EPSILON5 MKIV (AVR-JTAG) - Portable ISP Programmer - Atmel AVR-JTAG algorithms only

The Epsilon5 MKIV Portable USB ISP Programmer is a high-speed development / field / production programmer supporting most *in-system programmable (ISP)* microcontrollers from Atmel, Philips and Zensys. The programmer can be operated under PC control during development and for project configuration / uploading using the EQTools Toolsuite. For field / production applications the unit is designed to operate in *'Standalone Mode'*. A 'Programming Project' can be recalled from the *on-board non-volatile FLASH memory* and programmed into a Target System by pressing a single key.

The Epsilon5 MK IV(AVR-JTAG) supports high-speed In System Programming (ISP) of Atmel AVR microcontrollers via the JTAG interface.

Ideal programmer for development, field service and production applications

Features

- Supports PC Controlled and Standalone Programming
  - Development Mode - using Equinox Development Suite (EDS) under PC control
  - Standalone Mode - ideal for field or small-scale production use (no PC required)
- Main features
  - Fastest programming times possible due to on-board data, high-speed SPI and JTAG port
  - Supports programming of FLASH, EEPROM, FUSE bits, Security bits and RC Oscillator Calibration bytes
  - 2Mbits of on-board non-volatile FLASH memory for user project storage (Standalone Mode)
  - SCK2 Oscillator signal for externally clocking ATmega & ATtiny microcontrollers during programming
  - On-board +12V Vpp generator for programming Atmel ATtiny11/12/15 microcontrollers in 'High voltage Serial Mode'
  - JTAG Port - FAST ISP using JTAG algorithm (license upgrade)
- Controlled / configured by Equinox EQTools Software
  - Equinox Development Suite (EDS)
  - Project Builder - to create/edit Programming Projects
  - Project Manager - to create and maintain Project Collections
  - Project Upload / Download Utility - to upload projects to the programmer for use in Standalone Mode
- Standalone Programming Mode

In **'Standalone Mode'**, the EPSILON5 is controlled via the push buttons on the front panel of the programmer - no PC connection is required.The programmer can store one **'Standalone Programming Project'** which can then be executed multiple times by simply pressing the **'Autoprogram'** button.

In Standalone Mode...

- Programmer is completely portable as no PC connection is required
- Programmer supports storage of 1 x **'Standalone Programming Project'** in the non-volatile On-board **512kbyte** FLASH Memory Store .
- Single key auto-program mode - supports repetitive programming of the same project
- Simple BUSY / PASS / FAIL indication via **'Programmer Status LEDs'**
- Operator can not inadvertently change the programming data or settings

To configure the programmer for 'Standalone Mode'...

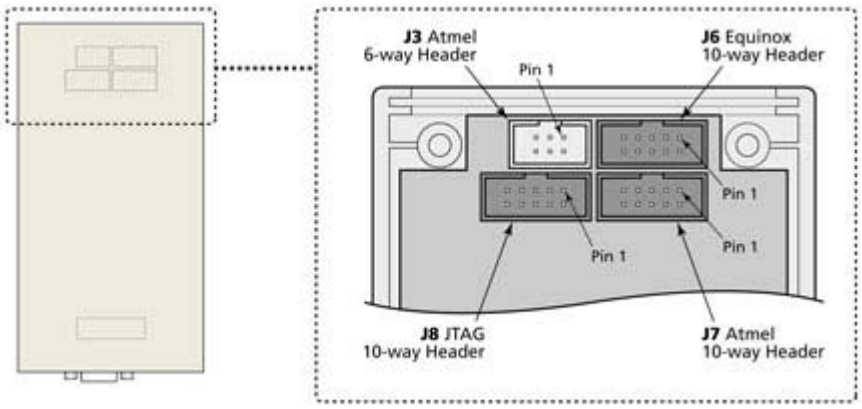
- A Project Collection containing a single **'Standalone Programming Project'** must be uploaded on a one-off basis to the programmer using the EQTools PC software
- This is a single file which can be easily distributed to remote sites. It contains all projects, Hex File data, Fuse information etc.

▸ Target Interface Capabilities

The **EPSILON5** programmer supports the following Target Programming Interfaces / Algorithms:

- **Atmel AVR - SPI -** Serial Programming Mode
- **Atmel AT89S - SPI -** Serial Programming Mode
- **Atmel ATtiny11/12/15 High-Voltage** Serial Programming Mode
- **UART Boot Loader** - for Atmel T89C51Rx2 8051 microcontrollers
- **UART Boot Loader** - for Philips P89C51Rx2 and P89C66x 8051 microcontrollers
- **Atmel ATmega JTAG** In-System Programming (ISP) - chargeable upgrade
- **24Cxxx Serial EEPROMs** I2C (Two-Wire Interface) - chargeable upgrade
- **AT91SAM7 JTAG** In-System Programming (ISP) - chargeable upgrade
- **NXP LPC21xx JTAG** In-System Programming (ISP)

