



WAN (or IP) Emulators Platforms

February 2019

- **IPNetSim™ – WAN Emulator (Multi-Stream and up to 10Gbps)**
 - ◆ IPNetSim™ (1/10Gbps) - is an optional application available with PacketExpert™ portable platforms (IPN506, IPN507) and rack mount mTOP™ appliance (IPN507+MT001/MT001E). IPNetSim™ provides multi-stream WAN emulation capability (16 bidirectional unique streams with aggregate traffic capacity of 1Gbps and 4 bidirectional unique streams with aggregate traffic capacity of 10Gbps).

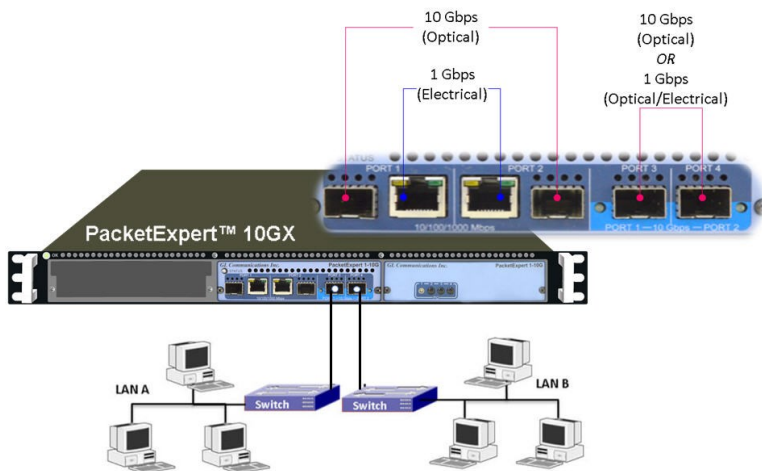
- **IPLinkSim™ - WAN Link Emulator (Single Stream and up to 10Gbps)**
 - ◆ IPLinkSim™ (1/10Gbps) - is an optional application available with PacketExpert™ portable platforms (IPN506, IPN507) and rack mount mTOP™ appliance (IPN507+MT001/MT001E). IPLinkSim™ can emulate a bidirectional IP WAN link with varying capacities from 10Mbps to 1000Mbps on 1G ports and up to 10Gbps on 10G ports.

- **PacketExpert™ mTOP™ Probe 10G/1G Unit**
 - ◆ PacketExpert™ mTOP™ Probe unit is a stand-alone hardware variant, an all-in-one self-contained test instrument. 10Gbps/1Gbps Electrical/Optical ports supports BERT, Smart Loopback, RFC 2544, ExpertSAM, Record and Playback, IPLinkSim™ and PacketBroker functionalities.

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WAN (or IP) Test Platforms



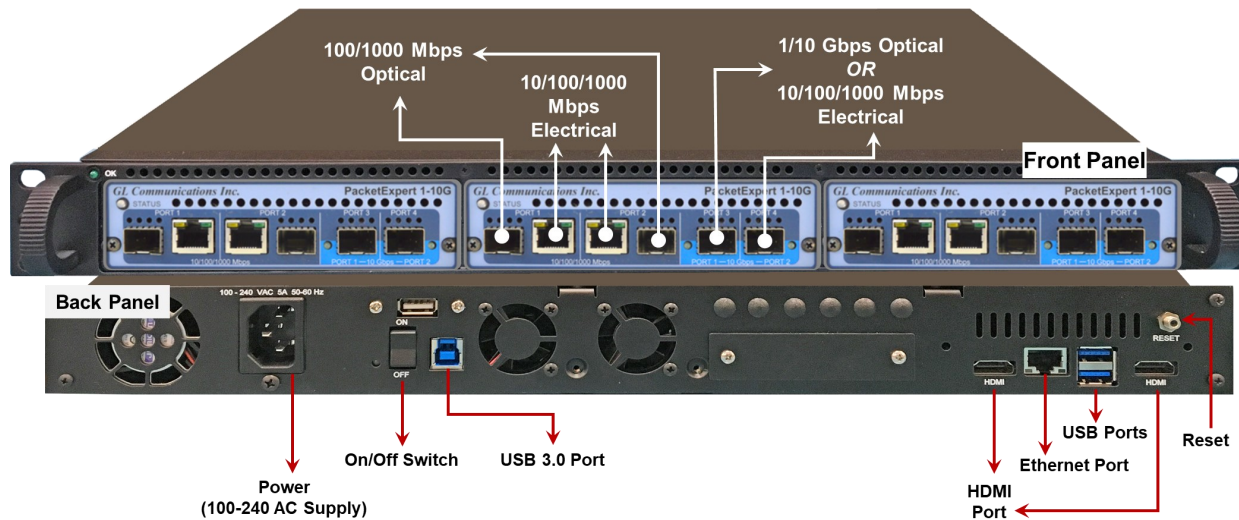
IPNetSim™ (Multi-Stream WAN Emulator) connecting 2 network end points

IPNetSim™ - Multi-Stream WAN Emulator

IPNetSim™ appliance is an optional application available with PacketExpert™ portable platforms and rack mount mTOP™ appliance (MT001, MT002, MT003, MT004) supporting 1Gbps/10Gbps WAN link emulation.

