NeoMobileTV™

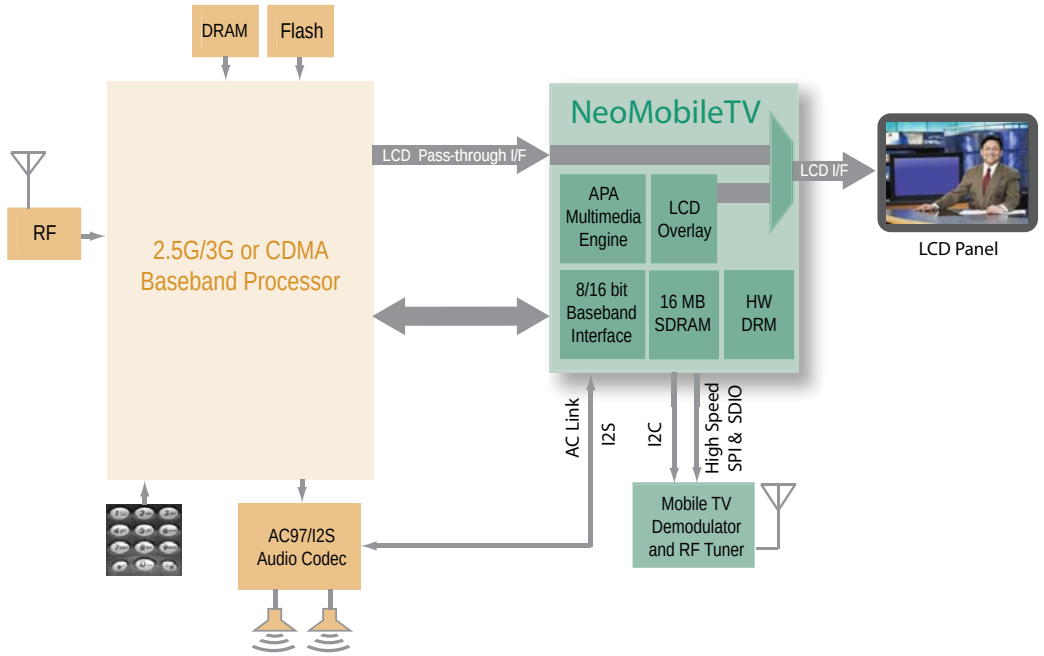
Mobile TV designed for Feature Phones

NeoMagic's NeoMobileTV™ (NMTV) provides a digital mobile TV solution that phone designers can integrate into existing phone designs with minimal impact to existing software or hardware architecture. Complete mobile TV software package from NeoMagic, including all necessary APIs, makes it very easy to integrate the NMTV co-processor into any Feature Phone design.

In a Feature Phone design, the NMTV co-processor resides between the LCD-panel RGB bus of the baseband processor on one side and the LCD interface on the other side. When the TV application is not in use, the baseband drives the LCD panel directly, taking advantage of the LCD pass-through mode of the NMTV co-processor. In this mode, the baseband RGB data passes through the NMTV to the LCD panel without any interference from the NMTV. The NMTV can be set to the lowest power mode and consequently will consume negligible power. This approach greatly reduces software overhead required for passing baseband data to the LCD panel. While the TV application is in use, the NMTV chip drives the LCD panel and has the capability to display TV in a window or as a full-screen display.

- Simple Integration
  - Baseband LCD data pass-through with no software overhead
  - Simple 8/16-bit interface to baseband using NeoMagic APIs
  - Overlay support of baseband and TV images on LCD panel
- Complete Solution
  - NeoMagic solution includes the NMTV device and complete software for mobile TV processing
  - Supports ISDB-T, E-DMB, T-DMB, DVB-H, etc.
- Low Power
  - Extended battery life while watching mobile TV
  - NMTV power in only uW when TV function not is use
- Low Cost System
  - Reuses existing baseband flash subsystem
  - Reduced BOM: 27 MHz crystal oscillator and 128 Mbit SDRAM included

Feature Phone with NeoMobileTV



NeoMobileTV™ Features and Specifications

Video Support
- H.264 baseline 1.3+
- MPEG-4
- DIVx
- H.263
- QCIF, QVGA, CIF, and VGA
- Frame rates up to 30 fps

Audio Support
- AMR, AAC, HE-AAC ("AAC+")
- MP3, WMA
- G.711, G.723.1

Unique, Programmable Multimedia Engine
- APA-based unique multimedia engine enables very low power audio/video decode
- Fully programmable multimedia engine makes it very easy to add new codex support in the future

Host and Control Interfaces
- 8/16-bit host Interface
- High-speed SPI (50 MHz) and SDIO for interface to mobile TV demodulators
- AC97/I2S digital audio interface
- I2C and GPIOs for LCD and demodulator/tuner control

On-board BOM Reduction
- On-board 128 Mbit SDRAM
- Tunable 27 MHz crystal oscillator delivers most accurate timing for broadcast synchronization and MPEG Transport Stream time stamps
- Program memory loaded by host CPU, no Flash needed

Display Interface
- 24-bpp LCD interface output
- Supports TFT panels
- LCD-input from baseband for display pass-through
- Overlay of baseband and NeoMobileTV displays

Power Management
- APA-based unique multimedia engine enables very low power audio/video decode
- Ultra low-power standby mode with LCD Pass-through (uW range)
- Clock gating and dynamic clock management
- Scalable low voltage operation for power saving (i.e. 0.9 V-1.2 V)
- Multiple power saving modes

Software solution
- The solution includes the semiconductor device, and the software needed for mobile TV processing.
- NeoMagic also provides all necessary APIs to make it very easy to integrate NMTV into a handset.
- NeoMagic delivers software for all major mobile TV standards, including: ISDB-T, T-DMB, E-DMB, DVB-H.

Package
- 10x12 mm, 1.4 mm height
- 196 balls, 0.65 mm spacing

NEOMAGIC

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