

PALAS ECoB

Indicative measuring device connected via Bosch Cloud Services for monitoring ambient air quality parameters such as particulate matter (PM_{2.5}, PM₁₀) and gases (CO, NO₂, O₃, SO₂).



The ECoB (Environmental Connected Box) was developed to better understand the relationships between emission sources and the environment. By continuously transmitting locally-sourced environmental parameters to a cloud platform, the ECoB facilitates real-time analyses and applications. The Bosch Cloud Services allow for the retrieval of the datasets at one's convenience, facilitating advanced simulations.



Environmentally sensitive traffic management provides precise real-time data on traffic emissions, assesses the impact of traffic on overall emissions and enables reduction through targeted control, e.g., through traffic light switching.

KEY FACTS

- Precise measurement technology of various traffic-relevant gases for better classification of emission sources
- Extensive factory calibration against reference systems for best agreement, accuracy and precise data
- Manufactured by Palas in cooperation with Bosch
- Continuous validation of the data via the Bosch Cloud Services
- Integration into Bosch Mobility Solutions and traffic simulation software

TOGETHER HAND IN HAND

Bosch and Palas, two experienced partners, collaborate with specialized integrators to support cities and industrial areas in improving air quality. Palas uses its experience as a measurement technology company to provide reliable and precise air quality data. Bosch contributes with cloud services for data acquisition and device management for air quality measurement devices by Palas. In addition to this, they offer environmentally sensitive traffic management that delivers real-time, accurate traffic emission data. Their air quality dispersion modeling also enables tailored and sustainable measures at hotspots with heightened pollution levels.



Fenceline monitoring and air surveillance offer benefits beyond compliance: they protect worker health, avoid penalties, boost community relations, and identify efficiency improvements.

Connected by

DATASHEET

Weight	4 kg
Dimensions	280 x 280 x 230 mm
Power supply	11.6 – 12.4 V (100 – 240 V AC at 50 – 60 Hz), solar power supply available
Power consumption	Typical 6 W ; max 24 W allowed
Operating temperature	-10 °C – +45 °C
Relative humidity	25 % – 95 % (non condensing)
Ambient pressure	80 – 120 kPa
Storage temperature	-10 – + 50°C (non condensing)

Sensor	Measurement Range	Resolution
O ₃	0 – 1,000 µg/m ³	< 1 µg/m ³
NO ₂	0 – 2,000 µg/m ³	< 1 µg/m ³
PM ₁₀	0 – 1,000 µg/m ³	< 1 µg/m ³
PM _{2.5}	0 – 1,000 µg/m ³	< 1 µg/m ³
SO ₂	0 – 1,000 µg/m ³	< 1 µg/m ³
CO	0 – 5,000 µg/m ³	< 1 µg/m ³
p	30 – 110 kPa	< 0.01 kPa
T	-40 °C – +85 °C	< 0.1 K
rh	0% – 100 %	< 0.1%

Bosch Cloud Services*

- Device management as a service by Bosch experts, cloud services for data acquisition and device management for air quality measurement boxes
- Environmentally sensitive traffic management generates highly-accurate traffic emissions data in real time
- Air quality dispersion modeling permits tailored and sustainable measures at hotspots subject to increased emissions

For more details, please refer to Service Package Brochure by Bosch.

More information: <https://count.palas.de/ecob/>



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* Neither the cloud service packages of Robert Bosch GmbH for the Palas ECoB nor the required mobile services are included in the scope of delivery of Palas GmbH.

Subject to change.
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