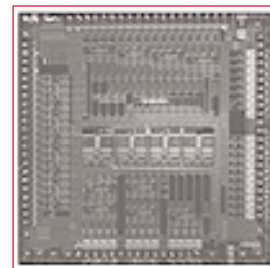




BCM93214 PRODUCT Brief



DOCSIS/EuroDOCSIS 2.0 ADVANCED CABLE MODEM TERMINATION SYSTEM

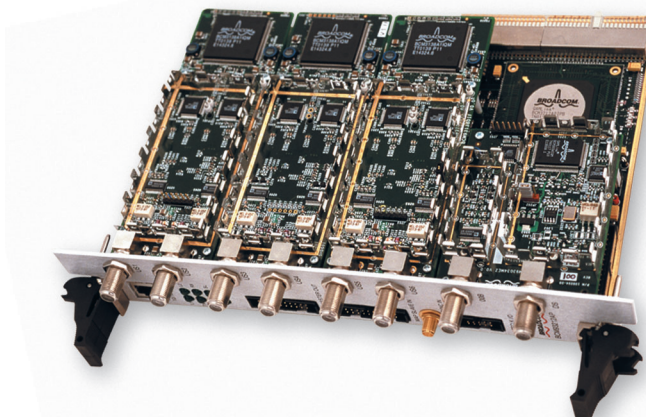
BCM93214 FEATURES

- The BCM93214 is a DOCSIS/EuroDOCSIS-2.0 based cable modem termination system (CMTS) reference design incorporating:
 - 64/256/512/1024 QAM downstream modulation with FEC
 - QPSK, 16, 32 and 64 QAM burst ATDMA demodulation
 - Digitally generated IF carrier that meets DOCSIS/EuroDOCSIS-2.0 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
 - BCM3214 MAC hardware that simplifies registration, ranging, fragmentation, concatenation, encryption, and payload header suppression
 - Scheduler support for DOCSIS 2.0 best-effort, polled, and unsolicited grant service flows
- The BCM93214 basic system parameters include:
 - A BCM3214 Compact PCI V2.1 compliant base board with plug in connectors for 64/256/512/1024 QAM modulator and ATDMA/SCDMA demodulator daughter cards
 - Support for one QAM downstream channel
 - Support for six programmable upstream channels that support all DOCSIS 2.0 symbol rates and demodulation types
 - 10/100/1000BASE-T network side interface

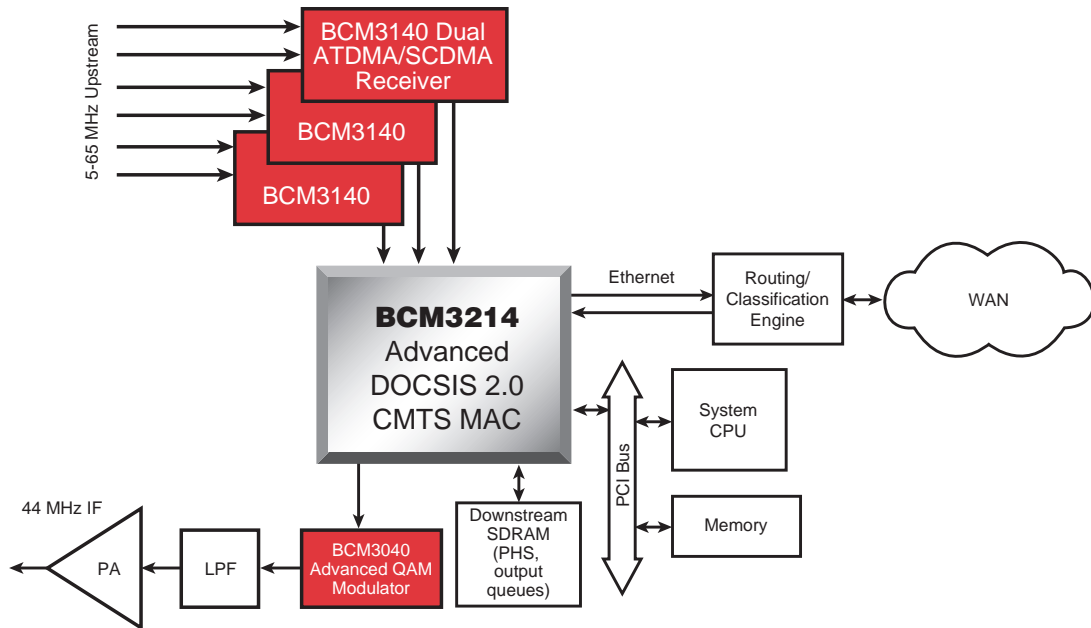
SUMMARY OF BENEFITS

- Provides complimentary system to the BCM93348, DOCSIS 2.0 subscriber cable modem reference design for product development and testing.
- Supports DOCSIS/EuroDOCSIS 2.0 fragmentation and concatenation for Quality of Service (QoS).
- Provides a highly integrated 6 x 1 CMTS reference design.
- Accelerates software development by providing source code for core software functionality and low level diagnostics.
 - Reduces customers' internal development expenses.
- 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

BCM93214 Cable Modem Termination System (CMTS) Reference Design



BCM93214 OVERVIEW



The Broadcom **BCM93214** QAMLink® DOCSIS/EuroDOCSIS Cable Modem Termination System (CMTS) Reference Design represents the industry's first complete DOCSIS/EuroDOCSIS-based silicon solution with ATDMA/SCDMA upstream and advanced PHY downstream functions for the headend cable plant. The **BCM93214** CMTS supports the DOCSIS/EuroDOCSIS 2.0 specification, enabling QoS for the simultaneous processing of voice, video, and data on a prioritized basis. The **BCM93214** CMTS includes the BCM3040 Universal Advanced PHY QAMLink® Modulator, the BCM3214 DOCSIS/EuroDOCSIS 2.0 CMTS MAC, and the BCM3140 DOCSIS 2.0 ATDMA/SCDMA—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 **BCM93214** is complemented at the subscriber end by the BCM93348, a DOCSIS/EuroDOCSIS 2.0-based cable modem silicon solution.

Together, the **BCM93214** and the BCM93348 provide vendors with a seamless end-to-end silicon solution for development and testing of an DOCSIS/EuroDOCSIS 2.0-based cable modem and cable modem termination system with ATDMA/SCDMA upstream and advanced PHY downstream functions.

Ordering Information:

BCM93214 CL–DOCSIS CMTS

BCM93214-E CL–EuroDOCSIS CMTS