



## ***WAN (or IP) Emulators Platforms***

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- **IPNetSim™ – WAN Emulator (Multi-Stream and up to 10Gbps)**
  - ◆ IPNetSim™ (IPN506 -1/10Gbps) - is an optional application available with PacketExpert™ portable (PXG100) and rack mount mTOP™ appliance (PXG100 +MT001). 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™ (IPN506 -1/10Gbps) - is an optional application available with PacketExpert™ portable (PXG100) and rack mount mTOP™ appliance (PXG100 +MT001). 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.
  
- **IPNetSim™ Handheld - IP Network / WAN Emulator (Coming Soon)**
  - ◆ Emulate up to 16 independent flows of traffic (of up to 1 Gbps) with predefined QoS

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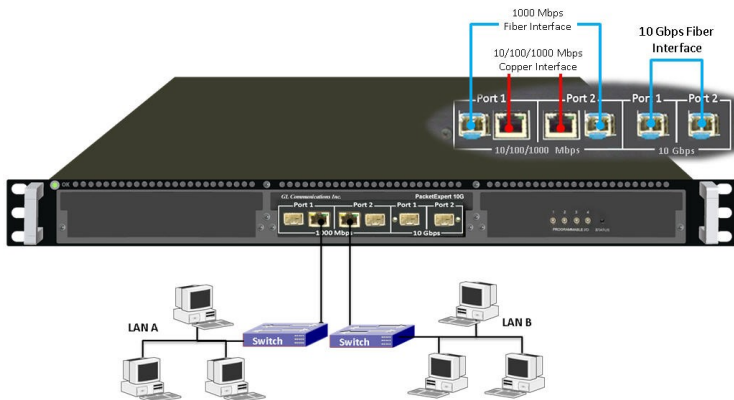
# WAN (or IP) Test Platforms

## IPNetSim™ - Multi-Stream WAN Emulator

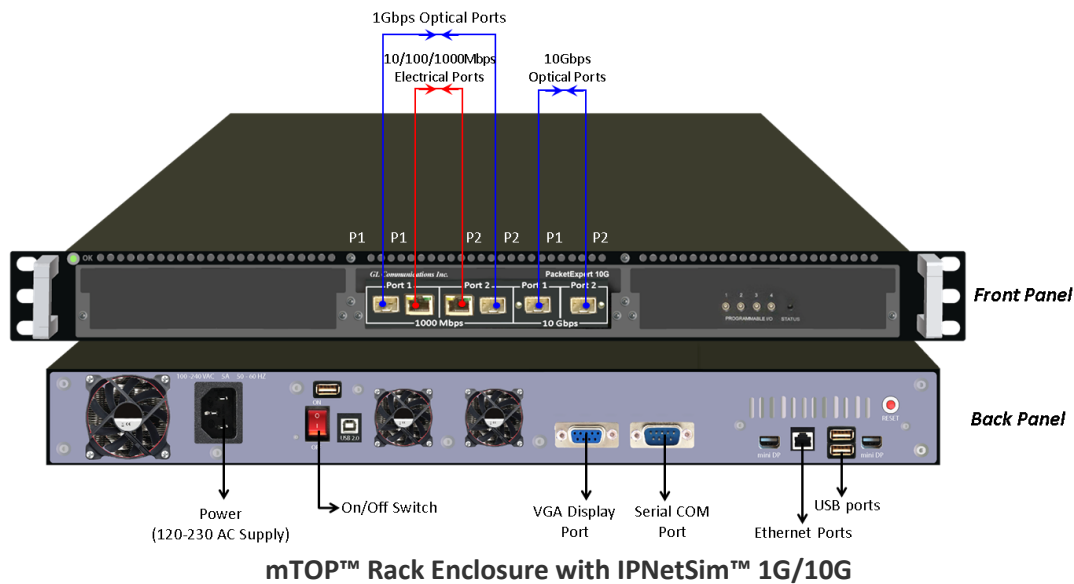
IPNetSim™ appliance is an optional application available with PacketExpert™ portable (PXG100) and rack mount mTOP™ appliance (PXG100 +MT001) supporting 1Gbps/10Gbps WAN link emulation.

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.



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



- 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

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

IPLinkSim™ appliance is an optional application available with PacketExpert™ portable (PXG100) and rack mount mTOP™ appliance (PXG100 +MT001) 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.

