BROADCOM®
Connecting everything®

BCM2727 PRODUCT Brief

HIGH-DEFINITION 720P MOBILE MULTIMEDIA PROCESSOR

FEATURES

- **High-Definition (HD) Video**
  - HD (720p) H.264 Encode and Decode, both High Profile at 30 fps
  - Supports all major video compression algorithms, including H.263, MPEG 4/2/1 and VC-1
  - Direct TV Connect
    - HDTV via HDMI with HDCP content protection
    - Component, S-Video, and Composite including Macrovision® content protection
- **Quality Imaging**
  - Up to 12 Mpixel digital still camera for professional quality photos
  - Advanced Image Signal Processing (ISP)
    - Fine-grained sensor control and compensation
    - Image enhancement: exposure and geometric distortion compensation, sharpening, color correction, image stabilization
- **Graphics**
  - Extreme gaming and intuitive user interface presentation
  - 3D Graphics hardware capable of 32M triangles/s
  - Supports OpenGL ES 1.1/2.0 and OpenVG 1.0 standards
- **Hi Fi Audio**
  - Supports all major audio standards, including MP3, AAC, AMR, WMA, RealAudio, FLAC, Ogg Vorbis, and MIDI
- **Ultra Low Power for Extended Usage**
  - Audio decode <10 mW
    - Music player time of 60 hours for system
  - HD H.264 Video+AAC record <450 mW
    - HD camcorder capture time of over three hours for system
- **Programmable Architecture**
  - Silicon efficient, software programmable, dual core vector architecture allows in-the-field feature additions and codec upgrades

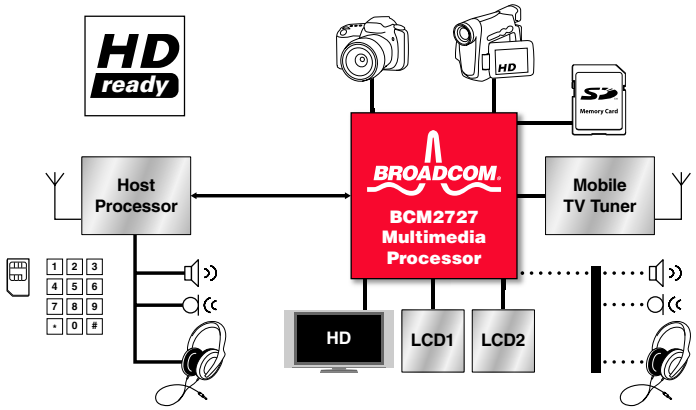
SUMMARY OF BENEFITS

- **Consumer camcorder in your pocket with high-quality HD 720p video capture**
- **Professional quality imaging from low-cost sensors and lens systems with high-performance ISP**
- **High-quality TV playback up to HD resolution**
- **Broad consumer content interoperability with large pre-integrated codec library and hardware DRM support**
- **Mobile gaming experience approaching dedicated handheld game quality**
- **Immersive user interface acceleration with 3D menu features**
- **Extended listening and viewing sessions with power optimized VideoCore® III architecture**
- **Field upgradeable to support emerging multimedia standards**
- **Rapid systems integration into existing and emerging mobile device architectures**
  - Broad range of integrated peripherals
  - Major open operating systems supported
  - OpenGL ES 1.1/2.0, OpenVG 1.0 and OpenMAX IL 1.1 software drivers and libraries
  - Complete development kit with reference applications
  - Optional third-party partners trained to provide extra support, extended IP, and product adaptation

