

TRENDnet[®]



Quick Installation Guide

Fiber Converters

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1. Before You Start

Package Contents

- Fiber converter
- Multi-Language Quick Installation Guide
- Power adapter

Minimum Requirements

- TFC-1600 chassis (optional) or sturdy, level surface that can support the weight of the Fiber Converter
- 10/100 Mbps Ethernet switch
- Fiber cables compatible with the fiber converter's connector and media specifications
- Cat. 5, Cat. 5e, or Cat. 6 RJ-45 Ethernet cable

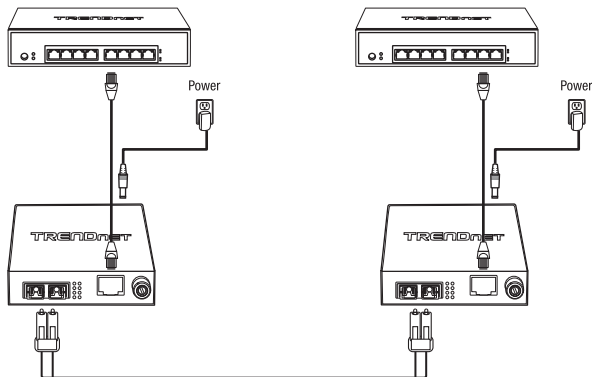
Optional Equipment

- Standard 19" rack
- TFC-1600 chassis (optional)

2. Hardware Installation

Installing Two Stand Alone Fiber Converters Together

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 fiber converter.

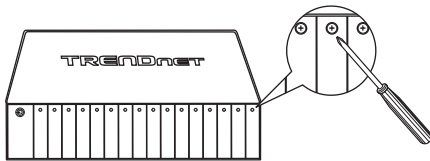


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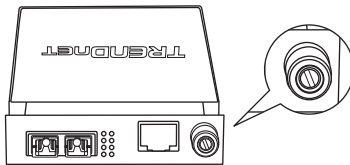
- For the TFC-110MM/MST/MSC/110S15/S15i/S30/S30i/S60/S60i/S100, the TX and RX cables must be reversed on the opposite fiber connection
- TFC-15MS100 converts Multi-Mode to Single-Mode fiber, it can be connected to a switch with Multi-Mode SC-type fiber connection (e.g TEG-424WS with fiber modules) to extend the distance up to 15km with Single-Mode fiber.
- Cabling
 - Multi-Mode Fiber Optic Cable: TFC-110MSC, TFC-110MST, TFC-110MM
 - Single-Mode Fiber Optic Cable: TFC-110S15, TFC-110S30, TFC-110S60, TFC-110S100, TFC-110S15i, TFC-110S30i, TFC-110S60i
 - Single Strand Fiber Optic Cable: TFC-110S20D3, TFC-110S20D5, TFC-110S20D3i, TFC-110S20D5i, TFC-110S40D3, TFC-110S40D3i, TFC-110S40D5i

Installing Fiber Converter in a Chassis

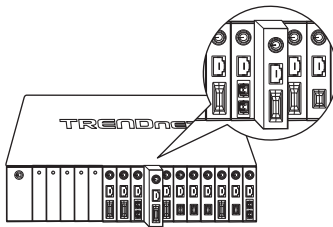
1. Unscrew the bay cover from the desired bay on the chassis.



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.



