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MokerLink SR 300M

MokerLink 10GBase-SR SFP+ Transceiver User Manual

Model: SR 300M

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your MokerLink 10GBase-SR SFP+ Transceiver. Please read this manual thoroughly before using the product to ensure proper functionality and safety. This transceiver is designed for high-speed data transmission over multi-mode fiber optic cables.

2. PRODUCT OVERVIEW

The MokerLink 10GBase-SR SFP+ Transceiver is a high-performance, cost-effective module designed for 10 Gigabit Ethernet applications. It complies with industry standards and offers reliable connectivity for various networking environments.



Figure 1: MokerLink 10GBase-SR SFP+ Transceiver. This image shows a top-down view of the transceiver module,

highlighting its metallic casing and the label with model information.

Key Features:

- **Data Rate:** 10Gbps
- **Wavelength:** 850nm
- **Fiber Type:** Multi-Mode Fiber (MMF)
- **Reach:** Up to 300 meters (with OM3/OM4 fiber)
- **Connector:** Duplex LC
- **Compliance:** SFF-8431, SFF-8432, IEEE 802.3ae 10GBASE-SR
- **Functionality:** Digital Diagnostics Monitoring (DDM) support via SFF-8472
- **Compatibility:** MokerLink, Cisco, Meraki, Ubiquiti UniFi, Mikrotik, TP-Link, Binardat, YuLinca, and other Open SFP+ Switches/NICs.

3. SAFETY INFORMATION

This product is a Class 1 laser product. Observe the following safety precautions:

- Do not stare directly into the optical bore of the transceiver or fiber optic cable when it is active.
- Avoid exposing eyes to direct or scattered laser radiation.
- Ensure proper grounding of equipment to prevent electrostatic discharge (ESD) damage.
- Handle the transceiver by its metal casing, avoiding contact with the electrical contacts.

4. PACKAGE CONTENTS

Verify that your package contains the following item:

- 1x MokerLink 10GBase-SR SFP+ Transceiver Module

5. SETUP AND INSTALLATION

The MokerLink SFP+ transceiver is hot-pluggable, allowing for installation or removal without powering down the host device.

Installation Steps:

1. **Prepare the Host Device:** Ensure the SFP+ port on your network switch, server, or NIC is clean and free of obstructions.
2. **Insert the Transceiver:** Gently slide the SFP+ transceiver into the designated SFP+ slot on your host device until it clicks into place. Ensure the module is oriented correctly.

