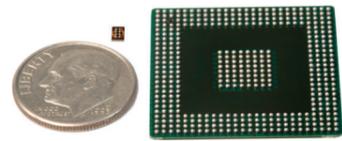


BPM310 High Capacity • Up to 48 Sockets • 6 Universal Sites • 1,432 Devices Per Hour • UFS 2.1



Uses same Award-winning BPWin™ Software



Full system throughput with package sizes ranging from the smallest CSP (0.4 x 0.2mm) to the largest QFP— a true CSP Production Machine



Highest throughput combined with most capacity in the smallest footprint



Award-Winning Software



WhisperTech™ provides automated Z-height detection, critical for each pick/place location. Setup is fast and accurate, reducing teach time *as much as 83%*

10TH GEN

10TH Generation site technology offers the broadest support in the industry at unsurpassed programming speeds. We support more devices on a single site platform than any other



Award-Winning Service



CyberOptics® Vision with component auto-measure— for fast set-up, true CSP support, and on-the-fly alignment for maximum quality and productivity

10TH GEN

Six 10TH Gen sites provides full universal support for UFS*, eMMC HS400, MCU, NAND & Serial Flash, at incredible speeds with **up to 48 devices programmed concurrently**

Optional Automated Peripherals to maximize/customize your BPM310

- 3D Inspection
- Tape In/Out • Label Presenter
- Stationary Tray • Tray Stacker
- Tray Shuttle
- Fiber Laser

UFS 2.1 sequential read/write up to 440 megabytes per second
*UFS Kit Optional



WhisperTech™ reduces set-up times while dramatically improving device placement



The new BPM310 is the latest 10th Generation Automated Programmer from BPM Microsystems. It features up to 6 fully universal programming sites with up to 48 sockets, producing the fastest programming times in the smallest footprint while offering advanced features such as WhisperTech™, BPM.NCRYPT, and on-the-fly vision alignment. Unlike other products in

the industry, the BPM310 offers true universal support, including UFS, Microcontrollers, Memory and Complex Devices that can be configured as needed to support the smallest chip-scale-package to the largest QFP, all at blazing speeds.

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BPM310 Specifications

Pick & Place System	
Handler Throughput:	Up to 1,432 Devices per Hour (with vision centering)
Component Handling Range:	0402 to 240-pin QFP (1.0 x 0.4mm to 32 x 32mm)
Machine Dimensions:	Length 127cm, width 61cm, height 137cm
Machine Net Weight:	195.45 kg
Shipping Dimensions:	Length 162cm, width 96cm, height 177cm
Shipping Weight:	309.09 kg
Safety Standard:	CE compliant
Self-test:	Power supplies, CPU, memory, X, Y, Z, theta motion systems, nozzle run-out, and height
UFS Kit:	Optional; Universal 8-up UFS Adapter for BGA 153. UFS 2.1 Programming Performance: Up to 440 Megabytes per second Read/201 Megabytes per second Write

Positioning System	
X-Y Drive System:	High-performance stepper motor driven belt
X-Y Encoder Type:	Linear optical scale
X-Y Axis Positioning Accuracy:	± 0.015mm
X-Y Axis Maximum Velocity:	150cm per second
Z Drive System:	High-performance stepper motor driven lead screw
Theta Drive System:	Precision stepper motor-driven direct drive assembly
Theta Accuracy:	0.014°
Z-Axis Teach Accuracy with WhisperTeach™	± 0.015mm (15µ)

Vision System	
Alignment:	CyberOptics® LNC-120 On-The-Fly vision camera
Downward Vision:	CCD, GigE compliant

System Requirements	
Air Pressure:	80 psi (5.56 bars) minimum
Air Flow:	2.0 scfm (50.1L/min)
Operational Temperature:	55° to 90° F (13° to 32° C)
Relative Humidity:	30-80%
Minimum Floor Space:	183cm x 107cm (not including UFS Computer sidcar)
Input Line Voltage:	100-130/200-260VAC
Input Line Frequency:	50/60 Hz
Power Consumption:	1KVA

Socket Options	
Socket Card:	Including, but not limited to, CSP, QFN, µBGA, BGA, MLF, SOIC, LAP, TSOP, LCC, PLCC, QFP
Other Options:	Receptacle Socket options

Computer Specs	
Processor:	i7 Quad processor
RAM:	8 GB DDR3 SDRAM
Hard Drive:	500GB SATA3, SSD (Solid-State Drive) or 2TB NVMe (Non-Volatile Memory)
Power Supply:	750W ATX
DVD Drive:	Read Write SATA

The Computer in the BPM310 is an industrial-grade, purpose-built computer, that is a machine controller as opposed to a personal computer. It has the ability to access a user's Network/Domain but also has special hardware to control and monitor the various subsystems necessary for complex system operation.

Programming Hardware	
Architecture:	10 th Gen Concurrent Programming System with Vector Engine Co-Processor
Programming Sites:	2 to 6 sites, 1 to 8 sockets per site, 48 sockets max
Calibration:	Annual, may be performed on site
Diagnostics:	RAM, communications, calibration, timing, LEDs, fans, pinout, power supplies, voltage/current/slew for vpp and vcc, high current vcc mode, digital pin drivers, and relays. Ground Transistors, digital driver path to programmer, dcard LEDs, customizable diagnostics per dcard, Precision Measurement Unit (PMU) pin drivers
Memory:	256GB per site, upgradeable to 512GB
Communications:	USB 2.0
Data Pattern Broadcast:	25MB per second
Firmware Updates:	Software automatically performs firmware download

Pin Drivers	
Quantity:	240-pins standard, per site
Vpp Range:	0V to 25V
Ipp Range:	Up to 1.2A total
Vcc Range:	0V to 13V
Icc Range:	0-2A
Rise Time:	350 ps
Protection:	ESD, overcurrent shutdown, power failure shutdown
Independence:	Pin drivers and waveform generators are fully independent and concurrent on each site
Digital Range:	0-4.5V
Clocks:	800kHz to 200MHz

Software	
Required:	BPWin™
File Type:	Binary, Intel, Motorola, RAM, straight hex, hex-space, Tekhex, Extended Tekhex, ASCII, hex, OMF, LOF, MER and others
Device Processes:	ID check, blank check, continuity, auto start, compare, read, erase, program, verify, multi-pass verify, test, checksum, secure, device configure, auto-range, options and more
Operating System:	Windows 10 Pro, 64-bit
Network Interface:	Gigabit Ethernet (6)
Advanced Feature Software:	Simple and complex serialization, Cjob Monitor and Cjob Control (API)

Peripheral Options	
Peripherals:	Tape Input/Output, 3D Inspection, Tray Input/Output, Tray Stacker, Tray Shuttle, Tube Input/Output, Fiber Laser Marker, Label Presenter

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



UFS • 1,432 DPH • 6 Sites

BPM310

Production Programmer

Up to 6 fully universal programming sites with up to 48 sockets, producing the fastest programming times in the smallest footprint

Programming the Future



10th Generation Site Technology
Future-proof investment with true universal site technology



UFS 2.1
8-Up UFS Adapter for BGA 153; Up to 440 MB/sec Read & 201 MB/sec Write



Security
Protection for mission-critical applications and processes with BPM.NCRYPT



CyberOptics®
On-the-fly vision alignment—fast, precise and efficient in a production environment



WhisperTeach™
Automatic Z-Teach—reduces setup time per job and improves accuracy & quality

See the video at bpmmicro.com/BPM310



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