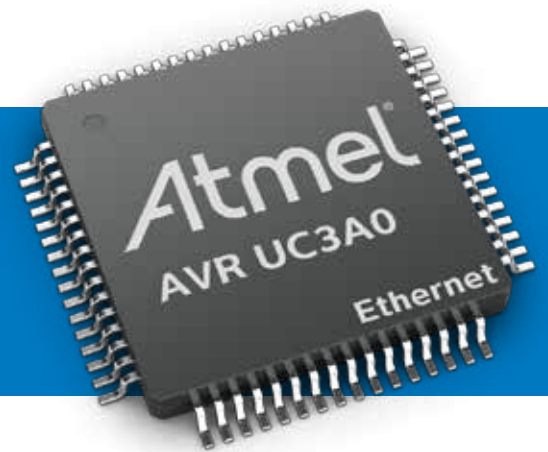




## Atmel AVR UC3 A0/A1

### 32-bit Flash Microcontrollers

Connectivity, High Performance, Ease of Use



Atmel® AVR® UC3 A0/A1 Series 32-bit Flash microcontrollers are designed for high data throughput, ease of use and outstanding computing performance. The series features high connectivity with USB OTG, Ethernet MAC and SDRAM interfaces. These features combined with fast Flash and large internal SRAM make it ideally suited for data intensive applications.

AVR UC3 A0/A1 devices are particularly well suited for applications requiring Ethernet or USB connectivity and high computing performance. They are used today in a range of applications, including audio decoding such as 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 outstanding 92DMIPS performance running at 66MHz from Flash. The CPU includes cutting-edge features such as DSP arithmetic, single-cycle multiply and accumulate instructions and single-cycle SRAM access. In addition, its peripheral DMA controller and multi-layer high-speed bus architecture make the UC3 core ideal for high throughput applications. AVR UC3 devices are also perfectly suited for portable and battery-based applications thanks to their outstanding low-power properties.

#### Key Features

- 128–512KB Flash
- 32–64KB SRAM
- Full Speed USB 2.0 device + OTG
- Ethernet MAC
- SRAM/SDRAM controller
- Peripheral DMA Controller
- 4 USARTs
- 3 SPI
- 1 I<sup>2</sup>S 24-bit input
- 1 I<sup>2</sup>S 24-bit output
- Multiple timers and PWM
- Built-in digital audio DAC
- Available in QFP and BGA packages
- Qualified for automotive

#### 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 A Introduction
- Atmel Digital Audio
- Application Notes
- Datasheet

#### Example Applications

- Digital Audio decoding
- iPod docking
- High-fidelity audio playback
- Embedded web servers
- Industrial control

#### Product Status

All part numbers are in mass production and samples are available



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### Development Tools

| Kit P/N                                   |                                                 |                                                                                     |
|-------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------|
| ATEVK1100                                 | Evaluation kit                                  |    |
| ATEVK1105<br>ATEVK1105AU<br>ATEVK1105-MFi | Evaluation kit<br>and audio<br>reference design |    |
| AVR ONE!/<br>JTAGICE3                     | Debuggers                                       |    |
| Atmel Studio 6                            | IDE                                             |   |
| Atmel Software<br>Framework               | Library of C<br>source code                     |  |
| ATSTK600 +<br>TQFP144                     | Starter kit                                     |  |

### Suggested Resale Price

| Ordering Code     | 10KU   |
|-------------------|--------|
| AT32UC3A0128-ALUT | \$5.67 |
| AT32UC3A0256-ALUT | \$6.97 |
| AT32UC3A0512-ALUT | \$7.48 |
| AT32UC3A1128-AUT  | \$5.08 |
| AT32UC3A1256-AUT  | \$6.25 |
| AT32UC3A1512-AUT  | \$7.38 |



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