

FISP® – Flash In System USB Programmer for Atmel AVR Micros



EASY TO USE SOFTWARE

The software interface for the FISP® unit is developed for ease of use with the most commonly used settings placed where they can be accessed the easiest. The software operates under Windows® Vista XP / 2000 / 98SE.

The software displays the FISP® product ID and serial number in the status bar along with the Target device type and voltage if connected.

Once the parameters have been set, all data is sent to the FISP® at one time. If the unit is now connected to a compatible target device, the FISP® will program the target.

If a target device is connected to the PC via the FISP®, direct programming of the target device is possible. This allows the FISP® to be used as a simple programmer.

Project files store all the parameters required for the programming, including device type, flash / EEPROM file names, Lock & Fuse bits and serial numbers.

This software is available from our website at www.4d-electronics.co.nz.

FEATURES

- **Portable** handheld field programmer. Once set up does not require a computer. Take it anywhere.
- It's **small size** allows it to be sent to the client's site easily.
- Easy to use. **No buttons** to press; just plug it in and wait for the green light.
- Programs **all Atmel AVR** low voltage serial programmable devices 1.8 to 5V.
- **Large Memory**, 512KByte standard Flash, requires no battery.
- Supports up to **16 programs**.
- **Automatic program selection**. Using Device type, Product ID and Version.
- **Low Cost** from Only US\$129.99

Physical Specifications

- Dimensions 93mm x 51mm x 17mm
- Package Contents
 - USB FISP®
 - Standard 10pin ISP Target Cable.
 - USB Cable.
- PC requirements:
 - Windows® Vista/XP/2000/98SE.
 - USB Port
 - Hard Disk approx 5Mb
 - SVGA 800 x 600 minimum

Designed & Manufactured by:

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Electrical Specifications

Target:

Input Voltage	1.7V – 5.5V
Input Current	
Standalone (Vin=5.0V)	20mA typ ¹
Standalone (Vin=3.3V)	25mA typ ¹
Standalone (Vin=1.8V)	35mA typ ¹
PC Mode (Vin=5.0V)	6.0mA typ ¹
PC Mode (Vin=3.3V)	4.0mA typ ¹
PC Mode (Vin=1.8V)	2.0mA typ ¹

USB:

Input Voltage	4.0V – 5.5V
Input Current	60mA max
Suspend Current	1mA max

¹Typical values at 25°C ambient.

ISP Cable

The ISP target cable is 175mm long with the standard 10pin (optional 6pin) IDC ribbon cable connectors. Both ends of the cable are wired identically.

10 Pin ISP Cable	6 Pin ISP Cable	ISP Signal Name
1	4	MOSI
2	2	VIN
3	-	Logic 0.
4	-	GND
5	5	RESET
6	-	GND
7	3	SCK
8	6	GND
9	1	MISO
10	-	GND

Other

- Memory Size Standard 512KByte.
- USB Interface 2.0 Compliant Full Speed.(12Mbps)
- Operating Temperature 0°C to 70°C
- ESD Protection to 2000V Human Body Model.
- USB Cable Length 1.8M.
- RoHS Compliant

Programming Times

The fast programming times shown below are typically what can be expected from the FISP.

FISP to Target

- ATmega8515 8K Program & Verify 4s
- ATmega128 128K Program & Verify 14s

PC to FISP

- 8K Project Program & Verify 1.5s
- 128K Project Program & Verify 24s

PC to Target

- ATmega8515 8K Program & Verify 3s
- ATmega128 128K Program & Verify 26s

Supported Microcontrollers

The FISP supports all the Low Voltage programmable Atmel AVR ISP devices including the Mega, Tiny, V, L and LS versions. The following list includes some of the devices. New devices are added as they are released.

ATtiny12, ATtiny13, ATtiny15, ATtiny22, ATtiny25, ATtiny26, ATtiny45, ATtiny85, ATtiny2313

AT90S1200, AT90S2313, AT90S2323, AT90S2343, AT90S2333, AT90S4414, AT90S4433, AT90S4434, AT90S8515, AT90S8535

ATmega8, ATmega16, ATmega32, ATmega48, ATmega64, ATmega83, ATmega88, ATmega103, ATmega128, ATmega161, ATmega162, ATmega163, ATmega164, ATmega165, ATmega168, ATmega169, , ATmega323, ATmega324, ATmega325, ATmega329, ATmega603, ATmega640, ATmega645, ATmega649, ATmega644, ATmega1280, ATmega1281, ATmega2560, ATmega2561, ATmega3250, ATmega3290, ATmega6450, ATmega6490, ATmega8515, ATmega8535

AT90CAN128, AT90PWM2/3