INTRODUCTION

The STMP3600 is a complete personal media player solution that offers top quality multimedia experiences for the consumer. The SigmaTel STMP3600 System on Chip (SoC) provides customers the ability to design and develop high performance digital multimedia players with audio, video, gaming, and wireless capabilities. With a complete Software Development Kit (SDK) and worldwide engineering support customers can go to market more rapidly and economically.

MULTIMEDIA ON CHIP

Coupled with a full-featured Software Development Kit, the STMP3600 enables a broad array of features, including:

• Audio decoding/encoding with post-processing effects
• Video decoding
• Image decoding
• Wireless networking (WiFi®) and Bluetooth® connectivity
• STFM1000 FM tuner with Radio Data Service (RDS) support
• PlaysForSure™ 2.2x with Windows Vista™ and Windows Media Player
• NAND Flash and removable media support (SD/MMC)

COMPLETE SYSTEM SOLUTION

Together with the SDK, the STMP3600 SoC enables these advanced features without sacrificing performance by excelling in battery life, package size, processing power, level of integration and flexibility.

Low Power

The STMP3600 is designed to provide low power consumption for extended battery life in portable applications. The integrated power management unit includes a high efficiency, on-chip DC-DC converter that supports various battery configurations including 1xAA, 1xAAA, and Li-Ion cells including battery charging for Li-Ion.

Small Form Factor at a Lower System Cost

With a high level of on-chip integration, the STMP3600 needs very few external components to complete the system. This feature allows manufacturers to meet the consumer market demand for smaller devices featuring more functionality at a lower system cost. The STMP3600 integrates all of the major analog components needed for a portable media player which can result in significantly smaller Print Circuit Board (PCB) area.

