GigMAC Fiber Model 7160
COMPACT PCI SERIES - HIGH-PERFORMANCE GIGABIT ETHERNET FIBER PMC 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)

Over 536,000 frames per second transfer rate

IEEE 802.3 Compact PCI 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 Fiber Card

Partners

WindRiver

Microsoft® Windows® Embedded Partner

National Semiconductor

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-F Adapter is a high performance 1000 Base-SX Fiber Network Interface Controller targeted for Embedded Communications Applications. It provides a single 1000 Base-SX Optical Fiber connection and is fully IEEE 802.3 compliant. It is based on the very latest 3rd generation high-performance Gigabit Ethernet controller chip on the market today.

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

The GigMAC PMC Fiber controller normally operates in full-duplex mode, transmitting and receiving Ethernet frames at wire speed. Combined with our high-performance device drivers, it is capable of providing a total sustained throughput of 242 Megabytes per second. As a bus-master, it operates on buffer descriptor lists, transferring Ethernet frames to and from memory without CPU intervention. This approach yields maximum performance while minimizing CPU utilization.

Advanced features include TCP/IP checksum generation and checking, VLAN tagging, priority queuing, deep-packet filtering and buffer descriptor list processing 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 have formed partnerships with leading companies of Semiconductors and Embedded Operating Systems so that we are able to provide robust, highly integrated solutions backed by industry proven technology. Our customer service is second to none in the industry offering personalized service and support for our products.

The GigMAC PMC Fiber controller 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 Digi-

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GigMAC Gigabit Ethernet Fiber Card

Specifications

· IEEE 1386 64-Bit PCI Mezzanine Card
· Supports 1000 Base SX and LX including Auto Negotiation
· PCI Rev 2.2 Compliant
· 33/66 MHZ 32/64 PCI Bus Interface
· Low Power, 3W@3.3V in Gigabit Mode
· Support for 5V or 3.3V PCI bus power and 5V or 3.3V PCI signaling environment
· High-performance Bus-Master Design
· Supports Jumbo packets
· Extended status and statistics
· Optical 850nm SFF LC or SC connector options
· Optional support for 1310nm LC and SC connectors
· Multimode and singlemode fiber support
· 4 LED indicators
· FCC Class 15; Part B, EN55022, EN50082
· 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 DP83820 Media Access Controller
· Vitesse VSC7123 Gigabit Fiber Serdes
· Large Internal FIFOs, 32KB receive, 8KB Transmit
· Big or Little Endian
· Fast back-to-back and Burst Mode
· 4 LEDS - Link, signal detect, TX and RX
· Integrated SC or LC connectors, single or multimode
· PCI 2.2 Compliant
· Low power, 1.8 and 3.3 volt design
· Highly integrated, low chip count
· 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
· Windows NT, 2000, 98
· 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

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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**

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