3. LEDs and DIP switches

LED	Color	Sequence	Function		
			TFC-110MM/MST/MSC/ 110S15/S30/S60/S100/ TFC-110S20D3/S20D5/20D3i/ 20D5i/S40D3/S40D3i/S40D5i	TFC-110S15i/30i/60i	TFC-15MS100
PWR (Power)	Green	Solid	Device powered On		
	N/A	Off	Device powered Off		
100M	Green	Solid	100/200Mbps (Half/Full Duplex) Connection		N/A
	N/A	Off	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
	N/A	Off	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
	N/A	Off	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
	N/A	Off	The link is disconnected		N/A
LINK/ACT (FX)	Green	Solid	100/200Mbps (Half/Full Duplex) Connection		N/A
	Green	Blinking	100/200Mbps (Half/Full Duplex) Data Transmitting/Receiving		N/A
	N/A	Off	The link is disconnected		N/A
LINK/ACT	Green	Solid	N/A	N/A	100/200Mbps (Half/Full Duplex) Connection
	Green	Blinking	N/A	N/A	100/200Mbps (Half/Full Duplex) Data Transmitting/Receiving
	N/A	Off	N/A	N/A	The link is disconnected
FAIL (TX)	Red	Solid	N/A	The TX link is disconnected	
	N/A	Off	N/A	The TX link is connected	
FAIL(FX)	Red	Solid	N/A	The Fiber link is disconnected	
	N/A	Off	N/A	The Fiber link is connected	

Switch	Action	Function	
		TFC-110MM/MST/MSC/ 110S15/S30/S60/S100	TFC-110S15i/30i/60i/20D3i/20D5i/40D3/40D3i/40D5i
1	On	Half-Duplex	Fiber Half-Duplex
	Off	Full-Duplex	Fiber Full-Duplex
2	On	N/A	TX Forced Mode
	Off	N/A	TX Auto-Negotiation
3	On	N/A	TX 10M
	Off	N/A	TX 100M
4	On	N/A	TX Half-Duplex
	Off	N/A	TX Full Duplex
5	On	N/A	LLR Enable
	Off	N/A	LLR Disable
6	On	N/A	LLR Enable
	Off	N/A	LLR Disable

Note:

- After changing the DIP Switch settings, power cycle the Fiber Converter.
- LLCF stands for Link Loss Carry Forward. When LLCF is enabled, the ports do not transmit a link signal until they receive a link signal from the opposite port. Link loss is “carried forward” to the managed switch or hub that is sending the link. LLCF can be used for either the copper or fiber ports.
- LLR stands for Link Loss Return. When LLR is enabled, the fiber port’s transmitter shuts down if its receiver fails to detect a valid receive link. If one of the optical conductors is bad, the card with LLR enabled will return a no link condition to its link partner. LLR is used to detect link problems only on the fiber port. If LLR is enabled on one Fiber converter, the opposite Fiber converter must have LLR disabled.

4. Technical Specifications

Power Budget										
Model Name	Media	Connectors	Wavelength		Optical Output Power (dBm)		Optical Input Power (dBm)		Power Budget (dBm)	Distance
			Transmit (TX)	Receive (RX)	Min.	Max.	Min. (Sensitivity)	Max.		
TFC-110MSC	MMF (Multi-mode fiber)	RJ-45/SC (Duplex)	1300nm		-19	14	-32	-14	13	2km
TFC-110MST	MMF	RJ-45/ST (Duplex)	1300nm		-19	14	-32	-14	13	2km
TFC-110MM	MMF	RJ-45/MT- RJ (Duplex)	1300nm		-23.5	14	-31	-33.5 (typ.)	7.5	2km
TFC-110S15	SMF (Single-mode fiber)	RJ-45/SC (Duplex)	1310nm		-20	0	-32	0	12	15km
TFC-110S30	SMF	RJ-45/SC (Duplex)	1310nm		-15	-8	-34	0	19	30km
TFC-110S60	SMF	RJ-45/SC (Duplex)	1310nm		-5	0	-35	0	30	60km
TFC-110S100	SMF	RJ-45/SC (Duplex)	1550nm		-5	0	-35	0	30	100km
TFC-110S15i	SMF	RJ-45/SC (Duplex)	1310nm		-20	0	-32	0	12	15km
TFC-110S30i	SMF	RJ-45/SC (Duplex)	1310nm		-15	-8	-34	0	19	30km
TFC-110S60i	SMF	RJ-45/SC (Duplex)	1310nm		-5	0	-35	0	30	60km
TFC-110S20D3	SMF	RJ-45/SC (Simplex)	1310nm	1550nm	-14	-8	-31	0	17	20km
TFC-110S20D5	SMF	RJ-45/SC (Simplex)	1550nm	1310nm	-14	-8	-31	0	17	20km
TFC-110S20D3i	SMF	RJ-45/SC (Simplex)	1310nm	1550nm	-14	-3	-31	-3	17	20km
TFC-110S20D5i	SMF	RJ-45/SC (Simplex)	1550nm	1310nm	-14	-3	-31	-3	17	20km
TFC-110S40D3	SMF	RJ-45/SC (Simplex)	1310nm	1550nm	-8	-3	-34	-3	26	40km
TFC-110S40D3i	SMF	RJ-45/SC (Simplex)	1310nm	1550nm	-8	-3	-34	-3	26	40km
TFC-110S40D5i	SMF	RJ-45/SC (Simplex)	1550nm	1310nm	-8	-3	-34	-3	26	40km
TFC-15MS100	MMF (1)	SC (Duplex)	1300nm		-23.5	-14	-31	0	7.5	2km
	SMF (2)	SC (Duplex)	1310nm		-20	0	-32	0	12	15km

