

---

## Atmel Audio Datasheets



---

### Atmel AVR 32-bit Audio Microcontrollers

---

The following Atmel® AVR® UC3 32-bit microcontrollers are designed for audio applications:

- AT32UC3A0512AU-ALUT
- AT32UC3A0512AU-ALTRA
- AT32UC3A0256AU-ALUT
- AT32UC3A0128AU-ALUT
  
- AT32UC3A1512AU-AUR
- AT32UC3A1256AU-AUR
  
- AT32UC3A3256AU-ALUT
  
- AT32UC3B0512AU-Z2UR
- AT32UC3B0128AU-A2UT
- AT32UC3B0128AU-Z2UR
  
- AT32UC3C0512CAU-ALUT

These devices are distinguished by the AU letters before the dash in their part numbers. Please note that for a given microcontroller, not all package versions exist. Additional audio part numbers can be created upon customer demand.

The difference between an Audio microcontroller (e.g. AT32UC3A0512AU-ALUT) and its standard counterpart (e.g. AT32UC3A0512-ALUT) is not relevant to the user code.

As far as the user code is concerned, Audio parts are 100% compatible with the standard devices.

Atmel licensed Audio firmware IP cores such as the Proprietary Communication Protocol with iPod®, iPhone® or iPad® devices, MP3, WMA or AAC decoders will only work on Audio microcontrollers. These Audio firmware IP cores will not execute on standard microcontrollers (e.g. AT32UC3A0512-ALUT). The same rule may apply to additional IP cores in the future.

For technical information on an audio part (e.g. AT32UC3A0512AU-ALUT), please refer to the datasheet, architecture manual and technical reference manual of the standard counterpart (e.g. AT32UC3A0512-ALUT). The same applies for other technical documents such as IBIS files, qualification packages, etc.

Tools that support the standard version of AVR UC3 microcontrollers also support their audio counterpart.

Rev. doc32174A-AVR-11/11





**Atmel Corporation**  
2325 Orchard Parkway  
San Jose, CA 95131  
USA  
**Tel:** (+1)(408) 441-0311  
**Fax:** (+1)(408) 487-2600  
[www.atmel.com](http://www.atmel.com)

**Atmel Asia Limited**  
Unit 01-5 & 16, 19F  
BEA Tower, Millennium City 5  
418 Kwun Tong Road  
Kwun Tong, Kowloon  
HONG KONG  
**Tel:** (+852) 2245-6100  
**Fax:** (+852) 2722-1369

**Atmel Munich GmbH**  
Business Campus  
Parkring 4  
D-85748 Garching b. Munich  
GERMANY  
**Tel:** (+49) 89-31970-0  
**Fax:** (+49) 89-3194621

**Atmel Japan**  
16F, Shin Osaki Kangyo Bldg.  
1-6-4 Osaki Shinagawa-ku  
Tokyo 104-0032  
JAPAN  
**Tel:** (+81) 3-6417-0300  
**Fax:** (+81) 3-6417-0370

© 2011 Atmel Corporation. All rights reserved.

Atmel®, Atmel logo and combinations thereof, AVR®, and others are registered trademarks or trademarks of Atmel Corporation or its subsidiaries. Other terms and product names may be trademarks of others. iPad®, iPhone®, and iPod® are trademarks of Apple Inc., registered in the U.S. and other countries.

**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 product 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.