

EAST COAST
D A T A C O M , I N C .

- Products for Global Networks -

Company Overview

Manufactured
Product Lines

Oct 10, 2019 Rev - B

Company Overview - 1

- East Coast Datacom, Inc. (ECDATA) is a customer oriented, high technology enterprise which was formed in 1994 to design, manufacture and support Data Communication Equipment and Network Latency Emulators.
- The company founder and president is Richard O Barger, Jr. who formed the company after 9 years with AT&T Paradyne. ECDATA is privately funded and located in a former NCR terminal repair facility located in Rockledge Florida USA near Kennedy Space Center in the state of Florida. The secure facility is also owned by Mr. Barger under the name of Vitellus, LLC and East Coast Datacom, Inc has been located in the facility for over 17 years. The company's financial and major marketing efforts are run by Deborah Barger who has vast experience in the banking and financial services industry.

Company Overview - 2

- All ECDATA products are manufactured at this secure facility. The company purchases all raw good components, prepares production kits and outsources the printed wiring board assemblies at ISO-9000 facilities located near ECDATA. Documentation is located on-site and off-site in secure back-up facilities.
- ECDATA also exports worldwide with TUV safety and EMI certifications. Our facility is inspected twice yearly by TUV for safety conformance to standards.

Our Network Latency Emulators

- We manufacture one of the broadest line of **Network Latency Emulators** in the network test equipment market.
- Our **WanRaptor™**, Network Latency Emulator allows users to test and stage critical network equipment adding network latency and network impairments over 10/100/1000, 10G, 25G and 40G Ethernet networks. The WanRaptor™ is an excellent choice for emulating wide area network delays, satellite delay emulation, stress testing network software development and conversion of legacy serial networks to IP.
- In September of 2018 we introduced the new **WanRaptor™** that is a new user-space application for Route and Bridge Mode in 40G applications. The **WanRaptor™** will enable line rate performance for almost all packet sizes for 40G for Bridge or Route modes of operation.
- The United States Military and leading Defense companies rely on ECDATA Network Latency Emulators. Our products enable network link error and delay emulation that provides a realistic simulation of physical network behavior with respect to time delays and bit errors. The RDS-PLUS supports a wide range of serial interface types and speeds, ranging from 1200bps to over 50Mbps. The unit also supports TELCO Line Simulation such as T1, E1, DS3, STS-1, HSSI and EIA-644 LVDS for high speed CRYPTO network delays. A work horse of the armed forces !

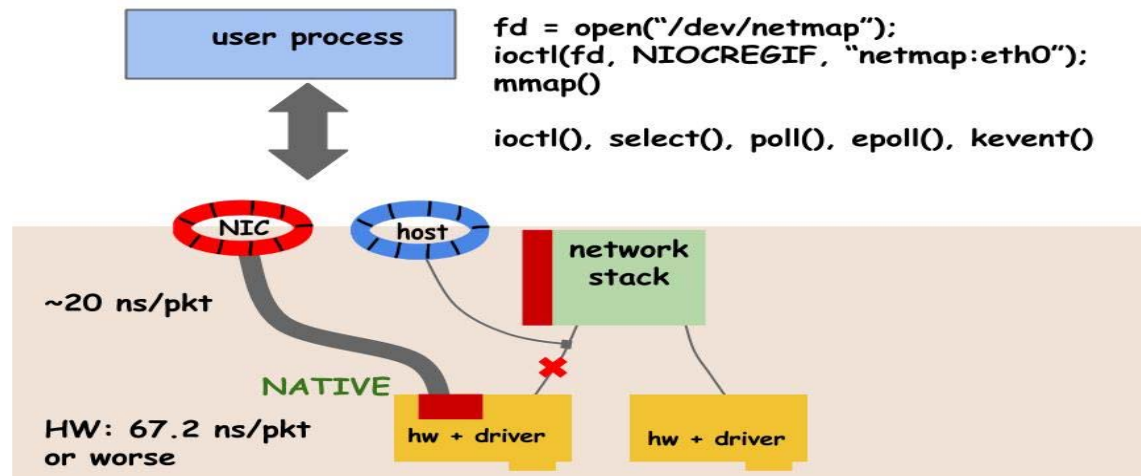
Our Top Network Delay Emulator, WanRaptor™

- **WanRaptor™**, supports 10/100/1000 copper, 1G Fiber, 1/10/25G w/SFP+ and 40G w/QSFP+
- COTS open hardware design, 3-Year Warranty
- Allows customer to replace or expand ports
- Based on INTEL XEON v4 and INTEL SERVER NIC's
- Fast User-space Network Emulator Application
- User-space Drivers on top of INTEL Drivers
- Line Rate Performance & Low Overall Cost
- Accurate and Repeatable Results with live packet counters

WanRaptor™, How We Do It

- The **WanRaptor™** uses a pipelined software architecture, which exploits the power of Intel multicore processors. Fast network I/O is provided by high performance Intel NIC cards, a User-Space framework, and careful tuning of the Linux operating system. Stages of the processing such as input, traffic selection, shaping and delay emulation, packet manipulations and output are assigned to different cores, according to speed requirements and the complexity of the processing. This allows the **WanRaptor™** to scale performance as the number and speed of the LAN ports grow. At the same time, the pipelined architecture inherently preserves the ordering of all tra

