2800ISP

Semi-Automated In-System Device Programmer

PROGRAMMING STATION FEATURES

- The fastest flash programming with 8th Gen and Vector Engine BitBlast
- Semi-automated pneumatic desktop programming solution
- Custom Cassette Interface matched to customer requirement
- Configurable with 1 to 4 high-speed programming sites
- Integrated access panel with impedance matched connection for third party functional testing
- Up to 960 programming pins and 240 test pins
- Close center wireless probes replaceable in the field
- Moving alignment plate protects probes
- Up to eight oprgrammable power supplies with up to 7V at 450mA each
- Contact surfaces ESD compliant
- Eliminate bit-flip issues during reflow

PROGRAMMING SITE FEATURES

- Universal device support for high-density flash, MCUs and more
- Ideal for the latest flash device architectures (OneNAND, eMMC, iNAND, moviNAND, MLC, SLC, and more)
- Supports device densities up to an 8 Eb theoretical limit and voltage down to 0.7 (Vdd)
- 20ns verify with Vector Engine Co-Processor® technology
- 16 GB of on-board memory per site
- Program multiple devices on each board and up to 16 devices in parallel
- Parallel and serial programming mode
- Maximum Panel Size 254mm x 304mm
- Fault-tolerant concurrent architecture
- Independent signals to each DUT

PROGRAMMING SOFTWARE FEATURES

- Use standard BPWin software
- JobMaster™ - production automation tool
- NAND bad block handling feature
- API - Process Monitoring and Control
- File encryption for IP protection
- Standard and Advanced Serialization
- Compatible with 8th Gen algorithms

Eighth Generation Programming Technology

In-System Programming Station

The 2800ISP is BPM Microsystems' production solution for in-system device programming and testing. It combines the unmatched performance and flexibility of 8th Generation site technology with a custom-designed test fixture so that operators can easily program flash, MCUs and other device technologies on-board after reflow in parallel and serial mode. An access panel with impedance-matched connection for third party functional testing, such as boundary scan, is integrated into the system and features the capability to test up to 240 pins in addition to the 960 pins available for programming.

The 2800ISP is ideal for medium and high volume production and can be configured to program up to 16 boards in parallel. Programming flash components in parallel mode is much faster than using traditional test equipment in slow serial mode. With 8th Generation programming technology and BPM's Vector Engine Co-Processor, the 2800ISP is capable of achieving an amazing peak operating rate of 24Gbits per second. It also features BitBlast technology, which means that managed NAND devices that utilize the eMMC interface get an incredible boost to programming speeds, drastically increasing your overall throughput. This solves the test bottleneck problem while allowing the operator to program the latest data just-in-time, all while attaining a very low programming cost per device.

The ergonomic design of the 2800ISP uses a pneumatic fixture with built-in safety features to actuate the pressure plate. Once actuated, high-quality wireless probes, engineered to achieve exceptional signal integrity, make contact with the circuit board through a protective moving alignment plate. The innovative design is ideal for critical production applications.

BPM Microsystems' technical experts work with your PCB design specifications to provide a custom turn-key solution. The 2800ISP includes the software and hardware to program on-board right out of the box. With a removable pogo-cassette, the programming station can be reconfigured in the future for new jobs.

VECTOR ENGINE CO-PROCESSOR

BITBLAST

BPM MICROSYSTEMS

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2800ISP

Semi-Automated In-System Programmer

GENERAL

Dimensions:	length 24” (610 mm) x width 20” (508 mm) x height 16” (406 mm)
Weight:	110 lbs. (50 kg)

SYSTEM REQUIREMENTS

Compressed Air Supply:	80 PSI (5.56 bars) dry and clean air
Input Line Voltage:	100-240 VAC , auto-switching power supply
Input Line Frequency:	50-60 Hz
Power Consumption:	400VA
Operational Temperature:	5° - 40° C (41° - 104° F)
Relative Humidty:	up to 70% non-condensing humidity

SOFTWARE

Required:	BPWin
File Type:	Binary, Intel, Motorola, RAM, straight hex, hex-space, Tekhex, Extended Tekhex, ASCII, hex, OMF, LOF, MER, and others
Device Commands:	Blank, check sum, compare, program, test, erase, verify
Features:	Jobmaster™, Bit Error Rate Tolerance, Auto Range, Data Editor, Revision History, Device and Algorithm information, Searchable help menu, BBM, ESS, session logging

HARDWARE

Architecture:	Concurrent Programming System with Vector Engine Co-Processor®
Sites:	1-4 site model, configurable
Capacity:	Up to 16 DUTs in parallel
Maximum Panel Size:	254mm x 304.8mm**
Calibration:	Annual, may be checked on site
Diagnostics:	Pin continuity test, pin drivers, power supply, communications, calibration, timing, ADC, DAC, interconnects
Memory:	16GB per site standard
Communications:	USB 2.0, RS-232
Peak Verify Bandwidth:	20ns cycle
Firmware ROM:	No firmware ROM, software automatically performs firmware download
User Interface:	Pass, Fail, Active, Start, Interlock ready, Programmer ready, and Pressure plate error LEDs; Start button; Power Enable button; Emergency stop button; PC display shows systems status at a glance; auto-start mode
PC System Requirements:	Microsoft Windows 7 - 64 Bit BPWin software with current license Four individual USB ports COM port 4 GB of RAM minimum

PIN DRIVERS

Quantity:	240-pins standard, per site
Vpp Range:	0-13V Slew rate 2V/us
Ipp Range:	0-50mA continuous
Vcc Range:	0-7V Slew Rate 2V/us
Icc Range:	0-450mA
Rise Time:	4ns
Protection:	Overcurrent shutdown, power failure shutdown

FEATURES

File Loading:	Automatic file type identification; supports Intel-Hex, Motorola S-record, 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:	NAND Flash, NOR Flash, Serial Flash E/EPROM, Managed NAND, MCU, PCM and others
Continuity Test:	Each pin, including Vcc, ground, and signal pins, may be tested before every programming operation
Protection:	Overcurrent shutdown, powerfailure shutdown, ESD protection, banana jack for ESD wrist strap
Options:	Advanced Feature Software, simple and complex serialization, CJob Monitor and CJob Control (API)
Programming Yield:	Assured by independent universal pin drivers on each DUT, short distance from pin drivers to device, and accuracy of waveforms
Algorithms:	All algorithms meet manufacturer approved specifications - BPM Microsystems has an excellent record of being first to provide certified algorithms for new devices
Algorithm Updates:	Algorithm changes and updates are available, additional algorithms available by subscription after the first year

STANDARD ACCESSORIES

Included:	software on CD-ROM Quick Start Guide 1 diagnostics socket card 1 power cable 4 USB 2.0 cables 1 serial communications cable 1-year hardware warranty 1-year software support

**Larger custom panel sizes available

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