



1410™ Universal Engineering Programmer

- Supports over 23,000 devices with voltages down to 2.4V (Vdd) including, but not limited to, EPROM, EEPROM, Flash EPROM, Microcontrollers, PLD, CPLD, FPGA and antifuse FGAs
- Compatible with standard manual and automated socket modules
- Patented solution to guard against passing blank parts-available only from BPM Microsystems
- Supports all device packages, including but not limited to, DIP, SDIP, PLCC, TSOP, SSOP, PCMCIA, QFN, MLF, LAP, SOIC, LCC, QFP, PQFP, PGA, SIMM, CSP, BGA, μ BGA, TQFP and TSSOP
- Ideal for design engineering
- Uses USB 2.0 communications bus
- Jobmaster™ files portable to BPM Production programmers

Universal Device Support

Built to meet the rigorous demands of the world's leading engineers and programming centers, the 1410/240 will exceed your highest expectations. The 1410/240 is a truly universal device programmer supporting all device technologies and comes standard with 240 pin drivers for complete continuity and functionality testing on all pins, unlike other competitive programmers.

Exclusive JobMaster™ Included

The 1410/240 also comes with JobMaster™ software, a powerful tool that incorporates the use of ".bp" files. A feature exclusive to BPM Microsystems programmers, ".bp" files are valuable for both production and engineering departments. Customers can easily share data securely around the world, transfer designs between engineering and manufacturing, and share programming files between customers and programming centers.



BPM MICROSYSTEMS

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GENERAL

Operating Voltage:	100-240 VAC
Frequency:	50-60 Hz
Current Rating:	4-2 A (Fuse 250V 6A SB)
Dimensions:	11.75" (298mm) x 8.65" (220mm) x 4.68" (119mm)
Mass:	7.22 lbs. (3.28 kg)

SOFTWARE

Required:	BPWin
File Type:	including, but not limited to, binary, Intel, JEDEC, Motorola, POF, RAM, straight hex, Tekhex, Extended Tekhex, ASCII hex, Formatted Binary (.DIO), AFM, OMF, LOF, STAPL
Device Commands:	blank, check sum, compare, options, program, test, verify, erase
Features:	data editor, revision history, session logging, on-line help, device and algorithm information

HARDWARE

Calibration:	automatic self-calibration
Diagnostics:	pin continuity test, RAM, ROM, CPU, pin drivers, power supply, communications, cable, calibration verification timing, ADC, DAC
PC System Requirements:	Microsoft Windows 2000 or above
Operational Temperature:	41° to 104° F (5° to 40° C)

PIN DRIVERS

Quantity:	240-pins standard
Analog Slew rate:	0.3 to 25V/μs
Vpp Range:	0-25V
Ipp Range:	0-70mA continuous, 250mA peak
Vcc Range:	0-12V
Icc Range:	0-1A
Very low voltage:	to 2.4V (Vdd)
Rise Time:	4ns
Overshoot:	none
Protection:	overcurrent shutdown, power failure shutdown
Independence:	pin drivers and waveform generators are fully independent and concurrent on each site

STANDARD ACCESSORIES

Included:	software on CD-ROM user manual on CD-ROM power cable data cable 3-year hardware warranty
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FEATURES

File Loading:	automatic file type identification; no download time because programmer is PC controlled; supports Intel, JEDEC, Motorola S-record, POF, straight hex, hex-space, Tekhex, and other file formats
Device Selection:	intelligent device selector allows you to type as little or as much of the part number as you like then choose from a list of devices matching your description
Devices Supported:	including, but not limited to, Antifuse, Low Voltage, PROM, EPROM, EEPROM, Flash EEPROM, Microcontrollers, SPLD, CPLD, FPGA
Continuity Test:	each pin, including Vcc, ground, and signal pins, may be tested before every programming operation
Protection:	overcurrent shutdown; power failure shutdown; ESD protection, reverse insertion, banana jack for ESD wrist straps
Options:	available Socket Modules including, but not limited to, Universal PLCC, standard PLCC, PGA, CSP, BGA, JBGGA, SOIC, QFP, TSOP, LCC, SDIP, PCMCIA, QFN, MLF, LAP, SIMM—JobMaster™ software, Advanced Feature Software, simple and complex serialization
Programming Yield:	assured by independent universal pin drivers on each socket, short distance from pin drivers to device, and accuracy of waveforms
Algorithms:	all algorithms are manufacturer approved or certified (if required)—BPM Microsystems has an excellent record of being first to provide certified algorithms for new devices
Algorithm Updates:	software updates are available throughout the year

