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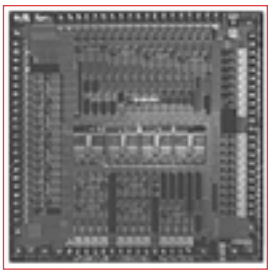
BCM93345i
PRODUCT Brief



DOCSIS/EuroDOCSIS INTERNAL PCI CABLE MODEM

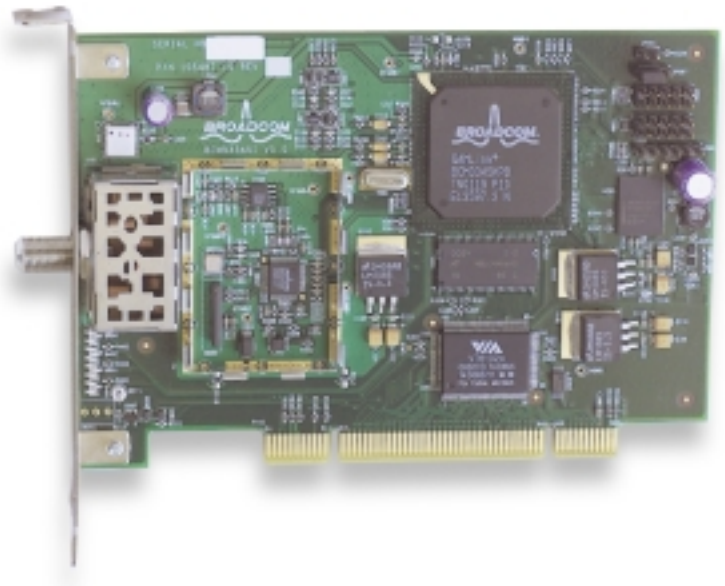
BCM93345i FEATURES

- **The BCM93345i represents the latest high-performance, lowest cost internal PCI DOCSIS/ EuroDOCSIS cable modem design.**
- **The BCM93345i uses the BCM3415 Digital Cable Tuner to provide a low-cost RF interface that supports both DOCSIS and EuroDOCSIS with minimal BOM changes.**
- **100% software compatible with the BCM93345 External DOCSIS/EuroDOCSIS Reference Design.**
- **The BCM93345i includes a complete software package, including:**
  - Certifiable DOCSIS/EuroDOCSIS code
  - Complete source code for easy modification
  - Advanced QAMLink®, RF analysis software
  - 100% code compatibility with external BCM93345 software
- **The BCM93345i includes a complete documentation package, including:**
  - Schematics and Gerber files
  - Bill of materials (BOM)
  - Data sheets, application notes and user manual
  - Software source code
  - Applications support contact information

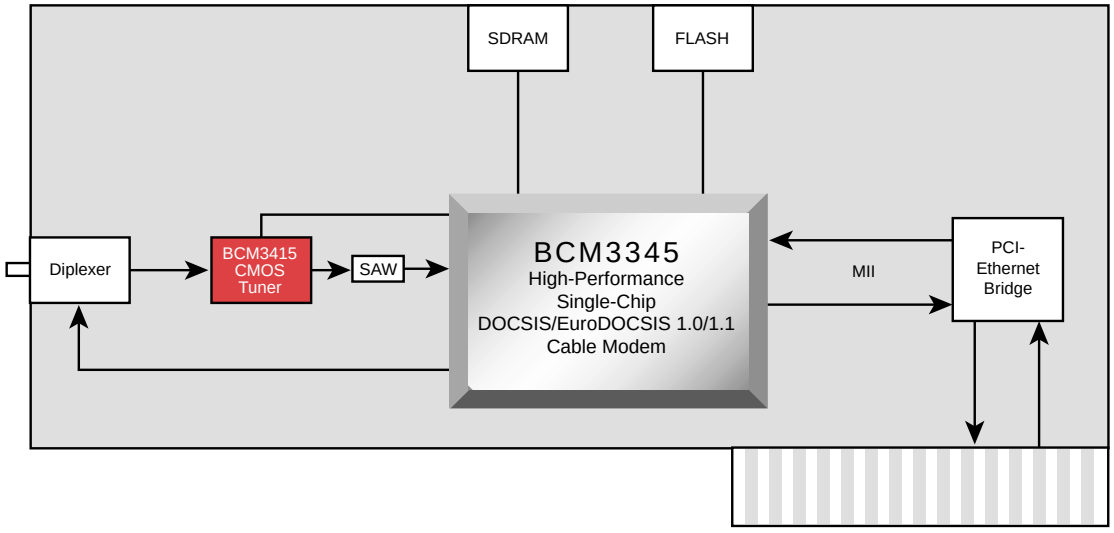
SUMMARY OF BENEFITS

- **Reduced BOM improves assembly and results in lowest overall system cost for DOCSIS/EuroDOCSIS 1.0/1.1 cable modems.**
- **Maximum use of BCM3415 minimizes BOM changes for conversion between DOCSIS and EuroDOCSIS.**
- **Software compatibility with BCM93345 eliminates separate code loads and minimizes development and support costs.**
- **Advanced QAMLink modulator/demodulator technology provides superior performance in noisy plant environments.**
- **Provides Propane support for both DOCSIS/EuroDOCSIS-based packet acceleration.**
- **Significantly reduces time to market with complete production-ready design.**

BCM93345i Internal PCI DOCSIS/EuroDOCSIS Cable Modem with CMOS Tuner



BCM93345i OVERVIEW



Broadcom's **BCM93345i** QAMLink Cable Modem Reference Design is a complete implementation of a certifiable, low-cost internal DOCSIS/EuroDOCSIS cable modem. The **BCM93345i** design is based on the high-performance BCM3345 QAMLink Single-Chip Cable Modem and BCM3415 Digital Cable Tuner.

The **BCM93345i** receives the downstream signal via a DOCSIS/EuroDOCSIS diplexer. The modulated QAM signal is then downconverted via the BCM3415 Digital Tuner. This signal is then directly sampled via the ADC of the BCM3345. The BCM3345 physical layer processing acquires the signal and demodulates the information for further processing. The data is output in a digital MPEG format for processing by the DOCSIS/EuroDOCSIS 1.0/1.1 MAC of the BCM3345. All DOCSIS/EuroDOCSIS management messages are processed by the BCM3345 hardware based on programmed variables established by the cable modem application software. User data is passed along to the Ethernet MII to the PCI 2.2 bridge chip and to the PC. User data from the PC is likewise processed for forwarding to the CMTS based on the rules established by the MAC management messaging. After data is processed for upstream communications, it is modulated to the appropriate rate and directly converted to the required frequency. The signal then passes through the on-chip upstream amplifier and output directly to the diplexer and onto the cable plant.

The **BCM93345i** is 100 percent software-compatible with the BCM93345. Duplicate software loads reduce software development effort and promote certification. The **BCM93345i** is delivered with certifiable DOCSIS/ EuroDOCSIS software.

The documentation package for BCM3345i includes:

- User manual
- BCM3345 Data Sheet
- Hardware schematics
- Bill of materials
- Gerber files for the PC board
- Current object code
- Source code
- Application notes

The **BCM93345i** Reference Design uses Broadcom's high-performance, single-chip BCM3345 cable modem. This cost-effective design allows Broadcom's customers to minimize their time to market with a production-quality, internal PCI DOCSIS/EuroDOCSIS modem.

Ordering information:

BCM93345i DOCSIS version

BCM93345i-E EuroDOCSIS version

Connecting everything™

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