



# SINGLE-CHIP 2-LINE VoIP BROADBAND IC

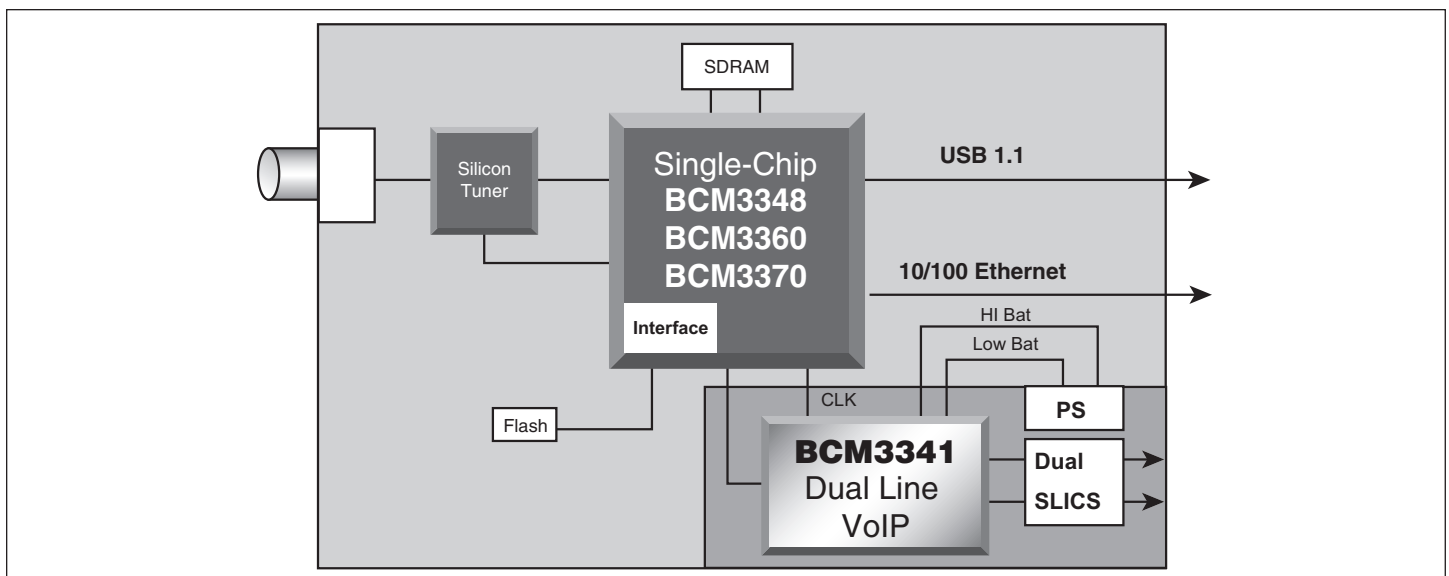
## BCM3341 FEATURES

- The BCM3341 broadband VoIP DSP solution provides a seamless interface with Broadcom's PacketCable™ cable and DSL modem ICs, providing the industry with the lowest cost, modular VoIP system solution.
- The BCM3341 integrates:
  - High-performance 240-MIPS DSP and dual world linecard programmable codec
  - Internal memory supports G.711+ 1 complex vocoder (2 lines of either/or simultaneously)
  - Supports all ITU G.7xx narrow-band vocoders, plus T.38 fax relay
  - Complex vocoder, fax and modem relay memory Expansion bus (128K×16) memory expansion (32K×16, or 64K×16)
  - World linecard support
  - G.168 (2000) compliant echo canceler
  - Extensive chip power management
  - Integrated HVG circuit switch mode controller Eliminates dual switching power controller for Low Bat(-24V) and Hi Bat(-48V) power supplies
  - Supports both narrow-band **BroadVoice™16** and wideband **BroadVoice™32**
  - Integrated battery sensing
  - Single 3.3V power supply
  - 0 to 70°C operation