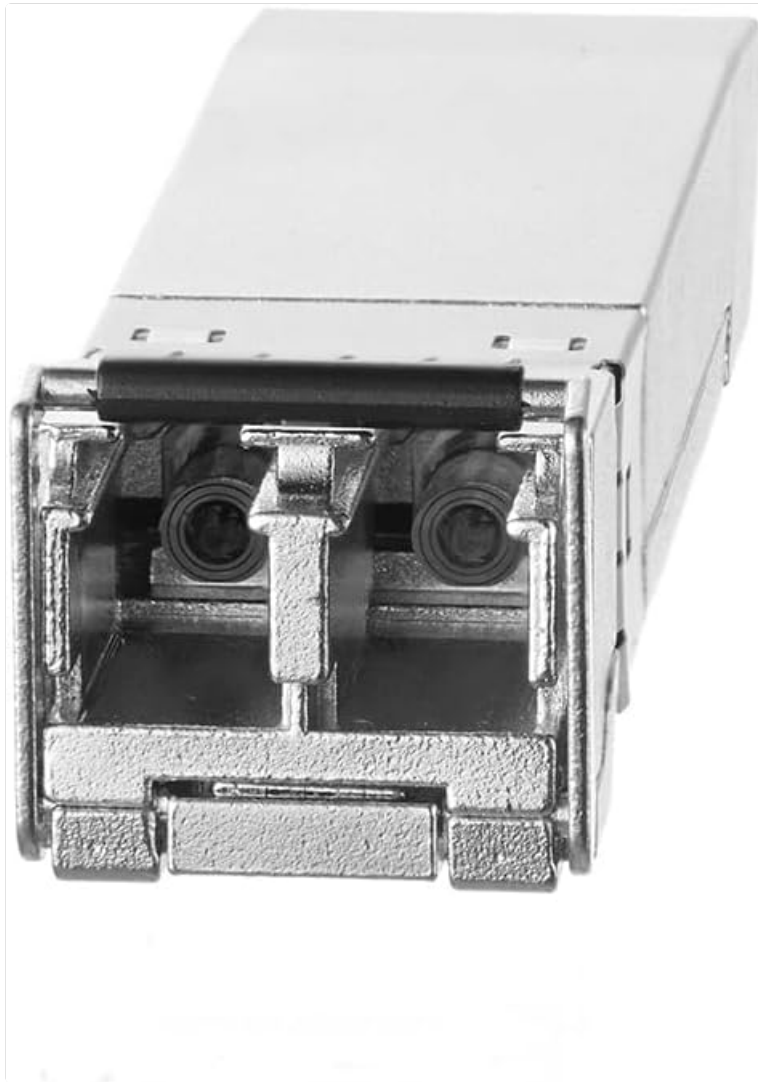


Figure 2: Front view of the SFP+ Transceiver, showing the duplex LC connector ports.

- 3. Connect Fiber Optic Cable:** Remove the dust caps from the transceiver's LC ports and your multi-mode fiber (MMF) cable. Connect the duplex LC fiber optic cable to the transceiver's ports. Ensure the transmit (Tx) port on the transceiver connects to the receive (Rx) port on the other end, and vice-versa.

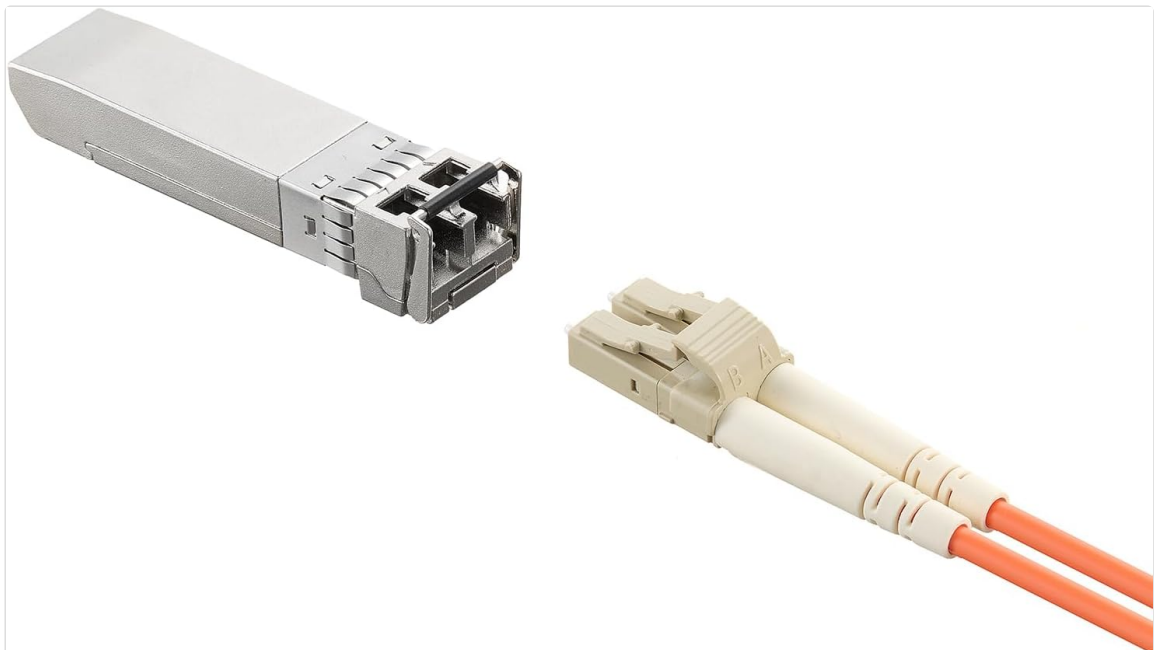


Figure 3: The SFP+ Transceiver shown next to a duplex LC fiber optic cable, illustrating the connection method.

