

# GigMAC PMC Model 5161

COMPACT PCI SERIES - HIGH-PERFORMANCE GIGABIT ETHERNET PMC ADAPTER CARD

## Features

242 Mbytes/sec (1.94 Gb) sustained raw throughput (using 64/66 PCI)  
 118 Mbytes/sec (944 Mb) sustained raw throughput (using 32/33 PCI)  
 Up to 1,000,000 frames per second max transfer rate  
 IEEE 1386 64-Bit Compact PCI PMC Mezzanine Card  
 High performance PCI compliant bus-master DMA engine design

Driver Support for

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



**GigMAC Gigabit Ethernet PMC Card**

## 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 Gigabit Ethernet PMC Adapter is a high performance 10/100/1000 Auto Negotiating Network Interface Controller targeted for Embedded Communications Applications. It operates over standard CAT5 cabling and is fully IEEE 802.3 compliant. It is based on the very latest in 3rd Generation, High-Performance Gigabit Ethernet Chipsets available in the market today.

Its Compact PCI Mezzanine Card design makes it a drop-in option card interface adding one or more Gigabit Ethernet network interfaces to your product. Mezzanine card designs are an attractive, reliable and space conscious alternative yielding excellent performance to that of a 64 bit, 66 MHZ slot based PCI approach.

The GigMAC PMC controller normally operates in full-duplex mode and transmits Ethernet frames at wire speed. Combined with our high-performance device driver, it is capable of providing a total throughput of 242 Megabytes per second. As a bus-master it operates on buffer descriptor lists and transfers Ether-

net frames to and from memory without CPU intervention. This approach yields maximum performance while minimizing CPU utilization.

Advanced features including TCP/IP checksum generation and checking, VLAN tagging, Priority Queuing, Deep-packet filtering and Buffer Descriptor Lists are implemented in silicon to boost performance while offloading the host processor.

DSS Networks is a direct manufacturer and we also supply our own high performance device drivers for VxWorks, Linux and Embedded Windows. We offer personalized, excellent customer support and service for our products.

GigMAC is an ideal solution for today's converged high-bandwidth network infrastructure and is Embedded RTOS ready. Applications include Network Appliances, Network Attached Storage, Storage Area Networks, Digital Video, Streaming Media, Internet Voice, Switches, Routers, Gateways, Network Security Servers and Digital Imaging Products.

# GigMAC PMC Model 5161

COMPACT PCI SERIES - HIGH-PERFORMANCE GIGABIT ETHERNET PMC ADAPTER CARD



GigMAC Gigabit Ethernet PMC Card

## Specifications

- IEEE 1386 64-Bit PCI Mezzanine Card
- Supports 10/100/1000 Auto Negotiation
- Fully compliant to IEEE 802.3 and 803.ab Copper Specifications
- PCI Rev 2.2 Compliant
- 33/66 MHZ 32/64 PCI Bus Interface
- Support for 5V or 3.3V PCI bus power and 5V or 3.3V PCI signaling environment
- Low Power, 3.39W @ 3.3V in Gigabit Mode
- High-performance Bus-Master Design
- Supports Jumbo packets
- Extended status and statistics
- Direct Connect to onboard CAT5 RJ45
- 6-LED indicators
- FCC Class 15; Part B, EN5502 (pending)
- VxWorks, Linux and Windows Driver Support

## System Configuration and Performance

- High-Performance Bus-Master Design
- DMA directly to/from Host Buffers
- 242 Mbytes/sec (1.94 Gb) sustained raw throughput using 64/66 PCI
- 118 Mbytes/sec (944 Mb) sustained raw throughput using 32/33 PCI
- Supports Interrupt Coalescing
- Supports Priority Queuing
- Advanced "deep-packet" Filtering
- VLAN and TCP/IP Checksum support
- Broadcast and Multicast Addresses

## Communications Hardware

- National Semiconductor DP83865 10/100/1000 Transceiver
- National Semiconductor DP83820 10/100/1000 Media Access Controller
- Large Internal FIFOs, 32KB receive, 8KB Transmit
- Big or Little Endian
- Fast back-to-back and Burst Mode
- 6 LEDS - 10, 100, 1000, Transmit, Receive and Duplex
- Integrated Single-Chip Magnetics
- PCI 2.2 Compliant
- Ultra low power transceiver, 1.8V and 2.5V design
- Highly integrated, low chip count
- Direct Connect to onboard CAT5 RJ45
- 64-bit PMC JP1,JP2,JP3 Connectors
- 33/66 MHZ PCI Bus Interface

## 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
- MontaVista Embedded Linux
- Multiple Card Support
- Statistics and Status Interfaces
- RFC 1213, RFC 1398 MIB support
- Portable to other Operating Systems



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

## DSS NETWORKS, INC.

111 Pacifica, Suite 250, Irvine, CA 92618

Toll Free 1.888.506.7651

Direct 1.949.727.2490

Fax 1.949.727.2498

[www.dssnetworks.com](http://www.dssnetworks.com)

Specifications are subject to change without notice. Please contact DSS Networks for full technical specifications, ordering details, or check out our website at <http://www.dssnetworks.com>

(C) 2002 DSS Networks, Inc.

pb151710.pdf - 09/08/02