

BCM5751





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

FEATURES

- Single-chip device for desktop LAN-on-Motherboard (LoM) or network interface card (NIC) applications
- Integrated 10/100/1000BASE-T transceiver
 - 10/100/1000BASE-T triple-speed MAC
 - High-speed RISC core with 24-KB cache
 - SMBus 2.0 controller
 - On-chip voltage regulation
 - Wake-on-LAN power switching circuit
- PCI Express host interface
 - 1x lane
 - 4-pin interface
 - · Functionality identical to PCI
- Performance features
 - TCP, IP, and UDP checksum
 - Microsoft® Large Send Offload
 - Large burst read
 - · Interrupt coalescing

• Robust Wake on LAN (WoL)

- Standards-compliant WoL
- Innovative out-of-box mode WoL
- Hardware power switching
- Comprehensive diagnostic and configuration software suite

• Industry-compliant alerting features

- Alert Standard Format (ASF) 2.0 support
- Secure power-on and power-off
- Fast hardware authentication (SHA-1, HMAC, MD5)
- True hardware random number generation

Integrated TPM functionality

- Secure key management
- Strong authentication capabilities
- Platform state verification
- 3.3V I/Os (5V tolerant)
- JTAG

SUMMARY OF BENEFITS

- Wirespeed performance increases user performance
 - PCI Express provides wirespeed non-blocking throughput
 - TCP/IP stack offloads significantly reduce utilization of CPU
 - TCP/IP stack offloads significantly increase throughput to enable faster downloads of large files
- Industry's smallest GbE form factor enables easier motherboard design
 - Innovative design reduces footprint to 67% smaller than competing solutions
 - 15 x 15-mm package
 - Integrated WoL switching eliminates external power switching components
- Proven TPM-based security features protect corporate information
 - Protect valuable data against theft
 - Strong authentication to prevent unauthorized network access
 - Virus protection for VPN users exposed to Internet
- Secure alerting and power cycling reduces IT costs
 - ASF 2.0 support for standards-based alerting. IT managers receive automatic alerts when PC support issues occur
 - Remote power-on/off features allow IT managers to power cycle PCs to address issues
 - Hardware-based authentication and random number generation ensures the highest level of security possible
- Design flexibility allows feature consistency across SKUs
 - Layout compatible with PCI-based BCM5750, enabling one motherboard layout to support both PCI and PCI Express
 - Single software driver image across PCI and PCI Express platforms

