

ECOMSMART

CONNECTED STATION

OF MULTIPARAMETERS MEASUREMENT OF AMBIENT AIR QUALITY

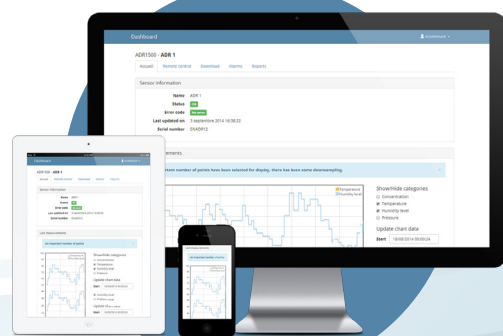


Ideal for monitoring air quality in ambient or harsh environments, ECOMSMART tracks pollutants such as NO₂, O₃, CO, NO, SO₂, H₂S, VOC, CO, PM_{1/2.5/10} (and others) and temperature, pressure and humidity.

Easy to install, ECOMSMART connects automatically to the environmental data web platform www.i-comesure.com for real-time data monitoring and sensors remote control.



Secure web server
i-comesure.com



+ BENEFITS

- + All-in-one multiparameter monitor
- + Ongoing quality of measurements
- + Easy to use, accurate and affordable
- + Centralized services on i-comesure.com
- + Stand-alone version (solar panel & battery)

+ APPLICATIONS

- + Smart cities
- + Industrial sites (quarries, mines, airports, ports)
- + Workshops, warehouses, work-sites
- + Road construction

ECOMSMART

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SPECIFICATIONS



Communication with the web server	Ethernet - Wi-Fi - 3G/4G/GPRS - LTE-M - LoRa - ZigBee Pro - Sigfox ready Encrypted and secure data exchanges using SSL protocol
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 xls, csv, sending by FTP protocol) Alerts/alarms by SMS and/or E-mail Data analytics reports - access Virtual Integrated Devices (VID) Data ciphering API link Database export Data logger
Data storage	Locally on SD card and external on web server
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) Adapter included: 100-240 VAC 50/60 Hz
“ Solar kit ” Option	Solar Panel (55W) / Battery weather-resistant assembly
Dimensions	L8,2 x H7,8 x P3,5 Inches (L210 x I200 x H90 mm) / 1.2 kg
External fastening	Clamped onto a post or a fence, weather-resistant (equivalent IP54)
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 ₂ S 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/m ³	2 µg/m ³	4 µg/m ³
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) and particles (TSP) integrated 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.