

BCM3350 QAMLINK® SINGLE-CHIP CABLE MODEM

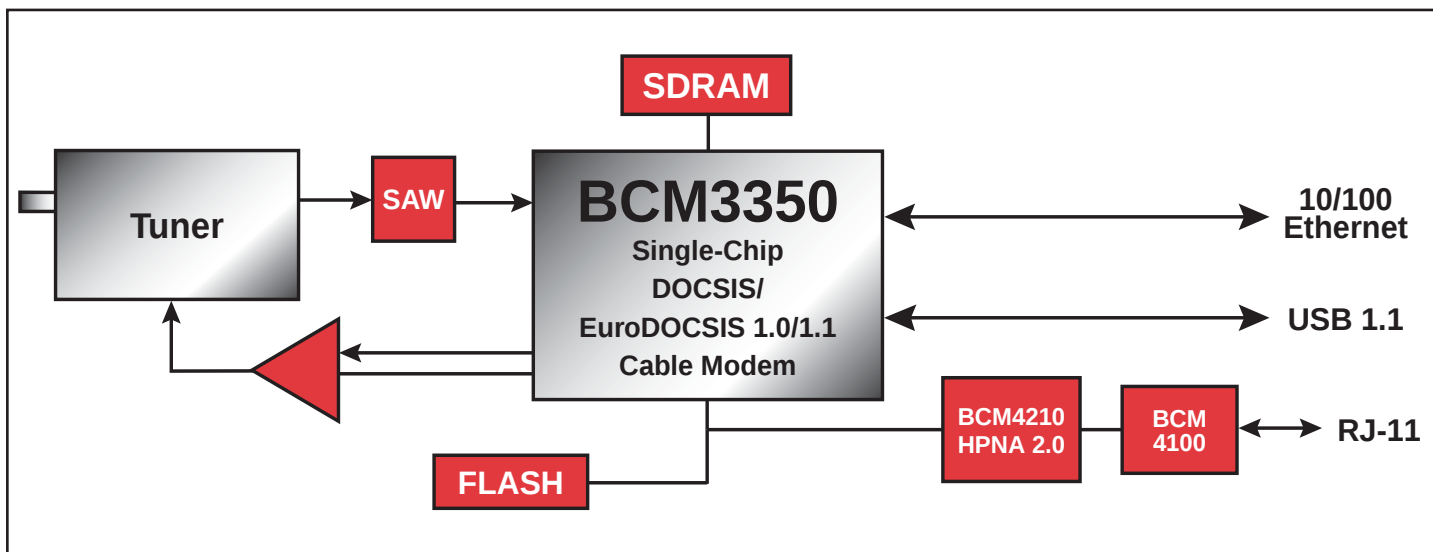
BCM3350 FEATURES

- The highest level of silicon integration ever achieved for a DOCSIS/EuroDOCSIS cable modem, integrating all the major silicon components of a cable modem into a single device
- The BCM3350 integrates:
 - QAMLink transceiver supporting Annex A/B/C operation
 - DOCSIS/EuroDOCSIS 1.0/1.1 based MAC
 - High performance 100 MIPS CPU
 - 10/100 Ethernet MAC and PHY with MII interface
 - USB 1.1 slave port with integrated transceiver
 - IPSEC interface including DES, 3-DES, CBC, MD5, SHA algorithm support
 - TDM interface capable of supporting up to four voice channels
 - SDRAM interface
 - External bus interface with eight programmable chip selects
 - GPIO interface
- 2.5V operation
- 352-pin TBGA package

