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## 1.Introduction

## 1.1 Checklist

- One TER850S/860S Optical Converter
- One AC/DC Power Adaptor
- One Power Wire
- One User's Manual

If any of listed items are mismatched, damaged or missing, please contact the retailer from whom you purchased for replacement immediately.

## 1.2 The Specification of the LED Indicators

The LED indicators of Optical Converters include Power, Link, 100M indicators, which serve to monitor equipments and display faults. Every LED indicator will be explained as blow.

| LED indicators | Colors | Status | Description |
|---|---|---|---|
| Power | Red | Lit Up | The indicator lights when the power turns on. |
| | One | No Lit | If the indicator doesn't light, please check the power socket to make sure that the power adapter works well and that optical converter turns on. |
| Link (Fiber) | Red | Lit Up | The connector of fiber has connected the network properly. |
| 100M | Red | Lit Up | RJ-45 port works for 100M cable. |
| Link（RJ45） | Red | Lit Up | RJ-45 port connects to the network properly |

## 1.3 Main Features

1. Compliant to IEEE802.3 10BASE-TX, IEEE802.3u 100BASE-TX/FX standards
2. 10/100Mbps Auto-Negotiation data transmission rate.
3. Auto-Detect Half-/Full-duplex mode.

4. Supports more than 2KM Far-Distance Transfer under Full-duplex mode.
5. One SC Fiber connector and one RJ-45 Socket (please refer to the pin specification in the Appendix.).
6. LED indicators include Power, Link, 100M indictor to monitor equipments and display faults.

### 1.4 Physical Conditions and Working Environments

| Physical Conditions and Working Environments | |
|---|---|
| AC input | 100-240VAC，47/63Hz |
| DC output | DC10V 600mA |
| Operating temperature | 0°C~55°C |
| Storage temperature | -25°C~55°C |
| Humidity | 5%~90%(Non-Condensing) |
| Size | 104x61x22mm(LxWxH) |

## 2.Installation Methods

### 2.1 Installation Notes:

- The power socket should be within 1.82M around the equipment.
- Check carefully the voltage and frequency of the power adaptor and connect safely.
- Make sure there is adequate space for

proper heat dissipation.

- Don't put heavy articles on the Optical Converter.

## 2.2 Connectivity and Communication Mode

The network equipments (Servers, Stations, Routers or Switches) with 10/100BASE-TX connectors link up the RJ-45 socket with the twisted pair. The facilities with 10/100- BASE-FX connectors link up SC fiber connector with Multi-mode Fiber Wire. AC/DC Power Adaptor joints DC power socket on TER850S/860S. The below figure shows that the utmost communic- ation distance between the two devices is 2100 meters (TER860s could be up to 20,100 meters.)

**Notice**: the network connector must set All-duplex mode before you prepare more than 2,000 meters for connectivity.

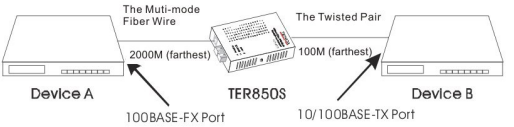


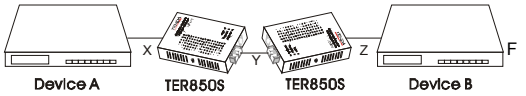

Figure 2.2.1 Connectivity and Communication Mode

## 2.3 Communication Mode and Transfer

## Distance

Figure 2.3.1The solution to Device A with fiber connector

| The Mapping Table 1: Communication Mode and Transfer Distance | | | | |
|---|---|---|---|---|
| Mode | Device A | Device B | X | Y |
| All-duplex | DTE | DTE（*） | 2000 meters | 100 meters |
| All-duplex | DTE | DTE | Y≤100，X+Y≈300 | |
| All-duplex | DTE | Class I Hub(*) | Y≤100，X+Y≈75 | |
| All-duplex | DTE | Class II Hub(*) | Y≤100，X+Y≈118 | |




igure 2.3.2 The solution to Device A with no fiber connector.

| The Mapping Table 2 : Communication Mode and Transfer Distance | | | | | |
|---|---|---|---|---|---|
| Mode | Device A | Device B | X | Y | Z |
| All-duplex | DTE | DTE（*） | 100 meters | 2000 meters | 100 meters |
| Half-duplex | DTE | DTE | X≤300，X+Y+Z≤230，Z≤100 | | |

**Remarks:**

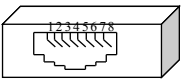
- DTE (Data Terminal Equipment) refers to Stations, Switches, Routers or other

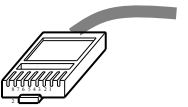
terminal facilities.

- If Device B is a 1010BASE-TX Hub, other facilities, excluding TER850S/860S, should be set within 100M twisted pair

## 3.Appendix

The following figure and chart are the standard RJ-45 socket, connector and the definition of pin.



Standard RJ-45 Socket/Connector

| The Definition of RJ-45 Connector Pin | |
|---|---|
| NO. | The Signal of the Connector |
| 1 | Tx+ (transmitted) |
| 2 | Tx- (transmitted) |
| 3 | Rx+(received) |
| 4 | Unemployed |
| 5 | Unemployed |
| 6 | Rx+(received) |
| 7 | Unemployed |
| 8 | Unemployed |

Standard 3 Cat. Cable, RJ-45 Pin Definition

- Connecting to Switches with straight cable.
- One end of the straight cable connects to the UP-LINK port of the switch, the other links up TO-UPLINK port of this Converter.

  One end of the straight cable connects

to common ports, the other links up the TO-OTHER port of this Converter.