



SINGLE-CHIP SATELLITE SET-TOP BOX DECODER

FEATURES

- **Dual All-Digital Satellite Receivers**
 - 1–45 Mbaud variable rate receiver
 - Integrated 7-bit A/D converters
 - Complies with DVB/DIRECTV®/Digicipher II FEC Decoder
- **Data Transport Processor**
 - Support for DIRECTV and MPEG transport streams
 - DES/DVB descrambler
 - Support for 64 PIDs and 64 section filters
 - Support for play/record from/to hard disk
- **MPEG-ATSC Compliant Audio/Video Decoders**
 - MP@ML MPEG-2 video decoder
 - Dual decode of MPEG Layer 1 and Layer 2 audio
 - Support for Dolby AC-3 and compressed PCM
- **Broadcom Graphics Engine (BGE)**
 - Supports 3 graphics, 1 x video and H/W cursor planes
 - 2D video scaling support
 - Integrated PAL/NTSC/SECAM encoder
 - ITU-656 input support
- **MIPS64™ CPU Core @ 200–250 MHz**
 - IEEE 754 compliant floating point unit
 - EJTAG debug support
- **IDE Host Adapter**
 - ATA5 command set, Ultra ATA/66 I/F

SUMMARY OF BENEFITS

- Provides a cost-effective solution for direct broadcast satellite (DBS) applications
- Fully integrated dual QPSK receivers, MPEG-2 A/V decoder, MIPS64™ CPU and peripherals for complete set-top box system
 - Simultaneously supports two TVs with independent programming and on-screen graphics displays
- PVR capability enables personal viewing and scheduling, video-on-demand (VOD), and VCR “trick mode” effects on any video stream
 - Encryption ensures copy protection of recorded programming content
 - Simultaneous support for dual stream Record & Playback
- Advanced 2D graphics system allows applications such as Internet browsers and electronic program guides to deliver studio quality text and graphics on television monitors
- Broadcom-developed device drivers enable rapid software development cycle with support of industry-standard operating systems
- Subsystems are based on Broadcom’s field-proven production available technologies.

BCM7320 Single-Chip System Block Diagram

