UNIVERSAL PROGRAMMER
Mod. UP-80

Professional pocket-sized Universal Programmer with 48-Pin socket and USB connection 2.0. Ideal instrument for the development laboratory that can be used in all the movable applications and consequently near the apparatus that can be programmed (field programmer).

- Universal 48-pin DIL socket
- it can program most active components, from EPROM to Microcontroller
- USB connection 2.0
- Powered via USB connection
- CPU 200 MIPS ARM-9
- Internal RAM of 64 MB
- Very short programming times
- 3 programming voltages up to 25 V
- Low voltage programming up to 1.3
- Linux 2.6 installed

It can support EPROMs, EEPROMs, FLASH EPROMs, series EEPROMs, NV-RAM, LPC,FPGA, EPLD, GAL, PALCE, Microcontrollers, up to DIP48 without the need of any adapter nor additional circuits.

Technology

High-Speed programming. Programming algorithms are included in the processor 200 MIPS ARM-9, developed in Linux environment. This processor directly controls the necessary pin drivers and algorithms for programming the component, via an FPGA. The FPGA enables to realize State-Machine, UARTs, etc..., besides assisting the programming of critical components that cannot be implemented with simple software solutions.
Programming times reach the minimum values allowed by the same components. The internal RAM of 64 MB enables to store also the data of big components, so that, in case of multiple programming, they must not be reloaded.
The signals indicated here below are available for each pin of the programming socket:

- logic output: High level from 1.3 V to 5.0 V (adjustable)
- logic input: adjustable change threshold from 0.5 V to 5.0 V
- three separate programming voltages up to 25 V
- ground
- three different loads that can be connected for Pull-up and Pull-down
- adjustable cycles

In-System Programming (ISP)

The signals for In-System Programming can be extracted with the use of a specific adapter, or they can come directly from the 48-pin ZIF socket of the programmer. The software supplies useful information for the connection of all the supported components.

JTAG support

It is possible to clear, program and check components with JTAG port (Joint Test Action Group, IEEE Std. 1149.1). The following formats: SVF-Script file in XSVF (Xilinx) and JAMByte-Code Player (ALTERA), are supported.

Safety characteristics

The current absorption, the correct positioning, as well as the connection of each pin with the component, are checked for every action. Thus any wrong use of the component or of the instrument is completely excluded.

Software

The software will run in all 32-bit Windows versions. Besides the basic functions such as writing, programming, comparing and clearing, other special functions too can be set for the selected component. This software also includes an editor offering multiple possibilities for using the program of the component, that can be opened or saved in Binary, Intel-Hex, Motorola-S format or in Jedec format. The programming phases in production are supported by statistical functions and by programming with serial numbers.
The software is continuously upgraded to support new components and upgrades are available at no cost on our web site.

Using the programmer without power supply unit

This programmer is powered directly from the USB port of the PC and it needs batteries or the power supply unit only in specific cases. This instrument is certified for the use with USB and it needs 500 mA, at the most. A limitation is set only for the old NMOS components or for some complex microcontrollers needing high programming voltages. These components are specified in the Software of use. Although these components are USB certified, it is better to use the power supply unit included, or the batteries (6xAAA, not included) for external applications.

TECHNICAL CHARACTERISTICS

- 48-pin ZIF socket
- 48 universal pin drivers
- Processor 200 MIPS ARM-9 RISC
- 64-MB RAM
- 8-MB Flash
- FPGA (50K Gatter, 64-kb RAM)
- USB connection 2.0 High-Speed Device
- 3 linear regulators for internal power supply
- 4 regulators for programming voltages and for internal power supply
- 2 linear regulators for output logic levels and input logic comparators
- Microcontroller for the control of internal supply voltages
- Microcontroller for the control of programming voltages
- 8-channel Digital-to-Analog converter
- 16-channel Analog-to-Digital converter

Dimensions: 80x115x33mm (+7mm of socket)
Weight: approx. 185g

Accessories included:

- Power supply unit
- USB cable
- CD with Software and Handbooks