Installation Guide for

10/100BaseT Multi-Station Tap

Models TP4-CU, TP8-CU, TP12-CU, TP16-CU, TP20,CU

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Contents

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Additional Information

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Introduction

Net Optics 10/100BaseT Taps supply mission-critical networks with superior network visibility and security access. The breakthrough design of the Net Optics 10/100BaseT Tap ensures zero impact on network traffic while maintaining uninterrupted access for monitoring and security devices. These are the world's first and only 10/100BaseT Taps offering "zero delay" technology.

The efficient 4 Station 10/100BaseT Tap connects up to four monitoring devices to four different links, saving rack space, time, and money.

Zero Delay™ – A Net Optics Breakthrough

Highly sensitive network locations can improve monitoring performance via the innovative features of Net Optics Taps. If power is lost to other 10/100 Taps, the connected devices may introduce delays as they detect the power loss and try to re-establish their link.

Net Optics' engineering breakthrough ensures that any loss of power to the Tap is transparent to the network, and does not affect the flow of traffic through the Tap – eliminating packet delay and loss as potential security issues.

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.

Reliability

For extra uptime protection, Net Optics 10/100BaseT Taps offer redundant power connections. Should the primary power source fail, the Tap automatically switches to the backup power source. Power LEDs on the front of the Tap indicate the current power source – even if power is lost and reapplied, there is always zero delay to network traffic.

Key Features

Passive, Secure Technology

- Provides passive access at speeds of 10 or 100 Mbps without data stream interference or introducing a point of failure
- Unique Zero Delay technology ensures no packet delay or loss if power is lost to the Tap
- 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
- Redundant power ensures monitoring uptime
- Fully IEEE 802.3 compliant (model TP4-CU only)
- Fully RoHS compliant

Ease of Use

- Front-mounted connectors make installation and operation quick and easy
- LED indicators show redundant power status
- Efficient one rack unit enclosure
- Silk-screened application diagram illustrates all connections for easy deployment
- Tested and compatible with all major manufacturers' monitoring devices, including protocol analyzers, probes, and intrusion detection/prevention systems

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 10/100 Multi-Station Tap. This guide covers the following models:

Part Number	Description
TP4-CU	10/100BaseT 4 Station Tap
TP8-CU	10/100BaseT 8 Station Tap
TP12-CU	10/100BaseT 12 Station Tap
TP16-CU	10/100BaseT 16 Station Tap
TP20-CU	10/100BaseT 20 Station Tap

Unpacking and Inspection

Carefully unpack the 10/100 Multi-Station Tap and check for damaged or missing parts. The Tap ships with the following:

- 10/100 Multi-Station Tap
- 2 Power Cords
- Installation Guide
- Rubber Feet
- Fasteners for rack mounting

You may have also ordered 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

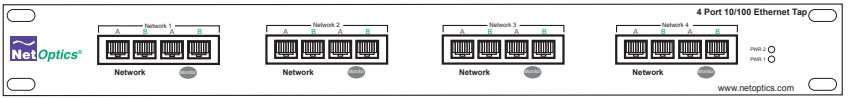

Figure 1: TP4-CU Front Panel

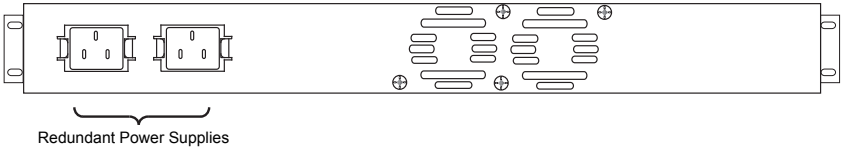

Figure 2: TP4-CU Rear Panel

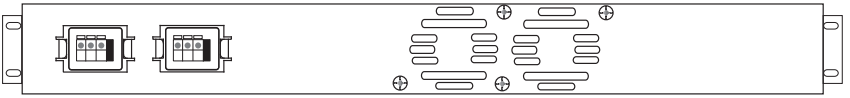

Figure 3: -48V Rear Panel (All models)

