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Connecting
e v e r y t h i n g ®

BCM97395
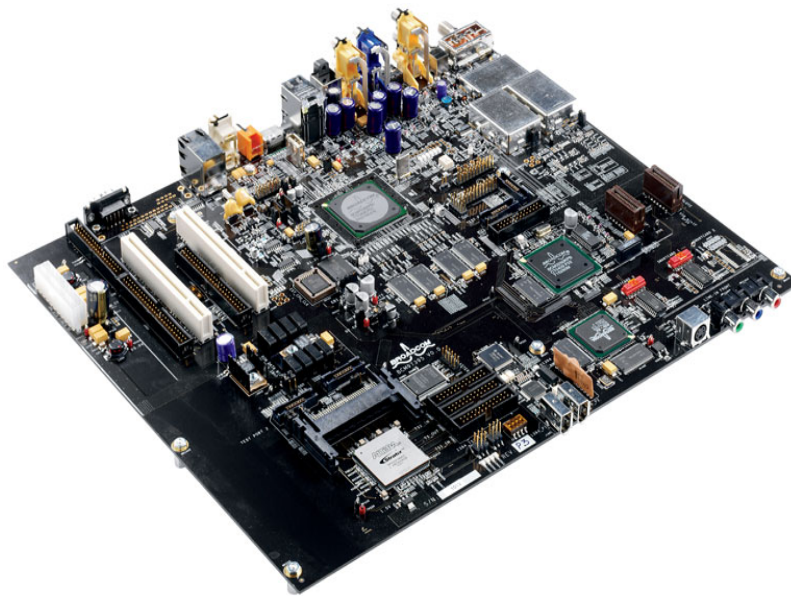## PRODUCT Brief

DUAL CHANNEL AVC HD REFERENCE PLATFORM

FEATURES

- Dual channel AVC HD decode and display
- On-board dual channel QAM tuners
- Dual channel plug in support for QPSK/8PSK and VSB tuners
- DOCSIS® and OOB upstream signaling
- DTCP protected networking support
- Triple HD digital video recording
- Bi-directional 3D comb video encoder
- On-board analog video encoder
- Dual channel SATA controller
- Dual channel USB 2.0 support
- Dual channel 1394 support
- Dual smart card support
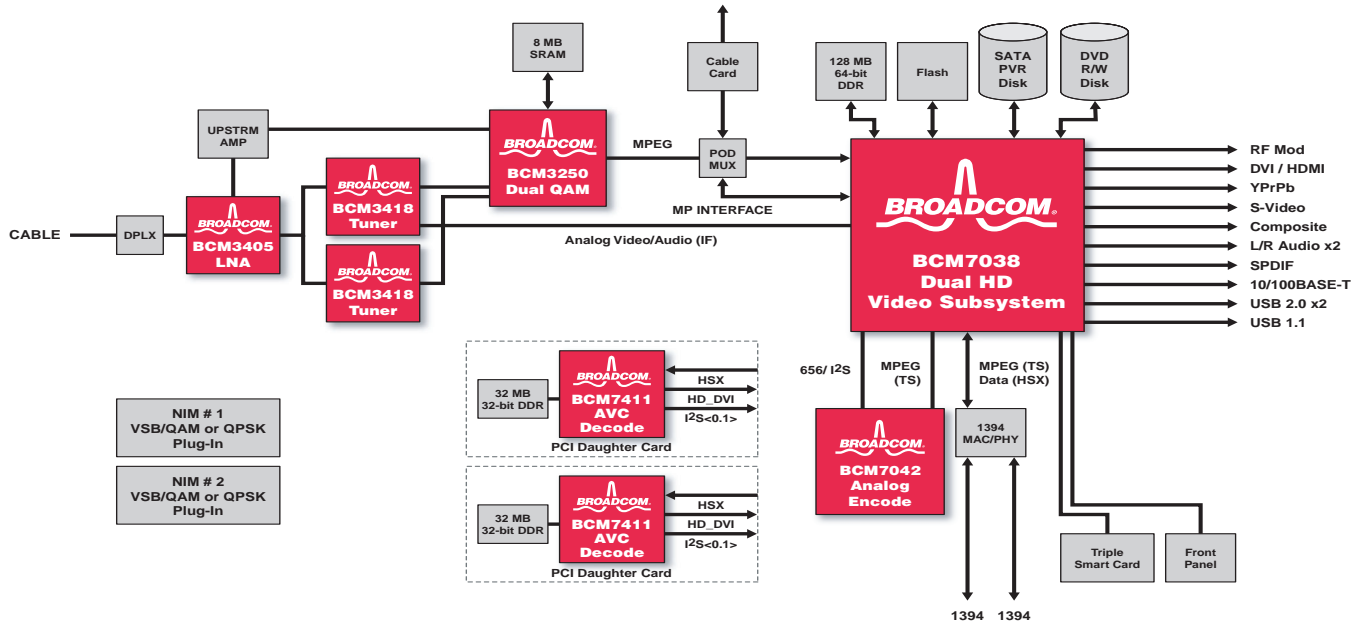- AC3, Dolby Digital Pro, MP3, AAC support

