

10GbE Fiber Media Converter with Open SFP+ Slot

ET10GSFP



*actual product may vary from photos

FR: Guide de l'utilisateur - fr.startech.com

DE: Bedienungsanleitung - de.startech.com

ES: Guía del usuario - es.startech.com

NL: Gebruiksaanwijzing - nl.startech.com

PT: Guia do usuário - pt.startech.com

IT: Guida per l'uso - it.startech.com

For the latest information, technical specifications, and support for this product, please visit www.StarTech.com/ET10GSFP

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by StarTech.com could void the user's authority to operate the equipment.

Industry Canada Statement

This Class A digital apparatus complies with Canadian ICES-003.

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

CAN ICES-3 (A)/NMB-3(A)

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Introduction

Package contents

- 1 x 10GbE Ethernet fiber media converter
- 1 x universal power adapter
- 4 x power cords (NA/EU/UK/AU)
- 1 x grounding screw
- 1 x quick-start guide

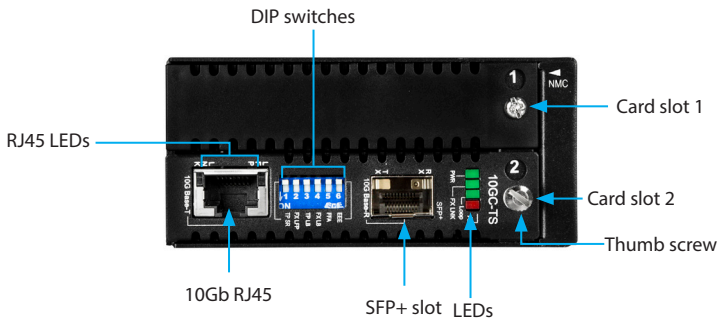
Requirements

- MSA-compliant 10 Gigabit SFP+ transceiver module (Mini-GBIC)
- 10GbE network equipment (for example, a network switch)
- RJ45-terminated UTP Cat6a or better Ethernet cable
- Terminated fiber-optic cable (dependent on the SFP+ transceiver module used)
- Available AC electrical outlet
- Terminal emulation software such as PuTTY (if using the serial console port for management)

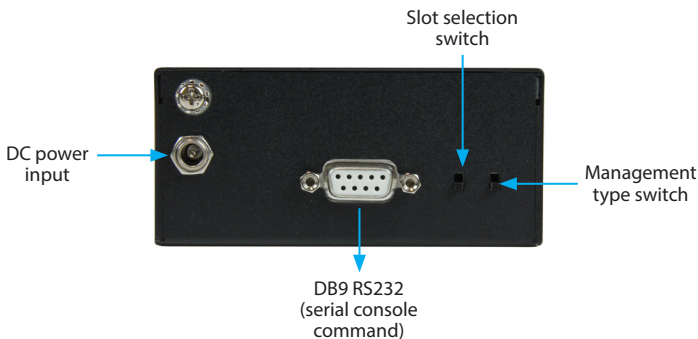
Requirements are subject to change. For the latest requirements, please visit www.StarTech.com/ET10GSFP.

Product diagram

Front view



Rear view



Using the DIP switches

Note: By default, all of the DIP switches are set to the off position.

See the table below for more information about the functions of the different DIP switches.

DIP switch number	Function	State	Description
1	TP SR (Short Range Cable Drive)	On	Enable if TP cable length is 30 m or less.
		Off	For TP cables that are up to 100 m in length.
2	FX LFP (Link Fault Pass-through)	On	Enable LFP on fiber side.
		Off	Normal mode.
3	TP LB (Loopback)	On	Enable TP loopback mode.
		Off	Normal mode.
4	FX LB (Loopback)	On	Enable fiber loopback mode.
		Off	Normal mode.
5	FFA (Fiber Fault Alert)	On	Enable FFA.
		Off	Disable FFA.
6	EEE (Energy-Efficient Ethernet)	On	Enable EEE.
		Off	Disable EEE

Install the media converter

1. Turn off any networking equipment that will be connected to the media converter.
2. Insert a 10 Gigabit MSA-compliant SFP+ module into media converter's SFP+ slot.
The SFP+ transceiver must be compatible with your fiber network infrastructure.

Note: The media converter can only be used with 10 Gigabit SFP+ modules and will not support 10/100/1000Mbps modules.

3. Connect a duplex fiber-optic cable from the media converter's SFP+ module to your fiber network device. The TX and RX connectors must be paired at both ends of the connection (example TX to RX, and RX to TX).
4. Connect an RJ45 Cat6a Ethernet cable from the media converter's RJ45 port to your 10GbE network device.
5. Select the appropriate power cord for your region and connect it to the power adapter.
6. Connect the power adapter to an AC electrical outlet and then to the media converter's DC power input port. The PWR LED (power) lights up and remains solid to indicate the media converter is powered.
7. Turn on the networking equipment you turned off in step. The FX Link (fiber link) LED lights up and remains solid when a fiber link has been established, and the RJ45 Link (copper link) LED lights up and remains solid when a copper Ethernet link has been established.

