EPSIL5N
Portable ISP Programmer
MK IV
USB

Supporting

ARM
FLASH microcontrollers

▲ Target ISP Connector ▲

EPSIL5N
Portable ISP Programmer
USB MK IV

Target Vcc PASS · BUSY · FAIL

✗ NO
✓ YES

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Portable ISP Programmer for Field-Service and Production applications

STANDALONE MODE

Status LED's

Target Vcc PASS BUSY FAIL

The EPSILON5-MK4(ARM) programmer being used in **Standalone Mode**

CE RoHS

The **EPSILON5-MK4(ARM)** is a high-speed **portable programmer** designed for field-service and production **In-System Programming (ISP)** applications. It supports programming of many popular **ARM FLASH microcontroller** devices via the **ARM JTAG Debug Interface**. The programmer is capable of operating in **'Standalone Mode'** (without PC) allowing an operator to program a single project only. For field / production applications the unit is designed to operate in **'Standalone Mode'**. A **'Standalone Programming Project'** can be recalled from the on-board non-volatile FLASH memory and programmed into a Target System by pressing a single key. All the popular ARM ISP connection headers are catered for.

● **Portable In-System (ISP) Programmer**
● **Ideal for Field-service or low-volume Production programming**
● **Supports In-system Programming (ISP) of many popular ARM FLASH microcontroller families from Atmel, NXP and ST**
● **Supports high-speed programming via the ARM JTAG or SWD Debug Interface**
● **Supports 'Standalone' operation (single project only) - no PC required after programmer has been configured**
● **Low power consumption allows the programmer to be powered from most Target Systems (no external supply required)**
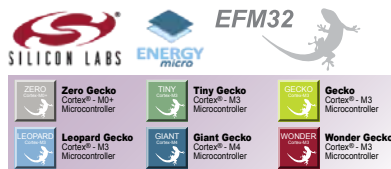● **High-speed USB connection to PC**

ARM Devices Supported...

Atmel *AT91SAM7xx*

NXP *LPCxxxx*

ST *STM32*

STM32 F1	STM32 F2	STM32 F4	STM32 L1
Mainstream MCUs	High-performance MCUs	High-performance MCUs with DSP and FPU	Ultra-low-power MCUs

Support coming soon for...

SILICON LABS **ENERGY micro** *EFM32*

ZERO Zero Gecko Cortex® - M0+ Microcontroller	TINY Tiny Gecko Cortex® - M3 Microcontroller	GECKO Gecko Cortex® - M3 Microcontroller
LEOPARD Leopard Gecko Cortex® - M3 Microcontroller	GIANT Giant Gecko Cortex® - M4 Microcontroller	WONDER Wonder Gecko Cortex® - M3 Microcontroller

ST *STM32*

STM32 F0	STM32 F3	STM32 W
Entry level MCUs	Mixed-signal MCUs with DSP and FPU	Wireless MCUs. IEEE 802.15.4

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The Embedded Solutions Company

EPSIL⌀N5 MK IV
Portable ISP Programmer
USB

Supporting ARM

FLASH microcontrollers

Programming Interfaces:
- Supports programming of ARM microcontrollers via the **ARM JTAG or SWD Debug Interface**
- Very fast programming speeds suitable for high-throughput production environments
- Robust I/O driver stage
- Individually configurable programmer I/O pins
- Supports programming of target ICs between 3.0 and 5.0V

Control methods:
- PC control via on-board USB port
- Manual operator control in **Standalone Mode** via the display and keypad

Standalone Mode:
- Supports loading of 1 x **'Standalone Programming Projects'** into the programmer memory (480 kbytes capacity)
- Single-button **auto-program** operation allows repetitive execution of the project (permanently stored in programmer)
- **PASS / BUSY / FAIL** LED's indicate programmer status

Device support:
- Atmel **AT91SAM7** A / L / S / SE / X / XC - ARM7 FLASH microcontrollers
- Energy Micro - **EFM32 GECKO** ARM microcontroller families
- NXP - **LPC11xx, PC17xx, LPC2xxx** - ARM7 FLASH microcontrollers
- ST **STM32** - ARM FLASH microcontrollers
- Support for other ARM microcontrollers can be added on request

