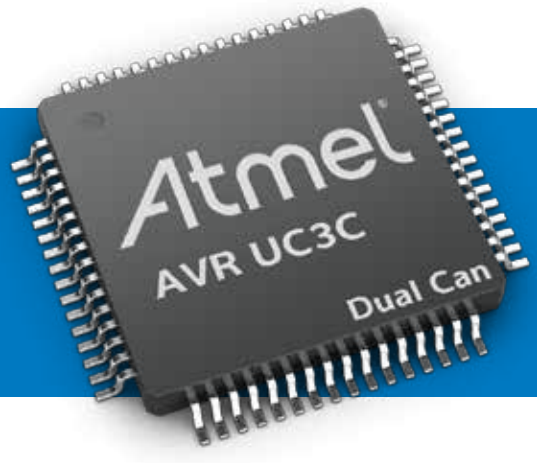
Atmel AVR UC3C 32-bit Flash Microcontrollers

Industrial and Automotive Control



Atmel® AVR® UC3C 32-bit Flash microcontrollers are designed for industrial and automotive control applications, including fast communication and motor control. The devices feature single or dual CAN interfaces, Full Speed USB with OTG, NAND Flash and SDRAM interface, PWM with dead-time insertion, 1.5 Msps 12-bit ADC with 8 channels and dual sample-and-hold circuit for synchronized sampling of 2 signals, and 1.5 Msps 12-bit analog DAC with dual outputs. Designed with a multi-layered databus, 68KB on-chip SRAM with triple high-speed interfaces, and multi-channel peripheral and memory-to-memory DMA controller, the AVR UC3C offers outstanding data throughput.

The AVR UC3C Event System provides a connection between on-chip peripherals to off-load the CPU, save power consumption and provide a 100% deterministic response to external and internal events.

The AVR UC3 delivers high computational throughput, deterministic real-time control, low power, low system cost, high reliability and ease of use. The CPU includes cutting-edge features such as DSP arithmetic, single-cycle multiply and accumulate instructions and single-cycle SRAM access. In addition, a peripheral DMA controller and multi-layer high-speed bus architecture make the UC3 core ideal for high throughput applications.

Key Features

- 64-512KB Flash
- 68KB SRAM (2 x 32kB + 4kB)
- Event System
- Single/Dual CAN interface
- Full Speed USB device + OTG
- SRAM/SDRAM controller
- NAND Flash controller
- 8 ch 12-bit ADC, 1.5 Msps with dual sample-and-hold
- 2 ch 12-bit DAC, 1.5 Msps
- PWM with dead-time insertion
- Memory-to-memory DMA
- High number of serial communication modules
- 144, 100 and 64-pin package options
- Available in QFP, QFN, and BGA package options

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 C Introduction
- Application Notes
- Datasheet

Example Applications

- Industrial control
- HVAC
- Home appliances
- Automotive

Product Status

All part numbers are in mass production and samples are available

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Development Tools

Kit P/N		
ATUC3C-EK	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
AT32UC3C064C-ALUT	$4.86
AT32UC3C0128C-ALUT	$5.87
AT32UC3C0256C-ALUT	$7.21
AT32UC3C0512C-ALUT	$8.51
AT32UC3C164C-AUT	$4.53
AT32UC3C1128C-AUT	$5.48
AT32UC3C1256C-AUT	$6.73
AT32UC3C1512C-AUT	$7.94
AT32UC3C264C-A2UT	$4.21
AT32UC3C2128C-A2UT	$5.09
AT32UC3C2256C-A2UT	$6.25
AT32UC3C2512C-A2UT	$7.38

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