

## BCM6348 SINGLE-CHIP ADSL2+ CPE DEVICE

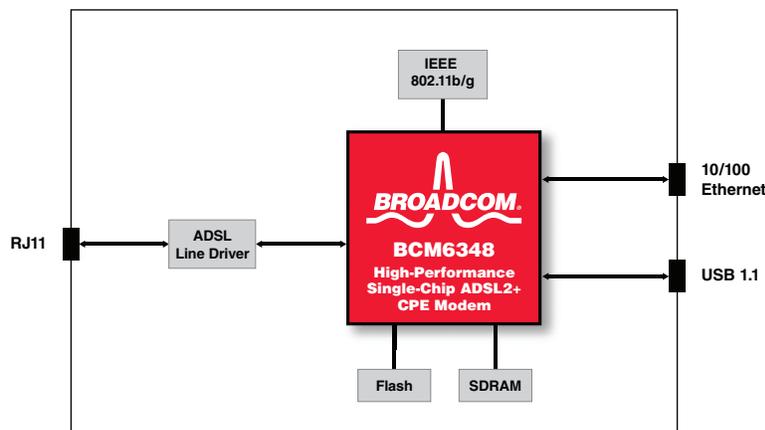
### FEATURES

- Single-chip ADSL2+ CPE device with integrated CPU, transceiver and AFE
- Standards compliant for worldwide G.992.1/G.992.2/G.992.3/G.992.5/T1.413 (Issue II) deployments supporting Annex A, B, C, J, I, L, and M
- High-performance MIPS32® CPU with MMU and TLB support
- Hardware ATM SAR for enhanced ATM VC management, traffic shaping, and QoS
- Two 10/100-Mbps IEEE 802.3u Ethernet MACs and one PHY with auto-MDIX
- Configurable USB host and device interface with integrated transceiver
- Multi-format peripheral expansion bus with PCI, mini-PCI, CardBus, and PCMCIA support
- Serial and parallel Flash support and high-speed SDRAM interface
- Extensive on-board chip power management, EJTAG, GPIO, and UART
- 1.2-mm package ball pitch for reduced PCB design complexity
- Complete protocol and application software support package

