PLANET FT-80x Series

10/100BASE-TX to 100BASE-FX Bridge Media Converters

PLANET FT-80x is a Fast Ethernet Bridge 100BASE-FX fiber to 10/100BASE-TX shielded twisted pair (STP) converter. It supports both half-duplex and full-duplex operations and a variety of fiber options. The converter auto-adapts to the highest level of performance supported by the device connected to the STP port. When the device is a switch or a workstation that supports full duplex, the converter adapts to the full-duplex mode and provides an effective 200Mbps bandwidth. When the connected device is a hub or a workstation that supports only half duplex, the converter adapts to the half-duplex mode and provides the nominal 100Mbps bandwidth. An override switch provides total manual control over the half/full-duplex operation in fiber-optic interface. The fiber port of the converter operates at 1310 nm and uses ST, SC, MTRJ, VF45 or WDM connectors. Multi-mode models that support distances up to 2km and single-mode models that support distances up to 15/20/35/50/60km are available.

The FT-80x series is with LFP (Link Fault Pass-through function) (LLCF/LLR) and the DIP switch design. LLCF/LLR can immediately alarm administrators the problem of the link media and provide efficient solution to monitoring the net. The DIP switch provides the disabling or enabling of the LFP function.

LLCF (Link Loss Carry Forward) means when a device is connected to the converter and the TP line loses the link, the converter’s fiber will disconnect the link of transmit. LLR (Link Loss Return) means when a device is connected to the converter and the fiber line loses the link, the converter’s fiber will disconnect the transmit link. Both can immediately alarm administrators the problem of the link media and provide efficient solution to monitoring the net.

Features

- Complies with IEEE 802.3, IEEE 802.3u 10/100BASE-TX, 100BASE-FX standard
- Connectors: One RJ45 (auto-MDI/MDI-X) twisted pair, EIA568
- One fiber-optic, 1310nm wavelength, connector type and distance vary with model
  - FT-806A20 / FT-806A60: Tx-1310nm, Rx-1550nm
  - FT-806B20 / FT-806B60: Tx-1550nm, Rx-1310nm
- Data Transfer Rate:
  - TP: 10/100Mbps
  - FX: 100Mbps
- Duplex mode support:
  - Full or half-duplex mode by auto-negotiation (TP)
  - Full or half-duplex mode by DIP switch (FX)
- LED indicators: PWR, FX LNK/ACT, FX FDX/COL, TP 100, TP LNK/ACT, TP FDX/COL
- DIP switch: 2 DIP switches
  - Rear DIP switch: FX duplex mode selection
  - Side DIP switch: LFP (Link Fault Pass-through) mode selection
- IEEE 802.3x Full-Duplex Flow-Control and Back-Pressure in Half-Duplex eliminate the loss of packets
Applications

**Standalone and Centralized Management Media Converter Installation**

To meet the demand for the growing network, PLANET FT-80x has provided the advanced media conversion technology. The FT-80x media converter provides various fiber connecting types to meet different network applications. It is very flexible for the FT-80x to work as a standalone device or install into the central standard media converter chassis for providing centralized power. The FT-80x is an ideal solution to building a network solution of FTTH (Fiber to the Home) or FTTC (Fiber to the Curb) and FTTB (Fiber to the Building) for ISPs, campuses and enterprises.
## Specifications

<table>
<thead>
<tr>
<th>Product</th>
<th>FT-80x Series</th>
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</table>
| Protocol      | IEEE 802.3, 10BASE-T  
IEEE 802.3u, 100BASE-TX  
IEEE 802.3u, 100BASE-FX  
IEEE 802.3x, Flow Control |
| Dimensions (W x D x H) | 97 x 69 x 26 mm |
| Weight        | 0.2 kg |
| Power Input   | 5V DC, 2A, max. |
| Power Supply  | AC Adapter 100-240VAC Frequency: 50-60Hz |
| Enclosure     | Compact-sized metal housing  
Case with anticorrosion treatment  
Electrostatic paint |

### Connectors and Cables

<table>
<thead>
<tr>
<th>Shielded Twisted-pair</th>
<th>RJ45, Category 5 (EIA/TIA 568)</th>
</tr>
</thead>
</table>
| Fiber-optic           | FT-801 : ST / Multi-mode / 2km  
FT-802 : SC / Multi-mode / 2km  
FT-803: MTRJ / Multi-mode / 2km  
FT-802S15 : SC / Single mode / 15km  
FT-802S35 : SC / Single mode / 35km  
FT-802S50 : SC / Single mode / 50km  
FT-806A20: WDM SC / Single mode / 20km  
FT-806B20: WDM SC / Single mode / 60km  
FT-806B60: WDM SC / Single mode / 60km |

| Multi-mode Cable      | 50/125, 62.5/125 µm |
| Single-mode (SM) Cable| 9/125 µm |

### Optic Wavelength

| FT-801: 1310nm  
FT-802: 1310nm  
FT-803: 1310nm  
FT-802S15: 1310nm  
FT-802S35: 1310nm  
FT-802S50: 1310nm  
FT-806A20: TX: 1310nm; RX: 1550nm  
FT-806B20: TX: 1550nm; RX: 1310nm  
FT-806A60: TX: 1310nm; RX: 1550nm  
FT-806B60: TX: 1550nm; RX: 1310nm |

