



1,432 DPH

# BPM 3910

Production Programmer

Powerful Automated Device Programmer in a Small Package

Our newest production programmer with a smaller footprint.

Perfect for clients progressing to automation. Ideal for high-volume and high-mix production.

## Programming the Future



### Make Device Programming Easy

Saving time in set-ups without requiring advanced technicians



### Get the Lowest Cost per Device

Bring programming in-house and turn your operation from a cost center to a profit center



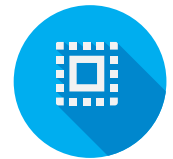
### 9<sup>TH</sup> Generation Site Technology

Future-proof investment with true universal site technology



### 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 and quality

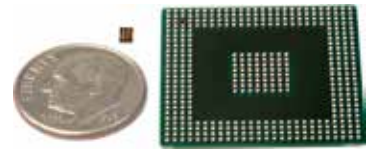
# BPM 3910

High-Throughput, High-Yield, and Fast Job Changeover Time equate to the Lowest Programming Cost-Per-Device

Award-winning  
BPWin™  
Software



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



Highest throughput in the smallest footprint

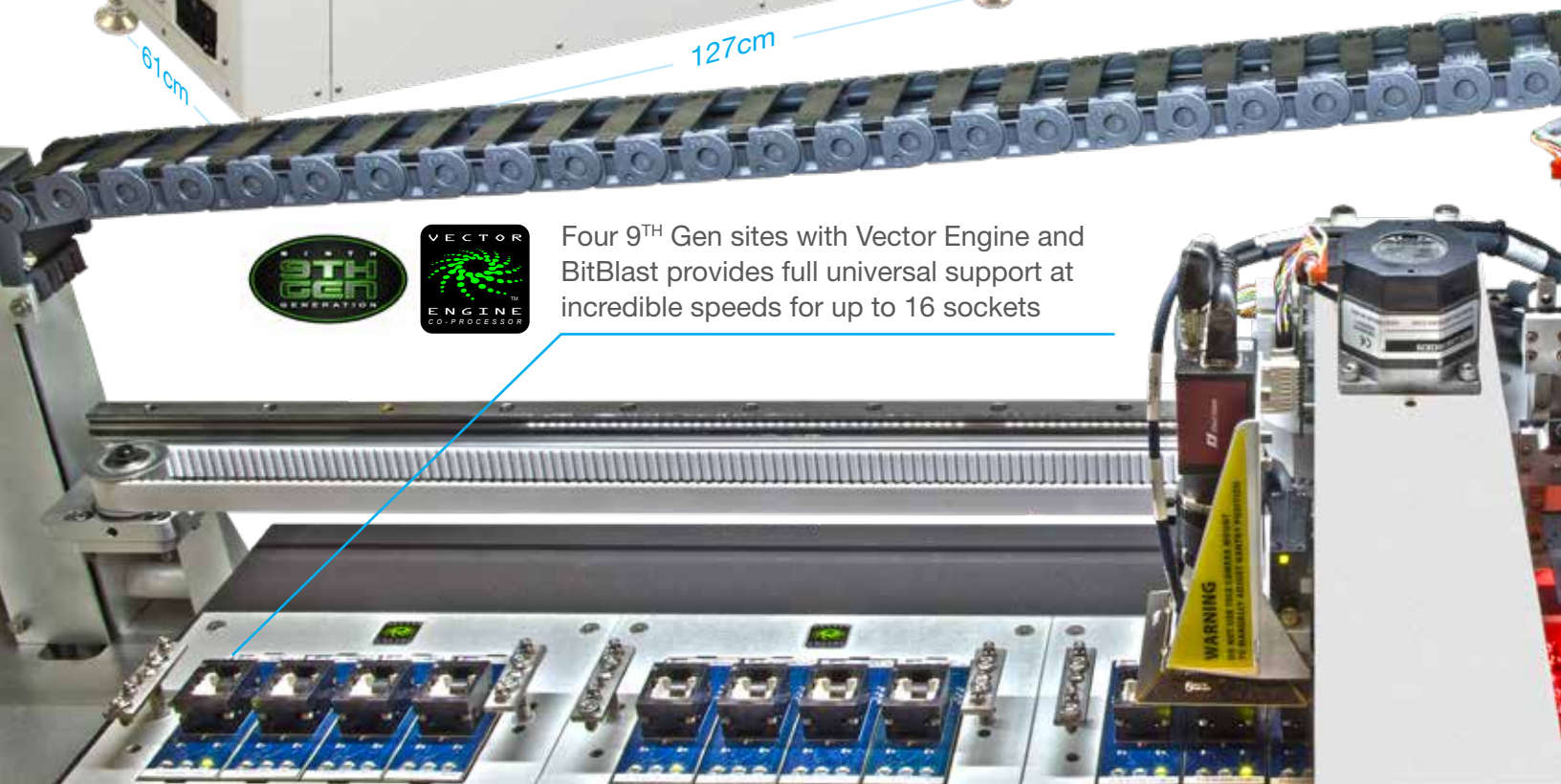


61cm

127cm



Four 9<sup>TH</sup> Gen sites with Vector Engine and BitBlast provides full universal support at incredible speeds for up to 16 sockets



