ECOMZEN

CONNECTED STATION
OF MULTIPARAMETERS MEASUREMENT FOR INDOOR AIR QUALITY

Radio

i

PATENTED TECHNOLOGY

Ecomesure, air quality specialist, designed ECOMZEN to monitor the key pollutants indoors : CO_2, VOC, CO, NO_2, O_3, NO, SO_2, H_2S, $PM_{1/2.5/10}$ (and others) and temperature, relative humidity and pressure.

Easy to install, ECOMZEN connects automatically to the environmental data web platform www.i-comesure.com for real-time data monitoring and sensors remote control.
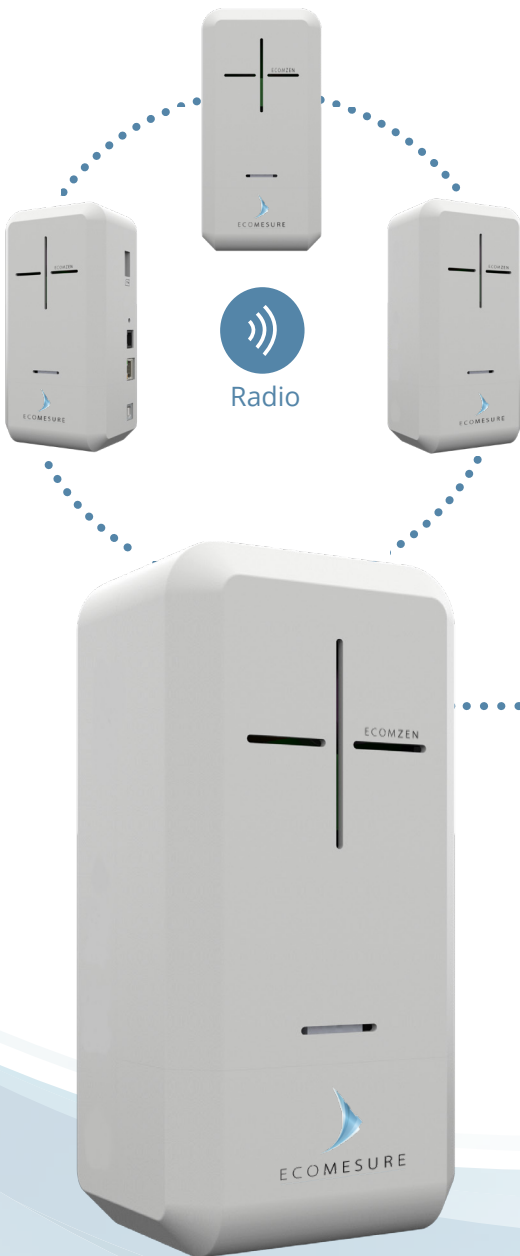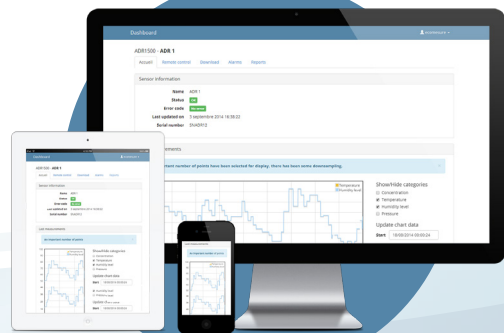
Ethernet, Wi-Fi, 3G/4G, LoRa, LTE-M, Zigbee

Secure web server i-comesure.com

⊕ BENEFITS

- ⊕ All-in-one multiparameter monitor
- ⊕ Ongoing quality of measurements
- ⊕ Easy to install, accurate and affordable
- ⊕ Centralized services on i-comesure.com
- ⊕ Optimized one-step maintenance

APPLICATIONS

- ⊕ Public transport, airports
- ⊕ Town halls, schools, universities, hospitals
- ⊕ Malls, hotels, concert halls
- ⊕ Smart buildings, IoT
- ⊕ Meeting rooms, open space, restaurants

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ECOMZEN SPECIFICATIONS

Communication with the web server	Ethernet - Wi-Fi – 3G/4G/GPRS - LTE-M - LoRa - Zibgee Pro - Sigfox ready Encrypted and secure data exchanges using SSL protocol SigFox/ZigBee ready
Digital I/O	1 Digital Input / 1 Digital Output
Localization	Accelerometer, GPS
Access to web services	https://www.i-comesure.com Secured by password and SSL certificate
Web services	User support | Mapping | Data real time display | Multi-display mode (index and scientific) | Device status | Device remote control | Data storage | Data downloading (direct download in xlsx, csv, sending by FTP protocol) | Alerts/alarms by SMS and/or E-mail | Data operating & analytics reports - access | Virtual Integrated Devices (VID) | Data ciphering | API link | Database export I Data logger
Frequency of measurements	Every minute, possible adjustments according to customer demand (10 min. in LoRa)
Power supply	5 VDC USB 2 A max, Optional: integrated back-up battery (8h of autonomy, 12h in LoRa) AC adapter included: 90-264VAC 50/60Hz
Dimensions	L8,2 x H7,8 x P3.5 Inches (L210 x l200 x H90 mm) / 0,8 kg
Internal fastening	Installed vertically
Certifications	CE class B, FCC class A
Patent	Applicable in France, Europe, United States N° 1552497 (French National Institute of Industrial Property) N° WO2016/151096 (European Patent Office) N° 10064083 (US Patent & Trademark Office)

Optimized maintenance and calibration: one-step sensor cartridge replacement

SENSOR CARTRIDGE SPECIFICATIONS

	Range	Detection Limit*	Precision
NO_2 sensor (electrochemical)	0 to 5000 ppb	3 ppb	3 ppb
O_3 sensor (electrochemical)	0 to 5000 ppb	6 ppb	6 ppb
CO sensor (electrochemical)	0 to 8000 ppb	10 ppb	10 ppb
NO sensor (electrochemical)	0 to 5000 ppb	5 ppb	5 ppb
SO_2 sensor (electrochemical)	0 to 5000 ppb	5 ppb	5 ppb
H_2S sensor (electrochemical)	0 to 2000 ppb	2 ppb	2ppb
COV_{50} and COV_{3000} sensor (PID)	0 to 50 ppm | 0 to 3000 ppm	3 ppb | 50 ppb	5 ppb | 100 ppb
CO_2 sensor (infrared)	0 to 5000 ppm	10 ppm	10 ppm at full scale
PM_1, $PM_{2,5}$ et PM_{10} sensor (optical)	0 to 1000 µg/m³	2 µg/m³	4 µg/m³
Temperature	0 to 120 °F (-20 to +50 °C)	/	32° F (0.3C)
Humidity	0 to 100% HR	/	2% HR
Pressure	300 to 1100 hPa	/	1 hPa
Supplementary measurements	Other gas sensors (including NH_3, Cl_2, HCHO, HCl) available on demand		
Corrections	Drift corrected as a function of temperature, relative humidity and ageing		
Cartridge dimensions	H5 x L3.5 x D1.5 Inches (H128 x L85 x D38 mm)		

*The measurement uncertainty can increase slightly when the concentrations become very low due to electronic noise inherent to sensors.

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