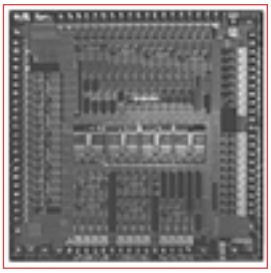
BROADCOM®

BCM3352 PRODUCT Brief



QAMLINK™ SINGLE-CHIP 4-CHANNEL VoIP BROADBAND GATEWAY IC

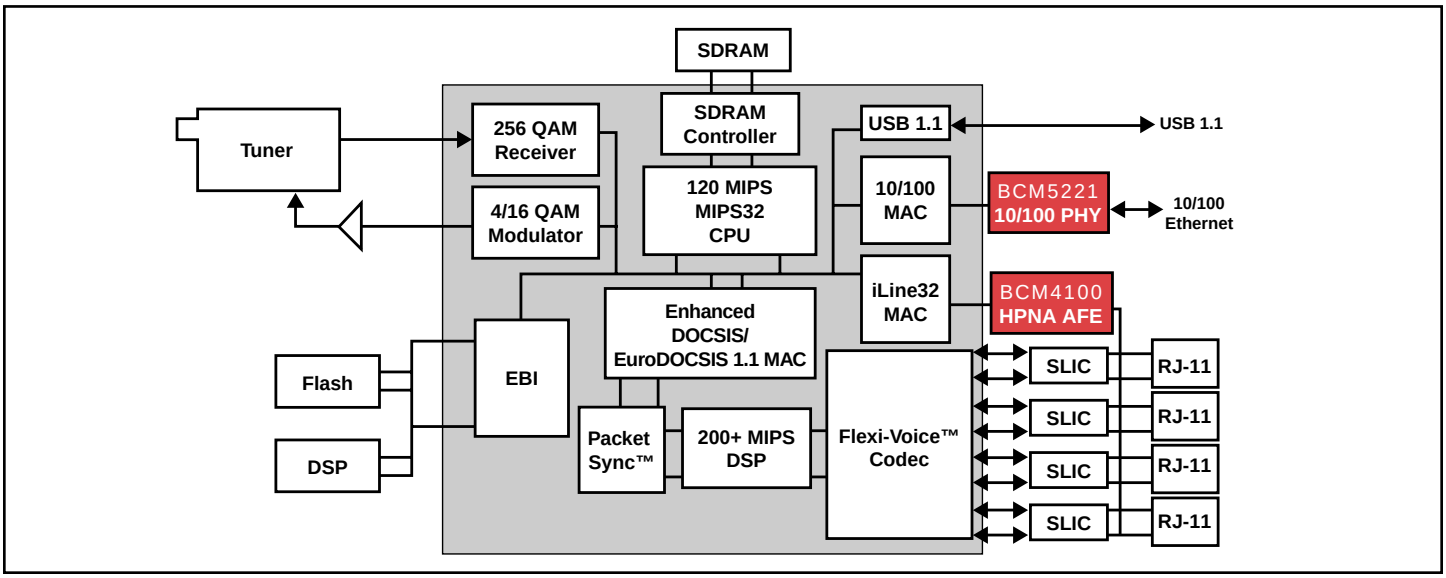
BCM3352 FEATURES

- **The BCM3352 is the world's most highly integrated, lowest-cost and lowest-power, single-chip solution for cable residential gateway's providing four-channels of VoIP/FoIP and 32 Mbps home phone line networking.**
- **The BCM3352 Integrates:**
  - Enhanced VoIP DOCSIS/EuroDOCSIS 1.1/1.0 MAC with 16 upstream queues
  - Payload header suppression(PHS) engine
  - 120 Dhrystone 2.1 MIPS32 CPU
  - Four-channel VoIP DSP
  - Four-channel G.712/V.90 FlexiVoice™ CODEC
  - IpV6 IPSec processor
  - 4-256 QAM receiver with Annex A,B,C FEC
  - 4/16 QAM burst modulator
  - 32-bit 100 MHz SDRAM controller
  - 16-bit expansion bus interface
  - iLine32 32 Mbps HPNA 2.0 phone line networking MAC
  - 10/100 Ethernet MAC with MII
  - 12 Mbps USB 1.1 interface
  - Extensive chip power management
  - 1.8/3.3V -40 to 85c operation
  - 484-pin BGA package