IPNetSim™ is connected to the 2 end points of a WAN link. It can be configured to act either as a transparent bidirectional Ethernet link or a simple Ethernet bridge between 2 end points. The links are emulated between Port 1 (P1) and Port 2 (P2). IPNetSim™ bandwidth can be controlled to simulate various WAN link speeds (RS232/DSL/Modem/T1/E1/T3/E3 etc.).

In real-time, a single IPNetSim™ can emulate different WAN scenarios like Head Office to Data Center, Head Office to Branch Office etc.



mTOP™ Rack Enclosure with IPNetSim™ 1G/10G

- Emulates IP network with access to 10 Gbps full duplex link or a 10/100/1000 Mbps full duplex link.
- "Stream Definition" feature to classify traffic on each port into separate streams
- Emulates bidirectional WAN links (up to 16 streams on 1 Gbps ports and 4 streams on 10 Gbps ports)
- Check the stability or performance of the network with various real world WAN conditions (Bandwidth control, Latency/Delay, Packet Loss, Packet Reordering, Packet Duplication, & Logic Errors)



visit <http://www.gl.com/wan-link-emulation-ipnetsim.html>

WAN (or IP) Test Platforms

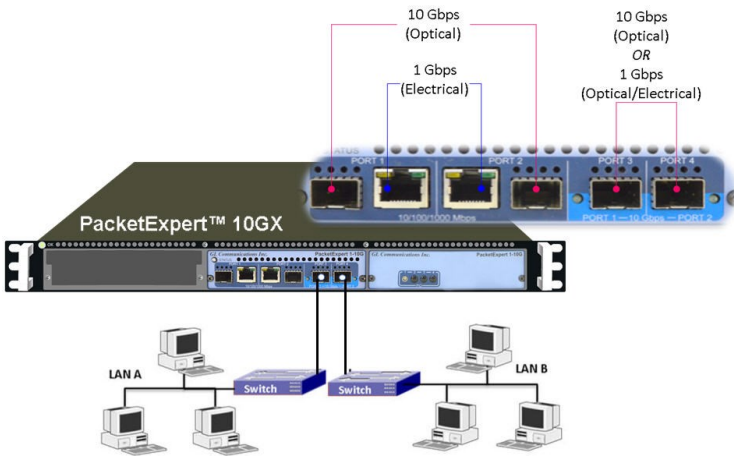


Figure: IPLinkSim™ (WAN Emulator) connecting LAN 1 and LAN 2

IPLinkSim™ - Single Stream WAN Emulator (1 Bi-directional link, 2 active ports)

IPLinkSim™ appliance is an optional application available with PacketExpert™ portable platforms and rack mount mTOP™ appliance (MT001, MT002, MT003, MT004) supporting 1G and 10G WAN link emulation.

IPLinkSim™ acts as a transparent bidirectional link or a simple Ethernet Bridge between 2 LANs and test the network with various real world impairments such as Constant Delay, Delay variation (Jitter), Congestion, Packet Loss/Duplication/reordering, Logic, and FCS error. It also includes live throughput graphs, and per-port or per-link statistics log for easy performance monitoring.

