

PM2.5 Air Quality Sensor for medical environment

Proven robustness:

- 3 years of field experience
- 10,000 hours of tests in different applications, environments, and circumstances
- Long term correlation measurements done at weather-stations all over the world
- Dust endurance in specialized setup



Maintenance free over lifetime. Optimized for IoT applications while preserving quality-of-measurement

Measure air quality accurate by sensing before & after HVAC filter in real-time in sensitive medical environments like Operating Rooms

Dual channel solution:

- One device instead of 2 separate devices
- Optimal measurement accuracy between two channels
- Optimal synchronization of measurements



Highlights

- The DCPM2.5 features 2 calibrated sensor channels to simultaneously measure and compare PM2.5 particles between two independent channels.
- Short response time between air intake and sampled measurements to enable actions to improve air quality and optimize air conditioning strategy
- The DCPM2.5 is developed with focus on accuracy and reliability over lifetime

PM2.5 Specifications



Exceptional repeatability & lifetime stability



Maintenance-free over lifetime



Real-time parallel PM2.5 measurements



Fast response

Description	Specification DCPM2.5
Number of channels	2 in one device
Measurement range	0 $\mu\text{g}/\text{m}^3$ – 1200 $\mu\text{g}/\text{m}^3$
Resolution	1 $\mu\text{g}/\text{m}^3$
Accuracy	$\pm 10 \mu\text{g}/\text{m}^3 + \pm 15\%$
Calibration accuracy	7%*
Channel to channel accuracy	<1%
Start up time	<10s
Update frequency	2s
Operational temperatures	-40°C to +70°C **
Operational humidity	RH5% to RH95%
Power consumption	3.5W (worst-case)
Allowed external pressure drop	32Pa
Dust robustness	1500 mgh/ m^3
Lifetime	8000h of sampling time
Communication interface	LIN
L*W*H	~160*115*40mm
IP Rating	IP5K0

* Relative to reference lab setup

** Best effort measurement from -40°C to -10°C