Overview

GL’s PacketExpert™ 10G (PXG100) provides comprehensive testing of 10 Gbps wirespeed Ethernet/IP networks. It has two 10Gbps Electrical/Optical ports, and two 10/100/1000 Mbps Electrical/Optical ports, which are capable of BERT, Smart Loopback, BERT/Loopback, and RFC 2544 test functionalities.

Each GigE port provides independent Ethernet/VLAN/MPLS/IP/UDP testing at wirespeed with applications such as BERT, Smart Loopback, BERT/Loopback, and RFC 2544. BERT is implemented for all layers. RFC 2544 is applicable for Layers 2, 2.5, and 3, and Loopback is applicable for Layers 2, 3, and 4.

GL also offers Touchscreen Handheld PacketExpert™ 10G version of 10G Ethernet/IP Tester (PXG101), with a Tablet PC mounted on PacketExpert™ 10G, making it highly suitable for field testing.

PacketExpert™ 10G supports the following important functionalities -- Wire speed BERT, Smart Loopback, RFC 2544 Testing, PacketBroker, Record Playback, ExpertSAM, Multi-Stream UDP/TCP Traffic Generator and Analyzer, and ExpertTCP™.

It truly takes confusion out of Ethernet/IP testing at all protocol layers - from Layer1 frames to IP/UDP packets. It can be used as a general purpose Ethernet to IP performance analysis tool for 10 Mbps, 100 Mbps, 1 Gbps and 10Gbps Ethernet Local Area Networks and Wide Area Networks (WAN).

With the capability to generate/receive traffic with stacked VLAN (Q-in-Q) and stacked MPLS, PacketExpert™ 10G finds use in testing a wide range of networks – from testing individual links/switches, testing local Ethernet/IP networks (LAN), end to end testing of Wide Area Networks (WAN), testing Core/MPLS networks, and much more.

GL’s other Ethernet/IP tester variants include PacketExpert™ in 1Gbps versions. These are portable quad port models. There is also the HD-PacketExpert™ in 12 and 24 GigE port versions, for testing GigE switches, routers & network conditions and WAN Emulators - IPLinkSim™ and IPNetSim™ for testing GigE switches, routers and network conditions.

For detailed information on PacketExpert™ 10G, visit https://www.gl.com/packetexpert-10g-optical-ethernet-tester.html
Wire Speed BER Testing
PacketExpert™ 10G supports Wire speed BERT up to 10Gbps simultaneously over Framed Ethernet (Layer2), Stacked VLAN (Q-in-Q), Stacked MPLS (Layer 2.5), IP and UDP. It can generate and receive various BER Traffic Patterns, including various PRBS patterns, Bit Error Insertion, and FCS Error Insertion. Wire speed BERT is also supported on 1000 Mbps Electrical /Optical interface.

The screen below displays the PacketExpert™ 10G GUI, running All Port BER test on Port#1 and Port#2 10G optical ports.

RFC 2544 Testing
PacketExpert™ 10G supports RFC 2544 tests up to 10Gbps. RFC 2544 tests includes Ethernet Throughput, Latency, Frame Loss, and Back-to-Back performance tests in accordance with RFC 2544 specifications. The test is setup such that the traffic can be generated and transmitted on either of the ports and the looped back traffic from the DUT is received on the opposite port validating the test parameters. RFC 2544 tests are also supported on 1000 Mbps Electrical /Optical interface.
PacketExpert™ 10G supports Command Line Interface (CLI) with additional CGX100 licenses to access all functionalities such as All Port Bert, All Port Loopback, Bert/Loopback, and RFC 2544 connecting to all clients (TCL, C#, Python) using MAPS™ CLI Server environment.

Remote Control

PacketExpert™ 10G includes report generation option to create consolidated CSV and PDF file format reports for 10G Optical and 1000Mbps Electrical/Optical ports. The following sample CSV and PDF reports generated for ‘All ports BERT’ test includes Interface, BERT Statistics, Tx/Rx Statistics, Tx/Rx Configuration details for each of the Electrical and Optical ports.

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Specifications

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<th>Port on 10G Hardware Unit</th>
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<td>Interfaces:</td>
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Buyer’s Guide

PXG100 - PacketExpert 10G™
CXG100 - CLI Server for PXG100 (10G Platforms)

Related Hardware

PXN100 - PacketExpert™ 10GX
CXN100 - CLI Server for PXN100
PXN101 - 10G option for PXN100
PXN112 - PacketExpert™ 10GX – SA (12-Port)
PXN124 - PacketExpert™ 10GX – SA (24-Port)
PXG101 - PacketExpert 10G™ Tablet (Coming Soon)
PXG104 - PacketExpert™ 10G Rackmount
PXE100 - PacketExpert™ 1G
PXE104 - PacketExpert™ - SA (4 ports)
PXE112 - PacketExpert™ - SA (12 Ports)
PXE124 - PacketExpert™ - SA (24 Ports)

Related Software

PXG105 - Wire speed Record /Playback 10G
PXG106 - ExpertSAM™ 10G
PXG107 - PacketBroker 10G
PXG108 - Multi Stream Traffic Generator and Analyzer 10G
PXG108 - ExpertTCP™ 10G
ETH100 - PacketCheck™
PKV100 - PacketScan™ (Online and Offline)