

## 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.

This versatile copper-to-fiber converter supports standalone operation. 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.

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.

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.

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

- 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

- 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

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#### Hardware

Warranty	2 Years
PoE	No
WDM	No
Industry Standards	IEEE 802.3ab (1000BASE-T) IEEE 802.3z (1000BASE-LX)

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**Performance**

Maximum Data Transfer Rate	2 Gbps (Full-Duplex)
Max Transfer Distance	20 km (12.4 mi)
Type	Single Mode
Wavelength	1310nm
Fiber Operating Mode	Half/Full-Duplex
Flow Control	None
Remote Management Ability	No
Compatible Networks	1000 Mbps (1 Gbps)
Auto MDIX	Yes
Jumbo Frame Support	9.6K max.
Switching Architecture	None
MTBF	65,000 Hours

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**Connector(s)**

Local Unit Connectors	Fiber Optic LC Duplex
	RJ-45

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**Special Notes / Requirements**

System and Cable Requirements	The media converter can only be used with Gigabit SFP modules, and will not support 10/100Mbps modules.
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**Indicators**

LED Indicators	PWR
	RPF
	LFP
	LNK
	LINK - RJ45



FULL - RJ45

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**Power**

Power Source	AC Adapter Included
Input Voltage	100 - 240 AC
Input Current	0.48 A
Output Voltage	12V DC
Output Current	1.6 A
Center Tip Polarity	Positive
Plug Type	M
Power Consumption (In Watts)	19.2

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**Environmental**

Operating Temperature	0C to 50C (32F to 122F)
Storage Temperature	-10C to 70C (14F to 158F)
Humidity	10~90% RH (Non-condensing)

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**Physical Characteristics**

Color	Black
Material	Steel
Product Length	6.4 in [16.3 cm]
Product Width	3.5 in [88 mm]
Product Height	0.9 in [23 mm]
Weight of Product	14.5 oz [410 g]

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**Packaging Information**

Package Length	8.1 in [20.7 cm]
Package Width	5.4 in [13.7 cm]
Package Height	3.5 in [90 mm]



Shipping (Package) Weight	27.5 oz [778 g]
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**What's in the Box**

Included in Package	Gigabit Ethernet fiber media converter
	universal power adapter (NA/JP, EU, UK, ANZ)
	grounding screw
	instruction manual

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***\*Product appearance and specifications are subject to change without notice.***

