

Axiom LFP411-AX

Axiom BlackBox SFP Module LFP411-AX User Manual

Model: LFP411-AX

INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, maintenance, and troubleshooting of the Axiom BlackBox SFP Module, model LFP411-AX. This SFP (Small Form-Factor Pluggable) transceiver is designed for optical network and data networking applications, supporting 1000Base-SX Gigabit Ethernet over multi-mode optical fiber with an LC connector.

The LFP411-AX module is engineered for compatibility across various OEM platforms, ensuring reliable performance and seamless integration into existing network infrastructures.

PRODUCT OVERVIEW



Figure 1: Axiom BlackBox SFP Module LFP411-AX. This image displays the compact form factor of the SFP module, highlighting its LC connector interface.

The Axiom BlackBox SFP Module LFP411-AX is a hot-pluggable transceiver that provides Gigabit Ethernet connectivity. It features an LC duplex connector for multi-mode fiber optic cables, operating at a wavelength suitable for 1000Base-SX applications. Its design ensures compatibility and reliable data transmission within optical networks.

SETUP AND INSTALLATION

Follow these steps to properly install the Axiom BlackBox SFP Module LFP411-AX into a compatible network device.

1. **Safety Precautions:** Ensure the network device is powered off or in a safe state before handling SFP modules. Always wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage.
2. **Identify SFP Port:** Locate an available SFP port on your network switch, router, or other compatible device.
3. **Insert SFP Module:** Gently slide the LFP411-AX SFP module into the designated SFP port until it clicks into place. Ensure the module is oriented correctly. Do not force the module.
4. **Connect Fiber Optic Cable:** Remove the dust caps from both the SFP module's LC connector and the multi-mode

fiber optic cable. Carefully insert the LC connectors of the fiber optic cable into the SFP module's ports. Ensure a secure connection.

5. **Verify Connection:** Power on the network device (if it was off). Check the link/activity LED indicators on the SFP port. A solid green or blinking green light typically indicates a successful link and data activity. Consult your network device's manual for specific LED interpretations.

Note: Always use appropriate multi-mode fiber optic cables for 1000Base-SX applications to ensure optimal performance and avoid signal degradation.

OPERATING INSTRUCTIONS

Once installed, the Axiom BlackBox SFP Module LFP411-AX operates automatically to provide Gigabit Ethernet connectivity. No specific user configuration is typically required for the SFP module itself, as its functionality is managed by the host network device.

- **Link Establishment:** Upon insertion and connection of a compatible fiber optic cable to another active network device, the SFP module will attempt to establish a 1000Base-SX link.
- **Data Transmission:** The module facilitates full-duplex Gigabit Ethernet data transmission over the connected multi-mode fiber optic link.
- **Monitoring:** Network administrators can monitor the SFP module's status, link speed, and diagnostic information (if supported by the host device) through the network device's command-line interface (CLI) or graphical user interface (GUI).

MAINTENANCE

The Axiom BlackBox SFP Module LFP411-AX is a low-maintenance device. Proper handling and care will ensure its longevity and reliable performance.

- **Keep Connectors Clean:** Always keep the fiber optic connectors on both the SFP module and the fiber cable clean. Dust and contaminants can significantly degrade optical performance. Use only approved fiber optic cleaning tools and methods.
- **Use Dust Caps:** When the SFP module is not connected to a fiber optic cable, always keep the protective dust caps on the optical ports to prevent contamination.
- **Proper Handling:** Handle the SFP module by its metal casing. Avoid touching the optical ports or electrical contacts.
- **Storage:** Store unused SFP modules in their original anti-static packaging in a cool, dry environment.

TROUBLESHOOTING

If you encounter issues with your Axiom BlackBox SFP Module LFP411-AX, consider the following troubleshooting steps:

- **No Link Light:**
 - Ensure the SFP module is fully seated in the port.
 - Verify that the fiber optic cable is correctly connected at both ends (SFP module and remote device).
 - Check the fiber optic cable for damage (kinks, sharp bends).
 - Confirm that the remote device is powered on and its corresponding SFP port is active.
 - Clean the fiber optic connectors on both the SFP module and the cable.
 - Ensure you are using a multi-mode fiber optic cable suitable for 1000Base-SX.

- **Intermittent Link or Slow Speed:**
 - Inspect and clean all fiber optic connectors.
 - Check the fiber optic cable for excessive bends or damage.
 - Verify that the cable length does not exceed the maximum supported distance for 1000Base-SX over multi-mode fiber.
 - Ensure the SFP module and the remote transceiver are compatible and operating at the same speed and wavelength.
- **Module Not Recognized by Host Device:**
 - Remove and re-insert the SFP module.
 - Ensure the host device's firmware is up to date and supports the SFP module.
 - Try the SFP module in a different port or a different compatible device to isolate the issue.

If these steps do not resolve the issue, contact Axiom technical support for further assistance.

SPECIFICATIONS

The following are the key technical specifications for the Axiom BlackBox SFP Module LFP411-AX:

Feature	Description
Model Number	LFP411-AX
Form Factor	SFP (Small Form-Factor Pluggable)
Data Rate	1.25 Gbps (Gigabit Ethernet)
Protocol	1000Base-SX
Connector Type	LC Duplex
Fiber Type	Multi-Mode Fiber (MMF)
Wavelength	850 nm
Max Distance	Up to 550m over OM2 MMF (distance varies with fiber type)
Hot-Pluggable	Yes
Dimensions (L x W x H)	2.21 x 0.53 x 0.49 inches (approximate)
Weight	0.64 ounces (approximate)
Compatibility	100% compatible in all OEM applications, MSA compliant

Note: Specifications are subject to change without notice.

WARRANTY AND SUPPORT

Axiom products are designed for reliability and performance. For specific warranty information regarding your LFP411-AX SFP module, please refer to the warranty documentation provided with your purchase or visit the official Axiom Memory website.

For technical assistance, troubleshooting beyond the scope of this manual, or product inquiries, please contact Axiom

technical support. Contact details can typically be found on the Axiom Memory website or on your product packaging.
Online Resources: For the latest drivers, firmware, and support documentation, please visit the official [Axiom Memory website](#).

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question