



SMART ENVIRONMENT[®]

Air quality, noise monitoring, sustainable mobility, control of emissions and environmental monitoring

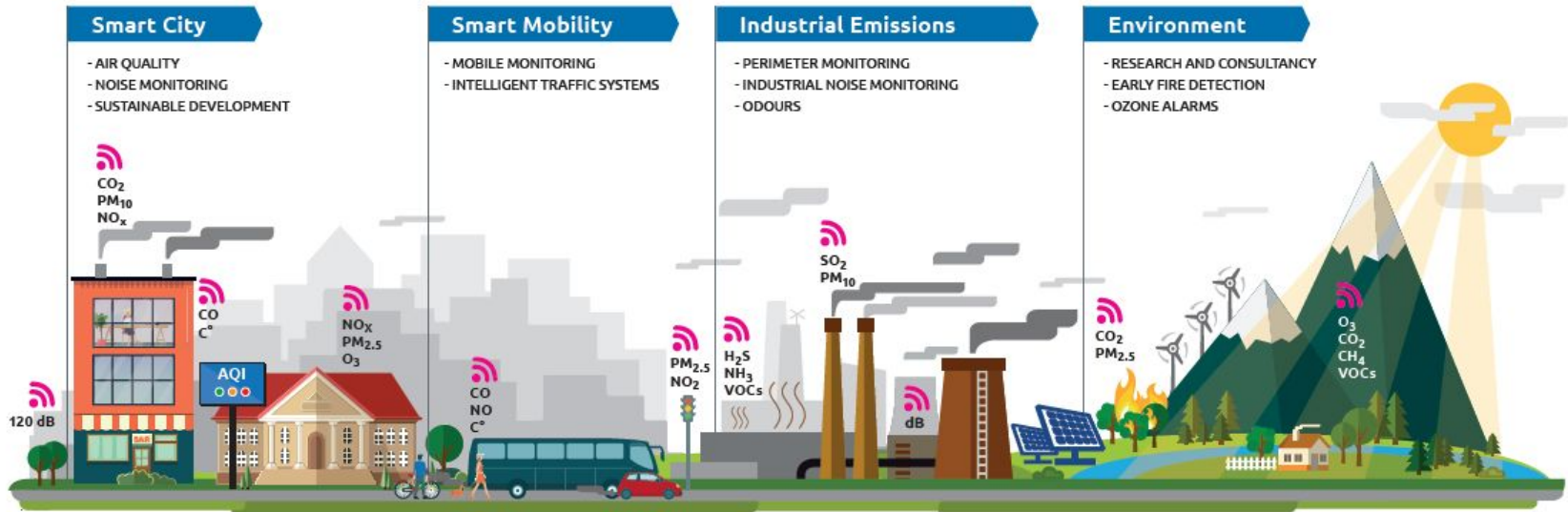


KUNAK ENVIRONMENT® | Systems to protect people and the environment

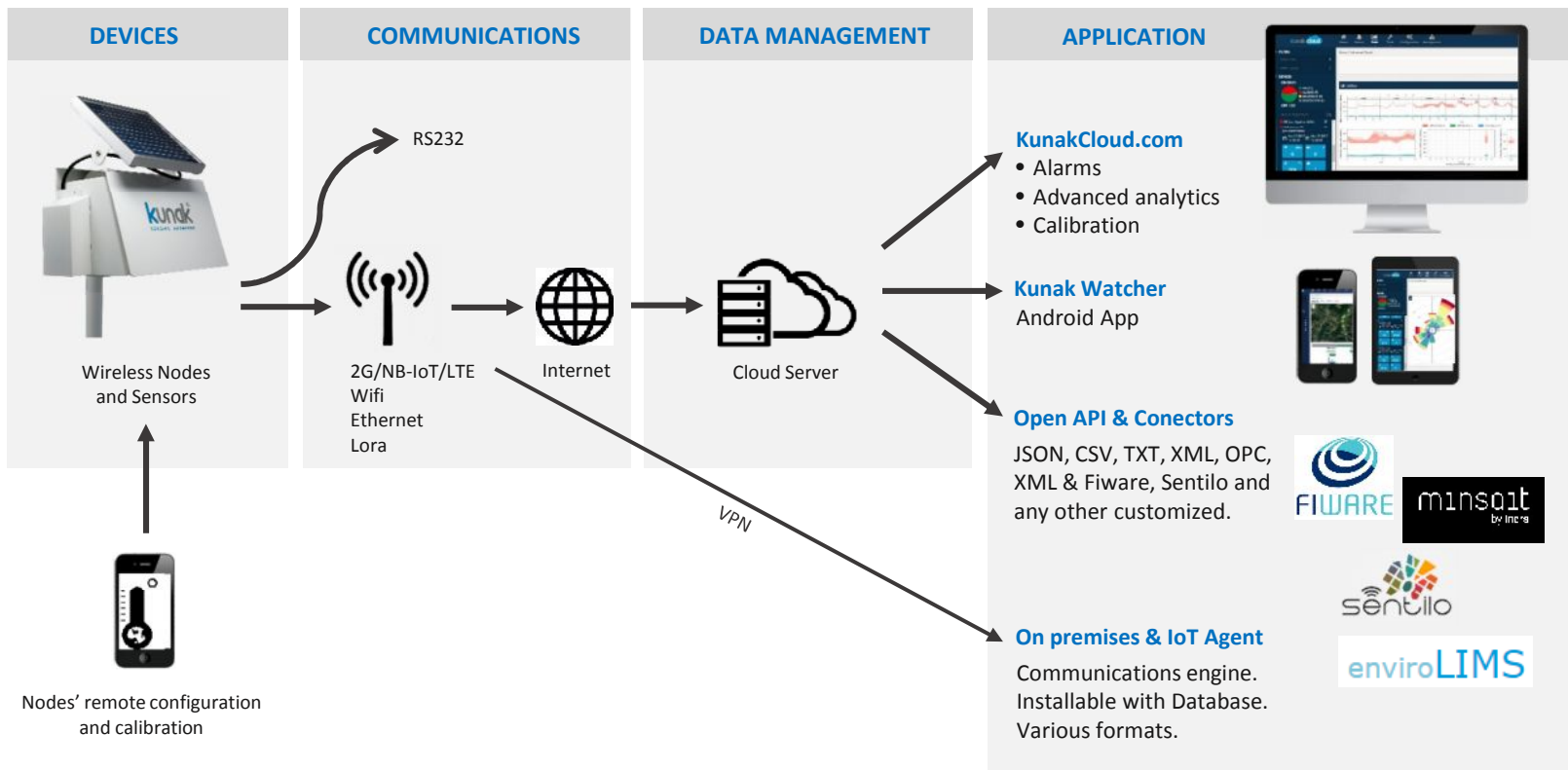
Cities and businesses need reliable information in real time to guarantee the quality of life and to protect the environment.

KUNAK ENVIRONMENT systems monitor Air Quality, Industrial Emissions, Acoustic Pollution and other environmental factors through fast-deploying wireless devices; providing high value information for decision making, with excellent precision and at a 30 times lower cost than the reference methods.

- Benefits and Advantages**
- Integration into Smart City platforms
 - High accuracy
 - Quick installation and easy maintenance
 - Advanced Air Quality Software



KUNAK ENVIRONMENT® | Complete solution for efficient environmental management



KUNAK ENVIRONMENT® | Products for environmental monitoring

KUNAK AIR devices, sample and send data in real time to Kunak Cloud, a specific software for air quality and noise advanced analysis, providing high correlations with official stations and reference equipment. The devices come pre-calibrated from origin. They can be easily calibrated in remote and also at destination with standard gas or with a reference equipment.

Measurement Parameters:

- **Air quality:** NO, NO₂, NOx, CO, O₃, PM10 μm, PM2.5 μm y PM1 μm.
- **Climate change:** CO₂, CH₄, O₃, VOCs.
- **Industrial emissions and odours:** SO₂, PM, H₂S, VOCs, NH₃.
- **Noise:** dB.
- **Meteorology:** Temperature, Relative Humidity, Atmospheric Pressure, Anemometers, Pluviometer and others.



