

64-bit PCI/PCI-X Gigabit Ethernet Adapter

ENA5031



**Key Features**

- Consistent 900+ Mbps performance throughput per port
- One Perfisans’ ENA1001 Gigabit Ethernet accelerator ASIC with following features:
  - Half/full duplex in 10/100Mbps, full duplex in 1000Mbps;
  - Backward compatibility to existing 10/100Mbps networks;
  - Hardware acceleration for offloading host CPU;
  - Support large frames up to 8KB;
  - Independent transmit and receive processing queues;
  - Built-in power management capability;
  - Statistic gathering (SNMP, MIB II, and Ethernet MIB);
  - Full JTAG, MBIST, and scan test provisions.
- Self-diagnostic capabilities for easy debug and test
- External EEPROM for customized identification
- Single 10/100/1000Mbps copper interface port
- Optional fiber interface port for Gigabit Ethernet mode only
- 64-bit PCI/PCI-X bus to the host system
- LED indicators for link activity and status display

**Host Offload Features**

- IP, TCP, and UDP checksum offload capabilities for TX and RX
- TCP segmentation on TX
- Conditional IP de-fragmentation on RX
- Conditional segment reassembly on RX
- VLAN tag insertion and removal
- Advanced configurable packet filtering capabilities
- Proprietary descriptor ring management hardware
- Adaptive interrupts for TX and RX

**Standard Compliance**

- IP v.4
- IP v.6
- IEEE 802.3/u/z 10/100/1000Base-T/TX/SX
- IEEE 802.3x Flow Control – h/w and s/w control
- IEEE 802.1q VLAN tagging
- IEEE 802.1p Priority Processing – up to 8 queues
- IEEE 802.3ad Link Aggregation

**Network Driver Supports**

- Windows 2000, XP, 2003
- Linux (Red Hat), and other derivatives

**Summary**

Perfisans’ ENA5031 Gigabit Ethernet adapter is a cost-effective and high performance solution for home, office and enterprise server applications. Built-in advanced hardware acceleration engines support all Microsoft TCP/IP offload features, and result in lower host CPU utilization and higher network throughput.

**Product Description**

Perfisans’ ENA5031 adapter offers a simple and cost-effective solution for Gigabit Ethernet migration. The heart of the product is based on Perfisans’ ENA1001 Gigabit Ethernet Accelerator ASIC, which provides advanced TCP/IP task offload features and subsequently lowers host CPU utilization. The solution is also backward compatible to the existing 10/100Mbps Ethernet networks. Offload engines enable consistent high performance throughput in target applications. The adapter supports either or both copper and fiber ports, and one 64-bit PCI/PCI-X bus interface to the host system. Device drivers for Windows and Linux platforms allow easy deployment for all possible applications.

**Benefits**

- Cost-effective for Gigabit Ethernet migration
- Scalable and high performance throughput
- Task offloads lead to lower host CPU utilization
- Highly configurable for various target applications
- Low profiles suitable for high density and rack mount servers

**Applications**

- Gigabit NIC card;
- Gigabit Ethernet adapter for servers and host application;
- High density and redundant NICs for server applications;
- Storage area network applications.