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## Installation Guide for GigaBit Copper In-Line Regeneration Tap™

*Models RGN-GCU-IL2, RGN-GCU-IL4, RGN-GCU-IL8*



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***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.

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## **Introduction**

Net Optics GigaBit Copper Regeneration Taps solve the key physical layer challenges of multi-device monitoring for GigaBit copper networks. For a better picture of network health, this Tap connects up to eight different network management and security devices at any single GigaBit network location.

### **One Tap, No Idle Resources**

Keep your intrusion detection and prevention systems, protocol analyzers, RMON probes, and other security devices productive with a single Regeneration Tap. Maximize resources and save on access points when multiple devices can monitor link traffic simultaneously through a single Regeneration Tap. Secure, passive access for multiple devices simply means a better return on monitoring investments.

### **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 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.

## **Key Features**

### **Passive, Secure Technology**

- Enables real-time, simultaneous monitoring of a single GigaBit link with up to eight monitoring devices
- Provides complete full-duplex visibility at 1000 Mbps without data stream interference or introducing a point of failure
- Passes all 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 RoHS compliant

### **Ease of Use**

- LED indicators show redundant power, speed, link, and activity status
- Front-mounted connectors support easy installation and operation
- 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](mailto:ts-support@netoptics.com). FAQs are also available on Net Optics website at [www.netoptics.com](http://www.netoptics.com).

## About This Guide

Please read the guide before attempting to install GigaBit Copper In-Line Regeneration Tap. This guide covers the following models:

Part Number	Description
RGN-GCU-IL2	2x1 GigaBit Copper In-Line Regeneration Tap
RGN-GCU-IL4	4x1 GigaBit Copper In-Line Regeneration Tap
RGN-GCU-IL8	8x1 GigaBit Copper In-Line Regeneration Tap

## Unpacking and Inspection

Carefully unpack the GigaBit Copper In-Line Regeneration Tap and check for damaged or missing parts. The Tap ships with the following:

- GigaBit Copper In-Line Regeneration Tap
- Two power cords
- Installation Guide
- 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.

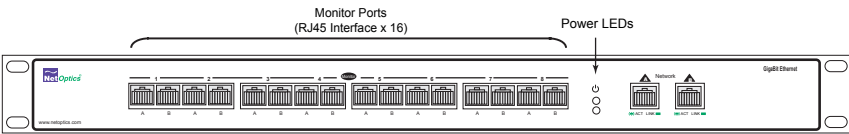
**Product Diagrams**



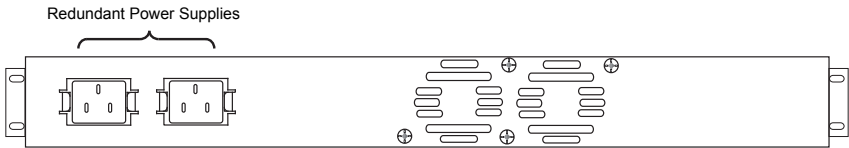
**Figure 1: RGN-GCU-IL2 Front Panel**



**Figure 2: RGN-GCU-IL4 Front Panel**



**Figure 3: RGN-GCU-IL8 Front Panel**



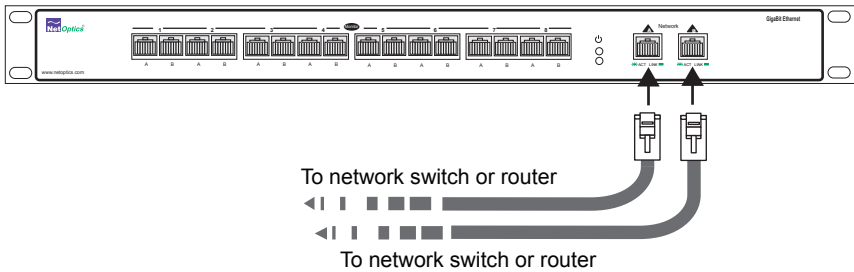
**Figure 4: Rear Panel (all models)**

## LED Indicators

- **Link Indicators:** Located on the right corner of each RJ45. If a good link is established, the LED illuminates a steady green.
- **Activity Indicators:** Located on the left corner of each RJ45. If there is current activity on this link, the LED flashes green.
- **PWR 1/ PWR 2:** Main and Redundant Power. If the Tap is deployed with both power supplies, both LEDs illuminate white when the Tap is connected to power. An off power LED indicates that the corresponding power supply is not functioning or not connected.

### Connecting to the Network

1. Connect Network Port A to the appropriate switch Network port using a CAT5e RJ45 cable.
2. Connect Network Port B to the appropriate switch Network port using a CAT5e RJ45 cable.



3. Check the RJ45 connector LEDs to verify that the Regeneration Tap is receiving traffic from the in-line ports.

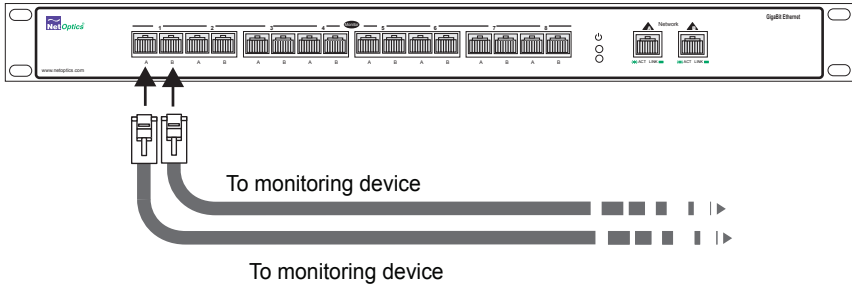
**Figure 6: Connecting to the Network**

**Note:**

*The second power supply is available to support the flow of traffic to the monitoring device should the first power supply fail. If the first power supply is unavailable, the second power supply supplies all power for the Tap.*

## Connecting to the Monitoring Devices

1. Supply power to the Tap using the power supply adapter included with the unit. Verify that the power LED illuminates.
2. Connect Monitor A ports to the appropriate monitoring devices using a



CAT5e RJ45 cable. These devices will monitor Network port traffic from Network A port.

**Figure 7: Connecting the Monitoring Devices**

3. To monitor a second Network port link, connect Monitor B ports to the appropriate monitoring devices using a CAT5e RJ45 cable. These devices will monitor Network port traffic from Network B port.

## Specifications

### Environment

Operating Temperature: 0°C to 55°C

Storage Temperature: -10°C to 70°C

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

### Power

Power Supply Input: 100-240VAC, 0.5A, 47-63Hz

### Mechanical

Dimensions: 1.75" high x 10.5" deep x 17" wide

### Cable Interface

Copper Cable Type: 22-24 AWG unshielded twisted pair cable, CAT5e

Link Distance Supported: 100 meters

### Connectors

#### **RGN-GCU-IL2 model:**

(4) RJ45, 8-pin connectors (monitor ports)

(2) RJ45, 8-pin connectors (network ports)

#### **RGN-GCU-IL4 model:**

(8) RJ45, 8-pin connectors (monitor ports)

(2) RJ45, 8-pin connectors (network ports)

#### **RGN-GCU-IL8 model:**

(16) RJ45, 8-pin connectors (monitor ports)

(2) RJ45, 8-pin connectors (network ports)

### Certifications

Fully RoHS compliant

## **Limitations on Warranty and Liability**

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Net Optics, Inc. warrants this Regeneration 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.

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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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