

## Uprog LE / USB



**Uprog LE** - supports basic range of programmable devices. Its 48 universal pin-drivers allow using any 48-pin adapters for non-DIP packages. Built-in in-system programming connector enables the programmer to program ISP capable chips in circuit.

**New software** for Windows 2000 and newer systems was designed to intuitive operation. It supports many programmers simultaneously, so several programmers may be connected to the PC in order to increase efficiency of whole system.

[Device list](#)

### Key features

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- **USB** interface - USB 2.0 (FullSpeed only) and USB 1.1 compatible
- Specialized **FPGA** based microprocessor (20 ns cycle).
- **In-circuit programming** connector (ICP).
- 48-pins universal independent pindrivers which can provide **VPP**: 0-30V, **VCC**: 0.8 - 8V, **CLK**: ~360Hz-24MHz, **GND**
- No adapter required for any DIL devices.
- Devices supported: basic range of **EPROM**, **EEPROM**, **Flash**, **microcontrollers** up to 48 pins.
- **Adapter Creator** feature allows to use many adapters from different providers.
- **Pin contact check** feature
- Test of digital ICs
- 8-bit EPROM/Flash simulator (option)
- 16-bit EPROM/Flash simulator (option)
- Ulogic - Uprog based logic analyzer with pattern generator feature (option)
- Multi color status **LEDs**: power, busy, error, good.
- Banana jack on the case for grounding purpose and ESD protection.
- Software for Windows 2000/XP/Vista supports many independent programmers simultaneously.
- List of supported devices limited to basic set of programable devices

### In-circuit programming connector (ICP)

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Uprog portable has Build-in interface for in-circuit programming, so as to be able to program chips working via **SPI, I2C, BDM, JTAG, 1 WIRE, 3 WIRE** and others. Serial programming interface was designed to allow to archive maximum data speed transfer and allows to adjust signal voltage level for any technology. Serial Programming Adapter assure:

- adaptation of voltage levels (1.2V - 5V)
- fast data transfer
- flexible connection between programmer and programmed device
- possibility to connect **VPP, VCC, GND, CLK,** and 6 universal IO pins.

ICP allows to be pin-checked, so as to be able to keep good contacts with programmed chip.

### Adapter Creator feature.

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New unique feature of Uprog programmers - Adapter Creator - allows to use many adapters from different providers. User is able to **scan structure** of the adapter, save it to file and use with selected device. Uprog programmers support Flash memories (typical and NAND), EPROMs, EEPROMs, serial EEPROMs, microcontrollers, PLDs/CPLDs. The device list is quickly developing and all software updates are free of charge!. If we obtain IC samples, we offer free update on customer's demand.

### Pin checking feature.

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Uprog programmers always check if all pins have good contact to the socket before start of programming. It saves you against damages of programmed devices. You can always see very easy if you inserted the chip incorrectly. Pin which have poor contact are showed with red labels.

### 8-bit EPROM simulator (option).



- Features of 8-bit EPROM simulator:
- memory sizes from 2KB to 64KB (optional to 256KB - after memory expansion)
  - short loading time
  - short access time: approx. 30ns
  - reset after data loading completion
  - variable voltage level: 1.8V - 5V

### 16-bit EPROM / Flash simulator (option).



- Features of EPROM simulator:
- memory size 64KWords (optional 128KWords and 256KWords - after memory expansion)
  - short loading time
  - short access time: approx. 30ns
  - reset after data loading completion
  - variable voltage level: 1.8V - 5V

### Ulogic - digital signal analyser (option).



- Main input features:
- 16 channels
  - maximum sampling rate: 200MHz<sup>1</sup>
  - buffer length: 64K x 16 or 256K x 16
  - short data transfer time
  - external clock input
  - flexible trigger settings: edge, level (pattern) or combination of edge and/or pattern
  - Pre-trigger and Post-trigger buffer
  - capture delay and edge counter feature

- input impedance: 470kΩ
- **sampling booster** - the area near Trigger may be sampled with double rate
- serial protocol interpreter: RS-232, SPI\*, I2C\*, CAN\*, 1-wire\* (\* - available soon)
- state machine analyser
- mnemonics code analyser for microprocessors
- possibility of signal comparing (three independent buffers)
- **pattern generator**

**Ulogic**, the Uprog based logic analyzer, makes the programmer an excellent measurement tool. Simply connect small adapter board directly to the programmers socket, run software and enjoy capturing the data.