4. **Verify Connection:** Check the link status indicators on your host device. A stable link light indicates a successful connection.

Removal Steps:

1. **Disconnect Fiber:** Carefully disconnect the fiber optic cable from the transceiver. Replace dust caps on both the transceiver and the fiber cable.
2. **Release Latch:** Pull down the bail latch (or push the release mechanism) on the transceiver.
3. **Remove Transceiver:** Gently pull the transceiver out of the SFP+ slot.

6. OPERATING INSTRUCTIONS

Once installed and connected, the MokerLink 10GBase-SR SFP+ Transceiver operates automatically. It is a plug-and-play device that establishes a 10Gbps link with compatible equipment.

Digital Diagnostics Monitoring (DDM):

This transceiver supports DDM functions, which allow for real-time monitoring of operating parameters such as transceiver temperature, laser bias current, transmitted optical power, received optical power, and transceiver supply voltage. This information can be accessed via a 2-wire serial interface, as specified in SFF-8472, through your host device's management interface (e.g., CLI or GUI).

7. MAINTENANCE

The MokerLink SFP+ transceiver requires minimal maintenance. Follow these guidelines to ensure optimal performance and longevity:

- **Keep Clean:** Always keep the optical ports of the transceiver and fiber optic cables clean and covered with dust caps when not in use. Dust and contaminants can significantly degrade optical performance.
- **Proper Handling:** Handle the transceiver carefully to avoid physical damage. Do not bend or twist the module.
- **Environmental Conditions:** Operate the transceiver within the specified temperature and humidity ranges (refer to Section 9: Specifications).

8. TROUBLESHOOTING

If you encounter issues with your MokerLink SFP+ transceiver, consider the following troubleshooting steps:

- **No Link Light:**
 - Ensure the transceiver is fully seated in the SFP+ slot.
 - Verify that the fiber optic cable is correctly connected and not damaged.
 - Check the compatibility of the transceiver with your host device. While MokerLink transceivers are broadly compatible, some devices may require specific vendor coding.
 - Inspect the fiber optic cable for bends or damage.
 - Clean the optical connectors on both the transceiver and the fiber cable.
- **Intermittent Connection:**
 - Check for loose connections at both ends of the fiber link.

- Monitor DDM parameters (received optical power) to ensure signal strength is within acceptable limits.
 - Ensure the fiber cable type (MMF) and length are appropriate for the 10GBase-SR standard (up to 300m).
- **Performance Issues:**
 - Confirm that both the transceiver and the connected device are operating at 10Gbps.
 - Check for excessive network traffic or other bottlenecks in your network infrastructure.

If problems persist after following these steps, please contact MokerLink customer support.

9. SPECIFICATIONS

Detailed technical specifications for the MokerLink 10GBase-SR SFP+ Transceiver:



Figure 4: Top view of the SFP+ Transceiver, clearly showing the model number MK-8510G-VL03D and compliance information.

Parameter	Value
Model	MK-8510G-VL03D (SR 300M)
Form Factor	SFP+
Data Rate	10Gbps
Wavelength	850nm
Transmitter	VCSEL
Fiber Type	Multi-Mode Fiber (MMF)
Max Distance	300m (with OM3/OM4 fiber)
Connector Type	Duplex LC
Power Supply	+3.3V
Power Consumption	< 1 Watt
Operating Temperature	0°C to 70°C (32°F to 158°F)
Digital Diagnostics	DDM (SFF-8472 compliant)
Compliance	SFF-8431, SFF-8432, IEEE 802.3ae 10GBASE-SR, Class 1 Laser Product (21CFR(J))

Parameter	Value
Dimensions (Package)	4.53 x 1.81 x 0.87 inches
Item Weight	1.44 ounces

10. WARRANTY AND SUPPORT

MokerLink provides the following support for this product:

- **Money-Back Guarantee:** 30-day money-back policy.
- **Warranty:** 3-Year warranty from the date of purchase.
- **Technical Support:** Lifetime technical support.

For any product quality or compatibility issues, please contact MokerLink customer support through your purchase platform or the official MokerLink website.