KUNAK AIR A10
Monitor de calidad del Aire



KUNAK AIR P10
Contador de partículas



KUNAK NOISE N10
Sistema de monitorización de ruido



KUNAK AIR M10
Sistema móvil de calidad del aire

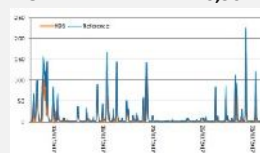
KUNAK ENVIRONMENT® | Technical specifications

TECHNICAL SPECIFICATIONS		GAS MEASUREMENT							PARTICLE COUNTER	
Dimensions / Weight	122 x 202 x H: 90 mm / < 1,5Kg	Gas	Range (1)	Real range (2)	LDL (3)	Precision (4)	Units	Life (months)	Channels	EN 481 (PM1, PM2.5 and PM10) in µg/m3
Enclosure	PC IP67 & Metal Panel (optional)	NO2	0–20 ppm	0 - 5 ppm	5 ppb	± 8 ppb	ppb or µg/m ³	> 24 m	Particle Size range	From 0.38 to 17 µm (spherical equivalent size)
Power consumption	< 10 mA @ 3.7 Vdc.	NO	0–20 ppm	0 - 5 ppm	5 ppb	± 5 ppb	ppb or µg/m ³	> 24 m	Total flow rate	1.2 L/min
Battery	8,1 Ah rechargeable (always incl.)	CO	0–1000ppm	0-10 ppm	20 ppb	± 50 ppb	ppb or µg/m ³	> 36 m	Certifications	IEC 60825-1 2014. Class 1 Laser Product
External Supply	5 – 17 Vdc. Charger, Solar panel, etc	SO2	0–100 ppm	0-10 ppm	5 ppb	± 20 ppb	ppb or µg/m ³	> 36 m	SONOMETER	
Communications	GPRS, Wifi, RS232	H2S	0–100 ppm	0 - 2 ppm	5 ppb	± 20 ppb	ppb or µg/m ³	> 24 m	Parameter	Laeq.
Operating Temp.	-20°C to +50°C	O3	0–20 ppm	0 - 2 ppm	5 ppb	± 7 ppb	ppb or µg/m ³	> 24 m	Range	35 – 130 dB
Built-in Sensors	Internal temperature, battery and signal level, solar panel charge.	Temperature					-40 to 125°C		Resolution	0,1 dB
		Humidity and Pressure					0 to 100 %RH – 500 to 1500 mb		Accuracy	+/- 1db
GNSS	GPS/Glonass (optional)	(1) Limit covered by guarantee (2) Maximum reading (3) Minimum value detected. (4) Average accuracy of experimental data in field. Without interference								
Measurement	Continuous sampling (3Hz) *	Frequency range								
										20 – 12.500 Hz

* Adjustable Data aggregation and sending periods, 10s - 4h. (1h by default).

TESTS & ESSAYS

NO $R^2 > 0,96$



Kunak AIR ■
Ref. Teledyne 200E ■

CO $R^2 > 0,83$



Kunak AIR ■
Ref. Teledyne 300E ■

NO2 $R^2 > 0,95$



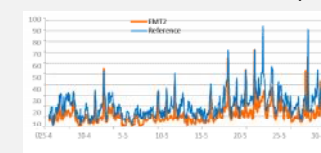
Kunak AIR ■
Ref. Teledyne 200E ■

O3 $R^2 > 0,95$



Kunak AIR ■
Ref. Teledyne 400E ■

PM10 $R^2 > 0,68$



Precision < ±9,2 µg/m3
Kunak AIR ■
EMT2 Madrid ■

KUNAK ENVIRONMENT® | Advanced software for data collection and processing

KUNAK AIR CLOUD is a specific Air Quality software that stores, processes, analyzes and exports the gathered information from any sensor in real time. An advanced control panel prepared for big data, multiparametric analysis and the remote configuration and calibration of the devices.

Main features:

- Configure data reading and sending periods, thresholds and alarms.
- Manage user profiles.
- Geoposition and calibrate devices remotely.
- Generate multiparametric graphs.
- Integrate the information into any Web or Smart City platform.
- Kunak®Watcher APP Available for Android and IOS.



KUNAK AIR CLOUD
Air Quality and Noise Software
www.kunakcloud.com



KUNAK WATCHER
Mobile App for Android



KUNAK OPEN API
Integration in Smart City platforms

KUNAK ENVIRONMENT® | Success stories and international collaborations



Air quality networks for EDUSI and Red.es



Fixed and mobile air quality system for EMTs



50 teams for the Life + Respira Project of the University of Navarra



Industrial perimeters for diffuse emissions monitoring



Environmental monitoring for intelligent traffic control

We collaborate with laboratories,
cities and environmental operators.
Contact us and tell us your case.

info@kunak.es

Real-time information for decision making

We help you capture critical, accurate, real-time information to evaluate your actions, make your resources profitable, anticipate risks and operate your business efficiently.

Our premises :

RELIABILITY - EFFICIENCY - INNOVATION - ECOLOGY



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