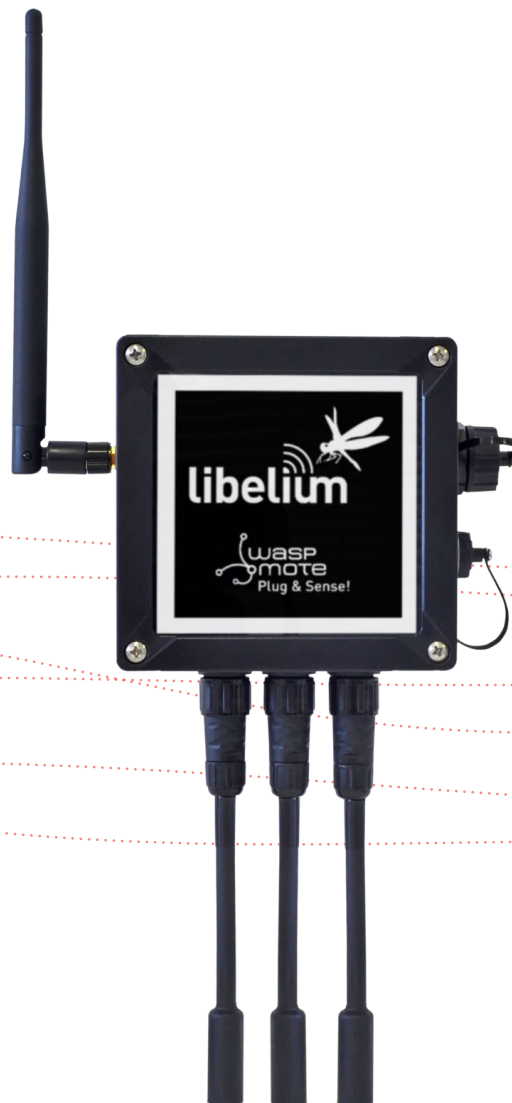


# Libelium Smart Cities IoT Vertical Kit

## Quick Start Guide



**The IoT Marketplace**  
— Make it real —



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## 1. Identify the products



## 2. Open the box



## 3. Identify Meshlium device and antennas



## 4. Antennas set up

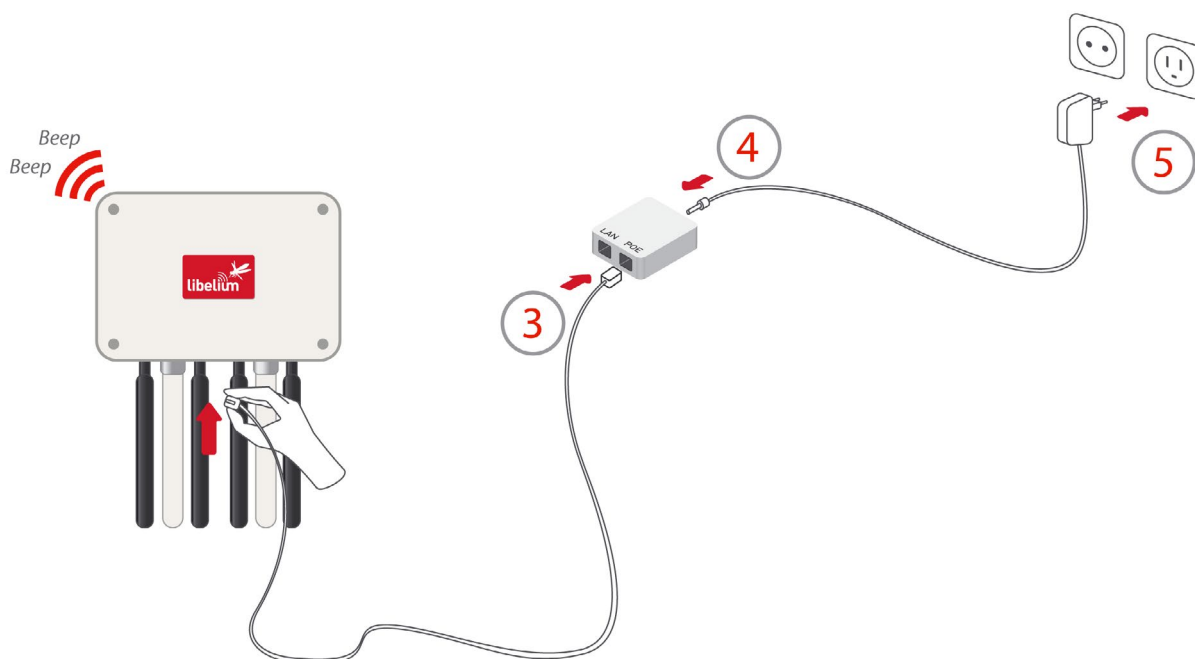
### Antennas \*

- a) Dipole 5 dBi (Bluetooth, WiFi, XBee-PRO 802.15.4).
