# product catalogue 2017





# FOLLOW THESE STEPS TO FIND YOUR LIBELIUM SOLUTION

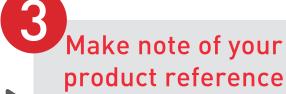
What are you looking for?

You can select from three different options depending on your needs



Configure your selection

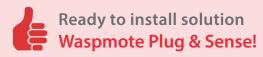
Select the components step by step from the top menu

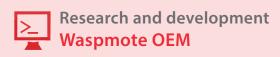




Complete the form with the chosen references to place your order









1° Customize your device Sensors + Connectivity + Power Options





2° Decide the way to access the data

Extracting the Data



3° Choose Support & Training options
Support Section



Make note **Product reference** 



Complete the Order Form



Send to your Sales Agent

You are

You need

best option

The

# WHAT ARE YOU LOOKING FOR?

# Testing IoT Market!



- Decide quickly the components to test
- Use your time to check if technology meets your requirements, not programming
- Maximize your budget: test the market with the minimum risk

### Out-of-the-Box IoT Vertical Kits

- Out-of-the-Box working demos
- · Data visualization tool
- Includes online consultancy bonus



# Looking for a ready to install solution



- Reduce your time to market.
- Save in development costs
- Focus on the solution

### Waspmote Plug & Sense!

- Encapsulated and robust solution ready to install outdoors
- Factory programmed and configured devices
- Customized online support



# Doing research and development



- Get the maximum flexibility in programming
- Use your extra time to save on support options

### Waspmote OEM

- Select the components one by one to test at the laboratory
- Free support through our forums and documentation
- Join our Free Overview Webinars to get quick insights about our technology





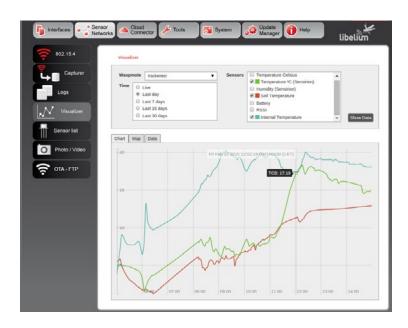
### Configure your Hardware

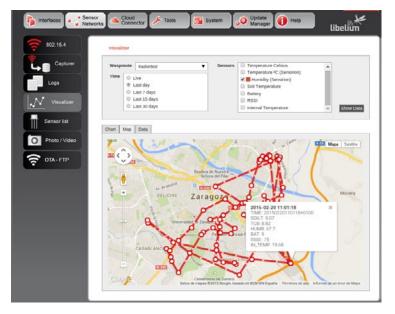
Orders

# Technology to get new customers

If you are exploring IoT possibilities with a pilot project, setting up a demo to engage with potential customers or just comparing technology options, time is the most important factor.

We have created five different IoT Vertical Kits addressing the most dynamic IoT verticals and one evaluator kit to ensure you get started in as fast as possible. The vertical kits are factory programmed with basic codes, include a visualization plugin in Meshlium<sup>1</sup> and 2 hours of technical consultancy so that you can have a working demo just by powering on the devices.





1.- Visualization plugin only available in IoT Vertical Kits.

We provide prices in USD to US customers. Please submit your RFQ, and we will provide you with the USD prices.





# Configure your Hardware

### Orders

# **Smart Cities IoT Vertical Kit**



### Application examples:

Application	Description	Sensors	
Noise Urban Maps	Sound monitoring in bar areas and centric zones in real time	Noise / Soun Level (LeqA in dBA)	
Smart Lighting	Intelligent and weather adaptive lighting in street lights	Luminosity (luxes accuracy)	
Air Quality	Control of the pollution levels	CO, NO <sub>2</sub> , O <sub>3</sub>	
Weather Control	Monitor atmospheric conditions	Humidity, luminosity (Luxes), temperature, atmospheric pressure	



# Configure your Hardware

### Orders

### List of items included in the Smart Cities IoT Vertical Kit:

Item	Ref.	Quantity
Plug & Sense! Smart Cities 802.15.4 (EU version is provided for the European kit)	SCP-802	1
Plug & Sense! SEP 802.15.4 (EU version is provided for the European kit)	SEP-802	1
Noise Level sensor probe	NLS	1
Luminosity (luxes accuracy)	9325-P	1
Temperature, Humidity and Pressure Sensor Probe	9370-P	1
Carbon Monoxide (CO) Sensor Probe (Calibrated)*	9371-P	1
Nitric Dioxide high accuracy (NO <sub>2</sub> ) Sensor Probe (Calibrated)*	9376-HA-P	1
Ozone (O <sub>3</sub> ) Sensor Probe (Calibrated)*	9374-P	1
6600mAh rechargeable battery + external solar panel	6600-EXT	2
Outdoors USB cable	256369	2
International adapter	10280	3
Meshlium 4G 802.15.4 AP (EU/BR, US or AU versions are provided, depending on kit) (EU/BR and US versions feature a GPS receiver)	M4G-802	1
Technical consultancy 2 hrs	TC-2	1
P&S! Programming Service (kit of Marketplace)	PROG-Mktplace	1
Meshlium visualization interface	MVIS	1



Ref / Total Price	SCIVK-EU/	5,500€
	SCIVK-USA/	5,500€
	SCIVK-BR/	5,500€
	SCIVK-AU/	5,500€

Includes Meshlium Sensor Visualizer interface – 100 times free access limit. After 100 log-ins a license fee can be acquired to keep on using it.

We do not provide these codes, the nodes are already programmed in Libelium. Do not overwrite the code.
\*Calibrated gas sensors are manufactured once the order has been placed to ensure maximum durability of the calibration feature. Manufacturing process and delivery may take from 4 to 6 weeks. Lifetime of calibrated gas sensors is 6 months working at maximum accuracy. We strongly encourage our customers to buy extra gas sensor probes to replace the original ones after that time to ensure maximum accuracy and performance.



# Configure your Hardware

### Orders

# **Libelium Smart Parking Solution Kits with cloud partners**



### Application examples:

Application	Description	Sensors
Smart Parking	Detection of free parking spots	Electromagnetic field sensor. It is designed to be installed on the surface of parking spaces and to detect the arrival and departure of vehicles with an electromagnetic field sensor. It includes a polyamide casing



# Configure your Hardware

### Orders

List of items included in the Libelium Smart Parking Solution Kits, Sigfox version:

Item	Ref.	Quantity
Smart Parking node (EU or US versions are provided, depending on kit)	SP-E U SP-US	10
Smart Parking USB Programmer	SP-USB	1
Smart Parking Installation Key	SP-IK	1
Magnet for contactless reset	10342	1
Smart Parking Configuration Service	SP-CFG	1
Technical consultancy 2 hrs	TC-2	1

Item	Ref.	Price
Libelium-Hirisens SmartParking Sigfox Solution Kit EU	SP-HIR-SF-SK-EU	2,850 €
Libelium-Hirisens SmartParking Sigfox Solution Kit US	SP-HIR-SF-SK-US	2,850€
Libelium-Yazamtec SmartParking Sigfox Solution Kit EU	SP-YAZ-SF-SK-EU	2,850€
Libelium-Yazamtec SmartParking Sigfox Solution Kit US	SP-YAZ-SF-SK-US	2,850 €

Licenses for Sigfox connectivity are included, as well as the subscription for the partner's cloud service.













# Configure your Hardware

Orders

List of items included in the Libelium Smart Parking Solution Kits, LoRaWAN version:

Item	Ref.	Quantity
Smart Parking node (EU or US versions are provided, depending on kit)	SP-EU SP-US	10
Smart Parking USB Programmer	SP-USB	1
Smart Parking Installation Key	SP-IK	1
Magnet for contactless reset	10342	1
Smart Parking Configuration Service	SP-CFG	1
Technical consultancy 2 hrs	TC-2	1
LoRaWAN Base Station	9376-HA-P	1
LoRaWAN Base Station		1



Item	Ref.	Price
Libelium-Simfony LoRaWAN Smart Parking SK BS Multitech EU	SIMFONY LORAWAN EU SP SK	4,450 €
Libelium-Simfony LoRaWAN Smart Parking SK BS Multitech US	SIMFONY LORAWAN US SP SK	4,450 €

Licenses for LoRaWAN connectivity are included, as well as the subscription for the partner's cloud service.







PRODUCT CATALOGUE
Out-of-the-Box IoT Vertical Kits

Intro

# Configure your Hardware

### Orders

# **Smart Agriculture IoT Vertical Kit**



### Application examples:

Application	Description	Sensors
Wine Quality Enhancing	Monitoring soil moisture in vineyards to control the amount of sugar in grapes and grapevine health	Soil moisture, soil temperature, humidity, leaf wetness, atmospheric pressure
Green Houses	Control micro-climate conditions to maximize the production of fruits and vegetables	Soil moisture, soil temperature, humidity, leaf wetness, atmospheric pressure
Golf Courses Irrigation	Selective irrigation in dry zones to reduce the water resources required in the green	Soil moisture (3 levels of depth)
Compost	Control of humidity and temperature levels in alfalfa, hay, straw, etc. to prevent fungus and other microbial contaminants	Humidity, soil moisture, soil temperature



# Configure your Hardware

### Orders

### List of items included in the Smart Agriculture IoT Vertical Kit:

Item	Ref.	Quantity
Plug & Sense! Smart Agriculture-PRO 868/900 EU [868], US, BR or AU [900] versions are provided, depending on kit)	SAP-868/900	1
Plug & Sense! Smart Agriculture 868/900 EU [868], US, BR or AU [900] versions are provided, depending on kit)	SA-868/900	1
Temperature, Humidity and Pressure probe	9370-P	2
Soil moisture 1.5 m sensor probe	9248-P	1
Soil moisture 4.5 m sensor probe	9324-P	2
Solar radiation (PAR) sensor probe	9251-P	1
Soil/Water temperature (Pt-1000) sensor probe	9255-P	1
Soil temperature (DS18B20) Probe	86949-P	1
Leaf wetness sensor probe	9249-P	2
WS-3000 (anemometer + wind vane + pluviometer) sensor probe	9256-P	1
6600mAh rechargeable battery + external solar panel	6600-EXT	2
Outdoors USB cable	256369	2
International adapter	10280	3
Meshlium 4G 868/900 AP (EU/BR, US or AU versions are provided, depending on kit) (EU/BR and US versions feature a GPS receiver)	M4G-868/900	1
Technical consultancy 2 hrs	TC-2	1
P&S! Programming Service (kit of Marketplace)	PROG-Mktplace	1
Meshlium visualization interface	MVIS	1



Ref / Total Price	SAIVK-EU/ 4,300 €
	SAIVK-US/ 4,300 €
	SAIVK-BR/ 4,300 €
	SAIVK-AU/ 4,300 €

Includes Meshlium Sensor Visualizer interface – 100 times free access limit. After 100 log-ins a license fee can be acquired to keep on using it.

We do not provide these codes, the nodes are already programmed in Libelium. Do not overwrite the code.



# Configure your Hardware

### Orders

# **Smart Environment IoT Vertical Kit**



### Application examples:

Application	Description	Sensors
Forest Fire Detection	Monitoring of combustion gases and preemptive fire conditions to define alert zones	CO, CO <sub>2</sub> , temperature, humidity
Air Pollution	Control of CO2 emissions, pollution from cars and toxic gases generated in factories or farms	CO, CO <sub>2</sub>
Indoor Air Quality	Monitoring of gas levels and environmental conditions inside chemical plants to ensure workers and goods safety	CO, CO <sub>2</sub> , temperature, humidity





# Configure your Hardware

### Orders

### List of items included in the Smart Environment IoT Vertical Kit:

Item	Ref.	Quantity
Plug & Sense! Smart Environment-PRO 868/900 EU [868], US, BR or AU [900] versions are provided, depending on kit)	SEP-868/900	1
Plug & Sense! Smart Agriculture 868/900 EU [868], US, BR or AU [900] versions are provided, depending on kit)	SA-868/900	1
Temperature, Humidity and Pressure Sensor Probe	9370-P	1
Carbon Monoxide (CO) Sensor Probe (Calibrated)*	9371-P	1
Carbon Dioxide high accuracy (CO <sub>2</sub> ) Sensor Probe (Calibrated)*	9376-HA-P	1
WS-3000 (anemometer + wind vane + pluviometer) sensor probe	9256-P	1
6600mAh rechargeable battery + external solar panel	6600-EXT	2
Outdoors USB cable	256369	2
International adapter	10280	3
Meshlium 4G 868/900 AP (EU/BR, US or AU versions are provided, depending on kit) (EU/BR and US versions feature a GPS receiver)	M4G-868/900	1
Technical consultancy 2 hrs	TC-2	1
P&S! Programming Service (kit of Marketplace)	PROG-Mktplace	1
Meshlium visualization interface	MVIS	1

 Ref / Total Price
 SEIVK-EU/ 4,650 €

 SEIVK-US/ 4,650 €
 SEIVK-BR/ 4,650 €

 SEIVK-AU/ 4,650 €
 SEIVK-AU/ 4,650 €



Includes Meshlium Sensor Visualizer interface – 100 times free access limit. After 100 log-ins a license fee can be acquired to keep on using it.

We do not provide these codes, the nodes are already programmed in Libelium. Do not overwrite the code. \*Calibrated gas sensors are manufactured once the order has been placed to ensure maximum durability of the calibration feature. Manufacturing process and delivery may take from 4 to 6 weeks. Lifetime of calibrated gas sensors is 6 months working at maximum accuracy. We strongly encourage our customers to buy extra gas sensor probes to replace the original ones after that time to ensure maximum accuracy and performance.

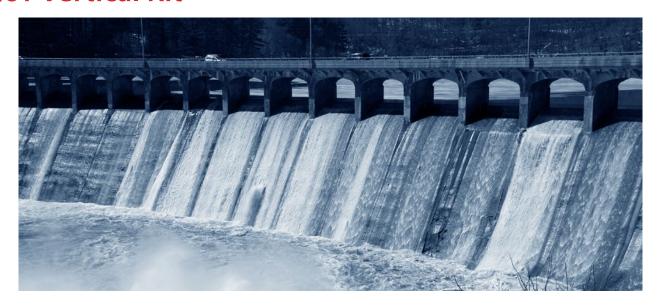




# Configure your Hardware

Orders

# **Smart Water IoT Vertical Kit**



### Application examples:

Application	Description	Sensors
Potable water monitoring	Monitor the quality of tap water in cities	pH, ORP, Dissolved Oxygen (DO)
Chemical leakages	Detect leakages and wastes of factories in rivers	Extreme pH values signal chemical spills, Dissolved Oxygen (DO)
Swimming pool remote measurement	Control remotely the swimming pool conditions	pH, Oxidation Reduction Potential (ORP)
Pollution levels in the sea	Control real-time leakages and wastes in the sea	Conductivity (Salinity), pH, Dissolved Oxygen (DO)



# Configure your Hardware

### Orders

### List of items included in the Smart Water IoT Vertical Kit:

Item	Ref.	Quantity
Plug & Sense! Smart Water 868/900 (EU [868], US, BR or AU [900] versions are provided, depending on kit)	SW-868/900	2
Conductivity Sensor Probe	9326-P	2
pH Sensor Probe	9328	2
Oxidation Reduction Potential Sensor Probe	9329	2
Conductivity Calibration Kit, K=0.1	9339	1
Conductivity Calibration Kit, K=1	9340	1
Conductivity Calibration Kit, K=10	9341	1
ORP Calibration Solution	9344	1
pH Calibration Kit	9343	1
Dissolved Oxygen Sensor Probe	9327	2
DO Calibration Kit	9342	1
6600mAh rechargeable battery + external solar panel	6600-EXT	2
Outdoors USB cable	256369	2
International adapter	10280	3
Meshlium 4G 868/900 AP ((EU/BR, US or AU versions are provided, depending on kit) (EU/BR and US versions feature a GPS receiver)	M4G-868/900	1
Technical consultancy 2 hrs	TC-2	1
Plug & Sense! Programming Service (kit of Marketplace)	PROG-mktplace	1
Meshlium visualization interface	MVIS	1



Ref / Total Price	SWIVK-EU/ 5,250 €	
	SWIVK-US/ 5,250 €	ı
	SWIVK-BR/ 5,250 €	ı
	SWIVK-AU/ 5,250 €	

Includes Meshlium Sensor Visualizer interface – 100 times free access limit. After 100 log-ins a license fee can be acquired to keep on using it.

