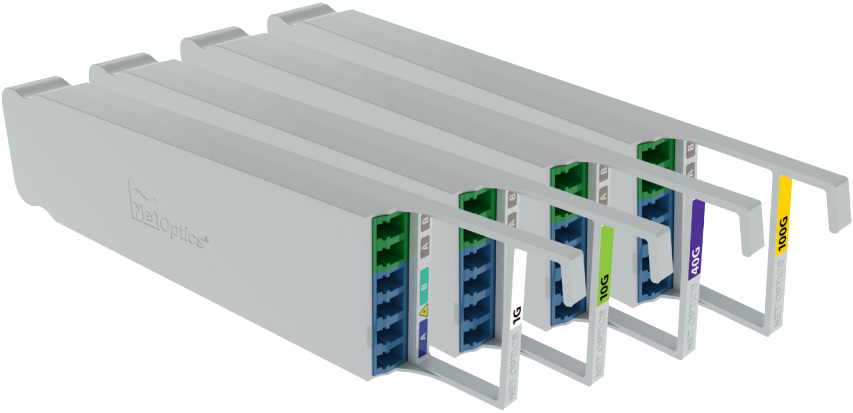
Installation Guide for Flex Tap



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Introduction

Get total traffic visibility for monitoring and security devices by placing Net Optics Flex Taps on critical network links. The all-optical design of the Flex Tap is optimized and tested for high-performance on fiber networks. Available in LC connector types for single mode or multimode fiber networks running at ATM, 1 Gigabit, 10 Gigabit, 40 Gigabit, and 100 Gigabit speeds.

All-Optical Design

Requiring no power, Flex Taps maintain 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 Net Optics Flex Taps 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 inline, including Layer 1 and Layer 2 errors.

Key Features

Passive, Secure Technology

- High Density Design saves rack space up to 24 Taps in 1U
- Each model is tested and optimized for 1 Gigabit, 10 Gigabit, 40 Gigabit, and 100 Gigabit speeds
- Available in Single Mode and Multimode
- All split ratios available: 50, 60, 70, 80, and 90
- No IP address protects against attacks
- Compatible with all protocols and monitoring devices
- Passes all full-duplex traffic (including errors) from all layers
- Non-disruptive and transparent
- Quick, easy installation saves time with front-mounted connectors
- Requires no power
- Removable, flexible and scalable

Ease of Use

- Front-mounted connectors make installation and operation quick and easy
- Optional 19-inch rack mount hold up to 24 Taps
- Compatible with all major manufacturers' monitoring devices, including protocol analyzers, probes, and intrusion detection systems

Unsurpassed Support

In the event that you require our assistance, our world-class technical support is available to help you.

Support is available 24x7 for customers with a Premium Service Plan, and from 7:00 a.m. to 5:30 p.m. PST, Monday through Friday, for all other customers.

If, at any time, you have questions, please feel free to contact us by using one of the following methods:

- Phone: (408) 737-7777
- Email: support@netoptics.com
- Customer Portal: http://customer.netoptics.com/

About This Guide

Please read this guide before attempting to install the Flex Tap.

Unpacking and Inspection

Flex Taps are individually packaged in smaller cartons and shipped in larger, multi-pack shipping carton. Carefully open the multi-pack shipping carton and remove the individual Flex Tap packages.

The Flex Tap multi-pack carton ships with the following:

- Flex Taps (ordered quantity)
- Flex Tap spacer unit
- Quick Installation Guide (printed inside the package)

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

To unpack the Flex Tap from its individual package:

1. Open the package end flaps and slide the protective sleeve out of its package.

2. Use your finger to reach inside the protective sleeve and push out the cardboard retainer tabs.

3. Carefully slide the Flex Tap unit out of its protective sleeve.

4. Check to ensure that there is no damage to the unit.

   If the unit appears damaged, contact the Net Optics Customer Service Department immediately.

Rack Mounting the Flex Tap Panel

The Flex Tap panel is a purchased option and shipped in a separate carton.

If you purchased a Flex Tap panel:

1. Carefully remove the panel and its mounting screws from the shipping carton.

2. Find an appropriate mounting location for the Flex Tap panel in your cabinet or equipment rack.

3. Use the four rack-mounting screws provided to secure the panel in place.

Loading the Flex Tap into the Panel

Each panel is designed to hold up to 24 Flex Taps—12 slots that hold two Flex Taps each. Two Flex Taps fit snugly into each slot.

To load the Flex Taps into the panel:

1. Slide the tap into the panel slot with the handle on top until it is seated in the detents at the rear of the panel slot.

2. Repeat Step 1 for each Flex Tap unit until you have either partially or fully populated the panel (see "Figure 1. Fully Populated Flex Tap Panel").

