

BPM 2900L | 2900 Specifications

Pin Drivers	
Quantity:	240-pins drivers total, universal ground transistors 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:	Windows 10, 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:	9TH Generation Concurrent Programming System with Vector Engine Co-Processor®
29XX Programming Sites:	1 per site, 1 to 4 sockets per site
Calibration:	Annual
Site Diagnostics:	RAM, communications, calibration, timing, LEDs, fans, P1NOE (pin output enabled), 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:	256GB per site, upgradeable to 512GB
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 304.8mm x width 304.8mm working height (excluding sockets) 73.025mm
Weight:	3.7kg
2900L Power:	Connect 2900 to computer and launch BPWin; Software turns the programmer "on"

Warranty	
Hardware:	One Year Warranty
Software:	One Year Support



[bpmmicro.com/device-programmers/  
manual-programming-systems/](https://bpmmicro.com/device-programmers/manual-programming-systems/)

# BPM Manual Programmers

Manual Programming Systems

**Production Programmer 2900L**  
Universal Production Programming System with Integrated Lever Socket Actuator

**Production Programmer 2900**  
Universal Production Programming System

Programming the Future

**Extendable**  
Connect multiple units to program up to 44 devices simultaneously

**Lowest Programming Cost**  
Faster performance means higher throughput for lowest cost/device

**9<sup>TH</sup> Generation Site Technology**  
Future-proof investment with true universal site technology

**Ergonomic Design**  
Lever Action on the 2900L reduces operator fatigue & increases productivity



# BPM 2900



## The 2900

**Precision Production Programmer. Multi-site manual production programmer ideal for volumes from 1K to 100K per year. Excellent for smaller jobs with long programming times.**

Versatility and Capacity— OneNAND, eMMC, iNAND, MLC, SLC, MCU, PLD— whatever your device type, the 2900 can support it. Plus, you can connect up to eleven programmers to one PC for concurrent programming of up to 44 devices!

## 9TH Gen Delivers Best in Class Features, Versatility and Performance

- High programming speed for MCUs, eMMC, NAND, NOR and Serial Flash
- Up to 400 MB per second for industry's fastest program/verify times
- Download image files up to 25MB/second 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 - 256GB, upgradeable to 512GB
- Connect up to 11 units in one job session for high density volume production
- True universal support – One solution for all your programming requirements
- With 240 pin drivers, BPM Manual Programmers support a wider range of devices on the same socket reducing the number you need to buy
- Universal site and socket technology streamlines your first article and production programming
- Compatible with existing 7th and 8th generation socket cards and algorithms so you retain the value of your investment
- Vast library of currently supported sockets means faster time to market for your next project
- 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 Software's 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

# BPM 2900L



## The 2900L

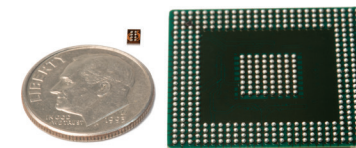
**With Integrated Lever Socket Actuator and Universal Pressure Plate**

Over 40,000 devices supported with weekly updates, including HS200 and HS400 mode for up to 400 MB per second speeds.

Both 2900 and 2900L manual programmers use the same software, algorithms and sockets used on the latest Automated Systems— true universal support.

The 2900L is designed for production device programming. With its precision self-locking lever design, the operator can consistently actuate sockets while placing and removing devices. As with our automated systems, precision socket actuation increases socket longevity. Plus, opening the socket fully and evenly every time minimizes the potential for bent pins on programmable devices.

Call us to find out more, especially regarding the latest eMMC tools, such as high-speed HS400 mode, and the eMMC File Concatenate Wizard that saves time, streamlines workflow, and reduces errors...



Full system throughput with package sizes ranging from the smallest CSP to the largest QFP



Extendable

Connect multiple 2900s to one computer to program up to 44 devices simultaneously!



2900L Programmer



2710 Programmer



2900 Programmer



1710 Programmer



4910 APS



3928 APS



3901 APS

## Complete Ecosystem

BPM Microsystems has ownership of all designs, manufacturing, and support for all programming sites, robotics, vision systems, and software, 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
- 2900, 2900L (9th Gen), 1710 & 2710 (7th Gen) for Manual Production; 3901, 3928, & 4910 for Automated Production— only BPM can deliver!

**BPM** MICROSYSTEMS  
Setting the Standard in Device Programming

[bpmmicro.com/device-programmers/  
manual-programming-systems/](http://bpmmicro.com/device-programmers/manual-programming-systems/)

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