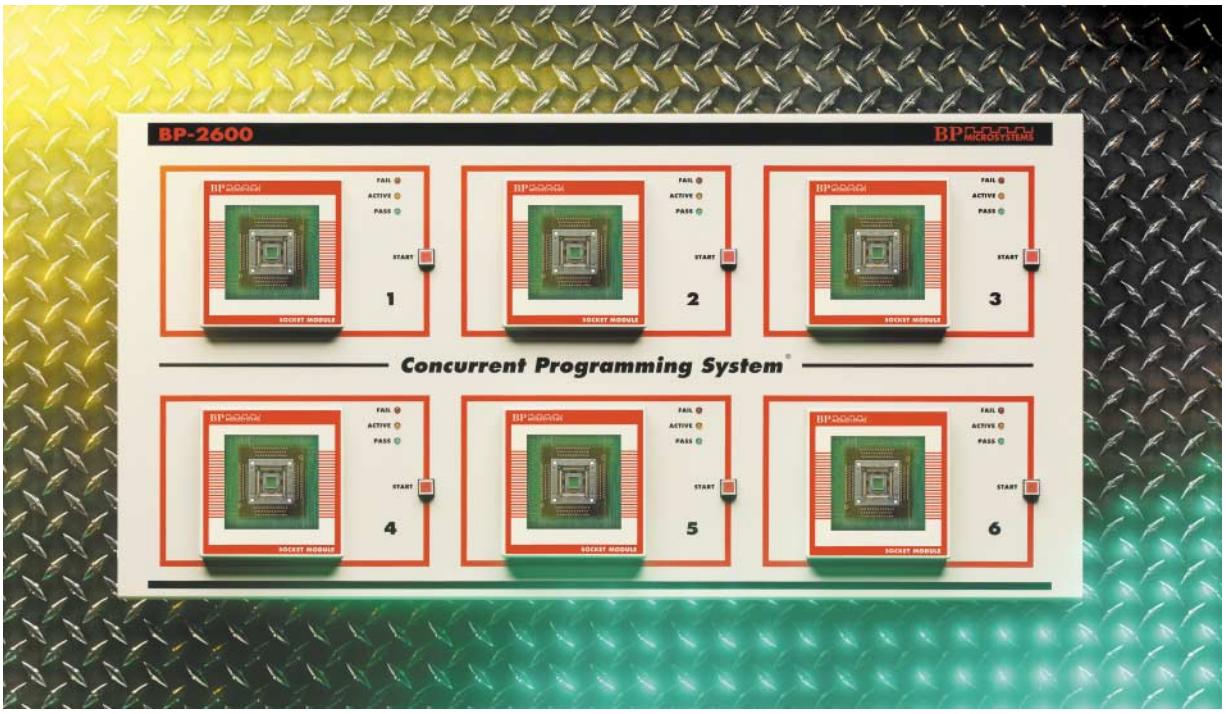
BP-2600 Concurrent Programming System®



- **With BP's 6th Generation Technology, the BP-2600 is the fastest universal production programmer available**
- **Very Low Voltage Support down to 1.5V**
- **Concurrent Programming System®**
- **Unsurpassed device and socket module support**
- **Fault Tolerant Design**

BP MICROSYSTEMS

Company Background

For almost fifteen years, BP Microsystems has led the way in advanced device programming and customer-focused support. We've introduced industry-leading technologies before any of our competitors, providing our customers with the most flexible, value-focused programmers available.

Today, we support virtually every device available and release new programming algorithms every six weeks via the Internet.

BP Microsystems provides comprehensive technical support and user training in more than 32 countries around the world. Our high level programming language means that the same algorithms run on BP engineering programmers as well as production programmers, ensuring a smooth and rapid transition from prototype to production.

Sixth Generation Technology

The BP-2600 features BP's Sixth Generation Programming Technology and is the fastest universal production programmer available. That means you will be able to program today's and tomorrow's high density devices at the highest speeds. In fact, the BP-2600 programs and verifies 64Mb at an incredibly fast 42s.

To obtain the highest programming speeds, the BP-2600 uses advanced, accelerated socket modules (the FX socket modules). These FX socket modules allow you to program at the fastest speeds in the industry. Like all BP universal programmers, the BP-2600 also supports the full range of BP's socket modules.