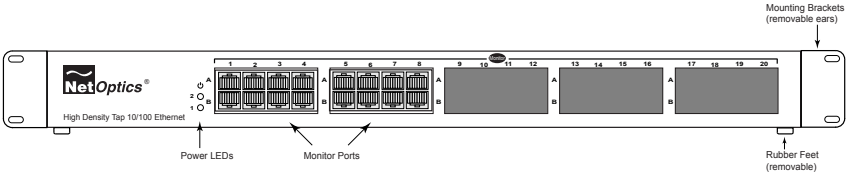

Figure 4: TP8-CU Front Panel

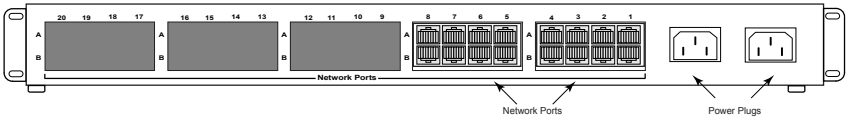

Figure 5: TP8-CU Rear Panel

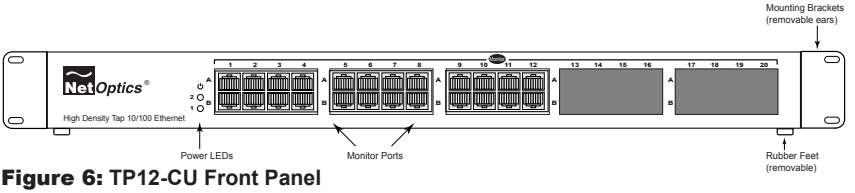

Figure 6: TP12-CU Front Panel

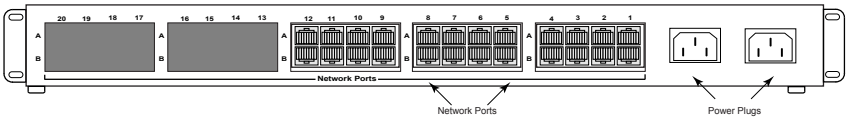

Figure 7: TP12-CU Rear Panel

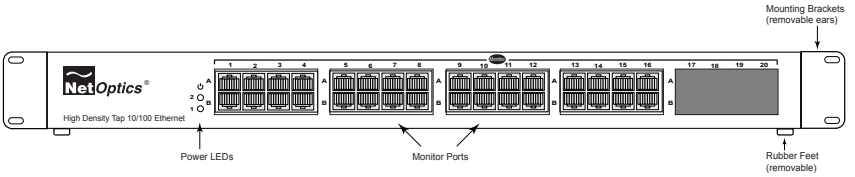

Figure 8: TP16-CU Front Panel

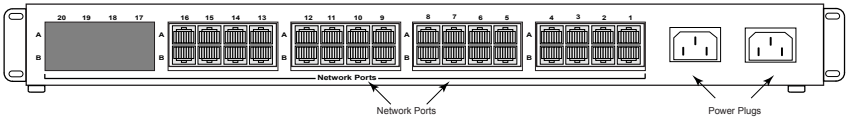

Figure 9: TP16-CU Rear Panel

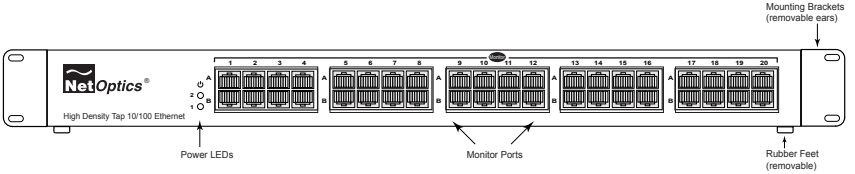

Figure 10: TP20-CU Front Panel

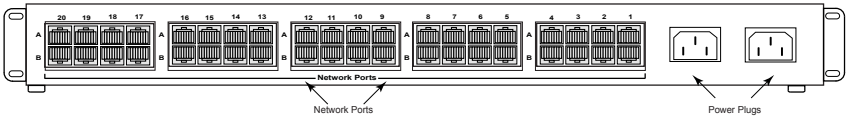

Figure 11: TP20-CU Rear Panel

Cabling Guidelines

- If connecting to Switches or Hubs, use CAT5 RJ45 cross-over cabling.
- If connecting to Routers or NICs, use CAT5 RJ45 straight-through cabling.

