

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 thirteen countries worldwide.

Available Options

Stage mapping and thermal monitoring for increased accuracy; rotational stage; HEPA blower; custom printheads; image analysis software; automated fiducial recognition & location & automated alignment; heated workpiece holder; pre and post printing process functions. The jetlab® II is compatible with most of MicroFab's printhead offerings, including Solder Jet® and Polymer Jet™ printheads.

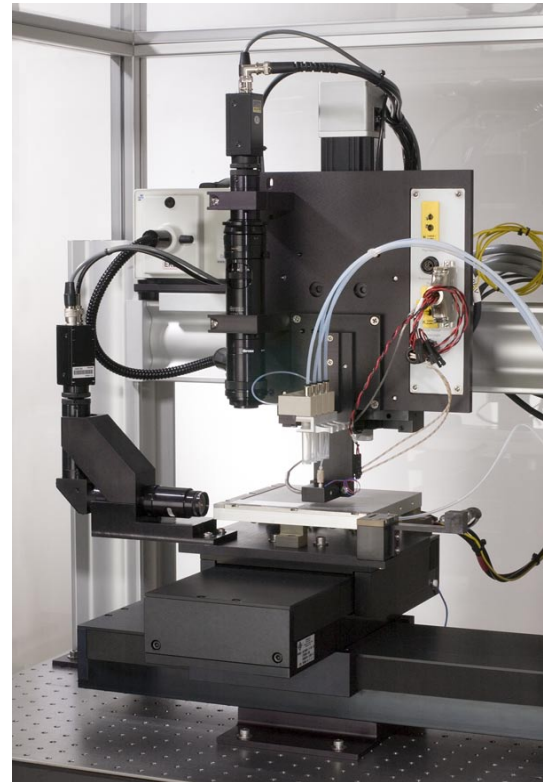


Standard Features

Software controlled X-Y positioning; 10x20 cm substrate size & print area; Z axis control of printhead height; Print-on-the-Fly (both axes simultaneously) or Point-to-Point printing; raster & vector printing modes, including 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 for substrate observation; vibration isolated mounting surface; pneumatics and thermal controls; JetDrive™ III Drive Electronics unit with bipolar and arbitrary waveform modes, and single and burst modes.

Applications

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| Organic Electronics | Biomedical Research |
| Displays | Sensors |
| Solder Bumping | Micro-assembly |
| Hermetic Sealing | Solar Cells |
| Nano-metal Conductors | Fuel Cells |
| Embedded Passives | Tissue Engineering |
| Micro-Optical Elements | Medical Devices |
| Medical Diagnostics | Sensor Calibration |
| Drug Delivery | 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 / ±2µm with mapping
Computer	Integrated PC; monitor, keyboard and mouse; XP Pro; USB 2.0 & Ethernet ports	
Pneumatics	Precision pressure/vacuum regulator with digital readout for jet operation; three state pneumatic control	Computer controlled pressure/vacuum regulator
Vision	Horizontal camera for jet setup; vertical camera for alignment and inspection	Image analysis software / routines for automated alignment / inspection
Jetting Devices	MicroJet room temperature devices; single jet & multiple jet configurations	Heated devices (Solder Jet®, Polymer Jet™); array printheads
Complex Print Jobs	Script file: nesting, repetition with offsets, wait states, maintenance, & TTL controls	
Print Modes	Print-on-the-Fly and Point-to-Point	
Jet Drive Electronics	JetDrive™ III: bipolar and arb mode	Multi-channel JetDrive™ III-(n)