

5510 Remote Airborne Particle Counter

1.0 CFM (28.3 LPM)

- Industry's highest concentration of 1,500,000 particles/ft³ @ 10% coincidence loss
- Ideal for use in research, industrial health and safety, indoor air quality, and cleanroom applications
- The most comprehensive internal self-diagnostics of any remote particle counter
- Remote diagnostics allow for remote service investigation through the Internet
- Supports MODBUS TCP, RTU and ASCII communication over Ethernet, or (optional) RS-485/RS-232
- Internet of Things (IoT) communication allows for network or cloud-based data options



The Particles Plus® 5510 Remote Particle Counter measures 0.5 to 25.0 µm and is the most feature advanced remote particle counters available. Integration is easy into a building automation and cleanroom management system via Ethernet, or (optional) Wireless 802.11 b/g, RS485 or RS232. Integrated web server displays instrument screen through any browser.

The 5510 remote particle counter displays and reports 6 user-selectable particle size channels, as well as (optional) temperature and humidity, flow and sensor status, date of last calibration, serial number, laser on-time, and date of manufacture for easy maintenance and warranty management. Storing up to 45,000 time-stamped particle count and environmental data records provides data redundancy on every instrument. Particles Plus® counters can be monitored remotely via web browser, or controlled and monitored using IMS Software.

All Particles Plus® counters meet ISO 21501-4 and JIS B9921. The 5510 ensures compliance with an on-board pulse height analyzer.

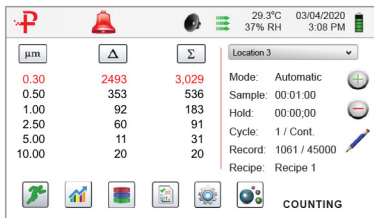
Features and Benefits

- 5510: Measures 0.5 µm to 25 µm
- 1.0 CFM (28.3 LPM) flow rate
- Long life laser diode technology
- Measures up to 6 channels of simultaneous data
- Approximates mas concentration in µg/m³ with density/refractive index corections
- Large easy-to-use icon driven colour touch screen display
- (Optional) Temperature and relative humidity probe
- Stores up to 45,000 sample records, 1,000 sample locations and 50 recipes
- Annotation function allows user to save 32 character notations to a sample record
- Easy configuration and transferable from instrument to instrument
- Connect using Ethernet, USB or (optional) Wireles 802.11b/g, RS485 or RS232
- Static or dynamic IP address (DHCP)
- Remote diagnostics allows for remote service investigation through the internet
- Versatile mounting options
- Internal audible alarm
- User-selectable channel sizes
- Complies with ISO 21501-4 and JIS B9921 standards
- Easy to clean and wipe down with minimal particle traps
- Seamless integration into a facility monitoring system
- Light weight stainles steel enclosure
- 2 year limited waranty. Extended warranties available.

Specifications

Model	5510
Size Range	0.5 to 25.0 μm
Size Channels	Factory calibrated at 0.5, 0.7, 1.0, 3.0, 5.0, 10.0 μm variable binning
Counting Efficiency	50% @ 0.3 μm ; 100% for particles >0.45 μm per JIS
Concentration Limits	1,500,000 particles/ft ³ @ 10% coincidence (per ISO 21501-4), 3,000,000 particles/ft ³ @ 10% coincidence (as tested and validated ¹)
Flow rates	1.0 CFM (28.3 LPM)
Light Source	Long life laser diode
Zero Count	<1 count / 60 minutes (<1 particles / 6 ft ³). No fault count subtraction.
Count Modes	Real-Time Meter and graph, cumulative/differential count/m ³ and count/ft ³ , and mass concentration (PM)
Count Alarms	1 to 9,999,999 counts
Calibration	NIST traceable
Display	4.3" (10.9 cm) WQVGA (480x272) color touch screen
Printer (Optional)	External thermal printer available
Vacuum Requirements	External vacuum >15" (38.1 cm) of Hg
Airflow	Internally monitored
Number of Channels	6
Custom Size Channels	Calibration for custom size channels available
Audible Alarm	Adjustable built-in alarm
Reports	ISO 14644-1, EU GMP Annex 1, FS 209E
Communication Modes	Ethernet and USB (Optional) Wireless 802.11 b/g, RS485 or RS232.
Environmental Sensor	(Optional) Temperature 32° to 122°F (0° to 50°C) $\pm 1^\circ\text{F}$ (0.5°C) and relative humidity probe 15-90% $\pm 2\%$
Alarm	Alarms on counts for all particle sizes, low battery, sensor failure, environmental sensors and flow
Standards	ISO 21501-4 and JIS B9921
Calibration	Recommended minimum once per year
External Surface	Stainless steel
Dimensions (L x W x H)	5.2" x 2.3" x 8.9" (13.3 cm x 5.8 cm x 22.6 cm) includes barb fittings
Weight	2.6 lb (1.18 kg)
Accessories	Operating manual on USB flash drive, isokinetic probe, temperature relative humidity sensor, filter, battery, data download software, USB cable, power supply & cable
Optional Accessories	Printed manual, spare battery, external battery charger, external printer and isokinetic probes
Buffer Memory	45,000 sample records (rotating buffer) including particle count data, environmental data, locations and times. Scrollable on screen or printout
Sample Locations	Up to 1,000 locations 20 characters long
Sample Time	1 second to 99 hours
Power	110 to 240 VAC 50/60 Hz universal in-line power supply
Operating Conditions	41° to 104°F (5° to 40°C) / 20% to 95% non-condensing
Storage Conditions	32° to 122°F (0° to 50°C) / Up to 98% non-condensing
Warranty	2 year limited warranty. Extended warranties available.

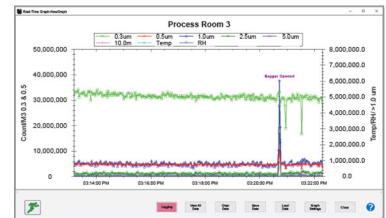
1- Validated by independent analysis see paper available at www.particlesplus.com/aac2022_paper



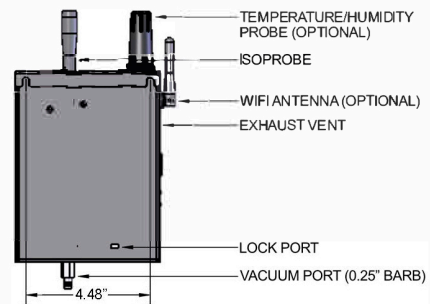
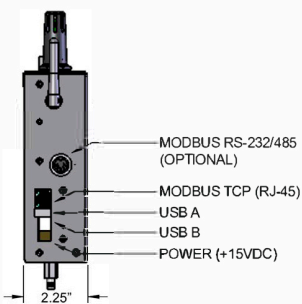
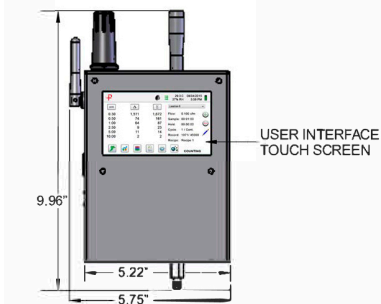
Audible and Visual Alarm Management



Icon Driven Menus for Ease-of-Use



Control and Manage Remotely with IMS



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31 Tosca Drive
 Stoughton, MA 02072 U.S.A.
 +1-781-341-6898
www.particlesplus.com