

# Indoor Air Pollution Monitoring

## Datasheet

### Integrated Pollution Monitoring (IPM)

Monitor Indoor Air Quality

Product Number: **EZ-3000-0001**

#### Specifications

<b>Sensors</b>	CO2, VOC, Temperature, Relative Humidity
<b>Sampling Period</b>	CO2, Temp, RH: 30 seconds; VOC: 5 seconds
<b>Bluetooth Technology</b>	Bluetooth Low Energy (BLE)
<b>AC Power</b>	Yes, via the microUSB connector
<b>Battery Power</b>	Yes, integrated 120mAh Rechargeable Li-Po Battery
<b>Battery Life</b>	Up to 24 hours on a full charge
<b>Dimensions (L x D)</b>	88mm x 25mm (3.46" x 0.98")
<b>Weight</b>	55g (1.94 Oz)
<b>Operating Temperature</b>	0°C to 40°C on Charger, -10°C to 50°C on Battery only
<b>Storage Temperature</b>	10°C to 30°C (recommended)
<b>Relative Humidity</b>	10% to 80%
<b>Certifications</b>	FCC, CE



#### 1. Apps Software to View Data

iOS and Android apps included (uses bluetooth).

#### 2. Remote Cloud Monitoring (optional)

Measurements can be sent to the cloud via Wi-Fi or LTE (contact us for APIs).

BLE Gateway (Wi-Fi version):

- 802.11b/g/n (single stream), 2.4GHz frequency band
- Transmit power: +19.5 dBm @802.11b, +13 dBm @802.11n
- Data rate up to 150 Mbps

BLE Gateway (LTE Cat M1 version):

- 375 Kbps peak rate (DL & UL), max. transmit power: 23dBm
- Supported LTE Bands: B1/B2/B3/B4/B5/B8/B12/B13/B19/B20/B28
- MicroSIM card slot

## CO2 Sensor

<b>CO2 Specified Range</b>	400-2000 ppm
<b>Accuracy</b>	± (50 ppm + 5% of reading)
<b>Response Time (to reach 63%)</b>	60 sec
<b>Resolution</b>	1 ppm

## VOC Sensor

<b>VOC Specified Range</b>	0.3-30 ppm (Ethanol in clear air)
<b>Output Signal</b>	VOC Index, between 1 to 500
<b>Repeatability</b>	± 5 VOC Index points
<b>Limit of Detection</b>	<0.05 ppm ethanol
<b>Resolution</b>	1 VOC Index point

## Temperature and Relative Humidity Sensor

<b>Temperature Measurement Range</b>	-10°C to +60°C (14°F to 140°F)
<b>T. Accuracy (typ.), 15-35°C</b>	±0.8°C (±1.4°F)
<b>T. Response Time (to reach 63%)</b>	120 sec
<b>T. Resolution</b>	0.1°C
<b>Relative Humidity Range</b>	0 to +100% RH
<b>RH Accuracy (typ.), 15-35°C</b>	±6% RH
<b>RH Response Time (to reach 63%)</b>	90 sec
<b>RH Resolution</b>	0.1% RH

## 2. VOC Index

The VOC Index is a robust measure for indoor air quality. It automatically adapts the environment the sensor is exposed to. The VOC Index shows changes of intensity of VOC events relative to the history of the room, referenced to the average of VOCs present over the last 24 hours.

In other words, the Index doesn't represent absolute concentrations but refers to the typical conditions of the environment. It indicates users when air pollution changes and the room needs to be ventilated or the air purified.