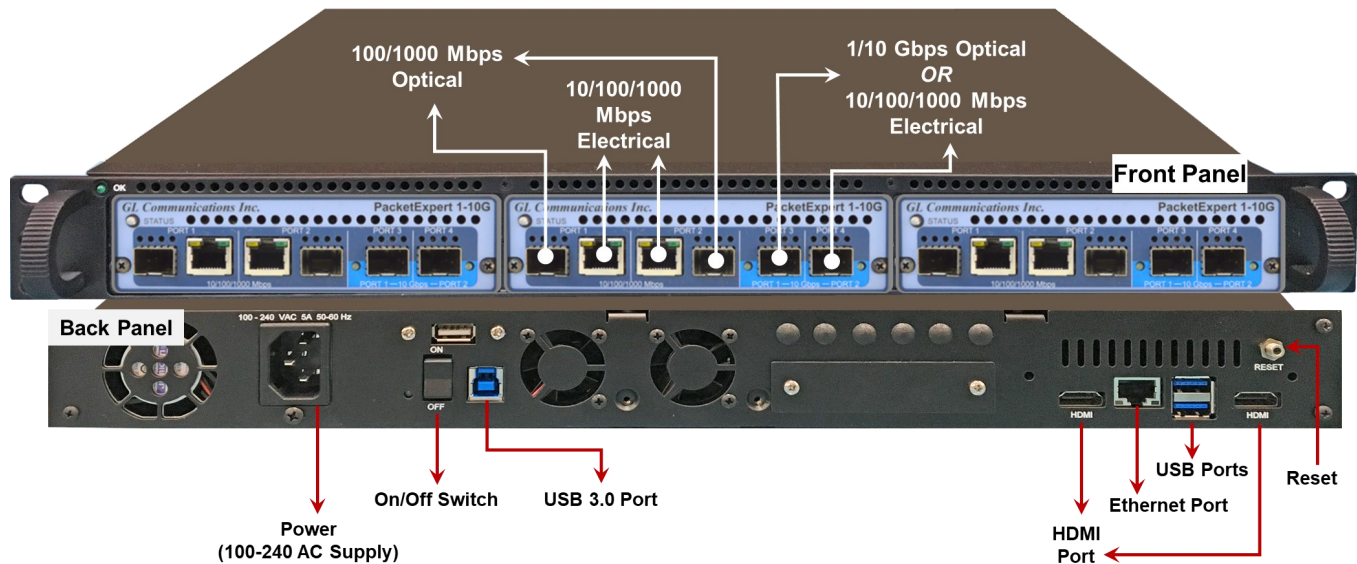


Figure: mTOP™ Rack Enclosure with IPLinkSim™ WAN Link Emulator (1 Gbps, 2 active ports)

- Acts as a transparent bi-directional link or a simple Ethernet Bridge for easy integration with any test setup.
- Emulates WAN conditions separately and independently for bidirectional link
- Easily monitor the bandwidth performance using live throughput graphs, and per-port or per-link statistics
- Supports Periodic and Random Packet Loss, Packet Reordering, Packet Duplication and Error Insertion impairments

For more information on IPLinkSim™ - WAN Link Emulator.

visit <http://www.gl.com/wan-link-emulation-iplinksim-packetexpert.html>



WAN (or IP) Test Platforms



Figure: PacketExpert™ 10G Portable (PXG100)

WAN IP Link Emulators (IPNetSim™, IPLinkSim™)

IPNetSim™ and IPLinkSim™ (IPN506) appliances are an optional applications available with in PacketExpert™ PXG100 platform.

IPNetSim™ emulates a bidirectional WAN IP Link with a 10 Gbps or a 10/100/1000 Mbps full duplex link. For each direction, incoming traffic can be identified into separate user defined streams (up to 16 streams for 1 Gbps pipe and up to 4 streams for 10 Gbps pipe). These user defined streams can be modified to simulate network impairments.

IPLinkSim™ also supports a single stream WAN IP Link with a 10 Gbps or a 10/100/1000 Mbps full duplex link, where all the incoming traffic is streamed as a single link which can be modified to simulate network impairments.

For more information on IPNetSim™ and IPLinkSim™ - WAN Link Emulators

visit <https://www.gl.com/wan-link-emulation-ipnetsim.html>

PacketExpert™ mTOP™ Probe 10G/1G Unit

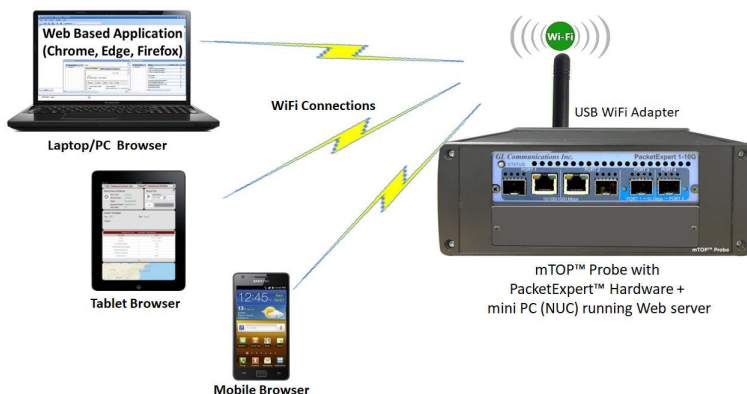


Figure: Portable Tester for IP / Ethernet

GL's latest PacketExpert™ mTOP™ Probe unit is a stand-alone hardware variant, an all-in-one self-contained test instrument. PacketExpert™ probe unit includes USB based PacketExpert™ hardware unit and in-built NUC mini PC, which can be controlled remotely using browser application. The rear panel displays the PC interfaces - USB 2.0 or 3.0 ports, GigaBit Ethernet port, HDMI, along with 256 GB HDD, 8G memory, i3/i7 NUC, and Windows® 10 64-bit OS.

External USB based Wi-Fi adaptor can be plugged to the USB 3.0 ports on the rear panel provides wireless connectivity. The tests and the configurations on the hardware can be controlled remotely using any browser-capable (Chrome, Edge, Firefox) device such as desktops, table PCs MAC systems (Mac, iPhone, iPad) or PDAs.

For more information visit <https://www.gl.com/handportableunits.html>

