

*Lacentalina*  
5-20  
Environmental indoor  
monitoring unit



*Lacentalina* is a modular environmental monitoring unit, totally remotely manageable. It can detect the presence of specific pollutants, relate them to human presence and send data wirelessly, providing alarms in case of overexposure. *Lacentalina* is equipped with the highest quality sensors for a professional measurement with an affordable cost, portability, ease of installation, use and data visualization.

## *Lacentalina* 5-20

### Your personal air quality monitor

MINIMAL INSTALLATION - EASY MAINTENANCE - FULLY CUSTOMIZABLE

#### 8 REASONS FOR USING *LACENTRALINA*

- Advanced sensors able to provide high accuracy and specificity**
- Large number of pollutants analysed**
- Extreme modularity**
- Monitoring for acute and chronic exposure, through a human presence sensor**
- Affordable cost for a large-scale use**
- Wireless data transmission**
- Remotely monitored**

#### *LACENTRALINA* IS... UNIVERSAL

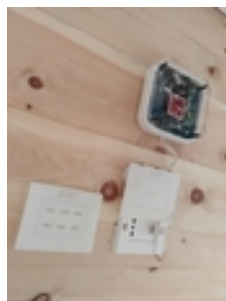
*Lacentalina* is a modular environmental monitoring unit completely manageable remotely, it can detect the presence of specific pollutants, relate them with the human presence and send data via wireless, providing alarms in case of overexposure.

*Lacentalina* can be installed in indoor spaces, where it communicates directly with the building control unit to operate the air conditioning, opening windows or send reports to abnormal situations. It can then find easy application in awareness and information initiatives.

aGrisù offers a variety of functionalities with a continuous and dedicated support. One of the best examples is *Lacentalina* at BiosPHera 2.0 in Milan.



*Lacentalina* is perfect for monitoring the environment in homes built according to sustainable building criteria, in museums, to monitor production activities in small industries, medical laboratories or to highlight the quality of air in hotel room. It is also suitable for intensive use for monitoring, for example, of greenhouse cultivations, during restoration of cultural heritage. The control unit can monitor an area of about 30-50 m<sup>2</sup>.



#### EASY TO USE!

Just plug in the power, set the Wi-Fi network, wait 5 minutes and the system will start sending data on the platform.

That's it!



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TECHNICAL CHARACTERISTICS: FULLY CUSTOMIZABLE

135 mm x 135 mm x 36 mm  
5 volt power supply  
Wi-Fi connection

Dashboard via browser ([www.lacentralina.info](http://www.lacentralina.info))

#### EASY TO VIEW!

Just log in on your dashboard ([lacentralina.info](http://lacentralina.info)) and see all sensors data in a simple way. That's it!

Temperature

Humidity

Atmospheric pressure

Altitude of placement

Environmental light

Environmental noise

Shock and vibration

Human presence sensor

Tropicalization

VOC

CO

NH<sub>3</sub>

NO<sub>2</sub>

O<sub>3</sub>

PM10 - PM2.5

CO<sub>2</sub>

#### CUSTOMER SERVICE

Get the remote customer service for next 12 months:

choosing this option you will get 1 year of remote support via phone, e-mail or Skype ensuring you the support of an aGrisù expert.

Our experts will give you advices on how to correctly install you *Lacentralina*: best practices on where install it and how to connect it to the Dashboard via browser ([www.lacentralina.info](http://www.lacentralina.info)). Furthermore, our experts will support you detecting eventual misleading peaks in curves and their reasons.

99,00 € / year



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#### TECHNICAL CHARACTERISTICS: SENSORS

#### POLLUTANTS

SENSOR	TECHNOLOGY	MONITORING RANGE	RESPONSE TIME	OPERATING TEMPERATURE	WARM-UP TIME
VOC – Volatile Organic Compound	MOS	0 -1000 ppb isobutylene equivalent tVOCs	< 5 s	0°C to 50 °C	900 s
Ammonia (Ethanol, Hydrogen)	MEMS	1 – 500 ppm	< 5 s	-30 °C to 85 °C	900 s
Carbon Monoxide	MEMS	1 – 1000 ppm	< 5 s	-30 °C to 85 °C	900 s
Nitrogen Dioxide	MEMS	0.05 – 10 ppm	< 5 s	-30 °C to 85 °C	900 s
Ozone	ULPSM	0 – 20 ppm	20 s	-20 °C to 40 °C	3600 s
Carbon Dioxide	NDIR	0 – 2000 ppm	60 s	-20 °C to 70 °C	900 s
PM 2.5 – PM 10	IRLED	Over > 1 µm	30 s	-10 °C to 45 °C	90 s