Special ARM features:
- Very fast programming due to downloaded **'programming agent'** and use of the high-speed ARM JTAG port
- NXP LPC devices - automatic FLASH checksum generation and validation
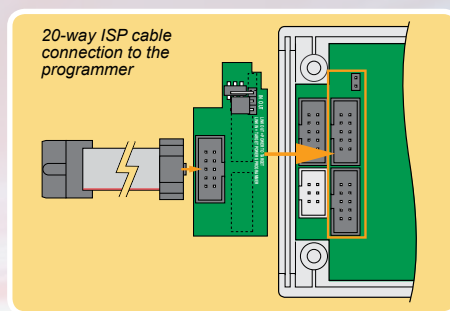- Atmel SAM7 - supports hardware Erase via the Erase pin

Power supply:
- The programmer can be powered from:
  - User Target System (3.1 - 5.0V @ 60mA)
  - External power supply via jack socket (6.0 - 12.0V @ 80mA)
  - PC USB Port (PC dependent)
  - External USB Power Pack (+5V only)
- Programmer can supply either +3.3V or +5.0V regulated power to the Target System when it is powered from an external supply
- Power supply is reverse-polarity protected

ISP connectors / headers:
- A **20-pin ARM ISP cable** (2 x 10-pin 0.1" pitch IDC connector) is supplied with the programmer (see illustration below)

20-way ISP cable connection to the programmer

- A 10-pin ARM ISP cable is available separately

Software (as standard):
- **EQTools** - creates **'Standalone Programming Projects'**
- **EDS** - Development Mode for testing under PC control
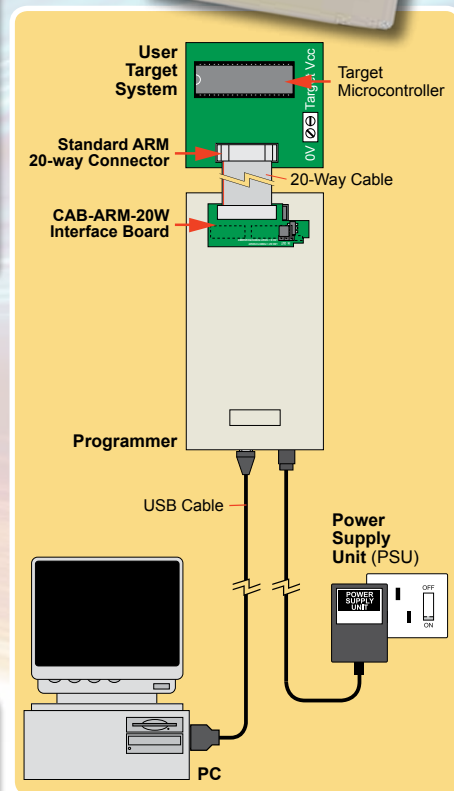- **Upload Wizard** - uploads projects to the programmer

Typical applications:
- **Field-service** programming
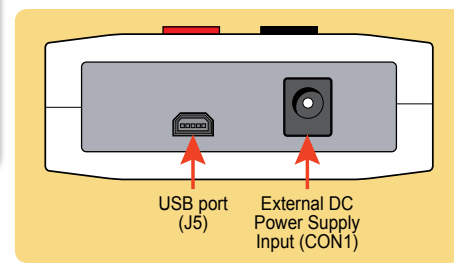- Low to medium quantity standalone **production programming**

System Contents:
The picture shows the typical contents of the EPSILON5-MK4(ARM) programming kit.

Typical programmer connection to PC and Target System

Bottom panel connections

Ordering information:
EPSILON5MK4(ARM) - Programmer supporting ARM microcontrollers
CAB-ARM-20W - Spare ARM 20-way ISP cable assembly (This cable is included with the programmer)
CAB-ARM-10W - Spare ARM 10-way ISP cable assembly

IMPORTANT NOTE:
The EPSILON5-MK4(ARM) programmer can store up to 480 kbytes of 'user project data'. If you are programming a target microcontroller with 512 kbytes of on-chip FLASH, then the programmer will not be able to program the entire 512 kb memory in standalone mode.
Please consider using the FS2009USB(ARM) programmer instead.

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