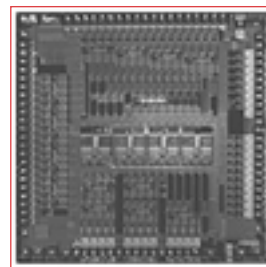




BCM93710 PRODUCT Brief



BCM93710 LOW-COST SET-TOP BOX REFERENCE DESIGN

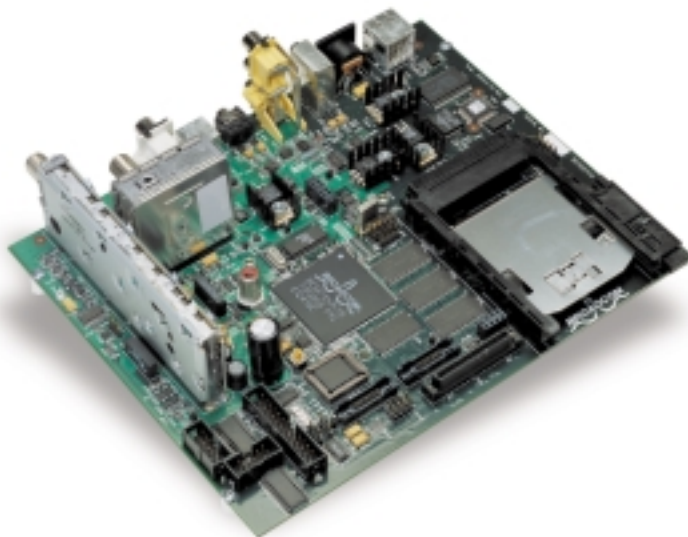
BCM93710 FEATURES

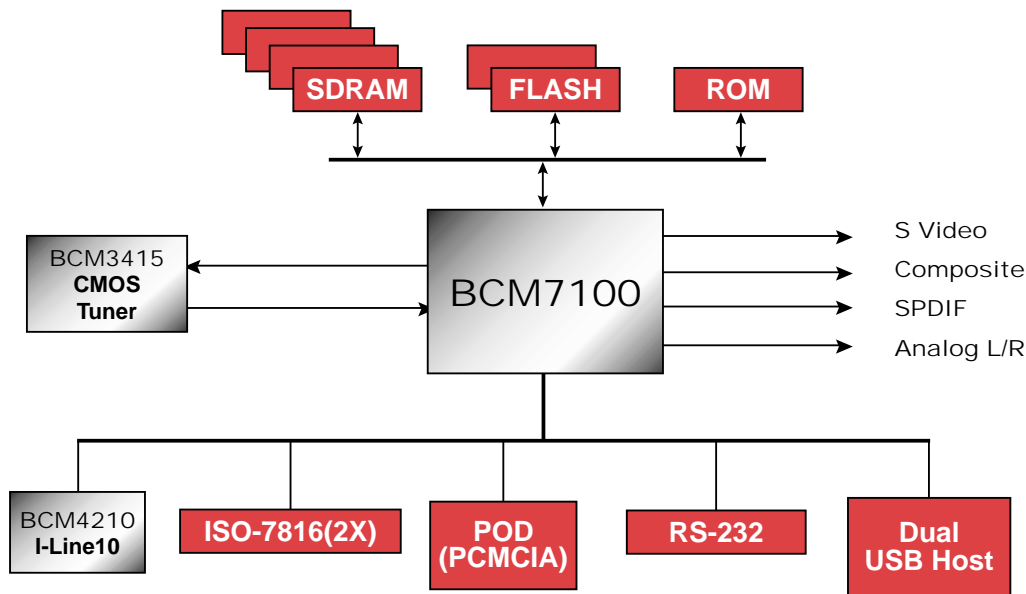
- **Low-Cost Set-Top Box Reference Design based on the BCM7100 Single-Chip Cable Set-Top Box**
 - **Audio/Video Sub-system**
 - Supports MPEG2/DC2 transport and video decoding, Dolby AC3 and MPEG audio
 - **Advanced 2D/3D Graphics Sub-System**
 - Studio quality text and graphics
 - NTSC analog video digitizer/decoder
 - NTSC/PAL video encoder
 - **QAMLink® Cable Set-Top Box Transceiver**
 - In-band and out-of-band demodulators
 - Burst upstream transmitter
 - Key peripherals
 - **MIPS32 Embedded Processor**
 - EJTAG interface
 - **DAVIC MAC Version 1.2/1.5**
- **Software device drivers**
- **HPNA 2.0 iLine10™ HomePNA with software drivers**
- **POD interface**
- **IR Rx/Tx, wireless keyboard**
- **USB host capability**

SUMMARY OF BENEFITS

- **All major system functionality is integrated into the BCM7100 Single-Chip Set-Top Box, greatly reducing system cost and complexity.**
- **Broadcom's device drivers enable rapid software development cycles with support of industry-standard operating systems.**
- **Complete cable set-top box design with DAVIC MAC support for interactivity.**
- **Advanced graphics system allows applications such as internet browsers and electronic program guides to deliver studio-quality text and graphics on television monitors.**
- **Analog and digital video system**
- **Hardware and software design can be leveraged by set-top box manufacturers for rapid time to market.**
- **Provides a development environment for BCM7100-based set-top box designs.**

BCM93710 Set-Top Box Software Development Platform





The Broadcom **BCM93710** Set-Top Box Reference Design is a complete hardware and software set-top box design based on the BCM7100 Single-Chip Cable Set-Top Box. The BCM7100 includes all front-end communication circuitry, a DAVIC MAC version 1.2/1.5 for interactivity, MPEG-2 video, high-quality 2D and 3D graphics engine, MPEG and Dolby Digital audio, analog video decoder and encoder, and a MIPS32-based microprocessor. All system memory and peripheral control is included to complete the set-top box system. In addition, this design includes Broadcom's iLine10 HPNA 2.0 solution for home networking. POD and smart card interfaces are included to complete a conditional access system. The **BCM93710** also includes a full SDRAM and flash memory complement.

The **BCM93710** includes an extensive software suite that is developed for the set-top box environment. All software developed for the prior generation reference designs, including the BCM93120, BCM93714, and the BCM93709, is portable to

this latest set-top box development platform and can be leveraged by Broadcom customers. This extensive software suite developed for cable set-top box applications includes software for the cable front-end, MPEG-2/AC3 audio and video decoder, and graphics subsystem. Broadcom supports industry-standard operating systems and APIs in this design. HAL device drivers are available so common applications can run on this platform.

The **BCM93710** is a complete set-top reference box design based upon the highly integrated, cost effective, BCM7100 Cable set-top box system on a chip. This cost effective design can be leveraged by Broadcom's customers to rapidly get the functionality required for today's set-top boxes to market. 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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