BPM MICROSYSTEMS

Setting the Standard in Device Programming

2900 UNIVERSAL PRODUCTION PROGRAMMING SYSTEM

PRODUCT SPECIFICATION SHEET
2900 UNIVERSAL PRODUCTION PROGRAMMING SYSTEM

POWERED BY 9TH GENERATION PROGRAMMING TECHNOLOGY

DEVICE PROGRAMMING NINTH 9TH GEN GENERATION TECHNOLOGY + VECTOR ENGINE® CO-PROCESSOR

The industry's **only** programming solution that offers both the **fastest** programming speeds with **true universal** device support.

With 9THGEN Universal Site Technology, 1900 Delivers Measurable Cost Savings

High Speed Programming

- High programming speed for MCUs, eMMC, NAND, NOR and Serial Flash
- Up to 100MBytes/s for industry's fastest program/verify times
- Download image files up to 25MB/s to all programmers simultaneously
- Faster programming times reduces the number of systems, sites and sockets you need to buy
- Up to 9 times faster than competing universal programmers
- The Largest Memory Support in the industry - 512GB
- Connect up to 16 units in one job session to for high density volume production

True Universal Support

- True universal support – One solution for all your programming requirements
- With 240 pin drivers 2900 supports a wider range of devices on the same socket reducing the number you need to buy
- Ultra universal site and socket technology streamlines your first article and production programming
- Compatible with existing 7th and 8th gen socket cards and algorithms so our customers can retain the value of their investment in assets
- Vast library of currently supported sockets means faster time to market for your next project

Technology Designed to Deliver Value

- As newer and faster devices are introduced onto the market Vector Engine Co-Processor® technology adapts to the faster speeds, delivering more value with improved performance
- BPWin - User-friendly interface includes all the software features you need to run your production programming operation. Process control, IP protection, API for custom applications, monitoring, traceability and External Serialization Server all help you deliver a quality product.
- Economical and efficient receptacle-base socket card design reduces your cost for replacement sockets

Complete Ecosystem

- BPM has ownership of all designs, manufacturing and support for all programming sites, robotics, vision systems, software and Edge Sockets so we can provide unmatched support and responsiveness
- Reduce your time to market by doing New Product Introduction/First Article through Automated Production with the same hardware, algorithms and software
- 1900 for Fast First Articles, 2900 for Manual Production, 3900 and 4900 and EDGE Sockets for Automated Production

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Product Specifications

PIN DRIVERS

Quantity:	240-pins drivers total, universal ground transisters 48 fully universal drivers with vcc, vpp, digital and clock 96 high speed digital and clock pins
Vpp Slew Rate:	40V/ms to 6V/us
Vpp Range:	0V to 25V
Ipp Range:	Up to 1.2A total
Vcc Slew Rate:	40V/ms to 4V/us
Vcc Range:	0V to 13V
Icc Range:	0-2A
Digital Range:	0V to 4.5V
Digital Rise Time:	4ns
Protection:	Vpp, Vcc, and digital pin drivers are protected from ESD events. Vpp and Vcc drivers are also protected from overcurrent.
Clocks:	800kHz to 64MHz

SOFTWARE

Required:	BPWin
File Type:	Binary, Intel, Motorola, RAM, straight, hex, hex-space, Tekhex, Extended Tekhex, ASCII, hex, OMF, LOF, MER, STAPL, and others
Device Processes:	ID check, blank check, continuity, auto start, blank, checksum, compare, program, test, verify, erase, secure
File Loading:	no download time because programmer is PC controlled;
Devices Supported:	NAND Flash, NOR Flash, Serial Flash EPROM, EEPROM, Managed NAND, MCU
Protection:	Overcurrent shutdown, power failure shutdown, ESD protection, reverse insertion, banana jack for ESD wrist strap
Additional Features:	Automatic file type identification, Jobmaster™, BERT™, Auto Range, Data Editor, Revision History, Device and Algorithm information, Searchable help menu, BBM, ESS, session logging, on-line help
Operating Systems:	Microsoft Windows XP Professional, Windows 7 32bit
Algorithms:	Large library of existing 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

PROGRAMMING HARDWARE

Power:	90W
Architecture:	9THGEN Concurrent Programming System with Vector Engine Co-Processor®
Programming Sites:	1 per site, 1 to 4 sockets per site
Calibration:	annual, may be performed on site with included socket card
Site Diagnostics:	RAM, communications, calibration, timing, LEDs, fans, pinoe, power supplies, voltage/current/slew for vpp and vcc, high current vcc mode, digital pin drivers, and relays.
Daughter Card Diagnostics:	Ground Transistors, digital driver path to programmer, dcard LEDs, customizable diagnostics per dcard.
Continuity Test:	Each pin, including Vcc, ground, and signal pins, may be tested before every programming operation
Memory:	512GB per site
Communications:	USB 2.0
Data Pattern Broadcast:	25MB/s
Firmware ROM:	Software automatically performs firmware download
Peak Verify Bandwidth:	20ns cycle
User Interface:	Pass, Fail, Active, Start LEDs, and start button on each site; PC display shows systems status at a glance; auto-start mode automatically begins programming when device is inserted
Programming Yield:	Assured by independent universal pin drivers on each socket, short distance from pin drivers to device, and accuracy of waveforms

MECHANICAL SPECIFICATIONS

Operational Temperature:	55° to 90° F (13° to 32° C)
Relative Humidity:	30-80%
Dimensions:	length 304.800mm x width 304.800mm working height (excluding sockets) 73.025mm
Mass:	3.7kg

OPTIONS

Socket Modules:	Support for existing FX and FVE socket modules. Universal 1900/2900 socket cards with 144 universal pins. Available Socket Cards including, but not limited to, standard PLCC, CSP, BGA, µBGA, SOIC, QFN, MLF, LAP, QFP, TSOP, LCC, SDIP, SIMM, Receptacle Socket options, EDGE™ High Performance Socket Cards
Other Options:	Advanced Feature Software, simple and complex serialization, CJob, Monitor and CJob Control (API)

WARRANTY

Hardware:	One Year Hardware Warranty
Software:	One Year Software Support

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MADE IN THE USA
OF U.S. AND IMPORTED PARTS