



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

PM2.5

PM4

PM10

VOC Index

NO_x Index

Temperature

Humidity

Pressure

Light

IAQ (computed)

Six sensing elements measure twelve signals, including a computed IAQ index. CO₂ is **photoacoustic**.

Sensor specifications

PARAMETER	SENSOR	RANGE	ACCURACY
CO ₂	Sensirion SEN66 · photoacoustic	400–5,000 ppm	±50 ppm + 2.5%
PM1 / 2.5 / 4 / 10	Sensirion SEN66 · laser	0–1,000 µg/m ³	EPA AQI-aligned
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	±0.5 °C typ.
Relative humidity	Sensirion SEN66	0–100% RH	±4.5% RH typ.
Barometric pressure	Bosch BMP390L	300–1,100 hPa	±0.5 hPa
Ambient light	TI OPT3001	0.01–83,000 lx	photopic

Values reflect the published Terrestream datasheet (temperature rated 15–30 °C, humidity rated 30–70%). Full per-sensor evidence at terrestream.com/evidence.

One color language

Good

Air is clean.

Fair

Trending up.

Poor

Ventilate or filter.

Unhealthy

Take action.

Very unhealthy

Strong response.

Hazardous

Avoid exposure.

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

System & connectivity

Power

- USB-C with Power Delivery
- 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
- AI insights in plain English
- Privacy-first, local-first data

Compliance, warranty & box

Regulatory: FCC Supplier's Declaration of Conformity (SDoC): compliant; the radio module carries its own FCC ID. **Warranty:** 1-year limited. **Returns:** 30 days. **In the box:** sensor, USB-C cable, power adapter, printed field guide. **Shipping:** FedEx. **Made by** Aerodyne Inc., Dover, Delaware, USA.

Terrestream®, the leaf logo, and "Breathe Better. Live Smarter."® are trademarks of Aerodyne Inc. Patents pending. Specifications subject to change; verified 2026-06-10.

Terrestream Spec Sheet · v1 · 2026-06-10
terrestream.com/buy · terrestream.com/evidence