Cable Matters 104066x2

Cable Matters 1000BASE-SX SFP to LC Multimode 1G Fiber Transceiver Module

Model: 104066x2

Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your Cable Matters 1000BASE-SX SFP to LC Multimode 1G Fiber Transceiver Module. This module is designed to connect network switches, servers, NICs, and media converters with an SFP port to a Gigabit fiber network, offering reliable short-reach links over duplex LC multimode fiber.

Image: The Cable Matters 1000BASE-SX SFP module installed in an SFP port of a network switch, with two LC multimode fiber cables connected. This illustrates the primary use case of the transceiver.

Key Features

- **High-Performance LC SFP Module:** Provides standards-based 1000BASE-SX Gigabit Ethernet over duplex LC multimode fiber for reliable short-reach links.
- **Universal MSA Compatibility:** Works with MSA-compliant equipment from various brands including Cisco, HPE Aruba, Ubiquiti, MikroTik, Fortinet, Meraki, Huawei, Netgear, TP-Link, D-Link, and Supermicro. Supports DDM/DOM (SFF-8472). *Note: Not compatible with proprietary vendor-locked SFP ports.*
- **Energy-Efficient & Hot-Pluggable:** Designed for low power consumption (<0.5 W) and minimal EMI emissions. Features a hot-pluggable design with built-in ESD protection for safe installation and removal.
- **Reliable Gigabit Transmission:** Supports up to 1.25 Gbps line rate at an 850 nm (VCSEL). Achieves up to 550m on 50/125µm (OM2/OM3/OM4) and up to 275m on 62.5/125µm (OM1) over 1000BASE-SX. Fully compliant with IEEE 802.3z 1000BASE-SX, SFP MSA (INF-8074i).
- **Convenient 2-Pack:** Each package includes two LC fiber SFP modules for scalable deployment and maintenance.

Image: An exploded view of the SFP module, illustrating its internal components such as gold-plated contacts, a premium integrated circuit for stable signals, a bail clasp latch for easy insertion/removal, and a protective dust cap. This highlights the design for reliability and ease of use.

Setup and Installation

1. **Preparation:** Ensure your network device (switch, server, NIC, media converter) has an available SFP port. Confirm that the device is powered off or that the SFP port supports hot-plugging. Always handle the SFP module carefully and use anti-static protection to prevent electrostatic discharge (ESD) damage.
2. **Insert the SFP Module:** Gently slide the SFP module into the designated SFP port on your network device until it clicks into place. Ensure the module is fully seated.
3. **Connect Fiber Optic Cables:** Remove the protective dust caps from both the SFP module's LC ports and your LC multimode fiber optic cables. Connect the LC connectors of your multimode fiber cable to the corresponding LC ports on the SFP module. Ensure a secure connection.
4. **Power On/Verify:** If you powered off your device, power it back on. The SFP module should be detected automatically. Check the link status indicators on your network device for a successful connection.

Image: A visual representation of the SFP module being inserted into a network switch, demonstrating the hot-pluggable nature and the connection points for LC multimode fiber cables. This highlights the ease of installation.

Operating Instructions

The Cable Matters 1000BASE-SX SFP module is designed for plug-and-play operation. Once correctly installed and connected to

compatible fiber optic cables and network devices, it will automatically establish a Gigabit Ethernet link.

- **Link Status:** Observe the LED indicators on your network switch or device. A solid green or amber light typically indicates a successful link. Refer to your network device's manual for specific LED interpretations.
- **Data Transmission:** The module supports full-duplex Gigabit Ethernet data transmission at 1.25 Gbps.
- **DDM/DOM Support:** The module supports Digital Diagnostic Monitoring (DDM) / Digital Optical Monitoring (DOM) as per SFF-8472. This allows for real-time monitoring of parameters such as optical output power, optical input power, laser bias current, temperature, and transceiver supply voltage, if supported by your network device.

