



Tehuti Networks TN7586-D 10GbE Dual Port XFP Server Adapter

Single Chip Low Profile Solution for XFP

- **10 Gigabit Performance in a Low Profile size**
- **High Speed PCI-Express x8 Host Bus**
- **Two XAUI interfaces to Two XFP connectors**
- **Single Chip Design Saves Cost and Power**
- **OptiStrata™ Embedded Technology**
 - **Boosts Network Traffic**
 - **Minimizes CPU Utilization**



Product Description

The **TN7586-D** dual-port 10 Gigabit Ethernet server adapter offers simple integration into any PCI Express x8 server slot via two XFP connectors. By optimizing for high-performance applications that have strict low-power budgets and small form factor requirements, the **TN7586-D** provides an optimal solution for many Ethernet applications.

The **TN3016-D** controller featured on the **TN7586-D**, integrates Tehuti Networks'

OptiStrata™ Embedded Technology and a 10GbE MAC into a single chip that provides up to 10Gbps of network throughput. Tehuti Networks' solution substantially reduces the CPU's TCP/IP packet processing tasks by performing enhanced data-handling algorithms thereby offering nearly 10Gb line speed performance with the simplicity of a conventional Network Interface Card (NIC) or LAN-on-Motherboard (LOM).

Seamless Integration

- **TN7586-D** operates in complete harmony with the OS, enabling simple integration into designs.
- NO modifications are required to the server's operating system and no special software is needed.
- **TN7586-D** replaces the Ethernet MAC of any conventional TCP connection and requires only a simple, standard PCI driver to interface between the hardware and the software.
- The CPU's existing TCP/IP stack is kept intact.

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Features

Benefits

PCI Express Host Bus Interface

- | | |
|--------------------------------------|---|
| ✓ x8 Interface | ✓ Maximum host bus bandwidth 32 Gbps (bi-directional) |
| ✓ High bandwidth per pin (2.5 Gbps) | ✓ Minimizes card size |
| ✓ PCI Express Rev 1.0a specification | ✓ Standard high performance bus interface |

Memory

- | | |
|-----------------------|----------------------------------|
| ✓ 3Mb internal memory | ✓ Minimizes controller footprint |
|-----------------------|----------------------------------|

MAC and Media Interface

- | | |
|--|--|
| ✓ Two XAUI interfaces | ✓ Interface to two XFP connectors |
| ✓ Jumbo frame support (9K) | ✓ Higher network utilization for large data transfers |
| ✓ IEEE 802.3x flow control support | ✓ Reduced frame loss and increased network utilization |
| ✓ IEEE 802.1q VLAN support | ✓ Traffic isolation for security, and VLAN stripping |
| ✓ IEEE 802.1p layer 2 priority queuing | ✓ Layer 2 priority encoding |
| ✓ RFC2819 RMON MIB statistics | ✓ Generic statistics monitoring |
| ✓ Multicast | ✓ Reduce network traffic |
| ✓ Load Balancing | ✓ Maximize network throughput across ports |
| ✓ Failover | ✓ Maximize network uptime |
| ✓ LEDs | ✓ 1 LED per port (link and activity) |

OptiStrata™ Accelerator Engine

- | | |
|------------------------------------|--|
| ✓ Integrated OptiStrata™ Processor | ✓ Simple integration with MAC |
| ✓ TCP acceleration | ✓ Most widely used transport protocol |
| ✓ Segmentation and reassembly | ✓ Requires no OS upgrade |
| | ✓ Relieves CPU from transport processing |
| | ✓ Reduced host bus traffic |

Performance enhancements

- | | |
|---------------------------------------|---|
| ✓ Microsoft Scalable Networking | ✓ Reduced host bus traffic |
| ✓ TCP Chimney | ✓ Optimization for multiple CPUs |
| ✓ Receive-side scaling (RSS) | ✓ Eliminates interrupt sharing |
| ✓ MSI and MSI-X | ✓ Widely used network protocol |
| ✓ IP acceleration | ✓ Lower CPU utilization |
| ✓ IP, TCP and UDP checksum offloading | ✓ Increased network throughput |
| ✓ Large Send (up to 64 KB) | ✓ Protocol Flexibility |
| ✓ IPv4, IPv6 | ✓ Reduce CPU utilization and improve throughput |
| ✓ Linux TOE | |

Driver Support

- | | |
|--|--|
| ✓ Windows Server 2003, Windows Server Longhorn, Windows XP, Windows Vista™ | ✓ Short time to market |
| ✓ Linux 2.4, Linux 2.6, Linux 64-bit | ✓ Seamless software integration |
| ✓ FreeBSD®, Solaris, XEN™, and VMware® ESX 3.0 | ✓ No interference with existing TCP/IP implementations |
| ✓ Multiple queues management | ✓ Advanced multi-processor platforms support |
| ✓ Windows Management Interface (WMI) | ✓ Multi-processor redundancy support |
| | ✓ Easy configuration |

Technical Characteristics

- | | | | |
|-------------------|----------------------|-----------------------------|---------------|
| ▪ Bus Type | PCI Express, 8 lanes | ▪ Operating Temperature | 0°C to 65°C |
| ▪ Cabling Options | XFP | ▪ Operating Humidity | 5% to 95% |
| ▪ Length | 6.5" (Half Length) | ▪ Storage Temperature | -40°C to 85°C |
| ▪ Height | 2.5" (Low Profile) | ▪ Typical Power Dissipation | 17W |

For additional information please contact sales@tehutinetworks.net

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