



# ATLASEN LEO (AT04)

Indoor Environmental Quality (IEQ) Monitoring Device

## User Manual







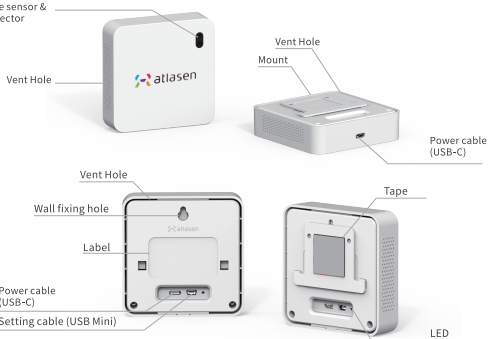
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## Main Components and Names

### ① Sensor unit

Illuminance sensor &  
Motion detector



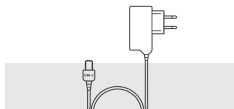
### ② Wall-hanging part

### ③ User manual



## Additional Components

### ① Power cable (USB C-Type Cable)



### ② Setting cable (USB A-Mini cable)



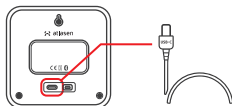
## How to install

\* The power supply is located on the rear and bottom sides.

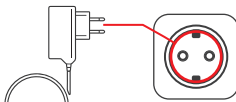
If the sensor is laid down and used, connect power through the lower power input terminals.

### Desk Type

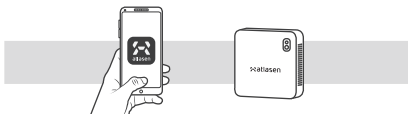
- 1 Connect the power USB cable to the sensor body



- 2 Connect power (C-Type)

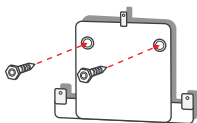


- 3 Install the mobile app on your phone and register atlasenLEO

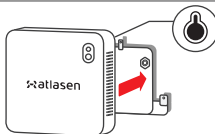


### Wall Type

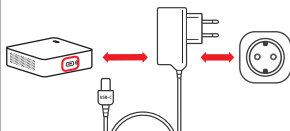
- 1 Fix the wall bracket to the wall with screws



- 2 Fix the body to the bracket

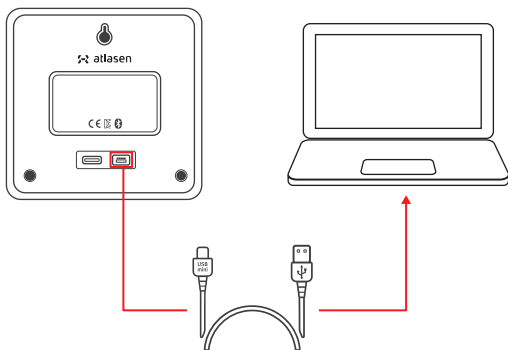


- 3 Connect the power USB cable to the input located on the bottom of the body.



- 4 Install the mobile app on your phone and register atlasenLEO

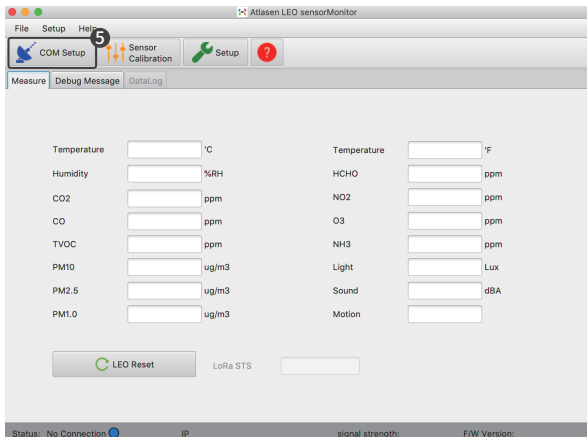




**01** Connect the USB cable (USB mini B-A Type, the right side on the sensor's back input) to PC and open LEO.

**02** Download the installation program from <http://www.atlasencontrol.com/leo> or 'download' at [www.atlasen.com](http://www.atlasen.com).

**03** If you have received a compressed file, you can decompress it and run the program



**04**

PC version — unzip atlasen\_LEO\_PC.zip file and double-click exe file.

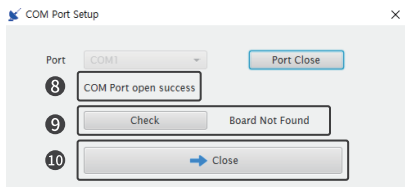
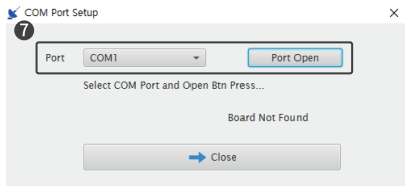
MAC version — unzip atlasen\_LEO\_Mac.zip file and double-click jar file.

