

# LabSmith LabPackage

## Complete system for micro- and nano-fluidics

- ▶ Electric field control
- ▶ Precise fluid flow
- ▶ Fast, simple high pressure fluid connections
- ▶ Visualize your experiment

LabSmith's LabPackage gives micro- and nano-fluidic researchers total control over their experiments, from controlling fluid flow and electric fields to reliably capturing and imaging transient phenomena. LabSmith's LabPackage can help you to quickly get started with micro/nanofluidics experimentation.

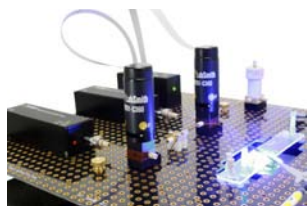


### Control Electric Fields



The HVS448 High Voltage Sequencer provides eight high-voltage channels with programmable sequencing for an entirely new level of voltage manipulation. With innovative voltage and current supply and sensing, and a ground-breaking sequencing environment, the HVS448 integrates your entire experiment, simply and safely.

### Route Fluid Flow



LabSmith SPS01 Programmable Syringe Pumps deliver volumetric flow rates on the order of nanoliters/minute, withstanding pressures of up to 500 psi with zero dead volume. The SPS01's plunger/glass sets are interchangeable to deliver volumes of 5, 10, 20, 50 and 100  $\mu\text{L}$ .

LabSmith's compact CapTite™ microfluidics components and automated uDevices are designed for leak-free connectivity, even at high pressures. All valves, interconnects, cartridges and fittings are designed for low dead volumes, easy cleaning and long life. These breadboard based components make it a snap to build simple or complex fluid circuits and world-to-chip interfaces.

### Visualize Experiments



The small footprint SVM340 Synchronized Video Microscope provides real-time visual monitoring as well as video capturing and publication-quality images. The inverted fluorescence microscope includes stroboscopic illumination, powerful video analysis software and a range of objectives and options for microfluidics and microbiology research, even epi-fluorescence measurements. All instruments include LabSmith software and can also be run using LabVIEW™ drivers.

# Table 1. LabPackage Specifications

COMPONENT	PART NUMBER		QUANTITY	
High Voltage Control (HVS448-LP) <sup>†</sup>				
Eight-channel high-voltage sequencer with 3000 V maximum differential voltage	A - Base price assumes HVS448-3000D or HVS448-3000D-LC B - HVS448-6000D or HVS448-6000D-LC		1	
High-voltage cable kit	A-HVC8-STD		1	
Micro-clip set for use with high-voltage cable kit (includes 8 clips)	A-MC8-01		1	
Platinum electrode wire, 0.584 mm dia (23 gauge), 10 cm length	A-PT-ELECTRODE		1	
Visualization (SVM-LP) <sup>†</sup>				
Synchronous video microscope. Includes control and acquisition software, RS-170- BW camera module, LED-B illuminator module, 10X objective, and motorized X-Y focus traverse stage	SVM340		1	
Schott filter for use in camera module. Wavelengths available: 495, 515, 530, 550, 570, 590, 610, 630, 645, 665 nm <sup>†</sup>	A-FILTER-[WL]		1	
Stainless steel sample stage for SVM340 with two rectangular openings: 20 x 32 mm and 22 x 66 mm	A-Plate		1	
SVM light shield, sits on top of SVM to block ambient light	A-SHIELD		1	
Fluid Control (uProcess-LP) – Syringes and Valves for use with uProcess Software (included) <sup>†</sup>				
Syringe Pump Body	SPS01		2	
Syringe glass and plunger – specify size (5, 10, 20, 50, 100 µl for 360 µm capillary or 100 µm for 1/16" tubing)	SG-XXX-C360, SG-080-T116		4	
Tools for changing syringe glass and plunger set	SPS-TOOLS		1	
Two-Position Automated Valve (choose from 360 µm o.d. or 1/16" o.d compatible)	AV201-360	AV201-T116	2	
4 Valve Electronic Manifold	4VM01		1	
Electronic Interface Board	EIB-100		1	
Integrated breadboard with 8 device connections and 1"x3" cutout for chip viewing via SVM340. Includes mounting hardware for attachment to SVM340.	iBB		1	
Connectors (CAPTITE-LP) - specify kit for 360 µm capillary, 1/32" tubing or 1/16" tubing <sup>†</sup>				
One-Piece Fitting	C360-100	T116-100	T132-100	75
One-Piece Plug	C360-101	T116-101	T132-101	10
Tee	C360-203	T116-203	T132-203	5
Cross	C360-204	T116-204	T132-204	5
Luer-Lock™ Adapter	C360-300	T116-300	T132-300	10
Bonded Port Connector*	C360-400		T132-400	25*
Breadboard mounting hardware and tools. Includes TORX wrench, hex wrench, and screws for mounting 5 valves, 10 interconnects to breadboard plus 4 chip clips and 8 electrode clips for mounting chips and electrodes to the iBB.	iBB-TOOLS			1
Breadboard Reservoir – 1.1 mL reservoirs with pressurizable caps and 3 connections	C360-BBRES		T116-BBRES	2
Epoxy Adhesive*	LS-EPOXY*			1*
microfluidic ChipShop chip – cross, 100 µm x 100 µm , 87 mm PMMA or TOPAS	LS-CROSSCHIP-PMMA		LS-CROSSCHIP-TOPAS	2
360µm kit: 150µm ID fused silica capillary with cutting stone; 1/32" kit: 250µm ID PEEK tubing; 1/16" kit: 0.03" ID PEEK tubing				1m

\* Only included in 360µm and 1/32" kits.

† Additional modules or equipment can be added at 15% discount if placed along with a LabPackage order.

Prices will vary depending on tubing size, model and/or substitutions.

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