The new WanRaptor™ Network Emulator is an easy to use, economical test solution to validate your applications in a lab environment by emulating bandwidth, latency, loss and jitter of wide area networks. With the purchase of the WanRaptor™ you receive a COTS hardware system with embedded software supporting network emulation on 10/100/1000, 10G, 25G and 40G optional interfaces. The product has an easy to use GUI interface and allows changes On-The-Fly for real time test and result monitoring. Competing products require expensive hardware upgrades or confusing bandwidth license upgrades to support different media types and in most cases require a complete new hardware purchase. The WanRaptor™ overcomes all those drawbacks in a very economical desktop or rackmount enclosure.

The WanRaptor™ product has outstanding packet throughput performance for Bridge or Route modes of operation and all impairments allow decimal value inputs. The WanRaptor™ allows network architects, engineers, and developers to accurately gauge an application’s responsiveness, throughput, and quality of end-user experience prior to deployment. The WanRaptor™ is physically placed between two LAN segments and will accurately replicate a client/server WAN connection. The WanRaptor™ can be configured to adjust bandwidth constraints and apply impairments such as packet loss, delay, reordering or jitter. Latency can be specified to emulate the transfer of data over short or long distances allowing developers and engineers to monitor application performance as if they were actually on your WAN network. Application performance and end-user experience can then be observed, tested, and validated in real-time while making changes On-The-Fly without stopping the emulation.

The WanRaptor™ allows the user to easily view packet throughput and packet impairment performance with our intuitive statistics screen in real-time.

The WanRaptor™ is available in a small desktop / portable model, 1U or 2U 6-Slot model that houses multiple LAN interfaces which can be rack mounted. It is powered by an integrated 90-240V 50/60Hz power supply. The WanRaptor™ has a 5-year warranty and is fully supported during the warranty period.

**FEATURES / BENEFITS**
- **Unique COTS Architecture with Repeatable Results / Accuracy within 50 microseconds**
- **Supports 10/100/1000, 10G, 25G & 40G Interfaces for Network Emulation in a single embedded box and no software to install**
- **Impairments – Bandwidth, Delay, Jitter, Loss, Re-Order**
- **Supports Bridge / Route Modes**
- **Validate and Optimize your Network before Deployment to avoid Costly Application issues**
- **Easy to Use - GUI Interface**
- **Supports changes On-The-Fly**
- **Bandwidth – Up to 40G**
- **Latency Settings - 0 to 8 seconds with 50 microsecond Accuracy**
- **Other Features - Real Time Traffic Graph and Network Statistics, Output Reports**
- **Approvals - UL, CSA, CE, FCC and RoHS**
- **Available in Desk Top / Portable Standalone, 1U or 2U Sturdy Rack Mount Enclosure, 90-240VAC240VAC**
**Application**
An embedded box appliance that will mimic the behavior of a WAN/LAN network, inserted between LAN segments supporting Bridge or Routing functions with network impairments such as bandwidth, delay, loss & re-ordering.

**Configuration Management Ports – GUI Access**
Two Independent fixed 10/100/1000 Ethernet Ports

**Bridge or Routing Support**
All emulations support Bridge or Subnet Routing

**Emulation Interfaces**
- 10/100/1000 Copper or Fiber, Optional SFP
- 10G, 25G and 40G SFP+ Inserts

**Emulation Bandwidth Link Rates**
100bps - 40GbE bi-directional or split speeds, Kbps, Mbps or Gbps

**Emulated Latency Settings**
- Constant: 0 to 8 Seconds, Decimal Format(50µS Accuracy)
- **25G and higher will be smaller**
- Supports Uniform, Exponential & Inter-Packet

**Emulation Impairments**
- Packet Loss: 0 to 100%, Decimal Inputs
- Packet Re-Ordering: 0 to 100%, Decimal Inputs
- Jitter: By use of different delay options

**Link Throughput**
- Line Rate for 10/100/1000 & 10G except 64byte Frames 9G
- 25G and 40G Consult Factory

**Emulation Statistics**
Each link is capable of real-time statistics via GUI

**Password Protection**
Implemented via the user LAN Management Port

**Power Source**
AC Mains: 90-240VAC @ 10%, 50/60Hz, Auto Range

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

**Warranty**
Five Years hardware, includes software support and software feature upgrades/improvements

**Software Upgrades**
Administered via the LAN User Management Ports

**Web Browser Security & Compatibility**
- Supports HTTPS or HTTP Access
- Google Chrome and FireFox

**Regulatory Approvals**
- UL, CSA, CE, CCC, FCC and RoHS

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### ORDERING INFORMATION, 3-MODELS

**PT # 234000**
- **Model:** WanRaptor Desktop
- **Description:** WanRaptor WAN Emulator Desktop 1-slot
- **Dimensions:** H x W x D
  - 10.90(277mm) x 6.69(170mm) x 9.92(252mm)
- **Weight:** 9.5 Pounds, 4.309Kg

**PT # 207000**
- **Model:** WanRaptor_1U
- **Description:** WanRaptor WAN Emulator 1U, 2-Slot Chassis
- **Dimensions:** H x W x D
  - 1.70(43mm) x 17.12(437mm) x 9.80(249mm)
- **Weight:** 12 Pounds, 5.44Kg

**PT # 210000**
- **Model:** WanRaptor_2U
- **Description:** WanRaptor WAN Emulator 2U, 6-Slot Chassis
- **Dimensions:** H x W x D
  - 3.50(88.9mm) x 17.20(436.9mm) x 14.50(368.3mm)
- **Weight:** 30 Pounds, 13.6Kg

**10/100/1000 NIC CARDS**
- Ecdata# 226000
  - **Desc:** 4-Port 10/100/1000 Copper NIC Card
- Ecdata# 226001
  - **Desc:** 2-Port 10/100/1000GbE Fiber SFP NIC Card

**10GbE SFP+ NIC CARD**
- Ecdata# 226007
  - **Desc:** 2-Port 10G NIC Card
- SFP+ Optics for ECDATA PT# 226007
  - Ecdata# 226004 = 10G Pluggable Optic(SR)
  - Ecdata# 226006 = 10G Pluggable Optic(LR)

**25GbE SFP+ NIC CARD (Also Supports 10G)**
- Ecdata# 226016
  - **Desc:** 1-Port 25G NIC Card
- Ecdata# 226018
  - **Desc:** 2-Port 25G NIC Card
- SFP+ Optics for ECDATA PT# 226016
  - Ecdata# 226004 = 10G Pluggable Optic(SR)
  - Ecdata# 226006 = 10G Pluggable Optic(LR)
  - Ecdata# 226011 = 25G Pluggable Optic(SR)

**40G QSFP+ NIC CARD**
- Ecdata# 226005
  - **Desc:** 1-Port 40GbE QSFP+ NIC Card
- QSFP+ Pluggable Optic for PT# 226006
  - Ecdata# 226011 = QSFP+ SR Optic
  - Ecdata# 226012 = QSFP+ LR Optic
Overview of the WanRaptor™ Network Emulator User Interface

- Allows Decimal Entry Such as 35.5
- Allows Changes on the Fly
- Accurate & Reliable Log Screen Shows Frame TX/RX & Impairments for Both LAN Ports
System Setting Tab
Allows the WanRaptor Box ID Set & System Date/Time.
Allows user to set IP Management Port Addresses.
Updates and Security allows Updates & System Licence type Trial or Full

CPU load

System Performance Tab
Allows fast and accurate feedback to the user on system processor cores usage, memory and disk