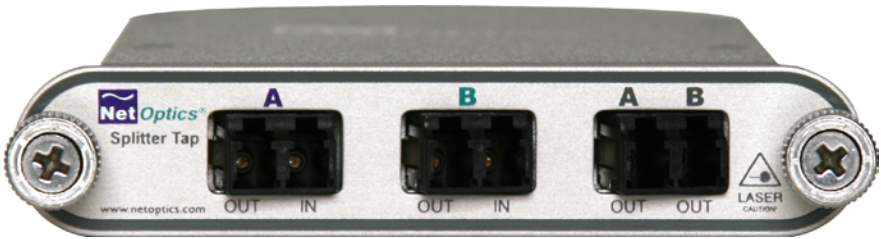


Installation Guide for GigaBit Fiber Tap



Contents

Introduction	1
Key Features	2
Unpacking and Inspection	3
Product Diagrams	4
Connecting to the Network	5
Connecting to the Monitoring Device	6
Specifications	7
Limitations on Warranty and Liability	8

PLEASE READ THESE LEGAL NOTICES CAREFULLY.

By using a Net Optics Tap you agree to the terms and conditions of usage set forth by Net Optics, Inc.

No licenses, express or implied, are granted with respect to any of the technology described in this manual. Net Optics retains all intellectual property rights associated with the technology described in this manual. This manual is intended to assist with installing Net Optics products into your network.

Trademarks and Copyrights

© 2007 by Net Optics, Inc. Net Optics® is a registered trademark of Net Optics, Inc. Additional company and product names may be trademarks or registered trademarks of the individual companies and are respectfully acknowledged.

Additional Information

Net Optics, Inc. reserves the right to make changes in specifications and other information contained in this document without prior notice. Every effort has been made to ensure that the information in this document is accurate.

Introduction

Get total traffic visibility for monitoring and security devices by placing Net Optics GigaBit Fiber Taps on critical network links. The all-optical design of the GigaBit Fiber Tap is optimized and tested for high-performance on GigaBit fiber networks. Available for both singlemode and multimode fiber, GigaBit Fiber Taps support passive monitoring of GigaBit links at 1000 Mbps.

All Optical Design

Requiring no power, the GigaBit Fiber Taps establish permanent passive access ports without introducing a point of failure or disturbing other network connections. These passive Taps deliver full-duplex monitoring with zero impact on network traffic around the clock.

Simply Plug It In

Full-duplex monitoring is a snap with a custom monitoring cable that sends each side of the signal to a separate NIC on the monitoring device. All monitoring and network cables are included with the GigaBit Fiber Tap for plug-and-play deployment.

Security and Visibility

Without an IP address, monitoring devices are isolated from the network, dramatically reducing their exposure to attacks. However, the monitoring device connected to the Tap still sees all full-duplex traffic as if it were in-line, including Layer 1 and Layer 2 errors.

Key Features

Passive, Secure Technology

- Provides passive access at 1000 Mbps without data stream interference or introducing a point of failure
- All-optical design is optimized and tested for GigaBit fiber networks
- Permanent in-line installation without affecting network performance
- Passes all full-duplex traffic (including errors) from all layers for comprehensive troubleshooting
- No IP address is needed for the Tap or monitoring device, enhancing monitoring security
- Completely transparent to the network and requires no power
- Fully RoHS compliant

Ease of Use

- Front-mounted connectors make installation and operation quick and easy
- Connectors are perfectly angled to reduce cable strain
- Monitoring and network cables included for plug-and-play deployment
- Optional 19-inch rack frames hold up to 8 Taps

Support

- Net Optics offers free technical support throughout the lifetime of your purchase. Our technical support team is available from 8 am to 5 pm Pacific Time, Monday through Friday at +1 (408) 737-7777 and via email at ts-support@netoptics.com. FAQs are also available on Net Optics website at www.netoptics.com.

About This Guide

Please read the guide before attempting to install GigaBit Fiber Tap. This guide covers the following models:

Part Number	Description
TP-SXn*-LCSLM	GigaBit Multimode Fiber Tap
TP-LXn*-LCSLM	GigaBit Singlemode Fiber Tap
TP-ZXn*-LCSLM	GigaBit Singlemode Fiber Tap - 1550nm
TP-50SX-LCSLM	GigaBit Singlemode Fiber Tap - 50 μ m

* “n” is the split ratio where 5 is 50/50, 4 is 60/40, 3 is 70/30, 2 is 80/20, and 1 is 90/10.