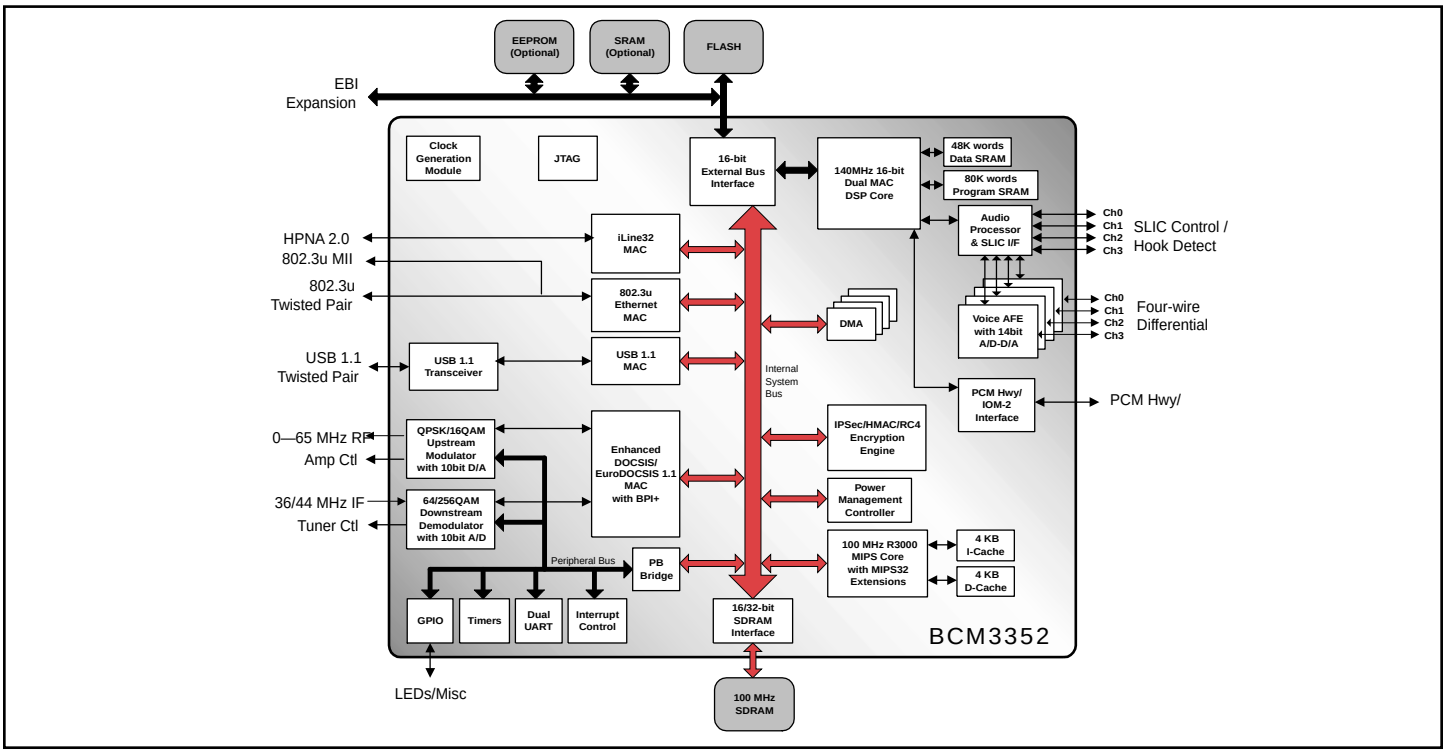
SUMMARY OF BENEFITS

- **Designed for primary line and second line cable telephony products**
- **Expandable to 16+ line MDU applications**
- **Integrated patented 16-channel DOCSIS/EuroDOCSIS 1.1 PacketSync™ engine obviates VoIP packet delay**
- **Propane software support for enhanced upstream efficiency and performance**
- **Integrated HomePNA 2.0 MAC supports high speed multimedia services over phone lines**
- **Available with Certifiable DOCSIS/EuroDOCSIS 1.0/1.1 and CablexChange VoIP Software**
- **Full IPv6 IPSec module to support advanced applications such as Virtual Private Networking (VPN) and Secure Voice Services**
- **Included in the comprehensive BCM93352V and BCM93352VCM reference designs**
- **Integrated CablexChange VoIP/FoIP software**
- **Full 12 Mbps, USB 1.1 compliant interface to enable simple Plug and Play external PC gateway implementations**

BCM3352 Application Block Diagram



BCM3352 OVERVIEW



The Broadcom **BCM3352** represents a new and unprecedented level of integration for PacketCable Multimedia Terminal Adapters (MTA.) The BCM3352 provides a unique solution for low power and cost effective MTAs that can deliver primary line VoIP cable telephony and broadband data services over phone lines worldwide.

Key modules integrated in the **BCM3352** include:

- Enhanced VoIP DOCSIS/EuroDOCSIS 1.0/1.1 based MAC integrating a wirespeed DES encryption/decryption engine, full DOCSIS/EuroDOCSIS 1.1 QoS, support for 16 SIDS in the downstream, 256 multicast/and Unicast DA CAM, 16 independent DMA controlled upstream queues, as well as extended network management MIB and diagnostic features.
- 200+ MIPS VoIP/FoIP DSP with patented PacketSync™ delivering four channels of compressed voice packets, including G.711, G.726, G.729a/b/e, and G.728 Vocoders, plus T.38 Fax Relay.
- Integrated iLine32™ HPNA 2.0 home phone line interface that eliminates hundreds of dollars worth of additional telephone and Ethernet wiring.
- High-performance 120 MIPS, 100-MHz MIPS32 processor with a 4K two-way set associative I-cache and a 4K two-way associative D-cache.
- Broadcom Propane™ software support for enhanced bandwidth efficiency and turbo modem performance.
- Integrated 10/100 Ethernet MAC for support of small business integrated access device applications.
- IPSec module with single-DES (CBC & ECB modes), triple-DES (CBC & ECB modes), MD-5 and SHA authentication in hardware, providing support for Virtual Private Networks (VPNs).
- Integrated four-channel FlexiVoice™ Voice Codec with individual line programmable filter coefficients, providing optimum performance for both V.90 modem and voice applications.

Ordering Information:

BCM93352V	Reference Design
BCM93352VCM	Reference Design

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