

SINGLE-CHIP 32-BIT PCI GIGABIT CONTROLLER WITH PHY

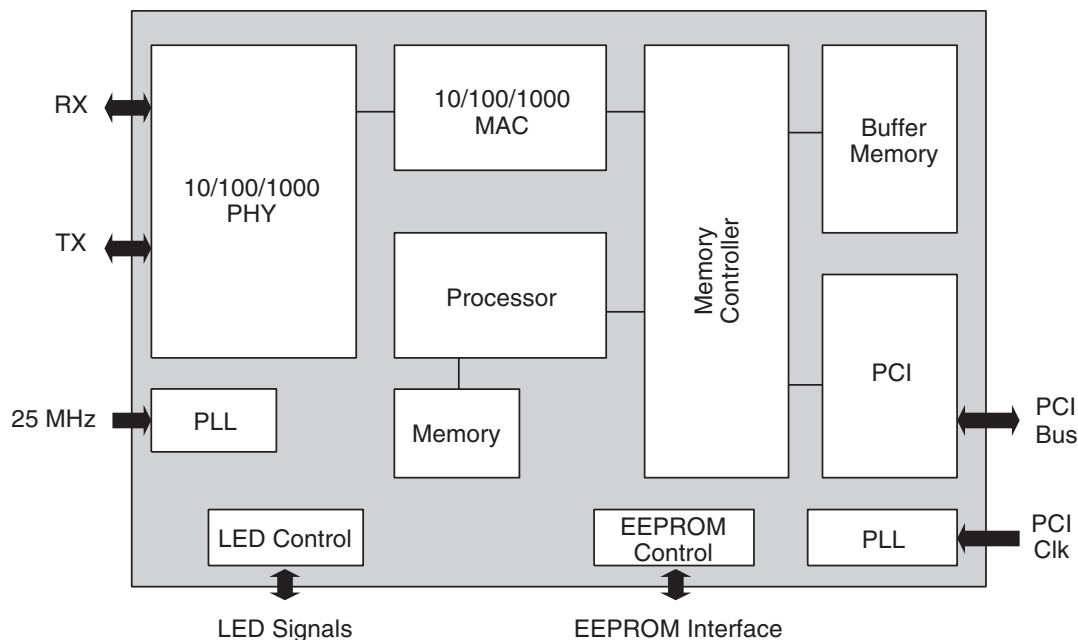
FEATURES

- **Single chip device for both notebook and desktop 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
- **Advanced power management, ACPI compliance**
- **Performance features**
 - TCP, IP, UDP checksum
 - CPU task offload
 - Adaptive interrupts
- **Robust manageability**
 - Wake-on LAN (WOL)
 - Out-of-box mode WOL
 - PXE 2.0 remote boot
- **3.3V I/Os (5V tolerant)**
- **JTAG**
- **Industry's smallest 10/100/1000 MAC+PHY solution that is optimized for notebook and desktop NIC and LOM applications**

SUMMARY OF BENEFITS

- **Ultra-low power for notebook designs**
 - 0.13μ CMOS design allows industry's lowest power
 - Advanced power management
- **Enables notebook and desktop PC products for all segments**
 - Footprint-compatible with 4401, a 10/100 companion chip
 - Allows one board layout for both Gigabit and Fast Ethernet applications
- **Power optimized through reduced CPU utilization**
 - Adaptive interrupts minimizes calls to the PC's CPU
 - TCP/IP offloads reduce CPU burden significantly
 - Reduces power consumption of PC processor
 - Allows use of lower power/performance PC processor
- **Space savings for LOM**
 - 196-pin HBGA package
 - No external memory
 - Integrated power circuitry reduces BOM costs

OVERVIEW



The NetLink™ **BCM5788(M)** is a fully integrated 10/100/1000BASE-T Gigabit Ethernet media access control and physical layer transceiver (PHY) solution for client networking applications. The NetLink **BCM5788(M)** combines a triple-speed, IEEE 802.3-compliant media access controller (MAC), a PCI v2.2 bus interface, an on-chip buffer memory, and an integrated PHY in a single device. The NetLink **BCM5788(M)** is fabricated in a low-voltage 0.13μ CMOS process, providing an ultra-low power solution.

The transceiver is fully compatible with the IEEE 802.3 standard for auto-negotiation of speed.

Target Applications of the NetLink BCM5788(M)

- Consumer/SMB Desktop PC NIC
- Consumer/SMB Desktop PC LOM
- Consumer/SMB Notebook PC LOM

Software Drivers Available

- Windows® 98, NT®, 2000, XP, ME
- Linux® 2.4

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BROADCOM CORPORATION
16215 Alton Parkway, P.O. Box 57013
Irvine, California 92619-7013

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Phone: 949-450-8700
Fax: 949-450-8710
E-mail: info@broadcom.com
Web: www.broadcom.com