



Apposite's award-winning Linktropy® and Netropy® WAN emulators simulate bandwidth, latency, jitter, loss, congestion, and other network impairments to test application performance in the lab.

### Linktropy WAN Emulators

Enterprise-class WAN emulators to simulate a single WAN link through each pair of physical interfaces.

**Linktropy 5500:** One pair of GigE ports to emulate WAN links up to 1 Gbps

**Linktropy 8510:** Four pairs of GigE ports to emulate four independent WAN links



### Linktropy Mini<sup>2</sup> & Mini-G™

Portable, low-cost emulators to simulate basic network conditions for application development and customer demonstrations.

**Linktropy Mini<sup>2</sup>:** Link speeds up to 100 Mbps

**Linktropy Mini-G:** Link speeds up to 1 Gbps



### Netropy Network Emulators

Advanced enterprise-class network emulators to simulate up to 15 separate virtual WAN links, each with their own bandwidth, delay, and loss characteristics, through each pair of physical ports. Packets can be assigned to different links by IP address range, VLAN, or other packet identifier. Netropy also offers advanced modeling and administrative capabilities for complex scenarios or multi-user environments.

**Netropy N60:** Emulates 15 separate WAN links through one pair of GigE ports

**Netropy N91:** Emulates up to 60 WAN links through four pairs of GigE ports

**Netropy 10G1:** Emulates one 10 Gbps link or 15 lower speed links through one pair of 10G SFP+ or RJ45 ports

**Netropy 10G2:** Emulates two 10 Gbps links or 30 lower speed links through two pairs of 10G SFP+ ports

**Netropy 40G:** World's first 40 Gbps WAN Emulator



### About Apposite Technologies

Apposite Technologies makes WAN emulation easy by offering professional-quality network emulation tools at affordable prices. Apposite's Netropy and Linktropy WAN emulation appliances simulate bandwidth, latency, loss, congestion, and other network impairments with fine-grained precision to provide accurate simulations of any type of wide-area network. Netropy and Linktropy WAN emulators are widely deployed by leading enterprises, application and equipment developers, telecoms carriers, and government and military organizations around the world. *Apposite Technologies – WAN Emulation Made Easy*

## Product Comparison Chart

Specifications	Linktropy Mini2 / Mini-G	Linktropy 5500 / 8510	Netropy N60 / N91 / 10G1 / 10G2 / 40G		
<b>Capacity</b>					
Maximum Emulation Rate	Mini2: 100 Mbps Mini-G: 1 Gbps	5500: 1 Gbps 8510: 1 Gbps	N60: 1 Gbps N91: 1 Gbps	10G1: 10 Gbps 10G2: 10 Gbps	40G: 40 Gbps
Emulated WAN Links (per port pair)	1	1	15		
Emulation Ports	2 10/100baseT	5500: 2 GigE 8510: 8 GigE	N60: 2 GigE N91: 8 GigE	10G1: 2 10GbE 10G2: 4 10GbE	40G: 2 40GbE
Maximum Packet Rate 64 byte packets (packets per second)	Mini2: 80,000 Mini-G: 350,000	5500: 1 million 8510: 12 million	N60: 2 million N91: 12 million	10G1: 29 million 10G2: 17 million	40G: 36 million
Test Lab Level Precision	X	✓	✓		
<b>Link Impairments</b>					
Packet Filtering	N/A	N/A	Source and dest. IP address (IPv4 or IPv6) VLAN, TCP/UDP port numbers, MAC address, MPLS label, Any arbitrary packet field		
Bandwidth Emulation	300 bps to 1 Gbps (depending on license)	300 bps to 1 Gbps (depending on license)	100 bps to 40 Gbps (depending on model and license)		
Latency & Jitter		0 ms – 10,000 ms in 0.1 ms increments Constant, uniform, normal distributions			
Packet Loss	Random, BER	Random, BER	Random, Periodic, Burst, BER, Gilbert-Elliot		
Data Corruption	X	X	✓		
Packet Reordering	X	✓	✓		
Packet Duplication	X	✓	✓		
Queue Management	Tail drop	Tail Drop	Tail drop, RED		
Access Link Rate Control	Out-bound	Out-bound	In-bound and Out-Bound		
Live Condition Capture and Replay	X	✓	✓		
Background Traffic	X	Random	Random, PCAP replay		
ToS Prioritization	X	X	FIFO, Strict Priority, Round Robin		
MTU and Fragmentation	X	X	✓		
<b>Installation and Operation</b>					
Form Factor	Portable 6" x 6"	5500: 1U 8510: 1U	N60: 1U N91: 1U	10G1: 1U 10G2: 2U	40G: 1U
Throughput Graphs	Previous 10 minutes	Previous 10 minutes	24 hours		
Statistics Download	X	24 hours	24 hours		
Full CLI	X	✓	✓		
SSL and SSH Secure Management	X	✓	✓		
Jumbo Frame Support	Mini2: X Mini-G: ✓	✓	✓		
LDAP User Authentication	X	X	✓		
DHCP, DNS, NTP	X	X	✓		
Multiple Users With Configuration Locking	X	X	✓		
Self-Monitoring Indicators	X	X	✓		