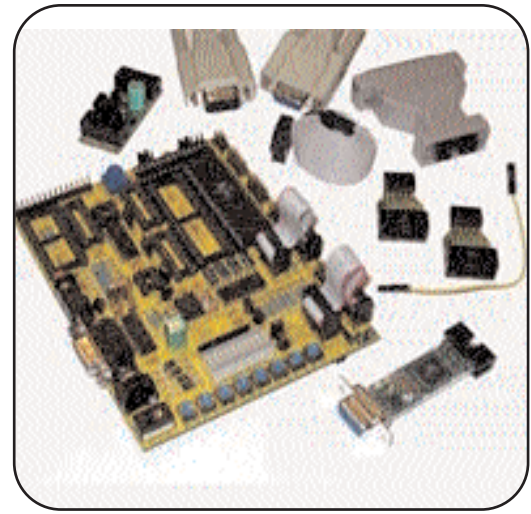- Industry Proven
- Classic Hardware
- Parallel Port ISP
- Application Builder
- AVRStudio4
- WinAVR C
- JTAGAVR ICE with adapters - Serial Port

AVR®

STK200ICE-PS

A complete Starter Kit for AVR microcontrollers with JTAGAVR ICE

The best starter kit ever

The STK200 supplied by Kanda to Atmel was the most successful starter kit EVER produced, with over 30,000 sold worldwide. Its success was due to Kanda's design concept that it should support as many features as possible but remain really easy to use, coupled with our excellent quality control and reliability in manufacture. We are pleased to be able to tell you that a new and enhanced version is now available direct from us.

STK200 ICE

Now redesigned with the same easy to use philosophy to include new device support and extra features. However, we have made sure that it is compatible with previous versions so your older code or training material will still work. Includes JTAGAVR ICE with adapters to plug straight in. The JTAGAVR is described from page 5 onwards. Note: JTAGAVR ICE only works with AVRs with JTAG Interface - see page 6. Supplied with ATmega162L.

STK200 board

You need hardware that supports all your needs but does not take weeks to understand. The classic target board is effectively laid out to give you access to all the peripherals of the different AVR devices.

Unlike other starter kits, the STK200 is simple to use and does not require a box full of leads and jumpers. Nor do you have to spend hours studying the manual before you can do anything.

But you still get all the features you need.

- Sockets for different devices. 1 x 8, 2 x 20, 1 x 28 and 2 x 40 pin sockets to support all device pin-outs

- Port Headers. 0.1" (2.54mm) DIL headers for all ports, including a Vcc and Ground pin for external circuitry. Features multiple Port B headers to correctly route signals on smaller devices and retain compatibility with original STK200 boards

- 8-way bar LED and 8 Switches. Can be connected to any available port using short 10-way leads (supplied)

- RS232 circuit. Full specification RS232 port with DB9 connector

- Clock/Port Pin select on smaller devices to free extra I/O pin if not programming
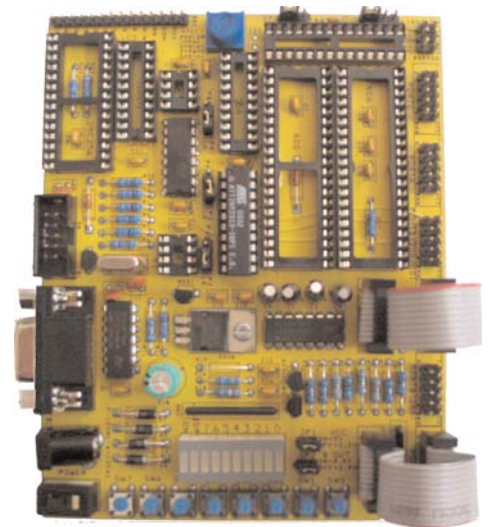
Contents:

- Target board
- Board Schematics
- AVR ATmega162
- ISP
- JTAGAVR ICE

On CD
- Full manual
- Application Builder
- AVR Studio 3
- AVRStudio 4
- WinAVR Ct
- Embedded C Book
- AVR Book
- Code examples
- AVR datasheets