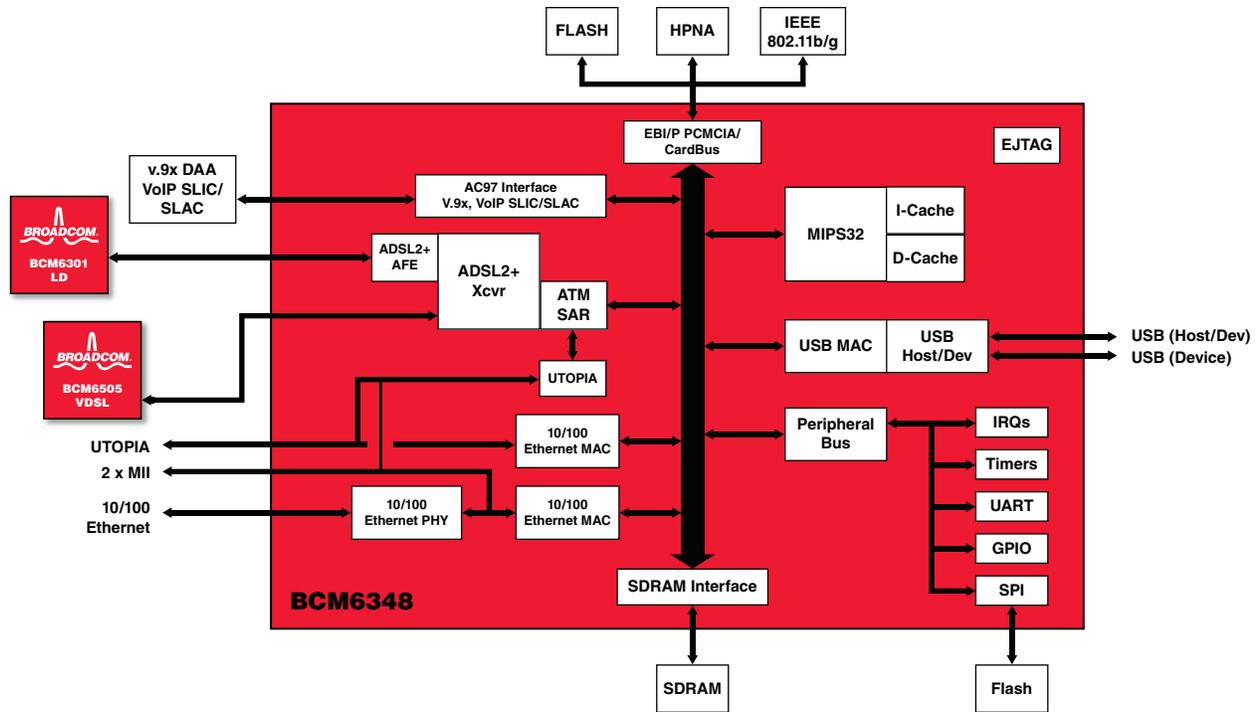
### SUMMARY OF BENEFITS

- Unmatched integration greatly reduces bill of materials cost to enable lowest possible product cost for worldwide deployment of ADSL modems, routers, and gateways.
- High-resolution A/D and D/A converters minimizes system bill of materials costs by reducing the need for external filtering.
- High-performance MIPS32 CPU supports advanced application development and future downloadable service models with industry-standard tool chains and operating systems.
- Support for wire-speed bridging and routing between ADSL and LAN interfaces on a single-chip significantly reduces development time, decreases time-to-market, and increases product flexibility.
- Two 10/100-Mbps Ethernet MACs with MII and one 10/100-Mbps Ethernet PHY interface with auto-MDIX supports true Ethernet-to-Ethernet bridging and routing as well as DMZ interface applications.
- Dual USB host and device interfaces enable simultaneous Plug and Play connection of PCs and peripheral devices including printers and hard disks.
- High-speed external bus with industry standard PCI, mini-PCI, CardBus, and PCMCIA support provides glueless interface to Broadcom and third-party voice, WiFi®, security, video encoding and decoding and other peripheral chipsets.
- Broadcom-enhanced protocol and applications software provides consistent, proven software architecture across all Broadcom DSL CPE and PON ONT chipsets.

### BCM6348-Based ADSL2+ CPE Modem



# OVERVIEW



## BCM6348 System Diagram

The BCM6348 combines a G.992.1/G.992.2/G.992.3/G.992.5/ T1.413 ADSL transceiver and AFE with a high-performance MIPS32 CPU, two 10/100-Mbps Ethernet interfaces, USB (host/device) transceiver, expansion bus interface supporting PCI, mini-PCI, CardBus, and PCMCIA into a single, high-performance chip.

The embedded ADSL transceiver and AFE implement G992.5 (ADSL2+), G.dmt, T1.413, and G.Lite ADSL, 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 custom application development with industry-standard EJTAG/Ethernet tool chains and development environments.

A full-featured ATM SAR supports complete traffic shaping, management, and QoS for multiple VCs. The embedded USB (host/device) transceiver, two 10/100-Mbps Ethernet MACs, and one PHY (with auto-MDIX) provide connectivity to PC hosts as well as optional 10/100/1000-Mbps Ethernet switches.

The expansion bus interface supports seamless connectivity to wired and wireless networking peripheral chips such as Broadcom's 802.11a/b/g or Bluetooth<sup>®</sup> chipsets via PCI, mini-PCI, CardBus, and PCMCIA, as well as Broadcom's V.92, security processors, and other advanced peripherals.

The BCM6348 enables a complete ADSL CPE router to be assembled with a minimal set of additional components resulting in a most cost-effective solution for a variety of ADSL CPE bridging and routing applications.

For more information contact your local Broadcom sales representative.

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