



Fiber Converters

TFC-110 Series

- [Quick Installation Guide \(1\)](#)

1. Before You Start

Package Contents

- Fiber Converter
- Multi-Language Quick Installation Guide
- Power Adapter

If any of the above contents are missing, please contact your reseller.

Minimum Requirements

- An environment that is fairly cool and dry
- An environment that is free from strong electromagnetic field generators (such as motors), vibration, dust and direct exposure to sunlight
- TFC-1600 chassis (optional) or sturdy, level surface that can support the weight of the Fiber Converter
- 10/100Mbps Ethernet Switch
- Multi-Mode or Single-Mode Fiber cables
- Cat. 5, 5e or 6 RJ-45 Ethernet Cable

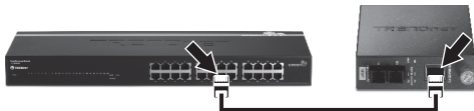
Optional Equipment

- Standard 19" rack
- TFC-1600 chassis

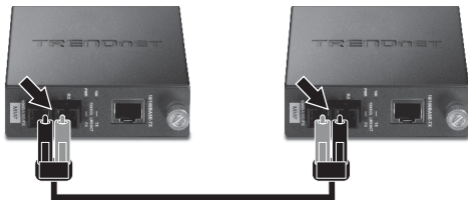
2. Hardware Installation

Installing two standalone Fiber Converters

1. Connect an RJ-45 Ethernet cable from the Ethernet port on the fiber converters to an Ethernet port on your switch (e.g TE100-S24g).



2. Connect the fiber cable to the fiber converters.



3. Connect the power adapter to the back of the fiber converter.



Note:

1. For the TFC-110MM/MST/MS/110S15/S15i/S30/S30i/S60/S60i/S100, the TX and RX cables must be reversed on the opposite fiber connection.
2. TFC-15MS100 converts Multi-Mode to Single-Mode fiber, it can be connected to a switch with Multi-Mode SC-type fiber connection (e.g TEG-424WS with fiber modules) to extend the distance up to 15km with Single-Mode fiber.
3. Cabling
 - a. Multi-Mode Optic Cable: TFC-110MSC, TFC-110MST, TFC-110MM.
 - b. Single-Mode Optic Cable: TFC-110S15, TFC-110S30, TFC-110S60, TFC-110S100, TFC-110S15i, TFC-110S30i, TFC-110S60i.
 - c. Single Strand Optic Cable for TFC-110S20D3, TFC-110S20D5, TFC-110S40D3, TFC-110S40D5.

Installing Fiber Converter in a Chassis

1. Unscrew the bay cover from the desired bay on the chassis.



2. Unfasten the thumbscrew and remove the fiber converter from the metal casing.



3. Slide the fiber converter into an available slot and fasten the thumbscrew.



Your installation is now complete.

3. LEDs and DIP switches

| LEDs | | | | | |
|-------------------------------|-------|----------|---|-------------------------|-------------|
| LED | Color | Sequence | Function | | |
| | | | TFC-110MM/ MST/MSC/ 110S15/S30/ S60/S100/ 20D3/20D5/ 40D3/40D5 | TFC-110S15i/ 30i/60i | TFC-15MS100 |
| PWR (Power) | Green | Solid | Device powered On | | |
| | Off | n/a | Device powered Off | | |
| 100M | Green | Solid | 100/200Mbps (Half/Full Duplex) Connection | n/a | |
| | Off | n/a | 10/20Mbps (Half/Full Duplex) Connection | n/a | |
| FDX/ COL (TX) | Green | Solid | Connection on TX end in full duplex mode | n/a | |
| | Green | Blinking | Data collision is detected | n/a | |
| | Off | n/a | Connection on TX end in half duplex mode | n/a | |
| FDX/ COL (FX) | Green | Solid | Connection on Fiber end in full duplex mode | n/a | |
| | Green | Blinking | Data collision is detected | n/a | |
| | Off | n/a | Connection on Fiber end in half duplex mode | n/a | |
| LINK/ ACT (TX) | Green | Solid | 100/200Mbps (Half/Full Duplex) or 10/20Mbps (Half/ Full Duplex) Connection | n/a | |
| | Green | Blinking | 100/200Mbps (Half/Full Duplex) or 10/20Mbps Data Transmitting/Receiving | n/a | |
| | Off | n/a | The link is disconnected | n/a | |

LEDs (continued)

| LED | Color | Sequence | Function | | |
|----------------------|--------|----------|---|--------------------------------|---|
| | | | TFC-110MM/ MST/MSC/ 110S15/S30/ S60/S100/ 20D3/20D5/ 40D3/40D5 | TFC-110S15i/ 30i/60i | TFC-15MS100 |
| LINK/ ACT (FX) | Action | Solid | 100/200Mbps (Half/Full Duplex) Connection | | n/a |
| | Green | Blinking | 100/200Mbps (Half/Full Duplex) Data Transmitting/ Receiving | | n/a |
| | Off | n/a | The link is disconnected | | n/a |
| LINK/ ACT | Green | Solid | n/a | | 100/200Mbps (Half/Full Duplex) Connection |
| | Green | Blinking | n/a | | 100/200Mbps (Half/Full Duplex) Data Transmitting/ Receiving |
| | Off | n/a | n/a | | The link is disconnected |
| FAIL (TX) | Green | Solid | n/a | The TX link is disconnected | n/a |
| | Off | n/a | n/a | The TX link is connected | n/a |
| FAIL (FX) | Red | Solid | n/a | The Fiber link is disconnected | n/a |
| | Off | n/a | n/a | The Fiber link is connected | n/a |

