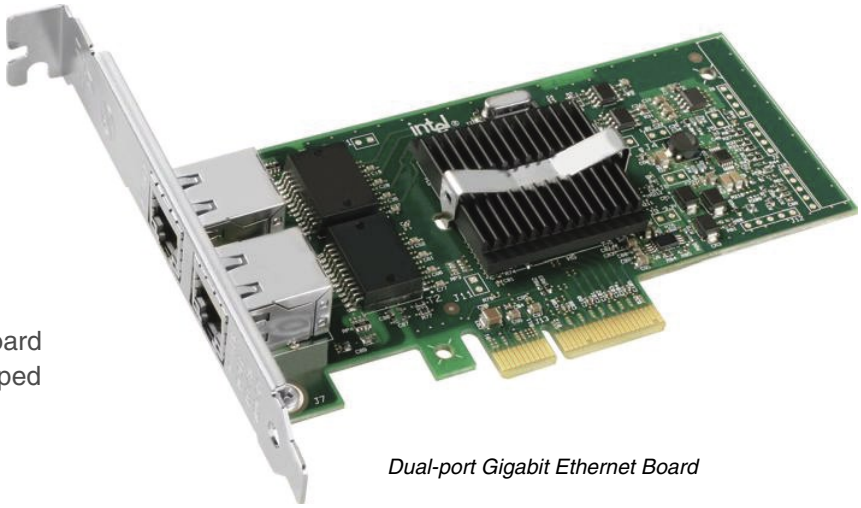
TurboCap



Dual-port Gigabit Ethernet Board

CACE Technologies' TurboCap is a feature-rich, full-rate, Gigabit Ethernet capture and injection solution for the Windows and Linux platforms.

TurboCap is based on a dual-port Gigabit Ethernet board and comes with an exclusive optimized driver, developed by CACE Technologies, and supports full-rate Gigabit capture and injection.†

PRODUCT FEATURES

Full-Speed Gigabit Ethernet Capture. TurboCap supports simultaneous full-rate Gigabit capture on both ports with precise timestamps and per-packet meta information. The TurboCap driver supports multiple TurboCap boards.

Board (Port) Aggregation. TurboCap supports full-rate traffic aggregation of the traffic received on both ports of the same board.

Pass-thru Mode. TurboCap supports a full-rate pass-thru mode in which packets received on each port are injected out the other port of the same board, similar to a hardware tap. When TurboCap is in pass-thru mode, incoming traffic on each port is available for capture.

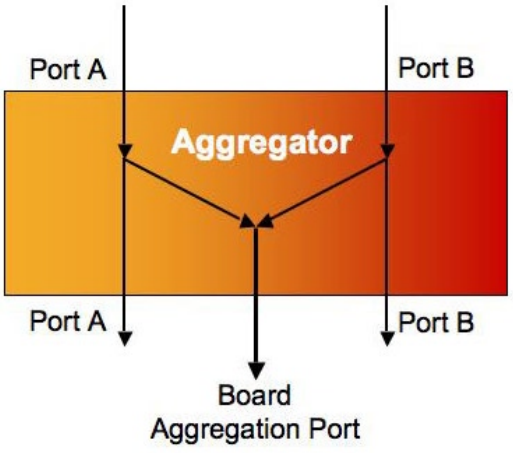
Aggregating Tap. The combination of Board Aggregation and Pass-thru Mode provides functionality equivalent to a hardware aggregating tap.

Full-Speed Gigabit Ethernet Injection. TurboCap supports simultaneous full-rate Gigabit packet injection on both ports. Packets are transmitted in the order in which they are sent to the driver and with minimal delay.

† ***Application Performance.*** The TurboCap card and optimized driver are capable of capturing full rate Gigabit Ethernet traffic simultaneously on both ports and delivering this data to an application. The overall application performance is often determined by a number of additional factors such as the application's computational tasks, disk write speed, CPU speed, and main memory size. TurboCap is integrated with WinPcap/libpcap and, consequently, supports applications such as Wireshark, Windump/tcpdump, and Ntop. Note that when using these applications with TurboCap, the capture performance at high data rates will be determined by the specific application. For more information on Wireshark performance in various load scenarios, see http://wiki.wireshark.org/Performance

Software Distributions. There are two software distributions: one for Windows and one for Linux Fedora 10. Each TurboCap software distribution includes a TurboCap driver, manuals, and a developer's package. The developer's package is for users who are interested in developing their own applications based on the TurboCap API. It includes a large number of sample applications, one very important application is the Dump-to-Disk Application which has been optimized for high-speed capture to disk.

