NETLINK™ BCM5788(M)

PRODUCT Brief

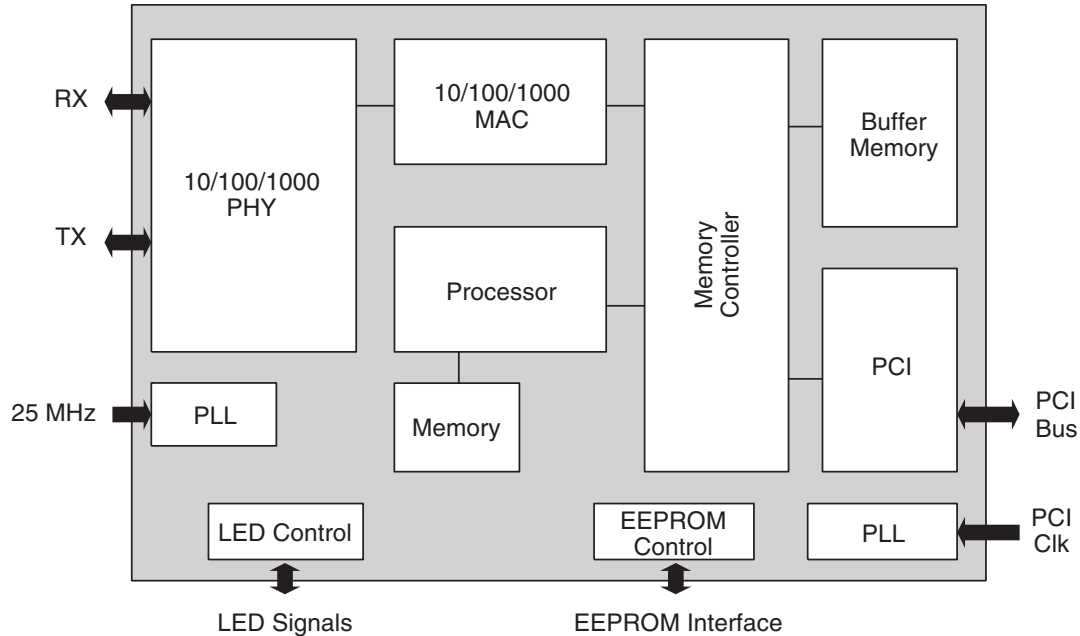# SINGLE-CHIP 32-BIT PCI GIGABIT CONTROLLER WITH PHY

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

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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