

Sensor Performance

Measurement	Range	Resolution	Accuracy + Precision	Uncertainty (95% CI)	Other Specification
CO ₂	400 to 5,000 ppm	1 ppm	±40 ppm at 425 ppm	±30 ppm ±3% rdg	±10 ppm/ann Or ABC correct
NO ₂	4 to 2,000 ppb	1 ppb	±5 ppb RMSE	±20% rdg at TLV	
PM ₁ PM _{2.5} PM ₁₀	1 to 1,000 µg/m³	0.1 µg/m³	<3% repeatability		
PNC ₁ PNC _{2.5} PNC ₁₀	250 to 1,000,000	1 PN/cm³	<5% linearity		
Ambient temperature	-5 to 50°C	0.01°C	±0.10°C (0 to 60°C)	±0.15°C	
Ambient %RH	0 to 95%RH	0.1%RH	±1% (25°C) ±1.5% (0 to 50°C)	±2% RH (<90%RH, 25°C)	<90%RH
Radiant temperature	-5 to 50°C	0.01°C	±0.10°C (0 to 60°C)	±0.15°C	
Barometric pressure	850 to 1100 hPa (mbar)	1 Pa	±8 Pa (23°C)	±10 Pa (15-55°C)	<±10 Pa/ann; <±1.5 Pa/24 hr
Ambient light	0 to 1000 lx	0.1 lx		±10% (light type)	545 nm peak
Total light	0 to 12 W/m²	0.01 W/m²		±5%	280-900 nm
Sound pressure	45 to 110 dB	0.1 dB	1.5 dB at 1kHz	2.5 dB at 1kHz	
dB(A) Class 2	30 to 105 dB	0.1 dB	1.5 dB at 1kHz	2.5 dB at 1kHz	
dB(C) Class 2	30 to 110 dB	0.1 dB	1.5 dB at 1kHz	2.5 dB at 1kHz	
Airspeed X and Y	0.10 to 10 m/s	0.01 m/s		0.1 m/s ±3% rdg	

Environmental, Mechanical

Parameter	Specification	Notes
Case dimensions	70 x 94 x 42 mm	Plus 2 mm rubber feet
Case weight	165g	Optional Tera NextPM: 85g
Temperature	0°C to 50°C	Survives -20 to 65°C but is not within performance specs
Relative Humidity	0%RH to 90%RH	Non-condensing
Pressure	700 to 1150 hPa	Barometric pressure sensor error increases beyond 850 to 1100 hPa

Electrical

Parameter	Specification	Notes
Battery	Type 21700, 5,000 mAh rechargeable Li-ion	Not user accessible
AC power	5 VDC via USB C socket	<250mA with NextPM
Power consumption	2.2mA to 5mA (Logger only)	PM: 90mA, 250mA w/heater
Battery lifetime	50 days typical, 80 days maximum	Depends on user selected setup
Battery lifetime with PM	60 hours (continuous, heater off) 50 days (15 min PM sampling, heater off)	AC powering is recommended if >60%RH (PM heat switches ON)

Cloud, Memory, Warranty

Item	Details	Notes
BuiltAir® Cloud		Data compensation, storage, analysis. Annual charge.
Logger memory	500,000 records	Logger memory backs up data continuously and stores readings when working offline
Warranty	12 months	From date of delivery. Meets quality and performance

Border Router, Particle Monitor

Device	Setup	Notes
BuiltAir® PM (NextPM) (Optional)	With stand, cable	Mini-USB connector
Border Router	One required for each network	WiFi/ Thread router, AC power