



AVR UC3 B0/B1 32-bit Flash Microcontrollers

Low Power, High Data Throughput,
DSP Instructions



Atmel® AVR® UC3 B0/B1 Series 32-bit Flash microcontrollers are designed for high data throughput, low power consumption and outstanding computing performance. The series also features high connectivity with USB OTG. These features combined with fast Flash and large internal SRAM make AVR UC3 B0/B1 devices ideally suited for data intensive applications.

The AVR UC3 B0/B1 is also particularly well suited for applications requiring Ethernet or USB connectivity and high computing performance. It is used today in a range of applications, including audio decoding like MP3, biometrics, bridging, industrial control and embedded web servers.

The AVR UC3 delivers high computational throughput with up to 1.5 Dhrystone MIPS/MHz. Fast on-chip Flash ensures an astonishing 75 DMIPS performance running at 60MHz from Flash. The CPU includes cutting-edge features such as DSP arithmetic, single-cycle multiply and accumulate instructions and dual port SRAM with single-cycle access. A peripheral DMA controller and a multi-layer high-speed bus make the UC3 ideal for high throughput applications. The 32-bit AVR UC3 devices are also perfectly suited for portable and battery-based applications thanks to their outstanding low-power properties.

Key Features

- 64-512KB Flash
- 16-96KB SRAM
- Full Speed USB device + OTG
- Peripheral DMA Controller
- 3 USARTs
- 2 SPI
- 1 I²S
- Multiple timers and PWM
- 64 and 48-pin options
- Available in QFP and QFN packages

Advantages

- High data throughput
- High computing efficiency including DSP instructions
- Industry-best low power consumption
- Excellent real-time performance
- Free application source code

Sales Collateral

- AVR UC3 Sales Introduction
- AVR UC3 Technical Introduction
- AVR UC3 B Introduction
- Atmel Digital Audio
- Application Notes
- Datasheet

Example Applications

- Industrial control
- Portable applications
- Board controllers
- iPod docking
- Low power

Product Status

All part numbers are in mass production and samples are available



AVR UC3 B0/B1 32-bit Flash Microcontrollers

Low Power, High Data Throughput, DSP Instructions

Development Tools

Kit P/N		
ATEVK1101	Evaluation kit	
AVR ONE!/ JTAGICE3	Debuggers	
Atmel Studio 6	IDE	
Atmel Software Framework	Library of C source code	
ATSTK600 + TQFP144	Starter kit	

Suggested Resale Price

Ordering Code	10KU
AT32UC3B064-A2UT	\$3.45
AT32UC3B0128-A2UT	\$4.08
AT32UC3B0256-A2UT	\$4.64
AT32UC3B0512-A2UT	\$5.70
AT32UC3B164-AUT	\$3.27
AT32UC3B1128-AUT	\$3.87
AT32UC3B1256-AUT	\$4.40
AT32UC3B1512-Z1UT	\$5.40



Atmel Corporation

1600 Technology Drive, San Jose, CA 95110 USA

T: (+1) (408) 441-0311

F: (+1) (408) 487-2600

| www.atmel.com

© 2012 Atmel Corporation. All rights reserved. Rev.: 32187B_AVR UC3B0/B1_E_US-0912

Atmel®, Atmel logo and combinations thereof, and others are registered trademarks or trademarks of Atmel Corporation or its subsidiaries. Other terms and product names may be trademarks of others.

Disclaimer: The information in this document is provided in connection with Atmel products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Atmel products. EXCEPT AS SET FORTH IN THE ATMEL TERMS AND CONDITIONS OF SALES LOCATED ON THE ATMEL WEBSITE, ATMEL ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL ATMEL BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS AND PROFITS, BUSINESS INTERRUPTION, OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF ATMEL HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Atmel makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and products descriptions at any time without notice. Atmel does not make any commitment to update the information contained herein. Unless specifically provided otherwise, Atmel products are not suitable for, and shall not be used in, automotive applications. Atmel products are not intended, authorized, or warranted for use as components in applications intended to support or sustain life.