

Low Cost Print Stations

Product Description

For applications that need a larger printable area, better positional accuracy, and/or specialty printhead assemblies, the jetlab[®] 4 Print Station is now available in the 4xl version. In addition to a printable area of 210 x 260 mm², the increased size of the enclosure and the mounting of the horizontal drop observation camera on the X-Y stage allows the 4xl version to accommodate the PH-04a Polymer Jet High Temperature Printhead and the PH-06 Four Fluid Printhead. Improved positional accuracy and repeatability (25µm / 5µm) is also available, in the 4xl-A version.

Available Options

CCD camera for substrate observation; heated workpiece holder and printheads; motorized vertical stage; drop and fiducial image analysis routines; electronic pressure control; HEPA filter & blower; improved positional accuracy (jetlab[®] 4xl-A); computer controlled pressure/vacuum regulator.



Standard Features

Software controlled X-Y positioning; 210x260 mm² substrate size & print area; manual Z axis control of printhead height; Print-on-the-Fly (straight and/or curved in any direction) or Point-to-Point printing; raster & vector printing modes; arbitrary printing resolution; synchronized vertical head motion on the fly; complex print job definition through scripting; software based rotation correction; CCD camera for drop observation; manual pneumatics controls; JetDrive drive electronics unit with bipolar and arbitrary waveform modes, and single and burst modes.

Applications

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



Specifications

Subsystem	Standard	Optional
X-Y travel	210 X 260 mm printable area	
Velocity / Acceleration	50 mm/s / 1500 mm/s ²	
X-Y Accuracy / Repeatability	±30µm unidirectional / ±20µm	±20µm / ±5µm (xl-A)
Computer	Panel PC; monitor, keyboard and mouse; Windows 10; USB 2.0 & Ethernet ports	
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 jet setup mounted on stage for multichannel printheads	Vertical camera for alignment, inspection; drop and fiducial image analysis routines
Printheads & Jetting Devices	Select one or more (not included in base price)	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™ V: bipolar and arb mode	