# **ST-NXP Wireless**

### **IMPORTANT NOTICE**

Dear customer,

As from August 2<sup>nd</sup> 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 <u>http://www.st.com</u> is replaced with <u>http://www.stnwireless.com</u>
- **Contact information** the list of sales offices is found at <u>http://www.stnwireless.com</u> 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



# STn8820

Data Brief

## Mobile multimedia application processor

 $\sim$  ADK Nomadik is a registered trademark of STMicroelectronics

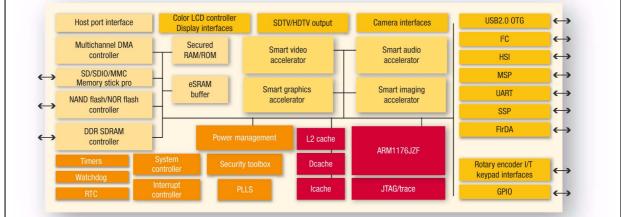
#### Features

- 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 finegrain power domains, dynamic voltage and frequency scaling

- ARM 1176JZF<sup>™</sup> 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<sup>™</sup> 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

February 2008

For further information contact your local STMicroelectronics sales office.

# **Ordering information**

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

## **Revision history**

Table 2.	<b>Document revision history</b>
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Date	Revision	Changes
17-Jan-2008	1	Initial release.
08-Feb-2008	2	Updated the smart imaging accelerator feature in <i>Features</i> .

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