

BPM 1900 | 2900 | 2900L

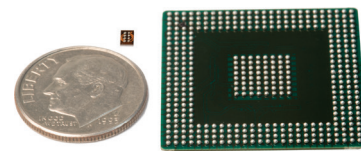
Manual Programming Systems and First Article Programmers



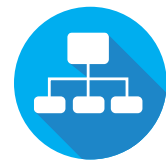
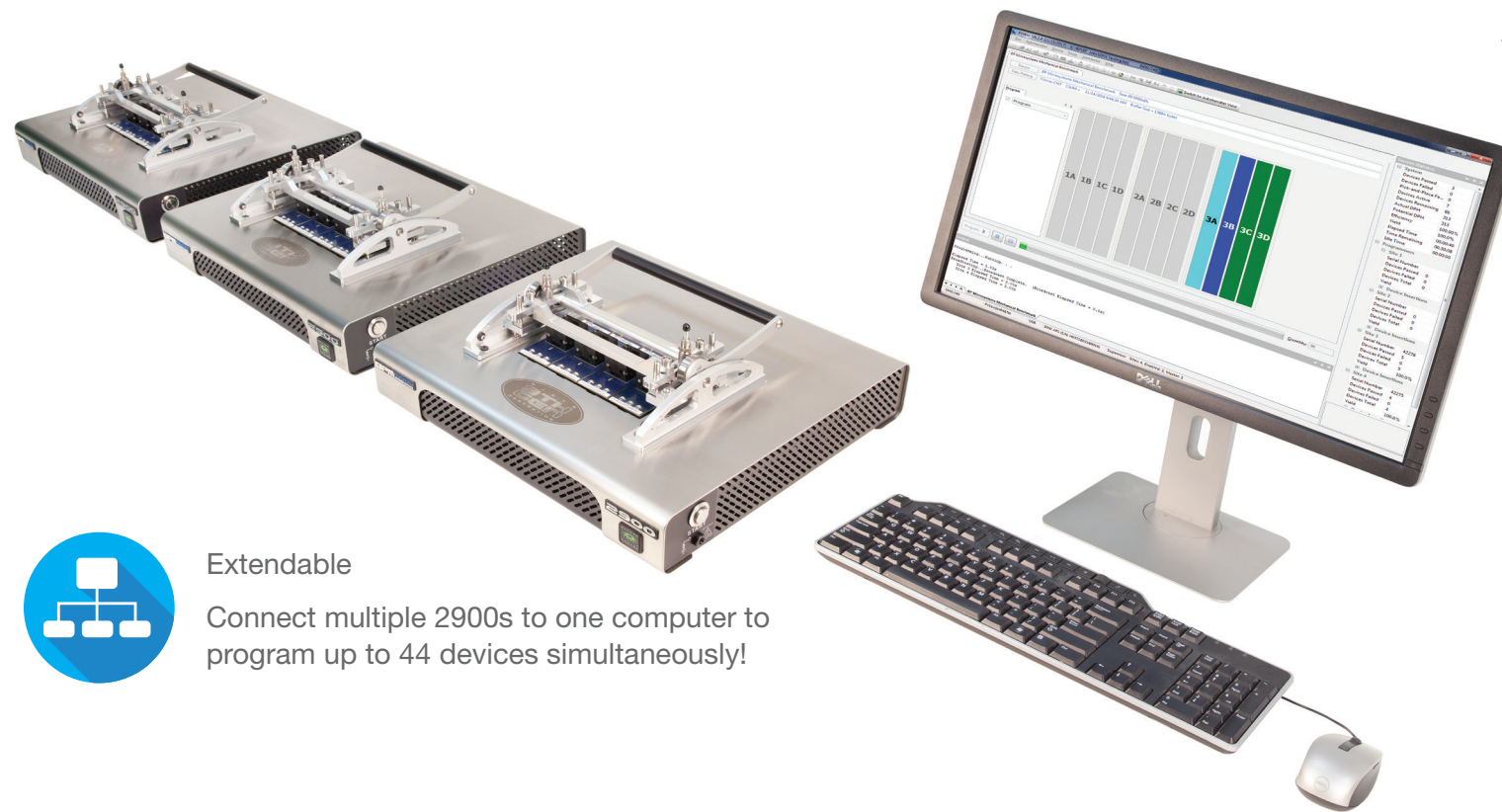
The 2900L

with Integrated Lever Socket Actuator and Universal Pressure Plate 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.

