



10/100/1000BASE-T CONTROLLER WITH INTEGRATED TRANSCEIVER

FEATURES

- **Single-chip device for mobile LAN on Motherboard (LOM) or Network Interface Card (NIC) applications**
 - Integrated 10/100/1000BASE-T transceiver
 - 10/100/1000BASE-T triple-speed MAC
 - PCI v2.2, 32-bit/33-MHz host interface
 - High-speed RISC core with 16-KB caches
 - SMBus 2.0 controller
 - On-chip power circuit controller and Wake on LAN power switching circuit
- **Advanced power management**
 - ACPI compliance
 - Situation-sensitive features reduce power consumption
- **Performance features**
 - TCP, IP, UDP checksum
 - Microsoft® large send
 - TCP segmentation
 - CPU task offload
 - Adaptive interrupts
- **Robust manageability**
 - Wake on LAN
 - Out-of-Box mode WOL
 - PXE 2.0 remote boot
 - Alert Specification Forum–ASF 1.0 support
 - Statistic gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30))
 - Comprehensive diagnostic and configuration software suite
 - ACPI 1.1a complaint–multiple power modes
- **Advanced network features**
 - Virtual LANs–802.1q VLAN tagging; supports 64 VLANs
 - 802.3x flow control
- **Advanced network features**
 - Cable analyzer features detect cabling problems
- **3.3V I/Os (5V tolerant)**
- **JTAG**

SUMMARY OF BENEFITS

- **Industry's smallest 10/100/1000 MAC+PHY solution**
 - Optimized for LOM and NIC applications
 - Enables small form factor PCs
- **Ultra-low power and intelligent power management to dramatically extend battery life**
 - 0.13-mm CMOS design allows industry's lowest power
 - Advanced situation-sensitive power management features
 - Power is continually reduced to the minimum needed
 - Adapts to usage model
 - Maximizes battery life and enables smaller mobile PCs
- **Enables desktop PC products for all segments**
 - Pin-compatible with 5705FE, a 10/100 companion chip
 - Allows one board layout for both gigabit and Fast Ethernet applications
- **Completely backward compatible**
 - With existing 10/100 network infrastructure
 - With existing PCI-based desktop and mobile platforms
- **Futureproof with flexible firmware architecture**
 - Flexible firmware adapts to changing standards
 - Wirespeed custom packet filtering via on-board CPUs
- **Power optimized through reduced CPU utilization**
 - Adaptive interrupts minimize the calls to PC's CPU
 - TCP/IP offloads reduce CPU burden significantly
 - Reduces power consumption of PC processor
 - Allows use of lower power/performance PC processor
- **Cable analyzer tests for network cable issues**
 - Customers can field-test using self-diagnostics
 - Reduce customer calls and returns, reducing costs dramatically
- **Robust and highly manageable**
 - PXE 2.0, ACPI 1.1, WOL
 - Integrated cable testing—link quality, length, pair skew, pair polarity, pair swap
 - Flexible ASF 1.0
- **Space savings for LOM**
 - 196-pin HBGA package
 - No external memory
 - Integrated power circuitry reduces BOM costs