

AVR[®] ICE40 In-Circuit Emulator

LOW-COST EMULATION SOLUTION FOR TINY26 AND MEGA8, WITH ROOM FOR GROWTH

The new ICE40 is a low-cost solution for hardware and software integration and just like the chips, it has room to grow. The ICE40 with AVR Studio[®] user interface provides the designer complete control of the internal resources of the tiny26 and mega8 microcontrollers, which helps reduce development time by making debugging easier. The tiny26 and mega8 are cost effective, highly integrated AVR[®] microcontrollers with integrated A/D capability and migration roadmap. The ICE40 performs Real Time emulation of the microcontroller while running in a target system.



The Low Cost ICE40 has a list price of \$995. It can be upgraded with the purchase and installation of the ICE50 upgrade kit, which transforms the ICE40 into the top of the line ICE50, capable of debugging all AVR devices.

- Operated by AVR Studio
- Same user interface for all AVR development tools
- Emulation of All Analog and Digital Functions
- Accurate emulation of tiny26 and mega8 over entire voltage and speed range
- Support for ASM and High-level Languages
- Debug in language of choice
- Unlimited Number of Program Breakpoints
- Simplifies debugging of large programs
- Built-in 128K x 144 Bits Trace Buffer
- Identification of hard-to-find failures
- ICE40 List Price \$995
- Lowest price emulator for tiny26 and mega8

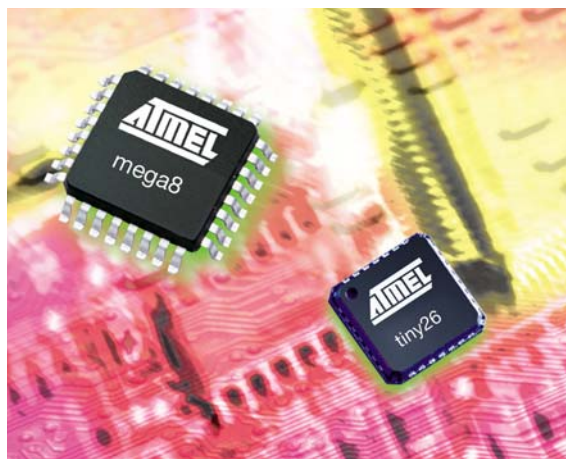
tiny26 and mega8 Microcontrollers

LOW-COST AVR SOLUTIONS WITH INTEGRATED A/D CAPABILITY

The tiny26 is ideal for power management applications. It has 11 A/D channels with 10-bit accuracy. The 7 differential channels with programmable gain stage eliminate the need for signal conditioning op-amps. A 200 kHz PWM can be used with up to 60% smaller filters than alternative solutions. This highly integrated Flash-based microcontroller is priced at less than a Dollar.

The mega8 has larger memories, more I/Os plus a two-cycle hardware multiplier and 16 MIPS performance. These features enable DSP functions like Real Time digital filtering needed in data acquisition systems.

Both devices are members of the large and growing family of tinyAVR[®] and megaAVR[®] devices. They are available in several package options including the new 5 x 5 mm Micro Lead Frame (MLF) package and as bare die. If your requirement change, there are alternatives with different memory densities, I/O structure, peripheral and package options. And best of all: the entire AVR product line from the smallest tiny to the largest mega devices are code compatible.



tiny26

- 16 I/O Lines
- 2K Bytes Flash Program Memory
- 128 Bytes RAM and EEPROM
- Two 8-bit Timers
- Supported by ICE40 and ICE50

mega8

- 23 I/O Lines
- 8K Bytes Flash Program Memory
- 1K Byte RAM, 512 Bytes EEPROM
- Two 8-bit and One 16-bit Timers
- Supported by ICE40 and ICE50

Corporate Headquarters
2325 Orchard Parkway
San Jose, CA 95131
USA
TEL: (1)(408) 441-0311
FAX: (1)(408) 487-2600

Europe

Atmel Sarl
Route des Arsenalux 41
Case Postale 80
CH-1705 Fribourg
Switzerland
TEL: (41) 26-426-5555
FAX: (41) 26-426-5500

Asia

Room 1219
Chinachem Golden Plaza
77 Mody Road Tsimshatsui
East Kowloon
Hong Kong
TEL: (852) 2721-9778
FAX: (852) 2722-1369

Japan

9F, Tonetsu Shinkawa Bldg.
1-24-8 Shinkawa
Chuo-ku, Tokyo 104-0033
Japan
TEL: (81) 3-3523-3551
FAX: (81) 3-3523-7581

e-mail

literature@atmel.com

Web Site

<http://www.atmel.com>



©Atmel Corporation, 2002
Atmel Corporation makes no warranty for the use of its products, other than those expressly contained in the Company's standard warranty which is detailed in Atmel's Terms and Conditions located on the Company's web site. The Company assumes no responsibility for any errors which may appear in this document, reserves the right to change devices or specifications detailed herein at any time without notice, and does not make any commitment to update the information contained herein. No licenses to patents or other intellectual property of Atmel are granted by the Company in connection with the sale of Atmel products, expressly or by implication. Atmel's products are not authorized for use as critical components in life support devices or systems.
Atmel®, AVR® and AVR Studio® and megaAVR® are registered trademarks of Atmel, tinyAVR™ is a trademark of Atmel.

Other terms and product names may be the trademarks of others.