BP-2600 Concurrent Architecture

Concurrent architecture allows the system to start programming each device as soon as it is inserted. With four to six programming sites, the system will completely program the first device by the time the operator has inserted the last device, so there's no need to wait. To optimize flexibility, signal fidelity, throughput and reliability, each site is a fully independent universal programmer. The BP-2600 improves your profitability by increasing the efficiency of your operation.

Device Support

The BP-2600 is universal and supports all technologies including antifuse and Very Low Voltage (VLV) devices to 1.5V. It also has the ability to vector test the latest high pin-count FPGAs and the VLV devices. The BP-2600's optimized software, memory, and communications result in greater throughput on every single device that we support.

Behind each programming socket is a powerful universal device programmer with independent CPU, memory, and pin drivers. The system is not subject to the restrictions of competing gang programmers that can lead to improperly programmed devices, especially on today's advanced devices. The system provides full support for devices up to 240 pins. This includes the ability to continuity test, erase, blank check, program, verify, and vector test. Since one pin driver per pin is required to perform a full continuity test and functionality test of logic devices, the BP-2600 comes with 240 pins standard to test high pin count devices.

Flexibility

The BP-2600 is the first programmer with the *power* and *flexibility* to meet all the needs of today's most demanding programming centers. Support for a myriad of single-purpose programmers is no longer necessary. The BP-2600 can support all of your production needs. The benefits of streamlining your programming center are far reaching. Not only will you eliminate the cost of purchasing and maintaining single-purpose systems but you can also simplify operator training, reduce mistakes, free up valuable managerial time and eliminate bottlenecks.

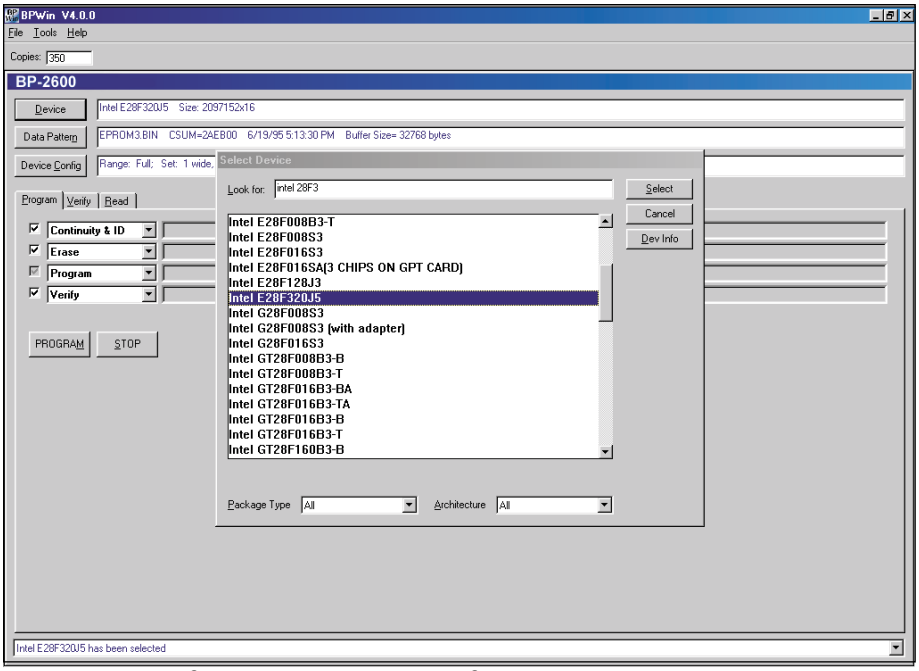
Fault Tolerance for Reliability

The BP-2600 incorporates a fault-tolerant design for enhanced reliability. In the event that one of the sites should fail, the system can operate on the remaining sites.

Software

Easy to use software is a hallmark of BP Microsystems. The BP-2600 is no exception. The user interface is informative, powerful, and most importantly, simple. JobMaster™ software, standard with the BP-2600, reduces set up times to seconds and significantly reduces the chance of a setup error. Design files and job statistics can be stored on a file server to meet your document control and SPC requirements.

JobMaster software—a powerful tool that incorporates the use of ".bp" files. A feature exclusive to BP programmers, ".bp" files are valuable for both production and engineering departments by ensuring proper job setup and secure data. The JobMaster files enable a user to easily transfer any ".bp" file, even by e-mail. This allows BP customers to easily share data securely around the world, transfer designs between engineering and manufacturing, and share programming files between customers and programming centers. JobMaster ".bp" files are error checked automatically, and aid to reduce or eliminate human error by only running jobs which have been tested and verified by a supervisor. The ".bp" files cannot be used if they have been modified inadvertently.



