



QAMLINK® SINGLE-CHIP TWO-LINE VoIP BROADBAND GATEWAY IC

BCM3351 FEATURES

- **The BCM3351 offers the industry the highest level of functionality integrated into a single-chip, enabling numerous broadband residential gateway services:**
 - High-speed data access over cable
 - Primary and secondary line VoIP/FoIP
 - Wireline and wireless home networking
- **The BCM3351 integrates:**
 - DOCSIS/EuroDOCSIS 1.1 based cable modem with:
 - Enhanced MAC with 16 Upstream Queues
 - 4-256QAM Receiver with Annex A, B,C FEC
 - 4/16 QAM Burst Modulator
 - VoIP/FoIP PacketCable 1.0 capable solution with:
 - Two Channel DSP and G.712/V90 CODECS
 - World line card support
 - G.168 compliant echo canceller
 - Extensive chip power management
 - MIPS32 CPU with 160 Dhrystone 2.1 MIPS
 - 32-bit, 100-Mhz SDRAM controller
 - Integrated IP SEC engine
 - 12-Mbps USB 1.1 and 10/100 Ethernet MAC
 - Integrated iLine32 Mbps HPNA 2.0
 - 16-bit expansion bus interface
 - 1.8/3.3V, 0 to 70°C Operation
 - 480-pin PBGA package

SUMMARY OF BENEFITS

- **High level of integration:**
 - Reduces VoIP cable modem BOM
 - Reduces part count, increasing reliability
 - Reduces power consumption
- **Proven DOCSIS/EuroDOCSIS baseline architecture, integrated in 70% of the worlds standardized cable modem solutions**
- **Enhanced reliability of voice services through powerful CPU, robust DSP technology and voice algorithms deployed in millions of ports worldwide.**
- **Enhances voice quality through advanced feature sets**
 - Propane™ improves upstream channel capacity 300%
 - IPSEC module supports VPN and secure voice services
 - Patented PacketSync™ minimizes VoIP packet delays
 - Power management engine reduces overall consumption
- **Integrated HomePNA 2.0 MAC supports high-speed multimedia services over phone lines**
- **Multiple interfaces provide home networking differentiation**
- **Interfaces seamlessly to additional Broadcom silicon**
- **Part of a comprehensive system solution:**
 - Low-cost reference design with extensive documentation
 - Certifiable DOCSIS/EuroDOCSIS 1.1 software
 - Certifiable PacketCable 1.0 CablexChange software

BCM3351 Application Block Diagram