▸ ISP Header Support



The **EPSILON5** programmer features all the popular In System Programming (ISP) Headers including:

- Atmel 10-way SPI Header (for Atmel AVR and AT89S microcontrollers)
- Equinox 10-way Header (for Atmel AVR and AT89S microcontrollers) and I2C Serial EEPROMs
- Atmel 6-way SPI Header (for Atmel AVR and AT89S microcontrollers)
- Atmel 10-way JTAG ISP Header (for JTAG ISP of Atmel ATmega AVR microcontrollers)
- Equinox 10-way UART Header (for Atmel AT89C51Rx2 and Philips P89C51RX2 and P89C66x microcontrollers)
- A special **'ARM JTAG ISP Cable'** is available to support programming of all ARM microcontrollers via the JTAG interface.

This allows the programmer to interface directly to most target systems without requiring an external cable convertor.

Please refer to the **ISP Header Overview** page for full details of all available ISP Headers and ISP Cables.

▸ Typical applications

- Field programming - supports programming of a single customer firmware / product version
- Distributor / Sales agent field programming applications
- Low to medium volume production programming
- Re-programming of product batches in production

▸ Device Support for each Epsilon5 version

The table below details which device families are supported by each version of the programmer.

Device Family	Programming Interface	EPSILON5 (STD)	EPSILON5 (AVR-JTAG)	EPSILON5 (ARM)
Atmel AVR (SPI):				
- AT90S - AT90USB - AT90CAN - ATmega - ATmegaRF - ATtiny LV	LV SPI	YES YES YES YES YES YES	- - - - - -	- - - - - -
Atmel AVR (HV):				
- ATtiny HV	HV Serial (+12V)	YES	-	-
Atmel AVR (JTAG):				
- AT90USB - AT90CAN - ATmega - ATmegaRF	AVR JTAG	- - - -	YES YES YES YES	- - - -
Atmel AT91SAM7				
- AT91SAM7A - AT91SAM7L - AT91SAM7S - AT91SAM7SE - AT91SAM7X - AT91SAM7XC	ARM JTAG	- - - - - -	- - - - - -	YES YES YES YES YES YES
Atmel 8051				
- T89C51Rx2 - AT89C51xxx	UART Boot Loader	YES YES	- -	- -
Atmel 89S 8051				
- AT89S82xx - AT89Sx051	LV SPI	YES YES	- -	- -
NXP 8051				
- P89X51Rx2	UART Boot Loader	YES	-	-
NXP LPC ARM7				
- LPC210x - LPC213x - LPC214x	ARM JTAG	UPGRADE	UPGRADE	YES YES YES
ST				
- STM32F100Rx	ARM JTAG	UPGRADE	UPGRADE	YES
Zensys				
- ZW100 / 200 / 300 series	LV SPI	YES	-	-
All manufacturers				

24xxx Serial EEPROM Memories	I2C	UPGRADE	UPGRADE	UPGRADE

▸ Comparison of new EPSILON5-MKIV and the MKII / MKIII versions

The new EPSILON5 MKIV programmer has the following improvements compared to the earlier MKII and MKIII versions:

- Features an on-board high-speed USB port instead of an RS232 port.
- Uploading of large project collections and PC controlled programming is now significantly faster
- The MKIV Programmer now runs at x2 the speed of the older programmer versions
- Most algorithms will now run faster due to faster processor and more on-board RAM
- The internal electronics now runs at +5V instead of +3.0V giving a better signal drive
- The external DC Jack power input will now accept any voltage between +6.2V and 12.0V.
- The programmer can be powered from the PC USB port during configuration / project uploading

Device Support (by family)

This product supports devices from the families listed below:

Atmel Corporation:

- AT90CAN - AVR with on-chip CAN : AVR microcontroller with on-chip CAN
- AT90USB - AVR FLASH Microcontroller Family
- ATmega AVR - FLASH Microcontroller Family
- ATmegaxxxP 'PICO Power' AVR Microcontroller Family

The following are available as chargeable upgrades: SPI In-System Programming support for the Atmel ATmega AVR Family; 24Cxxx - Serial I2C EEPROM Memory Device Library and Atmel AT91SAM7 Upgrade Pack. See [Upgrades] tab.

Please note:
Not all devices may be supported within a family.
Please see the Detailed Device Support List for a list of all devices which the product supports.

Ordering Information...

EPSILON5 MKIV (AVR-JTAG) - Portable ISP Programmer - Atmel AVR-JTAG algorithms only
Epsilon5 MKIV (AVR-JTAG) - Portable high-speed In-System (ISP) Programmer for JTAG programming of Atmel AVR microcontroller family via the JTAG interface only. Standalone capability (1 project) and USB / RS232 connectivity.
Manufacturer: Equinox Technologies
Order Code: **EPSILON5MK4(AVR-JTAG)**

Quantity	Price (USD) [Excl. VAT]
1 - 4	$
5 - 9	$
10 - 24	$
24 and above	$

BUY
Availability:

For further information about related products, please see the Overview Product.