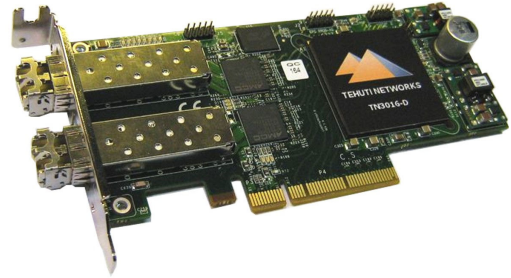




# Tehuti Networks TN7587-D 10GbE Dual Port SFP+ Server Adapter

Single Chip Low Profile Solution for SFP+

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



## Product Description

The **TN7587-D** dual-port 10 Gigabit Ethernet server adapter offers simple integration into any PCI Express x8 server slot via two SFP+ connectors. By optimizing for high-performance applications that have strict low-power budgets and small form factor requirements, the **TN7587-D** provides an optimal solution for many Ethernet applications.

The **TN3016-D** controller featured on the **TN7587-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

- **TN7587-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.
- **TN7587-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 SFP+ connectors (SFF-8431)          |
|  | ✓ Allows both Copper and Fiber cabling                 |
| ✓ 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 | SFP+                 | ▪ Operating Humidity        | 5% to 95%     |
| ▪ Length          | 5.8"                 | ▪ Storage Temperature       | -40°C to 85°C |
| ▪ Height          | 2.5" (Low Profile)   | ▪ Typical Power Dissipation | 16W           |

For additional information please contact [sales@tehutinetworks.net](mailto:sales@tehutinetworks.net)

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Rev 1.4, November 2007