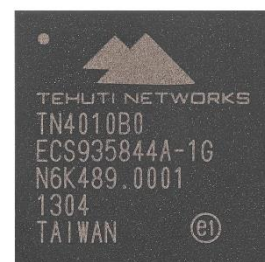


TN4010 Product Brief

5-Speed 10G/5G/2.5G/1G/100M Base-T single chip, single port Network Traffic Accelerator

1. Introduction

Tehuti TN4010 is an optimized single port 10GbE Network Traffic Accelerator and Offload Engine for NIC & LOM applications.



Available in a low cost 11x11mm BGA package and typical power consumption of less than 1W, the TN4010 offers the lowest power and cost MAC solution for next generation NIC and LOM for PC's, Servers and NAS systems, that seek to service the increasing demand of higher network bandwidth, while maintaining backward compatibility with existing Ethernet infrastructure.

Tehuti TN4010 solution includes software drivers for a broad range of Operating Systems and a fully proven Reference Design for shorter Time to Revenues for system manufacturers.

2. Features and Benefits

Features	Benefits
PCI Express Host Bus Interface	
<ul style="list-style-type: none">✓ PCI Express Rev 2.0 specification x4 Interface✓ High bandwidth per pin (5 Gbps)	<ul style="list-style-type: none">✓ Maximum host bus bandwidth 32 Gbps (Bi-directional)✓ Standard high performance bus interface
Memory	
<ul style="list-style-type: none">✓ 1Mbit internal memory	<ul style="list-style-type: none">✓ Minimizes controller footprint
Ethernet and Media support	
<ul style="list-style-type: none">✓ 5-Speed 10Gb/5Gb/2.5Gb/1Gb/100Mb auto negotiation support✓ XAUI Interface✓ CX4 Support✓ IEEE 802.3az support (EEE)✓ Jumbo frame support (16K)✓ IEEE 802.1q VLAN support✓ RFC2819 RMON MIB statistics✓ Multicast✓ IEEE 802.3ad Link Aggregation support	<ul style="list-style-type: none">✓ Multi-standard support for wide range of systems✓ Widely available 10G PHY connection✓ Low power short range Ethernet connection✓ EEE power reduction on idle time with supported partners✓ Higher network utilization for large data transfers✓ Traffic isolation for security✓ Generic statistics monitoring✓ Reduce network traffic✓ Maximize network throughput via teaming

OptiStrata™ Accelerator Engine	
✓ Integrated OptiStrata™ Processor	✓ Flexibility in implementing packet processing algorithms and supporting future TCP/IP stack implementations
Performance enhancements	
<ul style="list-style-type: none"> ✓ Microsoft Scalable Networking ✓ Receive-side scaling (RSS) ✓ MSI ✓ IP, TCP and UDP checksum offloading ✓ Large Send (up to 64 KB) ✓ Low Latency (< 4 uS) 	<ul style="list-style-type: none"> ✓ Reduced host bus traffic ✓ Efficiently support multi-core systems ✓ Minimize overhead and eliminates interrupt sharing ✓ Lower CPU utilization ✓ Increased network throughput ✓ Ideal for high performance computing applications
Offloading capabilities	
<ul style="list-style-type: none"> ✓ Layer 2 (Ethernet) <ul style="list-style-type: none"> • CRC processing • MAC Filtering (Unicast and Multicast) • VLAN filters ✓ Flow Control ✓ Layer 3 (IP) Checksums ✓ Layer 4 (TCP, UDP) Checksum ✓ RSS/RPS support ✓ Large Packet Send (up to 64KB) (TCP segmentation) 	
Driver support	
<ul style="list-style-type: none"> ✓ Microsoft Windows Server 2012, ✓ Microsoft Windows Server 2012 R2 ✓ Microsoft Windows Server 2008 R2 ✓ Microsoft Hyper-V ✓ Microsoft Windows 10 Pro Insider Preview 64 bit ✓ Microsoft Windows Win 8.1 32/64 bit ✓ Microsoft Windows Win 7 32/64 bit ✓ Linux 2.6.x, Linux 3.x ✓ vmware® ESXi 5.x, ESXi 6.0 ✓ Apple OS X 10.10.3 or later 	<ul style="list-style-type: none"> ✓ Short time to market ✓ Seamless software integration ✓ No interference with existing TCP/IP implementations ✓ Advanced multi-processor platforms support
Manageability	
<ul style="list-style-type: none"> ✓ MDIO ✓ Wake on LAN (WoL) support ✓ Comprehensive Built-In self-test 	<ul style="list-style-type: none"> ✓ Host management of PHYs ✓ Wake up system from remote site ✓ Improves yield, increases reliability, and lowers overall cost
Physical and Electrical	
<ul style="list-style-type: none"> ✓ Voltage 2.5V, 1.0V ✓ Low Power 1W typical ✓ Package 169 Pins TFBGA 11X11mm 	<ul style="list-style-type: none"> ✓ Operating Temperature 0°C to 70°C ✓ Storage Temperature -40°C to 85°C ✓ RoHS/Green Compliant

For more info visit our website: www.tehutinetworks.net email: info@tehutinetworks.net