



The Batronix Professional Programmer Series offers an exceptionally flexible, simple to use and extremely fast set of programmers that support a broad range of chips. With a height of only 2.5 cm the enclosures are very practical and are noted for their design and anodized die-cast aluminum construction. These programming devices are your first choice even in a harsh usage environment.

The exceptional flexibility is attained by providing all power requirements via the USB port. A power adapter or batteries are not required, since all programming voltages are provided internally by a voltage generator from the USB supply voltage. The chips are programmed at a high level of quality and reproducibility in the shortest time possible through the use of optimized algorithms and micro-controller managed programming times. All supported chips can be programmed directly in DIP/DIL packages and suitable adapters are available for specialized packages such as PLCC, SOP, TSOP and QFP.

Special Features	BX32, BX32P, BX40	BX48
USB Powered The device is powered through the USB port and doesn't need a power adapter or batteries.	✓	✓
Chip Auto Identification The programmer identifies chips automatically on their chip signature.	✓	✓
Multi Programmer Control For volume production of chips up to eight BX32, BX32P, BX40 or BX48 devices can be controlled simultaneously from one PC using the Prog-Express software.	✓	✓
Automatic Programming Start In production mode, the programmer detects newly inserted chips automatically and can automatically start the programming process. The operator can program chip series without any need to use the PC mouse or keyboard.	✓	✓
Ultra High Speed Technology Due to the specially developed Batronix pindriver ICs the BX48 is the fastest available programmer.		✓
Ultra Low Voltage Support Due to state-of-the-art technology the BX48 supports as first programmer in the world supply voltages down to 0.9 Volt and therefore already the coming 1.0 Volt chip technologies according to JEDEC standard JESD8-14A.01.		✓

Supported Devices	BX32 Batupo	BX32P Barlino	BX40 Bagero	BX48 Batego
Very old NMOS EPROM (VPP > 15V)	✓	✓	✓	
NMOS EPROM (VPP ≤ 15V)	✓	✓	✓	✓
EPROM (27, 27C, 87, ...)	✓	✓	✓	✓
EEPROM (28C, 28HC, ...)	✓	✓	✓	✓
NV-RAM, Timekeeper (48, DS12, ...)	✓	✓	✓	✓
FLASH (27E, 27SF, 28F, 28SF, 29C, 29F, ...)	✓	✓	✓	✓
LPC, FWH, Firmware Hubs (39, 49, ...)		✓	✓	✓
Serial EEPROM (24, 25, 45, 93, 95, ...)		✓	✓	✓
16 Bit EPROM, FLASH			✓	✓
PLD, SPLD, EPLD, GAL, PALCE				✓
Microcontroller, MCU				✓
Chip updates on customer request	✓	✓	✓	✓

Security- and Testfunctions	BX32 Batupo	BX32P Barlino	BX40 Bagero	BX48 Batego
Device selftest The programmer verifies its power supply and programming voltage regulation plus its internal data communication on start-up and shows an error message if there is any deviation.				✓
Pin contact test The programmer checks if a chip was inserted correctly and every pin is connected.				✓
Chip ID test The chip signature (if available) is verified before accessing the chip.	✓	✓	✓	✓
Voltage monitoring The supply and programming voltages at the connected chip are checked.				✓
Current monitoring During any chip action the current is checked continuously and all connections will be disconnected if it exceeds the maximum values.				✓
Data comparison under deviant voltages After the programming process the chip data can be verified several times using minimum, nominal and maximum supply voltage. Therewith a durable data integrity is guaranteed.			✓	✓
Checksum calculation The software is able to calculate and compare many different types of checksums.	✓	✓	✓	✓

Hardware Details	BX32 Batupo	BX32P Barlino	BX40 Bagero	BX48 Batego
Interface	USB 2.0 Full Speed 12 Mb/s			USB 2.0 High Speed 480 Mb/s
ZIF-socket	32 Pin ECE	32 Pin Aries	40 Pin Aries	48 Pin Aries
Pin driver	Specialized for memory chips			Universal
Low voltage support	-	downto 3V	downto 3V	downto 0.9V
Dimensions [cm (inch)]	9x8.5x2.5 (3.5"x3.3"x1")	9x8.5x2.5 (3.5"x3.3"x1")	15.3x8.5x2.5 (6.0"x3.3"x1")	13.7x8.5x2.5 (5.4"x3.3"x1")
Weight without accessories / packaging	155 g (0.34 lb)	162 g (0.36 lb)	241 g (0.53 lb)	257 g (0.57 lb)
Weight with accessories / packaging	349 g (0.77 lb)	356 g (0.78 lb)	435 g (0.96 lb)	451 g (1.00 lb)
Warranty	5 Years			

BX48 Batego Hardware Features

We developed a special new chip for the control of the socket pins extra for the BX48. This new pindriver ASIC reaches a very high capability and flexibility beyond imagination.




The BX48 supports as only available programmer of the world ICs with extremely low power supply according to JEDEC Norm JESD8-14A.01. Chips under this directive have to be powered with a supply voltage of 1.0V with a tolerance of 100mV maximum.



Each of all 48 pins can be used independent and flexible:

- Four supply and programming voltages from 0.9V up with 10mV resolution!
- Logical-Output
- Logical-Input
- Serial high-speed connection
- Analog Input (A/D measurements with 10mV resolution!)
- Analog Output (D/A voltage output with 10mV resolution!)
- Six switchable pullup+pulldown resistors on VPP, VCC and GND
- Adjustable clock frequencies up to 24.5 MHz
- Ground

For bulk production of chips up to eight BX32, BX32P, BX40 or BX48 devices can be controlled simultaneously from one PC using the Prog-Express software. These programming devices are a better alternative to expensive gang-programming devices due to their low cost and extremely high programming speeds, and also offer greater flexibility.

Software Details	Prog-Express
Process control	
Project management	
File formats	Binary, Intel Hex, Motorola S-Records, Straight Hex, Tektronix and extended Tektronix files
File format auto detection	
Offset	Data and chip offsets
Splitting	Complete 16 and 32 Bit splitting functions
Serial number generator	Very comfortable serial number generator with support for external serial number files.
Checksum calculation	Checksum, MD5, SHA-1, EPT1 CRC16 and CRC32
Hex-Editor	Very comfortable and feature rich
Software remote control	Prog-Express can be remote controlled by other software with command line parameters and script files
Software updates	~2 weekly, free via download
Supported operation systems	XP(32Bit + 64Bit), Vista(32Bit + 64Bit), Windows 7 (32Bit + 64Bit) Additionally for BX32-BX40: Windows 98SE, ME, 2000, 2003 Server
Languages	English, Arabic, Dutch, French, German, Italian, Norwegian, Portuguese, Russian, Spanish, Turkish

All Batronix BX-programmers can be easily controlled using the modern and intuitive Prog-Express software. Chips inserted in the programmer can be detected automatically by the software and programming a chip from a file or copying an existing chip is done with a few mouse-clicks. Despite the easy to use interface, professional protection, split, auto-identify, auto-start and serial-number functions as well as a convenient hex-editor are available in addition to the basic functions like read, program, compare and erase.

The software and all updates and further versions are free, and the current version and updates can be downloaded from www.batronix.com at any time and used without an activation key. Hence the devices are still current even after several years. Support for further chips is added quickly and free of charge according to customer requests.

Delivery including programmer, USB cable, Prog-Express software and manual (multi language) on CD.