- Improves Production Throughput
- Minimizes Fatigue from Opening Sockets by Hand
- Fully-Adjustable Universal Pressure Plate Supports Virtually All Available Sockets
- High-Quality Machined Aluminum Alloy Hardware and Precision Bearings for Long Life in a Production Environment
- Quick Package Changes and Adjustments— Only One Tool!



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!



bpmmicro.com/programmer/manual

Toll Free: 800-255-2102
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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!



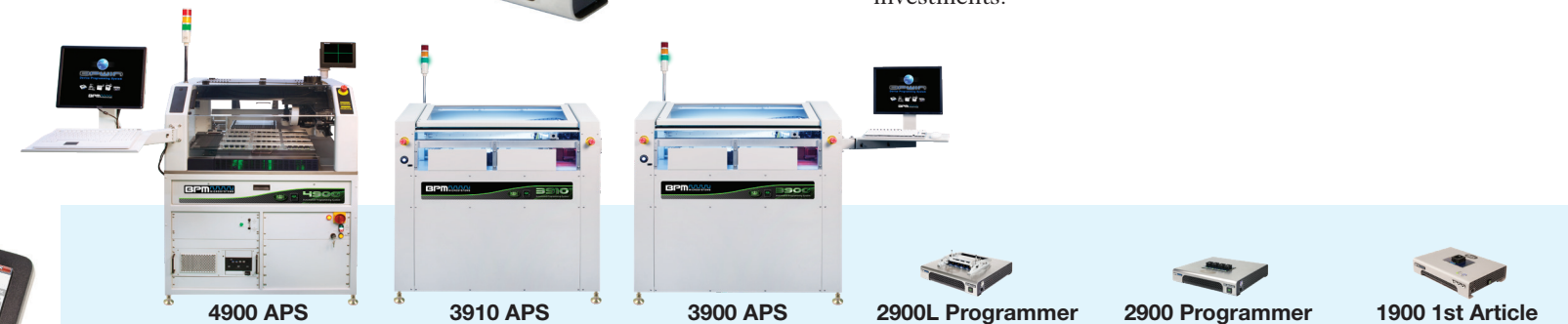
The 1900

BPM's Universal First Article Programming System

Production-Quality Single-Site Programmer. This manual programmer is ideal for low-volume production, first article qualification and system engineering programming.

True Universal Support

BPM's 1900 supports NAND, eMMC, iNAND, MLC, SLC, MCU and PLD. It's compatible with many 7th Gen and 8th Gen socket cards and algorithms, so our customers retain the value of asset investments.



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

- 1900 for Fast First Articles, 2900 and 2900L for Manual Production, 3900, 3910 & 4900 for Automated Production— only BPM can deliver!

With 9TH GEN Universal Site Technology, BPM Delivers Measurable Cost Savings

- 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 - 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 1900 | 2900 | 2900L 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:	Microsoft 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
1900 Programming Sites:	1 per site, 1 socket
Calibration:	Annual, may be performed on site with included socket card
Site Diagnostics:	RAM, communications, calibration, timing, LEDs, fans, pinoe (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 304.800mm x width 304.800mm working height (excluding sockets) 73.025mm
Weight:	3.7kg
2900L Power:	Explain how the power works on the 2900...
Warranty	
Hardware:	One Year Warranty
Software:	One Year Support



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BPM Manual Programmers

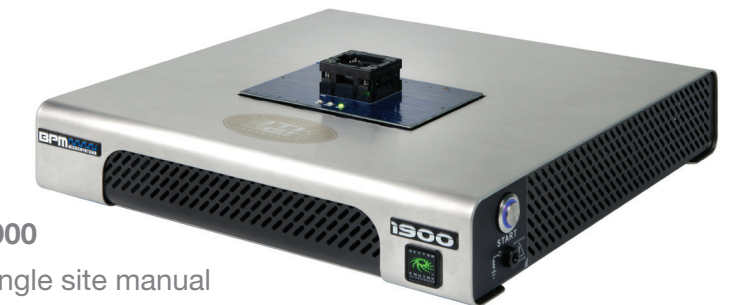
Manual Programming Systems and First Article Programmers



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

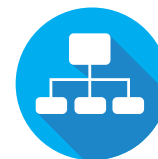


Production Programmer 2900
Universal Production Programming System



1900
Single site manual programmer ideal for low volume production, first article and system engineering programming

Programming the Future



Extendable
Increase utilization & lower overall costs



Lowest Programming Cost
Higher throughput at lower cost per device



9TH Generation Site Technology
Future-proof investment with true universal site technology



Ergonomic Design
Lever Action on the 2900L Reduce operator fatigue & increase yield