3928 Automated Programming System

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
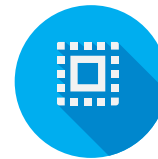
9TH Generation Site Technology

Future-proof investment with true universal site technology

CyberOptics®

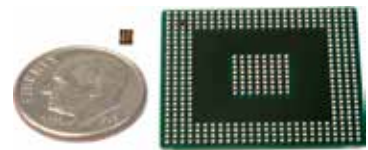On-the-fly vision alignment—fast, precise and efficient in a production environment

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
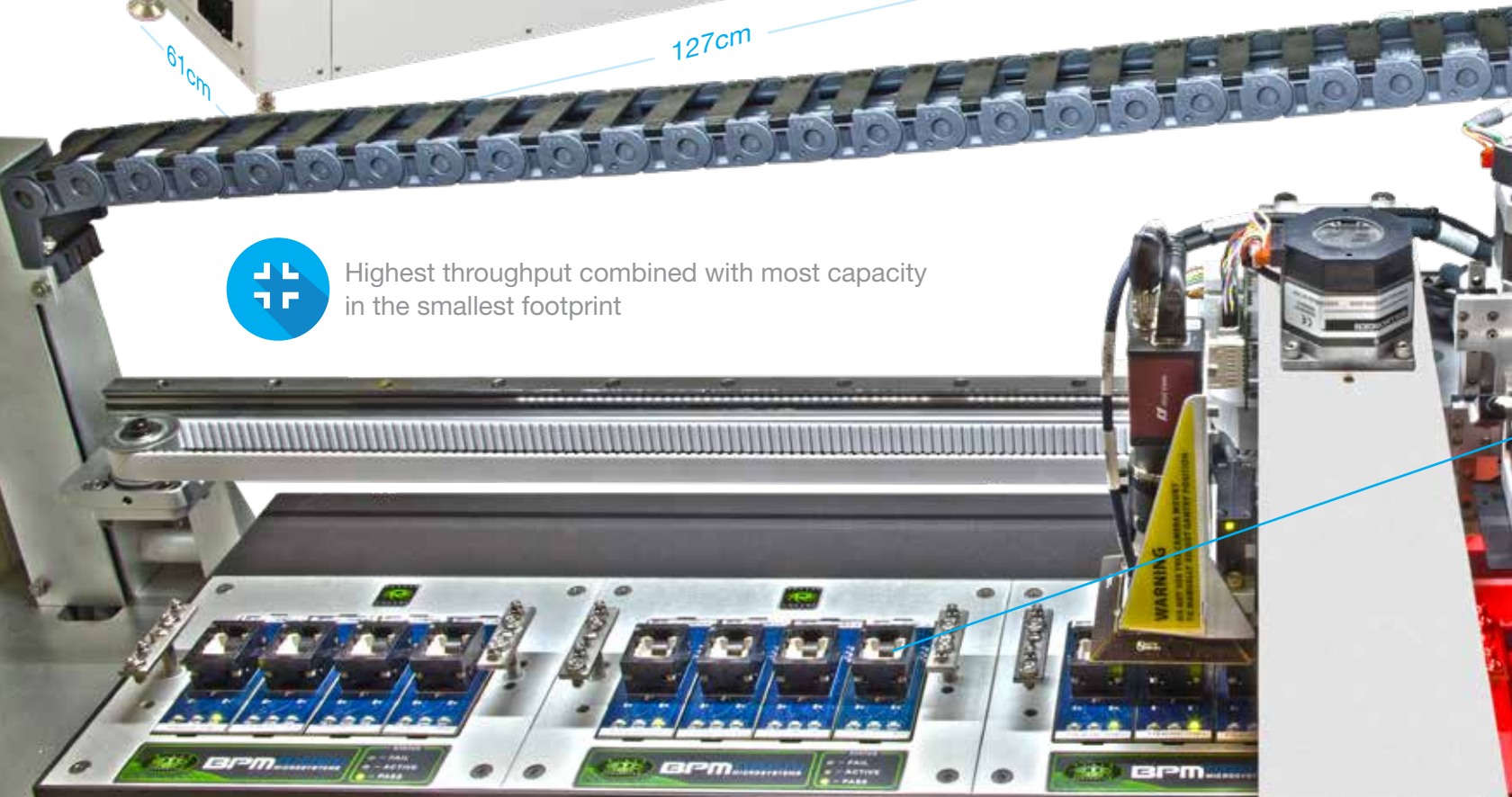
Award-winning BPWin™ Software

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

61cm

127cm

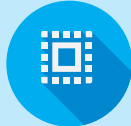Highest throughput combined with most capacity in the smallest footprint

Up To
1,432
Devices per Hour

3928

Award-Winning Software

WhisperTeach™ 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

VECTOR ENGINE CO-PROCESSOR™

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)

Windows 10

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

BPM MICROSYSTEMS
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CE

Made in the USA
with globally-sourced components

ISO
Certificate Registration
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