Note: Check the link budget of your SFP+ modules, as well as the module's intended wiring distance. SFP+ modules are designed to transmit signals over long distances. If the physical wiring distance is too short, the transmitting optical signal (laser) may be too strong and damage the receiving SFP+ module. An in-line optical attenuator may be required to protect them from damage.

Installing a second SFP card module

By default, the media converter's SFP+ card module is preinstalled into slot 2. The media converter features a secondary slot (slot 1), which lets you install a second compatible SFP card module (with LC connectors). Once a compatible SFP card module is installed, you can integrate the media converter into both 10Gb and 1Gb networks.

The media converter is compatible with the following StarTech.com products:

- ET91000SFP2C - [GbE Fiber-Media Converter Card Module](#) (card module only)
- ET91000LC2 - [GbE Fiber-Media Converter - LC](#) (card module and chassis)
- ET91000LCOAM - [GbE Fiber-Media Converter - LC - OAM Managed](#) (card module and chassis)
- ET91000SFP2 - [GbE Fiber-Media Converter - Open SFP Slot](#) (card module and chassis)
- ET1000S40LC2 - [GbE Fiber-Media Converter - SM - LC](#) (card module and chassis)

Remove a card module from another media converter

If you're installing a card module from one of the ET91000 media converters, you may need to remove the card module from that media converter's chassis.

- Turn the thumbscrew counterclockwise to loosen the SFP card module, and gently pull the SFP card module from the ET91000*** chassis.

Note: Consult the manual for the ET91000*** series product that you are removing the card module from for additional details regarding thumbscrew location.

Install a second SFP card module

Follow the instructions below to install a second SFP card module into the media converter's slot 1:

1. Turn the screw counterclockwise, using a Phillips screwdriver, and remove the cover plate from slot 1.
2. Gently insert the card module from one of the compatible media converters into slot 1.

Note: When properly installed, the card module in slot 1 should be flush with the preinstalled card module in slot 2.

3. Turn the thumbscrew on the card module that was inserted into slot 1 clockwise to tighten and secure it to the chassis.
4. Connect your network devices to the second card module using the instructions noted in the **Install the media converter** section.

Managing the media converter

The media converter features two slots:

- Slot 1: Expansion slot for installing another SFP/SFP+ card module
- Slot 2: Preinstalled SFP+ card module

The media converter can be controlled using the DB9 RS232 serial port located on the rear of the media converter. See the **Using the serial console command port** section for further instructions and details.

Using the management switches

The media converter features two switches on the rear:

- Slot selection (left switch): selects which slot to control (slot 1 or slot 2).
- Management type selection (right switch): must be set to the downward (console) position.

By default, the media converter's SFP+ card module is inserted into slot 2.

To control the media converter using the DB9 console port, ensure that the management type selection (right switch) is set in the downward (console) position.

Switch configuration options:

Slot 1	
Slot 2	Console

The SFP+ card module is installed in slot 2. The media converter is managed by the console. (Default)

Slot 1	
Slot 2	Console

A SFP+ card module is installed in slot 1. The media converter is managed by the console.

Note: The media converter's management type selection (right switch) must always be set to the downward (console) position, to control the media converter using the DB9 console port.

Using the serial console command port

The media converter features a DB9 (RS232 serial) port, which enables console-based management commands, for enhanced customization and control of the converter.

Media converter default settings:

- **Baud Rate:** 38,400
- **Data bits:** 8
- **Parity bits:** none
- **Stop bits:** 1
- **Handshaking:** none
- **Emulation:** VT-100
- **Default username/password:** admin/admin (case sensitive)

1. If connected, disconnect the power adapter from the media converter's DC power input port.
2. Connect a straight-through DB9 RS232 cable (not provided) from the media converter's DB9 serial port to a serial console (for example, a laptop with a DB9 serial port).
3. Run a terminal emulation application (for example, PuTTY).
4. Reconnect the power adapter that was disconnected in step #1.

Approximately three seconds after you power up the media converter, it will display a login menu.

5. Login with the following details:

- User Name: admin (case sensitive)
- Password: admin (case sensitive)

6. Configure and control the media converter to suit your network requirements, using the available menu options.

Update with X-Modem

You can update the firmware on the media converter from the console interface by downloading the latest firmware version from the StarTech.com website.

Caution! To update to firmware on the device, you must use a terminal emulation program that supports X-Modem.

1. Open the console main menu.
2. Press **U** to select **Update with X-Modem**.
3. Press **1** to select **Update firmware to FW**.

Warning! When you select the **Update firmware to FW option**, you will erase the current firmware. If you interrupt the process before it's complete, the media converter will stop functioning.

4. Use X-Modem to transfer a file to the media converter.
5. When the process is complete, reboot the media converter.

Technical support

StarTech.com's lifetime technical support is an integral part of our commitment to provide industry-leading solutions. If you ever need help with your product, visit www.startech.com/support and access our comprehensive selection of online tools, documentation, and downloads.

For the latest drivers/software, please visit www.startech.com/downloads

Warranty information

This product is backed by a two-year warranty.

StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

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