Easy to use software is a hallmark of BP Microsystems. The BP-2600 software is no exception.

Cost Per Device

BP multi-site concurrent programmers have a proven record of improving your profitability by increasing output. The efficiency of the concurrent architecture combined with incredibly fast

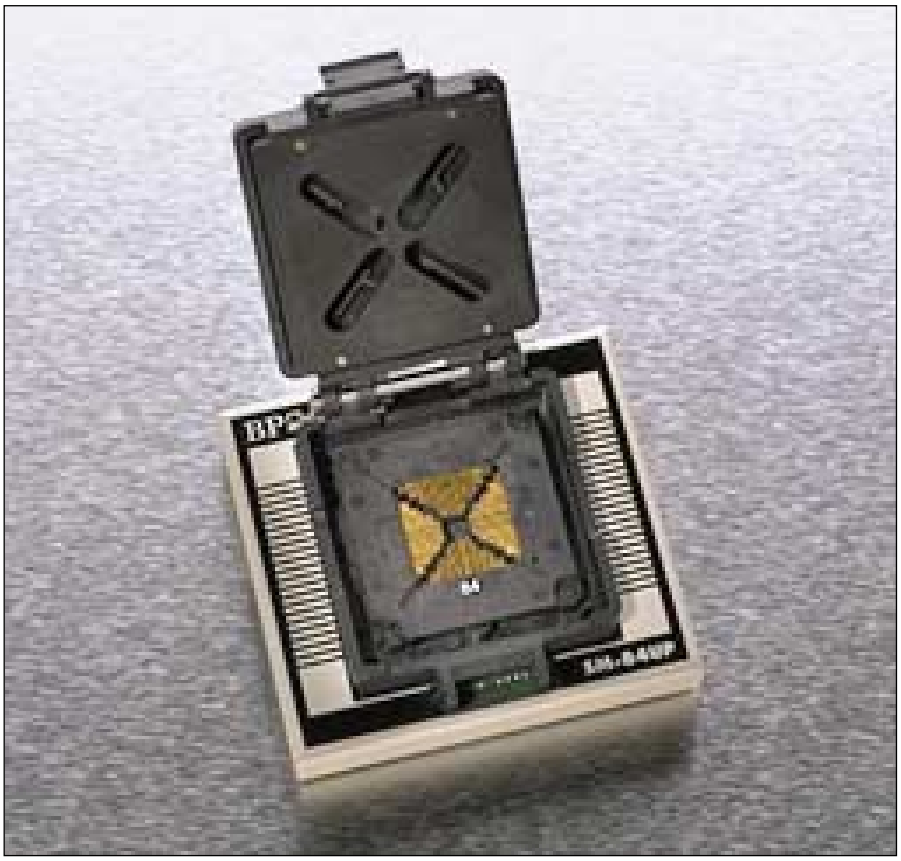
programming times means one operator with a BP-2600 can easily outpace several people running conventional programmers. This means you can improve quality, reduce time-to-market and your costs.

Algorithm Updates

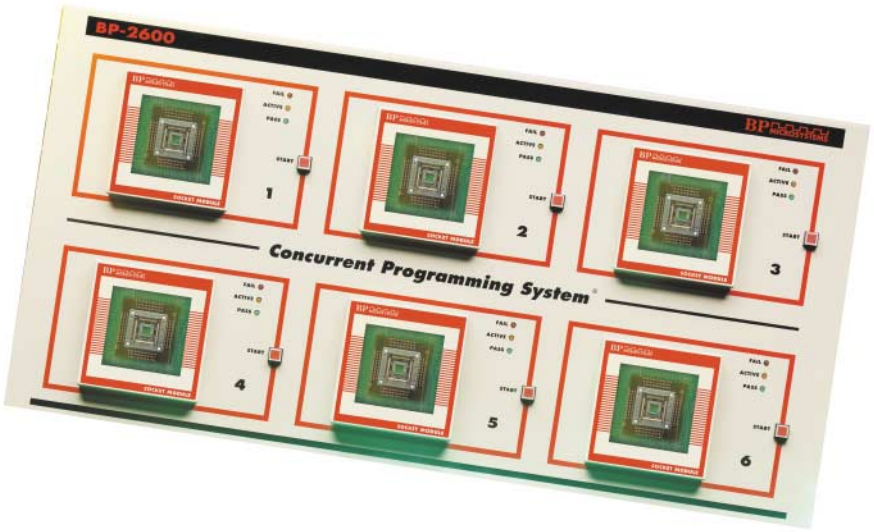
Algorithms are released eight times per year to ensure access to the newest programmables. Interim releases are available on our Web page at www.bpmicro.com. Algorithms are released simultaneously to engineering and production programmers ensuring a rapid transition from prototype to production.