We do not provide these codes, the nodes are already programmed in Libelium. Do not overwrite the code. (\*) Soil/Water temperature (Pt-1000) included in Plug & Sense! Smart Water.



# Configure your Hardware

### Orders

# **Air Quality Index IoT Vertical Kit**



### Application examples:

Application	Description	Sensors
Air Quality Index monitoring	Monitor the overall quality of the air with maximum accuracy and according to international standards	Temperature, Humidity and Pressure, Carbon Monoxide (CO), Ozone (O <sub>3</sub> ), Nitric Dioxide (NO <sub>2</sub> ), Sulfur Dioxide (SO <sub>2</sub> ), Particle Matter (PM1 / PM2.5 / PM10) - Dust





# Configure your Hardware

### Orders

### List of items included in the Air Quality Index IoT Vertical Kit:

Item	Ref.	Quantity
P&S! SE-PRO 802.15.4 (EU version is provided for the European kit)	SEP-802	1
Temperature, Humidity and Pressure	9370-P	1
Carbon Monoxide (CO) (Calibrated)*	9371-P	1
Ozone (O <sub>3</sub> ) (Calibrated)*	9374-P	1
Nitric Dioxide high accuracy (NO <sub>2</sub> ) (Calibrated)*	9376-HA-P	1
Sulfur Dioxide high accuracy (SO <sub>2</sub> ) (Calibrated)*	9377-HA-P	1
Particle Matter (PM1 / PM2.5 / PM10) - Dust	9387-P	1
6600mAh rechargeable battery + external solar panel	6600-EXT	1
Outdoors USB cable	256369	2
International adapter	10280	3
Meshlium 4G 802.15.4 AP (EU/BR, US or AU versions are provided, depending on kit) (EU/BR and US versions feature a GPS receiver)	M4G-802	1
Technical consultancy 2 hrs	TC-2	1
Plug & Sense! Programming Service (kit of Marketplace)	PROG-mktplace	1
Meshlium visualization interface	MVIS	1

Ref / Total Price	AQIIVK-EU/ 5,300 €
	AQIIVK-US/ 5,300 €
	AQIIVK-BR/ 5,300€
	AQIIVK-AU/ 5,300 €



Includes Meshlium Sensor Visualizer interface – 100 times free access limit. After 100 log-ins a license fee can be acquired to keep on using it.

acquired to keep on using it.

We do not provide these codes, the nodes are already programmed in Libelium. Do not overwrite the code.

\*Calibrated gas sensors are manufactured once the order has been placed to ensure maximum durability of the calibration feature. Manufacturing process and delivery may take from 4 to 6 weeks. Lifetime of calibrated gas sensors is 6 months working at maximum accuracy. We strongly encourage our customers to buy extra gas sensor probes to replace the original ones after that time to ensure maximum accuracy and performance.





# Configure your Hardware

### Orders

# **Smart Industrial Protocols IoT Vertical Kit**



### Application examples:

Application	Description
Connect any sensor to an existing industrial bus (RS-485 in this kit)	Plug & Sense! can be configured to work as a node in the network, inserting sensor data into the industrial bus already present
Add wireless connectivity to wired buses	Plug & Sense! can be configured to read the information coming from the bus and send it to Meshlium using any of the wireless radio modules available (802.15.4 in this kit)
Connect industrial devices to the Cloud	Plug & Sense! can be configured to read the information coming from the bus and send it directly to the Cloud using 4G or WiFi radio modules (not present in this kit). Additionally, Meshlium offers different cloud connectors that flow data directly to cloud platforms.



# Configure your Hardware

### Orders

### List of items included in the Smart Industrial Protocols IoT Vertical Kit:

Item	Ref.	Quantity
Plug & Sense! 4-20 mA 802.15.4 (Industrial ready) (EU version is provided for the European kit)	420-802-IIPP	1
Plug & Sense! AC 802.15.4 (Industrial ready) (EU version is provided for the European kit)	AC-802-IIPP	1
RS-485 / Modbus Module	RS-485-PS	2
Temperature, Humidity and Pressure	9370-P	1
Terminal box probe (accessory for Plug & Sense!)	9270-P	6
DB9 probe (accessory for Plug & Sense!)	DB9-P	2
6600mAh rechargeable battery + 220V adapter	6600-220V	2
Outdoors USB cable	256369	2
International adapter	10280	3
Meshlium 4G 802.15.4 AP (EU/BR, US or AU versions are provided, depending on kit) (EU/BR and US versions feature a GPS receiver)	M4G-802	1
Technical consultancy 2 hrs	TC-2	1
Meshlium visualization interface	MVIS	1





This kit does NOT include any programming service because the software cannot be standardized: each code will depend much on the chosen industrial device. That means the user will need to implement the code for the Plug & Sense! units.

Includes Meshlium Sensor Visualizer interface – 100 times free access limit. After 100 log-ins a license fee can be acquired to keep on using it. Meshlium Visualizer will show sensor data only if the codes create data frames as specified in the Technical Guides.





### Configure your Hardware

Orders

# More and New kits available at The IoT Marketplace!



Interested in complete IoT kits?

Check our out-of-the-box kits containing programmed sensor devices connected to the best Cloud applications for use in pilots or proof of concept projects in the minimum time to market.

Get fully integrated solutions from hardware sensors to cloud applications to speed up IoT adoption.

www.the-iot-marketplace.com





### Configure your Hardware

Orders

## **Evaluator Kit**

This kit is designed to compare different radio technologies or create customized demos. It contains the most demanded products in our catalogue, so that you do not need to spend lots of time configuring your order. Four different versions are available for the markets of Europe, US&Canada, Brazil and Australia.

To ensure you start testing the products as soon as possible, we include 1 attendee place at Libelium Basic Training Course where you will learn from installing the IDE to program Waspmote (more info about training courses on section <u>Support</u>).

Finally, we also include a 3-hour package of online technical consultancy, to solve quickly any doubt you may have when getting your hands on Waspmote. Both training courses and consultancy hours are driven by Libelium R&D engineers.





# Configure your Hardware

### Orders

### List of items included in the Evaluator Kit:

	Item	Pieces
	Waspmote 802.15.4 5 dBi (EU version of the radio is provided for the European kit)	4
	Waspmote Gateway 802.15.4 5 dBi (EU version of the radio is provided for the European kit)	1
ion	GPRS + GPS Module	1
Communication	4G Module (EU/BR, US or AU versions are provided, depending on kit) (EU/BR and US versions feature a GPS receiver)	1
omn	Bluetooth Module PRO 5 dBi	1
0	Waspmote RFID/NFC 13.56 MHz	1
	13.56 MHz / NFC stickers (5 pack)	1
	WiFi module on-chip	1
	Gases Board	2
ds	Events Board	2
Sensor Boards	Smart Cities PRO Board	1
Isor	Agriculture PRO Board	1
Sel	Prototyping Board	1
	Expansion Radio Board Module	2

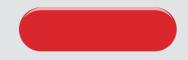
	Item	Piece
	Temperature, humidity and pressure sensor	4
	CO sensor	1
	CO <sub>2</sub> sensor	1
	Air pollutants II sensor	1
	NO <sub>2</sub> sensor	1
ors	Presence sensor (PIR)	1
Sensors	Luminosity (Luxes accuracy) sensor	1
	Ultrasound sensor (indoor)	1
	Soil / Water temperature sensor	1
	Soil moisture sensor	1
	Solar radiation (PAR) sensor	1
	Weather Station WS-3000 (anemometer + wind vane + pluviometer)	1
Accessories	Rigid Solar Panel 7V – 500mA	2
	6600 mAh rechargeable battery	4
Acc	MicroSD 2GB card pack (5 units)	1

	Item	Pieces
Support	Basic Training course*	1
Sup	Technical consultancy – 3 hours package	1

Ref/Price	WEVA-EU/ 4,000 €**	~ <del>6,120 €</del>
	WEVA-USA/ 4,000 €**	~6, <del>120 €</del>
	WEVA-BR/ 4,000 €**	~ <del>6,120 €</del>
	WEVA-AU/ 4,000 €**	~ <del>6,120 €</del>

\* Please check our website or Support section for training courses calendar. \*\* When purchased as a kit, you save almost 35% on the retail price of these separate items.

Now that you have configured your hardware, go to the Orders section to place your order.







### Configure your Hardware

Orders

# MySignals SW and HW Complete Kits (eHealth Medical Development Platform)

MySignals is a development platform for medical devices and eHealth applications. You can use MySignals to develop your eHealth web, Android or iOS applications or even to add your own sensors to build new medical devices.

MySignals Kits include more than 15 sensors which can be used to monitor biometric signals. All the data gathered by MySignals is encrypted and sent to the user's private account at Libelium Cloud through WiFi or Bluetooth. The data can be displayed on a tablet or smartphone with Android or iPhone apps. Developers may use their own Cloud too to store the information.

Libelium offers two different API's for developers to access the information. The Android / iOS API allows to get information directly from MySignals using Bluetooth. The API Cloud allows to access to the user's private account and get the information previously stored, to be displayed on a third party platform. (data can also be stored in a third party Cloud).



More info at: http://www.my-signals.com



# Configure your Hardware

### Orders

### MySignals SW Complete Kit includes:

- MySignals SW
- Snore Sensor [PRO]
- Patient Position Sensor [PRO]
- ECG Sensor [PRO]
- EMG Sensor [PRO]
- GSR Sensor [PRO]
- Airflow (Breathing) Sensor [PRO]
- Body Temperature Sensor [PRO]
- Spirometer Sensor [PRO]
- Glucometer Sensor [PRO]
- Blood Pressure Sensor (Sphygmomanometer) [PRO]
- SPO2 Sensor [PRO]

One year of free Cloud storage!

MySignals SW Complete Kit.	Ref.	Price
Europe version	MS-SW-E KIT	<del>1,860 €</del> → 1,674 €
America version	MS-SW-A KIT	<del>1,860 €</del> → 1,674 €
UK version	MS-SW-UK KIT	<del>1,860 €</del> → 1,674 €





# Configure your Hardware

### Orders

### MySignals SW BLE Complete Kit includes:

- MySignals SW
- Snore Sensor [PRO]
- Patient Position Sensor [PRO]
- ECG Sensor [PRO]
- EMG Sensor [PRO]
- GSR Sensor [PRO]
- Airflow (Breathing) Sensor [PRO]
- Body Temperature Sensor [PRO]
- Spirometer Sensor [PRO]
- SPO2 Sensor Wireless [PRO]
- Blood Pressure Sensor (Sphygmomanometer) Wireless [PRO]
- Glucometer Sensor Wireless [PRO]
- Weight Sensor Wireless [PRO]

### One year of free Cloud storage!

MySignals SW BLE Complete Kit.	Ref.	Price
Europe version	MS-SW-BLE-E KIT	<del>1,955 €</del> → 1,760 €
America version	MS-SW-BLE-A KIT	<del>1,955 €</del> → 1,760 €
UK version	MS-SW-BLE-UK KIT	<del>1,955 €</del> → 1,760 €





# Configure your Hardware

### Orders

### MySignals HW Complete Kit includes:

- MySignals HW
- Snore Sensor [PRO]
- Patient Position Sensor [PRO]
- ECG Sensor [PRO]
- EMG Sensor [PRO]
- GSR Sensor [PRO]
- Airflow (Breathing) Sensor [PRO]
- Body Temperature Sensor [PRO]
- Spirometer Sensor [PRO]
- Glucometer Sensor [PRO]
- Blood Pressure Sensor (Sphygmomanometer) [PRO]
- SPO2 Sensor [PRO]



### One year of free Cloud storage!

MySignals HW Complete Kit.	Ref.	Price
Europe version	MS-HW-E KIT	<del>1,430 €</del> → 1,287 €
America version	MS-HW-A KIT	<del>1,430 €</del> → 1,287 €
UK version	MS-HW-UK KIT	<del>1,430 €</del> → 1,287 €

This Kit needs an Arduino Uno.



# Configure your Hardware

### Orders

### MySignals HW BLE Complete Kit includes:

- MySignals HW
- Snore Sensor [PRO]
- Patient Position Sensor [PRO]
- ECG Sensor [PRO]
- EMG Sensor [PRO]
- GSR Sensor [PRO]
- Airflow (Breathing) Sensor [PRO]
- Spirometer Sensor [PRO]
- Body Temperature Sensor [PRO]
- SPO2 Sensor Wireless [PRO]
- Blood Pressure Sensor (Sphygmomanometer) Wireless [หหบ]
- Glucometer Sensor Wireless [PRO]
- Weight Sensor Wireless [PRO]

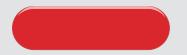


MySignals SW BLE Complete Kit.	Ref.	Price
Europe version	MS-HW-BLE-E KIT	<del>1,525 €</del> → 1,373 €
America version	MS-HW-BLE-A KIT	<del>1,525 €</del> → 1,373 €
UK version	MS-HW-BLE-UK KIT	<del>1,525 €</del> → 1,373 €

This Kit needs an Arduino Uno.



Now that you have configured your hardware, go to the Orders section to place your order.





Models

**Power Options** 

Accesories

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# Waspmote Plug & Sense!: technology ready to install

Waspmote Plug & Sense! is the the best option to use in commercial deployments. It has been designed with a robust waterproof enclosure that simplifies installation and maintenance process. Moreover, you can order them factory-programmed saving you development costs and time. The result is a ready to install and easy to deploy sensor device that reduces time to market in any application. You can focus on your customer and forget about the sensing part. Besides, the platform is market-ready because it is certified for the main regions in the world.

Any scenario	<ul> <li>110+ sensors available, up to 6 sensors per sensor device</li> <li>Communication: 802.15.4, 868 MHz, 900 MHz, WiFi, 4G, Sigfox and LoRaWAN</li> <li>Industrial protocols: RS-232, RS-485, Modbus, CAN Bus</li> <li>GPS receiver</li> </ul>					
For real projects	<ul> <li>Robust waterproof IP65 enclosure</li> <li>Solar powered with internal and external panel options</li> </ul>					
Fast installation	<ul> <li>Factory-programmed and configured</li> <li>Special holders and brackets to install in street lights and building fronts</li> <li>On / Off external button</li> <li>External socket for SIM card</li> </ul>					
Easy maintenance	<ul> <li>Remote firmware upgrades of multiple nodes at once (OTAP)</li> <li>Replace or add a sensor probe in seconds</li> <li>External, contactless device-reset with magnet</li> </ul>					
Fully certified	<ul> <li>CE (Europe)</li> <li>ANATEL (Brazil)</li> <li>FCC (US)</li> <li>RCM (Australia)</li> <li>IC (Canada)</li> <li>AT&amp;T (cellular certification for US)</li> <li>for US)</li> </ul>					





Models

**Power Options** 

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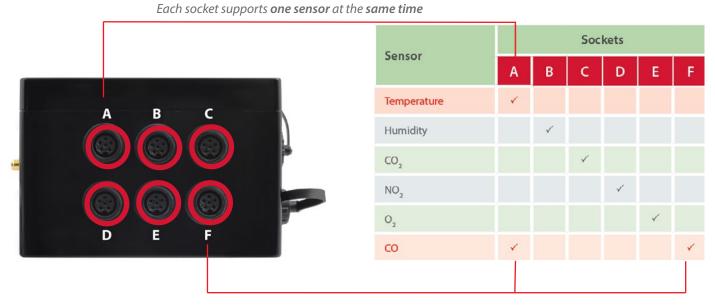
Orders

# Configuring your Plug & Sense! device

You can customize any Waspmote Plug & Sense! model by choosing the radio, power option, sensors and optional accessories.

Since each sensor has different power requirements and dedicated circuitry, sensor probes can be attached only to certain sockets (named A - F in the figure). There is a sensors table in all the models explaining all the possible connections between sensor probes and sockets.

