

# Lasair III<sup>®</sup>

Aerosol Particle Counter Models



**ISO 14644-1:2015  
COMPLIANT**

AVAILABLE WITH  
**ISO 17025  
CALIBRATION**  
for select parameters

 **OPTIONAL  
INTERNAL  
WIFI**

The Lasair III Particle Counter sets the standard for portable aerosol particle counters, and fully meets the requirements of ISO 14644-1 (including the new 2015 revision) and ISO 21501-4.

The Lasair III Particle Counter is available in three different flow rate configurations (1 CFM, 50 LPM and 100 LPM) to meet a variety of cleanroom applications. It can be used for routine remote and mobile cleanroom monitoring. Interactive software steps the user through the ISO 14644-1 (including the latest 2015 revision), EU GMP Annex 1, China GMP, and FS 209E room certification process.

Cleanroom certification results are available through a local printout, downloadable via USB in a secure format, or through the use of external software packages such as DataAnalyst, Facility Net or Pharmaceutical Net software.

The user interface is facilitated by the use of a large, easy-to-read IR touchscreen that works with gloves—no stylus required. Interaction problems commonly associated with resistive or capacitive touchscreens are eliminated.

The rugged chemical-resistant enclosure is lightweight for portability. The instrument's streamlined design minimizes particle traps, making the unit easy to clean. Power is provided to the unit through the use of the on-board hot-swappable batteries. Power can also be provided through the use of an external AC power source, which can simultaneously power the unit and charge the on-board batteries.

The Lasair III Particle Counter accepts inputs from a wide range of environmental sensors through the four built-in 4-20 mA inputs. Wireless network communications are made easy with an internal wireless board (optional), simplifying communications with network systems. The unit can be remotely managed via the built-in Web browser function, through Ethernet, WiFi or with the integrated Modbus TCP/IP communication protocol, and can connect with Pharmaceutical Net, Facility Net, FacilityPro<sup>®</sup>, or any other third party monitoring software.

## BENEFITS

- Comprehensive validation manual makes it easy to meet pharmaceutical regulatory requirements
- Operates in cleanrooms via a Web browser: Set up, sample, display, print, download data
- Removable batteries with optional external charger for continuous mobile use
- Pre-configured sampling recipes to reduce operator errors
- Long-term data archiving with DataAnalyst software
- Local printout for immediate hardcopy results
- USB electronic printouts for long term storage
- WiFi communication for easier data transfer and instrument control (optional)
- CSV file download for easy data integration
- Interactive software steps the user through the ISO 14644-1, EU GMP Annex 1, China GMP and FS 209E room certification process
- Up to 32 customizable alarm comments for easier cleanroom problem identification
- Modbus TCP/IP communication protocol for a wider integration with third party monitoring systems
- Quiet pump improves work environment
- 21 CFR Part 11 compliant download and privileges access management with up to 16 configurable users

## FEATURES

- 100 LPM, 50 LPM, or 1 CFM flow rates available
  - 100 LPM flow samples 1 m<sup>3</sup> in 10 minutes
- ISO 21501-4 compliant with a built-in Pulse Height Analyzer (PHA). Available with ISO 17025 calibration certificate. (Optional)
- Large, 8.4 inch IR touchscreen can be used when wearing gloves for simplified use
- Calculates and creates reports for ISO 14644-1:1999, ISO 14644-1:2015, EU GMP Annex 1, China GMP, and FS 209E
- Access via a Web browser
- Compatible with common cleanroom cleaning chemicals
- Choose from 12 languages for display and printout
- ISO14644-1:2015 Compliant

## APPLICATIONS

- Cleanroom monitoring
- Facility certification for ISO 14644-1:1999 & 2015, EU GMP, China GMP, FS 209E
- Trend analysis
- Statistical process control
- Troubleshooting particle excursions
- Manifold compatible
- Portable or dedicated use

