

## DOCSIS/EuroDOCSIS 1.1 ADVANCED CABLE MODEM TERMINATION SYSTEM

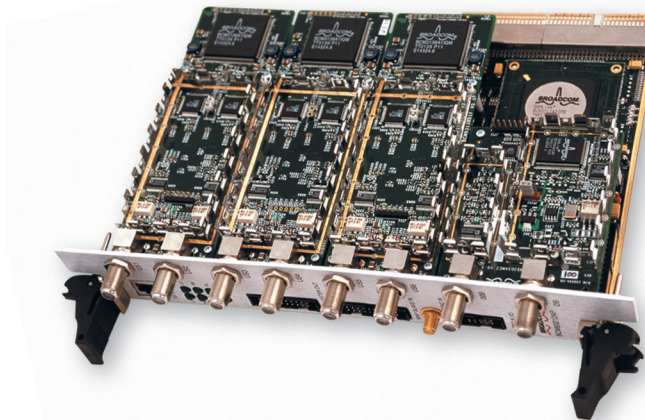
### BCM93212 FEATURES

- The BCM93212 is a DOCSIS/EuroDOCSIS-1.0 and 1.1 based cable modem termination system (CMTS) reference design which incorporates:
  - 64/256/512/1024 QAM downstream modulation with FEC
  - QPSK, 16, 32 and 64 QAM burst TDMA demodulation
  - Digitally generated IF carrier that meets DOCSIS/EuroDOCSIS-1.1 and 1.1 spectral purity requirements without a SAW filter
  - DOCSIS/EuroDOCSIS programmable downstream transmit IF carrier center frequency and channel bandwidth
  - Master/Slave MAP, reference clock, timestamp synchronization, and 10/100/1000BASE-T front panel connectors
  - BCM3212 MAC hardware that simplifies registration, ranging, fragmentation, concatenation, encryption, and payload header suppression
  - Scheduler support for DOCSIS 1.1 best effort, polled, and unsolicited grant service flows
- The BCM93212 basic system parameters include:
  - A BCM3212 Compact PCI V2.1 compliant base board with plug in connectors for 64/256/512/1024 QAM modulator and TDMA demodulator daughter cards
  - Support for one QAM downstream channel
  - Support for six programmable upstream channels that support all DOCSIS 1.0 / 1.1 and TDMA symbol rates and demodulation types.
  - 10/100/1000BASE-T network side interface
  - Seamless upgrade for legacy BCM93210 CMTS platforms using QNX RTOS

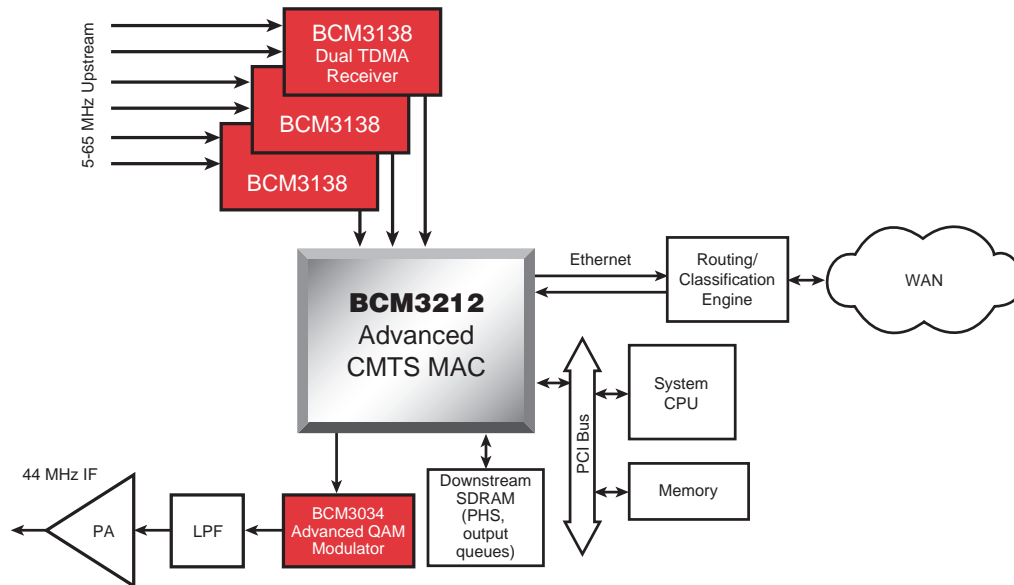
### SUMMARY OF BENEFITS

- Provides complimentary system to the BCM93345, BCM93350 and BCM93360 subscriber cable modem and residential gateway reference design for product development and testing.
- Supports DOCSIS/EuroDOCSIS 1.1 fragmentation and concatenation for Quality of Service (QoS).
- Provides a highly integrated 6 x 1 CMTS reference design in a compact PCI form factor.
- Accelerates software development by providing source code for core software functionality and low level diagnostics.
  - Reduces customers' internal development expenses.
  - Leverages years of development work embodied in the Broadcom BCM93210 reference design.
- Based on Broadcom's field-proven QAMLink technology.
- Reference design comes complete with:
  - Schematics and Gerber files
  - Bill of Materials (BOM)
  - Data sheets
  - Software source code and API

### BCM93212 Cable Modem Termination System (CMTS) Reference Design



# BCM93212 OVERVIEW



The Broadcom **BCM93212** QAMLink® DOCSIS/EuroDOCSIS Cable Modem Termination System (CMTS) Reference Design represents the industry's first complete DOCSIS/EuroDOCSIS-based silicon solution with TDMA upstream and advanced PHY downstream functions for the headend cable plant. The **BCM93212** CMTS supports the DOCSIS/EuroDOCSIS 1.0 and 1.1 specification enabling QoS for the simultaneous processing of voice, video and data on a prioritized basis. The **BCM93212** CMTS includes the BCM3034 Universal Advanced PHY QAMLink® Modulator, the BCM3212 DOCSIS/EuroDOCSIS 1.1 CMTS MAC and the BCM3138 Universal TDMA Burst Demodulator and provides all the necessary functionality required to receive and transmit high rate digital data to and from a cable plant.

## Functions include:

- Hardware-supported messaging (ranging, registration, channel configuration)
- Physical layer configurations (upstream baud rates, upstream channel descriptor and MAP variations, and FEC code-word size)
- Baseline privacy support
- Flexible PHY and MAC parameter settings and performance monitoring

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The **BCM93212** is complemented at the subscriber end by the BCM93345, BCM93350 and the BCM93360, DOCSIS/EuroDOCSIS-based cable modem and residential gateway silicon solutions. The BCM93360 is based on the BCM3360 single-chip residential gateway, which integrates all the major functions of a cable modem into a single device. Together, the **BCM93212** and the BCM93360 provide vendors with a seamless end-to-end silicon solution for development and testing of an DOCSIS/EuroDOCSIS-based cable modem and cable modem termination system with TDMA upstream and advanced PHY downstream functions.

## Ordering Information:

**BCM93212** CL-DOCSIS CMTS

**BCM93212-E** CL-EuroDOCSIS CMTS



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