

## AVR-JTAG DEVELOPMENT TOOL FOR AVR MICROCONTROLLERS WITH JTAG INTERFACE

### **Features:**

AVR-JTAG (complete analog of ATMEL's AVR JTAG ICE) is development tool for programming, real time emulation and debugging for AVR microcontrollers JTAG interface (ATmega16, ATmega32, ATmega323, ATmega162, ATmega169, ATmega128). AVR-JTAG have: JTAG 10 pin connector (Atmel layout), status LED, RS232 connector

AVR-JTAG allows access to all the powerful features of the AVR microcontroller. All AVR resources can be monitored: Flash memory, EEPROM memory, SRAM memory, Register File, Program Counter, Fuse and Lock Bits, and all I/O modules. AVR-JTAG also offers extensive On-chip Debug support for break conditions, including break on change of Program memory flow, Program memory Break Points on single address or address range, and Data memory Break Points on single address or address range.

- AVR Studio Operated
- Full Emulation of All Analog and Digital
- Full JTAG Programming Support
- Supports Multiple Devices in a JTAG Scan Chain
- RS-232 Interface to PC
- Full Support for Assembly and High Level Languages
- Program and Data Breakpoints
- All Operations and Breakpoints are Real Time

- Upgrades are done from AVR Studio
- Target Voltage 5.0V
- No need for external power supply – power is taken from target

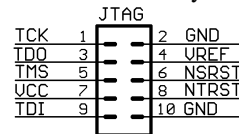
### **Programming:**

To work with AVR-JTAG you need target board with JTAG connector (for instance Olimex's AVR-M16 + AVR-P40B-P8535-8Mhz) and AVRSTUDIO software ( you can download from <http://www.avrfreaks.net> in Tools section).

### **JTAG interface:**

The JTAG connector is 2x5 pin with 0,1" step and Atmel's compatible layout. The PIN.1 is marked with square pad on bottom and arrow on top. JTAG signals are: 1- TCK, 2- GND, 3- TDO, 4- VREF, 5- TMS, 6- NSRST, 7- VCC, 8- NTRST, 9- TDI, 10- GND.

JTAG TOP view PCB board layout:



### **Ordering codes:**

AVR-JTAG - assembled and tested

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Development boards for PIC, AVR and MSP430 microcontrollers <http://www.olimex.com/dev>