ST-NXP Wireless

IMPORTANT NOTICE

Dear customer,

As from August 2nd 2008, the wireless operations of STMicroelectronics have moved to a new company, ST-NXP Wireless.

As a result, the following changes are applicable to the attached document.

● **Company name - STMicroelectronics NV** is replaced with **ST-NXP Wireless.**

● **Copyright** - the copyright notice at the bottom of the last page "© STMicroelectronics 200x - All rights reserved", shall now read: "© ST-NXP Wireless 200x - All rights reserved".

● **Web site** - http://www.st.com is replaced with http://www.stnwireless.com

● **Contact information** - the list of sales offices is found at http://www.stnwireless.com under Contacts.

If you have any questions related to the document, please contact our nearest sales office. Thank you for your cooperation and understanding.

ST-NXP Wireless

Mobile multimedia application processor

Data Brief

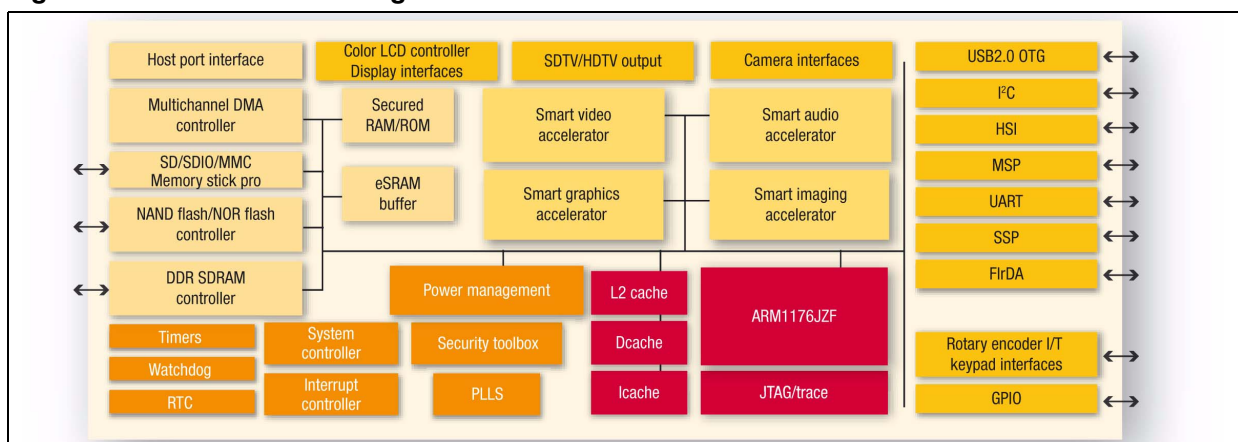*Nomadik is a registered trademark of STMicroelectronics*

Features

- Smart video accelerator
  - MPEG-4 SP real-time encoding/decoding up to HDTV 720P 30 fps
  - H264, VC1, MPEG-2, DiVx encoding/decoding up to SDTV 30 fps
  - JPEG fast encode/decode
- Smart audio accelerator
  - Extensive digital-audio software library
  - MIDI audio accelerated synthesis
- Smart imaging accelerator
  - Embedded real-time image reconstruction
  - High resolution sensor up to 8 Mpixels
- Smart 3D graphics accelerator
  - OpenGL-ES v1.2 and v2.0 compliant
  - OpenVG 1.1 compliant
- Ultra low-power implementation
- Simultaneous multiple display support
  - Display interfaces for STN/TFT/smart panels
  - Advanced multi-layer composition
- SDTV and HDTV outputs
- Advanced power management unit with fine-grain power domains, dynamic voltage and frequency scaling

- ARM 1176JZF™ 32-bit RISC CPU, up to 528 MHz and 32 Kbyte instruction cache, 32 Kbyte data level 1 cache, 256 Kbyte level 2 cache
- Large on-chip memory: up to 1 Mbyte SRAM, 128 Kbyte ROM
- Advanced security with TrustZone® memory protection, safeboot, crypto-acceleration, unique die identity
- 32-bit DDR-SDRAM memory controller
- NAND/OneNAND/NOR Flash controller
- Multiple high-speed MMC/SD Card/SDIO/ Memory Stick Pro™ host controllers
- USB2.0 OTG high-speed interface

Description

The STn8820 application processor enables smartphones, connected multimedia computers, internet appliances and in-car entertainment systems to play back web content, to capture high resolution pictures and record HD video clips, to receive mobile-TV or perform video conferences, and also to play vivid 3D immersive games.

Figure 1. STn8820 block diagram

www.st.com

Ordering information

Table 1.   Ordering information

Order code	Package	Packing
STN8820A0P12H11E	VFBGA 12 mm x 12 mm, 0.4mm pitch	Tray

Revision history

Table 2.   Document revision history

Date	Revision	Changes
17-Jan-2008	1	Initial release.
08-Feb-2008	2	Updated the smart imaging accelerator feature in *Features*.

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