

SUNRISE TELECOM® SunLite GigE

SLGE
Data Sheet



The SunLite GigE is an integrated Gigabit Ethernet test unit

The SunLite GigE, is a rugged, compact and lightweight handheld test solution with long battery operation hours for the installation and maintenance of Metro Ethernet and IP services. A complete set of testing capabilities makes the SunLite GigE ideal for the field technician who needs to verify end-to-end transport of Gigabit Ethernet/IP traffic, perform BER tests, determine throughput, link utilization, round trip delay, and IP connectivity.

The intuitive graphical user interface of the SunLite GigE, along with the straightforward creation and sharing of test profiles, allow technicians with limited Ethernet or IP testing experience to verify performance parameters for Gigabit Ethernet services. The wide range of test functionalities of the SunLite GigE provides all of the tools needed for verifying Service Level Agreements (SLAs) between service providers and their customers.

KEY FEATURES

- Full 10/100 Mbps and Gigabit Ethernet (1000 Mbps) line rate traffic generation
- Performs throughput, latency, frame loss, and back-to-back tests per RFC 2544
- BER testing at Layer 2, and Layer 3 (IP) for Gigabit Ethernet and IP services
- IP verification with Ping, Trace Route, and IP Throughput across a routed network
- Generate up to 8 traffic flows with different MAC address, VLAN tags, MPLS, IP address, payload and bandwidth configurations
- Class of Service (CoS) (via VLAN P-bit) and IP Type of Service (ToS)/DSCP traffic prioritization settings
- 10/100/1000BASE-T and 1000BASE-X dual media test interfaces
- Control/Respond Loopback feature to loop-up/down a far end STT, MTT Ethernet test modules or GigE Responder
- Test Profiles for fast and efficient test set configuration and operation

BENEFITS

- Rugged, compact, lightweight, quick boot-up time, high resolution color screen
- Eliminates the need for multiple instruments
- Complete solution for Installation and Maintenance (I&M) of Gigabit Ethernet and IP services
- Cost-effective and future-proof
- Completely interoperable with STT, MTT Ethernet test modules or GigE Responder for mixed 10/100/1000 Ethernet deployments

TEST FEATURES

- Enables service providers and operators to turn-up and troubleshoot Gigabit Ethernet and IP services
- Allows service providers to verify SLAs between themselves and their customers
- Automated SLA verification with RFC 2544 testing
- Layer 2 CoS settings for verifying Metro Ethernet services
- Test profile storing and loading for fast deployment of Gigabit Ethernet services

SPECIFICATIONS

Connector type
 Duplex LC for 1000Base-X
 RJ-45 UTP for 10/100/1000Base-T
 Optical transceiver type: SFP (small GBIC) field interchangeable
 SA580-850 (1000Base-SX)
 Transmitter
 – Wavelength: 850 nm multi-mode
 – Power: -9.5 dBm to -4 dBm
 Receiver
 – Wavelength: 770 nm to 860 nm
 – Signal: -21 dBm to 0 dBm max
 Optical Power Measurement (OPM) function available
 SA580-1310 (1000Base-LX)
 Transmitter
 – Wavelength: 1310 nm single-mode
 – Power: -9.5 dBm to -4 dBm
 Receiver
 – Wavelength: 1270 nm to 1600 nm
 – Signal: -25.5 dBm to -3 dBm max
 Optical Power Measurement (OPM) function available

SA580-1550 (1000Base-ZX)

Transmitter

- Wavelength: 1550 nm single-mode
- Power: +3 dBm to -2 dBm

Receiver

- Wavelength: 1270 nm to 1570 nm
- Signal: -24 dBm to -3 dBm max

Optical Power Measurement (OPM) function not available

SA580-RJ (1000Base-T)

1000Base-T SFP transceiver

Operation Mode

Point-to-Point mode

Auto-negotiation enabled or disabled

Auto-negotiation parameters: Pause flow control, 10/100/1000 full/half duplex mode

BER/Throughput Testing

End-to-end testing with two test sets

Single-ended testing with loop on the other end

Traffic Generation

Layer 2, or Layer 3 traffic

Configurable source and destination MAC address

Configurable 802.1q VLAN tag and 802.1p priority

Configurable source and destination IP address (IPv4)

Configurable IP header fields (ToS, TTL, Protocol, and Frame Offset) for QoS verification testing

Up to 8 traffic flows (MAC address, IP address, VLAN tag)

Test patterns: All 1s, All 0s, Alt1010, ITU-T PRBS (2e9, 2e11, 2e15, 2e20, 2e23, 2e31) normal or invert, or user defined (2 bytes)

Frame length 48 to 1522 bytes or Jumbo frame (up to 12 kbytes)

Frame rate 0% to 100% bandwidth utilization with steps of 0.01%

Traffic shaping: Constant, ramp, or burst

Error/Alarm injection: Bit, CRC error and rate injection

Test duration

Measurements

Performance statistics: Transmitted and received bandwidth utilization (Min, Max, Average), frame rate (Min, Max, Average), transmitted and received line rate and data rate (kbps)

Frame statistics: Aggregate and per stream statistics in number of transmitted and received frames, number of received VLAN tagged frames, number of lost, out of sequence frames, number of received runt, oversized, multicast, flow control, broadcast and unicast frames, inter-frame delay measurement (Min, Max, Avg, Variation)

Loopback Mode

Automatically loops incoming frames with swapping the source and destination MAC/IP address

Manual or controller/responder mode

IP Features

Ping

Sends Echo (Ping) requests

Statistics on Ping messages

Trace Route

Trace the IP route over the IP network

Gateway, Router IP address traceability

RFC 2544

Throughput, latency, frame loss rate, and back-to-back frames tests conform to RFC 2544 standard

Recommended frame sizes (64, 128, 256, 512, 1024, and 1518 byte) plus one user configurable frame size (64-12000 byte) can be tested

Tests can be run individually or in sequence

Available for Layer 2, and Layer 3 testing, including Ethernet routed circuits

Configurable IP header fields (ToS, TTL, Protocol, and Frame Offset) for QoS verification testing

Other Features

Multiple User Profiles

Up to 16 different test configuration profiles may be saved

Test profiles saved and loaded with the press of a button

Results

Test results are saved in text format for easy retrieval, sharing, print and analysis of data through the management port

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

SLGE	Single port, dual media, 10/100/1000 Mbps Ethernet test unit
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'

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