SUMMARY OF BENEFITS

- Complete time-to-market AVC HD solution
- Flexible front end tuner support for satellite, cable, and terrestrial applications
- Complete OpenCable and Plug and Play solution
- Enables IP STB solutions and in-home networking solutions
- Complete digital and analog video recording solution
- Supports internal and external hard drive and other peripheral connections
- Complete media center solution

BCM97395 Dual Channel AVC HD Reference Platform

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The H.264-based compression technology significantly reduces the bandwidth required to deliver HD and digital video content over service operator networks. Reducing the bandwidth requirements of HD content offers the following benefits to cable, satellite and telecommunication service providers.

- Frees up much needed bandwidth for cable operators to support additional services, such as advanced telephony, data delivery, and HD VOD services.
- Enables satellite operators to cost-effectively offer more HD channels over a given spectrum by increasing the HD channel capacity from one to four channels per QPSK channel.
- Allows telecommunications operators to deliver HD programming over their current networks.

The Broadcom BCM97395 HDTV decoder reference design provides manufacturers with a complete solution for receiving, decoding and displaying digital and analog video, with the ability to simultaneously decode and display two independent channels of HD AVC video. The reference design has a flexible tuner module that allows support for cable, satellite and terrestrial broadcast applications. An integrated Ethernet controller enables the reference design to support high-quality digital video streaming over IP and in-home networks. The BCM97395 also incorporates personal video recording capabilities, which enables users to watch and record HD programs. The BCM97395 supports CableCard interface thereby enabling OpenCable solutions. With it's

dual channel SATA support, the reference design supports simultaneous PVR hard drive and DVD recorder capabilities.

The reference design is built using 2005 production-ready chips, which include the BCM7038 dual-channel HDTV and personal video recorder (PVR) chip and BCM7411 MPEG-4/AVC video decoder/audio processor chip. The BCM7038 is a highly integrated a dual HD video/audio/graphics and PVR chip that delivers very high-quality HD programming. The dual audio and video channels and PVR features in the BCM7038 offer advanced capabilities, such as support for the delivery of HD broadcasting to multiple-television in the home, separate HD programs with picture-in-picture (PIP), and HD program watch and record PVR capabilities. The recently announced BCM7411 supports the H.264 video compression standard, which represents the current leading-edge compression technology in the industry. The chip is designed to improve video compression performance by a factor of two to three times when compared to existing MPEG-2 solutions.

The reference design also integrates the BCM7042, Broadcom's latest generation analog video encoder, which raises analog encoding quality to a new level.

The reference design comes with a complete set top API and application program that demonstrates the full suite of functionality.

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