## TP-Link MC210CS

# TP-Link Gigabit SFP to RJ45 Fiber Media Converter

### Model: MC210CS User Manual

## 1. Product Overview

The TP-Link MC210CS is a Gigabit SFP to RJ45 Fiber Media Converter, engineered to facilitate the conversion between 1000BASE-LX/LH fiber optic media and 1000Base-T copper Ethernet media. This device is compliant with IEEE 802.3ab 1000Base-T and IEEE 802.3z 1000Base-LX/LH standards, ensuring broad compatibility and reliable performance.

It is specifically designed for use with single-mode fiber optic cables, utilizing an SC-Type connector. The MC210CS operates at a wavelength of 1310nm for both transmitting and receiving data, supporting longwave (LX) laser specifications at full wire speed. This converter is capable of extending fiber optic distances up to 15 kilometers (9.3 miles).

## 2. Key Features

- Complies with IEEE 802.3ab 1000Base-T and IEEE 802.3z 1000Base-LX/LH standards.
- Converts 1000BASE-LX/LH fiber to 1000Base-T copper media.
- Supports single-mode fiber optic cable with SC-Type connector.
- Extends fiber distance up to 15 kilometers (9.3 miles).
- Features Auto MDI/MDI-X for the TX port.
- Equipped with front panel status LEDs for easy monitoring.
- Can be used as a standalone device or with TP-Link's 19-inch system chassis.

## 3. Hardware Description

The MC210CS features a compact design with clearly labeled ports and LED indicators for easy setup and monitoring.


**Figure 3.1: Front Panel View**

The front panel includes the Gigabit Ethernet (RJ45) port, two 1000BASE-LX fiber ports (TX and RX), and LED indicators for Power (PWR), Link/Act, and Gigabit Ethernet activity.


**Figure 3.2: Fiber Port View**

A closer look at the 1000BASE-LX fiber ports (TX for transmit, RX for receive) on the device, designed for single-mode fiber connections.


**Figure 3.3: Side Panel View**

The side panel features the power input port (9V/0.6A) for connecting the external power adapter.

## 4. Setup and Installation

Follow these steps to install your MC210CS Media Converter:

1. **Power Off Devices:** Ensure all devices to be connected (e.g., switches, routers, fiber optic equipment) are powered off before making connections.
2. **Connect Fiber Optic Cable:** Insert the single-mode fiber optic cable into the 1000BASE-LX SC-Type fiber ports (TX and RX) on the MC210CS. Ensure the cable is securely seated.
3. **Connect Ethernet Cable:** Connect a standard RJ45 Ethernet cable from your network device (e.g., computer, switch, router) to the Gigabit Ethernet port on the MC210CS.
4. **Connect Power Adapter:** Plug the provided power adapter into the 9V/0.6A power input port on the side of the MC210CS, then plug the adapter into a power outlet.
5. **Power On Devices:** Power on the connected network devices and then the MC210CS.
6. **Verify LED Status:** Check the LED indicators on the front panel to confirm proper operation.

## 5. Operating Instructions

Once installed, the MC210CS operates automatically. Monitor the LED indicators for operational status:

- **PWR (Power) LED:**
  - **On:** The device is powered on.
  - **Off:** The device is powered off.
- **Link/Act (Fiber Link/Activity) LED:**
  - **On:** A valid fiber link is established.
  - **Flashing:** Data is being transmitted or received over the fiber link.
  - **Off:** No fiber link is detected.
- **Gigabit Ethernet (RJ45 Link/Activity) LED:**
  - **On:** A valid Ethernet link is established at Gigabit speed.
  - **Flashing:** Data is being transmitted or received over the Ethernet link.
  - **Off:** No Ethernet link is detected.

## 6. Troubleshooting

If you encounter issues with your MC210CS, refer to the following common problems and solutions:

- **No Power (PWR LED is Off):**
  - Ensure the power adapter is securely connected to the device and a working power outlet.
  - Verify the power outlet is functional by plugging in another device.
- **No Fiber Link (Fiber Link/Act LED is Off):**
  - Check if the fiber optic cable is correctly and securely connected to both the MC210CS and the remote fiber device.
  - Ensure the fiber cable is not damaged or excessively bent.
  - Verify that the remote fiber device is powered on and functioning correctly.
  - Confirm that the fiber type (single-mode) and connector type (SC) match the requirements of the MC210CS.
- **No Ethernet Link (Gigabit Ethernet LED is Off):**

- Ensure the RJ45 Ethernet cable is securely connected to both the MC210CS and your network device.
- Verify that the network device (e.g., PC, switch) is powered on and its Ethernet port is active.
- Try using a different Ethernet cable to rule out cable issues.
- Confirm that the network device's Ethernet port supports Gigabit speeds.

- **Data Transfer Issues (Link/Act LEDs On but no data):**
  - Check network configurations on connected devices.
  - Ensure there are no IP address conflicts on the network.
  - Restart both the MC210CS and the connected network devices.

## 7. Technical Specifications

| Attribute | Value |
|---|---|
| Model | MC210CS |
| Brand | TP-Link |
| Product Dimensions | 3.7 x 1.1 x 2.9 inches (94.5 x 27.0 x 73.0 mm) |
| Item Weight | 7.8 ounces (220 Grams) |
| Hardware Interface | Ethernet |
| Data Link Protocol | IEEE 802.3, Ethernet |
| Data Transfer Rate | 1000 Megabits Per Second |
| Fiber Type | Single-Mode |
| Fiber Connector | SC-Type |
| Wavelength | 1310nm (TX/RX) |
| Max Fiber Distance | 15 km (9.3 miles) |
| Power Consumption | 1.8 watts (On-mode) |
| Operating Temperature | 0–40°C (32–104°F) |
| Storage Temperature | -40–70°C (-40–158°F) |
| Operating Humidity | 10–90% RH Non-Condensing |
| Storage Humidity | 5–90% RH Non-Condensing |
| UPC | 872182663966 |

## 8. Warranty and Support

TP-Link products come with a limited warranty. For detailed warranty information, please refer to the warranty card

included with your product or visit the official TP-Link website. Technical support and additional resources, including updated user guides and FAQs, are available through the TP-Link support portal.

For further assistance, you may refer to the official documentation provided by TP-Link:

- Installation Manual (PDF)
- User Guide (PDF)