Exported Interfaces. TurboCap exports capture interfaces for each port of every board and, for each board, a Board Aggregation Port (BAP) that aggregates the traffic on both ports. In the case of multiple boards on the same system, TurboCap exports a Global Aggregation Port (TcAP) consisting of the aggregated traffic from all the ports on all the boards.



The Aggregator merges traffic from ports A and B into a single traffic stream

TurboCap Detailed Specifications

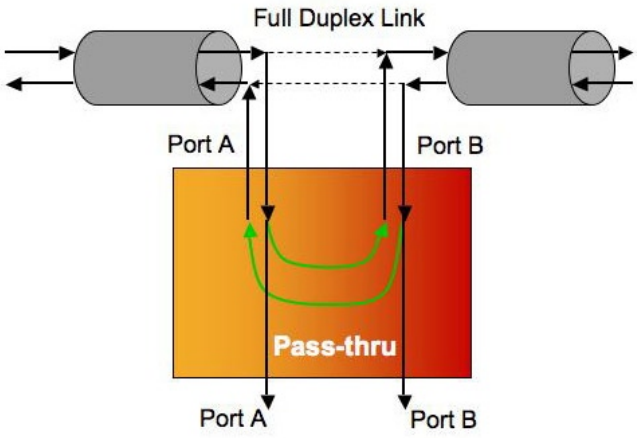
- Full-duplex, dual copper port Gigabit Ethernet board
- Concurrent capture and injection on both ports
- Board (Port) Aggregation
- Pass-thru Mode
- Three software timestamp modes are available
  - OFF: no timestamps
  - ON TIMER: timestamps are generated periodically using a 1ms precise timer
  - ON POLLING: timestamps are generated by the host when the board completes transfer of the packet to the host. This mode is CPU intensive.
- Link speeds: 10/100/1000 Mbps
- Autonegotiation: speed-selectable on a per-port basis
- Support for full-duplex in both injection and receive modes and for half-duplex in receive mode
- Per-packet meta information
- Multi-board support
- Low-level hardware filtering on correct FCS and physical error conditions
- BPF filtering at the WinPcap/libpcap level
- Jumbo frames (max 9234 bytes)
- Link status available
- Per Port Statistics. Total packets/bytes received; Total packets received correctly/incorrectly

Suggested Hardware Platform

- Pentium-D (dual core) 2.8 GHz processor
- 2 GB RAM
- 50MB free disk space on the hard drive plus additional space for capture (trace) files. Disk performance is key to full-rate packet dump to disk.
- PCI-Express 4x or 8x slot with 4 lanes for the TurboCap adapter

Software Requirements

- TurboCap OS support includes Windows XP and Vista (32 and 64-bit AMD64) and Linux Fedora 10 (32 and 64-bit AMD64).



Pass-thru Mode: Traffic received on port A is sent to port B from transmission and vice versa

TurboCap Hardware Features

- Based on an Intel Dual-Port Gigabit Ethernet Controller
- Two RJ 45 copper connectors
- 10BASE-T, 100BASE-TX, 1000BASE-T
- Auto-negotiation, full-duplex capable
- Includes full-height and half-height brackets
- Bus width is x4 lane PCI Express, operable in full-height x4, x8 PCI Express slots
- Certifications include: FCC B, UL, CE, VCCI, BSMI, CTICK, MIC
- Power consumption: 4.98 W (3.3 V @ 1.5 A)
- Operating temperature: 0 – 55 degrees F

TurboCap Package Contents

- TurboCap dual port (copper) Gigabit Ethernet board
- CACE Technologies' optimized Gigabit Ethernet driver
- TurboCap Software Distribution (Windows or Linux Fedora 10)
- Installation Guide

About CACE Technologies, Inc.

Founded in 2005 with the vision of offering superior tools to the networking community, CACE Technologies, Inc. has since become a leader in the network analysis industry. Our innovative product portfolio includes the AirPcap family of wireless packet capture adapters for Windows, the TurboCap™ full-rate dual-port Gigabit Ethernet capture and injection solution, and CACE Pilot™, a powerful and intuitive network analysis, visualization and reporting tool. CACE also provides support, training, and development for two of the most popular and highly acclaimed open-source networking tools: WinPcap and Wireshark. All CACE products are fully integrated with Wireshark and are designed to enhance the Wireshark user experience. For information on our tools and services, visit www.cacetech.com.

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