- b) 4G / GPS (3 antennas for EU, US or BR models; 2 antennas for AU models).
- c) Dipole 4.5 dBi (XBee 868LP, XBee-PRO 900HP).

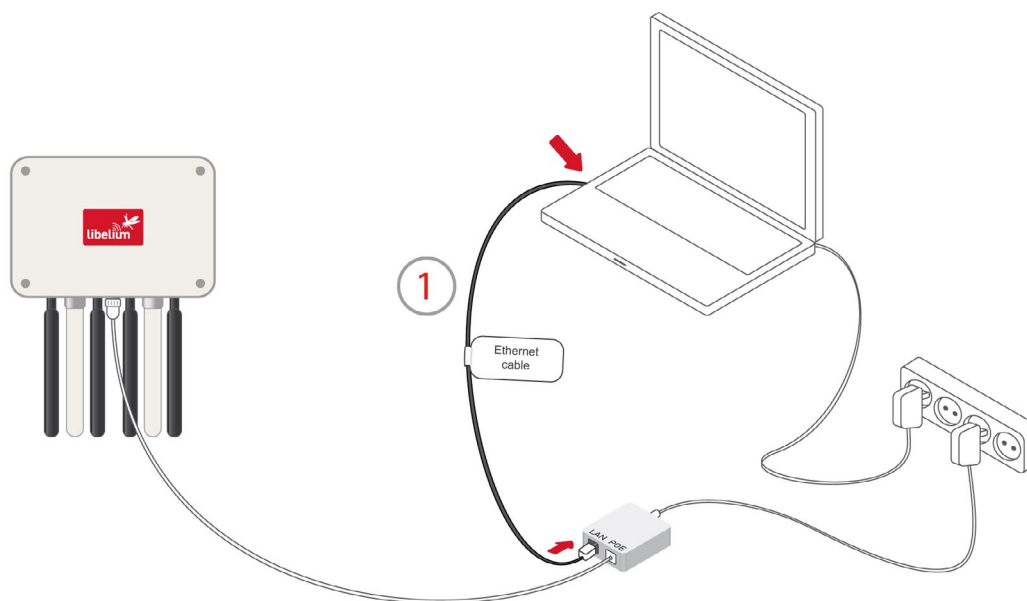
(\*) Number and type of antennas depend on the model purchased.



## 5. Power set up



## 6. Internet set up



### Wifi Access:

- Connect to Meshlium Wifi AP
  - Meshlium\_XXXX,
  - no password needed
- Access Meshlium IP 10.10.10.1/MeshliumManager using a Web Browser (IE, Chrome, Firefox)
  - User: admin
  - Password: libelium