# Lasair III<sup>®</sup>

## Aerosol Particle Counter Models

## Specifications

	<b>310B, 310C</b>	<b>350L</b>	<b>5100</b>
<b>Channels</b>	310B: 0.3, 0.5, 1.0, 3.0, 5.0, 10.0 µm 310C: 0.3, 0.5, 1.0, 5.0, 10.0, 25.0 µm	0.3, 0.5, 1.0, 5.0, 10.0, 25.0 µm	0.5, 1.0, 2.0, 5.0, 10.0, 25.0 µm
<b>Flow Rate</b>	1.0 CFM (28.3 LPM) ± 5%	50 LPM ± 5%	100 LPM ± 5%
<b>Calibration</b>	Meets ISO 21501-4 requirements - ISO 17025 Compliant Certification available (Optional)		
<b>Maximum Concentration<sup>a</sup></b>	> 1,380,270/ft <sup>3</sup>	> 832,599/ft <sup>3</sup>	> 688,495/ft <sup>3</sup>
<b>Counting Efficiency</b>	<ul style="list-style-type: none"> <li>50% ± 20% for most sensitive threshold</li> <li>100% ± 10% at 1.5 to 2.0 times channel 1 size</li> </ul> *Both meet ISO 21501-4 requirements.		
<b>Zero Count</b>	7.07 counts/m <sup>3</sup> (1CFM); 4.00 counts/m <sup>3</sup> (50 LPM); 2.00 counts/m <sup>3</sup> (100 LPM)		
<b>Data Storage</b>	3,000 complete data sets. 21 CFR 11 compliance. Long-term data storage/analysis with DataAnalyst.		
<b>Communication Modes</b>	Ethernet, Modbus TCP/IP, or RS-232; USB data downloading; optional internal wireless Ethernet		
<b>Controlling Software</b>	Facility Net, Pharmaceutical Net, FacilityPro, Microsoft <sup>®</sup> Internet Explorer <sup>®</sup> 5.0+, Firefox <sup>®</sup>		
<b>Remote Operation</b>	Remote web browser operation; real-time download to Facility Net or Pharmaceutical Net, or Modbus TCP/IP based monitoring systems		
<b>Report Output</b>	<ul style="list-style-type: none"> <li>Available by USB and/or thermal printer</li> <li>Creates reports for ISO 14644-1:1999, ISO 14644-1:2015, EU GMP Annex 1, China GMP, and FS 209E</li> </ul>		
<b>Environmental Sensors</b>	Configurable analog input (4-20 mA)		
<b>Languages</b>	English, French, German, Italian, Chinese (traditional and simplified), Japanese (Kanji), Korean, Polish, Portuguese, Russian, Spanish		
<b>Display and Printer</b>	8.4" color VGA display (640 x 480); IR touch screen (IP65 rated); built-in thermal printer		
<b>External Surface</b>	Polycarbonate (PC)		
<b>Enclosing Cleaning Materials</b>	Bleach, ethyl/isopropyl alcohol, peroxide/quaternary ammonium solutions		
<b>Sample Tubing ID<sup>b</sup></b>	3/8", 8 m max. length	1/2", 8 m max. length	3/4", 8 m max. length
<b>Sample Output Filtering</b>	Internally filtered to > 99.97% at 0.3 µm		
<b>Power and Battery<sup>c</sup></b>	100 – 264 V, 50 – 60 Hz, 150 W Lithium battery: estimated operation 3 hr (single) 6 hr (dual) for 1 CFM unit		
<b>Dimensions (H x W x L)</b>	11.9 x 12.9 x 10.2 in (30.1 x 32.7 x 25.9 cm)		
<b>Weight</b>	13.2 lb (6 kg) without battery, 16.5 lb (7.5 kg) with two optional batteries		
<b>Operating Environment</b>	Temperature: 32 – 86 °F (0 – 30 °C); Humidity: 5 – 95% RH non-condensing		

All dimensions, weights and values not provided with a tolerance are +/-10% values.

a. Less than 10.0% coincidence loss at maximum recommended concentration.

b. For pharmaceutical applications, tubing length should equal 2m maximum.

c. Battery life is based on continuous operation running one (1) minute samples and printing every minute.

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Patent details available at: [pmeasuring.com/trademarks-patents](http://pmeasuring.com/trademarks-patents).

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