jetlab® II

Table Top Printing Platform

Product Description

Based on MicroFab's highly successful jetlab® microdispensing and printing platform, the jetlab® II Table Top Printing Platform has most of the same capabilities, but in a much smaller footprint. The jetlab® II is designed for the laboratory development of jetting processes and materials, allowing MicroFab's customers and partners to investigate and optimize their specific applications. MicroFab's jetlab® family of printing platforms are currently in use in 23 countries worldwide.

Available Options

Stage mapping and thermal monitoring for increased accuracy; electronic pressure control; humidity control; HEPA filter & blower; custom printheads; drop & printed feature image analysis routines; automated fiducial recognition & location & automated alignment; heated workpiece holder and printheads; pre and post printing process functions. The jetlab® II is compatible with all -MicroFab's printhead offerings.

Standard Features

Software controlled X-Y positioning; 200x200 mm^2 substrate size & print area; Z axis control of printhead height; Print-on-the-Fly (straight and/or curved in any direction with synchronized vertical head motion possible) or Point-to-Point printing; raster & vector printing modes; arbitrary printing resolution; complex print job definition through scripting; control of multiple process functions (e.g. valves, light sources, etc.); software based rotation correction; CCD camera for drop observation; CCD camera with coaxial illumination for substrate observation; vibration isolated mounting surface; manual pneumatics controls; JetDrive™ III drive electronics unit with bipolar and arbitrary waveform modes, and single and burst modes.

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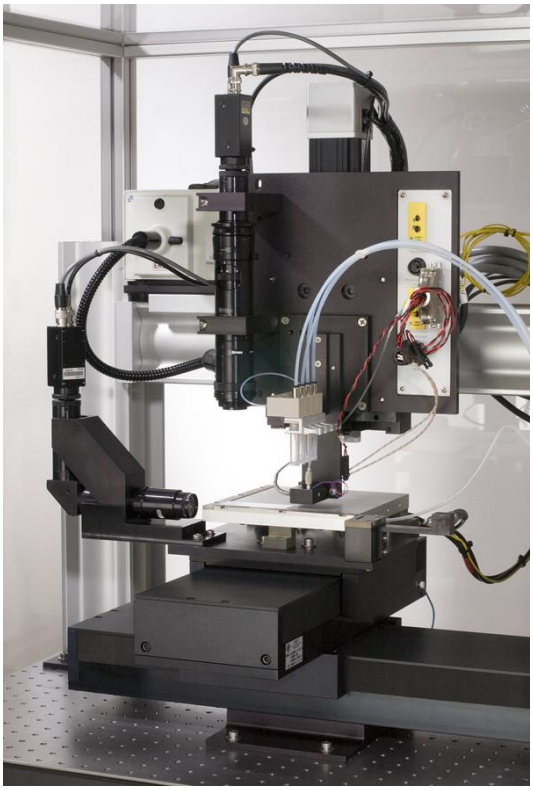
Applications

Organic Electronics
Displays
3-D Assembly
Security Printing
Nano-metal Conductors
Embedded Passives
Micro-Optical Elements
Medical Diagnostics
Drug Delivery
Biomedical Research
Sensors
Microassembly
Solar Cells
Fuel Cells
Tissue Engineering
Medical Devices
Sensor Calibration
Microchemistry



Specifications

Subsystem	Standard	Optional
X-Y travel	200 X 200 mm printable	300x300 mm printable area (jetlab® xl-300)
Velocity / Acceleration	100 mm/s / 400 mm/s^2	
X-Y Accuracy / Repeatability	±15µm / ±5µm	±3µm / ±1µm with mapping
Computer	Panel PC; monitor, keyboard and mouse; Windows 7; USB 2.0 & Ethernet ports; DVDRW	
Pneumatics	Precision pressure/vacuum manual regulator with digital readout for jet operation; three state manual pneumatic control	Electronic control: pressure/vacuum regulator and three state pneumatics
Vision	Horizontal camera & illumination for jet setup; vertical camera & illumination for alignment and post-printing inspection	Image analysis routines for automated alignment / inspection & drop analysis
Printheads & Jetting Devices	Printheads interchangeable; mounts all MicroFab standard printheads; compatible with all MicroFab jetting devices	Select one or more (not included in base price)
Complex Print Jobs	Script file: nesting, repetition with offsets, wait states, maintenance, & TTL controls; arbitrary printing resolution and direction	
Print Modes	Print-on-the-Fly and Point-to-Point	
Jet Drive Electronics	JetDrive™ III: bipolar and arb mode	Multi-channel JetDrive™ III-(n)

MicroFab
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