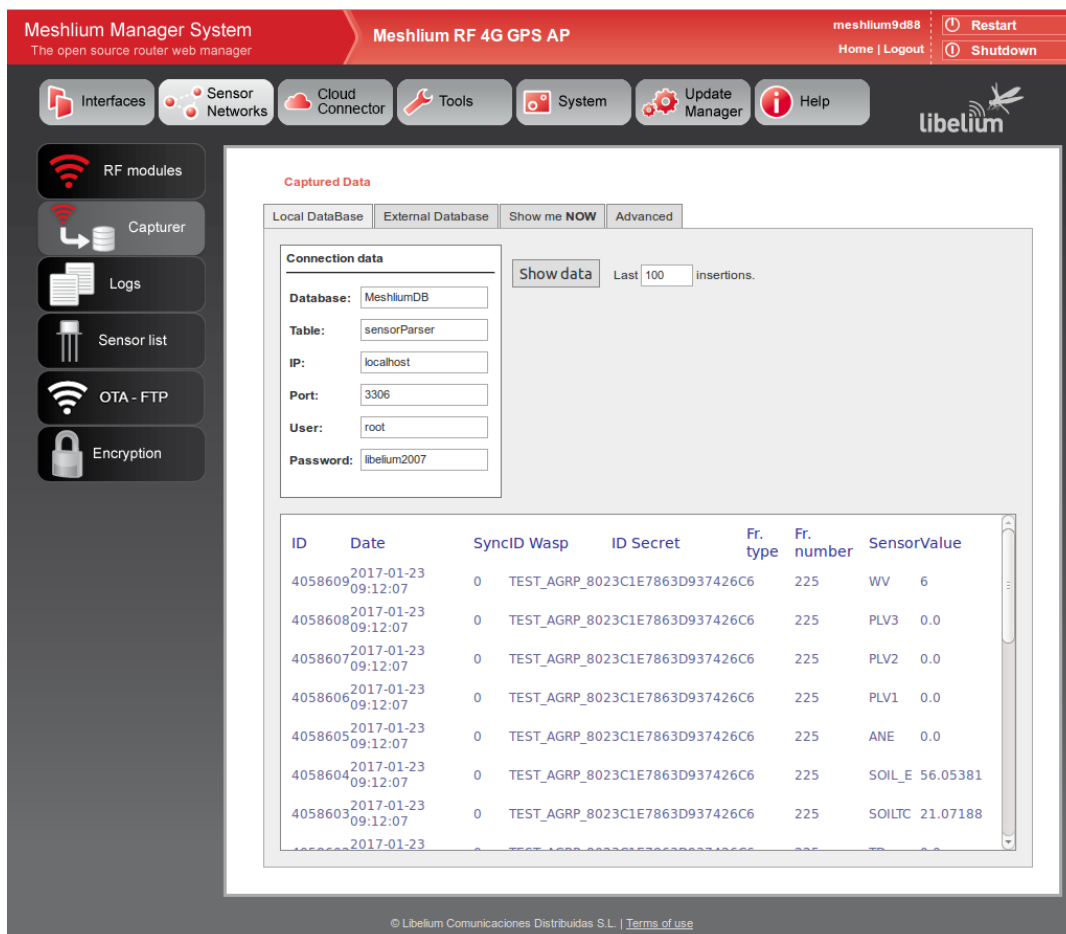
### Ethernet Access:

- Access Meshlium assigned IP/MeshliumManager using a Web Browser (IE, Chrome, Firefox)
  - User: admin
  - Password: libelium
- Meshlium will use DHCP to get the IP address from your router, check in your router the IP address given.