Unpacking and Inspection

Carefully unpack the GigaBit Fiber Tap and check for damaged or missing parts. The Fiber Tap ships with the following:

- GigaBit Fiber Tap
- 2 Network cables
- 1 Monitor cable
- Test report
- Installation Guide
- Fasteners for rack mounting

You may have also ordered a panel for rack mounting and an extended warranty. Carefully check the packing slip against parts received. If any part is missing or damaged, contact Net Optics' Customer Service immediately.

Product Diagrams

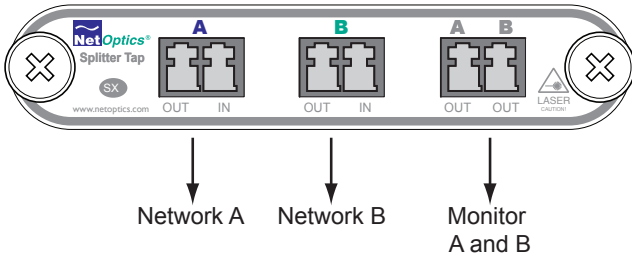


Figure 1: TP-SX*-LCSLM Front Panel

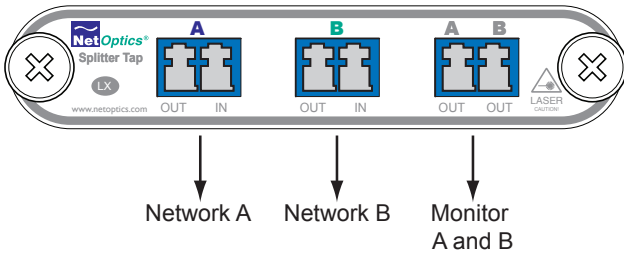


Figure 2: TP-LX*-LCSLM Front Panel

Connecting to the Network

1. Connect Network Port A to the appropriate network device using a Duplex LC cable.
2. Connect Network Port B to the appropriate network device using a Duplex LC cable.
3. Verify that the Tap Network Ports are cabled in-line between two devices.

Note:

The use of Singlemode (8.5µm) or Multimode (50µm or 62.5µm) cabling is determined by the model purchased.

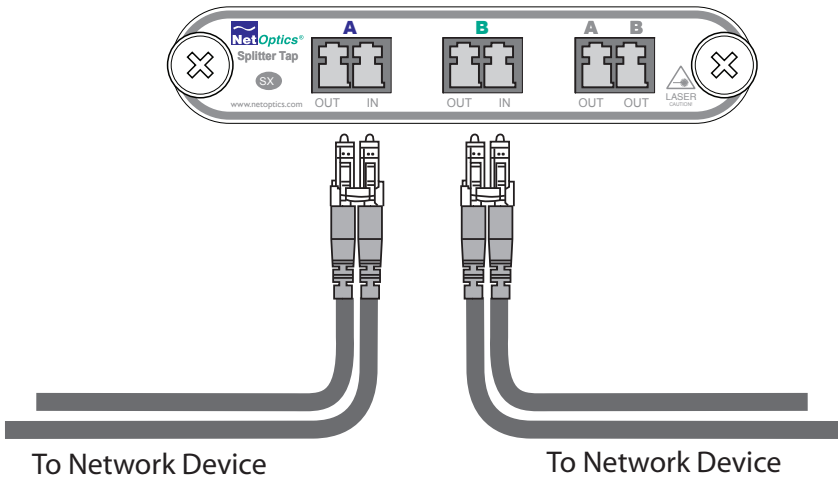


Figure 3: Connecting to the Network

Connecting to the Monitoring Device

1. Connect to the Monitor Port using a Duplex LC cable.
2. Connect the Monitor Port to the appropriate monitoring device using a Duplex LC cable.
3. Verify that the Tap Monitor Port is cabled to the monitoring device.

