

AVR[®] STK502 Expansion Board

SUPPORT FOR MEGA169 WITH ON-CHIP LCD CONTROLLER TO STK500

The STK502 board is a hardware expansion module for the STK500 Starter Kit adding support for the ATmega169 device featuring an on-chip LCD controller.

The STK502 includes connectors, jumpers and hardware allowing full support for all features on the mega169, including a LCD-display. The Zero Insertion Force socket allows easy use of TQFP packages. STK502 includes a demonstration application for temperature monitoring, using an on-board temperature sensor.



The STK502 demonstrates all the capabilities of the Low Power ATmega169 AVR[®] Flash microcontroller. Two applications notes designed to run on the STK502 hardware help reduce time-to-market for designers using the ATmega169.

- AVR Studio[®] Operated
- Plug-in Module for STK500
- Serial In-System Programming
- Parallel High-voltage Programming
- LCD Display for Demonstrating ATmega169 LCD-driver
- LCD Display Header for Using an External LCD Display
- Temperature Sensor for Temperature Monitoring Demonstration
- All I/O Ports Easily Accessible through Pin Header Connectors
- Expansion Connectors for Plug-in Modules and Prototype Areas
- TQFP Footprint for Emulator Adapters
- JTAG Connector for On-chip Debugging using the JTAG ICE
- On-board 32 kHz Clock Crystal for Easy Real Time Clock Implementation
- Target Voltage 1.8 - 5.5V
- Powered by STK500

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>



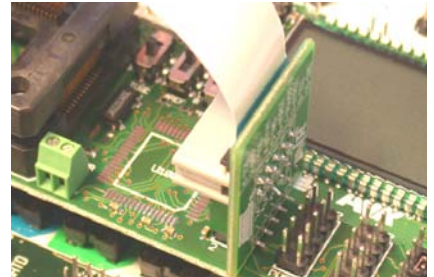
©Atmel Corporation, 2002
 Atmel Corporation makes no warranty for the use of its products, other than those expressly contained in the Company's standard warranty which is detailed in Atmel's Terms and Conditions located on the Company's web site. The Company assumes no responsibility for any errors 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® are registered trademarks of Atmel. Other terms and products names may be the trademarks of others.

4032A-AVR-11/02/15M

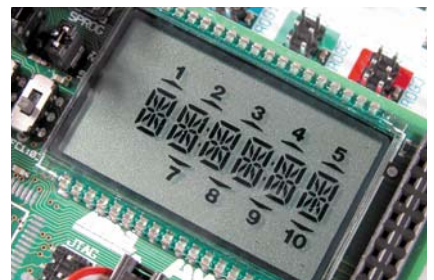
Together with the STK500 starter kit, the STK502 provides programming and development support for the ATmega169.

- The STK502 has a header for direct connection of the JTAG In-Circuit Emulator.

JTAG ICE offers a complete Background Debug Monitor solution with visibility of all ATmega169 internal resources, including full LCD emulation. STK502 and JTAG ICE makes a perfect pair for ATmega169 firmware development and debug.



- Generic 120 segment LCD display with six 14-segment characters plus additional segments for status information.



- Two-screw-terminal block for sensor connection.
- The NTC-thermistor is included in the STK502 kit.



- Application note "AVR064: STK502 – A Temperature Monitoring System with LCD Output" describes the demonstration application pre-programmed in the kit.
- Application note "AVR065: LCD Driver for STK502" describes how to write an ATmega169 LCD driver for alphanumeric characters.

STK502 supports both the In-System Programming mode and the High-voltage Programming mode. AVR Studio, Atmel's front-end tool for the STK500 Development Board, provides support for STK502.

Supported Device

ATmega169V, ATmega169L

Ordering Information

The STK502 is available from Atmel's franchised distributors.

The ordering code is **ATSTK502**.

The latest version of AVR Studio is available free of charge from Atmel web site: www.atmel.com