



Indoor Air Quality Sensor

Six sensors. Twelve signals.

A premium home and commercial air-quality sensor that connects indoor readings to outdoor context and turns every change into a clear next step.

\$249

one-time · dashboard & app
included

MODEL R500 · USB-C PD

Twelve signals

CO₂

PM1.0

PM2.5

PM4.0

PM10

VOC Index

NO_x Index

Temperature

Humidity

Pressure

Light

IAQ (computed)

Six sensors give eleven measured readings plus a calculated IAQ index. CO₂ is **photoacoustic**.

Sensor specifications

PARAMETER	SENSOR	RANGE	ACCURACY
CO ₂	Sensirion SEN66 · photoacoustic	400–5,000 ppm	±(50 ppm + 2.5%) at 400–1,000 ppm ¹
PM1.0 / 2.5 / 4.0 / 10	Sensirion SEN66 · laser	0–1,000 µg/m ³	±(5 µg/m ³ + 5%) precision ²
VOC Index	Sensirion SEN66 · VOC algo	1–500	per Sensirion
NO _x Index	Sensirion SEN66 · NO _x algo	1–500	per Sensirion
Temperature	Sensirion SEN66	–10–50 °C	±0.45 °C typ.
Relative humidity	Sensirion SEN66	0–100% RH	±4.5% RH typ.
Barometric pressure	Bosch BMP390L	300–1,250 hPa	±0.5 hPa
Ambient light	TI OPT3001	0.01–83,000 lx	photopic

Values from the Sensirion SEN66, Bosch BMP390L and TI OPT3001 datasheets. Temperature accuracy is rated at 15–30 °C and humidity accuracy at 30–70% RH. ¹ CO₂ accuracy is ±(50 ppm + 2.5%) at 400–1,000 ppm, ±(50 ppm + 3%) at 1,001–2,000 ppm and ±(40 ppm + 5%) at 2,001–5,000 ppm. It applies after 2 days of operation that include fresh air, with automatic self-calibration on and fresh air (about 400 ppm) at least once a week. Starting after five years, typical additional drift is ±(5 ppm + 0.5%) per year. ² Device-to-device precision for PM1.0 and PM2.5 at 0–100 µg/m³ (±10% at 100–1,000 µg/m³); PM4.0 and PM10 are ±25 µg/m³ (±25% above 100 µg/m³). The VOC and NO_x indices meet specification after about 1 and 6 hours of operation. Full per-sensor evidence at terrestream.com/evidence.

One color language

Good	Moderate	Unhealthy for sensitive groups	Unhealthy	Very unhealthy	Hazardous
Air is clean.	Trending up.	Ventilate or filter.	Take action.	Strong response.	Avoid exposure.

The device underglow and the app speak one color language across every signal.

System & connectivity

Power Plug-in USB-C with Power Delivery; no battery 5 V·3 A / 9 V·2 A / 12 V·1.5 A 18 W maximum	Local-first integrations Native Home Assistant MQTT + local HTTP API Matter / Apple Home / Google Home / Alexa via HA Matter bridge	Software Web dashboard + mobile app included Plain-English recommendations Privacy-first, local-first data
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Compliance, warranty & box

Regulatory: FCC Supplier's Declaration of Conformity (SDoC): compliant; the radio module carries its own FCC ID. Wireless: 2.4 GHz Wi-Fi only; Bluetooth LE. Size: 69 × 65 × 111 mm (2.72 × 2.56 × 4.37 in); 6.7 oz (190 g). Warranty: 1-year limited. Returns: within 30 days of delivery, even if opened and used; the buyer pays return shipping. In the box: sensor, 6 ft (1.8 m) USB-C cable, power adapter, printed guide. Shipping: ships the next business day via FedEx. Aerodyne Inc. · Dover, Delaware, USA

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