Technical parameters	
Sampling rates	200MHz <sup>1</sup> , 100MHz, 50MHz, 40MHz <sup>1</sup> , 20MHz, 10MHz, 5MHz, 4MHz <sup>1</sup> , 2MHz, 1MHz, 500kHz, 400kHz <sup>1</sup> , 200kHz, 100kHz, 50kHz, 40kHz <sup>1</sup> , 20kHz, 10kHz, 5kHz, 4kHz <sup>1</sup> , 2kHz, 1kHz, 500Hz, 400Hz <sup>1</sup> , 200Hz
Digital input	16 channels, maximum input voltage: ±50V
Buffer length	Adjustable size: 16384, 32768, 65536, 131072 <sup>2</sup> , 262144 <sup>2</sup> samples
Trigger settings	<i>Edge</i> - rising or falling edge <i>Edge, skip N</i> - edge counter <i>Pattern</i> - specified pattern <i>Edge and (or) Pattern</i> - combinations of edge and pattern <i>Force</i> - trigger can be also forced by the user.
Threshold level for digital signals	Supported standards: 5V (TTL), 3.3V, 2.5V, 1.8V
Capture Delay	A capture delay is the delay between trigger occurrence and data acquisition
Pre/Post Trigger buffer	Define how much of the sampling-buffer will be used to store data before the trigger
External clock input	External clock source may be used for sampling. Max. clock frequency 50MHz.
Software	The easy to use and flexible software displays captured data. Any number of channels can be displayed, the name of any channel can be changed. Three cursors are available for time/frequency measurements. Zoom options, jump to cursor buttons and scrollbar in connection with cursors make data analysing very easy.

Notes:

1. Sampling rate available in limited buffer area (12K samples near cursor T) when **Booster** is enabled.
2. Available after memory expansion.

## Pattern generator (option)



Pattern generator is a tool designed for developing and testing of digital equipment. Thanks to user friendly pattern editor user can define any sequence of 16 digital signals and apply them to device's digital interface. Generated patterns are fully compliant with general standards of digital signals. Except possibility of pattern definition user can change voltage level of output signals.

**Main features:**

- 16 output channels
- Generation rates from 100MHz (state changes every 10ns) down to 200Hz
- maximum buffer length: 64K samples (optionally 256K).
- adjustable buffer length from 1 to maximal length
- possibility of save defined signals for further use
- available work modes:
  - **Auto** - generation of defined signals,
  - **Repeat** - cyclic generation of signals after trigger
  - **Single** - single generation of signals after trigger
- adjustable voltage level of output: 1.8V, 2.5V, 3.3V, 5V (TTL).
- user friendly pattern editor.

## Package includes:

- Programmer
- CD-ROM with software
- In-circuit programming cable
- USB cable
- Power supplier

## Package adapters

name	class	additional info	
SOIC16-DIP48-CL-U	universal	SOIC8 - SOIC16 body 4mm (0.150in), pitch 1.27mm (0.050in)	<a href="#">view</a>
SOIC28-DIP48-CL-U	universal	SOIC16 - SOIC28 body 7.5mm (0.300in), pitch 1.27mm (0.050in)	<a href="#">view</a>
SOIC44-DIP48-CL-U	universal	SOIC8 - SOIC44 body 2.81mm (0.150in), 15.24mm	<a href="#">view</a>

(0.600in), pitch 1.27mm (0.050in)

PLCC44-DIP48-CL-U	universal		<a href="#">view</a>
PLCC44-DIP48-PO-U	universal		<a href="#">view</a>
PLCC32-DIP48-CL-U	universal		<a href="#">view</a>
PLCC32-DIP48-PO-U	universal		<a href="#">view</a>
QFP44-DIP48-CL-U	universal	body 10mm x 10mm, pitch 0.8mm	<a href="#">view</a>
TSOP40-DIP48-PO-U	universal	body 18mm, pitch 0.5mm	<a href="#">view</a>
TSOP48-DIP48-PO-U	universal	body 18mm, pitch 0.5mm	<a href="#">view</a>
TSOPII44-DIP48-CL-U	universal	body 10.16mm (0.400in), pitch 0.8mm (0.0315in)	<a href="#">view</a>

## Gallery

