

## Gigabit Ethernet Fiber Media Converter - MM LC

MCM1110MMLC

- DE: Bedienungsanleitung - de.startech.com
- FR: Guide de l'utilisateur - fr.startech.com
- ES: Guía del usuario - es.startech.com
- IT: Guida per l'uso - it.startech.com
- NL: Gebruiksaanwijzing - nl.startech.com
- PT: Guia do usuário - pt.startech.com

### Packaging contents

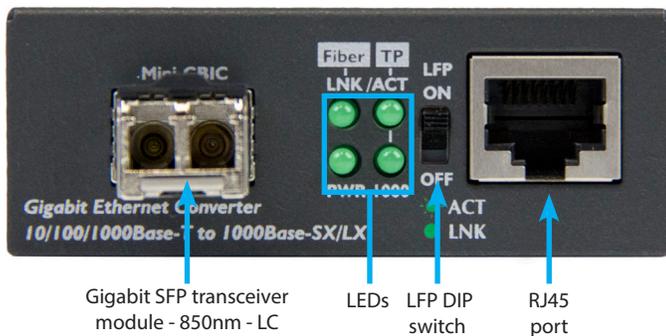
- 1x fiber media converter - MM LC
- 1x universal power adapter (NA/EU/UK/AU)

### System requirements

- 10/100/1000Mbps Ethernet network equipment
- RJ45 terminated UTP Cat5e or better Ethernet cable
- Terminated fiber optic cable — Multimode LC duplex connectors
- AC electrical outlet

### Product diagram

#### Front view



#### Rear view



### Install the media converter

The media converter is pre-installed with a 1000Base-SX (850nm) Gigabit SFP transceiver module with LC connectors.

1. Turn off the networking equipment that will be connected to the media converter.
2. Remove the dust cover from the SFP module.  
**Note:** In addition to the pre-installed SFP module, the media converter can also be used with any MSA-compliant Gigabit SFP module. It will not support 10/100Mbps modules.
3. Connect a multimode LC 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. For example TX to RX, and RX to TX.
4. Connect an RJ45 Cat 5e/6 Ethernet cable from the media converter's RJ45 port to your 10/100/1000Mbps network device.
5. Select the appropriate regional clip for your region and connect the power adapter to an AC electrical outlet.
6. Connect the power adapter to the media converter's DC input.  
The **PWR** LED (power) should light up solid.
7. Turn the networking equipment from step #1 back on. The **Fiber** and **TP LNK/ACT** LEDs should light up solid when all cables and devices are properly connected.

**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 large 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.

### LED indicators

LED	Status	Indication
PWR (Green)	Solid	The media converter is powered on
Fiber LNK/ACT (Green)	Solid	A fiber link between the media converter and fiber network equipment is established
	Flashing	The fiber port is actively sending or receiving data (activity)
TP LNK/ACT (Green)	Solid	An RJ45 Ethernet link between the media converter and RJ45 network equipment is established
	Flashing	The RJ45 port is actively sending or receiving data (activity)
TP 1000 (Green)	Solid	A Gigabit (1000Mbps) link on the RJ45 port is established
	Off	The RJ45 port is running at 10/100Mbps speeds

## Link fault pass-through (LFP)

Link fault pass-through can notify you of link problems and provides an efficient solution to monitor your network. The LFP DIP switch is set to **ON** by default, and you can use the DIP switch to enable (**ON**) or disable (**OFF**) the LFP function.

### Enable LFP

When the DIP switch is set to **ON** then LFP is enabled. When a device is connected to the media converter, and the **TP** (twisted pair) copper line or **Fiber** line drops the link, then the media converter will disconnect the transmission link on the opposite interface.

- Slide the LFP DIP switch to the **ON** position to enable LFP.

### Disable LFP

When the DIP switch is set to **OFF** then LFP is disabled. If you are familiar with your network infrastructure and proper diagnostic procedures then you can disable LFP, otherwise it is recommended to leave the DIP switch in the default **ON** position.

- Slide the LFP DIP switch to the **OFF** position to disable LFP. Once set to **OFF**, reset the media converter by disconnecting and reconnecting the power.

## Duplex mode support

The media converter's RJ45 port supports 10/100/1000Mbps networks and will automatically negotiate the connection type. By default, it will automatically detect the link speed and the duplex mode of your connected equipment.

The media converter's fiber port (1000Base-SX/LX) allows 1000Mbps full duplex auto-negotiation. Check to ensure the duplex setting of the connected fiber equipment matches the duplex setting of the media converter.

## Fiber cable types and distances

### Fiber cable types

Standard (wavelength)	Single MODE	Multimode
1000Base-SX (850nm)	N/A	50/125µm or 62.5/125µm
1000Base-LX (1310nm)	9/125µm	50/125µm or 62.5/125µm

### Fiber cable distances

The media converter is pre-installed with a 1000Base-SX (850nm) Gigabit SFP transceiver module with LC connectors.

The distance capabilities of the media converter are variable and depend on the SFP module, and the fiber optic cable used.

Standard (wavelength)	Fiber cable type	Diameter (micron - µm)	Bandwidth (MHz)
1000Base-SX (850nm)	MM	62.5/125µm	100
		50/125µm	500
1000Base-LX (1310nm)	MM	62.5/125µm	5
		50/125µm	5
	SM	9/125µm	N/A

## Surface or wall mounting

The media converter features two mounting holes on the bottom of the unit which let you mount it on a surface or a wall.

- Fasten and secure the media converter to a wall or surface using the integrated mounting holes.

**Note:** Screws are required to mount the media converter.

### FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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 B digital apparatus complies with Canadian ICES-003.  
Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.  
CAN ICES-3 (B)/NMB-3(B)

### Use of Trademarks, Registered Trademarks, and other Protected Names and Symbols

This manual may make reference to trademarks, registered trademarks, and other protected names and/or symbols of third-party companies not related in any way to StarTech.com. Where they occur these references are for illustrative purposes only and do not represent an endorsement of a product or service by StarTech.com, or an endorsement of the product(s) to which this manual applies by the third-party company in question. Regardless of any direct acknowledgement elsewhere in the body of this document, StarTech.com hereby acknowledges that all trademarks, registered trademarks, service marks, and other protected names and/or symbols contained in this manual and related documents are the property of their respective holders.

### Technical Support

In no event shall the liability of StarTech.com be an integral part of our commitment to provide industry-leading solutions. If you ever need help with your product, visit [www.startech.com/support](http://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](http://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.

### Limitation of Liability

In no event shall the liability of StarTech.com Ltd. and StarTech.com USA LLP (or their officers, directors, employees or agents) for any damages (whether direct or indirect, special, punitive, incidental, consequential, or otherwise), loss of profits, loss of business, or any pecuniary loss, arising out of or related to the use of the product exceed the actual price paid for the product. Some states do not allow the exclusion or limitation of incidental or consequential damages. If such laws apply, the limitations or exclusions contained in this statement may not apply to you.