

## Advanced Information

### Features and Benefits

#### MPEG-4 Video

- Full codec functionality  
I, P, and B frames  
64 Kbps to 2 Mbps
- CIF and SIF resolutions (max)  
352x288, 352x240, 320x240, 320x288  
QCIF and lower also supported
- Full natural motion frame rate  
30 fps / 25 fps (NTSC / PAL)  
User selectable frame rates as well:  
20 / 15 / 10 / 7.5 / 5
- **divio** patent pending Motion Estimation  
¼ PEL implementation
- Pre-processor  
(Noise reduction)
- Post-processor  
(De-blocking filter)

#### AAC Audio

- Full codec functionality  
High-quality 2-channel stereo
- User-selectable sample rate  
24, 32, 44.1, 48 KHz
- User-selectable bitrate  
16 – 384 Kbps

#### Megapixel DSC

- VGA - 4 Megapixel sensor support
- Hardware JPEG Codec  
with user selectable compression ratio
- Auto Exposure (AE)
- Auto White Balance (AWB)
- Auto “flash-strobe” control
- Bad pixel interpolation
- Zoom lens control

#### Physical

- Low power
- 1.8V (core) 3.3V (I/O)
- 277 PBGA package

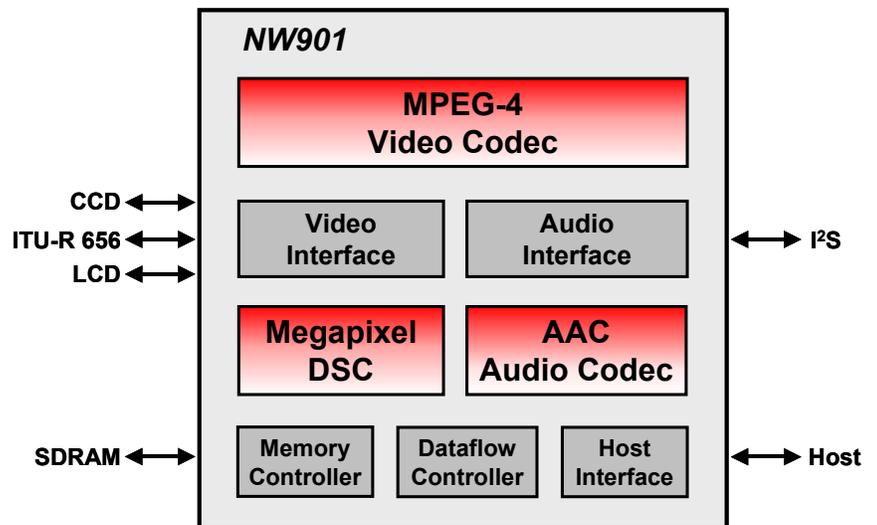
### Overview

#### Description

The revolutionary NW901 from **divio** combines a 30 fps MPEG-4 CIF resolution video codec for TV-like natural motion, a high fidelity AAC 2-channel audio codec, and up to 4-Megapixel DSC capabilities, all in one single-chip!

The NW901 was developed specifically to enable low-cost next-generation consumer oriented solid-state camcorders based on solid-state FLASH memory. **divio** has also created the *SDcam™* reference design to enable OEMs to reduce time-to-market and development costs.

#### Block Diagram



#### Sales Information:

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## Features and Benefits

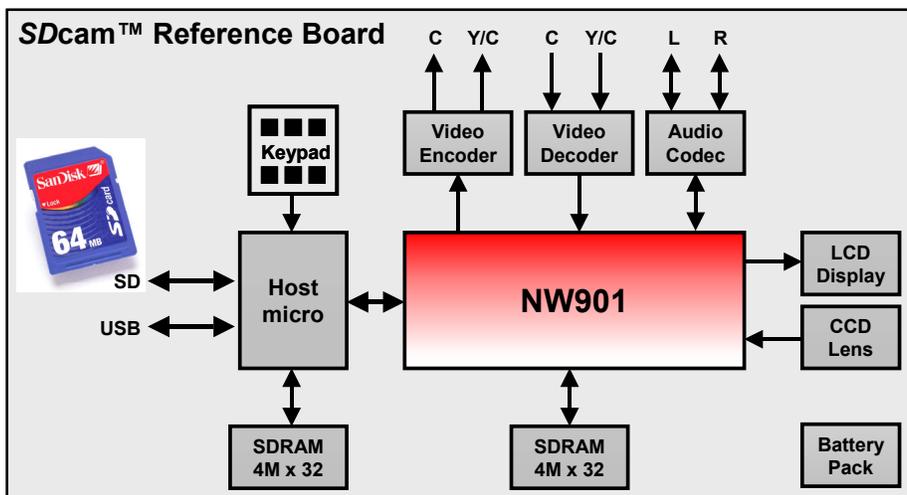
### Board Components

- **divio** NW901 Video/Audio/DSC Codec
- 32-bit Host microcontroller with SD interface optimized for real-time A/V streaming data
- Y/C and C video-in and video-out
- I<sup>2</sup>S audio-in and audio-out
- Key pad
- High-quality Megapixel CCD sensor/lens
- 1.8 inch LCD monitor screen
- 64 MB SD Memory card included
- Battery pack for mobile use

### Design Information

- Schematics
- Firmware
- Technical documents and User Manual

### Block Diagram



## Overview

### Description

The *SDcam™* Reference Design implements the **divio** NW901 advanced codec in a three-in-one solid-state based camcorder design. Intended to reduce time-to-market and development costs for OEMs the *SDcam™* Reference Design captures TV-like natural motion 30 fps video, high fidelity AAC 2-channel stereo audio, and Megapixel stills. No other single-chip codec design even comes close to the performance and quality of the **divio** NW901 based *SDcam™* Reference Design

Everything an OEM needs to achieve production is included with this kit: schematics, firmware, APIs, technical documents, and user manuals. Contact **divio** Sales today for more information!

### Secure Digital Memory Card

The Secure Digital (SD) Memory Card format is fast becoming the industry standard for consumer portable products. SD provides fast, reliable, and secure, data storage in a small footprint. Working together **divio** and SanDisk™

are providing a complete solution for the *SDcam* Reference Design. Join the 280+ companies who are already supporting the SD standard today and feel secure about your future!

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