Each socket supports one sensor at the same time



*In this example the CO Sensor can be connected to the socket A or F indistinctly* 



Models

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# **Choosing your Plug & Sense! model**

# **Smart Environment PRO**



**Smart Agriculture** 



**Smart Agriculture PRO** 



**Smart Water** 



- Particle Matter (PM1 / PM2.5 / PM10) Dust Sensor
- CO H, CI,
- CO, H,S NH,
- 0, HCI SO,
- HCN
- PH - NO
- NO, ETO
- CH<sub>4</sub> (and other combustible gases)
- Temperature, Humidity and Pressure
- Luminosity (Luxes accuracy)
- Ultrasound (outdoor IP67)

- Temperature, Humidity and Pressure
- Anemometer + Wind vane
- + Pluviometer
- Soil moisture (1.5, 4.5, 8 m)
- Soil temperature
- Leaf wetness
- Luminosity (Luxes accuracy)
- Ultrasound (outdoor IP67)

- Soil / Water temperature
- Solar radiation (PAR)
- Trunk diameter
- Stem diameter
- Fruit diameter
- Temperature, Humidity and Pressure
- Soil moisture (1.5, 4.5, 8 m)
- Leaf wetness
- Anemometer + Wind vane + Pluviometer
- Luminosity (Luxes accuracy)
- Ultrasound (outdoor IP67)

- Soil / Water temperature
- Conductivity
- Dissolved Oxygen
- Oxidation-Reduction Potential
- Turbidity

We provide prices in USD to US customers. Please submit your RFQ, and we will provide you with the USD prices.



Models

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**Smart Water Ions** 

**Smart Cities PRO** 

**Smart Parking** 

**Smart Security** 

4 - 20 mA (Current Loop)







- Magnetic field (3 axis):

· X axis

· Y axis

· Z axis





- Ammonium (NH<sub>4</sub><sup>+</sup>)
- Bromide (Br -)
- Calcium (Ca2+)
- Chloride (Cl -)
- Cupric (Cu2+)
- Fluoride (F-)
- lodide (l<sup>-</sup>)
- Fluoroborate (BF, -)
- Lithium (Li+)
- Nitrate (NO<sub>3</sub><sup>-</sup>)
- Nitrite (NO<sub>2</sub>)
- Magnesium (Mg<sup>2+</sup>)
- Perchlorate (CIO, )
- Potassium (K+)
- Silver (Ag+)
- Sodium (Na+)
- pH
- Soil / Water Temperature

- Noise / Sound Level
- Particle Matter (PM1 / PM2.5 / PM10) Dust Sensor
- CO - NH<sub>a</sub>
- CO. - H,
- O<sub>2</sub> - H<sub>s</sub>S
- O<sub>2</sub> - HCI
- NO - HCN
- NO - PH,
- SO. - ETO
- Cl
- CH, (and other combustible gases)
- Temperature, Humidity and Pressure
- Luminosity (Luxes accuracy)
- Ultrasound (outdoor IP67)



- Temperature, Humidity and Pressure
  - Presence (PIR)
  - Horizontal liquid level (water / combustibles)
  - Water leakage (point / line)
  - Hall effect
  - Water flow small
  - Water flow medium
  - Water flow large
  - Relay Input-Output
  - Luminosity (Luxes accuracy)
  - Ultrasound (outdoor IP67)

- Sensors and instruments
- Remote transducers
- Monitoring processes
- Data transmission in industrial ambients
- The user can choose among a wide variety of standard sensors

We provide prices in USD to US customers. Please submit your RFQ, and we will provide you with the USD prices.



Models

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**Radiation Control** 

**Ambient Control** 

**Traffic Congestion** 







- Geiger tube [ ß, γ ] (Beta and Gamma)

- Temperature, Humidity and Pressure
- Luminosity (LDR)
- Luminosity (Luxes accuracy)
- As well as working as IoT gateway for the Waspmote and Plug & Sense! sensor nodes, Meshlium can detect WiFi and Bluetooth devices, like smart-phones and tablets. This enables the user to calculate the number of people passing through the range area.



Models

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### **Smart Environment PRO**

This model model has been created as an evolution of Smart Environment. It enables the user to implement pollution, air quality, industrial, environmental or farming projects with high requirements in terms of high accuracy, reliability and measurement range as the sensors come calibrated from factory.

Communication options	Ref.	Price
Plug & Sense! SE-PRO 802.15.4 EU	SEP-802-EU	552€
Plug & Sense! SE-PRO 802.15.4	SEP-802	552€
Plug & Sense! SE-PRO WiFi	SEP-W	552€
Plug & Sense! SE-PRO 868	SEP-868	575€
Plug & Sense! SE-PRO 900 US	SEP-900-US	594€
Plug & Sense! SE-PRO 900 BR	SEP-900-BR	594€
Plug & Sense! SE-PRO 900 AU	SEP-900-AU	594€
Plug & Sense! SE-PRO 4G EU/BR*	SEP-4G-EU/BR	738€
Plug & Sense! SE-PRO 4G US*	SEP-4G-US	738€
Plug & Sense! SE-PRO 4G AU	SEP-4G-AU	672€
Plug & Sense! SE-PRO LoRaWAN EU	SEP-LW-EU	492€
Plug & Sense! SE-PRO LoRaWAN US	SEP-LW-US	492€
Plug & Sense! SE-PRO Sigfox EU **	SEP-SF-EU	492€
Plug & Sense! SE-PRO Sigfox US **	SEP-SF-US	504€

Looking for a working and programmed demo with this product?

Try our out-of-the-box IoT Vertical kits!

II DELIUM Smart Environment PRO

CE FC IC SANATEL

ANATEL

CANATEL

CANATEL

CONTRACTOR

C

<sup>\*</sup> This device includes a GPS receiver.

<sup>\*\*</sup> Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox IoT Starter Kit. Contact our <u>Sales Team</u> for more info.



Intro Models Power Options Accesories Data Support Orders

Sensor		Sockets						
	А	В	C	D	Е	F	Ref.	Price
Temperature, Humidity and Pressure					$\checkmark$		9370-P	48€
Carbon Monoxide (CO) for high concentrations (Calibrated) <sup>1</sup>	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9371-P	198€
Carbon Monoxide (CO) for low concentrations (Calibrated) <sup>1</sup>	$\checkmark$	$\checkmark$	$\checkmark$				9371-LC-P	276€
Carbon Dioxide (CO <sub>2)</sub> (Calibrated)* (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9372-P	648 €
Oxygen (O <sub>2</sub> ) (Calibrated) <sup>(1)</sup>	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9373-P	240 €
Ozone (O <sub>3</sub> ) (Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9374-P	348 €
Nitric Oxide (NO) for low concentrations (Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9375-LC-P	288€
Nitric Dioxide high accuracy (NO <sub>2</sub> ) (Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9376-HA-P	276€
Sulfur Dioxide high accuracy (SO <sub>2</sub> ) (Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9377-HA-P	276€
Ammonia (NH <sub>3</sub> ) for low concentrations (Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9378-LC-P	444€
Ammonia (NH <sub>3</sub> ) for high concentrations (Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9378-HC-P	Coming soon
Methane (CH <sub>4</sub> ) and Combustible Gas (Calibrated)* (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9379-P	246 €
Hydrogen (H <sub>2</sub> ) (Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9380-P	222€
Hydrogen Sulfide (H <sub>2</sub> S )(Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9381-P	228€
Hydrogen Chloride (HCI) (Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9382-P	408 €
Hydrogen Cyanide (HCN) (Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9383-P	268 €
PH <sub>3</sub> (Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9384-P	390 €
ETO (Calibrated) (1)	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9385-P	288€
Cl <sub>2</sub> (Calibrated) <sup>(1)</sup>	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	9386-P	300€
Particle Matter (PM1 / PM2.5 / PM10) - Dust (1)				$\checkmark$			9387-P	1,380 €
Luminosity (Luxes accuracy)					$\checkmark$		9325-P	59€
Ultrasound					$\checkmark$		9246-P	288€

1.Calibrated gas sensors are manufactured once the order has been placed to ensure maximum durability of the calibration feature. Manufacturing process and delivery may take from 4 to 6 weeks. Lifetime of calibrated gas sensors is 6 months working at maximum accuracy. We strongly encourage our customers to buy extra gas sensor probes to replace the original ones after that time to ensure maximum accuracy and performance. \* Due to high power requirements, these sensors cannot work at the same time in the same Plug & Sense!



Models

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### **Smart Agriculture**

This model allows the deployment of any Precision Agriculture application.

Due to the complexity of some sensors, there are two versions: Smart Agriculture and Smart Agriculture-PRI

Communication options	Ref.	Price
Plug & Sense! SA 802.15.4 EU	SA-802-EU	534€
Plug & Sense! SA 802.15.4	SA-802	534€
Plug & Sense! SA WiFi	SA-W	534€
Plug & Sense! SA 868	SA-868	535 €
Plug & Sense! SA 900 US	SA-900-US	564€
Plug & Sense! SA 900 BR	SA-900-BR	564€
Plug & Sense! SA 900 AU	SA-900-AU	564€
Plug & Sense! SA 4G EU/BR*	SA-4G-EU/BR	780 €
Plug & Sense! SA 4G US*	SA-4G-US	780 €
Plug & Sense! SA 4G AU	SA-4G-AU	708€
Plug & Sense! SA LoRaWAN EU	SA-LW-EU	516€
Plug & Sense! SA LoRaWAN US	SA-LW-US	516€
Plug & Sense! SA Sigfox EU **	SA-SF-EU	516€
Plug & Sense! SA Sigfox US **	SA-SF-US	522€



\* This device includes a GPS receiver.

\*\*Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox IoT Starter Kit. Contact our Sales Team for more info.

Looking for a working and programmed demo with this product?

Try our out-of-the-box IoT Vertical kits!



Models

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### Sensors available:

Sensor			Soc	kets	Dof	Price		
	А	В	C	D	Е	F	Ref.	Filce
Temperature, Humidity and Pressure				$\checkmark$		<b>√</b>	9370-P	48 €
Soil moisture 1.5 m		$\checkmark$	<b>✓</b>		$\checkmark$		9248-P	65 €
Soil moisture 4.5 m		$\checkmark$	$\checkmark$		$\checkmark$		9324-P	80€
Soil moisture 8 m		$\checkmark$	$\checkmark$		$\checkmark$		9323-P	90 €
Soil temperature (DS18B20)				$\checkmark$			86949-P	30 €
WS-3000 (anemometer + wind vane + pluviometer)	✓						9256-P	150€
Leaf wetness					$\checkmark$		9249-P	24 €
Luminosity (Luxes accuracy)				$\checkmark$		$\checkmark$	9325-P	59€
Ultrasound				$\checkmark$		✓	9246-P	288€

<sup>1.</sup>Calibrated gas sensors are manufactured once the order has been placed to ensure maximum durability of the calibration feature. Manufacturing process and delivery may take from 4 to 6 weeks. Lifetime of calibrated gas sensors is 6 months working at maximum accuracy. We strongly encourage our customers to buy extra gas sensor probes to replace the original ones after that time to ensure maximum accuracy and performance. \*Due to high power requirements, these sensors cannot work at the same lime in the same Plug & Sense!



Models

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# **Smart Agriculture PRO**

The PRO version accepts more sensors than the Standard version.

Communication options	Ref.	Price
Plug & Sense! SA-PRO 802.15.4 EU	SAP-802-EU	564€
Plug & Sense! SA-PRO 802.15.4	SAP-802	564€
Plug & Sense! SA-PRO WiFi	SAP-W	564€
Plug & Sense! SA-PRO 868	SAP-868	565€
Plug & Sense! SA-PRO 900 US	SAP-900-US	600€
Plug & Sense! SA-PRO 900 BR	SAP-900-BR	600€
Plug & Sense! SA-PRO 900 AU	SAP-900-AU	600€
Plug & Sense! SA-PRO 4G EU/BR*	SAP-4G-EU/BR	828€
Plug & Sense! SA-PRO 4G US*	SAP-4G-US	828€
Plug & Sense! SA-PRO 4G AU	SAP-4G-AU	756€
Plug & Sense! SA-PRO LoRaWAN EU	SAP-LW-EU	534€
Plug & Sense! SA-PRO LoRaWAN US	SAP-LW-US	534€
Plug & Sense! SA-PRO Sigfox EU **	SAP-SF-EU	534€
Plug & Sense! SA-PRO Sigfox US **	SAP-SF-US	546 €

Looking for a working and programmed demo with this product?

<u>Try our out-of-the-box IoT Vertical kits!</u>

ANATEL

<sup>\*</sup> This device includes a GPS receiver.

<sup>\*\*</sup> Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox IoT Starter Kit. Contact our <u>Sales Team</u> for more info.



Models

**Power Options** 

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### Sensors available:

			Soc	ckets	2			
Sensor	А	В	C	D	Е	F	Ref.	Price
Temperature, Humidity and Pressure				$\checkmark$		<b>√</b>	9370-P	48 €
Soil/Water temperature (Pt-1000)				$\checkmark$			9255-P	30 €
Solar radiation (PAR)		$\checkmark$					9251-P	250 €
Ultraviolet		<b>✓</b>					9257-P	340 €
Soil moisture 1.5 m		$\checkmark$	$\checkmark$		$\checkmark$		9248-P	65 €
Soil moisture 4.5 m		$\checkmark$	$\checkmark$		$\checkmark$		9324-P	80€
Soil moisture 8 m		$\checkmark$	$\checkmark$		$\checkmark$		9323-P	90 €
WS-3000 (anemometer + wind vane + pluviometer)	$\checkmark$						9256-P	150€
Leaf wetness					$\checkmark$		9249-P	24€
Trunk diameter			$\checkmark$				9252-P	500€
Stem diameter			$\checkmark$				9253-P	475 €
Fruit diameter			$\checkmark$				9254-P	475 €
Luminosity (Luxes accuracy)				$\checkmark$		$\checkmark$	9325-P	59€
Ultrasound				$\checkmark$		$\checkmark$	9246-P	288€



Models

**Power Options** 

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## **Smart Water**

The Smart Water model has been conceived to facilitate the remote monitoring of the most relevant parameters related to water quality. With this platform you can measure more than 6 parameters, including the most relevant for water control such as dissolved oxygen, oxidation-reduction potential, pH, conductivity and temperature. An extremely accurate turbidity sensor has been integrated as well.

Communication options	Ref.	Price
Plug & Sense! SW 802.15.4 EU	SW-802-EU	600€
Plug & Sense! SW 802.15.4	SW-802	600€
Plug & Sense! SW WiFi	SW-W	600€
Plug & Sense! SW 868	SW-868	600€
Plug & Sense! SW 900 US	SW-900-US	636€
Plug & Sense! SW 900 BR	SW-900-BR	636€
Plug & Sense! SW 900 AU	SW-900-AU	636 €
Plug & Sense! SW 4G EU/BR *	SW-4G-EU/BR	960 €
Plug & Sense! SW 4G US *	SW-4G-US	960 €
Plug & Sense! SW 4G AU	SW-4G-AU	864 €
Plug & Sense! SW LoRaWAN EU	SW-LW-EU	600€
Plug & Sense! SW LoRaWAN US	SW-LW-US	600€
Plug & Sense! SW Sigfox EU **	SW-SF-EU	600€
Plug & Sense! SW Sigfox US **	SW-SF-US	612€

<sup>\*</sup> This device includes a GPS receiver.



Looking for a working and programmed demo with this product?

Try our out-of-the-box IoT Vertical kits!

<sup>\*\*</sup> Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox IoT Starter Kit. Contact our <u>Sales Team</u> for more info.



Models

**Power Options** 

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#### Sensors available:

Sensor			Soc	:kets	D. (	Div		
	А	В	С	D	E	F	Ref.	Price
Soil/Water temperature (Pt-1000)*						$\checkmark$	9255-P	30€
Conductivity			✓				9326-P	59€
Dissolved Oxygen		$\checkmark$					9327	600€
рН	✓						9328	21 €
Oxidation Reduction Potential					$\checkmark$		9329	54€
Turbidity**						✓	9353-P	3,594 €

Not compatible with LoRa.

<sup>\*</sup> Each Smart Water node includes a Soil/Water temperature probe in the price.

<sup>\*\*</sup>The sensor is sold calibrated from factory. It must be purchased with its corresponding Plug & Sense! Smart Water node; available on demand.





Models

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For Smart Water sensors, it is highly recommended to purchase calibration solutions to calculate accurate measurement. One kit is enough for several sensor units.

Calibration Kit	Ref.	Price
Conductivity Calibration Kit, K=0.1	9339	28€
Conductivity Calibration Kit, K=1	9340	28€
Conductivity Calibration Kit, K=10	9341	28 €
DO Calibration Solution	9342	42 €
pH Calibration Kit	9343	63 €
ORP Calibration Solution	9344	42 €
Turbidity Calibration Kit (low)	TCL	144€
Turbidity Calibration Kit (high)	TCH	186€









Models

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### **Smart Water Ions**

The Smart Water lons models specialize in the measurement of ions concentration for drinking water quality control, agriculture water monitoring, swimming pools or waste water treatment. Due to the existence of 3 types for the reference probe and 2 types of sensor probes ("normal" and PRO), there are 3 variants: Smart Water lons Single, Smart Water lons Double and Smart Water lons PRO. See below the suitable version depending on the sensors needed.

