

# PKT-GEN Network Traffic Generator and Analyzer

WanRaptor™  
NETWORK EMULATOR



## FEATURES / BENEFITS

- ✓ Ethernet Interface – 1/10/1000, 10/25/40G
- ✓ Real-Time Monitor of network traffic throughput, loss, jitter, latency
- ✓ SD-WAN Testing, Site-to-Site testing, Router or Switch Throughput testing, network link testing, round trip
- ✓ Ideal for Network loopback testing
- ✓ Quality of Service (QoS) Service Testing
- ✓ Load Balance Testing
- ✓ Simulate Network Traffic
- ✓ Standalone Chassis or Rackmount Option

## DESCRIPTION

The PKT-GEN Network Traffic Generator is an easy to use, economical test solution to validate your network throughput, latency, packet loss and jitter. PKT-GEN is a high-performance design supporting UDP network traffic generation and analysis. The tool features an intuitive and user-friendly interface, making it easy for users to configure and control traffic generation parameters.

Free or open-source tools can waste valuable time and jeopardize your network design. PKT-GEN overcomes unreliable test results in a very economical desktop or rackmount enclosure.

UDP traffic generation has many advantages over TCP traffic generation. UDP is a connectionless protocol and as a result is simpler and more efficient. This simplicity allows for faster packet generation and transmission, making UDP traffic well suited for high-speed or high-volume network testing scenarios. The test results show packet throughput, packet loss, network latency and network jitter.

PKT-GEN may be purchased as a standalone product. Additionally, customers who already own our Wanraptor Network Emulator or PDS-1/10G emulator may purchase an upgrade that enables the PKT-GEN feature. By combining PKT-GEN and the Wanraptor Network Latency Emulator in a single design, users can reliably perform network testing and analysis.

The PKT-GEN product has full line rate performance for 10/100/1000, 10G and 25G Ethernet networks. Packet generation tests have real-time results, and the user may save tests for playback or export test results in text or Excel based reports.

PKT-GEN can be configured to:

- custom experiment names
- send a stream of IP4 or IP6 UDP packets, with configurable packet rate
- at the same time, receive the stream of packets and measure bandwidth and latency.
- send packets in constant mode or user defined number of packets to send
- the packets are customizable in several ways:
  - by selecting the source and/or destination MAC address
  - by selecting the source and/or destination IP address (fixed, range, random)
  - by selecting the packet size (fixed or random)
  - by loading the packets from a user-provided pcap file
- measure jitter in both directions of traffic
- measure packet loss in both directions of traffic

The PKT-GEN traffic generator is a versatile tool that can be used for network testing, application performance assessment, security evaluation, and educational purposes. It enables network administrators, developers, and security professionals to simulate and analyze UDP traffic in various scenarios to optimize network performance, detect vulnerabilities, and ensure the reliability and quality of network-dependent systems.

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# SPECIFICATIONS

## Application

Network traffic generator for evaluating the performance of devices under test or the users' network. By sending UDP packets and measuring throughput, latency, loss, out of order, duplicate packets and jitter.

## Management LAN Ports

Two Independent fixed 10/100/1000 Ethernet Ports  
1) Hard coded to an always good port  
2) Allows settings for the Users Network

## Software Upgrades

Software file is installed via the GUI

## LAN Interfaces Supported

10/100/1000 Copper or Fiber, 10G, 25G and 40G

## Traffic Generation Rates

Up to 40GbE  
Individual LAN port control for Kbps, Mbps or Gbps

## Packet Type

IP4 or IP6 UDP packets, fixed or random with configurable packet rate

## Packet Generation Features

User defined number of packets or infinite generation  
User defined packet size  
Customize by: packet size, source and destination MAC, source and destination IP address  
User PCAP file

## Test Measurement Results – Bi-Directional

Bandwidth, latency, jitter, loss, Out of Order and Duplicate Packets, all in live time, graphs, Bandwidth and Jitter are shown in live graph form  
-Live Playback feature

## Test Measurement Stats

Export to Excel format or CVS

## Link Throughput

Full Line Rate for 10/100/1000, 10G, 25G (64-9000byte Packets)  
40G Consult Factory

## Surge Protection

Main power supply

## Power Source

AC Mains: 100-240VAC @ 10%, 50/60Hz, 0.16/0.08A, Auto Range

## Environmental

Operating Temperature....32° to 104° F (0° to 40° C)  
Relative Humidity.....5 to 85% Non-Condensing  
Altitude.....0 to 10,000 feet

## Dimensions

Height ..... 3.50 inches (88.90 mm)  
Width ..... 17.20 inches (436.88 mm)  
Length ..... 14.50 inches (368.30 mm)

## Warranty

Three Years hardware, includes software support and software feature upgrades/improvements

## Web Browser Compatibility

Explorer, FireFox, Opera, Google / Chrome, Safari

## Regulatory Approvals

UL, CSA, CE

## ORDERING INFORMATION

Part Number: 284000  
Model: PKT-GEN Software Upgrade to Wanraptor or PDS  
Description: Packet Generation Software Upgrade

Part Number: 286000  
Model: PKT-GEN Embedded System, 2U 5 Slot PCIe  
Description: Packet Generation 2U Hardware & Software

Part Number: 288000  
Model: PKT-GEN Embedded System, Desktop or 1U  
Description: Packet Generation Desktop Hardware & Software

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