### Max. Launch Power (dBm)

| FT-801: -14  
FT-802: -14  
FT-803: -14  
FT-802S15: 0  
FT-802S35: -8  
FT-802S50: 0  
FT-806A20: -8  
FT-806B20: -8  
FT-806A60: 0  
FT-806B60: 0 |

### Min. Launch Power (dBm)

| FT-801: -20 (62.5/125µm), -23.5 (50/125µm)  
FT-802: -20 (62.5/125µm), -23.5 (50/125µm)  
FT-803: -20 (62.5/125µm), -23.5 (50/125µm)  
FT-802S15: -20  
FT-802S35: -15  
FT-802S50: -5  
FT-806A20: -14  
FT-806B20: -14  
FT-806A60: -5  
FT-806B60: -5 |

### Receive Sensitivity (dBm)

| FT-801: -31.8  
FT-802: -31.8  
FT-803: -31.8  
FT-802S15: -32  
FT-802S35: -34  
FT-802S50: -34  
FT-806A20: -31  
FT-806B20: -31  
FT-806A60: -34  
FT-806B60: -34 |
### FT-80x Series

#### Maximum Input Power (dBm)

<table>
<thead>
<tr>
<th>Model</th>
<th>Power (dBm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT-801</td>
<td>-14</td>
</tr>
<tr>
<td>FT-802</td>
<td>-14</td>
</tr>
<tr>
<td>FT-803</td>
<td>-14</td>
</tr>
<tr>
<td>FT-802S15</td>
<td>0</td>
</tr>
<tr>
<td>FT-802S35</td>
<td>0</td>
</tr>
<tr>
<td>FT-802S50</td>
<td>0</td>
</tr>
<tr>
<td>FT-806A20</td>
<td>0</td>
</tr>
<tr>
<td>FT-806B20</td>
<td>0</td>
</tr>
<tr>
<td>FT-806A60</td>
<td>0</td>
</tr>
<tr>
<td>FT-806B60</td>
<td>0</td>
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</tbody>
</table>

#### Supported Distances and Functions

<table>
<thead>
<tr>
<th>Type</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shielded Twisted-pair</td>
<td>100m (328 ft.)</td>
</tr>
<tr>
<td>Multi-mode Fiber Optic</td>
<td>412m (1,350 ft.) (half-duplex)</td>
</tr>
<tr>
<td></td>
<td>2km (1.2 miles) (full-duplex)</td>
</tr>
<tr>
<td>Single-mode (SM)</td>
<td>412m (1,350 ft.) (half-duplex)</td>
</tr>
<tr>
<td></td>
<td>15km (9 miles) (full-duplex)</td>
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<td></td>
<td>20km (12 miles) (full-duplex)</td>
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<td></td>
<td>35km (21 miles) (full-duplex)</td>
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<td></td>
<td>50km (31 miles) (full-duplex)</td>
</tr>
<tr>
<td></td>
<td>60km (37 miles) (full-duplex)</td>
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</tbody>
</table>

#### Port Mode

- **TP**: Half and full duplex, auto-negotiation
- **FX**: Half and full duplex via DIP switch

#### Environment & Emissions

- **Operating Environment**: Temperature: 0~50 degrees C
  Humidity: 5~90% non-condensing
- **Storage Environment**: Temperature: -40~70 degrees C
  Humidity: 5~90% non-condensing
- **Emissions**: FCC Class A, CE Class A

#### Ordering Information

- **FT-801**: 10/100BASE-TX to 100BASE-FX (ST, MM) Bridge Media Converter -- 2km
- **FT-802**: 10/100BASE-TX to 100BASE-FX (SC, MM) Bridge Media Converter -- 2km
- **FT-802S15**: 10/100BASE-TX to 100BASE-FX (SC, SM) Bridge Media Converter -- 15km
- **FT-802S35**: 10/100BASE-TX to 100BASE-FX (SC, SM) Bridge Media Converter -- 35km
- **FT-802S50**: 10/100BASE-TX to 100BASE-FX (SC, SM) Bridge Media Converter -- 50km
- **FT-803**: 10/100BASE-TX to 100BASE-FX (MT-RJ, MM) Bridge Media Converter
- **FT-806A20**: 10/100BASE-TX to 100BASE-FX (WDM TX:1310nm, SM) Bridge Media Converter -- 20km
- **FT-806B20**: 10/100BASE-TX to 100BASE-FX (WDM TX:1550nm, SM) Bridge Media Converter -- 20km
- **FT-806A60**: 10/100BASE-TX to 100BASE-FX (WDM TX:1310nm, SM) Bridge Media Converter -- 60km
- **FT-806B60**: 10/100BASE-TX to 100BASE-FX (WDM TX:1550nm, SM) Bridge Media Converter -- 60km

**Remarks**: FT-806A20/806B20 and FT-806A60/806B60 should run in pair. It means you must connect FT-806A20 / FT-806A60 to one end while FT-806B20 / FT-806B60 to the other end.

#### Related Products

- **MC-700**: 7-slot 10" Media Converter Chassis
- **MC-1500**: 15-slot 19" Media Converter Chassis
- **MC-1500R**: 15-slot Media Converter Chassis (AC Power)
- **MC-1500R48**: 15-slot Media Converter Chassis (DC Power)