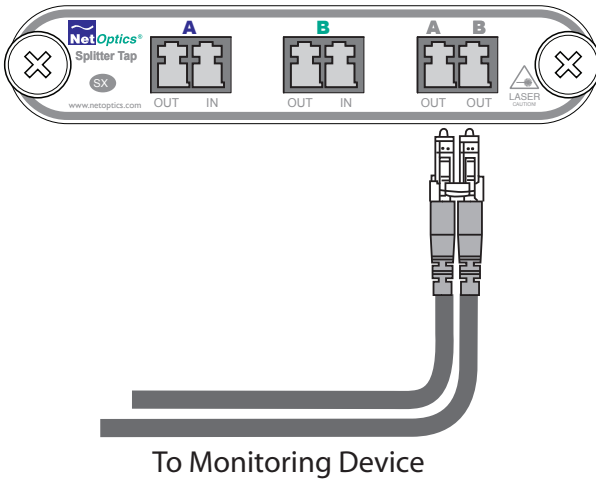


Figure 4: Connecting the Monitoring Device

Specifications

Splitter Specifications

Fiber Type:

Corning Multimode 62.5/125 μ m, wavelength 850nm

Corning Multimode 50/125 μ m, wavelength 850nm

Split Ratio	Network Port Insertion Loss	Monitor Port Insertion Loss
90/10	≤ 1.3 dB	≤ 11.5 dB
80/20	≤ 1.8 dB	≤ 8.1 dB
70/30	≤ 2.4 dB	≤ 6.3 dB
60/40	≤ 3.1 dB	≤ 5.1 dB
50/50	≤ 4.5 dB	≤ 4.5 dB

Fiber Type:

Corning Singlemode 8.5/125 μ m, wavelength 1310nm

Corning Singlemode 8.5/125 μ m, wavelength, 1550nm

Split Ratio	Network Port Insertion Loss	Monitor Port Insertion Loss
90/10	≤ 0.8 dB	≤ 12.0 dB
80/20	≤ 1.3 dB	≤ 8.0 dB
70/30	≤ 2.0 dB	≤ 6.1 dB
60/40	≤ 2.8 dB	≤ 4.8 dB
50/50	≤ 3.7 dB	≤ 3.7 dB

Environment

Operating Temperature: -40°C to 85°C

Storage Temperature: -55°C to 85°C

Relative Humidity: 10% min, 95% max, non-condensing

Mechanical

Dimensions: 0.8" high x 5.5" deep x 4" wide

Connectors

(1) Duplex LC connector (monitor port)

(2) Duplex LC connectors (network ports)

Certifications

Fully RoHS compliant

Limitations on Warranty and Liability

Net Optics offers a limited warranty for all its products. IN NO EVENT SHALL NET OPTICS, INC. BE LIABLE FOR ANY DAMAGES INCURRED BY THE USE OF THE PRODUCTS (INCLUDING BOTH HARDWARE AND SOFTWARE) DESCRIBED IN THIS MANUAL, OR BY ANY DEFECT OR INACCURACY IN THIS MANUAL ITSELF. THIS INCLUDES BUT IS NOT LIMITED TO LOST PROFITS, LOST SAVINGS, AND ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OR INABILITY TO USE THIS PRODUCT, even if Net Optics has been advised of the possibility of such damages. Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Net Optics, Inc. warrants this Tap to be in good working order for a period of ONE YEAR from the date of purchase from Net Optics or an authorized Net Optics reseller.

Should the unit fail anytime during the said ONE YEAR period, Net Optics will, at its discretion, repair or replace the product. This warranty is limited to defects in workmanship and materials and does not cover damage from accident, disaster, misuse, abuse or unauthorized modifications.

If you have a problem and require service, please call the number listed at the end of this section and speak with our technical service personnel. They may provide you with an RMA number, which must accompany any returned product. Return the product in its original shipping container (or equivalent) insured and with proof of purchase.

Additional Information

Net Optics, Inc. reserves the right to make changes in specifications and other information contained in this document without prior notice. Every effort has been made to ensure that the information in this document is accurate. Net Optics is not responsible for typographical errors.

THE WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, EXPRESS OR IMPLIED. No Net Optics reseller, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

Net Optics is always open to any comments or suggestions you may have about its products and/or this manual.

Send correspondence to
Net Optics, Inc.
5303 Betsy Ross Drive
Santa Clara, CA 95054 USA
Telephone: +1 (408) 737-7777
Fax: +1 (408) 745-7719
Email: info@netoptics.com/Internet: www.netoptics.com

All Rights Reserved. Printed in the U.S.A. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form, by any means, without prior written consent of Net Optics, Inc., with the following exceptions: Any person is authorized to store documentation on a single computer for personal use only and that the documentation contains Net Optics' copyright notice.

www.netoptics.com