Aeroshi Air Sensor IAQ-01

Technical Datasheet

Description

Room-by-room IAQ monitoring sensor with cloud dashboards and audit-ready PDF/CSV exports.

Measures CO_2, particulate matter, VOC/NOx indices, temperature, and humidity. Data is transmitted securely via Wi-Fi to cloud dashboards where it can be viewed in real-time and exported for compliance reporting. Each sensor monitors a single room with configurable sample intervals and alert thresholds.

IAQ-01 sensor

Specifications

Model	IAQ-01
Sensor module	Sensirion SEN66
Measurements	CO_2 (ppm), PM1/2.5/4/10 (µg/m^3), VOC index, NOx index, temperature (°C), relative humidity (%)
Sample interval	1 minute
Power	USB-C 5V, <3W typical, <5W peak (PSU included)
Connectivity	Wi-Fi 2.4 GHz (WPA2); MQTT over TLS to cloud (no inbound ports)
Dimensions	77 × 77 × 34 mm
Weight	<250g including mount
Mounting	Adhesive wall mount, vertical orientation
Operating conditions	0-50°C, 10-90% RH non-condensing, indoor use only
Storage conditions	-20 to 60°C, 10-90% RH non-condensing
Data exports	PDF and CSV with timestamps and timezone per room
Data retention	30 days default, configurable
Compliance	CE/UKCA certification in progress; documentation available on request

Technical Notes

- VOC/NOx are dimensionless indices. Baseline ~100; higher = poorer air.
- VOC stabilizes in minutes; NOx may take hours after power-up.
- Includes 5V USB PSU for mains power.
- Role-based access by organization, site, and room.

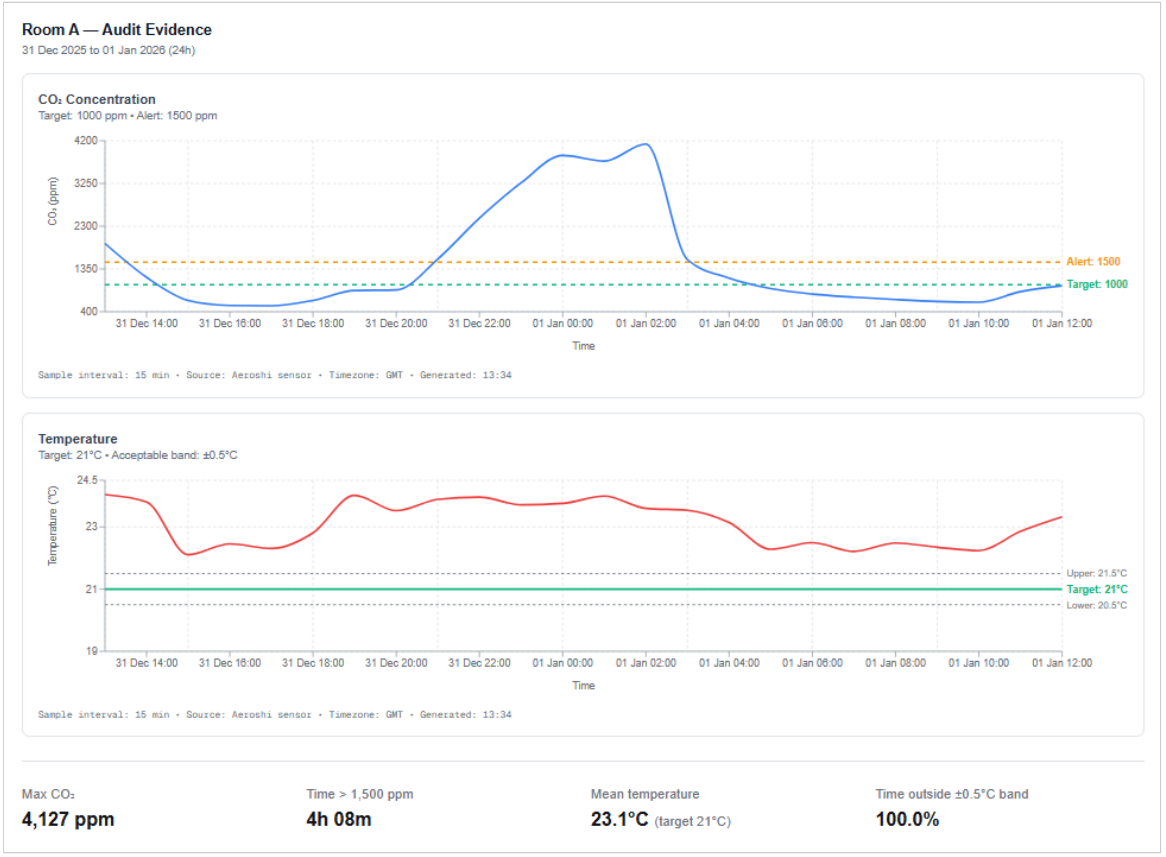
Measurement Performance

Sensor accuracy and performance specifications

CO_2 range	0-40,000 ppm
CO_2 accuracy	±(50 ppm + 5% of reading) at 400-5,000 ppm
PM range	0-1,000 µg/m³
PM accuracy	±10 µg/m³ (0-100 µg/m³), ±10% of reading (100-1,000 µg/m³)
Temperature range	-10 to +60°C
Temperature accuracy	±0.5°C at 15-35°C
Humidity range	0-100% RH
Humidity accuracy	±3% RH at 20-80% RH
VOC/NOx index range	1-500 (dimensionless)
Response time (τ63%)	<10s for VOC/NOx step change

