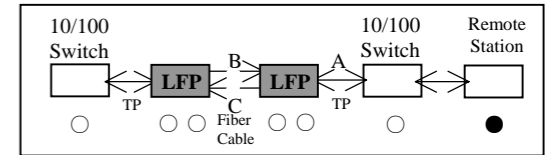Fig. 8 The status as TP Cable A is broken

Fig. 9 The status as Fiber Cable B or C is broken

Note : ● indicates LINK/ACT LED Lit

◯　　indicates LINK/ACT LED Off

Warning:
The LFP (Link Fault Pass Through) function works only when both two converters own this capability in pairs. Furthermore, both LFP converters should be supplied only by the same manufacturer/vender. The connection coming from LFP converters with odd models or non-LFP converters will cease the LFP function.
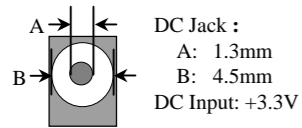
6.　DC Jack and AC-DC Power Adapter

DC Jack :
　A:　1.3mm
　B:　4.5mm
DC Input: +3.3V

Fig. 10 DC+3.3V Input Jack and Dimension

Warning:

— When TP NWay port is connected to TP 100FDX(force mode) instead of NWay partner, it will result in 100HDX mode with invalid collision signal
— Ensure that all network nodes are configured at an identical operation mode. Improper operation and flow control mode between TP and Fiber port connections will render the LAN to work poorly

7.　Cable Connection Parameter

100Base-X network allows 512-bit time delay between any two node-stations in a collision domain. Switch-based Media Converter breaks up TP and Fiber segments' collision domain to extend the cabling distance.
- **TP Cable Limitations:** Cat. 5 and up to 100m
- **Converter Fiber Cable Limitations:**

SC/ST Converter Models	
Multi-mode Half-duplex	412m
Multi-mode Full-duplex	2Km
Single-mode Half-duplex	412m
Single-mode Full-duplex	5/20/40/60/80/100Km

8.　TP-Fiber Technical Specifications
- **Standards**　**:**IEEE802.3u 10/100Base-TX, 100Base-FX
- **UTP Cable**　**:**Cat. 5 cable and up to100m
  Fiber Cable　**:**
  　50/125, 62.5/125 or 100/140μm multi-mode
  　8.3/125, 8.7/125, 9/125 or 10/125μm single-mode
- **LED Indicators :**
  　TP(LINK/ACT), FX (LINK/ACT)
- **Data Transfer Rate :**

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

- **Flow Control:** IEEE802.3x compliant for full-duplex
  　　　　　　Backpressure flow control for half-duplex
- **Power Requirement :**
  　1A@+3.3VDC from AC-DC Adapter
- **Ambient Temperature :** 0° to 40°C
- **Humidity**　　　**:** 5% to 90%
- **Dimensions :** 25(H) × 61(W) × 57.5(D) mm
- **Complies with FCC Part 15 Class B and CE Mark**
Note: For connecting this device to Router, Bridge or
  　　Switch, please refer to the corresponding device's
  　　Technical Manual.