

# CaptureEPON™

## Quad Channel EPON Analyzer & Recorder System

Simultaneous upstream and downstream full rate 10G EPON capture

### Applications

- Upstream/Downstream network traffic capture
- 10G EPON data recorder
- Latency measurement and analysis
- Network security

### Benefits

- Full bandwidth 10G EPON
- Fully integrated with Wireshark network protocol analyzer
- Supports TAP network sniffing and recording
- High level API enabling quick integration with applications

### Features

- Quad SFP+ ports supporting optical and copper connectors
- IRIG-A, B, and G time synchronization
- PCAP Next Generation file format
- Programmable capture size and hardware filters
- Low latency, multi-threaded DMA host interface

### Overview

The CaptureEPON system is a packet capture and recorder system developed to meet the interface and bandwidth needs of 10G EPON. The CaptureEPON system is able to simultaneously monitor upstream and downstream traffic. In the upstream capture direction the system uses a unique method of locking on to burst mode traffic from any sender. Capture files are stored in the PCAP format and integrated with the Wireshark tool.

The CaptureEPON system comes standard with essential features, such as accurate time synchronization, programmable 5-tuple filters, PCAP Next Generation file format, a highly efficient PCI Express Gen3 host, a user friendly GUI interface, and a feature rich API for record and playback functions.

The CaptureEPON system addresses the pressing need for a record and capture solution of 10G EPON network traffic. For applications requiring customized network data processing, New Wave DV enables deployment of customer developed applications. With this innovative business model, managers now have the freedom to take advantage of the wide variety of options available from New Wave DV while staying within their budget.



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### Functional Description

**Time Synchronization** — Critical 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 engineers and administrators to monitor network performance. The CaptureEPON system 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 20ns relative accuracy. The time source is provided via a front panel SMA connector.

**Data Capture and Filtering** — The CaptureEPON system 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 CaptureEPON system features a low latency, multi-threaded DMA host interface optimized for small packets. This enables applications to truly harness the power of multi-core systems for further data analysis.

**Network Protocol Analysis** — The CaptureEPON system 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 CaptureEPON system is fully integrated with the popular Wireshark network protocol analyzer, it provides a powerful tool for network administrators 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. Extended warranties and service agreements are available.

### Technical Specifications

#### NETWORK INTERFACE

Quad 10 Gigabit EPON SFP+ ports Quad 1 Gigabit EPON SFP+ ports

#### TIME SYNCHRONIZATION

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

#### FILTERS

128 programmable 5-tuple filters

#### PACKET Record

PCAP Next Generation format or raw data format

#### HOST INTERFACE

x8 PCI Express Gen 3

#### 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

#### TEMPERATURE

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

#### ORDERING INFORMATION

500-05031-30-06: Quad 10G EPON Analyzer System

Request more information for storage configuration options.

#### FOR MORE INFORMATION:

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