Socket Modules

Socket Modules for the BP-2600 are designed to support the widest range of devices possible. For example, a *single* universal PLCC socket can support over 5,000 devices. And, these sockets modules are interchangeable across the full range of BP Microsystems universal programmers. Over 275 socket modules are available to support every conceivable package type, including SOIC, TSOP, TSSOP, QFP, TQFP, PQFP, SSOP, PGA, SIMM, PCMCIA, LGA, CSP, VSOP, PLCC, BGA, FBGA, µBGA and DIP.



SM84UP - The universal PLCC socket programs over 5,000 devices.



The BP-2600 Concurrent Programming System®

The BP-2600 is the world's fastest and most flexible production device programmer. Incorporating concurrent architecture and BP's Sixth Generation Technology, the BP-2600 is the only production programmer capable of programming virtually every device architecture and package at the highest speeds.

Faster Programming Times

Device Size	Programming Time
64 Mb (E28F640J3)	42 seconds
32 Mb (E28F1602C3-T)	18 seconds

BP MICROSYSTEMS

SPECIFICATIONS

SOFTWARE

File Type: binary, Intel, JEDEC, Motorola, POF, straight hex, hex-space, Tekhex, Extended Tekhex, and others

Device Commands: blank, check sum, compare, options, program, test, verify

Features: data editor, revision history, session logging, on-line help, device and algorithm information

HARDWARE

Architecture: Concurrent Programming System

Sites: 2, 4, or 6 per chassis. Two chassis may be daisy chained

System Controller: 486 class PC with 340MB Hard Disk, VGA monitor, keyboard (standard, but may be omitted)

Calibration: annual, may be performed on site

Diagnostics: pin continuity test, RAM, ROM, CPU, pin drivers, power supply, communications, cables, calibration, timing, ADC, DAC, interconnects

Memory: 16MB per site

User Interface: Pass, Fail, Active, Start LEDs and Start switch on each site. PC display shows systems status at a glance. Auto-start mode automatically begins programming when device is inserted.

Power: 90-260VAC, 47-63 Hz, 1.2 KVA, IEC inlet

Mass: up to 45 lb (20 kg) per chassis

PIN DRIVERS

Quantity: 240 per socket (3,840 max.)

Voltage: 0 to 25.00V in 6.25 mV steps

Current: 0-1A, 15µA resolution

Slew rate: 0.001V/µs to 2500V/µs

Timing: 1µs - 1s, ±1µs, ±0.01%

Clocks: continuously variable 390 KHz to 30 MHz

Independence: pin drivers and waveform generators are fully independent and concurrent on each socket

CE

Operator Mode: the software may be configured to allow only loading jobs to help eliminate the possibility of an inadvertent setup mistake

Job Loading: a user defined job may be chosen from a list of user-defined part numbers

File Loading: automatic file type identification; no download time because programmer is PC controlled

Algorithms: only manufacturer approved or certified algorithms are used; BP Microsystems has an excellent record of being first to provide certified algorithms for new devices. Custom algorithms are available at additional cost

Algorithm Updates: algorithm changes and updates are available. Additional algorithms available by subscription after the first year

Devices Supported: Antifuse, Low Voltage, PROM, EPROM, EEPROM, Flash EEPROM, microcontrollers, SPLD, CPLD, FPGA

Programming Yield: assured by independent universal pin drivers on each socket, short distance from pin drivers to device, and accuracy of waveforms

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 include Universal PLCC, standard PLCC, PGA, SOIC, QFP, PQFP, TQFP, TSOP, LCC, SDIP, PCMCIA, SIMM, among others and custom sockets. JobMaster software

BP MICROSYSTEMS

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