#### ENVIRONMENTAL

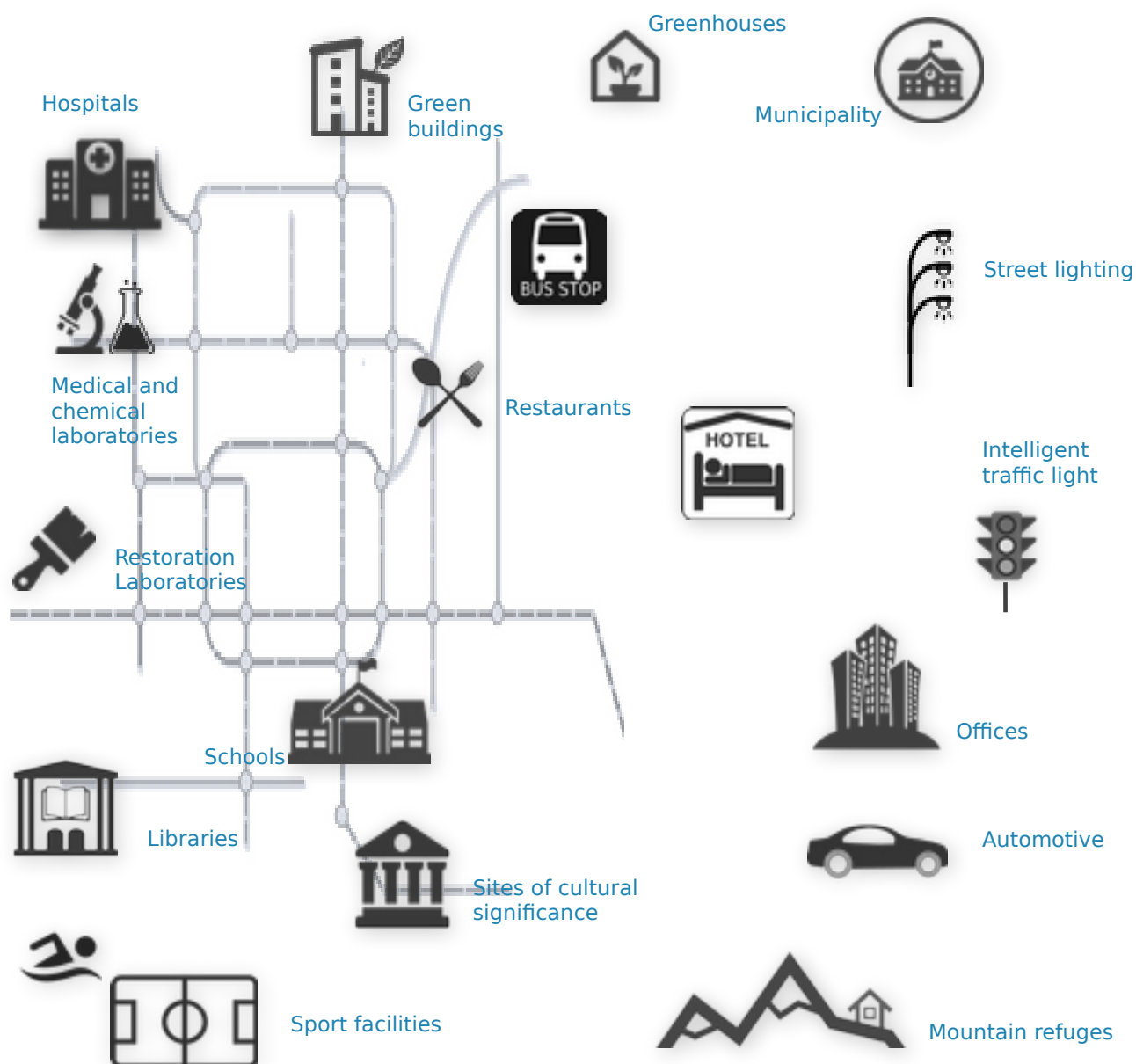
SENSOR	TECHNOLOGY	MONITORING RANGE	RESPONSE TIME	OPERATING TEMPERATURE	WARM-UP TIME
Shock sensor	Open circuit	500 gf for 1 minute	0 s	-40 °C to 80 °C	0 s
Light intensity sensor	Photodiode	400 – 1100 nm 188 µLux up to 88.000 Lux	60 s	-30 °C to 70 °C	150 s
Sound detector	Quad. voltage feedback amplifiers	> 30 dB up to 80 dB	0 s	-40 °C to 125 °C	60 s
Humidity & temperature sensor	Capacitive sensor (humidity) + band-gap sensor (temperature) + CMOS	0 – 100 relative humidity – 40 °C – + 100 °C temperature	30 s	-40 °C to 124 °C	30 s
Barometric pressure and altitude sensor	Piezo-resistive technology	300 – 1100 hPa -1000 to 9000 m	60 s	-40 °C to 85 °C	300 s
UV index sensor	Reflectance	280 – 400 nm	60 s	-40 °C to 85 °C	150 s

Only high-quality sensors are utilized for pollutants analysis. They are developed to last 10 years, after that period their accuracy could decrease. If you are a final customer, *Lacentalina* is guarantee 2 years.



