



FLASHSTREAM™

FLASH VECTOR PROGRAMMING SYSTEM

HELIX™

Integrated Programming System



Fast, Efficient Automated Flash Programming

The HelixFS-TU automated flash vector programming system, with integrated tube handling, provides hands-free programming of programmable flash devices. Precision automated handling capability, combined with proven programming technology, has expanded our automated system product line to offer an alternative solution for medium volume production programming of flash devices.



Next-Gen Processing Power



Featuring the Vector Engine Co-Processor™, which gives the Flashstream the programming industry's lowest programming overhead while maintaining the highest production quality programming signal; an industry first for production programming.

Flexible and Modular Production

Two precision-designed tube input and output-handling systems allow for the transfer of parts to and from the tube. The tube media system is designed to be highly reliable, while offering throughputs of up to 800 DPH. The HelixFS has the added feature of changing site technology between super fast Flashstream sites, for programming flash memories, or our 7th generation universal site technology, with simple tools. Purchasing additional 7th generation site technology adds the widest possible device list to your HelixFS, giving it the greatest flexibility in the device programming industry.



BPM MICROSYSTEMS

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PICK & PLACE SYSTEM

Handler Throughput:	800 DPH
Component Processing Range:	MSOP 8 up to PLCC 44
Device Carrier Supported:	Tube In and Tube Out only
Device Alignment:	Mechanical Nozzle Alignment by Device Body
Placement Force:	30 grams (compliant spring force of the Z axis)
Dimensions:	length 95 cm (37"), width 71 cm (28"), and height 64 cm (25")
Weight:	119 kg (262 lbs.)
Shipping Weight:	160 kg (350 lbs)
Shipping Dimensions:	119 cm (46.9"), width 125 cm (49.2"), and height 102 cm (40.2") (crate size)
Self Test:	Initialization and homing of X, Y, Z, and θ , computer memory and CPU at startup

POSITIONING SYSTEM

X Drive System:	high-performance stepper motor driven precision belt
X Axis Resolution:	0.004 mm (0.0002")
X Axis Repeatability:	± 0.02 mm (± 0.0008 ")
Y Axis Drive System:	precision lead screw
Y Axis Resolution:	0.004 mm (0.0002")
Y Axis Repeatability:	± 0.02 mm (± 0.0008 ")
Z Drive System:	high-performance stepper motor driven precision belt
Theta Drive System:	precision stepper motor-driven direct drive assembly
Theta Axis Resolution:	0.014°
Theta Axis Repeatability:	± 0.02 "

DEVICE CENTERING SYSTEM

Type:	Specially machined nozzles to align device during pick by the device body and not contacts
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SOFTWARE

Required:	BPWin
File Type:	binary, Intel, Motorola, RAM, straight hex, hex-space, Tekhex, Extended Tekhex, ASCII, hex, OMF, LOF, MER, and others
Device Commands:	blank, check sum, compare, options, program, test, erase
Features:	data editor, revision history, session logging, on-line help, device and algorithm information, Jobmaster™ software

SYSTEM REQUIREMENTS

Air Pressure:	0.5 MPa (73 psi)
Air Flow:	50 L/min (1.8 SCFM)
Operational Temperature:	13° - 32°C (55° - 90° F)
Relative Humidity:	30-80%
Minimum Recommended Floor Space:	length 180 cm (71") and width 115 cm (45") (with tooling installed and side table)
Input Line Voltage:	100-130/200-240 VAC
Input Line Frequency:	50/60 Hz
Power Consumption:	800 VA

HARDWARE

Architecture:	Vector Engine Concurrent Programming System with Vector Engine Co-Processor
Sites:	2 site model, 8 socket capable
Calibration:	annual, may be performed on site with included socket card
Diagnostics:	pin continuity test, RAM, pin drivers, power supply, communications, calibration, timing, ADC, DAC, interconnects
Memory:	32.7Gb per site standard
Communications:	USB 2.0
Data Pattern Broadcast:	31 Mb/s
Peak Verify Bandwidth:	20ns cycle
Firmware ROM:	No firmware ROM, Software automatically performs firmware download
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
PC System Requirements:	Microsoft Windows 2000 or above

PIN DRIVERS

Quantity:	240-pins standard
Vpp Range:	0-13V Slew rate 2V/us
Ipp Range:	0-50mA continuous
Vcc Range:	0-7V Slew Rate 2V/us
Icc Range:	0-150mA
Rise Time:	4ns
Protection:	overcurrent shutdown, power failure shutdown