## 7. Checking data received at Meshlium



**Captured Data**

Local DataBase External Database Show me NOW Advanced

Database: MeshliumDB

Table: sensorParser

IP: localhost

Port: 3306

User: root

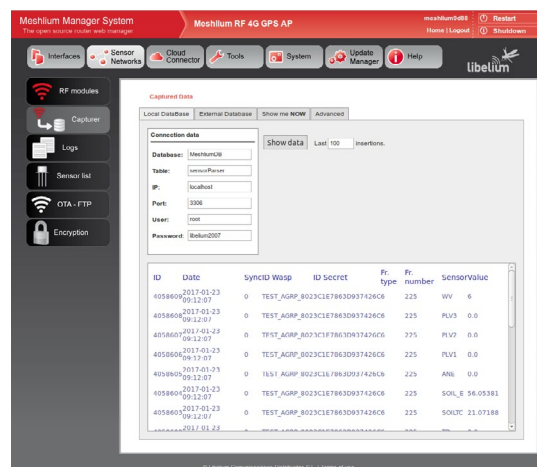
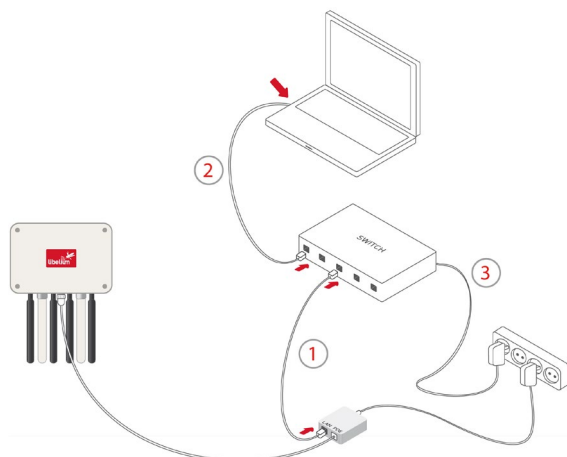
Password: libelium2007

Show data Last 100 Insertions.

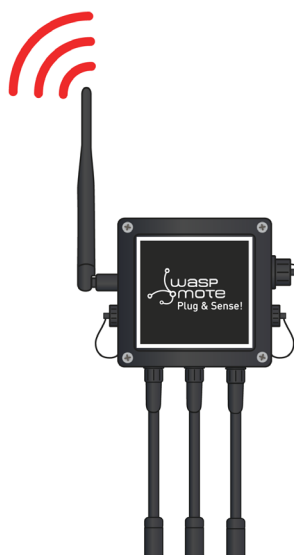
ID	Date	SyncID	Wasp	ID Secret	Fr. type	Fr. number	SensorValue
4058609	2017-01-23 09:12:07	0	TEST_AGRP_8023C1E7863D937426C6		225	WV	6
4058608	2017-01-23 09:12:07	0	TEST_AGRP_8023C1E7863D937426C6		225	PLV3	0.0
4058607	2017-01-23 09:12:07	0	TEST_AGRP_8023C1E7863D937426C6		225	PLV2	0.0
4058606	2017-01-23 09:12:07	0	TEST_AGRP_8023C1E7863D937426C6		225	PLV1	0.0
4058605	2017-01-23 09:12:07	0	TEST_AGRP_8023C1E7863D937426C6		225	ANE	0.0
4058604	2017-01-23 09:12:07	0	TEST_AGRP_8023C1E7863D937426C6		225	SOIL_E	56.05381
4058603	2017-01-23 09:12:07	0	TEST_AGRP_8023C1E7863D937426C6		225	SOILT_C	21.07188

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## 8. Now you can receive data



## 9. Get Ready to send Data



## 10. Open the box



## 11. Recharge Plug & Sense!



## 12. Antennas set up





## 13. Identify Plug & Sense! family

Smart Environment



Smart Environment PRO



Ambient Control



Smart Agriculture



Smart Cities PRO



Smart Water



Smart Water Ions



Smart Security



4-20 mA Current Loop



Smart Parking



Radiation Control



## 14. Check connection diagram

### Smart Cities IoT Vertical Kit

Get started in the IoT!

#### Plug & Sense!

- (1) Plug & Sense! Smart Cities PRO 802.15.4 -PRO 5dBi x1
- (2) Plug & Sense! Smart Environment PRO 802.15.4 -PRO 5dBi x1

#### Sensor Probes

- (3) Noise Level Sensor x1
- (4) Luminosity (luxes accuracy) Probe x1
- (5) Calibrated Carbon Monoxide (CO) Gas Sensor Probe x1
- (6) Calibrated Nitric Dioxide (NO<sub>2</sub>) Gas Sensor Probe x1
- (7) Calibrated Ozone (O<sub>3</sub>) Gas Sensor Probe x1
- (8) Temperature, Humidity and Pressure Sensor Probe x1