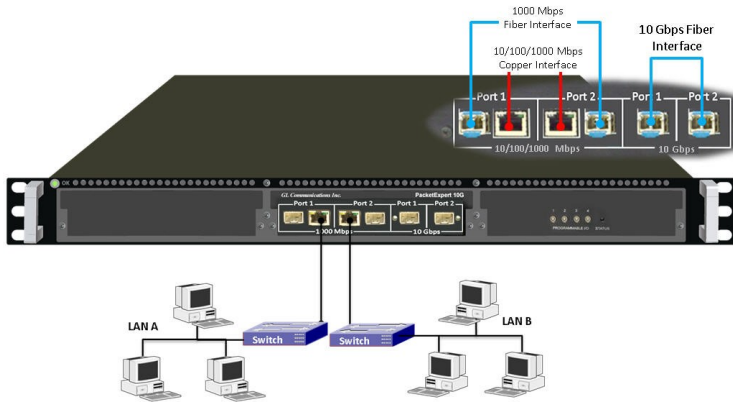


Figure: IPLinkSim™ (WAN Emulator) connecting LAN 1 and LAN 2

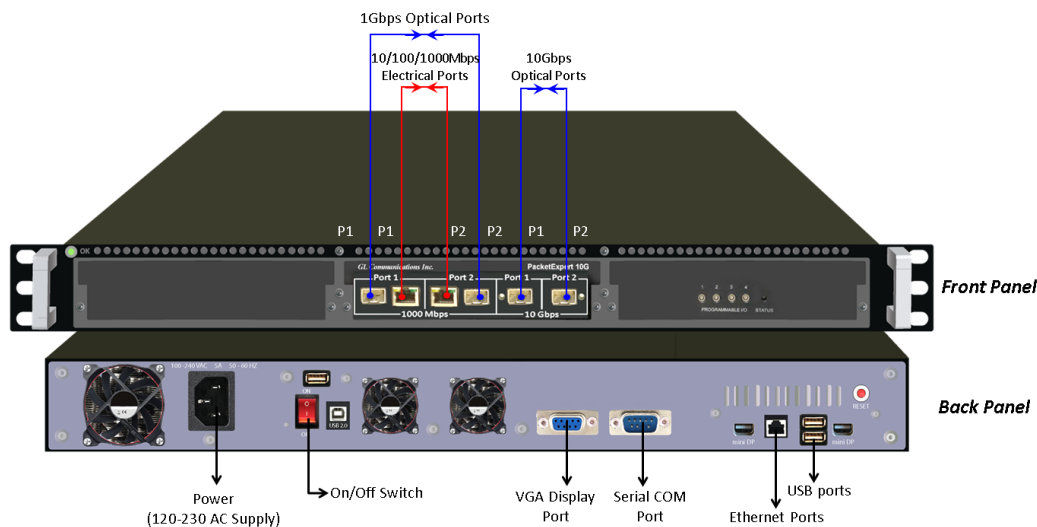


Figure: mTOP™ Rack Enclosure with IPLinkSim™ WAN Link Emulator (1 Gbps, 2 active ports)

- 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

## IPNetSim™ Handheld - IP Network / WAN Emulator (Coming Soon)



Figure: IPNetSim™ Handheld (IPN701)

GL's IPNetSim™ Handheld is a hand-held battery operated instrument that can simulate the real-time IP and Carrier Ethernet network dynamics by means of hardware controlled packet delay, loss, jitter, errors, bandwidth limitations, congestion, and duplication.

IPNetSim™ Handheld offers to manage network behaviors of up to 1 Gbps rates with accuracy always better than 1ms. IPNetSim™ Handheld is equipped with hardware based impairments generator, and dual GbE ports.

- Shape and manage up to 16 independent flows of traffic with predefined QoS.
- Impairment generation on each flow including Latency, Packet Loss, Duplication, Delay, Jitter.
- Impairments as per ITU-T Y.1541 standard.
- Traffic shaping and Traffic Policing.
- Ability to replicate complex network dynamic by means of modifying Bandwidth and QoS parameters.

For more information on IPNetSim™ Handheld,

visit <http://www.gl.com/ipnetsim-handheld-wan-emulator.html>