Communication options	Ref.	Price
Plug & Sense! SWI Single 802.15.4 EU	SWI-S-802-EU	684€
Plug & Sense! SWI Single 802.15.4	SWI-S-802	684€
Plug & Sense! SWI Single WiFi	SWI-S-W	696€
Plug & Sense! SWI Single 868	SWI-S-868	696€
Plug & Sense! SWI Single 900 US	SWI-S-900-US	720€
Plug & Sense! SWI Single 900 BR	SWI-S-900-BR	720€
Plug & Sense! SWI Single 900 AU	SWI-S-900-AU	720€
Plug & Sense! SWI Single 4G EU/BR*	SWI-S-4G-EU/BR	948€
Plug & Sense! SWI Single 4G US*	SWI-S-4G-US	948€
Plug & Sense! SWI Single 4G AU	SWI-S-4G-AU	876€
Plug & Sense! SWI Single LoRaWAN EU	SWI-S-LW-EU	672€
Plug & Sense! SWI Single LoRaWAN US	SWI-S-LW-US	672€
Plug & Sense! SWI Single Sigfox EU **	SWI-S-SF-EU	672€
Plug & Sense! SWI Single Sigfox US **	SWI-S-SF-US	684€



\* This device includes a GPS receiver.

\*\* Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox loT Starter Kit. Contact our <u>Sales Team</u> for more info.

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Models

**Power Options** 

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#### Sensors available:

Sensor			Soc	D. (				
	Α	В	С	D	E	F	Ref.	Price
Soil/Water temperature (Pt-1000)*						<b>✓</b>	9255-P	30€
Single Junction Reference*					$\checkmark$		9350	78€
Calcium Ion (Ca <sup>2+</sup> )	✓	$\checkmark$	✓	✓			9352	204€
Fluoride Ion (F <sup>-</sup> )	✓	✓	✓	✓			9353	204€
Fluoroborate Ion (BF <sub>4</sub> )	$\checkmark$	✓	✓	$\checkmark$			9354	204€
Nitrate Ion (NO <sub>3</sub> )	$\checkmark$	✓	<b>✓</b>	✓			9355	204€
pH (for Smart Water Ions)	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9363	54€

<sup>\*</sup> Each Smart Water Ions node, Single variant, includes a Soil/Water temperature probe and a Single Junction Reference probe in the price.



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The Double variant accepts other type of sensors than the Single variant.

Communication options	Ref.	Price
Plug & Sense! SWI Double 802.15.4 EU	SWI-D-802-EU	732€
Plug & Sense! SWI Double 802.15.4	SWI-D-802	732€
Plug & Sense! SWI Double WiFi	SWI-D-W	744 €
Plug & Sense! SWI Double 868	SWI-D-868	744 €
Plug & Sense! SWI Double 900 US	SWI-D-900-US	768€
Plug & Sense! SWI Double 900 BR	SWI-D-900-BR	768€
Plug & Sense! SWI Double 900 AU	SWI-D-900-AU	768€
Plug & Sense! SWI Double 4G EU/BR*	SWI-D-4G-EU/BR	996€
Plug & Sense! SWI Double 4G US*	SWI-D-4G-US	996€
Plug & Sense! SWI Double 4G AU	SWI-D-4G-AU	918€
Plug & Sense! SWI Double LoRaWAN EU	SWI-D-LW-EU	714€
Plug & Sense! SWI Double LoRaWAN US	SWI-D-LW-US	714€
Plug & Sense! SWI Double Sigfox EU **	SWI-D-SF-EU	714€
Plug & Sense! SWI Double Sigfox US **	SWI-D-SF-US	726€

<sup>\*</sup> This device includes a GPS receiver.









<sup>\*\*</sup> Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox loT Starter Kit. Contact our <u>Sales Team</u> for more info.



Models

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## Sensors available (they are "normal", not PRO):

Company			Soc	Def	Dui			
Sensor	А	В	C	D	Е	F	Ref.	Price
Soil/Water temperature (Pt-1000)*						<b>√</b>	9255-P	30 €
Double Junction Reference*					$\checkmark$		9351	120€
Bromide Ion (Br <sup>-</sup> )	$\checkmark$	$\checkmark$	✓	✓			9356	204€
Chloride Ion (Cl <sup>-</sup> )	$\checkmark$	$\checkmark$	✓	✓			9357	204€
Cupric Ion (Cu <sup>2+</sup> )	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9358	204€
lodide lon (l <sup>-</sup> )	$\checkmark$	<b>√</b>	✓	$\checkmark$			9360	204 €
Silver Ion (Ag+)	$\checkmark$	$\checkmark$	✓	$\checkmark$			9362	204€
pH (for Smart Water Ions)	$\checkmark$	$\checkmark$	✓	$\checkmark$			9363	54€

<sup>\*</sup> Each Smart Water Ions node, Double variant, includes a Soil/Water temperature probe and a Double Junction Reference probe in the price.



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The PRO variant is able to read PRO sensors, with higher performance than the "normal" sensors (Single or Double).

Communication options	Ref.	Price
Plug & Sense! SWI PRO 802.15.4 EU	SWI-P-802-EU	1,056€
Plug & Sense! SWI PRO 802.15.4	SWI-P-802	1,056€
Plug & Sense! SWI PRO WiFi	SWI-P-W	1,068€
Plug & Sense! SWI PRO 868	SWI-P-868	1,098€
Plug & Sense! SWI PRO 900 US	SWI-P-900-US	1,098€
Plug & Sense! SWI PRO 900 BR	SWI-P-900-BR	1,098€
Plug & Sense! SWI PRO 900 AU	SWI-P-900-AU	1,098€
Plug & Sense! SWI PRO 4G EU/BR *	SWI-P-4G-EU/BR	1,032€
Plug & Sense! SWI PRO 4G US*	SWI-P-4G-US	1,032 €
Plug & Sense! SWI PRO 4G AU	SWI-P-4G-AU	960 €
Plug & Sense! SWI PRO LoRaWAN EU	SWI-P-LW-EU	936€
Plug & Sense! SWI PRO LoRaWAN US	SWI-P-LW-US	936€
Plug & Sense! SWI PRO Sigfox EU **	SWI-P-SF-EU	936€
Plug & Sense! SWI PRO Sigfox US **	SWI-P-SF-US	948 €

<sup>\*</sup> This device includes a GPS receiver.











<sup>\*\*</sup> Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox IoT Starter Kit. Contact our <u>Sales Team</u> for more info.



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#### These are the PRO sensors available:

Canada			So	D. C	Duine			
Sensor	A	В	С	D	Е	F	Ref.	Price
Soil/Water temperature (Pt-1000)*						$\checkmark$	9255-P	30€
Reference [PRO]*					$\checkmark$		9410	504€
Ammonium Ion (NH <sub>4</sub> +) [PRO]	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9412	504€
Bromide Ion (Br) [PRO]	✓	$\checkmark$	$\checkmark$	$\checkmark$			9413	918€
Calcium Ion (Ca <sup>2+</sup> ) [PRO]	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9414	504€
Chloride Ion (CI <sup>-</sup> ) [PRO]	✓	$\checkmark$	$\checkmark$	$\checkmark$			9415	504€
Cupric Ion (Cu <sup>2+</sup> ) [PRO]	$\checkmark$	✓	$\checkmark$	$\checkmark$			9416	918€
Fluoride Ion (F <sup>-</sup> ) [PRO]	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9417	918€
lodide Ion (I <sup>-</sup> ) [PRO]	✓	$\checkmark$	$\checkmark$	$\checkmark$			9418	918€
Lithium Ion (Li <sup>+</sup> ) [PRO]	$\checkmark$	✓	$\checkmark$	$\checkmark$			9419	918€
Magnesium Ion (Mg <sup>2+</sup> ) [PRO]	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9420	504€
Nitrate Ion (NO <sub>3</sub> -) [PRO]	✓	$\checkmark$	$\checkmark$	$\checkmark$			9421	504€
Nitrite Ion (NO <sub>2</sub> -) [PRO]	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9422	918€
Perchlorate Ion (CIO <sub>4</sub> -) [PRO]	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9423	918€
Potassium Ion (K+) [PRO]	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9424	504€
Silver Ion (Ag+) [PRO]	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9425	918€
Sodium Ion (Na+) [PRO]	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9426	504€
pH (for Smart Water Ions) [PRO]	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9411	504€

<sup>\*</sup> Each Smart Water lons node, Pro variant, includes a Soil/Water temperature probe and a Pro Junction Reference probe in the price.



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For Smart Water lons sensors, it is highly recommended to purchase calibration solutions to calculate accurate measurement. One kit is enough for several sensor units.

Calibration Kit	Ref.	Price
Multi-lons Calibration Kit (Ammonium, Calcium, Chloride, Magnesium, Nitrate, Potassium, Sodium)	9445	144€
Bromide Calibration Kit	9388	119€
Calcium Calibration Kit	9366	119€
Chloride Calibration Kit	9389	119€
Cupric Calibration Kit	9390	119€
Fluoride Calibration Kit	9367	119€
Fluoroborate Calibration Kit	9368	119€
lodide Calibration Kit	9391	119€
Lithium Calibration Kit	9446	144€
Nitrate Calibration Kit	9369	119€
Nitrite Calibration Kit	9447	144€
Perchlorate Calibration Kit	9448	144€
Silver Calibration Kit	9392	119€
pH Calibration Kit	9343	63 €



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## **Smart Cities PRO**

This model allows to deploy many Smart Cities and Smart Buildings applications.

Communication options	Ref.	Price
Plug & Sense! SCP 802.15.4 EU	SCP-802-EU	552€
Plug & Sense! SCP 802.15.4	SCP-802	552€
Plug & Sense! SCP WiFi	SCP-W	552€
Plug & Sense! SCP 868	SCP-868	575€
Plug & Sense! SCP 900 US	SCP-900-US	588€
Plug & Sense! SCP 900 BR	SCP-900-BR	588€
Plug & Sense! SCP 900 AU	SCP-900-AU	588€
Plug & Sense! SCP 4G EU/BR*	SCP-4G-EU/BR	756€
Plug & Sense! SCP 4G US*	SCP-4G-US	756€
Plug & Sense! SCP 4G AU	SCP-4G-AU	684€
Plug & Sense! SCP LoRaWAN EU	SCP-LW-EU	510€
Plug & Sense! SCP LoRaWAN US	SCP-LW-US	510€
Plug & Sense! SCP Sigfox EU **	SCP-SF-EU	510€
Plug & Sense! SCP Sigfox US **	SCP-SF-US	522€





Looking for a working and programmed demo with this product?

Try our out-of-the-box IoT Vertical kits!

<sup>\*</sup> This device includes a GPS receiver.

<sup>\*\*</sup> Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox loT Starter Kit. Contact our <u>Sales Team</u> for more info.



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#### Sensors available:

			Soc	kets			D. C	Duisa
Sensor	А	В	С	D	Е	F	Ref.	Price
Temperature, Humidity and Pressure	<b>√</b>	<b>√</b>	✓		$\checkmark$	$\checkmark$	9370-P	48 €
Noise Level (dBA)*	$\checkmark$						NLS	1,194 €
Carbon Monoxide (CO) for high concentrations (Calibrated) 1		$\checkmark$	$\checkmark$			$\checkmark$	9371-P	198€
Carbon Monoxide (CO) for low concentrations (Calibrated) 1		$\checkmark$	$\checkmark$			$\checkmark$	9371-LC-P	276€
Carbon Dioxide (CO <sub>2</sub> ) (Calibrated) 1**		$\checkmark$	$\checkmark$			$\checkmark$	9372-P	648 €
Oxygen (O <sub>2</sub> ) (Calibrated) <sup>1</sup>		✓	$\checkmark$			$\checkmark$	9373-P	240 €
Ozone (O <sub>3</sub> ) (Calibrated) <sup>1</sup>		$\checkmark$	$\checkmark$			$\checkmark$	9374-P	348 €
Nitric Oxide (NO) for low concentrations (Calibrated) 1		✓	$\checkmark$			$\checkmark$	9375-LC-P	288€
Nitric Dioxide high accuracy (NO <sub>2</sub> ) (Calibrated) 1		$\checkmark$	$\checkmark$			$\checkmark$	9376-HA-P	276€
Sulfur Dioxide high accuracy (SO <sub>2</sub> ) (Calibrated) 1		$\checkmark$	$\checkmark$			$\checkmark$	9377-HA-P	276€
Ammonia (NH <sub>3</sub> ) for low concentrations (Calibrated) <sup>1</sup>		$\checkmark$	$\checkmark$			$\checkmark$	9378-LC-P	444€
Ammonia (NH <sub>3</sub> ) for high concentrations (Calibrated) <sup>1</sup>		$\checkmark$	$\checkmark$			$\checkmark$	9378-HC-P	Coming soon
Methane (CH <sub>4</sub> ) and Combustible Gas (Calibrated) 1 **		$\checkmark$	$\checkmark$			$\checkmark$	9379-P	246 €
Hydrogen (H <sub>2</sub> ) (Calibrated) <sup>1</sup>		$\checkmark$	$\checkmark$			$\checkmark$	9380-P	222€
Hydrogen Sulfide (H <sub>2</sub> S) (Calibrated) <sup>1</sup>		✓	✓			✓	9381-P	228€
Hydrogen Chloride (HCl) (Calibrated) 1		✓	✓			✓	9382-P	408€
Hydrogen Cyanide (HCN) (Calibrated) <sup>1</sup>		<b>√</b>	$\checkmark$			$\checkmark$	9383-P	268 €



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Sensor			Soc	kets	Ref.	Price		
Sensor	А	В	С	D	Е	F	ker.	Price
Phosphine (PH <sub>3</sub> ) (Calibrated) <sup>1</sup>		<b>√</b>	<b>✓</b>			<b>√</b>	9384-P	390 €
Ethylene (ETO) (Calibrated) <sup>1</sup>		$\checkmark$	$\checkmark$			$\checkmark$	9385-P	288 €
Chlorine (Cl <sub>2</sub> ) (Calibrated) <sup>1</sup>		✓	$\checkmark$			$\checkmark$	9386-P	300€
Particle Matter (PM1 / PM2.5 / PM10) - Dust 1				$\checkmark$			9387-P	1,380 €
Luminosity (Luxes accuracy)	$\checkmark$	✓	<b>√</b>		$\checkmark$	<b>√</b>	9325-P	59€
Ultrasound	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	9246-P	288€

<sup>1:</sup> Calibrated gas sensors are manufactured once the order has been placed to ensure maximum durability of the calibration feature. Manufacturing process and delivery may take from 4 to 6 weeks. Lifetime of calibrated gas sensors is 6 months working at maximum accuracy. We strongly encourage our customers to buy extra gas sensor probes to replace the original ones after that time to ensure maximum accuracy and performance.

<sup>\*:</sup> This sensor includes all the needed accessories (sensor, windshield, enclosure, cables, mounting kit, roof, etc).

<sup>\*\*:</sup> Due to high power requirements, these sensors cannot work at the same time in the same Plug & Sense!.



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## **Smart Parking**

This model allows to detect free parking spots. It is designed to be screwed on the surface of parking slots and to detect the arrival and departure of vehicles with an electromagnetic field sensor. It includes a robust polyamide enclosure for a fast and easy surface installation.

This node comes with 2 radios, Sigfox and LoRaWAN, which benefit from all the LPWAN characteristics. The device is easily configured from a PC and can even be reconfigured with the Remote Manager, from the cloud.

This model comes with a non-rechargeable battery of 10.4 Ah.

Item	Ref.	Price
Smart Parking Node 6 Units Bundle, Europe version <sup>1</sup>	SP-6-E	1,260 €
Smart Parking Node 10 Units Bundle, Europe version <sup>1</sup>	SP-10-E	2,100 €
Smart Parking Node 6 Units Bundle, America version <sup>1</sup>	SP-6-A	1,260 €
Smart Parking Node 10 Units Bundle, America version <sup>1</sup>	SP-10-A	2,100€
Smart Parking Installation Kit <sup>2</sup>	SP-INST	120€



- 1.- Any Smart Parking bundle includes 'n' nodes. Each node includes, among others, PCB, battery, 2 antennas, enclosure, rubber isolators, 4 private ground screws and 4 ground screw anchors.
- 2.- The Smart Parking Installation Kit includes a magnet for contactless reset, a private screw key, a USB Programmer and a miniUSB cable. This Installation Kits not included in Smart Parking bundle, so remember to order at least one.