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INSTALLATION POINTS



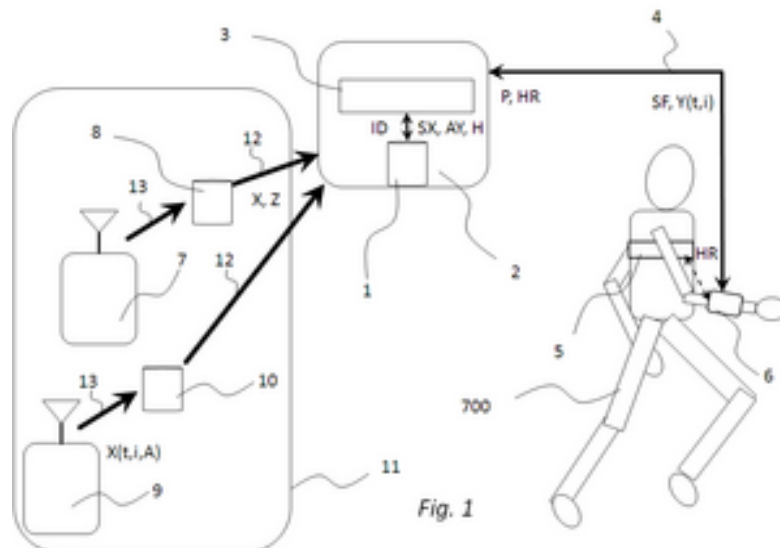


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PATENT

PATENT: WO2014108851 - US2015356851 - EP2943945 - ITTO20130022

System for signaling danger warnings arising from exposure of a subject to atmospheric pollutants, and corresponding method and mobile device



### THE COMPANY BEHIND LACENTRALINA:

aGrisù S.r.l., innovative start up already academic spin-off based in Torino - Italy, creates tools for monitoring human absorption of atmospheric pollutants. It supplies of environmental quality indices.

### WHERE TO BUY

For sales contact [info@a-grisu.com](mailto:info@a-grisu.com) - [sales@a-grisu.com](mailto:sales@a-grisu.com)





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### WHO WE ARE



### AWARDS

**Finalist Project at Wind Green Award  
(2017)**

**Finalist Project INNOVAZIONE-Startup  
Europe Awards (2016)**

**Winner Project of  
Special IngDan Far East Development  
Awards at 6th Edition of Premio  
Gaetano Marzotto (2016)**

**Winner Project of Fondazione Human  
plus Award at Reside Innovation Call,  
Vivere lo Spazio (2016)**

**Finalist Project OpenIren (2016)**

**Winner Proposal at National Program  
for development of innovative PMI  
(2016)**

**Finalist Project Edison Pulse 2016 (Low  
Carbon City) among 400 selected  
projects**

**Winner Project of Meet IOT challenge:  
Portable or wearable NO2 measurement  
devices for outdoor personal usage.  
(2015)**

aGrisù srl is an innovative start up and academic spin off of the University of Turin. It was founded in 2013 and its aim is creating simple and affordable tools for monitoring human absorption of atmospheric pollutants.

***It patented an algorithm which is now protected in Europe and USA.***

Since its foundation it started a growth path and it devoted wide space to research and development.

As a result of many participations to public calls, aGrisù received awards and recognitions that allowed to keep on developing its projects.

Today, it is protagonist in some partnerships with some businessmen who work in home automation, energetic and alert systems in the industrial and domestic field.



### TEAM

**Marco Ivaldi**  
PRESIDENT  
Clinical Kinesiologist,  
Ph.D. in Medical Pathophysiology.

**Luca Feletti**  
VICE PRESIDENT  
Electronic Engineer, Ph.D. in  
Electronics and  
Communications.

**Marco Iacuniello**  
CEO  
Degree in Economics and  
Management of Enterprises.

**Giovanni Cugliari**  
CSO  
Biostatistician, Master in  
Medical and Genomic  
Statistics.

**Alberto Antinucci**  
BUSINESS ANGEL