

---

## **Superthin 3-Channel Handheld Particle Counter**



### **HPC301**

#### **Features**

- **Simultaneously measures 3 user configurable particle sizes**
- **Counting modes with cumulative/differential/concentration/average/auto-repeat / timer**
- **Up to 3000-data (1000 sets) internal memory**
- **Excess-count-limit warning**
- **USB and Bluetooth interface for data downloading**
- **External digital temperature, humidity and pressure probe**

HAL-HPC301, replacing the popular but obsolete model HPC300, is a completely new designed, integrated with the state-of-art technology, handheld laser particle counter, The stylish design of HPC301 features easy-clean stainless enclosure particularly suitable in ultra clean environment. Because of its low-cost, versatility, and affordability, it can also be used for indoor/outdoor air quality (IAQ) application. The touch-screen display has adjustable color scheme and everything-at-a-glance user interface. The settings of measurement parameters as well as results displayed in **total counts, number concentration** or/and **mass concentration** as well as **PM values** (*new feature for IAQ application*) are all controlled and realized by an internal microprocessor (MCU). The HPC301 simultaneously measures three channel sizes that are configurable by a user. The data stored onboard can be downloaded through either a USB or Bluetooth wireless interface to a smart phone, a tablet or a computer.

The HAL-HPC301 is manufactured in the USA and is in compliance with the international standards (JIS B 9925:1997 and ISO21501 and ISO14644-1) and CE certified. It is very unique compared to any other manufacturers in the market. It features high sensitivity, multiple functional capabilities and extended battery operating time. It is compact, slim, and lightweight. The improved side-access ports and tripod mountable makes it very user friendly.

## Applications

- Clean environment monitoring
- Indoor air quality
- Test/Check filter seal and efficiency
- Trace contamination source
- Analysis of particle size distribution

## Specifications

Light Source	Laser diode (>100,000 hours)
Sensitivity	0.3 $\mu$ m
Size Range	0.3 $\mu$ m~20 $\mu$ m
Channels	All three channels and size are user configurable
Counting Efficiency	50 $\pm$ 20% @0.3 $\mu$ m 100 $\pm$ 10% @0.45 $\mu$ m
Coincidence Loss	<5% @70,000 Particles/Liter or <5% @2,000,000 particles/ft <sup>3</sup>
Zero Count	<1 count per 5 minutes
Flow Rate	2.83 L /min (0.1cfm)
Sampling Time	User defined: (up to 59m59s) and auto repeat (up to 99 times)
Count Limit Warning	FED STD 209E (Class 1 ~ 100,000) or ISO 14644-1 (Class 2 ~ 9)
Sampling Mode	Cumulative, differential, concentration (counts/liter), mass concentration $\mu$ g/m <sup>3</sup> , TSP and PM values) (optional)
Error Indications	Excess count limit, optics contamination, loss of laser power, insufficient battery power
Interface	USB, Bluetooth 4.0
Internal Memory	3000 measurement data (1000 sets)
Power	Li-ion polymer rechargeable battery (7.4V/5200mAH) or 9VDC1.5A AC Adapter (100~240V input)
Max. Operating Time	Continuous operation > 8 hours with Li-ion battery
Dimensions	190 (H) x90 (W) x 46 (D) mm
Weight	< 950 grams (including battery)
Environmental Conditions	Operating: 0 ~ 50 $^{\circ}$ C, < 90%RH Storage: -20 ~ 65 $^{\circ}$ C, < 90%RH
Standard Accessories	AC adaptor, isokinetic probe, USB data cable, portable carry case, data download software (CD), NIST-traceable calibration certificate
Optional Accessories	Zero-count filter, digital temperature and humidity sensor probe, mini Bluetooth printer, tripod
Mass Concentration Option	HAL-HPC301MS is capable of displaying particle concentration in $\mu$ g/m <sup>3</sup> and PM values