**05**

Run ATLASSEN LEO programmer.

**06**

Then, click “COM Setup” button, and you will see the following screen (on the next page).



**07** Check COM Port of the connected USB Port and select Port (usually the last number).  
Then, click “Port Open”

**08** “COM Port open success” message will show up.

**09** Click “Check”. If LEO is connected, you’ll see “Board Connection OK”.  
The Circular orange image will turn on and off at the bottom of the main screen.

**10** When it is checked, click “Close” and then click “Setup”.

### 1. LoRa Setup Screen

The screenshot shows the 'Setup' application window with a close button (X) in the top right corner. The 'LoRa Setup' tab is selected, with other tabs being 'Wifi Setup', 'Sensor Order Check', and 'DataLog'. A circled '1' indicates the first step: entering device information. This includes three input fields: 'DEV\_EUI' (containing 'Read Only'), 'APP\_EUI', and 'APP\_KEY'. Below these is a 'Transmission Interval' input field followed by 'sec', and a 'Band Select' dropdown menu currently set to 'AS923'. A circled '2' indicates the second step: using the control buttons. There are three buttons: 'Read' (with a left-pointing arrow), 'Write' (with a double-headed arrow), and 'Clear' (with an eraser icon).

**01** First, run Setup Program and select “LoRa Setup”.

**02** Click the “Read” button and call up previous value stored in LEO. If value needs to be modified, enter new value and click the “Write” button.

**03** DEV\_EUI is a unique code for each device. Register at Lora Network Server using DEV\_EUI, make APP\_EUI and APP\_KEY, and enter the value here.

### 2. LoRa Setup Screen

The screenshot shows a 'Setup' window with a close button (X) in the top right corner. Below the title bar are four tabs: 'LoRa Setup' (selected), 'Wifi Setup', 'Sensor Order Check', and 'DataLog'. The main area contains the following fields and controls:

- DEV\_EUI:** A text field with the value 'Read Only'.
- APP\_EUI:** An empty text field.
- APP\_KEY:** An empty text field.
- 4:** A callout pointing to the 'Transmission Interval' field, which is empty, followed by the unit 'sec'.
- 5:** A callout pointing to the 'Band Select' dropdown menu, which currently shows 'AS923'.
- 6:** A callout pointing to a row of three buttons: 'Read' (with a left arrow icon), 'Write' (with a right arrow icon), and 'Clear' (with a trash icon).

**04** Transmission Interval is the time interval at which the data is sent to LoRa. Input 900 sec as default.

**05** “Band Select” chooses different frequency for different countries.

**06** Once set, click “Write” to save.  
Click “Read” to confirm the saved content.

### 3. Wi-Fi Setup Screen

The screenshot shows the 'Setup' window with tabs for 'LoRa Setup', 'Wifi Setup', 'Sensor Order Check', and 'DataLog'. The 'Wifi Setup' tab is active. It contains the following fields and controls:

- 2** SSID:
- Passwd:
- 3** Server:
- Transmission Interval:  sec
- ID:
- 1**

A vertical arrow points from the 'ID' field down to the 'Write' button, with a circled '3' next to the arrow's shaft.

**01** When you click “Read”, the data saved at LEO will show up.

**02** Enter router’s SSID and Password.

**03** Enter the server which receives the data, [www.atlasencontrol.com](http://www.atlasencontrol.com).

### 4. Wi-Fi Setup Screen

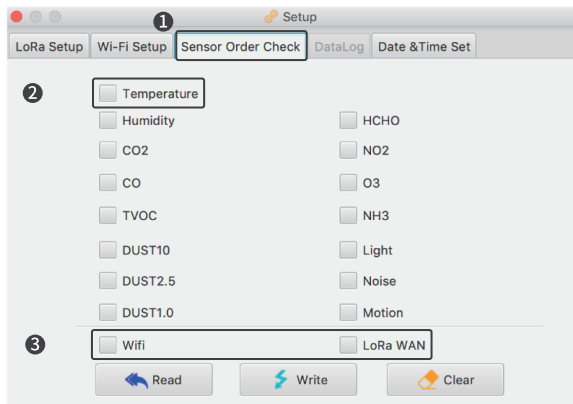
The screenshot shows the 'Setup' window of the Atlasen application. It has a title bar with a close button (X) and a tab bar with four tabs: 'LoRa Setup', 'Wifi Setup' (which is selected and highlighted in blue), 'Sensor Order Check', and 'DataLog'. The main area contains several input fields: 'SSID', 'Passwd', and 'Server' are simple text boxes. Below them is a 'Transmission Interval' field with a unit 'sec' and a circled '4' next to it. Underneath is an 'ID' field with a circled '5' next to it. At the bottom left is a circled '6' next to a group of three buttons: 'Read' (with a blue double-headed arrow icon), 'Write' (with a blue lightning bolt icon), and 'Clear' (with an orange eraser icon). A circled '6' is also next to the 'Clear' button.

