jetlab® 4xl & 4xl-A

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 Low Cost Print Station is now available in the 4xl version. In addition to a printable area of 210 x 260 mm, 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; 160x120 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 (with motorized Z option); 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.

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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	±25µm / ±5µm (xl-A)
Computer	Panel PC; monitor, keyboard and 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 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	

MicroFab
TECHNOLOGIES•INC.

an ink-jet innovation company

1104 Summit Ave. suite 110 Plano, TX 75074 USA +1-972-578-8076 +1-972-423-2438 (f) www.microfab.com