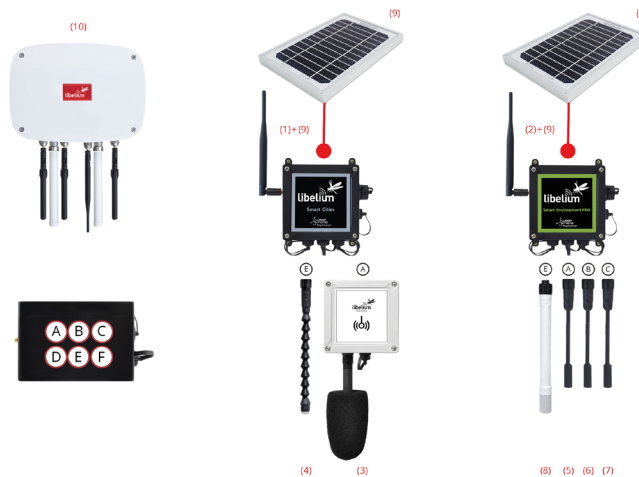
#### Power Options

- (9) 6600mAh Rechargeable Battery + External Solar Panel x2

#### Meshlium

- (10) Meshlium 4G 802.15.4-AP x1

#### Connection Diagram



\*Pictures are for representation purpose only.

- Show a working demo to your customers within days
- Create an IoT laboratory for your students
- Test and discover the most suitable technology for your project



## 15. Sensors setup



## 16. Connect sensors



## 17. Connect Solar Panel

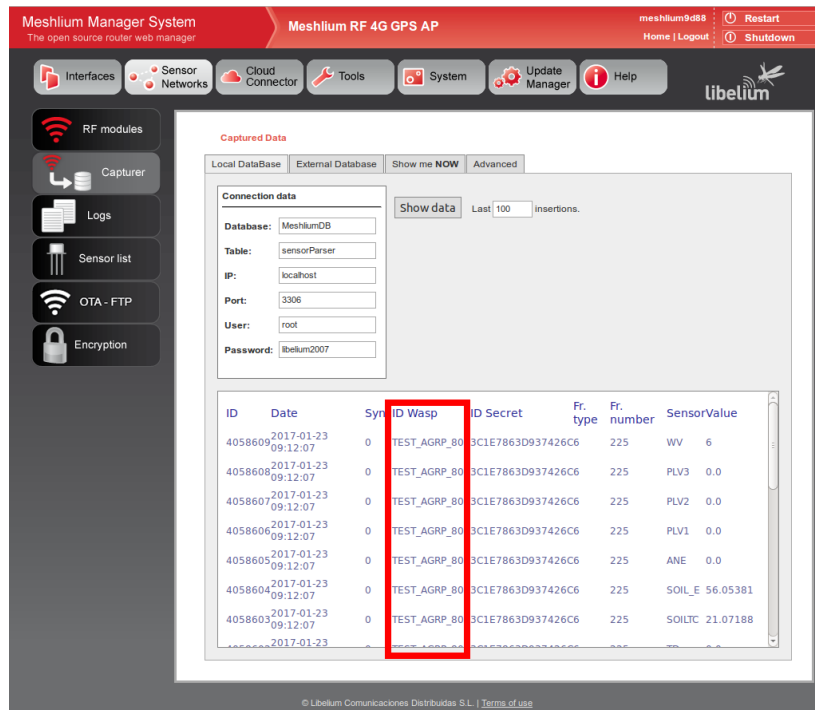


## 18. Turn ON Plug & Sense!



## 19. Checking if data is received

- Access to Meshlium as explained before in page 5-6.
- To check that your Plug & Sense! is sending data, see the ID\_Wasp. The ID\_Wasp of each Plug & Sense! can be found in the details sticker.