Looking for a working and programmed demo with this product?

Try our out-of-the-box IoT Vertical kits!



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## **Smart Security**

This model is designed to allow the detection of different events like movement, presence or water levels. Besides, a relay system allows this model to interact with external electrical machines.

Communication options	Ref.	Price
Plug & Sense! SS 802.15.4 EU	SS-802-EU	510€
Plug & Sense! SS 802.15.4	SS-802	510€
Plug & Sense! SS WiFi	SS-W	510€
Plug & Sense! SS 868	SS-868	525€
Plug & Sense! SS 900 US	SS-900-US	546€
Plug & Sense! SS 900 BR	SS-900-BR	546€
Plug & Sense! SS 900 AU	SS-900-AU	546€
Plug & Sense! SS 4G EU/BR*	SS-4G-EU/BR	780€
Plug & Sense! SS 4G US*	SS-4G-US	780€
Plug & Sense! SS 4G AU	SS-4G-AU	708€
Plug & Sense! SS LoRaWAN EU	SS-LW-EU	480€
Plug & Sense! SS LoRaWAN US	SS-LW-US	480€
Plug & Sense! SS Sigfox EU **	SS-SF-EU	480€
Plug & Sense! SS Sigfox US **	SS-SF-US	492€











<sup>\*</sup> This device includes a GPS receiver.

<sup>\*\*</sup> Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox IoT Starter Kit. Contact our <u>Sales Team</u> for more info.



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#### Sensors available:

Sensor			Soc	:kets			Ref.	Price
Sensor	Α	В	C	D	Е	F	кег.	Price
Temperature, Humidity and Pressure	$\checkmark$		✓	$\checkmark$	$\checkmark$		9370-P	48 €
Water flow small		$\checkmark$					9296-P	30 €
Water flow medium		$\checkmark$					9297-P	42 €
Water flow large		$\checkmark$					9298-P	45 €
Terminal box probe (accessory for Plug & Sense!)						$\checkmark$	9270-P	24 €
Presence (PIR)	<b>✓</b>		✓	$\checkmark$	$\checkmark$		9212-P	71 €
Water Leakage / Liquid Detection (Point)	✓		$\checkmark$	$\checkmark$	$\checkmark$		9243-P	27 €
Water Leakage / Liquid Detection (Line)	✓		✓	<b>✓</b>	✓		9295-P	114€
Horizontal liquid level (combustibles)	$\checkmark$		✓	$\checkmark$	$\checkmark$		9239-P	36 €
Horizontal liquid level (water)	$\checkmark$		✓	$\checkmark$	$\checkmark$		9240-P	42 €
Hall Effect	$\checkmark$		✓	$\checkmark$	$\checkmark$		9207-P	42€
Luminosity (Luxes accuracy)	$\checkmark$		✓	$\checkmark$	$\checkmark$		9325-P	59€
Ultrasound	$\checkmark$		✓	$\checkmark$	$\checkmark$		9246-P	288€



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# 4-20 mA (Current Loop)

The applications for this Plug & Sense! model are focused on adding wireless connectivity to 4-20 mA devices and connecting them to the Cloud.

Communication options	Ref.	Price
Plug & Sense! 4-20 mA 802.15.4 EU	420-802-EU	490€
Plug & Sense! 4-20 mA 802.15.4	420-802	490€
Plug & Sense! 4-20 mA WiFi	420-W	490€
Plug & Sense! 4-20 mA 868	420-868	490€
Plug & Sense! 4-20 mA 900 US	420-900-US	520€
Plug & Sense! 4-20 mA 900 BR	420-900-BR	520€
Plug & Sense! 4-20 mA 900 AU	420-900-AU	520€
Plug & Sense! 4-20 mA 4G EU/BR *	420-4G-EU/BR	790 €
Plug & Sense! 4-20 mA 4G US *	420-4G-US	790€
Plug & Sense! 4-20 mA 4G AU	420-4G-AU	710€
Plug & Sense! 4-20 mA LoRaWAN EU	420-LW-EU	470 €
Plug & Sense! 4-20 mA LoRaWAN US	420-LW-US	460€
Plug & Sense! 4-20 mA Sigfox EU **	420-SF-EU	460€
Plug & Sense! 4-20 mA Sigfox US **	420-SF-US	480 €

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<sup>\*</sup> This device includes a GPS receiver.

<sup>\*\*</sup> Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox loT Starter Kit. Contact our <u>Sales Team</u> for more info.



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#### Sensors available:

Sensor			Soc	Ref.	Duico			
	Α	В	С	D	Е	F	nei.	Price
Terminal box probe	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			9270-P	24€
DB9 probe	$\checkmark$	<b>√</b>	$\checkmark$	$\checkmark$			DB9-P	25 €



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## **Radiation Control**

This model can only attach one sensor for measuring radiation levels in nuclear centrals and surroundings.

Communication options	Ref.	Price
Plug & Sense! RA 802.15.4 EU	RA-802-EU	600€
Plug & Sense! RA 802.15.4	RA-802	600€
Plug & Sense! RA WiFi	RA-W	600€
Plug & Sense! RA 868	RA-868	615€
Plug & Sense! RA 900 US	RA-900-US	636 €
Plug & Sense! RA 900 BR	RA-900-BR	636 €
Plug & Sense! RA 900 AU	RA-900-AU	636€
Plug & Sense! RA 4G EU/BR*	RA-4G-EU/BR	840 €
Plug & Sense! RA 4G US*	RA-4G-US	840 €
Plug & Sense! RA 4G AU	RA-4G-AU	768€
Plug & Sense! RA LoRaWAN EU	RA-LW-EU	564€
Plug & Sense! RA LoRaWAN US	RA-LW-US	564€
Plug & Sense! RA Sigfox EU **	RA-SF-EU	564€
Plug & Sense! RA Sigfox US **	RA-SF-US	588€









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## **Ambient Control**

This model is advised for the large amount of scenarios that only need to monitor temperature, humidity, pressure and luminosity sensors.

Communication options	Ref.	Price
Plug & Sense! AC 802.15.4 EU	AC-802-EU	444€
Plug & Sense! AC 802.15.4	AC-802	444€
Plug & Sense! AC WiFi	AC-W	444€
Plug & Sense! AC 868	AC-868	450€
Plug & Sense! AC 900 US	AC-900-US	480€
Plug & Sense! AC 900 BR	AC-900-BR	480€
Plug & Sense! AC 900 AU	AC-900-AU	480€
Plug & Sense! AC 4G EU/BR*	AC-4G-EU/BR	708€
Plug & Sense! AC 4G US*	AC-4G-US	708€
Plug & Sense! AC 4G AU	AC-4G-AU	636€
Plug & Sense! AC LoRaWAN EU	AC-LW-EU	432€
Plug & Sense! AC LoRaWAN US	AC-LW-US	432€
Plug & Sense! AC Sigfox EU **	AC-SF-EU	432€
Plug & Sense! AC Sigfox US **	AC-SF-US	444€

<sup>\*</sup> This device includes a GPS receiver.









<sup>\*\*</sup> Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox IoT Starter Kit. Contact our <u>Sales Team</u> for more info.





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#### Sensors available:

Sensor			Soc	kets			Dof	Price
	А	В	С	D	Е	F	Ref.	Price
Temperature, Humidity and Pressure	✓						9370-P	48 €
Luminosity (LDR)		✓					9205-P	23 €
Luminosity (luxes accuracy)			$\checkmark$				9325-P	59€



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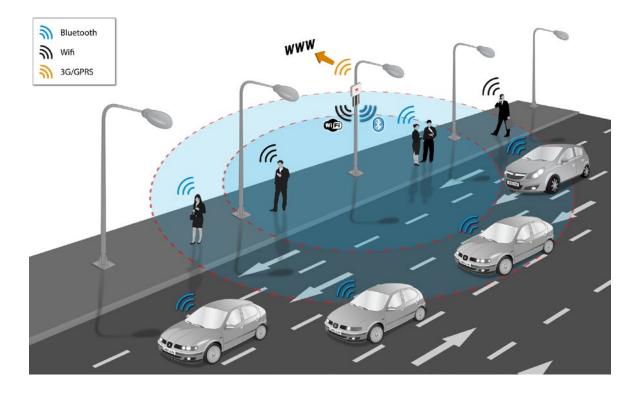
Support

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## Smartphone detection for traffic congestion and pedestrian counting

This application is performed with Meshlium and it is the only one that does not allow to attach any sensor. Meshlium can detect any smartphone in the area by measuring WiFi and Bluetooth activity. This way, pedestrian and traffic congestion can be determined in real time. Meshlium is also the Internet Gateway for Waspmote Plug & Sense! For more information about Meshlium models and prices see Meshlium section.







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# **Power options**

One of the following options is necessary for each Plug & Sense! unit.

Power options	Smart Environment PRO	Smart Agriculture	Smart Water	Smart Water Ions	Smart Cities PRO	Smart Parking <sup>(3)</sup>	Smart Security	4-20 mA	Radiation Control	Ambient Control	Ref.	Price
6600mAh rechargeable battery + external solar panel 7V - 500mA	<b>√</b>	✓	✓	✓	✓	X	✓	✓	✓	✓	6600-EXT	78€
6600mAh rechargeable battery + internal solar panel 6.5V - 205mA	✓	✓	<b>√</b>	✓	✓	X	<b>√</b>	<b>√</b>	✓	<b>√</b>	6600-INT	44€
6600mAh rechargeable battery + 220V adapter	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	6600-220V	40€
6600mAh rechargeable battery + 220V adapter + outdoors USB cable (1)	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	6600-220V-OUT	52€
6600mAh rechargeable battery + 220V adapter + plug adapter (2)	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	6600-220V-J	47€

### You can also add a bigger solar panel as an accessory:

Power options	6600-EXT	6600-INT	6600-220V	6600-220V-OUT	6600-220V-J	Smart Parking	Ref.	Price
20 W solar panel (for Plug & Sense!)	$\checkmark$	X	$\checkmark$	$\checkmark$	✓	X	20WSP-PS	90€

<sup>1.-</sup> Includes a special USB cable, waterproof in the Plug & Sense! end.
2.- Includes adapter for the mains electricity in countries like USA, UK, Australia, Canada, China, Japan, Singapore or Hong Kong.

<sup>3.-</sup> Smart Parking comes by default with a 10.4 Ah non-rechargeable battery; other power options do not make sense.



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# **Industrial Protocols for Plug & Sense!**

Plug & Sense! can incorporate an Industrial Protocol module as a secondary communication option. This feature opens a wide variety of applications for industrial sensing and automation, military, automobile, vehicle tracking or remote factory management. You can add the following accessories to your Plug & Sense! units:

Accesories	Smart Env. PRO	Smart Agric.	Smart Water	Smart Water Ions	Smart Cities PRO	Smart Parking	Smart Security	4-20 mA	Radiation Control	Ambient Control	Ref.	Price
RS-232 / Modbus Module	<b>√</b>	<b>√</b>	X	X	✓	X	<b>✓</b>	<b>✓</b>	<b>√</b>	✓	RS-232-PS	75 €
RS-232 / Modbus Module (4G models)	<b>√</b>	✓	X	X	<b>√</b>	X	✓	<b>√</b>	✓	<b>√</b>	RS-232-PS-4G	50€
RS-485 / Modbus Module	<b>√</b>	✓	X	X	<b>√</b>	X	✓	✓	✓	✓	RS-485-PS	120€
RS-485 / Modbus Module (4G models)	✓	✓	X	X	<b>√</b>	X	<b>✓</b>	✓	✓	✓	RS-485-PS-4G	90€
CAN Bus Module	$\checkmark$	✓	X	X	✓	Χ	$\checkmark$	✓	$\checkmark$	$\checkmark$	CAN-PS	110€
CAN Bus Module (4G models)	<b>√</b>	✓	X	X	<b>√</b>	X	<b>√</b>	<b>√</b>	✓	<b>√</b>	CAN-PS-4G	85€



Note: These accessories need special Plug & Sense! versions (called "Industrial Protocols ready"). Just remember to indicate to your sales agent the Plug & Sense! units where you want to use the Industrial modules.

In the case you chose any of the above options, you will need one or more of these accessories to connect your industrial devices to Plug & Sense!:

Sensor	Ref.	Price
Terminal box probe	9270-P	24€
DB9 probe	DB9-P	25 €



Models

**Power Options** 

Accesories

Data

Support

Orders

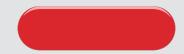
## **Accessories**

The following items are optional. Feel free to choose!

Accessories	Ambient Control	Smart Cities PRO	Smart Parking	Smart Environment PRO	Smart Agriculture	Smart Security	Smart Water	Smart Water Ions	4-20 mA	Radiation Control	Ref.	Price
GPS Module <sup>(1)</sup>	$\checkmark$	✓	X	$\checkmark$	✓	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	GPS-PS	80€
Extension cord 1.5 m <sup>(2)</sup>	✓	X	X	X	✓	✓	<b>√</b> (3)	<b>√</b> (3)	✓	X	10250	10€
Extension cord 3 m <sup>(2)</sup>	$\checkmark$	X	X	X	✓	$\checkmark$	<b>√</b> (3)	<b>√</b> (3)	$\checkmark$	Χ	10251	12€
Magnet for contactless reset (4)	✓	✓	<b>√</b> (5)	✓	✓	✓	✓	$\checkmark$	$\checkmark$	$\checkmark$	10342	30€

<sup>1.-</sup> You can add a GPS receiver to your Plug & Sense! units. That is great for locating each node and tracking applications. The GPS accessory needs special Plug & Sense! versions (called "GPS-ready"). Just remember to indicate to your sales agent the Plug & Sense! units where you want to have a GPS.

Now that you have configured your hardware, go to Data section to decide how to connect to the Cloud.



We provide prices in USD to US customers. Please submit your RFQ, and we will provide you with the USD prices.

<sup>2.-</sup> Extension cords are compliant with most sensor probes (not compliant for example with I2C probes or other digital probes). One extension cord per sensor required.

<sup>3.-</sup> In Smart Water or Smart Water Ions, extension cords are only compliant with the Soil/Water temperature probe.

<sup>4.-</sup> A single magnet can be used for many motes. It is highly recommended.

<sup>5.-</sup> The magnet is EXTREMELY recommended for Smart Parking.



Sensors

Connectivity

**Power Options** 

Data

Support

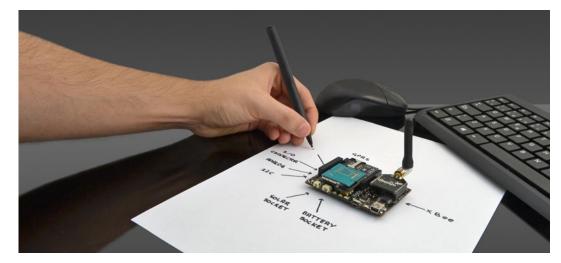
Orders

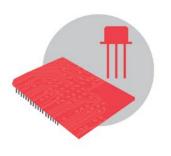
# Waspmote OEM: technology for developers

Waspmote OEM is the best option to research and develop. With a good C++ programming level, you can explore multiple possibilities with its Open Source API, 400+ online code examples and documentation.

Since it has no enclosure, you can try all kind of different hardware combinations, it is more handy to work with it at your lab table and you can use that extra money in getting more sensors and communication modules.

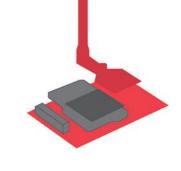
For configuring your hardware you will have to choose:











Board + Sensors

**Communication Protocol** 

Power Supply

**Your Custom Device** 





Sensors

Connectivity

**Power Options** 

Data

Support

Orders

# **Sensors**

To make the deployment of IoT sensor networks easier, we have created 10 sensor boards to integrate more than 110 different sensors.