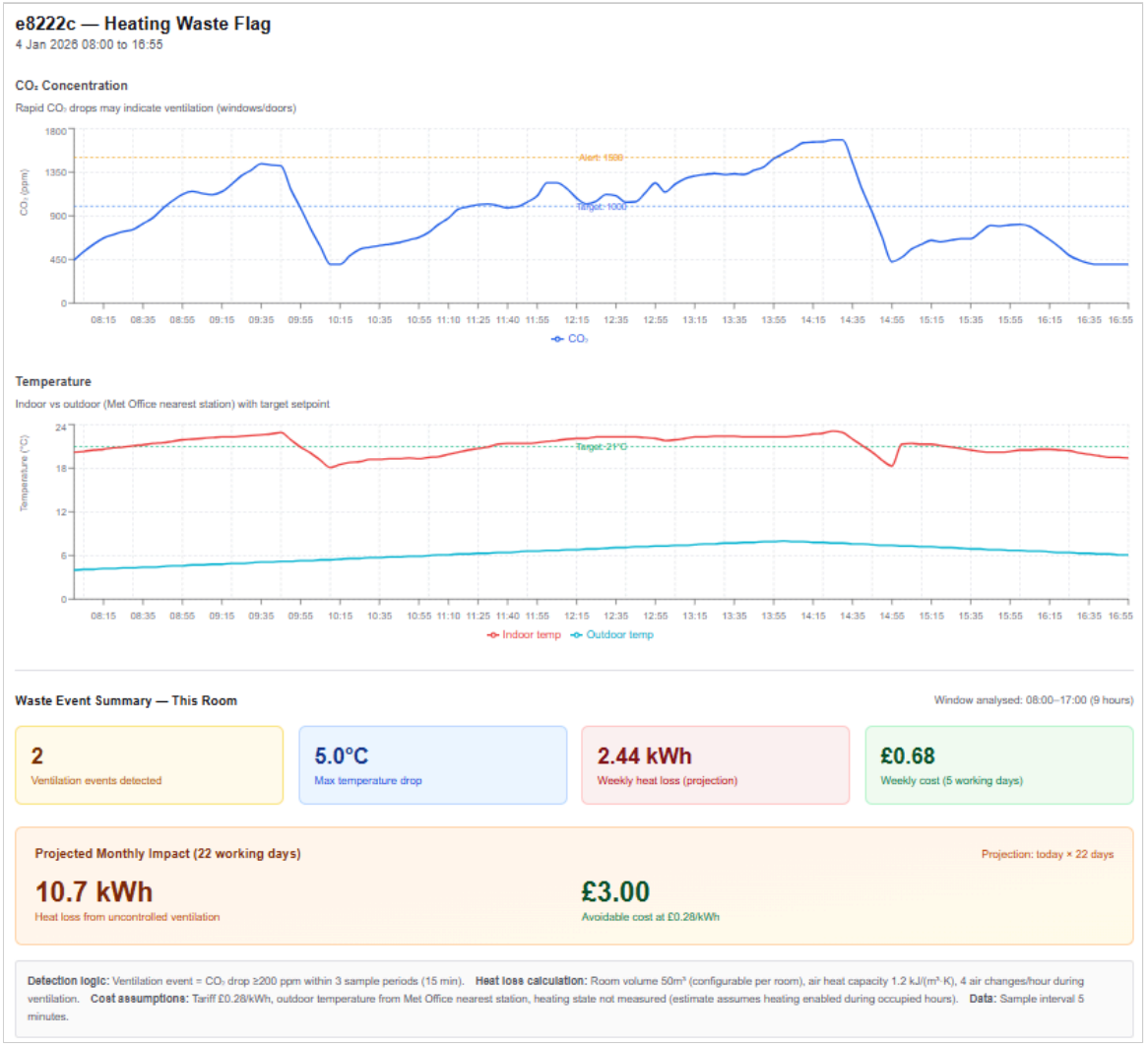
Example Outputs

Room Trend Analysis



CO_2 and temperature with reference thresholds (24-hour window). Timestamped data with timezone for audit cross-referencing. Configurable thresholds for compliance tracking.

Heating Waste Detection



Detected ventilation events with estimated cost impact (day window). Identifies CO_2 drops during heating periods. Cost estimates use configurable tariff and room volume. Outdoor temperature from Met Office. Estimates indicative only.

Export Configuration

Temperature source	Met Office nearest station API (outdoor reference)
Energy tariff	User-configurable (GBP/kWh)
Room volume	Configurable per room
Thresholds	Adjustable per site requirements