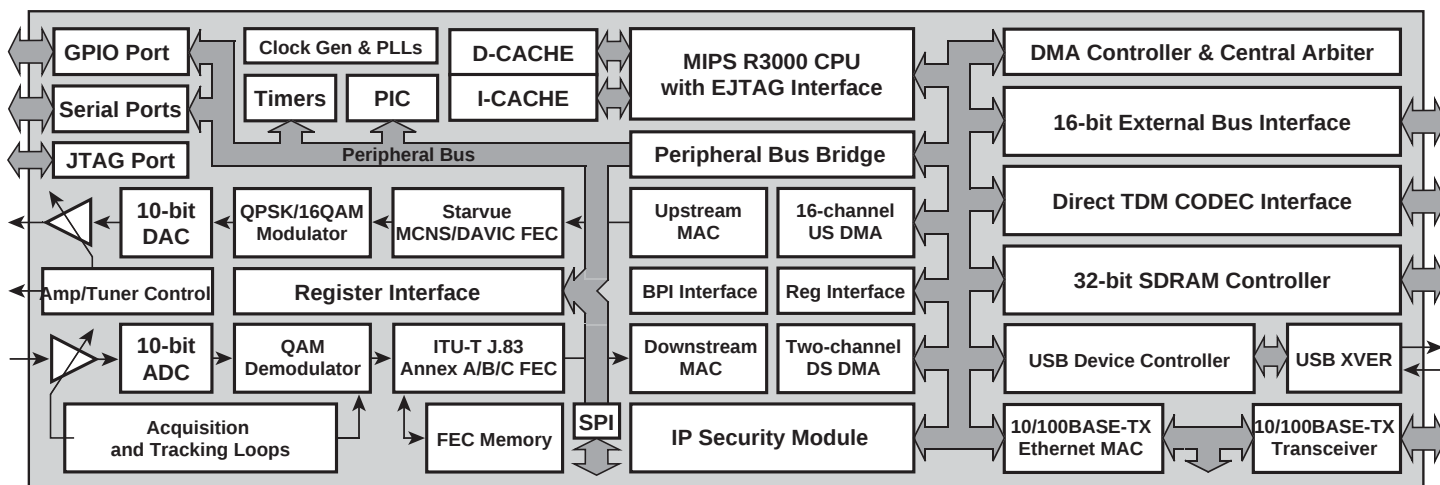
SUMMARY OF BENEFITS

- The BCM3350 integrates all the silicon components of a cable modem, resulting in dramatic overall system cost reduction.
- Includes a 100 MIPS CPU with EJTAG embedded ICE support for ease of software development and debug.
- Displays superior performance in noisy plant environments as a result of Broadcom's newest generation of Broadcom QAMLink technology.
- Features a full IPv6 IPSec module to support advanced applications such as Virtual Private Networking (VPN).
- The full USB 1.1 compliant interface enabling simple plug and play external cable modem implementations.
- The integrated 10/100 Ethernet MAC and PHY with MII eliminating the need for any external Ethernet components.
- Includes seamless interface with the BCM4210/4100 HPNA 1/2 components for low-cost home networking extensions.
- Features a completely static design with powerdown features for low-power operation.

Low-Cost DOCSIS/EuroDOCSIS Cable Modem



BCM3350 OVERVIEW



The Broadcom **BCM3350** represents a new level of cost-reduction for DOCSIS/EuroDOCSIS cable modems. Key modules integrated in the **BCM3350** include:

- 64/256 QAM receiver which supports direct IF sampling with an integrated 10-bit A/D converter and a ITU-J.83 Annex A/B/C compatible decoder. QPSK/16QAM transmitter consisting of programmable DOCSIS/EuroDOCSIS and DAVIC FEC encoder, with pre-equalization filter and a 10-bit D/A converter with output power control.
- DOCSIS/EuroDOCSIS 1.0/1.1 based MAC supports an integrated DES encryption/decryption engine, and QoS, support for 16 SIDS in the downstream, 16 destination address filters, 256 multicast DA filters and 16 independent upstream queues for QoS, as well as extended network management MIB/diagnostic features
- 100 MIPS R3000 processor with 4K two-way set associative I-cache and a 4K two-way associative D-cache.
- Full-speed USB 1.1 interface supports concurrent operations of control, bulk, isochronous and interrupt endpoints. It also supports USB standard commands, as well as class/vendor specific commands.

- 10/100 Ethernet Transceiver and Media Access Controller (MAC) with MII. The transceiver/MAC performs all of the functions for 100BASE-TX Ethernet in full- or half-duplex mode over Category (CAT) 5 twisted pair cable and 10BASE-T Ethernet in full- or half-duplex mode over CAT 3, 4, or 5 twisted pair cable.
- IPSec module with single-DES (CBC & ECB modes), triple-DES (CBC & ECB modes), MD-5 and SHA authentication in hardware providing support for application in Virtual Private Networks (VPN).
- TDM four-wire serial interface with variable timeslots from 2–32 that can be assigned to one of four transparent input/output channel controllers enabling support for up to four voice channels or one video (384 Kbs) and one voice channel.

The **BCM3350** represents the first silicon solution that integrates all the key silicon components of a cable modem into a single device, reducing the overall cost and complexity of cable modem products.

Ordering Information:

BCM3350KPP	Commercial Temperature Grade
BCM3350IPB	Industrial Temperature Grade

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