5510 Remote Airborne Particle Counter
1.0 CFM (28.3 LPM)

The Particles Plus® 5510 Remote Particle Counter measures particles from 0.5 to 75.0 μm at a flow rate of 0.1 CFM (2.83 LPM). These user-friendly instruments display up to six selectable particle size channels, along with optional temperature and relative humidity measurements.

Designed for cleanroom monitoring, indoor air quality, industrial hygiene, research, and health & safety applications, the 5000 Series offers exceptional versatility. From the cleanest labs to the dirtiest worksites, confidently monitor any environment thanks to the industry's highest particle concentration limits.

One of the key advantages of the 5000 Series as a remote particle counter is its built-in touchscreen display. It provides real-time visual feedback for technicians working in critical areas, enabling immediate identification of elevated particle counts. Adjustable audible alarms offer an additional layer of awareness in critical environments. The Particles Plus® Real-Time Monitoring technology enables dynamic particle investigations, displaying data in particles per second to help users quickly locate contamination sources in controlled environments.

Data can be managed directly on the device or through the free Particles Plus® software. Export raw data in .CSV format or generate reports (ISO 14644-1, EU GMP Annex 1, or FS 209E). Remote diagnostics are also available from anywhere with an internet connection. The 5000 Series can function as a fully portable, battery-operated solution or be easily integrated into building automation and cleanroom management systems with multiple communication options.
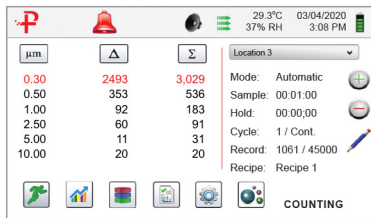
Features and Benefits

- Measures up to six particle size channels simultaneously
- Approximates mass concentration in μg/m³ with density and refractive index corrections
- Long-life laser diode technology for reliable performance
- Large, intuitive color touch screen display with an easy-to-use icon-driven interface
- Includes temperature and relative humidity probe
- Stores up to 45,000 sample records, 1,000 locations, and 50 sampling recipes
- Annotation feature allows users to save 32-character notes with sample records
- Connect using Ethernet, USB, Wi-Fi (optional), RS 485 or RS232
- Common interface ensures ease of use across all products
- Resolve issues quickly from any location with internet-enabled remote diagnostics
- Generate and export reports for ISO 14644-1, EU GMP Annex 1, and FS 209E
- Built-in audible and visual alarms for real-time alerts
- Complies with ISO 21501-4 and JIS B9921 standards
- Seamlessly integrates into facility monitoring and building automation systems
- Easy to clean, lightweight stainless steel enclosure with minimal particle traps
- 2 Year Limited Warranty (Extended and Lifetime Warranties available)

Specifications

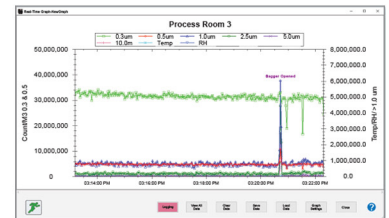| Model	5510
Size Range	0.5 to 25.0 µm
Size Channels	Factory calibrated at 0.5, 0.7, 1.0, 3.0, 5.0, 10.0 µm variable binning
Counting Efficiency	50% @ 0.3 µm; 100% for particles >0.45 µm per JIS
Concentration Limits	1,500,000 particles/ft^3 @ 10% coincidence (per ISO 21501-4), 3,000,000 particles/ft^3 @ 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 (480×272) 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 (32-122°F, ±1°F / 0-50°C, ±0.5°C) and relative humidity probe (15–90% RH, ±2%)
Alarm	Integrated alarms for particle counts (any channel), sensor failure, environmental sensors, and flow rate
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 in (13.3 cm x 5.8 cm x 22.6 cm) includes barb fittings
Weight	2.6 lb (1.18 kg)
Accessories	User manual + Instrument Management Software (IMS) on USB flash drive, isokinetic probe, temperature relative humidity sensor, zero-count filter, USB cable, and power supply
Optional Accessories	Printed manual, carrying case, external printer, barbed fittings, and tubing
Buffer Memory	Stores up to 45,000 sample records with particle counts, environmental data, locations, and timestamps
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	41-104ºF (5-40ºC) / 20% to 95% non-condensing
Storage Conditions	32-122ºF (0-50ºC) / Up to 98% non-condensing
Warranty	2 year Limited Warranty (Extended and Lifetime warranties available)

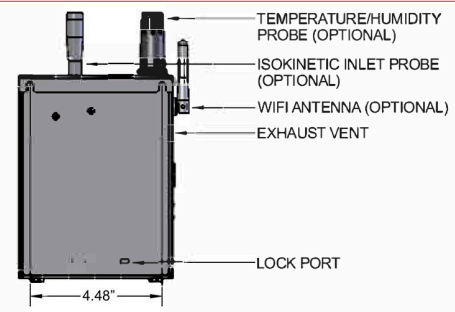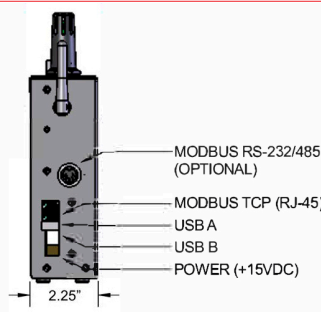1- Validated by independent analysis see paper available at www.particlesplus.com/aac2022_paper
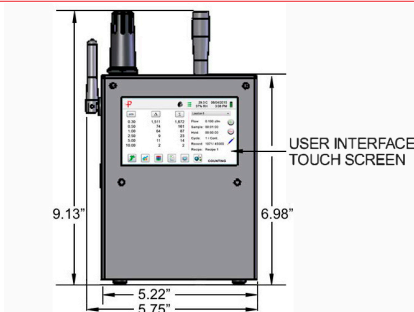

Audible and Visual Alarm Management

Icon Driven Menus for Ease-of-Use

Control and Manage Remotely with IMS

USER INTERFACE TOUCH SCREEN
9.13"
6.98"
5.22"
5.75"

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MODBUS TCP (RJ-45)
USB A
USB B
POWER (+15VDC)
2.25"

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ISOKINETIC INLET PROBE (OPTIONAL)
WIFI ANTENNA (OPTIONAL)
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LOCK PORT
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