

## BCM6358 ADSL2+ INTEGRATED ACCESS DEVICE SOLUTION

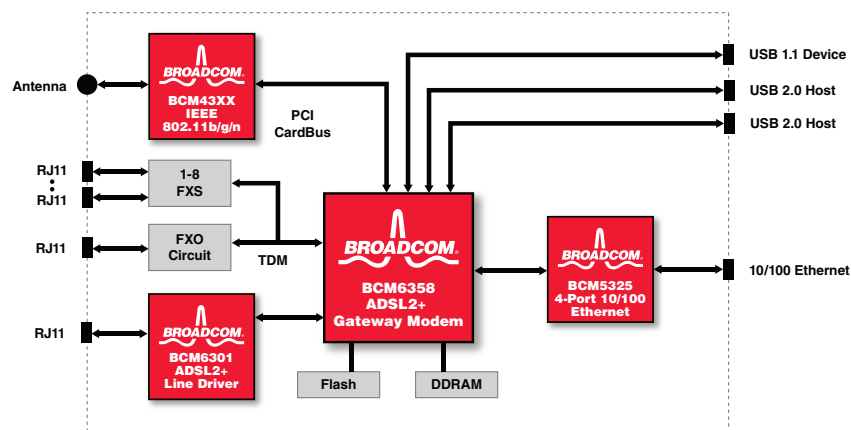
### FEATURES

- Highly integrated, single-chip A/VDSL2+ integrated access device (IAD) solution with seamless, multiuser support of 10/100 Ethernet, USB 2.0, Bluetooth®, DECT™, multichannel VoIP, and IEEE 802.11a/b/g/n wireless home networking
- G.992.1, G.992.2, G.992.3, G.992.5, G.993.1, G.993.2, and T1.413 compliant ADSL transceiver and AFE with worldwide support for Annex A, B C, M, and L
- Highly optimized MIPS32® CPU with MMU and TLB support
- Hardware ATM SAR for enhanced ATM VC management, traffic shaping, QoS, and CPU offload
- Two integrated 10/100 Mbps IEEE 802.3u Ethernet MACs and one integrated 10/100 PHY with auto-MDIX
- Concurrent dual USB 2.0 hosts and USB 1.1 device interfaces with integrated transceiver
- Multiformat 16/32-bit peripheral expansion bus
- Serial and parallel Flash interfaces with DDRAM support
- Extensive on-chip power management
- Industry-standard EJTAG debuggers, programmable GPIO and UART to enable development of custom applications
- 21 mm x 21 mm package with 1.0 mm pitch for reduced PCB design complexity
- Fully backward-compatible with Broadcom's existing BCM6345, BCM6335, BCM6348, and BCM6338 software and development toolchain