Declaration of Conformity

TRENDNET®

Manufacturer's Name and Address

TRENDnet, Inc.
20675 Manhattan Place
Torrance, CA 90501 USA

Zwolsestraat 156 2587 WB
The Hague The Netherlands



Product Information:

Model Number: TFC-110S15 / TFC-110S30 / TFC-110S60 / TFC-110S100 /
TFC-110MSC / TFC-110MST / TFC-110MM / TFC-110S20D3 /
TFC-110S20D5 / TFC-110S15i / TFC-110S30i / TFC-110S60i /
TFC-110S40D3 / TFC-110S40D5 / TFC-110S20D3i /
TFC-110S40D3i / TFC-110S20D5i / TFC-110S40D5i

Product Name: 100Base-TX to 100Base-FX Single Mode SC Fiber Converter (15KM, 9.3Miles) /
100Base-TX to 100Base-FX Single Mode SC Fiber Converter (30KM, 18.6Miles) /
100Base-TX to 100Base-FX Single Mode SC Fiber Converter (60km, 37.2 Miles) /
100Base-TX to 100Base-FX Single Mode SC Fiber Converter (100km, 62.1 Miles) /
100Base-TX to 100Base-FX Multi Mode SC Fiber Converter /
100Base-TX to 100Base-FX Multi Mode ST Fiber Converter /
100Base-TX to 100Base-FX Multi Mode MT-RJ Fiber Converter /
100Base-TX to 100Base-FX Dual Wavelength Single Mode SC Fiber Converter TX:
1310 RX: 1550 (20KM, 12.4Miles) /
100Base-TX to 100Base-FX Dual Wavelength Single Mode SC Fiber Converter TX:
1550 RX: 1310 (20KM, 12.4Miles) /
Intelligent 10/100Base-TX to 100Base-FX Single Mode SC Fiber Converter (15KM, 9.3Miles) /
Intelligent 10/100Base-TX to 100Base-FX Single Mode SC Fiber Converter (30KM, 18.6Miles) /
Intelligent 10/100Base-TX to 100Base-FX Single Mode SC Fiber Converter (60km, 37.2 Miles) /
100Base-TX to 100Base-FX Dual Wavelength Single Mode SC Fiber Converter TX:
1310 RX: 1550 / (40km, 24.8 Miles)
100Base-TX to 100Base-FX Dual Wavelength Single Mode SC Fiber
Converter TX: 1550 RX: 1310 (40km, 24.8 Miles) /
Intelligent 100Base-TX to 100Base-FX Dual Wavelength Single Mode SC Fiber
Converter (20 km / 12.4 miles) /
Intelligent 100Base-TX to 100Base-FX Dual Wavelength Single Mode SC Fiber Converter
(40 km / 24.8 miles) /
Intelligent 100Base-TX to 100Base-FX Dual Wavelength Single Mode SC Fiber Converter
(20 km / 12.4 miles) /
Intelligent 100Base-TX to 100Base-FX Dual Wavelength Single Mode SC Fiber Converter
(40 km / 24.8 miles)

Declaration of Conformity

TRENDNET®

Trade Name: TRENDnet

TRENDnet hereby declare that the product is in compliance with the essential requirements and other relevant provisions under our sole responsibility.

