

The Generations of E-LAB programmers

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1. Generation, V24-Connection to PC

ISP-V24

ISP-JTAG (V24) was able to program via SPI and in addition via JTAG

ICP-JTAG (V24) had a built-in accu

ICPII-V24 with LCD Display

2. Generation, USB (1.1) Connection to PC (FTDI driver necessary)

ISP-USB

ISP-USB-Debug first programmer able to do JTAG Debugging

ICP-USB had a built-in accu (predecessor of UPP-USB)

ICPII-USB introduced due to the necessity of new accus

UPP-USB first programmer with MMC card, control DLL available

3. Generation, USB (2.0) Connection to PC, E-LAB developed driver

early 3rd. Gen. programmer (before about mid. 2008) work only with the older driver. To communicate with the actual driver (ELABDRV2.SYS from V2.0) the programmers must be updated by E-LAB for a guaranteed function. Otherwise you get the error "*Programmer not found*".

One of the ISP3-types is part of the E-LAB Pascal Compiler package ("*AVRco*").

These types are not sold separately and also work as copy protection for the compiler.

ISP3-USB

NO Dongle functionality (see **ISP-3 Debug xxx**)

ISP-3 Debug Std

works also as dongle for E-LAB Pascal Compiler Standard version

ISP-3 Debug Prof

works also as dongle for E-LAB Pascal Compiler Profi version

UPP1-USB

NO Dongle functionality, MMC memory card

UPP2-USB

NO Dongle functionality, MMC memory card, graphical display

4. Generation, USB (2.0) Connection to PC, new E-LAB developed driver

series ***-101 came up with the spread of Windows 7 64 bit that caused some issues.

Apart from that the same remarks as for generation 3 are true

ISP3-101-USB

ISP3-101 Debug Std

ISP3-101 Debug Prof

UPP1-USB-101

UPP2-USB-101

5. Generation, ("*X-Programmers*"), optional DLL for UPP1-X free of charge

by replacing the former internal ATMega by XMega controller much faster in programming and debugging. Available since early 2013.

Apart from that the same remarks as for generation 3 are true

ISP3-X

ISP3-X Debug Std

ISP3-X Debug Prof

UPP1-X

free control DLL for 1 UPP1-X, license for up to 32 UPP1-X €250

UPP2X