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BCM97315 DBS SET-TOP BOX REFERENCE DESIGN
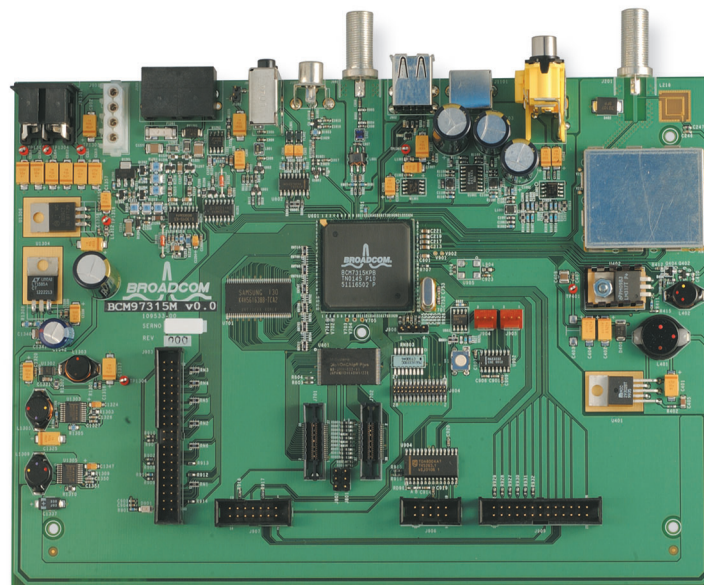
BCM97315 FEATURES

- BCM7315 Satellite Single-Chip
  - 1–45 Megabaud variable rate receiver
  - Data transport processor
    - Support for DirecTV™ and MPEG transport streams
    - DES/DVB descrambler
  - MPEG-ATSC compliant audio/video decoders
    - MP@ML MPEG2 video decoder
    - Decode of MPEG Layer 1 & Layer 2 Audio
  - Broadcom graphics engine (BGE)
    - Supports 3 graphics, 1 x video and H/W cursor planes
    - 2D video scaling support
    - Integrated PAL/NTSC/SECAM Encoder
  - MIPS32™ embedded processor
    - MMU support
    - EJTAG interface for development support
- BCM3440 CMOS tuner
- IDE host interface for PVR development
- USB host capability
- Software device drivers
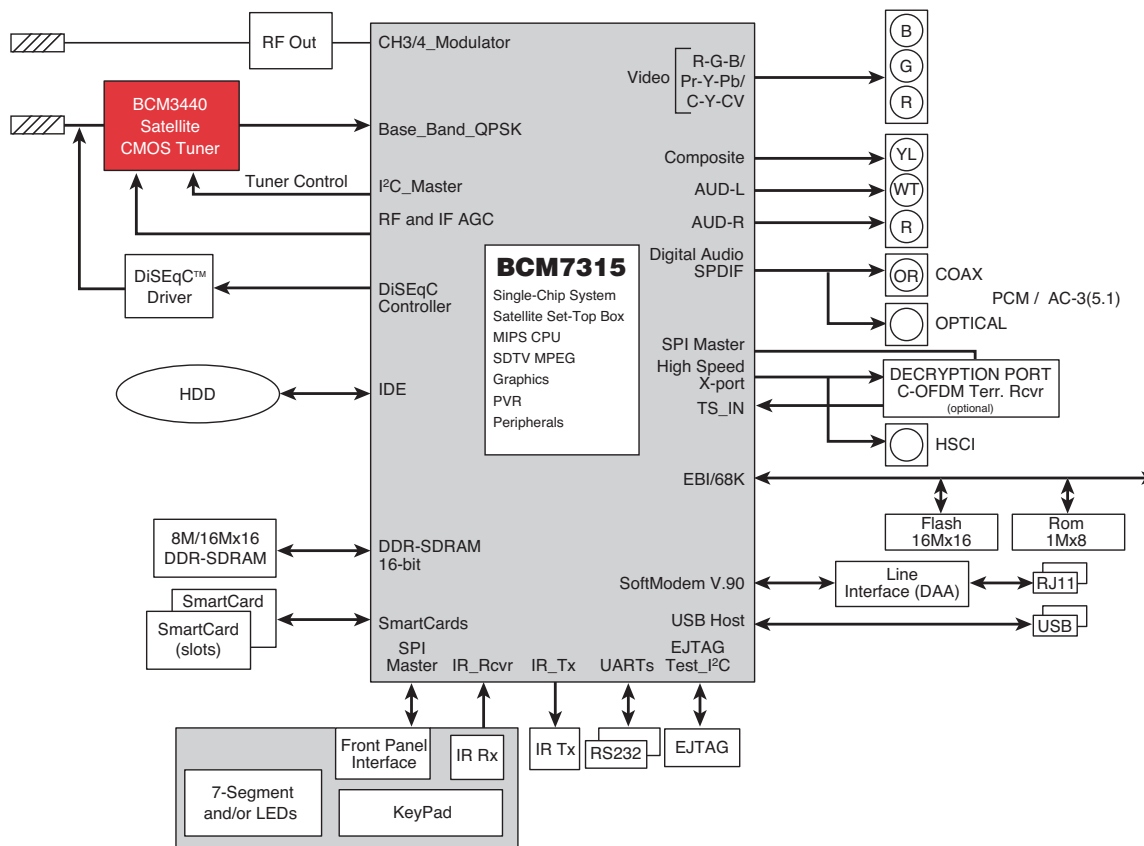- Complete fully functional set-top box

SUMMARY OF BENEFITS

- Provides a cost effective solution for direct broadcast satellite (DBS) applications.
- All major system functionality is integrated into the BCM7315 single-chip, greatly reducing system cost and complexity.
- Hardware and software design can be leveraged by set-top box manufactures for rapid time to market.
- Provides a reference & development environment for the BCM7315 based set-top box designs.
- Broadcom's device drivers enable rapid software development cycles with support of industry-standard operating systems.
- Reference design includes:
  - Schematic drawings and Gerber files
  - Bill of material (BOM)
  - Data sheets and users manual
  - Software source code
  - Application support

BCM97315 Set-top Box Software Development Platform

BCM97315 Digital Satellite Set-top Box Reference Design

The Broadcom BCM97315 set-top box reference design is a complete hardware and software design based on the BCM7315 single-chip satellite device.

The BCM7315 includes the DBS demodulator, MPEG-2 video, high-quality 2D graphics engine, MPEG and Dolby Digital audio, video encoder, and a MIPS32™-based microprocessor. All system memory and peripheral control is included to complete the set-top box system. The BCM97315 also includes a full SDRAM and flash memory complement.

The BCM97315 includes an extensive software suite that has been developed for the set-top box environment. Based around the Broadcom porting interface, software developed for the prior generation reference designs, including BCM93714 and BCM93730, is portable to this latest set-top box development platform and can be leveraged by Broadcom customers.

This extensive software suite developed for set-top box applications includes software for the satellite front-end, MPEG-2/AC3 audio and video decoder, and graphics subsystem. Broadcom supports industry-standard operating systems and APIs in this design. By developing with the Broadcom Porting Interface, applications can be easily migrated to next generation devices.

The BCM97315 is a complete set-top reference box design based upon the highly integrated, cost effective, BCM7315 Satellite set-top box system on a chip. This cost effective design can be leveraged by Broadcom's customers to rapidly achieve the functionality required for today's set-top boxes.

Broadcom's device drivers are compatible with industry standard operating systems and associated APIs that allow applications and content developed for set-top boxes to run on this platform with minimal effort by our customers.

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