Compatibility

This SFP module is designed for broad compatibility with MSA (Multi-Source Agreement) compliant equipment. It is verified to work with devices from leading brands:

- Cisco
- HPE Aruba
- Ubiquiti
- MikroTik
- Fortinet
- Meraki
- Huawei
- Netgear
- TP-Link
- D-Link
- Supermicro
- And other MSA-compliant SFP ports.

Important Note: This module is specifically for 1G SFP ports and is not compatible with 10G-Only SFP+ ports. It is also not designed for proprietary vendor-locked SFP ports that require specific vendor coding.

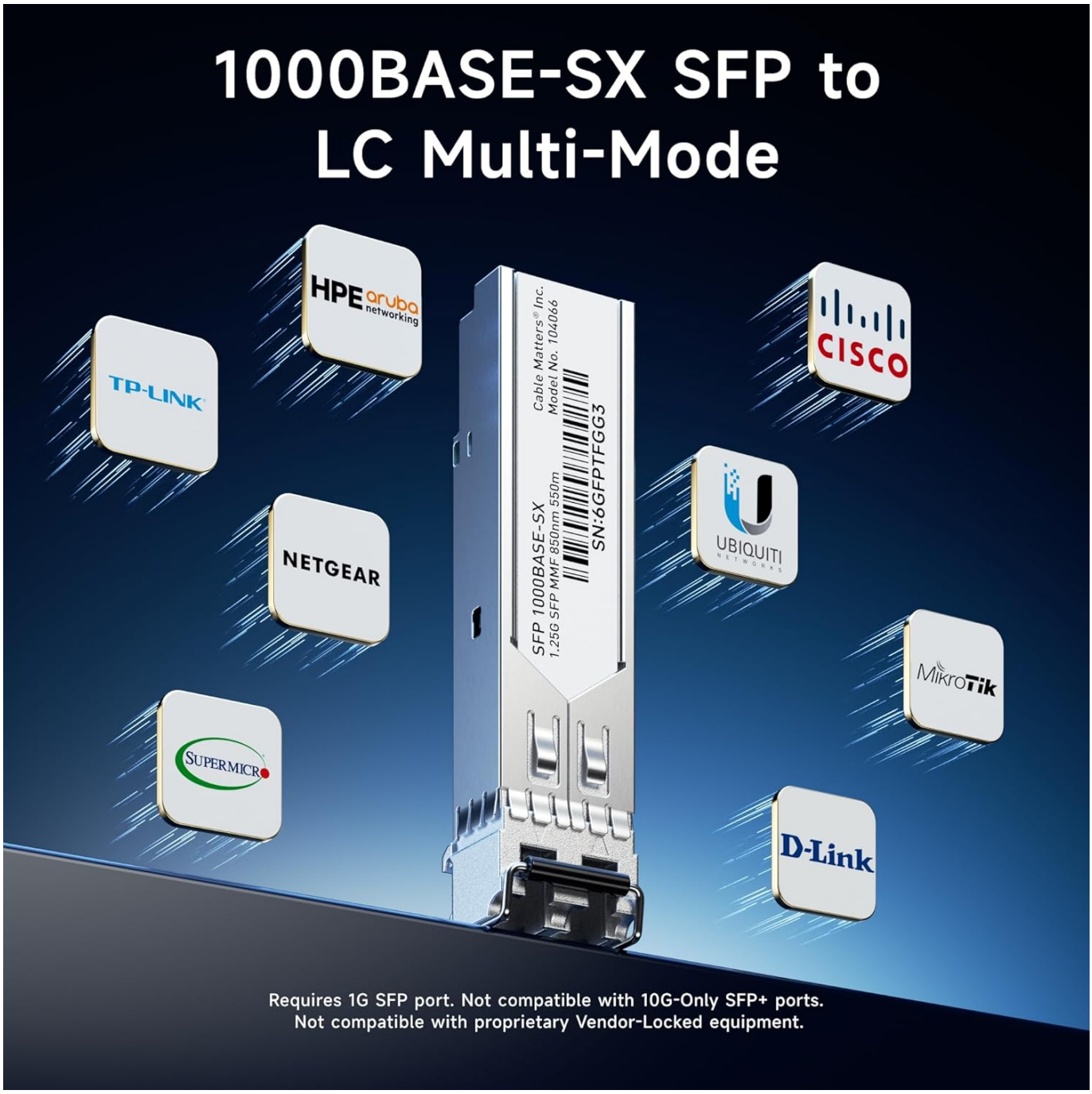

Image: The Cable Matters SFP module prominently displayed, encircled by the logos of various compatible network equipment manufacturers, including Cisco, Ubiquiti, TP-Link, Netgear, Supermicro, MikroTik, D-Link, and HPE Aruba. This visually confirms its broad MSA compatibility.

Specifications

Feature	Specification
Model	104066x2
Form Factor	SFP (Small Form-Factor Pluggable)
Data Rate	1.25 Gbps (Gigabit Ethernet)
Wavelength	850 nm (VCSEL)
Connector Type	Duplex LC
Fiber Type	Multimode Fiber (MMF)

Feature	Specification
Max Reach (50/125µm OM2/OM3/OM4)	Up to 550 meters
Max Reach (62.5/125µm OM1)	Up to 275 meters
Power Consumption	<0.5 W
Compliance	IEEE 802.3z 1000BASE-SX, SFP MSA (INF-8074i)
Special Features	Hot-pluggable, ESD protection, DDM/DOM support
Dimensions (Approx.)	5.9 cm (L) x 1.4 cm (W) x 1.2 cm (H) / 2.4 in (L) x 0.6 in (W) x 0.5 in (H)
Weight	0.05 Kilograms

Image: A visual summary of the SFP module's technical specifications, including line rate (1.25 Gbps), fiber type (MMF), wavelength (850nm), maximum reach (550m), and power consumption (<0.5W). This provides a quick overview of its performance capabilities.

Image: Two SFP modules are shown side-by-side with their approximate dimensions indicated: 2.4 inches (5.9 cm) in length, 0.6 inches (1.4 cm) in width, and 0.5 inches (1.2 cm) in height. This provides a clear understanding of the physical size of the modules.

Troubleshooting

- **No Link Light:**
