

CaptureXG™ 1000

Quad-Port 10 Gigabit Ethernet Capture PCI Express FPGA Card

Applications

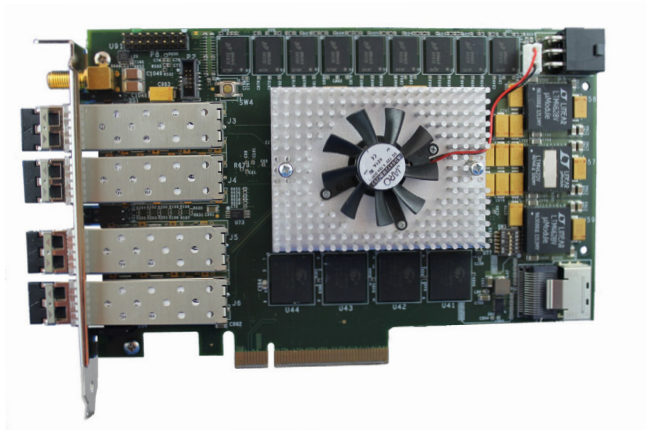
Latency measurement and analysis
Quality service
Network security

Benefits

Industry's lowest cost-per-port 10GE capture solution
Fully integrated with Wireshark network protocol analyzer
Supports SPAN, TAP, and in-line network monitoring
High level API enabling quick integration with applications

Features

Quad 10 Gigabit Ethernet SFP+ optical ports IRIG-A, B and G time synchronization
PCAP Next Generation file format Programmable 5-tuple filters
Low latency, multi-threaded DMA host interface 8-lane PCI Express Gen 3



Overview

The escalating cost of monitoring the performance of IT infrastructure is a significant concern for IT managers who must balance performance, reliability, budget, and deployment agility. Increasing network speeds are making software monitoring tools ineffective as they are unable to process traffic in real time. Traditional capture cards lack a balance between features, price, and performance making it difficult to justify the cost of deployment and operation. New Wave DV delivers the highest port density, lowest cost-per-port capture cards on the market without sacrificing performance or features.

In fact, the CaptureXG™ 1000 card comes standard with essential features, such as accurate time synchronization, programmable 5-tuple filters, PCAP Next Generation file format, and a highly efficient PCI Express Gen 3 host interface.

The CaptureXG™ 1000 card addresses the pressing need for an affordable plug and play capture solution in Data Centers, while eliminating unnecessary costs associated with port mirroring and wiring. For applications requiring intense network data processing, New Wave DV enables IT managers to deploy their own applications. With this innovative business model, IT managers now have the freedom to take advantage of the wide variety of card options available from New Wave DV while staying within their overall capital and operating IT budget.

Functional Description

Deployment Flexibility — The CaptureXG™ 1000 card introduces a new level of deployment flexibility, simplifying the logistics of introducing network monitoring into Data Center environments. It supports SPAN and TAP topologies, enabling the IT managers to choose the best topology for the application. A TAP deployment alleviates the need for using mirroring ports on the switch, further reducing cost and complexity. In addition, the CaptureXG™ 1000 card can operate in-line allowing the aggregation of multiple ports into a single port, providing a cost-effective way to implement TAP functions.

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Time Synchronization — Real-time systems, such as electronic trading systems, rely on the timely receipt of information for proper operation. It is important to monitor and be able to respond to network congestion and delays. Accurate time synchronization is one of the most important techniques used by IT administrators to monitor network performance. The CaptureXG™ 1000 card supports IRIG-A, B and G time code to ensure precise time synchronization of network data. It is capable of time stamping network data with 5ns relative accuracy. The time source is provided via a front panel SMA connector.

Data Capture and Filtering — The CaptureXG™ 1000 card delivers scalable, high performance packet capture in real time. Application flow classification at wire speed is achieved using 5-tuple filters consisting of IP addresses, port numbers, and network protocol. In addition to supporting PCAP Next Generation file format, the CaptureXG™ 1000 card features a low latency, multi-threaded DMA host interface optimized for small packets. This enables application to truly harness the power of multi-core systems for further data analysis.

Network Protocol Analysis — The CaptureXG™ 1000 card is available with a high level application API and drivers for Linux. This allows application software to take advantage of the card's capabilities through a C++ library and allows applications to modify card settings easily.

Because the CaptureXG™ 1000 card is fully integrated with the popular Wireshark network protocol analyzer, it provides a powerful tool for IT managers to easily leverage their team's existing expertise, increasing efficiency in diagnosing network issues.

Reliability and Interoperability — New Wave DV ensures extreme reliability that gives customers confidence to deploy their products in critical applications. The CaptureXG™ 1000 card is compatible with servers from leading OEMs. This single-slot solution allows customers to maximize the number of cards per server, resulting in a smaller server footprint.

Technical Specifications

NETWORK INTERFACE

Quad 10 Gigabit Ethernet SFP+ optical ports, supporting MMF 850nm (10GBASE-SR) or SMF 1310nm (10GBASE-LR)

TIME SYNCHRONIZATION

IRIG-A, B and G time synchronization via a front panel SMA connector

FILTERS

128 programmable 5-tuple filters
IPv4, TCP, UDP, ICMP, ARP

PACKET CAPTURE

PCAP Next Generation format or raw data format

HOST INTERFACE

x8 PCI Express Gen 3

SYSTEM REQUIREMENTS

x86 64-bit processor 2GHz or better, 1GB RAM, 1GB disk space
Free PCI Express x8 or x16 slot

COMPLIANCE

PCI Express Card Electromechanical Specification, Rev 2.0
IEEE 802.3ae 2002 10GBASE LAN
FCC 47 CFR Part 15, Subpart B, Class A (USA)
IEC 60950-1 (International)
RoHS Directive 2002/95EC

DIMENSIONS

111.15 mm x 167.65 mm (standard height, half-length)

TEMPERATURE

Operating: 0 to 50° C
Storage: -40° C to 85° C

ORDERING INFORMATION

400-05031-00-07 - CaptureXG 1000 Quad 10GE Capture PCIe Card

FOR MORE INFORMATION:

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