NANODUST AirPN10

Our AirPN10 is an ultrafine particle (UFP) monitor designed for measuring the concentration of hazardous nanoparticles in ambient air. It allows users to assess the pollution levels of UFPs, which the WHO concluded to have severe impact on human health and the environment. The combination of an advanced diffusion charging detector together with our unique aerosol switching technology makes the AirPN10 the only instrument to determine quasi-simultaneously the solid and the total number concentration within a range of 1,000 to 500,000 particles per cubic centimeter. Together with the measured average particle size information, this allows to better link ambient UFP pollution to emission sources from traffic, industry and agriculture. Designed as lightweight and easy-to-use instrument for long-term usage, the AirPN10 provides a unique solution for dense and large-scale UFP immission monitoring networks and the source assignment in emission hotspots.

FEATURES:

- 24/7 long-term monitoring of ultrafine particles
- Cost-effective & easy assessment of WHO critical pollution levels
- Measures solid and total particle number quasi-simultaneously
- Size sensitivity down to 10 nanometers
- Option for additional PM1/PM2.5/PM4/PM10 sensor
- Frequent self-checks ensure reliability
- Calibrated with soot in an ISO-17025 traceable lab
- Data transmission via Ethernet or 4G into cloud or customer server
- Lightweight design with wall or post mounting option
- Optional ambient sensor

SPECIFICATIONS:

Measured Quantity:	Solid and/or Total Particle Number Concentration (sPN & tPN) optional: PM1, PM2.5, PM4, PM10
Measurement Range:	1.000 – 500.000 #/cm3
Size Sensitivity:	10-300 nm, optional: 0.01 μm – 10 μm
Accuracy:	25% or 1.000 #/cm3
Volatile Particle Removal:	Evaporation Tube (only sPN path)
Calibration Aerosol:	Soot
Sample Inlet:	PM10 Sampling Head
Ingress Protection:	IP55 Weatherproof
Communication:	Ethernet, 4G
User Interface:	5" Removable Touchscreen or Remote
Maintenance Interval:	1 year
Weight:	~5 kg
Power:	100-230 VAC, 50-60Hz
Power Consumption:	<100 W

Application example of an AirPN10 mounted to a light pole in an emission hotspot
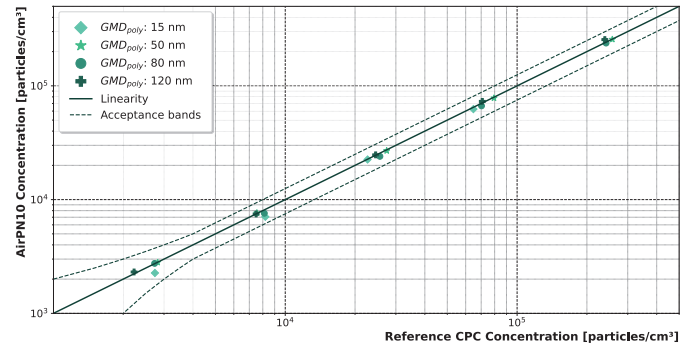
Size-dependent linearity against traceable reference CPC
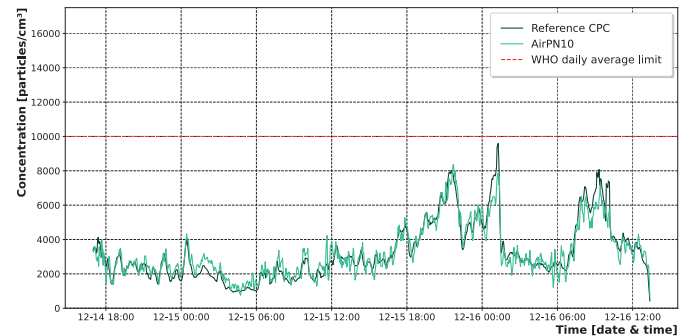
Ambient ultrafine particle monitoring with the AirPN10