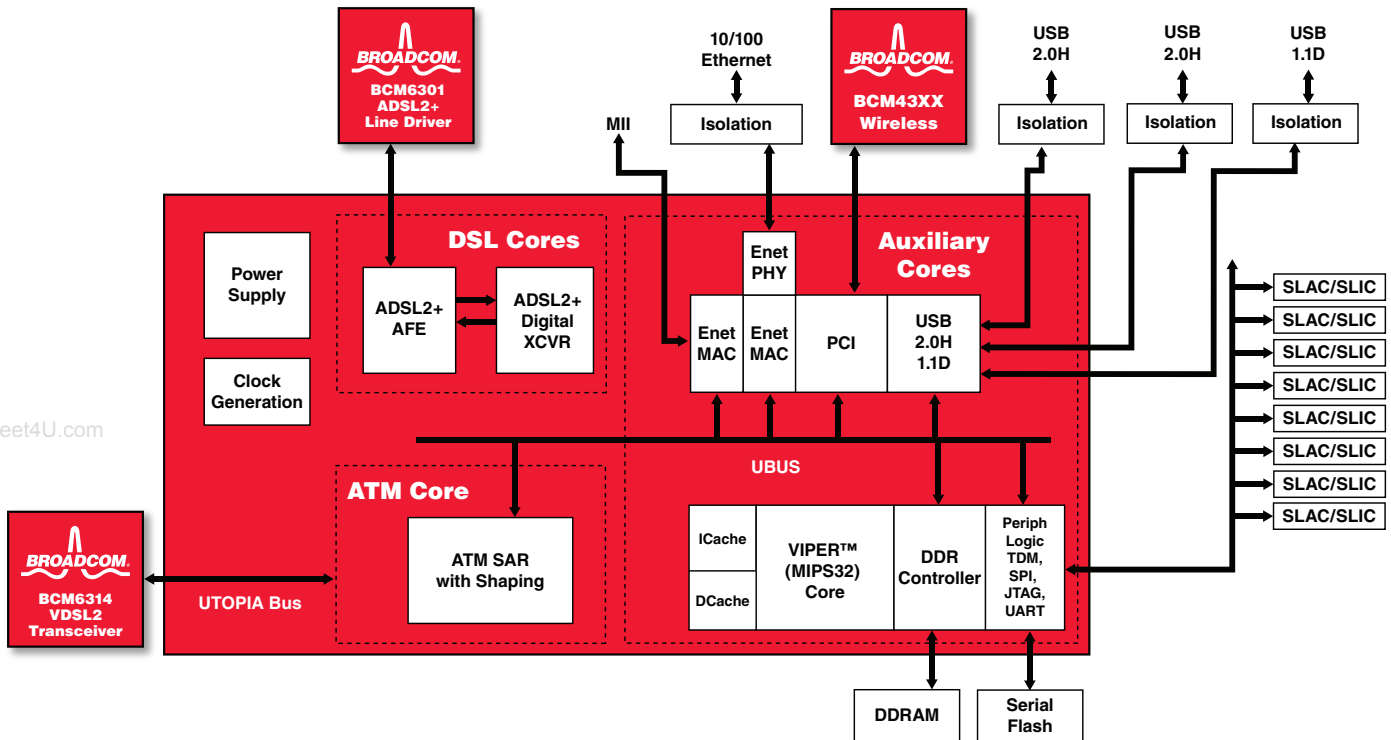
### SUMMARY OF BENEFITS

- High-performance VIPER™ CPU supports simultaneous wire speed routing and VDSL2 data rates, multichannel VoIP, and advanced applications such as remote management via TR-069 and SNMP.
- Integrated VoIP processing, using the widely deployed and field hardened DSLxChange software, eliminates design complexity and cost.
- Dual 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 applications.
- Concurrent dual USB 2.0 hosts and USB 1.1 device interfaces to enable simple Plug and Play connection of multiple PCs, printers, storage, web cameras, and other peripheral devices.
- High-speed 16/32-bit external expansion bus interface with support for CardBus, PCMCIA, and mini-PCI provides a seamless connection to on-board or module-based peripheral devices, such as IEEE 802.11a/b/g/n.
- Industry standard multichannel TDM/PCM interface for glueless connectivity to SLAC and SLIC components
- Unified memory architecture supports all embedded applications including DSL, Routing, VoIP, Remote Management, Security, Ethernet, Bluetooth, DECT, and WiFi®
- Support for industry standard toolchains and operating systems including Linux®, WinCE, VxWorks®, and eCOS
- Consistent field-hardened software platform across all Broadcom CPE gateway devices

### BCM6358-Based ADSL2+ Residential Gateway



# OVERVIEW



## BCM6358 System Diagram

The BCM6358 combines an ADSL2+ transceiver and AFE with a high-performance VIPER MIPS32 CPU, hardware ATM SAR, dual 10/100 Ethernet, dual USB 2.0 hosts and 1.1 device, multichannel 8/16-bit TDM/PCM bus, 16/32-bit parallel expansion bus supporting CardBus, PCMCIA, and mini-PCI into a single high-performance monolithic device.

The ADSL2+ transceiver delivers up to 29 Mbps downstream and 3 Mbps upstream, enhanced QoS for IPTV video, dual-latency framing, and embedded operations channels for remote management of the CPE.

Powered by the VIPER MIPS32 CPU and supplied software, the ADSL2+ modem performs wire speed bridging and routing between the WAN and the various LAN interfaces, and supports custom application development with industry-standard EJTAG debuggers, tool chains, and development environments.

Combined with Broadcom's industry leading VDSL2 transceiver (BCM6314), the BCM6358 provides the ideal host CPU for VDSL2 bridges, routers, gateways, or IADs with seamless fallback to ADSL2+.

A full-featured ATM SAR supports complete traffic shaping, management, and QoS for multiple VCs. The embedded USB and Ethernet ports provide a wide range of connectivity options to PCs, printers, storage, video devices, Ethernet switches, and Bluetooth™.

The programmable 16/32-bit interface supports networking devices such as Broadcom's IEEE 802.11a/b/g/n WiFi chipsets via CardBus, PCMCIA, and mini-PCI, as well as other video, storage, security and other advanced Broadcom devices via a generic CPU interface.

For voice applications, Broadcom's DSLxChange VoIP software runs on a dedicated thread of the VIPER MIPS32 CPU, providing a mature, field-hardened, and reliable solution. A multichannel TDM/PCM interface is provided for connectivity to external SLAC and SLIC devices.

The BCM6358 enables the development of a completely integrated VDSL2 or ADSL2+ IAD with advanced voice and application capabilities and unmatched functional integration.

For more information, contact your local Broadcom sales representative.

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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

www.DataSheet4U.com