



The DGE-550T Gigabit PCI card for server connection. This card connects to the Cat. 5 twisted-pair cable, common at most network sites, to transfer data at a blazing 2000Mbps full duplex speed, eliminating all network bottlenecks.

Twisted-pair Copper Gigabit Server Card

The DGE-550T Gigabit PCI card is a high-bandwidth network adapter designed for server connection over the inexpensive twisted-pair copper wires. At 2000Mbps full-duplex speed, this card provides very high dedicated bandwidth capacity for power servers directly attached to Gigabit switches. With advanced functions like VLAN, Flow Control, Traffic Prioritization and others, this Gigabit card brings you a high level of performance and security, allowing you to run bandwidth-intensive applications like multimedia, video conference and IP telephony.

Gigabit Over Twisted-pair

The DGE-550T offers an inexpensive alternative solution to fiber-optic Gigabit. Using your existing low-cost Cat. 5 copper twisted-pair wires as the transmission media, this card allows you to instantly upgrade your departmental servers to Gigabit capability without having to install new, expensive fiber cables.

High Performance

Using the bus master mode with direct DMA paths, the DGE-550T provides high throughput between the server host and the card, bypass the host's memory buffer. The card operates in 32-bit 33MHz PCI bus as well as in the upcoming 64-bit 66MHz PCI bus, auto-configuring according to the different data path widths to guarantee compatibility with various server configurations. To enhance performance, the card provides large, independent receive/transmit FIFO, jumbo frame support and adaptive Inter-Frame Spacing (IFS) capacity.

Flow Control for Secure Transmission

With IEEE 802.3x flow control support, your server is protected against possible data loss during transmission on the network. Connected to a Gigabit switch that supports flow control, the card receives signals from the switch regarding buffer overrun during peak usage periods. When the switch signals a buffer run situation, the card delays transmission until the switch is ready again to accept new data.

Priority Queues

This function allows your server to run Voice over IP (VoIP) telephony, video-conference and other multimedia applications where traffic is queued as critical and non-critical, and network packets are delivered at best-effort speeds.

VLAN to Improve Performance and Security

The card supports IEEE 802.1Q multiple Virtual LAN, allowing you to segment the network to smaller domains to improve performance and security. Dissemination of broadcast and unnecessary computer-to-computer packets can be restricted to reduce extraneous traffic. The card provides a VLAN table for the following functions: filtering packets by recognizing VLAN Tags, stripping VLAN Tags on receive, and inserting VLAN Tags on transmit.

Easy Migration Through 10/100/1000Mbps Support

The card supports three network speeds, 10Mbps, 100Mbps and 1000Mbps, allowing you to run in Fast Ethernet now, and migrate to Gigabit anytime later without having to change neither network adapters nor network cables. The card auto-senses and auto-negotiates to use the best network speed. Full/half duplex is supported for 10Mbps and 100Mbps, while full duplex is supported for the Gigabit speed.

Key Features

- 10/100/1000Mbps network speed support
- Uses existing Cat. 5 twisted-pair cable
- Full/half-duplex support
- 32/64-bit PCI bus support
- Universal bus support for 3.3V and 5V
- TCP/UDP/IP checksum support to offload task from host
- Flow Control, Priority Queue support
- Jumbo Frame support*
- High-level VLAN filtering support
- Runs Win98, 2000, NT 4.0, NetWare 5.1

* Available in next version

DGE-550T

Technical Specifications

General

Standards

- IEEE 802.3ab 1000BASE-T Gigabit Ethernet
- IEEE 802.3u 100BASE-TX Fast Ethernet
- IEEE 802.3 10BASE-T Ethernet
- ANSI/IEEE 802.3 NWay auto-negotiation
- PCI localbus 2.2 specifications
- IEEE 802.1Q VLAN Tagging
- IEEE 802.3x Flow Control
- IEEE 802.1P Priority Queues

Topology

Star

Protocol

CSMA/CD

Network Data Transfer Rates

- Ethernet: 10Mbps half duplex, 20Mbps full duplex
- Fast Ethernet: 100Mbps half duplex, 200Mbps full duplex
- Gigabit: 2000Mbps full duplex

Network Cables

- 4-pair UTP Cat. 5 (100 meters max.)
- EIA/TIA-568 100-ohm STP (100 meters max.)

Diagnostic LED Report

- Link/Activity
- Full duplex
- 1000Mbps
- 100Mbps

Cache Buffer

- 32KB Rx FIFO
- 8KB Tx FIFO

Full/half Duplex Support

- 10/100Mbps speeds: full/half duplex
- Gigabit speed: full duplex only

Flow Control

- IEEE 802.3x flow control per for full duplex
- Back pressure in half duplex

System Setup

IRQ

Allocated by system

I/O Address

Allocated by system

Full/half Duplex

- Auto-detected upon connection to network device
- User-selectable through software

Network Speed

- Auto-detected upon connection to network device
- User-selectable through software

Number of VLAN Supported

1 VLAN

Priority Queues

4 queues

Frame Size

- Standard Ethernet frame: 1518 bytes max.
- Max. frame size configurable by software

Environmental & Physical

Power Consumption

6 watts (max.)

Dimensions

166 x 73 mm (6.54 x 2.87 inch)

Gigabit Server Card

Office LAN

Weight

300g (0.66 lb.)

Operating Temperature

0° - 50° C (32° - 122° F)

Storage Temperature

-25° - 55° C (-13° - 131° F)

Humidity

5% - 90% non-condensing

Emission

- FCC Class B
- CE Class B
- VCCI Class B
- C-Tick Class B
- BSMI Class B

Network O.S. Support

- Novell NetWare 5.1
- Microsoft Windows 98, 98 SE, ME
- Microsoft NT 4.0, 2000



ACN 052 202 838

Ordering Information

Gigabit Card

DGE-550T Gigabit Twisted-pair Copper PCI Card

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