Compatible with:

- Win/95/98/ME
- Win 2000/NT4/XP

Order Code:

STK200ICE-PS Parallel/Serial

STK200ICE USB Version

- LCD Interface connector. 14-way connector for Hitachi LCD units, complete with contrast resistors and pulse stretching circuitry

- 3.3V or 5V operation. Voltage selection using a single jumper

- Brownout. Built in brownout circuit, with single jumper to set 2.9V or 4.5V level

- ADC circuit. Flexible ADC interface with reference pot or user supplied or internal reference. Supports new ADC features of ATmega devices including differential inputs.

- External Memory. 74HC573 address latch and Flash RAM sockets (Devices available separately)

- EEPROM socket. 24C (2 wire) memory socket

- Clock circuit. External clock circuit for reliable operation on all sockets. Default crystal is 8MHz for Low Voltage devices but board supports crystals up to 16MHz.

ISP

The system uses a parallel port programmer with 10-way ribbon cable using Kanda standard connection as adopted by Atmel and the ISP software is now an industry standard. This is a full featured programmer with all programming operations - Erase, Read, Program, Verify, including all Fuse and Lockbit settings. For a full description of the programmer, see NAVRISP

Application Builder

The Application Builder uses simple wizards to create all your setup code including ports, timers, UART, ADC, SPI, watchdog and interrupts. Stack pointer, External SRAM access and Boot Block setup (Reset and Interrupt Vector locations) can also be set.

This powerful feature gives you instant source code templates and code examples. It also reduces the need to read all the datasheets before you start your development, saving you time and money.
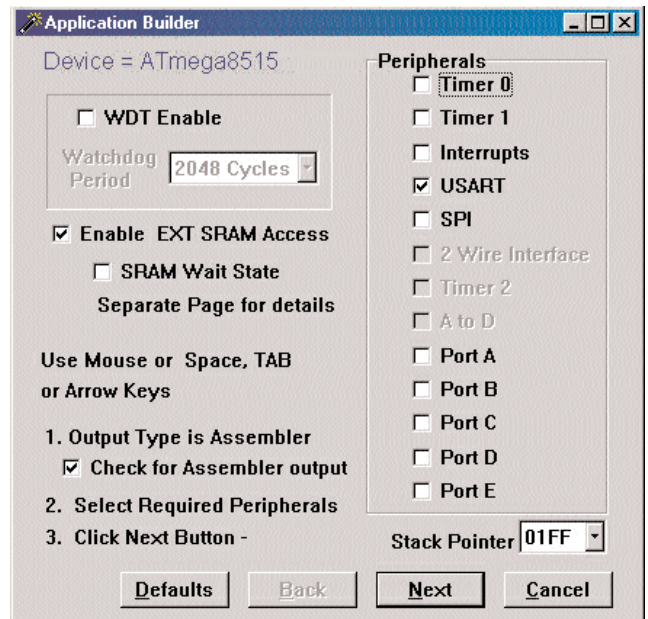
- Supported devices include ATmega8515 and ATmega8535
- Support for all new Timers, ADC features, External RAM access configuration etc.
- Bootloader support, including placing of Reset and Interrupt Vectors
- Output type can be Assembler or C code
- Runs under all Windows operating systems

Atmel AVR Studio

Atmel's superb development environment, AVR Studio 4, is included on the CD so you do not have to download it. It includes full editor, assembler and simulator for all the AVR devices. It is project based so that you can keep all your files together without any hassle. This is the best microcontroller development environment available from any manufacturer.

AVREdit

The AvrEdit is a freeware program developed by Hae-Kwon Hwang. This Windows program is not a compiler itself, but an editor / IDE to easily use the free GNU C-compiler AVRGCC. It features configurable syntax colouring, a simple file browser, a makefile generator and even a small bitmap-to-array editor. This version includes AVR-GCC 3.2 in a complete self-extracting installer.