Application Flexibility

At the heart of the solution, is an ARM926EJ-S CPU with dual caches, embedded SRAM, and an integrated memory manage-ment unit serves as the central processor of the STMP3600 and provides the processing power needed to support advanced features beyond just basic audio decoding. To provide the maximum application flexibility, the STMP3600 integrates a wide range of I/O peripherals. It can efficiently interface to nearly any type of flash memory, ATA drive, serial bus, or smart LCD. Moreover, it is ready for advanced connectivity applications such as Bluetooth® and WiFi® via its integrated high speed application UART and SDIO controller. The STMP3600 includes a high-resolution audio codec with headphone and speaker amplifiers, 8-channel low resolution ADC, high-current battery charger, linear regulators for 5-volt operation, high-speed USB 2.0 Host and Device with embedded PHY, and various system monitoring and infrastructure systems.
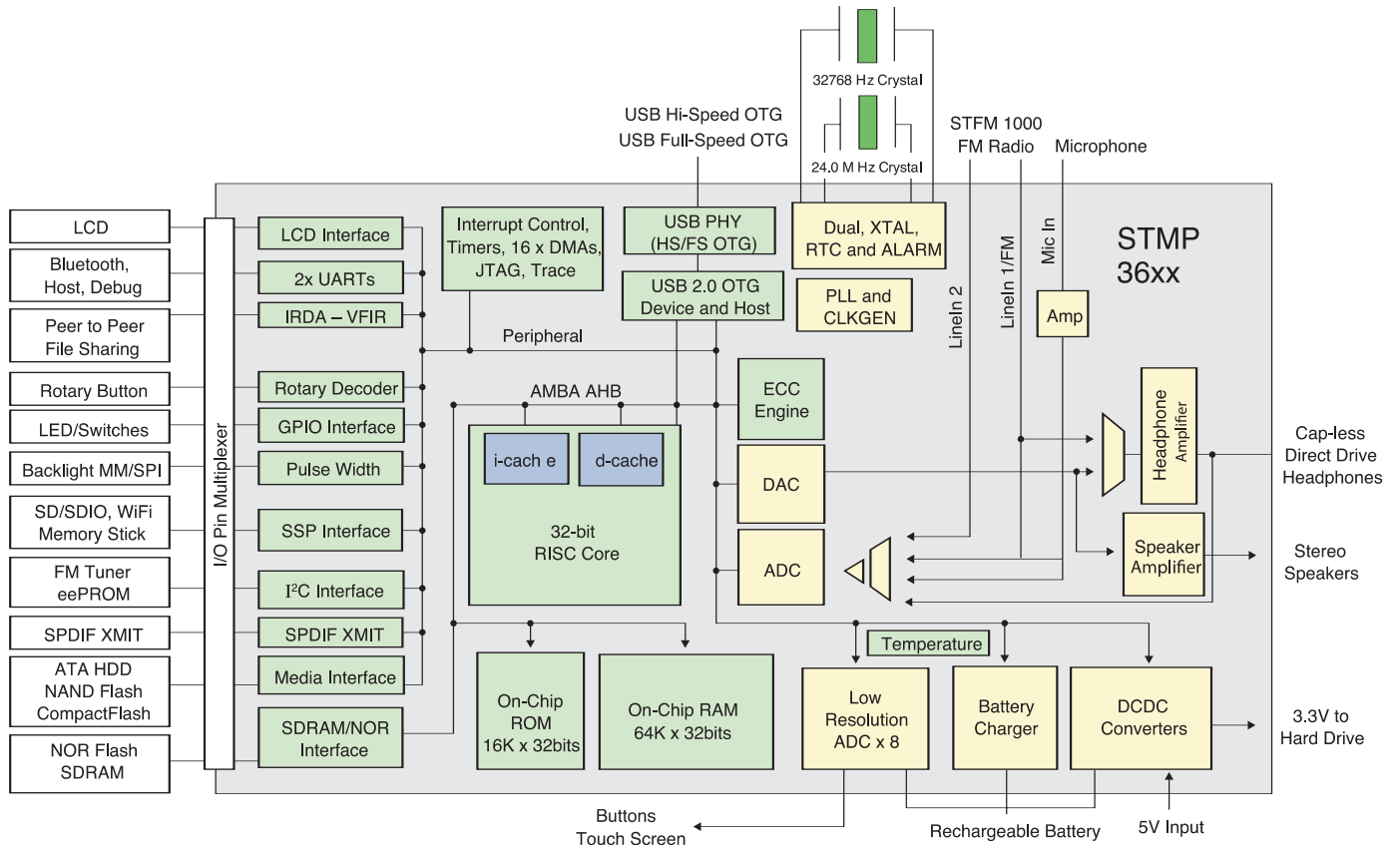
THE COMPLETE CHANNEL ECOSYSTEM

SigmaTel has established a worldwide network of design houses, developers, Original Design Manufacturers (ODMs), and technology partners to assist customers with all their design needs. Services range from consultation to complete design and manufacturing. This efficient and effective ecosystem ensures a rapid time to market with a quality product.

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PRODUCT SPECS

SigmaTel provides a complete solution, including hard-ware and software, through our Software Development Kits. Key features include:

- Content Management and UI Framework
- Audio/Image Decoder Support: MP3,WMA,WAV (PCM,IMA-ADPCM, MS-ADPCM), AAC, Ogg Vorbis, JPEG
- Audio Encoder Support: MP3, WMA, WAV (PCM, IMA-ADPCM, MS-ADPCM)
- Video Decoder Support:
    - MPEG4 SP/ASP @ QVGA, 20fps
    - WMV Simple/Main @ QCIF+, 20fps
- WiFi® and Bluetooth® support
- FAT32/16 file system formats with device formatting
- NAND flash support USB 2.0 device
- MMC/SD card support
- MTP
- WM-DRM10/PD-DRM (DRM9) support

- PlaysForSure™ 2.2x compliant
- Dynamic Power Management
- Battery Charging
- Host System Recovery and Firmware Update Utility
- STFM1000 FM Playback and Recording with Radio Data Service (RDS) Support
- Graphic EQ with 5 preset settings and custom settings
- Localized fonts
- Voice record
- Lyrics Support
- Support for third party audio post processing algorithms
- Album Art
- Windows Vista™ support and Windows Media Player
- Audible™ Support
- Transparent Menu Overlay
- Bookmarking/exact resume

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