Connecting to the Network

1. Connect Network Port A to the appropriate switch, server or router using a CAT5 cable.

2. Connect Network Port B to the appropriate switch, server or router using a CAT5 cable.

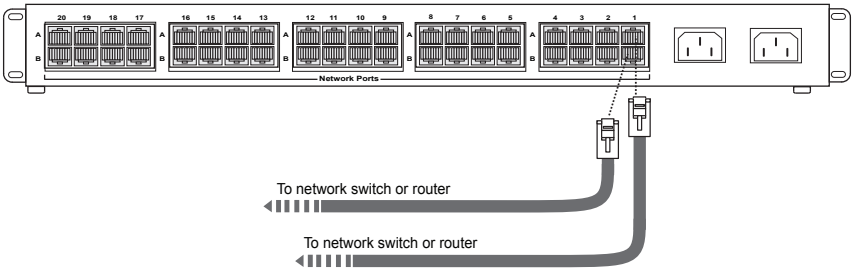

Figure 12: Connecting to the Network

3. Verify that the Tap Network Ports are cabled in-line between two devices.

4. Repeat Steps 2-3 for each network you wish to Tap and Monitor.

Connecting to the Monitoring Device

1. Supply power to the Tap using the two redundant power supplies included with the unit. Verify that the Power LED illuminates.

2. Connect Monitor Port A to the appropriate port on the monitoring device using a CAT5 straight-through cable.

3. Connect Monitor Port B to the appropriate port on the monitoring device using a CAT5 straight-through cable.

Note:

The second power supply is available to support the flow of traffic to the monitoring device in the event that the first power supply becomes unavailable.

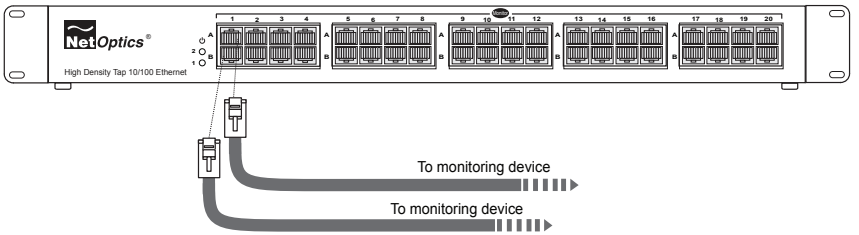

Figure 6: Connecting to the Monitoring Device

4. Repeat Steps 2-3 for each monitoring device you wish to connect to the 10/100 Multi-Station Tap.

Specifications

Environment

Operating Temperature: 0˚C to 40˚C
Operating Temperature: -10˚C to 70˚C
Relative Humidity: 10% min, 95% max, non-condensing

Power

Power Supply Input: 100-240VAC, 0.5A, 47-63Hz
Output: 12V 1.5A

-48V Power Supply Input: -48V DC typical, -36V DC min, -75V DC max

Mechanical

Dimensions: 1.75” high x 3” deep x 16.9” wide

Cable Interface

Copper Cable Type: 22-24 AWG unshielded twisted pair cable, CAT5/CAT5e
Link Distance Supported: 100 meters (model TP4-CU only)
Link Distance Supported: 85 meters (All other models)

Certifications

- 10/100BaseT Tap is compliant with IEEE 802.3 and 802.3af specifications. (model TP4-CU only)
- Fully RoHS compliant

Connectors

TP4-CU model:
(8) RJ45, 8-pin connectors (monitor ports)
(8) RJ45, 8-pin connectors (network ports)

TP8-CU model:
(16) RJ45, 8-pin connectors (monitor ports)
(16) RJ45, 8-pin connectors (network ports)

TP12-CU model:
(24) RJ45, 8-pin connectors (monitor ports)
(24) RJ45, 8-pin connectors (network ports)

TP16-CU model:
(32) RJ45, 8-pin connectors (monitor ports)
(32) RJ45, 8-pin connectors (network ports)

TP20-CU model:
(40) RJ45, 8-pin connectors (monitor ports)
(40) RJ45, 8-pin connectors (network ports)

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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

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