4710
Automated Programming System

- High-speed Flash programming with 44 socketsutilizing FX4™ socket modules and universal programming with 11 standard socket modules
- Production throughput up to 1,400 devices per hour
- Programs Flash memories, FPGAs, antifuse FPGA, PLDs, and Microcontrollers, including MCU's with embedded Flash memory
- Supports device densities up to 4 Gbits
- Programs at an unsurpassed 0.24s/Mb* with Seventh Generation Technology
- Very low voltage support down to 1.5V (Vdd)
- On-the-fly vision centering and fine-pitch handling without throughput reduction
- Handles all package types from DIP to µBGA including very small package such as SOT23 and MSOP8, a BPM Microsystems exclusive
- FX4™ socket module compatible for expanded capacity for high density devices
- USB 2.0 communications bus
- Most successful line of fine-pitch, automated programming systems
- Configurable options and scaleable capacity are perfect for medium and high volume applications
- Variety of input/output and marking options with tubes, trays or tape
- Laser marking with serialization and date code option
- The fastest programming times and unrivaled throughput means lower cost-per-device

**ST Microelectronics™ M28W640CB, program only.*

SEVENTH 7TH GEN GENERATION

4710™
Automated Programming System

Hands-free Flash and Universal Support

The 4710 is designed specifically for today's highest density devices and their longer programming times, making it the fastest at programming Flash, while still offering the versatility to program Microcontrollers, FPGAs, PLDs and all other device types. By taking advantage of the proven 7th Generation technology, we have improved the site hardware to allow us the capability of programming devices with densities up to 4 Gb. In addition, we have incorporated the industry's widely accepted high-speed USB 2.0 standard bus for communications. By combining the industry's fastest universal programming technology, 64Mb in 15s*, and BPM Micro's FX4 socket modules, which can program up to four devices simultaneously, the 4710 can program up to 44 devices at the same time resulting in four times the throughput.

BPM MICROSYSTEMS

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BPM MICROSYSTEMS

4710
Technical Specifications

PICK & PLACE SYSTEM

Handler Throughput:	1400 DPH
Component Processing Range:	SOT23 to 240-pin QFP
Laser Alignment:	component range - SOT23 to 208-pin QFP, minimum pitch 0.5mm
Placement Accuracy:	± 0.0024" (0.06mm)
Placement Repeatability:	± 0.0012" (0.03mm)
Placement Force:	60-600 grams positional control
Dimensions:	length 42" (106.6cm), width with laser 63" (160.2cm), width without laser 42" (106.6cm), and height with light tower 72" (182.8cm)
Shipping Weight:	1700 lbs. (771 kg)
Shipping Dimensions:	length 48" (122cm), width 48" (122), and height 69" (175cm)
Self Test:	power supplies, CPUs, memory, X, Y, Z, θ motion systems, spindle run out and height, vacuum system

POSITIONING SYSTEM

X-Y Drive System:	high-performance stepper motor-driven precision belt
X-Y Encoder Type:	linear optical scale
X-Y Axis Resolution:	0.0002" (0.0050mm)
X-Y Axis Maximum Velocity:	30"/sec (76cm/s)
Z Drive System:	high-performance stepper motor driven lead screw
Placement Accuracy:	90µ@ 4 sigmas, 67µ@ 3 sigmas
Z Axis Resolution:	± 0.001" (0.025mm)
Z Axis Repeatability:	± 0.0015" (0.038mm)
Theta Drive System:	precision stepper motor-driven anti-backlash twin gear assembly
Theta Axis Resolution:	0.015
Theta Axis Repeatability:	± 0.02"

VISION SYSTEM

Type:	CyberOptics Laser Align system
Component Location Resolution:	1 micron

SOFTWARE

File Type:	binary, Intel, JEDEC, Motorola, POF, straight hex, hex-space, Tekhex, Extended Tekhex, and others; automatic file type recognition
Device Commands:	blank, check sum, compare, options, program, test, verify, secure, continuity, ID check, erase
Features:	graphic display or job status, JobMaster™ control software, data editor, revision history, session logging, on-line help, device and algorithm information, optional simple and complex serialization

CE

SYSTEM REQUIREMENTS

Air Pressure:	80 psi (5.56 bars)
Air Flow:	8.1 SCFM (203 1/min)
Operational Temperature:	55° to 90°F (13°-32°C)
Relative Humidity:	30-90%
Floor Space:	length 60" (152.4 cm) and width 75" (190.5cm)
Input Line Voltage:	100-240 VAC
Input Line Frequency:	50/60 Hz
Power Consumption:	2.4 KVA

PROGRAMMING SYSTEM

Architecture:	Concurrent, independent universal programmer at each site
Devices Supported:	including, but not limited to, Antifuse, Low Voltage, PROM, EPROM, EEPROM, Flash EEPROM, Microcontrollers, SPLD, CPLD, FPGA
Included System Controller:	High-Grade Industrial Pentium PC, SVGA monitor, keyboard and mouse
Calibration:	automatic self-calibration
Diagnostics:	pin continuity test, RAM, ROM, CPU, pin drivers, power supply, communications, cable, calibration, timing, ADC, DAC, actuator, leakage current
Memory:	512MB per site
Programming Sites:	4 to 11 sites 1 to 4 sockets per site

PIN DRIVERS

Quantity:	240 per site
Analog Slew rate:	0.3 to 25V/µs
Vpp Range:	0-25V in 25mV steps
Ipp Range:	0-70mA continuous, 250mA peak
Vcc Range:	0-12V
Icc Range:	0-1A, 12µA resolution
Very low voltage:	to 1.5V (Vdd)
Rise Time:	800ps
Overshoot:	none
Clocks:	continuously variable 1 MHz to 30 MHz
Protection:	overcurrent shutdown, power failure shutdown
Independence:	pin drivers and waveform generators are fully independent and concurrent on each site

4710DS_EN_1006

BPM MICROSYSTEMS

BPM MICROSYSTEMS - Setting the Standard in Device Programming

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