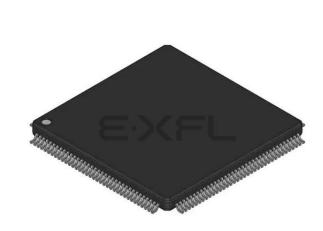
E·XFL



Welcome to E-XFL.COM

What is "Embedded - Microcontrollers"?

"Embedded - Microcontrollers" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

Applications of "<u>Embedded -</u> <u>Microcontrollers</u>"

Details

Details	
Product Status	Active
Core Processor	AVR
Core Size	32-Bit Single-Core
Speed	66MHz
Connectivity	EBI/EMI, Ethernet, I ² C, SPI, SSC, UART/USART, USB OTG
Peripherals	Brown-out Detect/Reset, POR, PWM, WDT
Number of I/O	109
Program Memory Size	256KB (256K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	64K x 8
Voltage - Supply (Vcc/Vdd)	1.65V ~ 3.6V
Data Converters	A/D 8x10b
Oscillator Type	Internal
Operating Temperature	-40°C ~ 85°C (TA)
Mounting Type	Surface Mount
Package / Case	144-LQFP
Supplier Device Package	144-LQFP (20x20)
Purchase URL	https://www.e-xfl.com/product-detail/atmel/at32uc3a0256au-alut

Email: info@E-XFL.COM

Address: Room A, 16/F, Full Win Commercial Centre, 573 Nathan Road, Mongkok, Hong Kong

Atmel Audio Datasheets

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 IBIS files, qualification packages, etc.

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





Atmel AVR 32-bit Audio Microcontrollers

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

© 2011 Atmel Corporation. All rights reserved.

Atmel Asia Limited Unit 01-5 & 16, 19F

BEA Tower, Milennium 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

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.