Safety EN 62368-1: 2014 + A11:2017

EMC EN 55032:2015+AC:2016 (CISPR32:2015/COR:2016) (Class A)
EN 61000-3-2:2014
EN 61000-3-3:2013
EN 55024:2010+A1:2015

This product is herewith confirmed to comply with the Directives.

Directives: EMC Directive 2014/30/EU
RoHS Directive 2011/65/EU
RoHS 3 Directive 2015/863/EU
WEEE Directive 2012/19/EU
REACH Regulation (EC) No. 1907/2006
Low Voltage Directive 2014/35/EU
Ecodesign Directive (EU) 2019/1782

Person responsible for this declaration.

Place of Issue: Torrance, California, USA

Date: July 13, 2021

Name: Sonny Su

Title: Vice-président de Technologie

Signature:





Declaration of Conformity

TRENDNET®

Manufacturer's Name and Address

TRENDnet, Inc.
20675 Manhattan Place
Torrance, CA 90501 USA

Authorized Representative:
Office: +44 (0) 1635 887 399
Unit 4 Rivermead Business Park,
Pipers Way, Thatcham, RG19 4EP England



Product Information:

- Model Number:** TFC-110S15 / TFC-110S30 / TFC-110S60 / TFC-110S100 /
TFC-110MSC / TFC-110MST / TFC-110MM / TFC-110S20D3 /
TFC-110S20D5 / TFC-110S15I / TFC-110S30I / TFC-110S60I /
TFC-110S40D3 / TFC-110S40D5 / TFC-110S20D3i /
TFC-110S40D3i / TFC-110S20D5i / TFC-110S40D5i
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Safety EN 62368-1: 2014 + A11:2017

EMC EN 55032:2015+AC:2016 (CISPR32:2015/COR:2016) (Class A)

EN 61000-3-2:2014

EN 61000-3-3:2013

EN 55024:2010+A1:2015

This product is herewith confirmed to comply with the Directives.

Directives: Electromagnetic Compatibility Regulations 2016
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012
The Waste Electrical and Electronic Equipment Regulations 2013 (as amended)
The REACH Enforcement Regulations 2008 (as amended)
Electrical Equipment (Safety) Regulations 2016
The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019

Person responsible for this declaration.


Place of Issue: Torrance, California, USA

Date: July 13, 2021

Name: Sonny Su

Title: VP of Technology

Signature:





Certifications

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received. Including interference that may cause undesired operation.



Waste electrical and electronic products must not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or Retailer for recycling advice.

Technical Support

If you have any questions regarding the product installation, please contact our Technical Support.

Toll free US/Canada: **1-855-373-4741**

Regional phone numbers available at www.trendnet.com/support

TRENDnet

20675 Manhattan Place
Torrance, CA 90501
USA

Applies to PoE Products Only: This product is to be connected only to PoE networks without routing to the outside plant.

Note

The Manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

Advertencia

En todos nuestros equipos se mencionan claramente las características del adaptador de alimentación necesario para su funcionamiento. El uso de un adaptador distinto al mencionado puede producir daños físicos y/o daños al equipo conectado. El adaptador de alimentación debe operar con voltaje y frecuencia de la energía eléctrica domiciliar existente en el país o zona de instalación.

Product Warranty Registration

Please take a moment to register your product online. Go to TRENDnet's website at:

www.trendnet.com/register