To make the deployment of lol sensor networks easier, we have created 10 sensor boards to integrate more than 110 different sensors.						
Gases	Gases PRO	Events	Cities PRO			
COR THE PROPERTY OF THE PROPER	Home Borner Ltd C					
- CO - CO <sub>2</sub> - O <sub>2</sub> - CH <sub>4</sub> - NH <sub>3</sub> - NO <sub>2</sub> - Temperature, Humidity and Pressure - Volatile Organic Compounds (1) - Liquified petroleum gases (H <sub>2</sub> , CH <sub>4</sub> , ethanol & isobutane) - Air pollutants I (H <sub>2</sub> , CH <sub>4</sub> , CO, ethanol and isobutane) - Air pollutants II (NH <sub>3</sub> , SH <sub>2</sub> , ethanol and toluene) - Solvent vapors (H <sub>2</sub> , CH <sub>4</sub> , CO, ethanol & isobutane) - Luminosity (Luxes accuracy) - Ultrasound (outdoor IP67)	- Particle Matter (PM1 / PM2.5 / PM10) – Dust Sensor (2)  - CO - H <sub>2</sub> - CO <sub>2</sub> - H <sub>2</sub> S - O <sub>2</sub> - HCI - O <sub>3</sub> - HCN - NO - PH <sub>3</sub> - NO <sub>2</sub> - ETO - SO <sub>2</sub> - CI <sub>2</sub> - NH <sub>3</sub> - CH <sub>4</sub> (and other combustible gases) - Temperature, Humidity and Pressure - Luminosity (Luxes accuracy) - Ultrasound (outdoor IP67)	<ul> <li>Temperature, Humidity and Pressure</li> <li>Presence PIR</li> <li>Horizontal liquid level (combustibles) / (water)</li> <li>Vertical liquid level (water)</li> <li>Water presence (point/line)</li> <li>Hall effect <sup>(3)</sup></li> <li>Water flow small</li> <li>Water flow medium</li> <li>Water flow large</li> <li>Relay Input-Output *</li> <li>Luminosity (Luxes accuracy)</li> <li>Ultrasound (outdoor IP67)</li> </ul>	- Noise / Sound Level* - Particle Matter (PM1 / PM2.5 / PM10) – Dust Sensor* - CO - CH <sub>4</sub> - CO <sub>2</sub> - H <sub>2</sub> S - O <sub>3</sub> - HCI - NO - HCN - NO <sub>2</sub> - PH <sub>3</sub> - SO <sub>2</sub> - ETO - CI <sub>2</sub> - NH <sub>3</sub> (and other combustible gases) - Temperature + Humidity + Pressure - Temperature, Humidity and Pressure - Luminosity (Luxes accuracy) - Ultrasound (outdoor IP67)			
WGAS - 144 €	WGASPRO - 72 €	WEVENTS - 90 €	WCITIES - 144 €			

<sup>1.</sup> VOC sensors go in the same socket, thus, they cannot work in the same board at the same time, but they are interchangeable. The same happens for CO and NH<sub>3</sub> sensors, and for CH<sub>4</sub>, Air pollutants I, Air pollutants I

<sup>2.</sup> Only available in the Plug & Sense! Smart Environment PRO line.

<sup>3.</sup> For doors and windows.

<sup>\*</sup> Only available in the Plug & Sense! Smart Security line.

WCITIES - 144 €

\* Only available in the Plug & Sense! Smart Cities PRO line.



Sensors

Connectivity

**Power Options** 

Data

Support

Orders

Parking \*

Agriculture

Agriculture PRO

Prototyping









- Magnetic Field (3 axis):

- Temperature, Humidity and PressureHumidity
- Anemometer + wind vane + pluviometer
- Soil moisture (3) (1.5, 4.5, 8 m)
- Leaf wetness
- Luminosity (Luxes accuracy)
- Ultrasound (outdoor IP67)

- Temperature, Humidity and PressureHumidity
- Anemometer + wind vane + pluviometer
- Soil moisture (4) (1.5, 4.5, 8 m)
- Leaf wetness
- Luminosity (Luxes accuracy)
- Ultrasound (outdoor IP67)
- Soil/Water temperature
- Solar radiation (PAR)
- Trunk diameter
- Stem diameter
- Fruit diameter

- Pad Area
- Integrated Circuit Area
- Analog-to-Digital Converter (16b)

\* Always supplied with a Waspmote.

Note: Smart Parking is only available with the Plug & Sense! line.

WAGRPRO - 270 €

WPROT - 48 €

3. In each agriculture board 3 soil moistures can be connected in order to measure the parameter in different depth levels.

WAGR - 180 €

4. In each agriculture board 3 soil moistures can be connected in order to measure the parameter in different depth levels.



Sensors

Connectivity

**Power Options** 

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Video Camera Standard / Advanced \*

Radiation

4-20 mA (Current Loop)







- Camera
- Luminosity
- Infra-Red (IR)
- Presence (PIR)
- \* Must always be purchased with a 3G module. Includes IR, luminosity (LDR) and PIR sensors.
- Geiger tube  $[\beta, \gamma]$  (Beta and Gamma)

- Sensors and Instruments
- Remote transducers
- Monitoring processes
- Data transmission in industrial ambients

The user can choose among a wide variety of standard sensors

WCAM-ST / WCAM-ADV - 171 € / 195 €

WRADIATION - 138 €

W420 - 54 €



Sensors

Connectivity

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#### Smart Water \*



- Soil/Water Temperature
- Conductivity
- Dissolved Oxygen
- рН
- Oxidation-Reduction Potential
- Turbidity\*\*
- \* Contains Soil/Water temperature sensor and 4 BNC pigtails. \*\* The sensor is sold calibrated from factory.

### **Smart Water Ions**



- Double Junction Reference Probe

- Reference Probe [PRO]

- Ammonium (NH,+)
- Bromide (Br<sup>-</sup>)
- Calcium (Ca<sup>2+</sup>)
- Chloride (Cl-)
- Cupric (Cu<sup>2+</sup>)
- Fluoride (F-)
- lodide (l-)
- Fluoroborate (BF,-)
- Lithium (Li+)
- Nitrate (NO<sub>3</sub>-)
- Nitrite (NO<sub>2</sub>-)
- Magnesium (Mg<sup>2+</sup>)
- Perchlorate (CIO<sub>4</sub>-)
- Potassium (K+)
- Silver (Ag+)
- Sodium (Na+)
- pH
- Soil / Water Temperature
- \* Contains Soil/Water temperature sensor and 5 BNC pigtails. Ion sensors need Reference Probe.

WWATER - 228 €

WWIONS - 240 €



Intro Sensors

Connectivity

**Power Options** 

Data

Support

Orders

Sensor	Ref.	Price
Temperature, Humidity and Pressure	9370	24 €
Luminosity (luxes accuracy)	9325	18€
Presence (PIR)	9212	22€
Horizontal liquid level (combustibles)	9239	24€
Horizontal liquid level (water)	9240	24€
Vertical liquid level (water)	9242	24€
Water Leakage / Liquid Detection (Point)	9243	12€
Water Leakage / Liquid Detection (line)	9295	90 €
Hall effect (1)	9207	15 €
СО	9229	29€
CO <sub>2</sub>	9230	66€
0,	9231	138€
CH <sub>4</sub>	9232	32€
NH <sub>3</sub>	9233	144€
NO <sub>2</sub>	9238-B	21 €
Volatile Organic Compounds (2)	9201-B	20 €

Sensor	Ref.	Price
Liquified petroleum gases (H <sub>2</sub> , CH <sub>4</sub> , ethanol & isobutane)	9234	34€
Air pollutants-I (H <sub>2</sub> , CH <sub>4</sub> , CO, ethanol and isobutane)	9235	24€
Air pollutants-II (NH <sub>3</sub> , SH <sub>2</sub> , ethanol and toluene)	9236	32€
Solvent vapors (H <sub>2</sub> , CH <sub>4</sub> , CO, ethanol and isobutane)	9237	32€
CO for high concentrations (Calibrated) (3)	9371	180€
CO for low concentrations (Calibrated) (3)	9371-LC	264€
CO <sub>2</sub> (Calibrated) <sup>(3)</sup>	9372	630€
O <sub>2</sub> (Calibrated) <sup>(3)</sup>	9373	222€
O <sub>3</sub> (Calibrated) <sup>(3)</sup>	9374	324€
NO for low concentrations(Calibrated) <sup>(3)</sup>	9375-LC	264€
NO <sub>2</sub> high accuracy (Calibrated) <sup>(3)</sup>	9376-HA	264€
SO <sub>2</sub> high accuracy (Calibrated) <sup>(3)</sup>	9377-HA	264€
NH <sub>3</sub> (Calibrated) for low concentrations (3)	9378-LC	420€
$\mathrm{NH_{_3}}$ (Calibrated) for high concentrations $^{\scriptscriptstyle{(3)}}$	9378-HC	CS
CH <sub>4</sub> and Combustible Gas (Calibrated) <sup>(3)</sup>	9379	234€

Sensor	Ref.	Price
H <sub>2</sub> (Calibrated) <sup>(3)</sup>	9380	198€
H <sub>2</sub> S (Calibrated) <sup>(3)</sup>	9381	204€
HCI (Calibrated) <sup>(3)</sup>	9382	384€
HCN (Calibrated)(3)	9383	250€
PH <sub>3</sub> (Calibrated) <sup>(3)</sup>	9384	372€
ETO (Calibrated) <sup>(3)</sup>	9385	276€
Cl <sub>2</sub> (Calibrated) <sup>(3)</sup>	9386	276€
Ultrasound (indoor)	9213	78€
Ultrasound (outdoor IP67)	9246	252€
Distance (by metallic pressure)	9267	36€
Water flow small	9296	18€
Water flow medium	9297	24€
Water flow large	9298	30€
Soil/Water temperature (4)	9255	18€
Solar radiation (PAR)	9251	225€
Trunk diameter	9252	500€
Stem diameter	9253	475 €

Please note that each board is only compatible with certain sensors. Boards and sensors have to be purchased separately. Sensors are not included in the board price (unless stated otherwise)



Intro Sensors

Connectivity

**Power Options** 

Data

Support

Orders

Sensor	Ref.	Price
Fruit diameter	9254	475€
Anemometer + wind vane + pluviometer	9256	132€
Ultraviolet radiation	9257	325€
Soil moisture (5) (1.5m)	9248	55€
Soil moisture (5) (4.5m)	9324	65€
Soil moisture (5) (8m)	9323	75€
Leaf wetness	9249	8€
Conductivity	9326	40 €
Dissolved Oxygen	9327	600€
рН	9328	21€
Oxidation Reduction Potential	9329	54€
Turbidity Sensor kit (6)	TSK	3,924€
Calcium Ion (Ca <sup>2+</sup> )	9352	204€
Fluoride Ion (F <sup>-</sup> )	9353	204€
Fluoroborate Ion (BF <sub>4</sub> <sup>-</sup> )	9354	204€
Nitrate Ion (NO <sub>3</sub> <sup>-</sup> )	9355	204€
Bromide Ion (Br <sup>-</sup> )	9356	204€
Chloride Ion (Cl <sup>-</sup> )	9357	204€

Sensor	Ref.	Price
Cupric Ion (Cu <sup>2+</sup> )	9358	204€
lodide lon (l¯)	9360	204€
Silver Ion (Ag+)	9362	204€
pH (for Smart Water Ions)	9363	54€
Ammonium Ion (NH <sub>4</sub> +) [PRO]	9412	504€
Bromide Ion (Br) [PRO]	9413	918€
Calcium Ion (Ca <sup>2+</sup> ) [PRO]	9414	504€
Chloride Ion (CI <sup>-</sup> ) [PRO]	9415	504€
Cupric Ion (Cu <sub>2</sub> +) [PRO]	9416	918€
Fluoride Ion (F <sup>-</sup> ) [PRO]	9417	918€
lodide Ion (I <sup>-</sup> ) [PRO]	9418	918€
Lithium Ion (Li+) [PRO]	9419	918€
Nitrate Ion (NO <sub>3</sub> -) [PRO]	9421	504€
Nitrite Ion (NO <sub>2</sub> -) [PRO]	9422	918€
Magnesium Ion (Mg <sup>2+</sup> ) [PRO]	9420	504€
Perchlorate Ion (CIO <sub>4</sub> -) [PRO]	9423	918€
Potassium Ion (K+) [PRO]	9424	504€
Silver Ion (Ag+) [PRO]	9425	918€

Sensor	Ref.	Price
Sodium Ion (Na+) [PRO]	9426	504€
pH [PRO]	9411	504€
Single Junction Reference Probe 7	9350	78€
Double Junction Reference Probe 8	9351	120€
Reference Probe [PRO] <sup>9</sup>	9410	504€

- 1. For doors and windows.
- 2. VOC sensors are connected to the same socket, thus, it is not possible to have them working within the same board at the same time, but they are interchangeable. The same happens for CO and  $\mathrm{NH_3}$  sensors, and for  $\mathrm{CH_4}$  Air pollutants I, Air pollutants II, etc.
- 3. Calibrated gas sensors are manufactured once the order has been placed to ensure maximum durability of the calibration feature. Manufacturing process and delivery may take from 4 to 6 weeks. Lifetime of calibrated gas sensors is 6 months working at maximum accuracy. We strongly encourage our customers to buy extra gas sensors to replace the original ones after that time to ensure maximum accuracy and performance.
- 4. Each Smart Water or Smart Water ions board includes a Soil/Water temperature sensor.
- 5. In each agriculture board ,3 soil moistures can be connected in order to measure the parameter in different depth levels.
- 6. This pack comprises the turbidity sensor and calibration kits. Sensor is calibrated in factory. Pack available on demand.
- 7. This reference probe is **mandatory** for ion sensors like Calcium (Ca2+), Fluoride (F-), Fluoroborate (BF4-), Nitrate (NO3-) and pH (for Smart Water Ions). It is not valid for the double or PRO type sensors.
- 8. This reference probe is **mandatory** for ion sensors like Bromide (Br-), Chloride (Cl-), Cupric (Cu2+), Iodide (I-), Silver (Ag+) and pH (for Smart Water Ions). It is not valid for the single or PRO type sensors.
- 9. This reference probe is **mandatory** for any ion sensor of the PRO type. It is not valid for the single or double type sensors.



Sensors

Connectivity

**Power Options** 

Data

Support

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For Smart Water and for Smart Water lons sensors it is highly recommended to purchase calibration solutions to calculate accurate measurement.

One kit is enough for several sensor units:

Calibration Kit	Ref.	Price
Conductivity Calibration Kit, K=0.1	9339	28€
Conductivity Calibration Kit, K=1	9340	28€
Conductivity Calibration Kit, K=10	9341	28€
DO Calibration Solution	9342	42 €
pH Calibration Kit	9343	63 €
ORP Calibration Solution	9344	42 €
Turbidity Calibration Kit (low)	TCL	144€
Turbidity Calibration Kit (high)	TCH	186€
Multi-Ions Calibration Kit (Ammonium, Calcium, Chloride, Magnesium, Nitrate, Potassium, Sodium)	9445	144€
Bromide Calibration Kit	9388	119€
Calcium Calibration Kit	9366	119€
Chloride Calibration Kit	9389	119€
Cupric Calibration Kit	9390	119€
Fluoride Calibration Kit	9367	119€
Fluoroborate Calibration Kit	9368	119€
lodide Calibration Kit	9391	119€

Calibration Kit	Ref.	Price
Lithium Calibration Kit	9446	144€
Nitrate Calibration Kit	9369	119€
Nitrite Calibration Kit	9447	144€
Perchlorate Calibration Kit	9448	114€
Silver Calibration Kit	9392	119€





Sensors

Connectivity

**Power Options** 

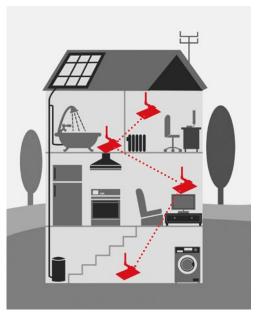
Data

Support

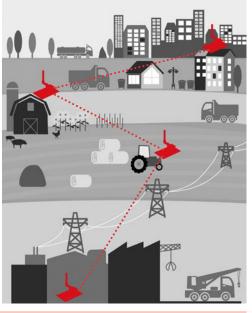
Orders

# **Configuring your Waspmotes: Connectivity**

Waspmote model is determined by the selected communication radio. Each Waspmote model can have different types of antenna: 2dBi or 5dBi for 2.4 GHz models and 4.5dBi for the rest of frequencies.









WiFi Bluetooth Bluetooth Low Energy

4G - 3G - GPRS - Sigfox - LoRaWAN

802.15.4 Digimesh ZigBee-PRO 868 MHz 900 MHz LoRa

RS-485 RS-232 4-20 mA CAN Bus Modbus

~ 0-300 m

Typical carrier range

~ 7-22+ Km

~ 0-200 m





Sensors

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The following table compares the features of all available options according to frequency, use zone, protocol and range.