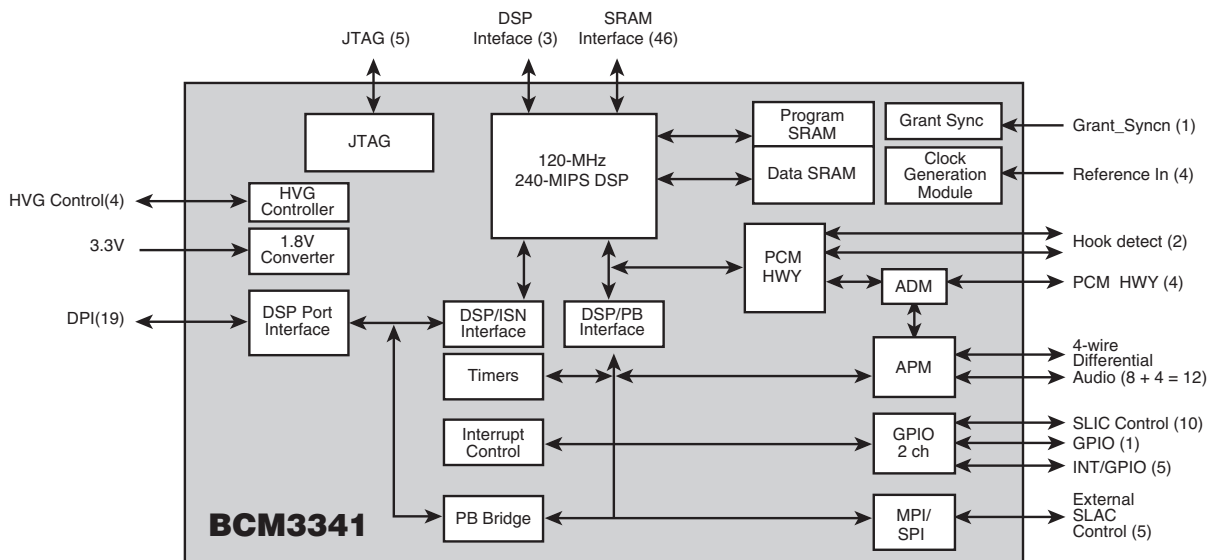
## SUMMARY OF BENEFITS

- **Highest level of integration:**
  - Significantly reduces VoIP cable modem BOM
  - Significantly reduces part count, increasing reliability
  - Significantly reduces power consumption
- **Enhanced reliability of voice services through powerful DSP engine and voice algorithms deployed in millions of ports worldwide.**
- **Enhances voice quality through advanced system features**
  - Patented **PacketSync™** minimizes VoIP packet delays
  - Power management engine reduces overall consumption
  - DSL NTR clock recovery
- **Seamless interface to additional Broadcom silicon**
  - BCM3348 low-cost VoIP cable modem
  - BCM3360 VoIP residential gateway and MDU apps
  - BCM3370 wireless VoIP residential gateway
  - BCM6345 low-cost VoIP DSL modem
  - BCM6350 xDSL communications processor
  - BCM1101, SMTA and IP phone solution
- **Part of a comprehensive system solution including:**
  - Low-cost reference design with extensive documentation
  - Certifiable PacketCable 1.0 **CablexChange™** software
  - Proven DSLXchange™ software

## BCM3341 PacketCable™



# BCM3341 OVERVIEW



The **BCM3341** offers the industry a highly integrated, cost effective approach to developing PacketCable™ or DSL VoIP solutions for the delivery of primary or secondary line telephony. The **BCM3341** provides a seamless interface with multiple Broadcom cable, DSL and IP phone products. This includes the BCM3348, BCM3360 and BCM3370 cable modem IC solutions, the BCM6350, BCM6352, BCM6345 DSL IC solutions, and the BCM1101 SMTA and IP phone solutions.

Key modules integrated into the **BCM3341** include:

- 240-MIPS VoIP DSP with patented **PacketSync™**, supports 2 primary lines of compressed voice packets plus T.38 fax relay. It can simultaneously support two secondary lines of G.711 for various class of service such as three way calling and caller ID.
- Integrated 2-line **FlexiVoice™** voice codec with individual line programmable filter coefficients, providing optimum performance for both V.92 modem and voice applications.
- Grant synchronization engine: A voice packetization scheduler that synchronizes the voice packets with the DOCSIS grant slots, potentially saving 10–20 ms of VoIP packet delay, providing higher voice quality.

- Integrated DOCSIS™ system clock synchronization provides clock synchronization in the entire voice path for a slip free voice. (CODEC<>DSP<>DOCSISMAC<>DOCSIS CMTS) Solutions without such synchronization incur voice packet slips that lower the quality of voice calls.
- Complex vocoder, fax and modem relay memory expansion bus (128K×16 memory expansion (32K×16, or 64K×16)).
- PCM IOM2 interface for connecting external devices supporting applications such as DECT wireless handsets.

## Ordering Information

**BCM3341** Single-Chip 2-line VoIP Broadband IC

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3341-PB01-403-R 11.20.02

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