



Tehuti Networks TN7585-D 10GbE Dual Port CX4 Server Adapter

High Performance Single Chip Low Profile Solution

- **Dual 10 Gigabit performance in a low profile form factor**
- **Single Chip solution, integrated MAC/PHY**
- **Low power consumption (11W)**
- **Stateless offloading**
- **OptiStrata™ network acceleration**
 - **Boosts Network Traffic**
 - **Minimizes CPU Utilization**
 - **Maximize Protocol Flexibility**



Product Description

The **TN7585-D** dual-port 10 Gigabit Ethernet server adapter offers simple integration into any PCI Express x8 server slot. The card offers two network port interfaces via 10G-BASE-CX4 connectors. The Host Hardware Stateless Offload utilizes special hardware logic design to significantly reduce host CPU utilization and boost network traffic. By optimizing for high throughput and low latency applications with strict low-power budgets and compact form factor requirements, the

TN7585-D provides an optimal solution for many Ethernet applications. The **TN3016-D** controller featured on the **TN7585-D**, integrates Tehuti Networks' OptiStrata™ Embedded Processor and two 10GbE MACs into a single chip that provides up to 10Gbps of network throughput per port. Tehuti Networks' solution substantially reduces the CPU's TCP/IP packet processing tasks by offloading the task to the embedded NIC processor thereby offering 10Gbps line speed performance per port.

Performance Advantages

- Dual Port 10 Gigabit Ethernet allows network scalability by maximizing throughput on both ports simultaneously.
- Advanced H/W based architecture reduces latency
- Receive Side Scaling (RSS) minimize CPU utilization across multiple processor systems
- Minimized device I/O interrupts using MSI

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Features

Benefits

PCI Express Host Bus Interface

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|--------------------------------------|---|
| ✓ PCIe 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 | ✓ High performance standardized bus interface |

MAC and Media Interface

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|---|--|
| ✓ Two XAUI interfaces | ✓ Interface to Two CX4 connectors |
| ✓ IEEE Std 802.3ae™ | ✓ 10GbE over short range Copper (CX4) |
| ✓ Jumbo frame support (9K, 16K) | ✓ Higher network utilization for large data transfers |
| ✓ IEEE Std 802.3x™ flow control support | ✓ Reduced frame loss and increased network utilization |
| ✓ IEEE Std 802.1q™ VLAN support | ✓ Traffic isolation for security, 4096 tags |
| ✓ MIB statistics | ✓ Generic statistics monitoring |
| ✓ Multicast ACL | ✓ Reduce Host load |
| ✓ Load Balancing | ✓ Maximize network throughput across ports |
| ✓ Failover | ✓ Maximize network uptime, Driver based |
| ✓ LEDs | ✓ 1 LED per port (link Up/Down status) |

OptiStrata™ Embedded Processor

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|------------------------------------|--|
| ✓ Integrated OptiStrata™ Processor | ✓ Simple integration with MAC |
| ✓ Segmentation and Reassembly | ✓ Offload Host TCP processing to NIC HW |
| ✓ Data Payload DMA control | ✓ Requires no OS upgrade |
| | ✓ Relieves CPU from transport processing |
| | ✓ Reduced host bus traffic |

Performance enhancements

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|---------------------------------------|---|
| ✓ Receive-Side Scaling (RSS) | ✓ Optimization for multiple CPUs under Windows OS control |
| ✓ MSI | ✓ Reduce CPU utilization and improve throughput |
| ✓ IP, TCP and UDP checksum offloading | ✓ Lower CPU utilization |
| ✓ Large Send (up to 64 KB) | ✓ Increased network throughput |
| ✓ IPv4 | ✓ Protocol Flexibility |

Driver Support

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|---|--|
| ✓ MS Server 2003, MS Server 2008, XP, Vista™, | ✓ Short time to market |
| ✓ Linux 2.4, Linux 2.6, Linux 64-bit | ✓ Seamless software integration |
| ✓ Redhat Enterprise Linux 4.7& 5.3 | ✓ No interference with existing TCP/IP implementations |
| ✓ VMware® ESX 3.5 | ✓ Advanced multi-processor platforms support |
| ✓ Multiple queues management | ✓ Multi-processor redundancy support |
| | ✓ Easy configuration |

Technical Characteristics

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|-------------------|----------------------|-----------------------------|---------------|
| ✓ Bus Type | PCI Express, 8 lanes | ✓ Operating Temperature | 0°C to 65°C |
| ✓ Cabling Options | CX4 – up to 15m | ✓ Operating Humidity | 5% to 95% |
| ✓ Length | 4.6" (Compact) | ✓ Storage Temperature | -40°C to 85°C |
| ✓ Height | 2.5" (Low Profile) | ✓ Typical Power Dissipation | 11W |
| | | ✓ Minimum Airflow | 200 FPM |

For additional information please contact sales@tehutinetworks.net

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