4-port Fast Ethernet Server Card

The DFE-580TX is a high-performance, versatile server card designed for very fast server connection. Outfit with 4 Fast Ethernet ports, the card gives you a 4-port trunk link from a server to a Fast Ethernet switch, providing load-sharing aggregated bandwidth and redundant backup links, allowing you to cost-effectively run bandwidth-intensive and mission-critical applications in client-server Windows and Unix environments.

4 Fast Ethernet Ports
With 4 twisted-pair ports running capable of running at full-duplex, the DFE-580TX provides connection at near Gigabit speed for servers on your existing Cat. 5 or lower grade network cable. All 4 ports support 10/100Mbps auto-sensing, and can be combined into a high-speed trunk transferring data at up to 800Mbps full-duplex.

Reliable High Performance
The card operates at the PCI Bus Master mode with clock speed support at up 33/66MHz. It is equipped with 4 independent MAC controllers, allowing each of the 4 ports to establish an independent full bandwidth segment with the attached switch. In the unlikely event where one MAC fails, the remaining controllers will continue to operate, guaranteeing uninterrupted server connection.

Load-sharing Aggregated Bandwidth
You can configure all 4 ports to operate at the load-sharing mode. In this configuration, the ports share the traffic load to and from the switch, while the card ensures a balanced load for each of the ports. This mode guarantees that bottlenecks are eliminated at peak traffic time.

Fail-over Redundant Backups
An alternative is to configure the card with 2 redundant backed-up load-sharing trunks. One trunk is active, the other trunk in the stand-by mode. In case if one trunk fails, the other trunk will provide the backup link. This configuration can be applied for mission-critical situations, or more common applications such as video-conference and IP telephony.

Priority Queues Support for Quality of Service
With packet prioritization capability, the card allows traffic to be queued as critical and non-critical, permitting your server to run voice over IP, video-conference and multimedia applications where packets are delivered at best-effort speeds.

Flow Control to Minimize Packet Loss
The card's embedded flow control provides a means to protect against possible data loss during transmission on the network. When connected to a Fast Ethernet switch that supports flow control, the card receives signals from the switch regarding buffer overrun during peak usage periods. The card then delays transmission until the switch is ready again to accept new data.

Features
- 4 10/100Mbps auto-sensing Fast Ethernet ports
- 4 with independent MAC controllers
- Full/half duplex for each port
- 32-bit Bus Master data transfer with PC host
- IEEE 802.3x Flow Control for fast, reliable data transmission
- Low network command processing overhead
- 800Mbps server-to-switch trunk
- Per-port load-balance/fault-tolerance configuration
- Dynamic fail-over function for backup mode
- IEEE 802.1p Priority Queues
**Technical Specifications**

**DFE-580TX**

**General**
- **Standards**
  - IEEE 802.3 10BASE-T Ethernet
  - IEEE 802.3u 100BASE-TX Fast Ethernet
  - PCI local bus 2.2 specifications
  - IEEE 802.3x Flow Control
  - IEEE 802.1P priority tagging
  - PCI 2.2

**Topology**
- Star

**Protocol**
- CSMA/CD

**Data Transfer Rates**
- Ethernet: 10Mbps (half duplex)
  20Mbps (full duplex)
- Fast Ethernet: 100Mbps (half duplex)
  200Mbps (full duplex)

**Network Cables**
- 10BASE-T:
  - 2-pair UTP Cat. 3, 4, 5 (100 m max.)
  - EIA/TIA-586 100-ohm STP (100 m max.)
- 100BASE-TX:
  - UTP Cat. 5 (100 m max.)
  - EIA/TIA-568 100-ohm STP (100 m max.)

**Diagnostic LED Report (per port)**
- Link
- Activity (Tx/Rx)
- Full duplex

**Cache Buffer**
- 2K byte receive FIFO
- 2K byte transmit FIFO

**Flow Control (per port)**
- IEEE 802.3x flow control in 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

**Priority Queues**
- 4 queues

**Configuration**
- Telnet
- Web-based configuration

**Environmental & Physical**
- **Power Consumption**
  - 3 watts (maximum)
- **Dimensions**
  - 160 mm x 100 mm
- **Weight**
  - 135 grams
- **Operating Temperature**
  - 0°C - 50°C (32°F - 122°F)
- **Storage Temperature**
  - -25°C - 55°C (-13°F - 131°F)
- **Humidity**
  - 5% - 90% non-condensing
- **EMI Certification**
  - FCC Class B
  - CE Class B
  - VCCI Class B
  - BSMI Class B

**Network O.S. Support**
- Microsoft Windows 2000, NT 4.0
- Linux support kernel versions: 2.2.18, 2.2.19, 2.4.2 through 2.4.16