

SINGLE-CHIP DEVICE FOR MOBILE LAN-ON-MOTHERBOARD APPLICATIONS

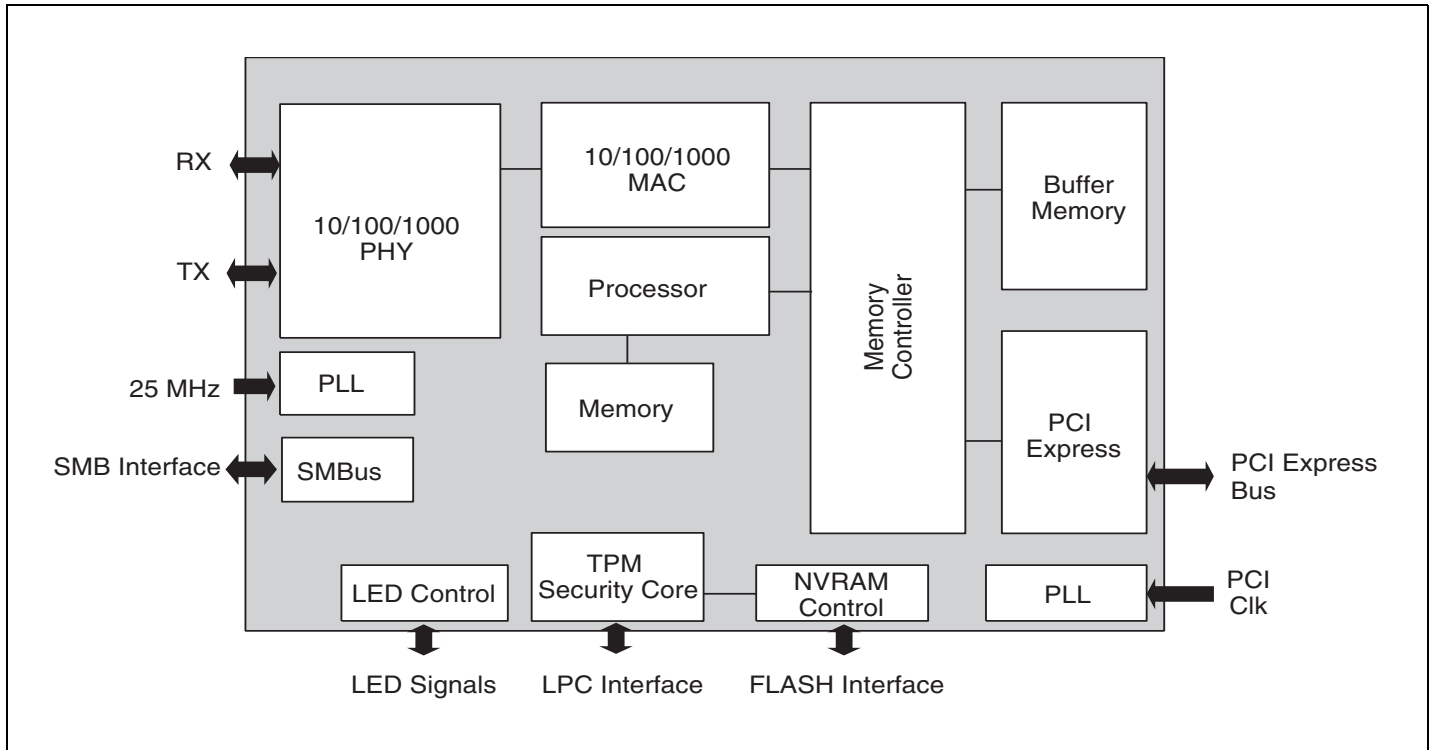
FEATURES

- **Integrated 10/100/1000BASE-T transceiver and MAC**
 - SMBus 2.0 controller
 - On-chip voltage regulation
- **Mobile power modes reduce device power consumption**
 - Device senses usage model and adapts power consumption
 - Device automatically configures itself for the lowest power required
- **Secure Foundation™ provides TPM 1.2 and NGSCB support**
 - Compliant with TCG 1.2 specification
 - Secure key management and strong authentication capabilities
- **PCI Express® host interface**
 - x1 PCI-E v1.0a
 - Software functionality is identical to PCI
- **Performance features**
 - TCP, IP, and UDP checksum and Large Send offload
 - Interrupt coalescing
- **CableChecker™ diagnoses costly cable issues**
 - CableChecker leverages Broadcom's extensive PHY expertise
 - Continually examines cabling to find problems
- **Robust Wake on LAN (WoL)**
 - Standards-compliant WoL and out-of-box mode WoL
 - Tested over many generations and hundreds of configurations
- **Industry-compliant alerting features**
 - Alert Standard Format (ASF) 2.0 support
 - Secure power-on and power-off
- **JTAG**

SUMMARY OF BENEFITS

- **Wirespeed performance increases user performance**
 - PCI Express provides full 2 Gbps of duplex throughput
 - User experience improves due to enhanced system performance
- **Proven TPM-based security features protect corporate information**
 - TPM provides industry-standard security to enterprise platforms
 - TPM delivers strong authentication and encryption
- **CableSense™ power mode improves the mobile experience**
 - Intelligent power management extends battery life—stays mobile longer
 - EnergyStar and 1W Initiative requirements are met
- **CableChecker reduces TCO and support calls**
 - Automatically pinpoints the location of cabling issues
 - Eliminates the need to send service technicians to diagnose link problems
- **Secure alerting and power cycling reduces IT costs**
 - Remote monitoring capabilities actively monitor client PC problems
 - Remote power cycling enables reduction in desk-side IT visits
- **Design flexibility allows feature consistency across SKUs**
 - Layout compatible to BCM5753 for non-TPM systems
 - Single software driver image spans entire SKU range

OVERVIEW



The BCM5752M is a fully integrated 10/100/1000BASE-T Gigabit Ethernet media access control and physical layer transceiver solution for high-performance network applications. The BCM5752M combines a triple-speed, IEEE 802.3 compliant media access controller (MAC), PCI Express bus interface, on-chip buffer memory, and integrated physical layer transceiver in a single device. It is fabricated in a low-voltage silicon process, providing an ultra-low power solution. By itself, the BCM5752M provides a complete single-chip Gigabit Ethernet LAN-on-Motherboard (LoM) solution.

The BCM5752M includes a 10/100/1000-Mbps Ethernet MAC with full- and half-duplex capability at all speeds. Support for the following 802.3 functions is featured in the MAC: VLAN tagging, layer 2 priority encoding, and full-duplex flow control.

The transceiver is fully compatible with the IEEE 802.3 standard for auto-negotiation of speed. Additionally, several plug-and-play enhancements are included to make the device even more user-friendly.

A link quality indicator LED and a GUI application give installers an instant visual indication of problems. This includes physical wiring defects or channel conditions, such as excessive cable length, return loss, crosstalk, echo, and noise.

Broadcom's remote cable management and diagnostics software can be used with the device to provide remote management of the cable and a first level of diagnostics and fault isolation.

Target applications of the BCM5752M:

- Mobile PC LoM

Software drivers available:

- Windows® 98, NT®, 2000, XP
- Linux® 2.2, 2.4, 2.6

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