BCM6345
PRODUCT
Brief

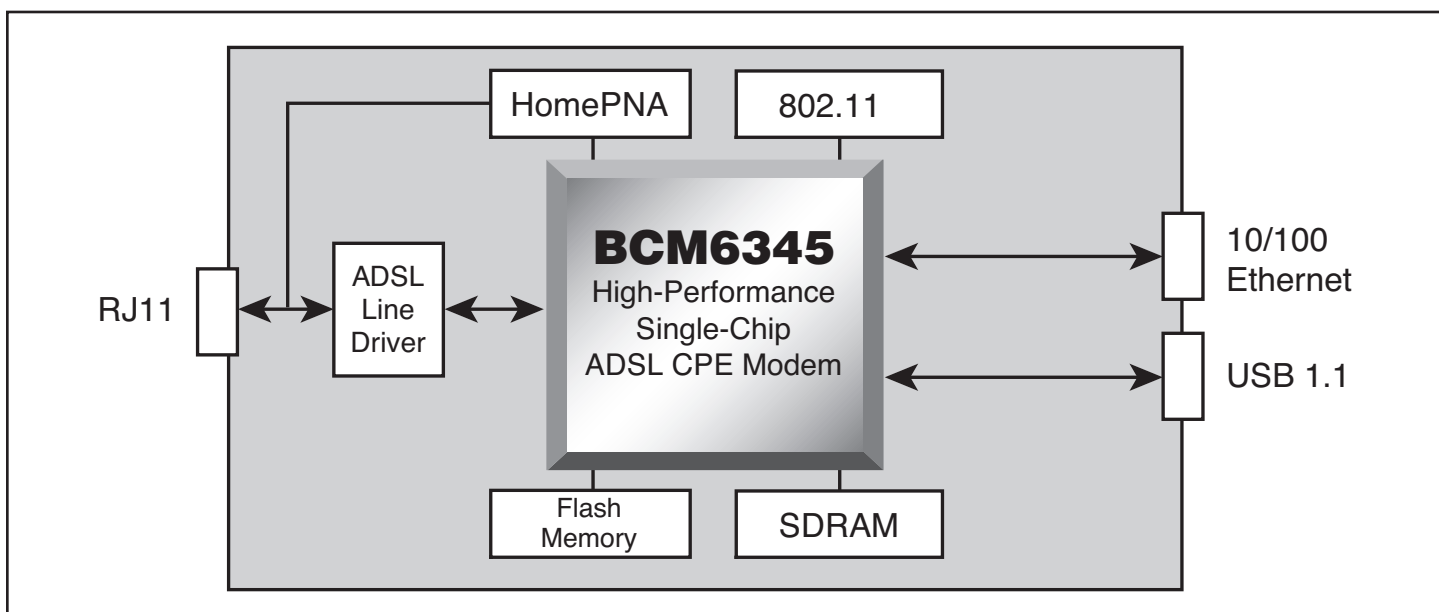# BCM6345 SINGLE-CHIP ADSL CPE MODEM

BCM6345 FEATURES

- Highly integrated, single-chip ADSL CPE bridge/router solution with seamless, multi-user, support for Ethernet, USB, 802.11a/b, Bluetooth™, and HomePNA 2.0 home LAN technologies

- Embedded G.992.1/G.992.2/T1.413 compliant ADSL transceiver and AFE with full standards support

- Embedded high-performance MIPS32™ CPU with MMU

- High-performance ATM SAR for enhanced ATM VC management, traffic shaping, and QoS