  - Ensure the SFP module is fully seated in the port.
  - Verify that the fiber optic cables are correctly connected and not damaged.
  - Confirm that both ends of the fiber connection are using compatible multimode SFP modules (1000BASE-SX).
  - Check if the SFP port on your network device is enabled and configured correctly (e.g., not set to 10G-only).
  - Ensure you are using multimode fiber (OM1, OM2, OM3, OM4) and not single-mode fiber.
- **Intermittent Connection:**
  - Inspect fiber cable connectors for dirt or damage. Clean them if necessary.
  - Ensure the fiber cable length does not exceed the maximum supported distance for your fiber type (e.g., 550m for

OM3/OM4, 275m for OM1).
    - Check for excessive bends or kinks in the fiber cable.
- **Module Not Recognized:**
    - Confirm your network device's SFP port is MSA-compliant and not vendor-locked.
    - Try inserting the module into a different SFP port or a different compatible device to isolate the issue.
    - Restart the network device after inserting the module.

Maintenance

- **Keep Clean:** Always keep the protective dust caps on the SFP module's LC ports when not in use. Dust and debris can significantly degrade optical performance.
- **Handle with Care:** Avoid touching the optical interfaces of the module or fiber cables. Oils from skin can cause signal degradation.
- **Storage:** Store the SFP modules in a cool, dry environment, away from direct sunlight and extreme temperatures.
- **ESD Protection:** When handling the module, especially during installation or removal, use appropriate electrostatic discharge (ESD) precautions, such as an anti-static wrist strap.

Warranty and Support

Cable Matters products are designed for reliability and performance. For warranty information and technical support, please refer to the official Cable Matters website or contact their customer service directly. Keep your purchase receipt for warranty claims. For further assistance, visit the Cable Matters Store on Amazon.