

Model 6267-SFP

### FEATURES

- Pluggable fiber SFP connector options
- Over 242 MB/sec per port / 490MB total
- Up to 1M frames per second
- 133/100/66 PCI-X bus interface
- Low profile form factor

### POWER AND OPERATING TEMPERATURE

- Power supply: Uses single 5V supply rail (optional 3.3V) Onboard step-down regulators for core voltages
- Power Consumption: 3.8W total board power
- Temperature: 0-55C ambient

### DRIVER AND FIRMWARE SUPPORT

- Tornado 2.2 / VxWorks 5.5
- Linux versions 2.4. 2.6
- Embedded Linux
- Loopback diagnostics and frame generators
- Management features including performance statistics and status
- Optional driver support for fail-over and link aggregation

### EMBEDDED APPLICATIONS

- Digital video transmission
- Packet voice, VoIP
- Network security and monitoring
- Network test equipment
- Servers and data centers
- Switches and edge routers
- Military and medical systems
- Digital imaging products

### PRODUCT DESCRIPTION

#### GIGMAC PCI-X SERIES - LOW PROFILE DUAL-PORT GIGABIT FIBER PCI-X

The Model 6267-SFP offers two ports of 1000 Base X Gigabit Ethernet over Fiber and is fully IEEE 802.3 compliant. It is packaged in a 64-bit low profile PCI-X card measuring 2.5 by 6.6 inches and is suitable for 1U and 2U embedded enclosures. Industry standard high throughput PCI-X bus mode is supported up to 133 MHz and is also backwards compatible with standard 64 or 32 bit PCI. Support for both 1000 Base SX and LX is supported with onboard small-form factor pluggable "SFP" type connectors offering maximum flexibility fiber optic interface options.

The Model 6267 uses state-of-the-art Gigabit Ethernet controller technology featuring an ultra low power Intel 82546 dual port integrated MAC-PHY PCI-X controller with intelligent burst mode bus-master DMA providing a very high-level of performance and integration. It has a 133 MHz 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. 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 CPU utilization.

Advanced features including TCP/UDP/IP checksum offload, jumbo frame support, priority queuing and VLAN support and 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 minimizing CPU utilization.

High-performance Linux and vxWorks drivers are available and optimized for high throughput and high frame rate applications. Tests and benchmark data is available and demonstrates throughput in excess of 242 megabytes and over 850,000 frames per second per port running in full-duplex mode with performance exceeding 484MB/sec over both ports simultaneously.

Power consumption is very low utilizing approximately 3.86W total board power running both ports simultaneously in gigabit mode. Support for pluggable SFP fiber optic module options includes 850nm multimode and 1310nm single mode with support for standard distances to 5km and extended distances up to 20km.

The GigMAC PCI-X Model 6267-SFP is targeted for OEMs and Systems Integrators for use in data and telecommunications and is well suited for a variety of embedded Telecom, Enterprise, Military, Aerospace and Industrial applications. This product is available with an OEM Developers Kit containing Linux and VxWorks device drivers, library functions, frame generators, loopback tests, benchmark programs, statistics and management utilities and documentation.

# GIGMAC PCI-X MODEL 6267-SFP

GIGMAC PCI-X SERIES – LOW PROFILE DUAL-PORT  
GIGABIT FIBER PCI-X

## PRODUCT DATASHEET

### SPECIFICATIONS

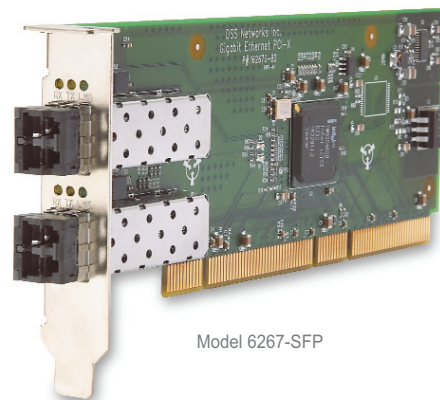
- 64-bit PCI-X low profile card, 2.5 by 6.6 inches
- Conforms to PCI "low-profile" specification
- Standard and low-profile bracket options
- Supports 1000 Base X (SX, LX) auto negotiation
- Fully compliant to IEEE 802.3 specifications
- PCI-X and PCI rev. 2.2 compliant
- 32/64 bit, 133/100/66 MHZ PCI-X bus interface
- Lower power: 3.86W @ 3.3V in Gigabit mode on both ports
- Supports 5V or 3.3V bus power, 5V or 3.3V PCI signaling
- Onboard pluggable SFP fiber optic transceivers
- Three multi-function LEDs per port
- FCC Class 15; Part B, EN55022, EN50082 certification (pending)
- 512KB flash BIOS eeprom (optional)

### CONFIGURATION, PERFORMANCE AND MANAGEMENT

- High-performance PCI-X bus master DMA engine
- Efficient buffer descriptor list design
- DMA directly to/from host buffers, no buffer copies
- Over 242MB/sec per port, 484 MB/sec sustained total throughput
- Over 850,000 frames per second using short frames
- 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

### COMMUNICATIONS HARDWARE

- Intel 82546 1000 Base-X dual-port PCI-X controller
- Internal dual-port fiber Serdes
- Internal 128-bit architecture
- Large internal FIFOS, 64KB transmit, 64KB receive
- Advanced APM & ACPI power management features
- Powerful PCI bus-master intelligent DMA engine design
- Fast back-to-back and burst transfer modes
- Low power, 1.5V and 2.5V design
- 850nm multimode SFP LC connector (standard)
- Optional 1310nm singlemode SFP LC connector
- 3 multi-function LEDs per port
- 512KB flash BIOS eeprom (optional)
- Big or little endian support
- Highly integrated, low chip count



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### PARTNERS



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

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