

# Gigabit Ethernet Copper-to-Fiber Media Converter - SM LC - 20 km

Product ID: ET91000SM20



This Gigabit Ethernet to fiber media converter is a cost-effective way to extend your network, or extend the distance between two devices by up to 20 km (12.4 mi.).

Fiber network connections provide greater distance and security, with less electromagnetic interference (EMI) than typical RJ45 copper-based networks, making it perfect for IT professionals and secure setups in government, business, or educational applications.



## Flexible integration into mixed network environments

This versatile copper-to-fiber converter supports standalone operation, or alternatively it can be installed into the StarTech.com Rackmount Chassis (ETCHS2U - sold separately), giving you more options for integration into your existing network. The card module can also be inserted back into the ET91000SM20 enclosure, plus it's compatible with enclosures from other StarTech.com ET91000 series media converters (sold separately).

The converter features a pre-installed Gigabit SFP transceiver with LC connectors. Should your network infrastructure change in the future, you can easily swap and replace the module to adapt the media converter to your new network requirements.

With flexible integration and connectivity up to 20 km away, you can provide network access to remote areas in other buildings, or in areas where Wi-Fi® is unreliable or unavailable.

## Rugged and reliable

This heavy-duty fiber media converter is designed for maximum reliability. It features a metal (steel) enclosure, so it can withstand the demands of harsh environments such as factories or warehouses.

Plus, by relying on this more durable fiber media converter, you can reduce the strain on your existing copper-based network equipment and potentially extend the life of those devices, which helps save future expenses.

## Diagnose and correct issues easily

This high-performance media converter supports a range of network setup and diagnostic protocols (for example, Link Fault Passthrough, Auto Laser Shutdown (ALS), and Auto MDIX, so you can set up and troubleshoot your network easily.

## **Prepare your network for the future**

If your existing network consists of RJ45 copper-based devices and cables, you might not be ready for future network expansion. Because the newest fiber-based network switches feature SFP ports more often than RJ45 ports, you might need a converter to bridge your copper and fiber networks together.

The ET91000SM20 is backed by a StarTech.com 2-year warranty, and free lifetime technical support.

## Certifications, Reports and Compatibility



## Applications

- Can be installed into the StarTech.com 20U rackmount chassis (ETCHS2U - sold separately)
- Use fiber optic cable to connect to your network from remote areas or separate buildings, at greater distances than copper (RJ45) cable allows
- Perfect for secure connections required by government agencies where EMI isn't acceptable
- Easily expand the number of ports on your existing network now, or in the future — perfect for small and medium businesses

## Features

- Flexible network integration, with support for standalone operation, or installation into the StarTech.com Rackmount Chassis (ETCHS2U - sold separately)
- Converts copper to fiber and extends your network up to 20 km (12.4 mi.) using single-mode LC fiber-optic cable (1310 nm)
- Removable SFP module (LC fiber connector) can be replaced should your network infrastructure change
- Supports Link Fault Passthrough (LFP), Auto Laser Shutdown (ALS), and Auto MDIX
- Up to 9.6K Jumbo Frame support
- Supports full or half-duplex operation, as well as autonegotiation or forced mode
- Media converter's card module is compatible with enclosures from other StarTech.com ET91000 series media converters (sold separately)
- Compatible with Gigabit (1000Mbps) copper (IEEE 802.3ab, 1000BASE-T) and fiber (IEEE 802.3z, 1000BASE-LX) protocols
- Fast, hassle-free setup
- Rugged steel enclosure

|                     |                                     |   |              |
|---------------------|-------------------------------------|---|--------------|
| <b>Hardware</b>     | Warranty                            | 2 Years   |              |
|                     | Industry Standards                  | IEEE 802.3ab (1000BASE-T)<br>IEEE 802.3z (1000BASE-LX)  |              |
|                     | PoE                                 | No  |              |
|                     | WDM                                 | No  |              |
| <b>Performance</b>  | Auto MDIX                           | Yes   |              |
|                     | Compatible Networks                 | 1000 Mbps (1 Gbps)  |              |
|                     | Fiber Operating Mode                | Half/Full-Duplex  |              |
|                     | Fiber Type                          | Single Mode   |              |
|                     | Flow Control                        | None  |              |
|                     | Jumbo Frame Support                 | 9.6K max.   |              |
|                     | Max Transfer Distance               | 20 km (12.4 mi)   |              |
|                     | Maximum Data Transfer Rate          | 2 Gbps (Full-Duplex)  |              |
|                     | MTBF                                | 65,000 Hours  |              |
|                     | Remote Management Ability           | No  |              |
|                     | Switching Architecture              | None  |              |
| Wavelength          | 1310nm                              |   |              |
| <b>Connector(s)</b> | Local Unit Connectors               | 1 - Fiber Optic LC Duplex Female<br>1 - RJ-45 Female  |              |
|                     | <b>Special Notes / Requirements</b> | The media converter can only be used with Gigabit SFP modules, and will not support 10/100Mbps modules. |              |
| <b>Indicators</b>   | LED Indicators                      | 1 - PWR<br>1 - RPF<br>1 - LFP<br>1 - LNK<br>1 - LINK - RJ45<br>1 - FULL - RJ45                          |              |
|                     | <b>Power</b>                        | Center Tip Polarity   | Positive     |
|                     |                                     | Input Current   | 0.48 A       |
|                     |                                     | Input Voltage   | 100 ~ 240 AC |
|                     |                                     | Output Current  | 1.6 A        |
|                     |                                     | Output Voltage  | 12 DC        |

|                                 |                              |   |
|---------------------------------|------------------------------|---|
|                                 | Plug Type                    | M   |
|                                 | Power Consumption (In Watts) | 19.2  |
|                                 | Power Source                 | AC Adapter Included   |
| <b>Environmental</b>            | Humidity                     | 10~90% RH (Non-condensing)  |
|                                 | Operating Temperature        | 0°C to 50°C (32°F to 122°F)   |
|                                 | Storage Temperature          | -10°C to 70°C (14°F to 158°F)   |
| <b>Physical Characteristics</b> | Enclosure Type               | Steel and Plastic   |
|                                 | Product Height               | 0.9 in [23 mm]  |
|                                 | Product Length               | 6.4 in [163 mm]   |
|                                 | Product Weight               | 14.5 oz [410 g]   |
|                                 | Product Width                | 3.5 in [88 mm]  |
| <b>Packaging Information</b>    | Shipping (Package) Weight    | 1.7 lb [0.8 kg]   |
| <b>What's in the Box</b>        | Included in Package          | <ul style="list-style-type: none"> <li>1 - Gigabit Ethernet fiber media converter</li> <li>1 - universal power adapter (NA/JP, EU, UK, ANZ)</li> <li>1 - grounding screw</li> <li>1 - instruction manual</li> </ul> |

Product appearance and specifications are subject to change without notice.