

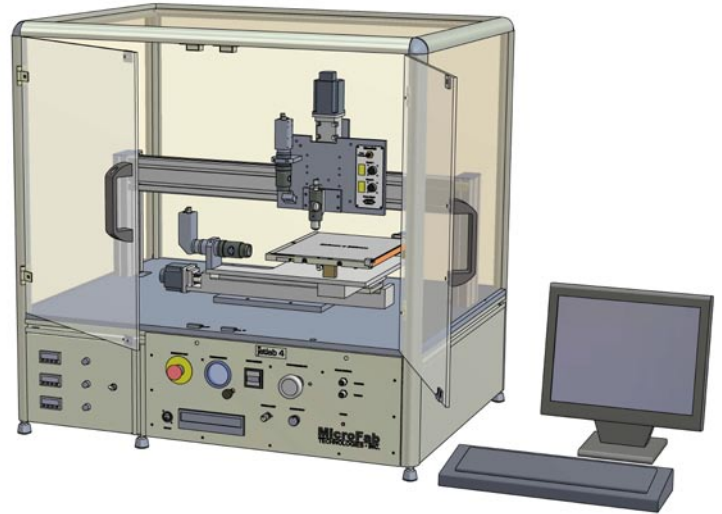
## Low Cost Print Stations

### Product Description

For applications that need a larger printable area, better positional accuracy, and/or specialty printhead assemblies, the jetlab<sup>®</sup> 4 Low Cost Print Station is now available in the 4xl version. In addition to a printable area of 21 x 26 cm, 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 substrate and / or printheads; motorized vertical stage; drop and fiducial image analysis routines; improved positional accuracy (jetlab<sup>®</sup> 4xl-A).



### Standard Features

Software controlled X-Y positioning; 21 x 26 cm substrate size & print area; manual Z axis control of printhead height; Print-on-the-Fly (both axes simultaneously) or Point-to-Point printing; arbitrary printing resolution and direction; complex print job definition through scripting; software based rotation correction; horizontal CCD camera for drop observation mounted on X-Y stage; vibration isolated mounting surface; pneumatics and thermal 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 <sup>2</sup>	
X-Y Accuracy / Repeatability	±30µm unidirectional / ±20µm	±25µm / ±5µm (xl-A)
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	Multichannel pneumatics
Vision	Horizontal camera jet setup mounted on stage for multichannel printheads	Vertical camera for alignment inspection; drop and fiducial image analysis routines
Jetting Devices	MicroJet room temperature devices; single jet configurations	Heated or high temperature printheads; multi-fluid 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	