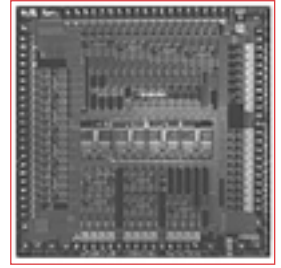




# BCM3352 PRODUCT Brief



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

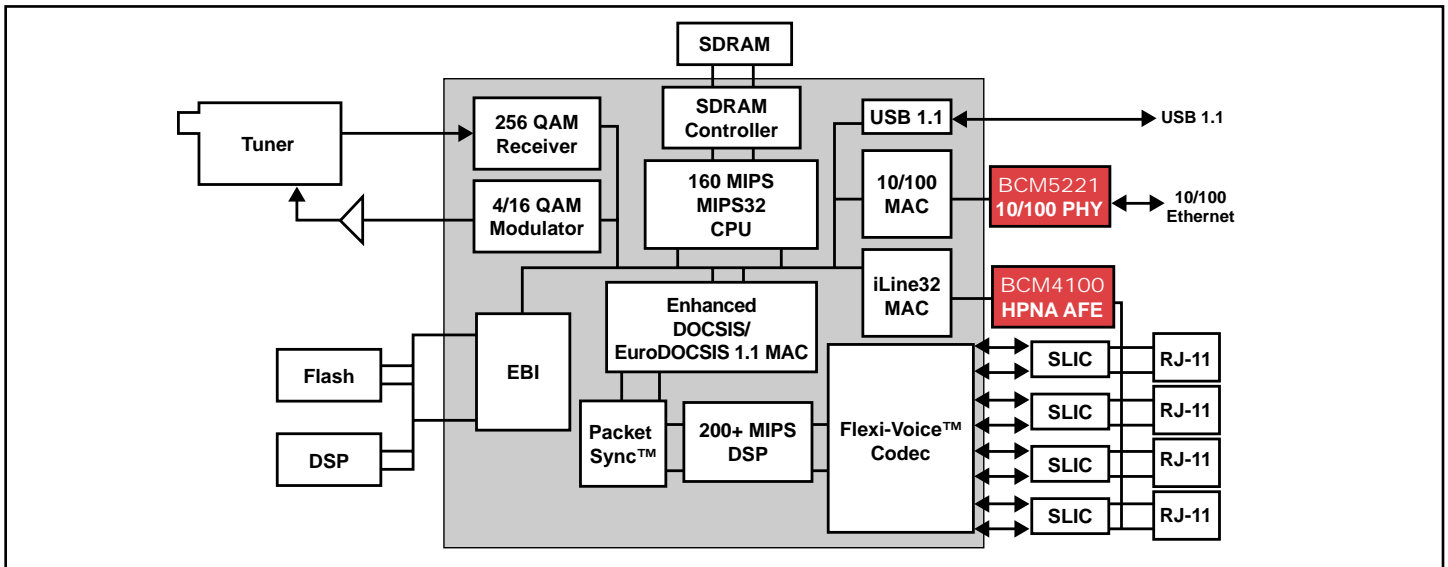
### BCM3352 FEATURES

- 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
  - 160 Dhrystone 2.1 MIPS 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

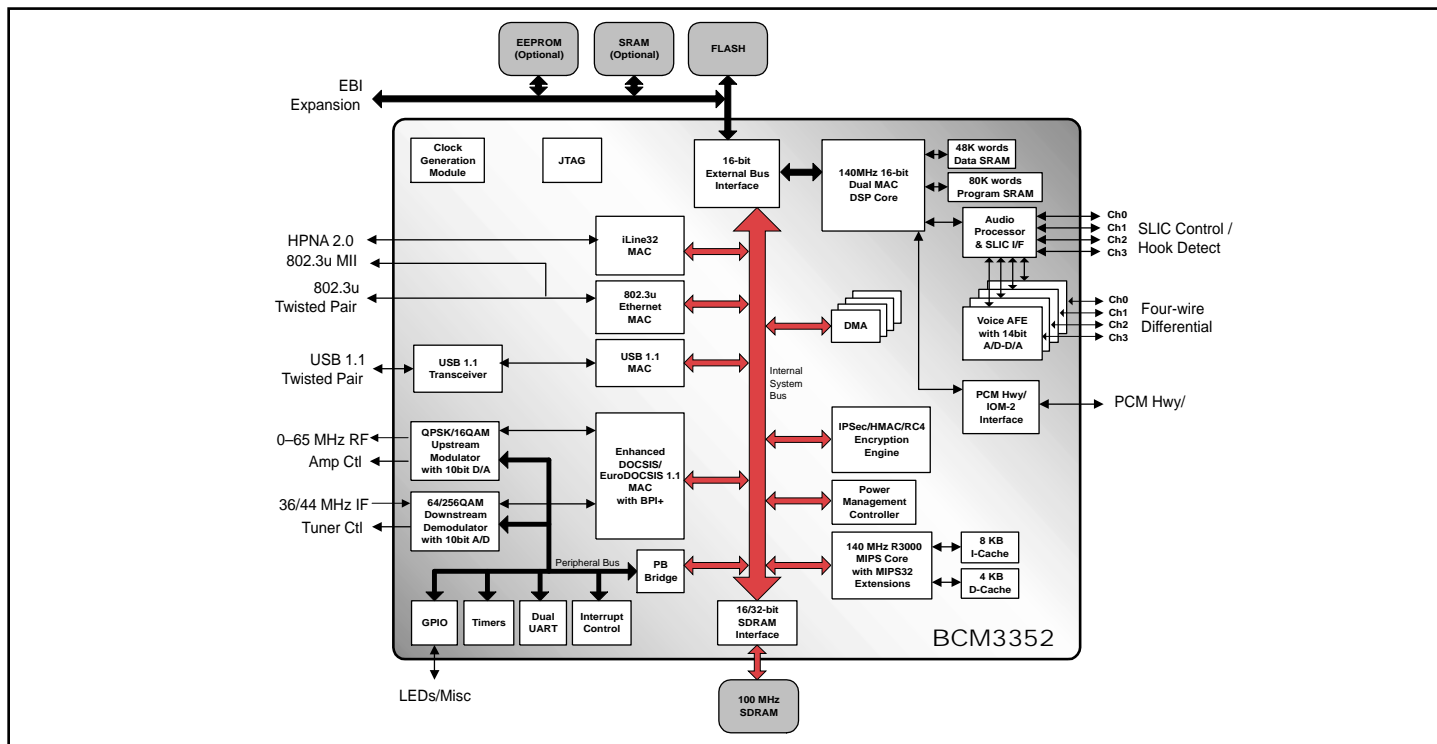
### SUMMARY OF BENEFITS

- 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
- Proprietary 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.729a/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 160 MIPS, 140-MHz MIPS32 processor with a 8K 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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