

GigMAC PCI-X Model 6162

HIGH PERFORMANCE GIGABIT ETHERNET PCI-X CONTROLLER CARD

Features

- Powerful PCI-X compliant bus-master DMA engine, wire speed transmissions
- Highly integrated dual port full-featured MAC-PHY controller with integrated transceivers
- 3.8 Gb (484 MB) sustained raw throughput using PCI-X or 64/66 PCI
- Over 600,000 frames per second transfer rate
- PCI-X compliant 64-bit bus operating at speeds up to 133 MHz
- Fully backward compatible with 32 and 64-bit PCI, 33 and 66 MHz
- Low-profile PCI card form factor, 2.5 by 6.6 inches
- Low power: 3.5W @ 3.3V typical

Driver Support for

- VxWorks, Tornado II
- Windows 2000, Windows XP Embedded
- Linux kernel versions 2.2 and 2.4 including Embedded Linux

Partners



Embedded Applications

- Digital Video
- Internet Voice, VoIP
- Media and protocol gateways
- Switches and Edge Routers
- Internet Security and Monitoring
- Servers and Data Centers
- MPEG encoders/decoders, streaming media



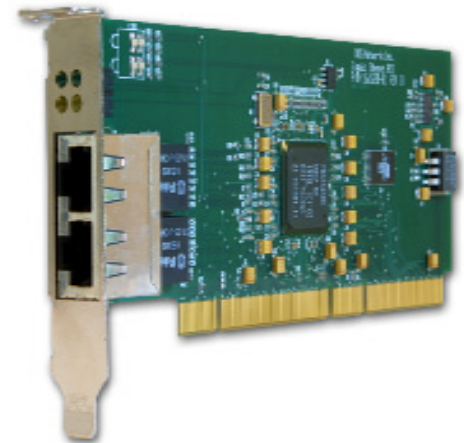
Gigabit Performance

Product Description

DSS Network's GigMAC PCI-X Model 6162 is a high performance Gigabit Ethernet controller for embedded applications in broadband telecommunication and data communications networks. It provides two fully independent 1000 Base-T copper connections over CAT5 cabling and is fully IEEE 802.3 compliant. The card's small form factor, low-profile 64-bit PCI design conforms to the PCI low profile specification and allows it to be used in low-height (1U) rack-mount server chassis.

The GigMAC PCI-X Model 6162 uses an advanced 4th generation, high-performance, low power Gigabit Ethernet chip from Intel. It has a PCI-X bus interface and is capable of 64-bit bus-master DMA operations utilizing maximum PCI bandwidth. It typically operates in full-duplex mode, transferring frames at wire speed. Combined with our high-performance device drivers, it is capable of providing a total sustained throughput of 484 megabytes per second. As a PCI-X bus master, it operates on buffer descriptor lists, transferring Ethernet frames to and from main memory with low CPU management overhead. This mechanism yields maximum throughput while minimizing utilization of the host CPU.

Advanced features including TCP/UDP/IP checksum generation and check offload, jumbo frame support, priority queuing, VLAN support and



GigMAC PCI-X Dual-port Gigabit Ethernet card

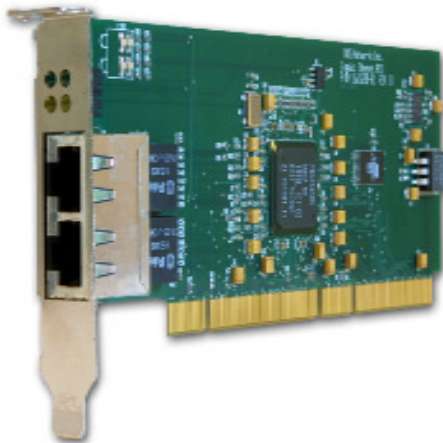
bus-master descriptor list processing are implemented in silicon. These features coupled with advanced packet filtering and a powerful PCI-X DMA bus engine provide optimal performance while offloading the host processor.

DSS Networks is a direct manufacturer of Gigabit Ethernet solutions and we also develop our own high-performance device drivers for VxWorks, Linux and Windows XP Embedded. We have formed strategic partnerships with leading companies of Semiconductors and Embedded Systems technology so that we are able to provide robust, highly integrated solutions backed by industry-proven technology. We provide excellent customer service and technical support to our customers to help ensure your project using Gigabit Ethernet is a success.

The GigMAC PCI-X dual port controller is an ideal solution for today's converged, bandwidth intensive, multi-protocol data and telecommunication networks. Applications include Switches, Edge Routers, Media Gateways, Broadcast Digital Audio and Video, Streaming Media, Internet Voice, Network Attached Storage, Storage Area Networks, Network Security Servers and Digital Imaging Products.

GigMAC PCI-X Model 6162

HIGH PERFORMANCE GIGABIT ETHERNET PCI-X CONTROLLER CARD



GigMAC PCI-X Dual-port Gigabit Ethernet card

Specifications

- 64-bit PCI-X low profile card, 2.5 by 6.6 inches
- Conforms to PCI "low-profile" specification
- Supports 10/100/1000 Base T auto negotiation
- Fully compliant to IEEE 802.3 and 802.3ab copper specifications
- PCI-X and PCI rev. 2.2 compliant
- 32/64 bit, 33/66/100/133 MHZ PCI-X and PCI bus interface
- Lower power: 3.5W @ 3.3V in Gigabit mode
- Supports 5V or 3.3V bus power, 5V or 3.3V PCI signaling
- Direct connection to two fully shielded CAT5E RJ-45 connectors
- 4 configurable LED indicators
- FCC Class 15; Part B, EN55022, EN50082 certification (pending)
- VxWorks, Linux and Windows XP driver support
- Optional 512KB flash eeprom available

Features, Configuration, Management and Performance

- High-performance PCI-X bus master DMA engine
- Efficient buffer descriptor list design
- DMA directly to/from host buffers, no buffer copies
- 484 Megabytes/sec sustained throughput
- Over 600,000 frames per second transfer rate
- Support for jumbo frames up to 16KB
- Supports interrupt coalescing (programmed latency)
- Supports priority queuing and VLAN tagging
- Advanced packet filtering options
- 4096 entry multicast hash table
- 16-entry destination or source address filtering
- Support for VLAN filtering and tagging
- TCP/UDP/IP checksum offload support
- Provides extended status, SNMP and RMON statistics
- Simultaneous operation on both ports

Communications Hardware

- Intel i82546 10/100/1000 dual-port PCI-X controller MAC-PHY combo
- Integrated on-chip gigabit transceivers
- Large internal FIFOs, 64KB transmit, 64KB receive
- Advanced APM & ACPI power management features
- Internal 128-bit architecture
- Powerful PCI-X bus-master DMA engine
- Big or little endian support
- Fast back-to-back and PCI burst modes
- 2 LEDs per port
- Each LED may be programmed separately to one of 14 output functions
- Low power, 1.5 and 2.5V design
- Highly integrated, low chip count



DSS Networks is a member of the **PICMG** association

Software Driver Support

- Tornado 2.0, 2.2, VxWorks 5.4, 5.5
- Linux versions 2.2 and 2.4, Embedded Linux
- Windows XP Embedded, Windows 2000
- Multiple card support
- Management features including statistics and status
- Optional driver support for fail-over and link aggregation

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