

# S1000EON

## Flow Cytometer

Up to 6 Lasers, 30 Parameters,  
21" x 21" Footprint



*When we heard about the S1000EON's release [in the US], we jumped at the opportunity to be one of the first adopters. So, we field-upgraded our 4-laser, 14-color, 3-spot S1000EXi to a 4-laser, 20-color, 4-spot S1000EON. Knowing that our systems can always be upgraded when the latest Stratedigm technology comes out is awesome. It's easily saved us hundreds of thousands of dollars. I would definitely call these systems 'future-proof'.*

*Jim Henthorn*

*Research Assistant III, Flow & Imaging Lab Manager  
Oklahoma University Health Sciences Center*



### True Investment Protection

The S1000EON (pronounced "S-1000-eon") ushers in a new age of future-proof flow cytometry. Gone are the days of discontinued service of instruments and obsoleted hardware, both of which diminish return on investment (ROI). Stratedigm's unlimited upgradeability is unrivaled in the market today. No matter when you purchased your S1000 cytometer, you can be confident that you will have access to the latest innovations via field upgrades. The Stratedigm S1000EON integrated and modular design ensures that the architecture is functionally open-ended and that upgrading is simple and economical. Given the diversity of applications and dyes available today, the ability to customize your cytometer to your research needs is essential. True to its name, the S1000EON will propel your research for many years to come.



### Brilliant In More Ways Than One

From the S1000EXi, the S1000EON increases the number of parameters from 22 to 30 and lasers from 4 to 6. It also doubles the throughput, increases the dynamic range to 5 decades, creates more spatially separated interrogation points, and boosts sensitivity up to 300%! All of these major improvements are in the same footprint and at the same price as our 1st S1000 launched in 2008. This is our commitment to Cytometry Without Compromise™.



### Continuous Availability

Uptime is an important consideration when purchasing a cytometer and this is Stratedigm's highest priority. Our S1000EON is based on the technology we have been developing since 2004—a tried-and-true architecture that ensures the ultimate in reliability. Start with the optical bench: the patented, single plate "unibody" construction is the underpinning of a rugged design that performs to spec even if moved or jostled. The unique expanded polypropylene (EPP) enclosure eliminates vibrational and temperature-related instability—as an added bonus it reduces weight and part count. Automated software routines for startup, shutdown, and other tasks keep the instrument at the ready, while continuous software monitoring of key subsystems alerts you when attention is needed...before it becomes a problem. Our industrial IoT-based Remote Diagnostics can relay critical performance statistics to our service center—improving service levels and uptime, and decreasing costs. The S1000EON is ready when you are.

## Lasers

This system is designed to support up to 6 lasers with 4 points of interrogation.

- 372 nm – 75 mW
- 405 nm – 100 mW
- 488 nm – 150 mW
- 532 nm – 100 mW
- 552 nm – 100 mW
- 561 nm – 100 mW
- 640 nm – 100 mW
- 805 nm – 100 mW

Other laser wavelengths and powers available by request.

## Detector Parameters/Data Acquisition

- Dynamic Range: 5 decades for acquisition, 7 decades for analysis
- Linearity:  $R^2 > 99\%$

Forward Scatter (FSC) – enables separation of unfixed platelets from noise.

- FSC resolution: < 500 nm polystyrene beads
- FSC scales: log and linear
- FSC parameters: width, peak height, area
- Optional FSC photomultiplier tube (PMT) detector
- Optional Quad-FSC: 375, 405, 488, and/or 640 nm

Side Scatter (SSC) – resolves lympho-, mono-, and granulocytes.

- SSC resolution: < 200 nm polystyrene beads
- SSC scales: log and linear
- SSC parameters: width, peak height, area
- Optional Dual-SSC: 405 and/or 488 nm

Parameters

- Maximum number of parameters: 30
- Sensitivity: < 80 MESF
- Fluorescence resolution: < 2.5% CV
- PMT scales: log and linear
- PMT parameters: width, peak height, area

## Analysis Rate and Carryover

- Maximum analysis rate: up to 20,000 events/sec
- Carryover: <0.1%, with automatic backflush between samples

## Fluidics Tray

- Integrated fluidics tray does not increase footprint of the instrument
- Automated startup, shutdown, and cleaning cycles
- Automated decontamination procedure using on-board cleaning solution for all components in contact with sample
- Tank capacity: 4 L sheath, 4 L waste, 4 L auxiliary solution
- Optional expanded fluidics tank for automated filling of sheath and drainage of waste tanks

372 nm - Near-UV (75 mW)	405 nm - Violet (100 mW)	488 nm - Blue (150 mW)	532 nm - Green (100 mW)
BUV395 (405/20) DAPI (440/40) BUV496 (530/30) BUV563 (580/30) BUV661 (676/29) BUV737 (725/40) BUV805 (780/60)	BV421 (440/40) DAPI (440/40) BV480 (530/30) BV510 (530/30) BV570 (580/30) BV605 (615/30) BV650 (676/29) BV711 (725/40) BV750 (780/60) BV786 (780/60)	FITC (530/30) PE (580/30) PE-CF594 (615/30) PI (615/30) PE-Cy5 (676/29) PerCP (676/29) PE-Cy5.5 (725/40) PerCP-Cy5.5 (725/40) PE-Cy7 (780/60)	PE (580/30) PE-CF594 (615/30) PI (615/30) mCherry (615/30) RFP (615/30) PE-Cy5 (676/29) PE-Cy5.5 (725/40) PE-Cy7 (780/60)
552 nm - Olive (100 mW)	561 nm - Yellow (100 mW)	640 nm - Red (100 mW)	805 nm - IR (100 mW)
PE (580/30) PE-CF594 (615/30) PI (615/30) mCherry (615/30) PE-Cy5 (676/29) PE-Cy5.5 (725/40) PE-Cy7 (780/60)	PE (580/30) PE-CF594 (615/30) PI (615/30) mCherry (615/30) PE-Cy5 (676/29) PE-Cy5.5 (725/40) PE-Cy7 (780/60)	APC (676/29) Alexa700 (725/40) APC-R700 (780/60) APC-H7 (780/60)	Alexa790 (810LP) BUV805 (810LP)

Other dyes and filters available upon request.

## Sample Input

- Dead volume: < 8  $\mu$ L
- Minimum sample volume: < 20  $\mu$ L
- Maximum particle size: up to 40  $\mu$ m polystyrene beads and up to 130  $\mu$ m cells
- Patented low insertion force single tube loading

## Operating Conditions

- Operating conditions:
  - 60–86 °F (15–30 °C)
- Size (including fluidics tray):
  - 21.5" W x 21" D x 24" H
  - 54.6 cm x 53.3 cm x 61 cm
- Weight (including fluidics tray):
  - < 74 lbs (35 kg)
- Power:
  - 110/115/230 VAC, 50–60 Hz

