



1,432 DPH • 7 Sites

BPM 3928

Production Programmer

Powerful Automated Device Programmer in a Small Package

Up To 28 Sockets!



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



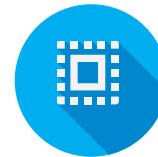
9TH Generation Site Technology

Future-proof investment with true universal site technology



CyberOptics®

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



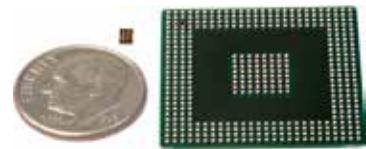
WhisperTeach™

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

BPM 3928

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

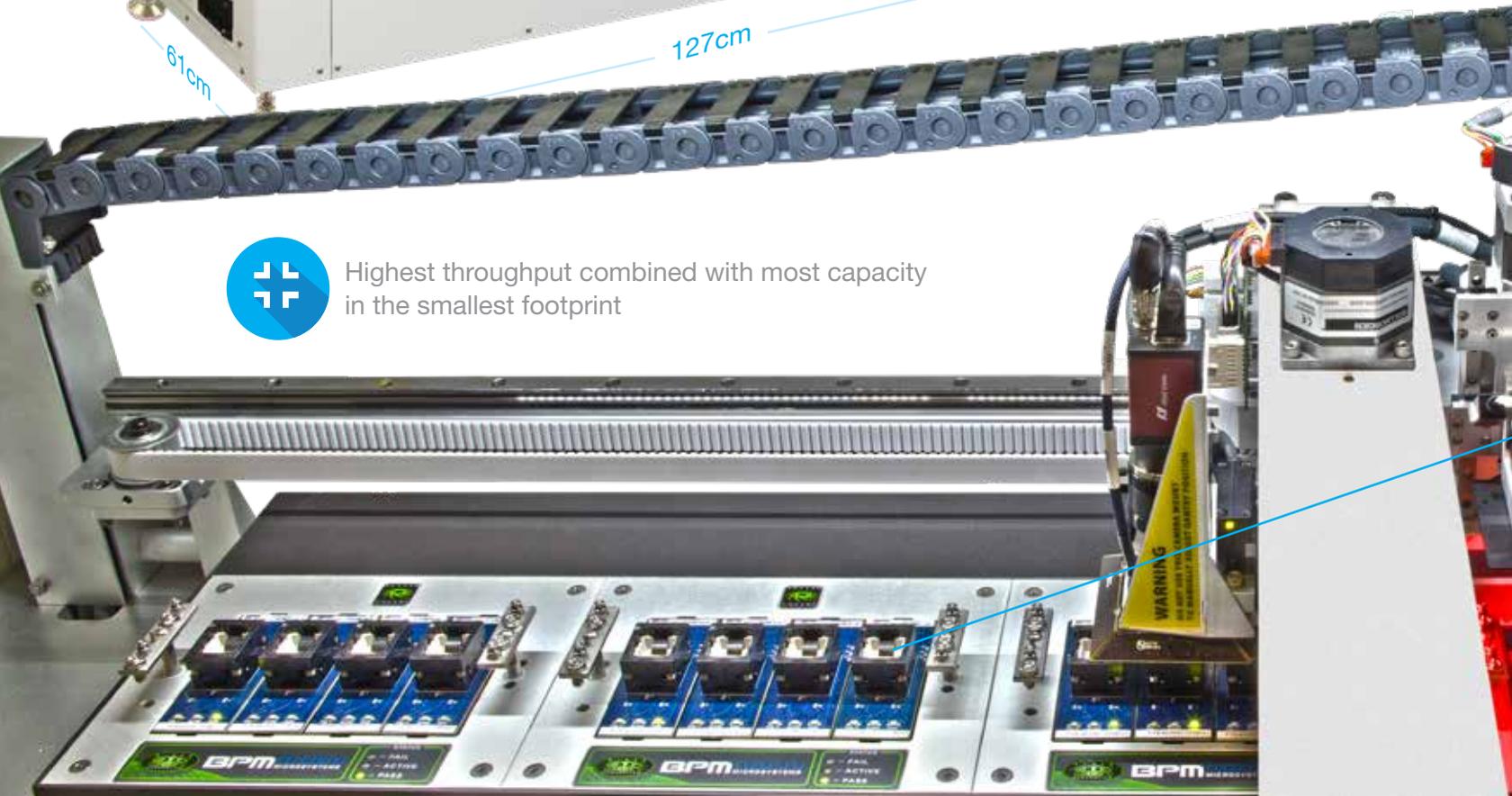
Award-winning
BPWin™
Software



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



Highest throughput combined with most capacity in the smallest footprint



Up To
1,432
 Devices per Hour

3928



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%*



9TH Gen 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



Seven 9TH Gen sites with Vector Engine and BitBlast provides full universal support at incredible speeds for **up to 28 sockets**



Optional Automated Peripherals to maximize/customize your 3928

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



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

BPM MICROSYSTEMS
 Setting the Standard in Device Programming

bpmmicro.com/3928-2
 (855) SELL BPM

BPM 3928 Specifications

Pick & Place System

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

Component Handling Range: 0402 to 240-pin QFP (0.4 x 0.2mm 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

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: 9th Gen Concurrent Programming System with Vector Engine Co-Processor

Programming Sites: 2 to 7 sites, 1 to 4 sockets per site, 28 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 10, 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, CO₂ Laser Marker

Warranty

Hardware: One Year Hardware Warranty

Software: One Year Software Support

See the video at
bpmmicro.com/3928-2

