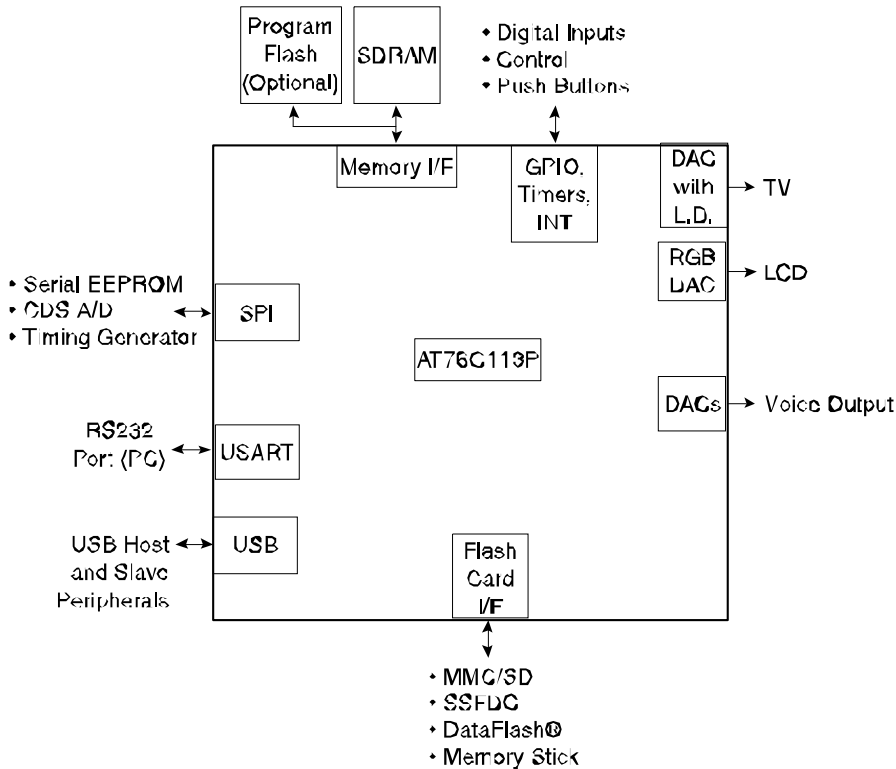


## Features

- Baseline JPEG Compression/Decompression
- MPEG-1 Encode/Decode at 24 fps QVGA
- Compatible with Various Types of Display Devices
- Video Encoder Including Line Driver for NTSC/PAL TV Signal
- Digital Outputs Include Composite, 16-bit YC, RGB 565
- SDRAM Interface – Supports from 16M Bits to 256M Bits
- Unified Memory Architecture (All Program and Data Stored in SDRAM)
- Support for Most Flash Card Interfaces (MMC, SD, SSFDC, Memory Stick™, CompactFlash®)
- USB 1.1 Host/Slave Controller and USART Interfaces
- Up to Nine External Interrupts and Wake-up Pin
- Serial Peripheral Interface for Loading Boot Code and Controlling System
- Two DACs for Audio Output
- Audio Data Interface for Connection to External Stereo ADC/DAC
- Three General-Purpose Timers for Waveform Generation (PWM, etc.) and Event Monitoring
- Up to 2M Bytes Program Space
- Support for RTOS
- All Low-level Software, Application Samples are Provided
- 208-ball BGA Package
- 1.8-volt Core and 3.3 V I/O Operation

Figure 1. Typical DSC Application Using AT76C113P



## High-Performance Digital Media Processor

## AT76C113P Summary

5657AS-IMAGE-01/04



Note: This is a summary datasheet. A complete document is available under NDA. For more information, please contact your local Atmel Sales Office.



## Description

The AT76C113P is a highly integrated media processor. It combines a number of required functions listed below:

- Image/Video/Audio decoding
- Image display
- Image processing and image storing
- Control of general-purpose I/O functions
- Data communication
- Control of user functions
- On-screen Display

The device is based on an ARM<sup>®</sup> microprocessor that controls the entire chip. A number of hardware resources, controlled by ARM, perform media functions such as image processing, JPEG coding/decoding, MPEG-1 decoding, DMA access to SDRAM, and video encoding. All these computationally-intensive functions are implemented in hardware which can be programmed according to user specifications, thus allowing ARM to be free for other user-defined functions.

## Part Versions

The AT76C113P device comes in two versions, each with slightly different features. These features are summarized in Table 1.

**Table 1.** AT76C113 Part Versions

Part Number	Maximum Imager Resolution (Pixels)	Maximum SDRAM Size (Mbytes)	USB Functionality
AT76C113-P	> 2M	512	Slave Only
AT76C113-PU	> 2M	512	Slave and Host



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