4. Technical Specifications

| Power Budget | | | | | | | | | |
|--------------|-------|----------------------|-------------------------|----------------------------|------|---------------------------|---------------|--------------|----------|
| Model Number | Media | Connectors | Wavelength | Optical Output Power (dBm) | | Optical Input Power (dBm) | | Power Budget | Distance |
| | | | | Min. | Max. | Min. (Sensitivity) | Max. | | |
| TFC-110MSC | MMF | RJ-45/SC (Duplex) | 1310nm | -23.5 | -14 | -32 | -14 | 13 | 2 km |
| TFC-110MST | MMF | RJ-45/ST (Duplex) | 1310nm | -23.5 | -14 | -32 | -8 | 8.5 | 2 km |
| TFC-110MM | MMF | RJ-45/MT-RJ (Duplex) | 1300nm | -23.5 | 14 | -31 | -14 (typical) | 7.5 | 2 km |
| TFC-110S15 | SMF | RJ-45/SC (Duplex) | 1310nm | -20 | 0 | -32 | 0 | 12 | 15 km |
| TFC-110S30 | SMF | RJ-45/SC (Duplex) | 1310nm | -15 | -8 | -34 | 0 | 19 | 30 km |
| TFC-110S60 | SMF | RJ-45/SC (Duplex) | 1310nm | -5 | 0 | -35 | 0 | 30 | 60 km |
| TFC-110S100 | SMF | RJ-45/SC (Duplex) | 1550nm | -5 | 0 | -35 | 0 | 30 | 100 km |
| TFC-110S15i | SMF | RJ-45/SC (Duplex) | 1310nm | -20 | 0 | -32 | 0 | 12 | 15 km |
| TFC-110S30i | SMF | RJ-45/SC (Duplex) | 1310nm | -15 | -8 | -34 | 0 | 19 | 30 km |
| TFC-110S60i | SMF | RJ-45/SC (Duplex) | 1310nm | -5 | 0 | -35 | 0 | 30 | 60 km |
| TFC-110S20D3 | SMF | RJ-45/SC- (Simplex) | TX-1310nm/ RX-1550nm | -14 | -8 | -31 | 0 | 17 | 20 km |
| TFC-110S20D5 | SMF | RJ-45/SC- (Simplex) | TX-1550nm/ RX-1310nm | -14 | -8 | -31 | 0 | 17 | 20 km |
| TFC-110S40D3 | SMF | RJ-45/SC- (Simplex) | TX-1310nm/ RX-1550nm | -8 | -3 | -34 | -3 | 26 | 40 km |
| TFC-110S40D5 | SMF | RJ-45/SC- (Simplex) | TX-1550nm/ RX-1310nm | -8 | -3 | -34 | -3 | 26 | 40 km |

Troubleshooting

1. After connecting the Fiber converter, the LEDs do not turn on. What should I do?

1. Check that the power outlet is receiving power.
2. Make sure the power adapter is firmly connected to the Fiber converter and the power outlet.
3. Make sure the Ethernet and the Fiber cables are connected.

2. All the LEDs are on, but I can't make a connection. What should I do?

1. Verify that you are using the proper fiber cable (e.g. multi-mode fiber cable for multi-mode converter; single-mode fiber cables for single-mode converters).
2. Verify that the TX and RX cables have been reverse on the opposite Fiber connection (TFC-110MM, TFC-110MSC, TFC-110MST, TFC-110S15, TFC-110S30, TFC-110S60, TFC-110S100, TFC-110S15i, TFC-110S30i, TFC-110S60i).
3. Power down the fiber converters and the switches. Wait 15 seconds, then plug the switches and the fiber converters back in.

3. What is the maximum distance that is supported by the fiber converter?

Please reference section 4 for distance information.

If you still encounter problems or have any questions regarding the **Fiber converters** please contact TRENDnet's Technical Support Department.

Declaration of Conformity



Company Information:

Company Name:
TRENDnet, Inc.

Company Address:
20675 Manhattan Place
Torrance, CA 90501
USA



Product Information:

Product Description:
100Base-TX to 100Base-FX Fiber Converter

Model Number:
TFC-110MSC, TFC-110MST, TFC-110MM, TFC-110S15, TFC-110S30,
TFC-110S60, TFC-110S100, TFC-110S30i, TFC-110S60i, TFC-110S20D3,
TFC-110S20D5, TFC-110S40D3, TFC-110S40D5, TFC-15MS100

Brand name:
TRENDnet

Technical Standards:

- EN 55022 : 2006 Class A
- EN 61000-3-2 : 2006 Class A
- EN 61000-3-3 : 1995 + A1 : 2001 + A2 : 2005
- EN 55024 : 1998 + A1 : 2001 + A2 : 2003

Declaration:

The product is herewith confirmed to comply with the requirements of Directive 2004/108/EC of the Council (European Parliament) on the EMC directive and Energy-related products Directive 2009/125/EC.

I hereby declare that the products and devices mentioned above are consistent with the standards and provisions of the guidelines.

Sonny Su

Full Name

May 27, 2011

Date

Director of Technology

Position / Title

Signature

Limited Warranty

TRENDnet warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase.

Fiber Converters– 3 Years Limited Warranty

AC/DC Power Adapter, Cooling Fan, and Power Supply carry a 1 year warranty.

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- (2) This device must accept any interference received. Including interference that may cause undesired operation.



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Cet appareil numérique de la classe-A est conforme à la norme NMB-003 du Canada.

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