3. Insert a Flex Tap spacer unit to hold the odd numbered tap in place if you have an odd number of Flex Taps loaded into the panel.

   The spacer ensures the Flex Tap is held snugly in place.

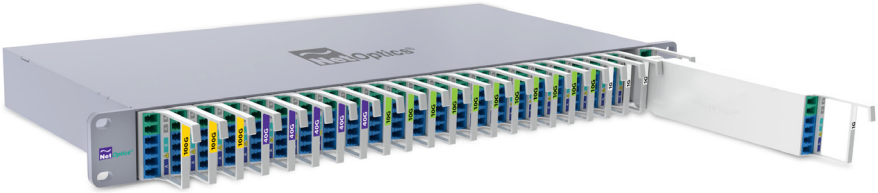

Figure 1. Fully Populated Flex Tap Panel

Notes: _____

The monitor port LC is green for Single Mode and beige for Multimode.

Connecting the Cables

Complete the following steps to connect the network and monitor cables (see "Figure 2. Connecting to the network and monitors" on page 6):

To connect to the network (in-line links):

1. Connect Network Port A to the appropriate network appliance using a Duplex LC cable.

2. Connect Network Port B to the appropriate network appliance using another Duplex LC cable.

To connect to the monitoring tool:

1. Connect the custom Duplex LC analyzer cable to the monitor port on the tap.

   These custom cables can be ordered separately (contact Sales).

2. For a full-duplex monitor, plug Monitor Port A and Monitor Port B into two ports on the tool.

Notes:

Traffic from Network A is routed to Monitor A, and traffic from Network B is routed to Monitor B.

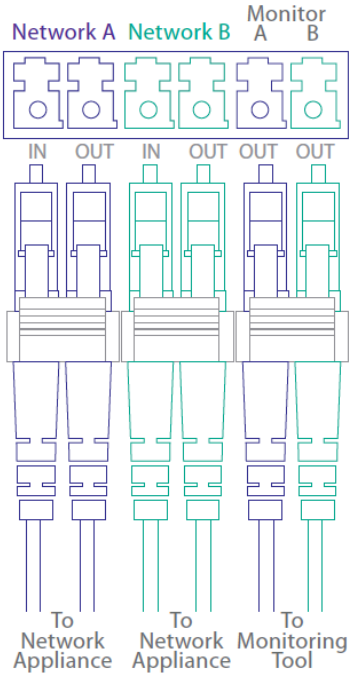

Figure 2. Connecting to the Network and Monitor Ports

Labels

The label displays the following information pertaining to the particular unit:

Description: Model description

Split Ratio

P/N: Part number (model number)

Rev: Revision level

S/N: Serial number

Max Insertion Loss in dB: Light insertion loss measured at each port

Compliance Notifications

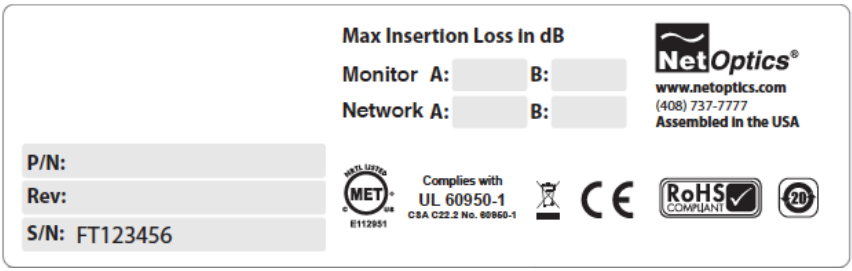

Figure 3. Product Label

Specifications

Operating

Operating Temperature: 0º to 40º C
Storage Temperature: –10º to 70º C
Relative Humidity: 10% minimum, 95% maximum, non-condensing

Mechanical

Tap Dimensions: 1.63 inches High x 7.82 inches Deep x 0.66 inches Wide
Rack Dimensions: 1.74 inches High x 8.41 inches Deep x 19.0 inches Wide

Fiber Type

Multimode:
Core Size: 50/125μm; Wavelength: 850nm/1300nm
Core Size: 62.5/125μm; Wavelength: 850nm/1300nm
Single Mode:
Core Size: 8.5/125μm; Wavelength: 1310nm/1550nm

Connectors

Network Ports: (2) Duplex LC connectors
Monitoring Port: (1) Duplex LC connector

Split Ratio Multimode

Split Ratio	Network Port Insertion Loss	Monitor Port Insertion Loss
50/50	4.5 dB	4.5 dB
60/40	3.1 dB	5.1 dB
70/30	2.4 dB	6.3 dB
80/20	1.8 dB	8.1 dB
90/10	1.3 dB	11 .5 dB

Split Ratio Single Mode

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

Limitations on Warranty and Liability

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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.

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

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