- 10/100 Mbps IEEE 802.3u Ethernet MAC and PHY with an MII interface

- 12-Mbps USB 1.1 interface with integrated transceiver

- Expansion bus for glueless interface to external peripherals

- PCMCIA host bus interface

- External flash memory with separate SDRAM interface

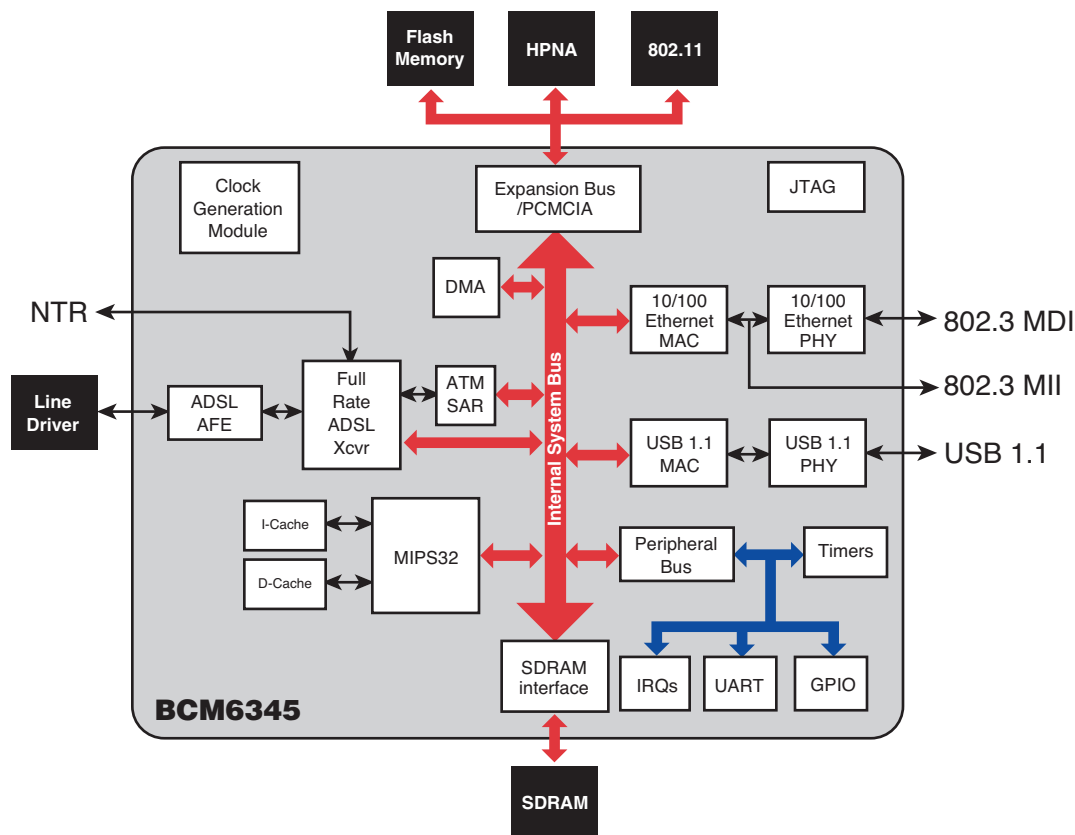- Extensive chip power management, EJTAG, GPIO, UART

SUMMARY OF BENEFITS

- Unmatched integration greatly reduces the bill of materials to enable the lowest possible product cost for Annex A, B and C ADSL routers.

- High-resolution A/D and D/A converters eliminate complex external filtering.

- High-performance MIPS32 CPU for advanced application development, with industry-standard tool chains and operating systems.

- Support for bridging and routing between ADSL and LAN interfaces on a single chip significantly reduces development time, decreases time-to-market, and increases product flexibility.
  - 10/100 Mbps Ethernet MAC and PHY interface with MII and auto-MDIX support to eliminate external Ethernet components and reduce cabling.
  - Fully USB 1.1 compliant interface enables simple Plug and Play installation.
  - 802.11a/b wireless network support via PCMCIA host interface.
  - Glueless expansion capability to Broadcom's home networking solutions, Ethernet switches, and so forth.

- Provides consistent, proven software architecture across all Broadcom CPE gateway devices.

BCM6435-Based xDSL Integrated Access Device

The **BCM6345** combines a G.992.1/G.992.2/T1.413 ADSL transceiver and AFE with a high-performance MIPS32™ CPU, a 10/100 Ethernet interface, a USB 1.1 transceiver, a PCMCIA interface, and a generic and flexible expansion bus into a single chip.

The embedded ADSL transceiver and AFE supports full-rate G.dmt, T1.413, and G.Lite ADSL modems along with G.997.1, G.994.1, I.432 TC layer, dual-latency framing, NTR, and embedded operations channels for remote management of the CPE.

The embedded MIPS32 CPU, with Broadcom-supplied software, controls the ADSL modem, performs high-performance bridging and routing between the ADSL WAN interface and various LAN interfaces, and allows for customer application development with industry-standard EJTAG/Ethernet tool chains and development environments.

A full-featured ATM SAR supports full traffic shaping, management, and QoS for multiple VCs.

The embedded USB 1.1 transceiver and 10/100 Ethernet MAC/PHY (with auto-MDIX) provide connectivity to a PC host. The PCMCIA interface supports wireless networking such as Broadcom's 802.11a/b or Bluetooth™ chipsets, whereas the flexible expansion bus allows for seamless connectivity to Broadcom's 32-Mbps HomePNA 2.0 or other advanced peripherals.

The **BCM6345** enables a complete ADSL CPE router to be assembled with a minimal set of additional components. The result is the most cost-effective solution for a variety of ADSL CPE bridging and routing applications.

For more information contact your local Broadcom sales representative or Phil Radtke at pradtke@broadcom.com

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