#### Waspmote price chart depending on model:

Model	Frequency band	Use zone	Protocol	Distance outdoors (1)	Ref.	Price
Waspmote 802.15.4 2dBi EU	2.4 GHz	Europe	802.15.4		W802P-SMA2-EU	240 €
Waspmote 802.15.4 5dBi EU	2.4 GHz	Europe	802.15.4	750 m	W802P-SMA5-EU	240 €
Waspmote 802.15.4 2dBi	2.4 GHz	Worldwide	802.15.4		W802P-SMA2	240 €
Waspmote 802.15.4 5dBi	2.4 GHz	Worldwide	802.15.4	1.6 km	W802P-SMA5	240 €
Waspmote Digimesh 2 dBi	2.4 GHz	Worldwide	Digimesh		WDMP-SMA2	240 €
Waspmote Digimesh 5 dBi	2.4 GHz	Worldwide	Digimesh	1.5 km	WDMP-SMA5	240€
Waspmote ZigBee 2 dBi	2.4 GHz	Worldwide	ZigBee-Pro		WZBP-SMA2	240 €
Waspmote ZigBee 5 dBi	2.4 GHz	Worldwide	ZigBee-Pro	3.2 km	WZBP-SMA5	240€
Waspmote 868 4.5 dBi	868 MHz	Europe	RF	8.4 km	W868-SMA4	250€
Waspmote 900 4.5dBi US	900 MHz	USA & Canada	RF	15.5 km	W900-SMA4-US	276€
Waspmote 900 4.5dBi BR	900 MHz	Brazil	RF	15.5 km	W900-SMA4-BR	276€
Waspmote 900 4.5dBi AU	900 MHz	Australia	RF	15.5 km	W900-SMA4-AU	276€





Sensors

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### Waspmote price chart depending on model:

Model	Frequency band	Use zone	Protocol	Distance outdoors (1)	Ref.	Price
Waspmote LoRaWAN 4.5 dBi - EU	868 MHz	Europe	LoRaWAN	-km-Typical base station range	WLW-SMA4-EU	228€
Waspmote LoRaWAN 4.5 dBi - US	900 MHz	USA & Canada	LoRaWAN	-km-Typical base station range	WLW-SMA4-US	228€
Waspmote LoRaWAN 4.5 dBi - 433	433 MHz	Worldwide	LoRaWAN	-km-Typical base station range	WLW-SMA4-433	228€
Waspmote Sigfox 4.5 dBi EU <sup>2</sup>	868 MHz	Europe	Sigfox	-km-Typical base station range	WSF-SMA4-EU	228€
Waspmote Sigfox 4.5 dBi US <sup>2</sup>	900 MHz	USA & Canada	Sigfox	-km-Typical base station range	WSF-SMA4-US	240 €
Waspmote LoRa 4.5 dBi - 868	868 MHz	Europe	RF	22+ Km	WLoRa-SMA4-868	178€
Waspmote LoRa 4.5 dBi - 900	900 MHz	USA & Canada	RF	22+ Km	WLoRa-SMA4-900	178€
Waspmote WiFi on-chip	2.4 GHz	Worldwide	802.11b/g/n	100-500 m	WWIFI-OC	264€
Waspmote + GPRS	850/900/1800/1900 MHz	Worldwide	GSM – GPRS	- km - Typical carrier range	WA-GPRS	234€
Waspmote + GPRS + GPS	850/900/1800/1900 MHz	Worldwide	GSM – GPRS	- km - Typical carrier range	WA-GPRS-GPS	276€
Waspmote + 3G (Europe version)	Dual-band: WCDMA/ UMTS 900/2100 MHz	Europe	GSM – GPRS – 3G	- km -	WA-3G-E	316 €
waspinote + 30 (Europe version)	Tri-band: GSM/GPRS/ EDGE 850/900/1800MHz	Luiope	DS - C/1 1D - 101CD	Typical carrier range	MV-20-F	310€





Sensors

Connectivity

**Power Options** 

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**Orders** 

#### Waspmote price chart depending on model:

Model	Frequency band	Use zone	Protocol	Distance outdoors (1)	Ref.	Price
Waspmote + 3G (America/Australia version)	Dual-band: WCDMA/ UMTS 850/1900 MHz Quad-band: GSM/ GPRS/EDGE 850/900/1800/1900 MHz	America / Australia	GSM – GPRS – 3G	- km - Typical carrier range	WA-3G-A	316€
Waspmote 4G EU/BR <sup>3</sup>	2G: 900/1800 MHz WCDMA: 850/900/2100 MHz LTE: 800/1800/2600 MHz	Europe & Brazil	GSM – GPRS – 3G – 4G	- km - Typical carrier range	WA-4G-EU/BR	468 €
Waspmote 4G US <sup>3</sup>	2G: 850/1900 MHz WCDMA: 850/1900 MHzTE: 700/850/1700/1900 MHz	USA & Canada	GSM – GPRS – 3G – 4G	- km - Typical carrier range	WA-4G-US	468 €
Waspmote 4G AU	4G: 700/1800/2600 MHz	Australia	4G	- km - Typical carrier range	WA-4G-AU	378 €
Waspmote Bluetooth 2dBi	WCDMA: 850/1900 MHz	Worldwide	Bluetooth 2.1 + EDR Class 2		WWBTS-SMA2	234 €
Waspmote Bluetooth 5dBi	LTE: 700/850/1700/1900 MHz	Worldwide	Bluetooth 2.1 + EDR Class 2	30-100 m	WWBTS-SMA5	234€
Waspmote Bluetooth Low Energy 2dBi	2.4 GHz	Worldwide	Bluetooth 4.0 / Bluetooth Smart		WBLE-SMA2	204€
Waspmote Bluetooth Low Energy 5dBi	2.4 GHz	Worldwide	Bluetooth 4.0 / Bluetooth Smart	100 m	WBLE-SMA5	204 €

<sup>1-</sup> Tests performed with 5 dBi omnidirectional antenna, line-of-sight and Fresnel zone clearance conditions.

We provide prices in USD to US customers. Please submit your RFQ, and we will provide you with the USD prices.

<sup>2-</sup>Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox.

Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox IoT Starter Kit. Contact our Sales Team for more info.

<sup>3-</sup> This device includes a GPS receiver.



Sensors

Connectivity

**Power Options** 

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Orders

### **Industrial Protocols**

Waspmote can integrate communication modules for the most common wired communication protocols: RS-485, RS-232, CAN Bus and Modbus. These are widely used standards in the industrial and automation market for connecting devices and sensors, not in a wireless way but with cables. The user can interface Waspmote ecosystem with these protocols.

Waspmote allows to perform three main applications:

- 1. Connect any sensor to an existing industrial bus.
- 2. Add wireless connectivity to wired buses.
- 3. Connect to the Cloud industrial devices.

Waspmote price chart depending on model:		
Model	Ref.	Price
Waspmote RS-232 Serial / Modbus + DB9 cable	WA-232	171 €
Waspmote RS-485 / Modbus + DB9 cable	WA-485	210€
Waspmote CAN Bus + DB9 cable	WA-CAN	222€



Waspmote RS-232 Serial / Modbus



Waspmote RS-485 / Modbus



Waspmote CAN Bus





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## **Expansion Radio Board**

The Expansion Board allows to connect two radios at the same time. This means a lot of different combinations are possible using any of the radios available for Waspmote: 802.15.4, ZigBee, DigiMesh, 868 MHz, 900 MHz, LoRa, WiFi, GPRS, GPRS+GPS, 3G, 4G, Sigfox, LoRaWAN, Bluetooth Pro, Bluetooth Low Energy and RFID/NFC. Besides, the Expansion Radio Board can be utilized to connect the Industrial Protocols modules.

### Applications:

- Multifrequency Sensor Networks: (2.4GHz 868/900MHz, LoRa)
- Sigfox ZigBee hybrid networks
- NFC (RFID) applications with GPRS
- · LoRaWAN WiFi hybrid networks
- Industrial Protocols wireless hybrid networks



Expansion Radio Board: 2 radios connection



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Model	Require Expansion Radio Board?	Direct connection to Waspmote	Ref.	Price
Expansion Radio Board	-	-	WEXP	30€
XBee 802.15.4 5 dBi EU	✓		X802P-SMA5-EU	48 €
XBee 802.15.4 5dBi	✓		X802P-SMA5	48€
XBee Digimesh 5dBi	✓		XDMP-SMA5	48€
XBee ZigBee 5dBi	$\checkmark$		XZBP-SMA5	48€
XBee 868 4.5dBi	✓		X868-SMA4	90 €
XBee 900 4.5 dBi US	$\checkmark$		X900-SMA4-US	132€
XBee 900 4.5 dBi BR	$\checkmark$		X900-SMA4-BR	132€
XBee 900 4.5 dBi AU	$\checkmark$		X900-SMA4-AU	132€
LoRa module SMA 4.5 dBi - 868	Only for socket 0		LoRa-SMA4-868	54€
LoRa module SMA 4.5 dBi - 900	Only for socket 0		LoRa-SMA4-900	54€
LoRaWAN Module EU	$\checkmark$		LW-SMA4-EU	70 €
LoRaWAN Module US	$\checkmark$		LW-SMA4-US	70 €
LoRaWAN Module 433	✓		LW-SMA4-433	70 €
Sigfox Module EU <sup>1</sup>	✓		SF-SMA4-EU	66€
Sigfox Module US <sup>1</sup>	$\checkmark$		SF-SMA4-US	78€
WiFi Module on chip	✓		WIFI-OC	108€
GSM / GPRS Module		$\checkmark$	WGPRS	84€

Model	Require Expansion Radio Board?	Direct connection to Waspmote	Ref.	Price
GPRS + GPS Module		✓	WGPRS - GPS	119€
3G Module (Europe version)		✓	W3G-E	174€
3G Module (America/Australia version)		✓	W3G-A	174€
4G Module EU/BR <sup>2</sup>		✓	W4G-EU/BR	264€
4G Module US <sup>2</sup>		✓	W4G-US	264€
4G Module AU		✓	W4G-AU	198€







Waspmote 4G module





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Model	Require Expansion Radio Board?	Direct connection to Waspmote	Ref.	Price
Bluetooth Module for device discovery <sup>3</sup> , 2 dBi antenna	✓		WBTS-SMA2	90€
Bluetooth Module for device discovery <sup>3</sup> , 5 dBi antenna	✓		WBTS-SMA5	90 €
Bluetooth Low Energy Module, 2dBi antenna	✓		BLE-SMA2	78€
Bluetooth Low Energy Module, 5dBi antenna	✓		BLE-SMA5	78€
RFID 13.56 MHz / NFC Module + antenna*	✓		W1356	60€
GPS Module		✓	WGPS	60€
RS-232 Serial / Modbus Module, DB9 cable	✓		W232	21 €
RS-485 / Modbus module + DB9 cable	Only for socket 0		W485	60€
CAN Bus module + DB9 cable	Only for socket 0		WCAN	66€



RFID 13.56 MHz / NFC module + antenna



Waspmote GPS module

We provide prices in USD to US customers. Please submit your RFQ, and we will provide you with the USD prices.

<sup>1</sup> Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox. Check network availability in your country. Libelium offers Sigfox radios with 1-year license in the Sigfox IoT Starter Kit. Contact our <u>Sales Team</u> for more info.

<sup>2</sup> This radio includes a GPS receiver.

<sup>3</sup> The Bluetooth module requires an SD card to save all data of discovered devices, see prices in the next section.



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# **Power options**

Model	Features	Ref.	Price
6600mA·h battery <sup>(1)</sup>	Li-ion rechargeable	6041	36 €
52 A·h <sup>(1) (2)</sup>	Non-rechargeable	6023	162€
Rigid solar panel	7 V – 500 mA	6020	42 €
Flexible solar panel	7.2 V – 100 mA	6021	41 €
20 W solar panel	12 V – 2000 mA	20WSP	80 €
220V - USB	USB connector option	6006	4€
International adapter	USB connector option	10280	8€
Car lighter - USB	USB connector option	6007	4€



<sup>2.-</sup> This power option is not available for GPRS, GPRS+GPS, 3G or 4G models.



Rigid Solar Panel 7V - 500mA



Flexible Solar Panel 7.2V - 100mA

We provide prices in USD to US customers. Please submit your RFQ, and we will provide you with the USD prices.





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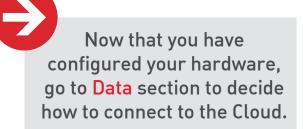
Orders

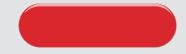
## **Accessories**

Optional complements for Waspmote. Feel free to customize your Waspmotes!

Model	Features	Ref.	Price
SD card*	2 GB (5 cards pack)	WSD	36 €
13.56 MHz / NFC card	5 units pack	10156	3€
13.56 MHz / NFC keyring	5 units pack	10157	4€
13.56 MHz / NFC sticker	5 units pack	10166	4€
OBD-II cable for CAN Bus Module	For connecting to compatible vehicles	OBD	29€

<sup>\*</sup> There are many SD card models; the only model that Libelium can assure that works with Waspmote correctly is the model that Libelium distributes officially.







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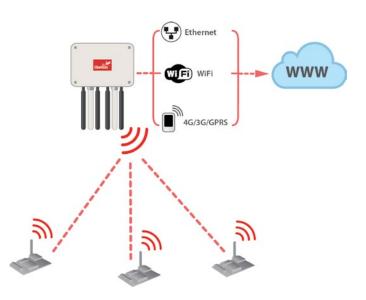
Orders

# **Extracting the data**

The last point for configuring a sensor network is to decide the way to access the data. There are 3 alternatives:

#### Meshlium

This is the most recommended option for outdoor networks since it is encased in a rugged, waterproof enclosure which protects it from the harshest conditions. It can receive, parse and store frames in its local database. Meshlium can also forward sensor data directly to the Internet via Ethernet or GPRS/3G/4G protocols, depending on the connectivity options available in the area.



#### Waspmote GPRS / 3G / 4G / Sigfox / LoRaWAN

GPRS, 3G or 4G can be used in networks placed in difficult access locations, when using a single point of data collection alone or in combination with the other two options, using the cellular radio only to send SMS alert messages.

Sigfox and LoRaWAN are special cases of cellular communications: LPWAN (Low Power, Wide Area Network). They are indicated for many applications (Smart Cities, Smart Parking, security, etc). Nodes send data directly to the back-end with low power consumption and cheap fees.



### **Waspmote Gateway**

Connected by USB to a computer. This is recommended for applications of few nodes that are indoors or for testing while configuring the network. The Waspmote Gateway is also used to send commands to the sensor network, thus at least one unit should be purchased with the first kit of Waspmotes.







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### Meshlium

Meshlium is the best Internet Gateway for Waspmote. It is a Linux-based router, totally modular and specially designed for harsh conditions without compromising flexibility in the installation. Meshlium can directly send sensor data from Waspmote to many 3rd party Cloud platforms.

Any scenario	<ul> <li>Communication:         <ul> <li>Waspmote → Meshlium: 802.15.4, 868/900MHz</li> <li>Meshlium → Internet: Ethernet and 4G/3G/GPRS</li> </ul> </li> <li>WiFi and Bluetooth interface detection to detect smartphones (traffic congestion applications)</li> <li>GPS receiver</li> </ul>
Fast configuration	<ul> <li>GUI to configure in a visual and easy way (includes factory presets to make installation even faster)</li> <li>Integrated with 3rd party Cloud platforms, required agents installed by default in all Meshliums</li> </ul>
Easy installation	<ul> <li>Special holders and brackets to install in street lights and building fronts</li> <li>Elbow connectors included in all models to place antennas horizontally</li> <li>External socket for SIM card</li> </ul>
Easy maintenance	<ul> <li>Get the latest software version with just one click</li> <li>Robust waterproof IP65 enclosure</li> <li>Notifications buzzer</li> </ul>
Fully certified	<ul> <li>CE (Europe)</li> <li>FCC (US)</li> <li>IC (Canada)</li> <li>ANATEL (Brazil)</li> <li>RCM (Australia)</li> <li>PTCRB (cellular certification for US)</li> <li>AT&amp;T (cellular certification for US)</li> </ul>







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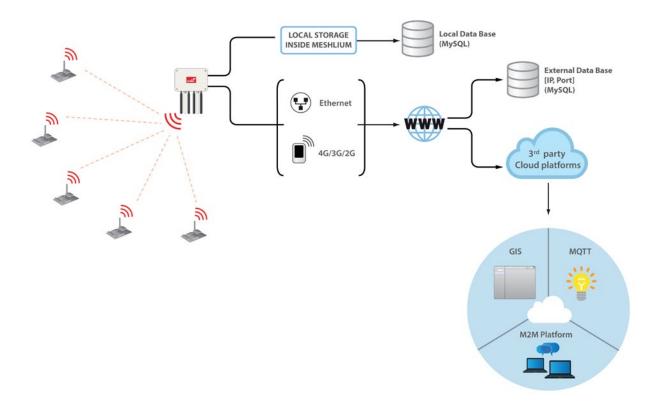
Waspmote OEM

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Libelium has partnered with the best Cloud software solution providers to offer you all the necessary components to deploy Internet of Things (IoT), machine-to-machine (M2M) or Smart Cities projects with minimum time to market. Meshlium is able to send data to the Cloud in a transparent way:







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Meshlium includes internal software units called "Cloud Connectors" that allow the information gathered to be easily sent to any of the next Cloud Platforms. Note that data can be also stored in the internal database of Meshlium or even sent to any other Cloud Platform (for more info about how being part of the official Cloud Connectors Program go to http://www.libelium.com/products/meshlium/wsn/).