Native NIC access



WanRaptor™ Performance

- An expensive FPGA based emulator will allow full 10Gbps throughput with 64 byte packets. The WanRaptor™ WAN Emulator consistently delivers in excess of 9.8Gbps per 10GbE port, up to 6-Ports of 10G per chassis . All other packets sizes are line rate.
- For a 10GbE leased line delivery service of a typical Telco, an anticipated network delay of about 35ms on each 10GbE interface will be experienced cross country. The WanRaptor™ testing for a full 10Gbps delivery with 35ms of delay on each port measures within +/- 50µs accuracy on each 10GbE port
- The test results are verified on an EXFO IQS-8830 FPGA based line rate tester. When tested with the EXFO a full RFC-2544 test was run and all frame rates outside of 64byte frames are full line rate performance. This test utilizes seven different frame sizes ranging from 64 to 1518 bytes ramping up to 10GbE line rates for the equipment under test. The WanRaptor™ can maintain over 9.6Gbps for 64 byte packets on each of the two 10GbE ports while maintaining extreme accuracy with the emulated 35ms delay to +/- 50µs accuracy on each 10GbE port. This is an amazing engineering software feat using COTS hardware that was never before possible without the help of Intel hardware and the User-Space framework.

Our Network Emulator Comparison

Main Features	WanRaptor™	BGP-EDS	RDS-PLUS	UDC-RDS
Latency Set Per Port	0 - 8 sec	0 - 10 sec	0 - 4 sec	0 - 1 sec
Delay Units	Microseconds	Milliseconds	Milliseconds	Milliseconds
Emulation Data Rates	1bps - 40Gbps	300bps - 1 GbE	1.2k - 52M	300bps - 3.072Mbps
Emulation Accuracy	50µs	No	60µs	No
Emulation Capacity	8 Ports, 4 Pairs **	16 Ports, Routed	2 Ports, 1 Pair	2 Ports, 1 Pair
Decimal Inputs	Yes	1ms	20µs	200µs
Interface	Copper/Fiber	Copper/Fiber	Serial/Telco	Serial
Data Format	UDP / TCP IP, ect	UDP / TCP IP, ect	Sync / Async	Sync
Changes On-The-Fly	Yes	Yes	No	No
Split Speeds	Yes	Yes	No	No
Error Insertion	Yes / BERT	No	Yes - Full BERT	No
Jitter	Yes	Yes	N/A	N/A
Loss	Yes	Yes	Yes	No
Re-Ordering	Yes	Yes	N/A	N/A
Duplication	No	Yes	N/A	N/A
Auto Profile Scheduler	Yes	Yes	No	No
Data Logger	Yes	Yes	No	No
Config Port(s)	10/100/1000	10/100	10/100 or Serial	Dip Switches
Full Command Line	No	No	Yes	No
GUI Support	Yes	Yes	Yes	No
Multiple Users	No	Yes	No	No
Jumbo Frames	Yes	Yes	N/A	N/A
Clock Source	N/A	N/A	Int/Ext	Internal
Test Interfaces	WanRaptor™	BGP-EDS	RDS-PLUS	UDC-RDS
10/100/1000	Yes	Yes	No	No
1/10/2025	Yes	No	No	No
10/40GbE	Yes	No	No	No
RS-232	No	No	Yes	Yes
V.35	No	No	Yes	Yes
RS-530	No	No	Yes	Yes
RS-422	No	No	Yes	Yes
X.21	No	No	Yes	Yes
RS-485	No	No	Yes	Yes
HSSI	No	No	Yes	No
EIA-644 LVDS	No	No	Yes	No
TTL	No	No	Yes	Yes
T-1	No	No	Yes	No
E-1	No	No	Yes	No
DS3	No	No	Yes	No
E3	No	No	Yes	No
STS-1	No	No	Yes	No
	** = Model Dependent			

Other East Coast Datacom, Inc Products

- Interfaces Supported: RS232, RS-422, RS-530, RS-485, V.35 and X.21
- Data Broadcast Units
- Digital Sharing Devices
- Interface Converters
- Modem Eliminators
- Serial Network Adapters - Async to Sync, Sync to IP Conversion and many other special varieties
- Network FIFO Buffers
- A/B Switches

Custom Design Solutions

- East Coast Datacom understands your need to keep budgetary costs down. But you need a custom design solution and you need it fast !
- We can help you, just as we have with many of our customers.
- **Our motto is, “The Customer Creates the Product”**
- For over 24 years East Coast Datacom, Inc has been solving many unique data communication problems. Simply email us your product request and we will respond back to you within 24 hours.

Conclusion

Whether you choose our popular Network Latency Emulators or any of our over 130 Data Communication Equipment products you can count on a Quality Product, On-Time Delivery backed with 3-years of Warranty and Support from one of the most trusted manufacturers in the market with over 24 years of experience supplying the worlds most influential companies.

EAST COAST DATACOM, INC.

245 Gus Hipp Blvd., STE 300

Rockledge, FL 32955 USA

www.ecdata.com

Email: info (-at-) ecdata.com