**04** Transmission Interval is the time interval of data transmission from a sensor to the server. Input 900 sec as a default.

**05** Input the serial number issued to the sensor for ID.

**06** When setup is finished, click “Write” and save the setup at LEO. In order to check whether data is saved or not, click “Clear” to delete setup and click “Read” to bring and read data saved at LEO.

### 5. Sensor Order Check Screen



**01** Sensor Order Check tab is where you select sensors from which data gets sent to the server.

**02** Since different devices have different sensors, you have to select which sensor to use. If you want to send Temperature data only, check “Temperature”.

**03** You also need to decide whether to use Wi-Fi and LoRaWAN or not

\* When all the setup is done, reboot LEO to apply changes.

\* If you turn LEO off and on again, or click LEO Reset button in main screen, LEO will be initialized and restart.

## Product Specification

Index	Remark
Sensor Capacity	Real-time IEQ Monitoring Device
Dimension	94 x 94 x 25 (mm)
Weight	126 g
Power Consumption	Less than 2 Watt (200mA)
Operating Conditions	Temperature : -5 to 50 °C, Humidity : 0 to 95 %
Storage Conditions	Temperature : -20 to 70 °C, Humidity : 0 to 95 %
Power Supply	Input : AC 00 to 240 V, 50 to 60 Hz Output : 9V/ 1A USB external power adapter
IoT Connectivity	Wi-Fi : Wi-Fi 201.11 b/g/n (2.4 GHz) Security : WPA/WPA2/WEP/TKIP/AES BACNet LoRa, NB-IoT, Sigfox, BehrTech
Analyzing Storage	Restful, SOAP, SQL Server Support
Data Storage	Stores up to 2 million measurements Possible to download stored readings to PC (USB)
System Requirement	Wi-Fi / LoRa / NB IoT / Sigfox / BehrTech Android 4.1 or Later, iOS 8 or Later atlasencontrol account
Approvals	KC, FCC, CE

Item	Management target
Thermal Quality	1 Temperature
	2 Relative Humidity
Air Quality	3 Carbon dioxide (CO <sub>2</sub> )
	4 Carbon monoxide (CO)
	5 Total volatile organic compounds (TVOC)
	6 Particulate Matter (PM 10)
	7 Fine Particulate Matter (PM 2.5)
	8 Ultrafine Particulate Matter (PM 1.0) .
	9 Formaldehyde (HCHO)
	10 Nitrogen dioxide (NO <sub>2</sub> )
	11 Ozone (O <sub>3</sub> )
	12 Ammonia (NH <sub>3</sub> )
Lighting Quality	13 Illumination (Lux)
Acoustic Quality	14 Sound level (dBA)
Spatial Quality	15 Occupancy (PIR Motion Detector)



### Cautions

- This product is for indoor use and is not waterproof.
- Sensor readings may vary depending on the environment of use, installation, location, calibration execution, etc.
- Install the product on a level surface. There is a possibility of malfunction when it is used tilted.
- Internal sensors are sensitive to vibration and shaking, so please install in areas where there is no vibration.
- If the LED on the rear panel is green, it is on normal operation; if it is orange, it is malfunctioning. If the orange light is shown, unplug the power and operate it again. If the problem is not resolved, please contact customer service.  
(Help Center: [hello@atlasen.com](mailto:hello@atlasen.com))
- In the case of malfunction or error, please contact customer service.

## Safety Precautions



### Safety Precautions

- Avoid use in outdoor or condensed environments.
- Do not disassemble or assemble the product while in use.
- Please be aware of handling the product, as it may be damaged by falling or external impact.
- We are not responsible for any accidents or problems caused by failure to comply with the safety precautions stated above.

- The warranty period for this product is one year from the date of purchase. In the case of a defect within the warranty period, a free repair service will be provided.
- After the warranty period, service will be provided at a cost.
- However, in the case of a service provided at a cost under the Consumer Damage
- Compensation Regulations (such as product damage due to user negligence), the service is provided for a fee even during the warranty period.
- For shipping fees, for free of charge service, shipping fees will be charged for both user and provider. For paid services, shipping will be charged on the user.
- This warranty will not be reissued.

<b>Product Name</b>	ATLASEN IEQ SENSOR
<b>Model Name</b>	ATLASEN LEO
<b>Serial No.</b>	Marked on the surface of the box
<b>Date of Purchase</b>	YYYY - MM - DD
<b>Warranty Period</b>	One year from the date of purchase
<b>Manufacturer / Country of Manufacture</b>	ATLASEN, Korea
<b>Seller</b>	
<b>Help Center</b>	hello@atlasen.com