APPLICATIONS

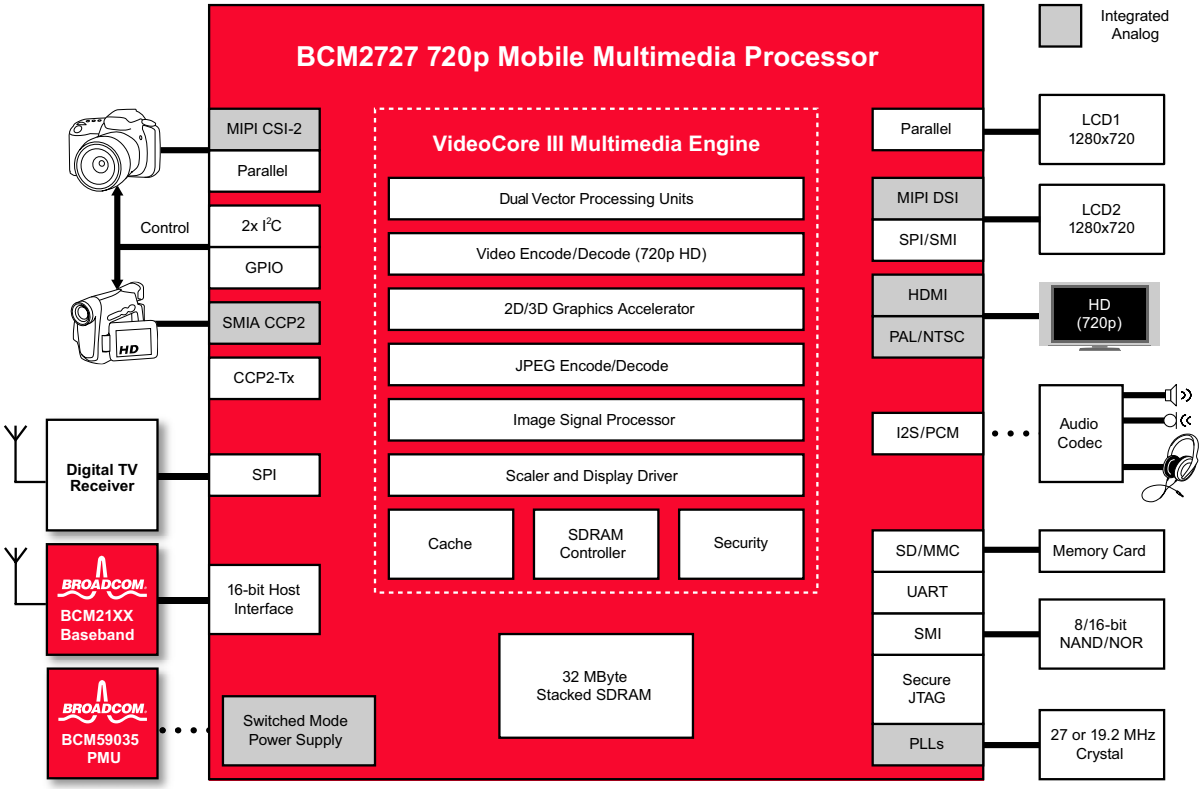
- Media-rich mobile phones
- Portable media players
- Personal navigation units

System Block Diagram



BROADCOM.

OVERVIEW



Functional Block Diagram

The BCM2727 multimedia processor provides high-quality multimedia features for mobile phones and advanced media players while retaining long battery life, a combination that allows users to carry a single device for all occasions. Next generation consumer devices based on the BCM2727 can support HD video camcorder and playback, professional cameras to 12 Mpixels with advanced ISP, and high-performance 3D for advanced user interfaces, navigation displays, and mobile gaming.

Recording 720p HD video is supported in H.264/MPEG-4 AVC High Profile format, resulting in a quarter of the storage required versus MPEG-2 standards. While simultaneously recording HD 720p video and audio streams, consumption is around 450 mW, enabling HD camcorder record time of three hours for a typical system. Video formats including H.264, MPEG-1, MPEG-2, MPEG-4 ASP and VC-1 (for WMV) can be played directly without transcoding. The low-power VideoCore III architecture provides over five hours of HD video viewing or six hours of VGA playback. HDMI 1.3a with HDCP encryption and Component, S-Video, or Composite connects allow high-quality video playback on televisions.

The BCM2727 delivers a high-quality imaging solution exceeding consumer portable digital cameras and approaching DSLR cameras. Advanced on-chip ISP is capable of handling sensors up to 12 Mpixels with on-the-fly image processing at 180M pixels per second and JPEG compression at 10 full quality photos per second. Even with reduced lens and sensor quality, crystal clear images with good color balance in a wide range of lighting conditions are enabled.

Handsets are moving to high performance 2D and 3D features to deliver an immersive mobile user interface and to provide a gaming platform for high action, handheld gaming. The BCM2727 incorporates a tightly coupled 3D graphics hardware accelerator that provides a complete OpenGL ES 2.0 solution capable of 32M triangles per second and OpenVG 1.0 capable of 94 “tigers” per second. Battery life is not compromised with quality games consuming around 130 mW, providing game play time in excess of six hours.

Connecting everything®

BROADCOM CORPORATION
5300 California Avenue
Irvine, California 92617

2727-PB01-R 10/15/07

Phone: 949-926-5000
Fax: 949-926-5203
E-mail: info@broadcom.com
Web: www.broadcom.com