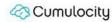










































































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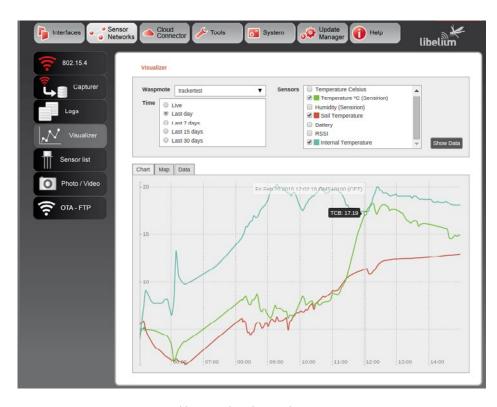
Data

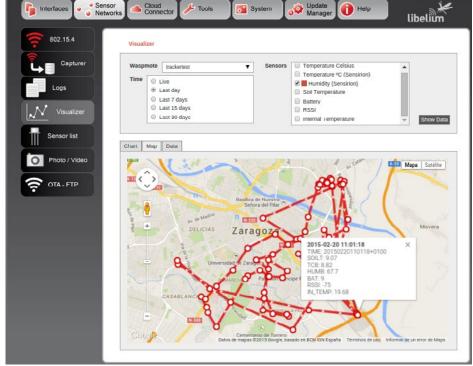
Support

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### **Meshlium Visualizer**

This software feature allows to plot beautiful graphs with Meshlium. Meshlium Visualizer is only included in IoT Vertical Kits.





Meshlium Visualizer showing data series

Meshlium Visualizer geo-locating a moving Plug & Sense!





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### Meshlium price chart depending on model:

Meshlium Model	WiFi AP	4G/3G/GPRS	GPS	802.15.4	868/900	WiFi & Bluetooth scanners	Ref.	Price
Meshlium 4G 802.15.4 AP 868 EU	✓	EU/BR version	✓	EU version	868		M4G-802-868-EU	1,590 €
Meshlium 4G 802.15.4 AP 900 US	✓	US version	✓	World version	900 US		M4G-802-868-US	1,590 €
Meshlium 4G 802.15.4 AP 900 BR	✓	EU/BR version	✓	World version	900 BR		M4G-802-868-BR	1,590 €
Meshlium 4G 802.15.4 AP 900 AU	$\checkmark$	AU version		World version	900 AU		M4G-802-868-AU	1,590 €
Meshlium 4G AP 868 EU	✓	EU/BR version	✓		868		M4G-868-EU	1,500€
Meshlium 4G AP 900 US	✓	US version	✓		900 US		M4G-900-US	1,500 €
Meshlium 4G AP 900 BR	✓	EU/BR version	✓		900 BR		M4G-900-BR	1,500€
Meshlium 4G AP 900 AU	✓	AU version			900 AU		M4G-900-AU	1,500€
Meshlium 4G 802.15.4 AP EU	✓	EU/BR version	✓	EU version			M4G-802-EU	1,500€
Meshlium 4G 802.15.4 AP US	✓	US version	✓	World version			M4G-802-US	1,500€
Meshlium 4G 802.15.4 AP BR	✓	EU/BR version	✓	World version			M4G-802-BR	1,500 €
Meshlium 4G 802.15.4 AP AU	✓	AU version		World version			M4G-802-AU	1,500€
Meshlium 4G AP Scanner EU/BR	✓	EU/BR version	✓			$\checkmark$	M4G-SCAN-EU/BR	1,650 €
Meshlium 4G AP Scanner US	✓	US version	✓			$\checkmark$	M4G-SCAN-US	1,650 €
Meshlium 4G AP Scanner AU	✓	AU version				$\checkmark$	M4G-SCAN-AU	1,650 €

We provide prices in USD to US customers. Please submit your RFQ, and we will provide you with the USD prices.



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The following accessories are optional.

Module	Ref.	Price
Directional Antennas for Meshlium Scanner*	MDA	294 €

<sup>\*</sup>This is a kit of 2 outdoors directional antennas (18 dB) for WiFi and Bluetooth, mounting kits, 2 m cables and adapters. The kit is specially indicated for Vehicle Detection applications because it enlarges the range area.



Directional antenna for Meshlium Scanner





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## Waspmote Gateway and cellular or LPWAN modules

Data extraction option	Ref.	Price
Waspmote Gateway 802.15.4 2dBi EU	WG802P-SMA2-EU	186€
Waspmote Gateway 802.15.4 2dBi	WG802P-SMA2	186€
Waspmote Gateway 802.15.4 5dBi EU	WG802P-SMA5-EU	186€
Waspmote Gateway 802.15.4 5dBi	WG802P-SMA5	186€
Waspmote Gateway Digimesh 2dBi	WGDMP-SMA2	186€
Waspmote Gateway Digimesh 5dBi	WGDMP-SMA5	186€
Waspmote Gateway ZigBee 2dBi	WGZBP-SMA2	186€
Waspmote Gateway ZigBee 5dBi	WGZBP-SMA5	186€
Waspmote Gateway 868 4.5 dBi	WG868-SMA4	180€
Waspmote Gateway 900 4.5dBi US	WG900-SMA4-US	228€
Waspmote Gateway 900 4.5dBi BR	WG900-SMA4-BR	228€
Waspmote Gateway 900 4.5dBi AU	WG900-SMA4-AU	228€
Waspmote Gateway LoRa 868	WGLoRa-SMA4-868	168€
Waspmote Gateway LoRa 900	WGLoRa-SMA4-900	168€
Waspmote Gateway Bluetooth 2 dBi	WGBTS-SMA2	186€
Waspmote Gateway Bluetooth 5 dBi	WGBTS-SMA5	186€
Waspmote Gateway Bluetooth Low Energy 2 dBi	WGBLE-SMA2	186€
Waspmote Gateway Bluetooth Low Energy 5 dBi	WGBLE-SMA5	186€

Data extraction option	Ref.	Price
Waspmote GSM/ GPRS module	WGPRS	84€
Waspmote GPRS + GPS module	WGPRS-GPS	119€
Waspmote 3G module (Europe version)	W3G-E	174€
Waspmote 3G module (America/Australia version)	W3G-A	174€
4G Module EU/BR *	W4G-EU/BR	264€
4G Module US *	W4G-US	264€
4G Module AU	W4G-AU	198€
LoRaWAN Module EU	LW-SMA4-EU	70€
LoRaWAN Module US	LW-SMA4-US	70€
LoRaWAN Module 433	LW-SMA4-433	70€
Waspmote Sigfox module EU**	SF-SMA4-EU	66€
Waspmote Sigfox module US**	SF-SMA4-US	78€

<sup>\*</sup> This radio includes a GPS receiver.

 $<sup>\</sup>hbox{\it ***Does NOT include Sigfox connectivity, the user must hire this service directly from Sigfox.}$ 

Check network availability in your country.

Libelium offers Sigfox radios with 1-year license in the Sigfox IoT Starter Kit. Contact our <u>Sales Team</u> for more info.





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### LoRaWAN base stations

Libelium distributes base stations for LoRaWAN networks. They are manufactured by the company MultiTech. All of them have LoRaWAN and cellular radios and Ethernet connection. These base stations are ready to work outdoors (IP67 grade), and come with lightning arrestor and grounding protection, PoE powering system, a mounting kit and all needed cables and antennas.

You can select 2 different types of operating system: mLinux (open-source, Yocto-based Linux distro) and AEP (enhanced closed-source Linux distro). There are EU and US/AU versions, and some of them come pre-configured for some LoRaWAN cloud servers:

Model	User Zone	Operating system	Pre-configured for LoRaWAN servers	Ref.	Price
Multitech Conduit LoRaWAN Base Station, 3G, mLinux, EU version	EU	mLinux	No	MLRWBS-3G-mL-EU	1,700 €
Multitech Conduit LoRaWAN Base Station, 3G, mLinux, US version	US	mLinux	No	MLRWBS-3G-mL-US	1,700 €
Multitech Conduit LoRaWAN Base Station, 3G, AEP, EU version (embedded Network Server)	EU	AEP	No, but has an embedded LoRaWAN Network Server	MLRWBS-3G-AEP-ENS-EU	1,700 €
Multitech Conduit LoRaWAN Base Station, 3G, AEP, US version (embedded Network Server)	US	AEP	No, but has an embedded LoRaWAN Network Server	MLRWBS-3G-AEP-ENS-US	1,700 €
Multitech Conduit LoRaWAN Base Station, 3G, mLinux, EU version (configured for Loriot)	EU	mLinux	Yes, Loriot	MLRWBS-3G-mL-L-EU	1,800 €
Multitech Conduit LoRaWAN Base Station, 3G, mLinux, US version (configured for Loriot)	US	mLinux	Yes, Loriot	MLRWBS-3G-mL-L-US	1,800 €
Multitech Conduit LoRaWAN Base Station, 4G, mLinux, EU version (configured for Actility)	EU	mLinux	Yes, Actility	MLRWBS-4G-mL-A-EU	1,800 €
Multitech Conduit LoRaWAN Base Station, 4G, mLinux, US version (configured for Actility)	US	mLinux	Yes, Actility	MLRWBS-4G-mL-A-US	1,800 €



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MultiTech's LoRaWAN base station

Now that you know how to extract the Data go to the Support section and see our training formulas.





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# **Getting support**

## Waspmote Plug & Sense! devices factory-programmed:

If you want to save time and development costs you do not need to program anything, we can ask you about the requirements and ship your devices factory-programmed and ready to Plug & Sense!.

Plug & Sense! Programming Service (includes the creation of up to 3 different codes and the upload them into 5 Plug & Sense! nodes)	PROG	600€
Additional Nodes Upload Service	PROG-UPL	24 € per node







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## **Support options**

Programming Waspmote on your own requires an advanced level in C++ and object oriented coding. Our <u>Development site</u> shows 400+ code examples, tutorials and technical guides. Do not worry if you are not a skilled programmer yet, we offer different training formulas so that you can achieve easily a good level.

Forum	Technical C	in the second se	Training Wor	kshops	Free Live IoT Overview Webinars	Special Projects Consultancy
<ul> <li>Answered once a day in best-effort way by our engineers</li> <li>Online: text</li> <li>Useful for: <ul> <li>Solving doubts about API usage, compilation problems, IDE options or basic questions</li> <li>Reporting bugs</li> <li>Tier-1 troubleshooting</li> <li>Staying up to date about new API releases, tutorials, code examples, etc</li> </ul> </li> </ul>	<ul> <li>Arranged in 1 hou</li> <li>Online and interal conference session share, mic and web</li> <li>Useful for: <ul> <li>Solving urgent of cannot wait the Fitime</li> <li>Guiding you stee</li> <li>Helping you to darchitecture</li> <li>Improving your reduce power conit more efficient, en</li> </ul> </li> </ul>	ctive video s: text, screen cam questions that orum's response p by step design a system program to nsumption, make	<ul> <li>Celebrated every quarte</li> <li>/ 21 hours</li> <li>Face-to-face</li> <li>Useful for: <ul> <li>Learning how to prograte by step</li> <li>Achieving an advance programming level in ju</li> </ul> </li> </ul>	ram Waspmote d	<ul> <li>Online master class: text, screen share, mic and webcam</li> <li>Useful for: <ul> <li>Getting an overview on the IoT market</li> <li>Discovering in just 1 hour the latest trends on smart cities, smart environment, precision agriculture, smart water, logistics, IoT</li> <li>Finding the inspiration to develop new projects learning about our success stories</li> <li>Taking advantage of our professional experience on IoT projects</li> <li>Approaching to Libelium ecosystem</li> </ul> </li> </ul>	• On request.  Even although we have a very modular and complete solution, sometimes you need something elseintegrating a new sensor, connect with a specific cloud platform, adapt the board for a vertical application, etc. In these cases, we arrange a meeting with our Project Manager to gather the requirements and after that he analyzes with the R&D team the viability of the solution and returns you an implementation proposal.
Eroo and ovelucive for customore!	2 hours $TC-2 \rightarrow 216 \in$ 3 hours Free <sup>2</sup>		Basic Training course (2 first days) Advanced Training course (3 <sup>rd</sup> day)	Free <sup>2</sup> / 1,600 $\in$ <sup>3</sup> 800 $\in$ <sup>3</sup>	Soo the calendar and register	PAS → 300 €
Free and exclusive for customers <sup>1</sup>	5 hours $TC-5 \rightarrow 486 \in$ 10 hours $TC-10 \rightarrow 864 \in$			2,000 €³ 14,000 €	See the <u>calendar</u> and <u>register</u>	

<sup>1.-</sup> Customers get exclusive access when they formalize the 1st purchase order.

<sup>2.-</sup>For customers that acquired an Evaluator Kit, 3 hours of Technical Consultancy and 1 place at a Basic Training Course are included.

<sup>3.-</sup> Discounts available: 2nd attendee: 25% off. 3rd, 4th, etc, attendees: 50% off.

<sup>4.-</sup> One engineer travels to your facilities to teach the Basic + Advanced Training Course. Recommended for groups from 7 to 20 attendees. Travel expenses not included.



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## **Calendar - Libelium Training Courses 2017**

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Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7	29			1	2	3	4	26			1	2	3	4	26						1
8	9	10	11	12	13	14	5	6	7	8	9	10	11	5	6	7	8	9	10	11	2	3	4	5	6	7	8
15	16	17	18	19	20	21	12	13	14	15	16	17	18	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	(21)	(22)	(23)	24	25	19	20	21	22	23	24	25	16	17	18	19	20	21	22
29	30	31			3)	4	26	27	28	1	2		4	26	27	28	29	30	31	1	23/30	24	25	26	27	28	29
			May		June							-				July		000000		August							
Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	Sa
30	1	2	3	4	5	6	28				1	2	3	25						1	30		1	2	3	4	5
7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
14	15	(16)	(17)	(18)	19	20	11	12	13	14	(15)	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
28	29	30	31			3	25	26	27	28	(29)	30	1	23/30	24/31	25	26	27	28	29	27	28	29	30	31		
in the same	00000	Sep	tem	ber	00000				0	ctob	er	00000	-	November							December						
Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	Sa
27	28	29	30	31	1	2	1	2	3	4	5	6	7	29	30	31	1	(2)	3	4	26	27	28	29	30	1	2
3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	(7)	(8)	(9)	10	1	3	4	5	6	7	8	9
10	11	(12)	(13)	(14)	(15)	16	15	16	17	18	(19)	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
24	25	26	27	(28)	29	30	29	30	31				4	26	27	28	29	(30)		2	24/31	25	26	27	28	29	30

Waspmote Face-to-Face Workshops

Advanced Waspmote Face-to-Face Workshops

or Spartans Challenge

Internet of Things Webinars

UNED Waspmote Course

Now that you have chosen a Support option go to the Orders section to place your order.







Waspmote P&S!

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Data

Support

Orders

# **Order placement**

To place an order, you must complete the form available in: **http://www.libelium.com/order\_form** and send it back to your sales agent.

If sales agent has not yet been assigned, please send it back to: sales@libelium.com

You can consult our Terms & Conditions in: http://www.libelium.com/legal. Should you have any doubt, please, contact our sales department.

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**Order Form** 





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Libelium Comunicaciones Distribuidas S.L. C/Escatrón nº16 (Edificio LIBELIUM)

C.P: 50014, Zaragoza (Spain)

Tel: +34 976 54 74 92 Fax: +34 976 47 31 86