Up To  
**1,432**  
Devices per Hour

# 3910



**Award-Winning Service**



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



9<sup>TH</sup> Gen site technology offers the broadest support in the industry at incredible programming speeds. We support more devices on a single site platform than any other

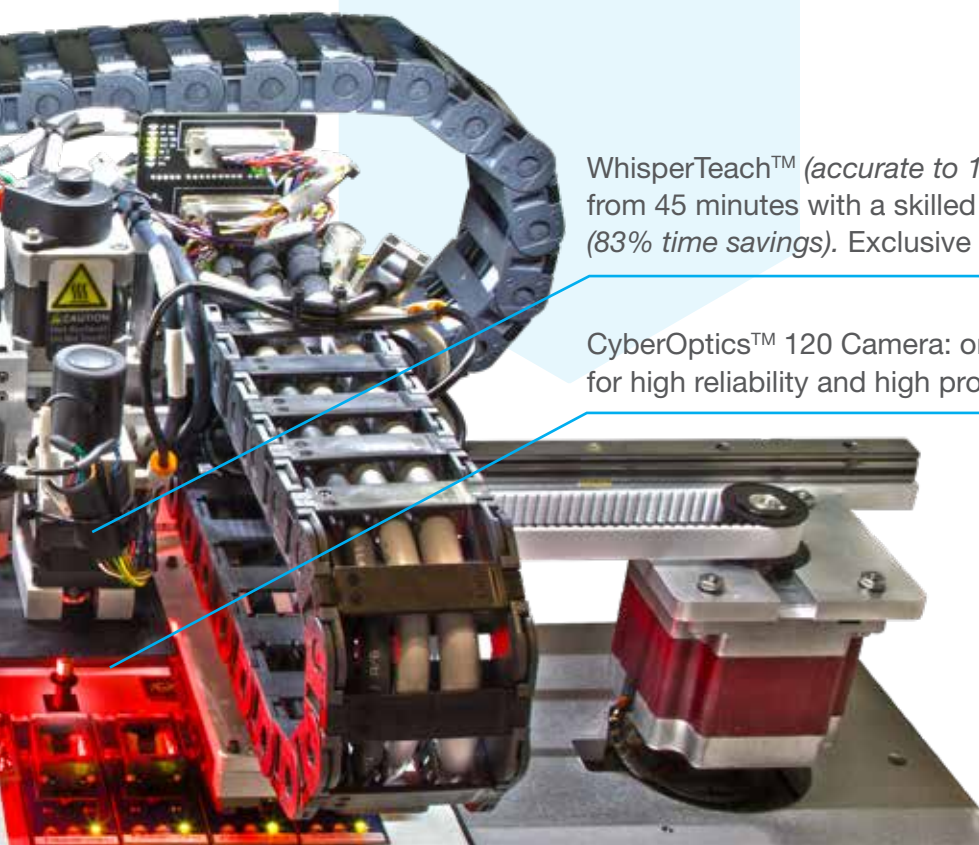


CyberOptics™ Vision with component auto-measure—for fast set-up, and on-the-fly alignment for maximum throughput

**Making Device Programming Fast, Easy and Profitable**

**Optional Automated Peripherals to maximize/customize your 3910**

- Laser Marker
- Tray Stacker
- Tape Input/Output
- Tube Input/Output
- Tray Shuttle



WhisperTeach™ (accurate to 15 microns) reduces set-ups from 45 minutes with a skilled technician to 7 minutes (83% time savings). Exclusive to BPM's Software

CyberOptics™ 120 Camera: on-the-fly vision alignment for high reliability and high production throughput

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

[bpmmicro.com/3910-2](http://bpmmicro.com/3910-2)  
713-688-4600

## BPM 3910 Specifications

### Pick & Place System

**Handler Throughput:** Up to 1,432 Devices per Hour (with vision centering)

**Component Handling Range:** 0402 to 240-pin QFP

**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

### 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

### Vision System

**Alignment:** CyberOptics™ On-The-Fly

**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

**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

### Programming Hardware

**Architecture:** 9<sup>th</sup> Gen Concurrent Programming System with Vector Engine Co-Processor

**Programming Sites:** 2 to 4 sites, 1 to 4 sockets per site, 16 sockets max

**Calibration:** Annual, may be performed on 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. 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 7, 64-bit

**Network Interface:** Gigabit Ethernet

**Advanced Feature Software:** Simple and complex serialization, Cjob Monitor and Cjob Control (API)

### Peripheral Options

**Peripherals:** Tape Input/Output, Tray Stacker, Tray Shuttle, Tube Input/Output, CO<sub>2</sub> Laser Marker

### Warranty

**Hardware:** One Year Hardware Warranty

**Software:** One Year Software Support

See the video at  
[bpmmicro.com/3910-2](http://bpmmicro.com/3910-2)

