

jetlab® 4 – Tabletop Printing Platform



Product Description

In response to our customers' requests for a low-cost tool to allow exploratory microdispensing investigations, MicroFab is pleased to offer the jetlab® 4. The newest member of our highly successful jetlab® family, currently in use in 23 countries worldwide, leans heavily on the successes of prior generations. By carefully considering the performance and budget requirements of laboratories exploring ink jet as a solution to their deposition challenges, jetlab® 4 provides a cost effective work station for research purposes.



Standard Features

Software controlled X-Y positioning; 160x120 mm² substrate size & print area; manual Z axis control of printhead height; Print-on-the-Fly (both axes simultaneously) or Point-to-Point printing; raster & vector printing modes; arbitrary printing resolution and direction; complex print job definition through scripting; software based rotation correction; CCD camera for drop observation mounted at 15°, allowing drop impact visualization and coarse substrate alignment; manual pneumatics controls; JetDrive Drive Electronics unit with bipolar and arbitrary waveform modes, and single and burst modes.

Available Options

CCD camera for substrate observation; heated workpiece holder and printheads; motorized Z-stage; drop and fiducial image analysis routines; electronic pressure control; HEPA filter & blower; 21x26 cm substrate size (4x1); improved positioning accuracy (4x1-A); integrated ultra-balance for calibration (4x1-B); computer controlled pressure/vacuum regulator.

Specifications

Subsystem	Standard	Optional
X-Y travel	160 X 120 mm printable area	210 X 260 mm printable area (4x1)
Velocity / Acceleration	50 mm/s / 1500 mm/s ²	
Accuracy / Repeatability	±30µm unidirectional / ±20µm	±25µm / ±5µm (4x1-A)
	Panel PC; monitor, keyboard and	

Computer	mouse; Windows 7; USB 2.0 & Ethernet ports; DVDRW	
Pneumatics	Precision pressure/vacuum regulator with digital readout for jet operation; three state pneumatic control	Electronic control: pressure/vacuum regulator and three state pneumatics
Vision	Horizontal camera at 15° for jet setup, print observation, alignment to features	Vertical camera for alignment, inspection Drop and fiducial image analysis software
Printheads & Jetting Devices	Select one or more (not included in base price)	Choose from PH-41, PH-41H & PH-47 xl versions: Mounts all MicroFab standard printheads; Interchangeable
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	

Additional Information (PDF)

[Brochure](#)

[Detailed Specifications](#)

Dimensions & Weight

CAD Machine Views