GL-400

Gigabit Ethernet Analyzer

GL-400 is a comprehensive Ethernet analyzer specially designed for deploying Gigabit Ethernet networks. GL-400 is the only handheld Gigabit Ethernet Analyzer in the market that offers dual GgaE electrical ports and dual GigaE optical ports in one unit. It supports Ethernet cable testing, Ethernet layer 1/2/3 BER testing, round trip delay, RFC2544 performance testing, monitors network status with its through-mode capability, simulates multi-streams and generates packages on layer 2/3, and also provides a complete diagnosing tool to analyze the Ethernet status, to meet most of the test requests for a Gigabit Ethernet network.

GL-400's excellent features, portable size and user-friendly GUI design make it the perfect test equipment for benchmark testing and FTTx field installation, maintenance and troubleshooting.

Applications

- Installation, maintenance and troubleshooting Gigabit Ethernet Links:
  Metropolitan Area Network.
  FTTA, FTTB, FTTC and etc.
  Key accounts such as banks, universities, large enterprises and etc.
- Benchmark test and performance and interoperability test on site for Ethernet related equipment

Key Features

Comprehensive test interfaces – GL400 comes with dual 10/100/1000base-T ports (RJ45) and dual 100/1000 base-X ports (SFP). Its dual-port testing operation mode (two RJ54 or two SFP ports or one each of RJ45 and SFP) completes most of the tests with a single GL400.

Multiple traffic generation – generate and transmit layer 2 and 3 packages in three modes (constant, ramped and burst). The speed is configurable from 1Mbps to 1000Mbps. It is able to simulate multi-stations as many as 500.

RFC2544 Benchmark Test - test full line rate of 10/100 Mbps and GigaE performances including Throughput, Latency, Frame Loss and Back-to-Back Frames tests.

Layer 1/2/3 BERT - test network end-to-end Bit Error Rate, and also able to insert errors.

PING Test – verify network connectivity.

Tracert Test - able to perform trace route test to identify IP addresses of all the gateways, routers as well as their associated hostnames on the route to the remote node.

Layer 2/3 loopback delay test – measure the round trip time of layer 2 and 3 data package. The load, frame type and extra long/short frames are selectable.

Network bandwidth utility statistics - provide max, min, average and current value

Flash port - identify the port in the switch/router that is under test from the remote.

Cable Test and Fiber Diagnosis
- LAN cable Mapping to identify LAN cable assignment, open/short.
- Cable length.
- When using a SFP transceiver supporting the diagnostic monitoring interface, GL-400 can display optical TX/RX power.

Loss of Service test – measure the time switching from one physical link to another physical link.

Electrical and Optical interface converting – in through-mode operation, GL-400 can also be used as a converter between optical and electrical connections.

Remote auto Loopback – if necessary, GL-400 can be set to a loopback mode. This is very convenient for long haul end-to-end test.

Super Terminal – support VT1000 via a serial port or Ethernet port. The user feels like working on a real PC.

Fruitful interfaces - support the serial port, USB and LAN port for uploading data or transferring to other equipment or using VT1000.

In-line monitoring – besides the end-to-end test and loopback testing, GL-400 also supports the through-mode for in-line monitoring. It can achieve bi-directional throughput monitoring, and various stats of layer 2/3 and network bandwidth usage. And stats results (counts) can be listed following the order of MAC/IP address.

Layer 2 filters - able to set up the broadcasting type (unicast or multicast), source/destination MAC address, and frame type (DIX/802.3 SNAP), VLAN ID and so on.

Layer 3 filters – able to set up the source/Destination IP address filter; enable/disable the bi-directional filter and TOS/DSCP filter.

Frame size stats - count frames for frame size of 64, 65~127, 128~25, 256~511, 512~1023, 1024~1518 respectively, and able to choose and turn on/off the layer 2 filters before starting stats.

Layer 2 stats - basing on the MAC address, provide stats results of unicast, multicast, CRC Error, short frames, long frames, overtime transmission, Alignment error frame, control frame, pause frame and as well as number of conflicted frames, and able to choose and turn on/off the layer 2 filters before starting stats.

Layer 3 stats - basing on the IP address, provide stats results of the IP, IPX, ARP, RARP, Banyan, DECnet, SNA, AppleTalk, NetBIOS and protocol type of data package, and able to choose and turn on/off the layer 3 filters before starting stats.

VLAN stats – display the number of network VALN frames, VLAN ID and priority, and able to choose and turn on/off the layer 2 filters before starting stats.

VLAN and QoS configuration - VLAN is configurable and QoS criteria can be preset up.

Remote control – remote GL400 can be controlled via Ethernet connection.

Save, print, copy, recall, delete test results – all of the test results can be saved and printed. For file management, the user can recall, delete and copy the saved test results.

Remote data downloading - the user can conveniently download the saved data anywhere through the Internet connection.

Acquire test results remotely – allow the user to login using Internet Explorer and download saved test results.

Online support – the user can get operation instruction and related information from "help"

General specifications

Test Interface:	• Two 10/100/1000BASE-T ports (RJ45)
	• Two 100/1000BASE-X ports
	  ❖ 100 BASE-FX (850nm SM, 1310nm MM)
	  ❖ 1000BASE-SX (850nm MM)
	  ❖ 1000BASE-LX (1310nm SM)
	  ❖ 1000BASE-ZX (1550nm SM)
	Up to two ports function at same time. In the dual-port mode, the user can choose a combination of any of two ports (2 RJ45, 2 SFP or one RJ45 and one SFP).

Other Interfaces	• USB1.1 (2) - for external storage and firmware upgrade • RS232 – VT1000 • 10Mbps – data upload, remote control
Display	TFT LCD. Resolution: 320 x 240. It is capable of displaying text and graphics at up to 16-bit color.
Weight	1.1kg (with battery)
Power	• Battery: 3800MA removable rechargeable Li battery pack, continuously work hour: >5 hours • AC/DC adapter: 100-240V, 50/60Hz, output 12V, 1500mA
Dimensions (mm)	190(L)×108(W)×50(H)
Operating temperature	0ºC to 40ºC
Storage temperature	-10ºC to 55ºC
Humidity	10% ~ 90% (non condense)
Memory	64M RAM, 128M CF card

The FibreOptica Limited 1828 Sutter Parkway, Powell, OH, 43065, USA. www.fibreo.com, info@fibreo.com, Tel: +1-614-798-2057