Contents

- STK200 Board with AVR device
- NAVRISP Parallel Port Programmer
- Programming lead, LED and Socket leads
- JTAGAVR ICE, leads and adapters plus serial lead (USB adapter on STK200ICEU)
- On CD:
    Programming software
    Application Builder
    User Manual
    Code Examples
    Board schematics
    Device datasheets
    Atmel AVR Studio3 and 4 (distributed under licence conditions of Atmel Corp.©)
    AVREdit IDE/Editor (© Hae-Kwon Hwang) with AVRGCC 3.2 C Compiler

Technical

- Power Supply requirements. The board needs 9-15VDC or 7-12VAC. Connector type is a 2.1mm barrel connector, centre positive. See PSUSTK-UK, PSU135-EU or PSU135-US for suitable PSU (wall transformers)

- Clock. Default is 8MHz but can be replaced by crystals up to 16MHz as crystal is in socket

- Programming Interface (ISP).

MISO	SCK	RESET	LED	MOSI
9	7	5	3	1
10	8	6	4	2
GND	GND	GND	GND	Vcc
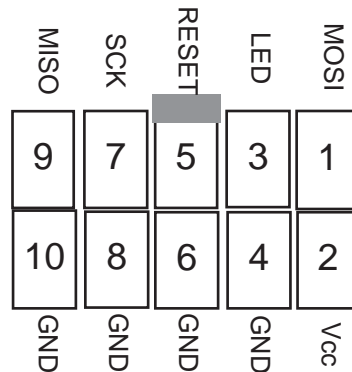
- Socket Support

DEVICE	SOCKET	DEVICE	SOCKET	DEVICE	SOCKET
AT90S1200	20D	ATmega48	28D	ATtiny26	20A
AT90S2313	20D	ATmega88	28D	ATtiny2313	20D
AT90S2323	8D	ATmega168	28D	ATtiny12	8D
AT90S2343	8D	ATmega8	28D	ATtiny13	8D
AT90S2333	28D	ATmega16	40A	ATtiny15	8D
AT90S4433	28D	ATmega161	40D	ATtiny22	8D
AT90S4414	40D	ATmega163	40A		
AT90S8515	40D	ATmega8535	40A		
AT90S8535	40A	ATmega8515	40D		
		ATmega32	40A		
		ATmega162	40D		

- **Physical**
  - Dimensions: 130 x 100 mm (5 inches x 4 inches)
  - Package weight: 300g (10 oz)

- **External memory socket for AT29C Flash RAM**

```
       WE  1        28  VCC
      A12  2        27  A14
       A7  3        26  A13
       A6  4        25  A8
       A5  5        24  A9
       A4  6        23  A11
       A3  7        22  OE
       A2  8        21  A10
       A1  9        20  CE
       A0 10        19  I/O7
     I/O0 11        18  I/O6
     I/O1 12        17  I/O5
     I/O2 13        16  I/O4
      GND 14        15  I/O3
```
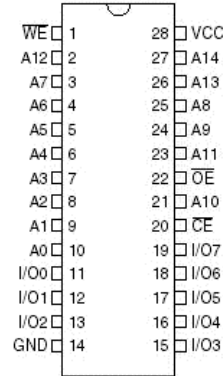
Accessories

Order Code	Description
STK200-RAM	Flash RAM (AT29C256) and Address latch (74HC573)
467200-PM	Data Entry Key Pad (4 x 3)
570910-PM	Intelligent Alphanumeric LCD (16 x 2)
PSU135-US	110V/13.5V Unregulated wall transformer
PSU135-EU	220V/13.5 Unregulated PSU
PSUSTK-UK	220V/15V regulated PSU
EE-02	256 Byte 24C EEPROM

Related Products

Order Code	Description
NSTK300	Starter Kit for ATmega128 devices. Comes with 64-pin TQFP device mounted on custom header. Ideal for larger projects
PSI-ISP	Serial and parallel port programmer. Faster with serial port option. Better low voltage support
NAVRUSB	USB port Programmer - our best and fastest programmer. Ideal for production and using multiple programmers from 1 PC. DLL available
AVR Devices	We can supply all AVR devices in small or large quantities. Memories and other devices are also available

Kanda.com