**Meshlium Manager System** Meshlium RF 4G GPS AP meshlium3:d88 Restart Home | Logout Shutdown

Interfaces Sensor Networks Cloud Connector Tools System Update Manager Help

RF modules Capturer Logs Sensor list OTA - FTP Encryption

**Captured Data**

Local DataBase External Database Show me NOW Advanced

**Connection data**

Database: MeshliumDB Table: sensorParser IP: localhost Port: 3306 User: root Password: libelium2007

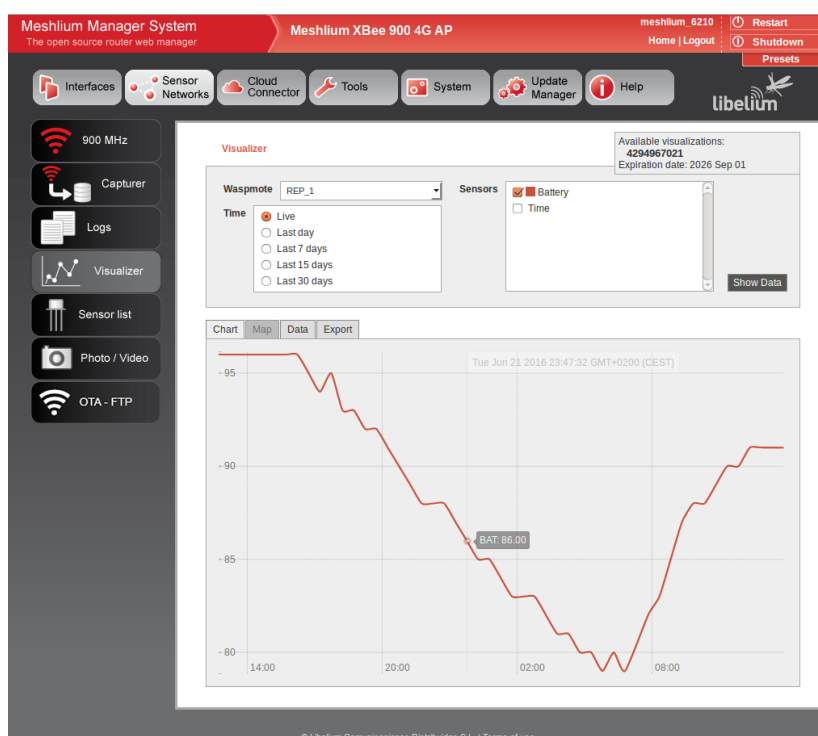
Show data Last: 100 insertions.

ID	Date	Sym	ID Wasp	ID Secret	Fr. type	Fr. number	SensorValue
4058609	2017-01-23 09:12:07	0	TEST_AGRP_80	3C1E7863D937426C6	225	WV	6
4058608	2017-01-23 09:12:07	0	TEST_AGRP_80	3C1E7863D937426C6	225	PLV3	0.0
4058607	2017-01-23 09:12:07	0	TEST_AGRP_80	3C1E7863D937426C6	225	PLV2	0.0
4058606	2017-01-23 09:12:07	0	TEST_AGRP_80	3C1E7863D937426C6	225	PLV1	0.0
4058605	2017-01-23 09:12:07	0	TEST_AGRP_80	3C1E7863D937426C6	225	ANE	0.0
4058604	2017-01-23 09:12:07	0	TEST_AGRP_80	3C1E7863D937426C6	225	SOIL_E	56.05381
4058603	2017-01-23 09:12:07	0	TEST_AGRP_80	3C1E7863D937426C6	225	SOILTC	21.07188

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## 20. Visualizing data

- Click Sensor Networks
- Click visualizer, select the variables and click show data button



**Meshlium Manager System** Meshlium XBee 900 4G AP meshlium\_6210 Restart Home | Logout Shutdown Presets

Interfaces Sensor Networks Cloud Connector Tools System Update Manager Help

900 MHz Capturer Logs Visualizer Sensor list Photo / Video OTA - FTP

**Visualizer**

Wasp mote: REP\_1

Time: ☒ Live ☐ Last day ☐ Last 7 days ☐ Last 15 days ☐ Last 30 days

Sensors: ☒ Battery ☐ Time

Show Data

Available visualizations: 4294967021 Expiration date: 2026 Sep 01

Chart Map Data Export

Tue Jun 21 2016 23:47:32 GMT+0200 (CEST)

BAT: 86.00

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