

# SUNRISE TELECOM®

# GigE Responder®

GIGR

Data Sheet



**The low-cost GigE Responder provides Ethernet loopback and ping functions in a handheld, battery powered chassis.**

The GigE Responder provides loopback functionality in a low-cost, handheld platform that is the perfect companion to the SunSet MTT Ethernet and Gigabit Ethernet modules as well as the STT Ethernet, STT Metro, and STT ONE modules. When Ethernet and IP traffic passes through a switch or router, the source and destination addresses are checked, logged, and used for directing the traffic. A simple hard loop like those used for TDM networks are insufficient for testing. Instead, a smart loop device must swap the source and destination addresses in the MAC and IP headers.

With a standard, full-featured test set on one end of a circuit and the GigE Responder on the other, a technician can verify throughput, bit error rate, roundtrip delay, packet jitter (delay variation), and quality of service. The GigE Responder is compatible with RFC 2544 testing and is also well suited for Ethernet over SONET/SDH (EOS) testing. The ping function verifies Layer 3 connectivity for Internet access, Voice over IP (VoIP), IPTV, and other IP services.

## KEY FEATURES

- 10/100/1000BASE-T, RJ-45 Port
- 1000BASE-X, SFP Port
- Loopback for Layer 1, 2, and 3
- IP Ping, Traceroute for Layer 3 connectivity test

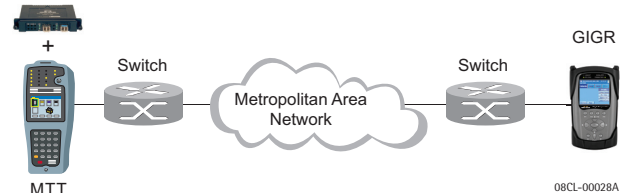
## BENEFITS

- Low-Cost
- Lightweight
- Battery or AC Powered
- Simple operation with Pass/Fail indication
- Responds to loopback commands from MTT and STT test modules
- Manual Loopback, Ping and Traceroute compatible with all Ethernet test products

## APPLICATIONS

### Loopback

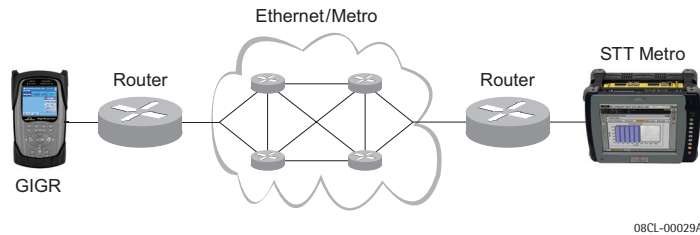
SSMTT-29 or other optional Test Modules



Loopback mode allows the specified Ethernet port to send incoming Ethernet frames back to the sender for end-to-end testing. Performing loopback tests is a common means of verifying the roundtrip delay of the network. The Ethernet loopback functions have been designed to emulate those used in traditional T-carrier networks. Manual mode immediately sets the port into loopback, whereas Responder mode allows the far end unit to send loop up and loop down commands.

## Ping Test

The complexity of a routed IP network can make traditional throughput testing cumbersome and time consuming. The GigE Responder offers a simple ping test to verify Layer 3 connectivity. Ping testing also has the advantage that it works with any router or device that responds to ICMP Echo request packets and does not require a second test set.



## SPECIFICATIONS

### Connectivity

#### 10/100/1000BASE-T

RJ-45 UTP: Automatic detection of straight/cross-over cable  
Auto-Negotiation: Enable or Disable, Pause, Asymmetric Pause, Half- or Full-Duplex, results displayed

#### 100BASE-X

SFP: Small Form-factor Pluggable, LC Connectors  
Auto-Negotiation: Enable or Disable, Pause, Asymmetric Pause, results displayed

#### VLAN

VLAN ID  
Priority

#### IP

Static or DHCP

Static values:

- Static IP
- Gateway
- Subnet Mask
- DNS Server

### Loopback

#### Operational Modes

Manual

- Compatible with all MTT and STT Ethernet testers

Respond

- Loops in response to Loopback command sent from remote unit
- Compatible with MTT-28 and -29 modules and STT Ethernet and Metro modules

#### Test Layers

Layer 1

- No swapping of addresses

Layer 2/3

- Swaps MAC and IP source and destination addresses
- Auto-detects presence of IP packet header

### Loopback Behavior

Layer 1

- Loops back all frames

Layer 2/3

Loops back all Unicast MAC frames

Discards Layer 2 and 3 frames with:

- CRC error
- Multicast or Broadcast MAC addresses
- Identical Source and Destination MAC addresses

### Ping Test

#### Ping Test

Sends Echo (ping) requests  
Statistics on Ping messages

### Trace Route

Trace the IP route over IP Network  
Gateway, Router IP address traceability

## PRODUCT DESCRIPTION

Size (W x L x H): 3.6 x 6.3 x 1.6 in (90 x 160 x 40 mm)

Weight: 1.10 lb (0.50 kg)

Color TFT-LCD screen: 320 x 240

Operating temperature: 32° to 104°F (0° to 40°C)

Storage temperature: -4° to 158°F (-20° to 70°C)

Humidity: 10% to 85% non-condensing

Link/Activity, Signal/Error, Pat. Sync, Power/Battery, LEDs

Li-Ion rechargeable batteries

Retractable stand

Water projection proof

Other connectors

- DC power jack for charger
- USB Host connector for file transfer. RJ-45 ports can be used for field software upgrade, file management and transfer.

## ORDERING INFORMATION

GIGR	GigE Responder
SA580-850	850 nm LC SFP Field Interchangeable Optical Transceiver
SA580-1310	1310 nm LC SFP Field Interchangeable Optical Transceiver
SA580-1550	1550 nm LC SFP Field Interchangeable Optical Transceiver
SA580-RJ	1000Base-T SFP Transceiver

#### Additional Accessories:

SA148	SFP Optics Container
SA265	Cable, 100 Ohm, CAT 5, RJ45 (M) to RJ45 (M), Cross-over, 6'
SA266	Cable, 100 Ohm, CAT 5, RJ45 (M) to RJ45 (M), 6'
SA561	Optical Patch Cord, LC-SC duplex, MMF, 62.5/125 um, 6'
SA562	Optical Patch Cord, SMF, LC-SC duplex, 6'
SA671	Carrying Case

For more information or a directory of sales offices: [info@sunrisetelecom.com](mailto:info@sunrisetelecom.com) | [www.sunrisetelecom.com](http://www.sunrisetelecom.com)

