



User Guide




essentim scouter



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## Notes

	<p>Warning: This symbol represents a warning. It describes a dangerous situation or indicates safety risks.</p>
	<p>Note: This symbol indicates important information.</p>
	<p>The symbol of a crossed-out dustbin indicates that this device contains electronic components and must not be disposed of with household waste in accordance with Directive 2002/96/EC (WEEE).</p>

### Legal notice

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essentim GmbH assumes no liability for any errors or omissions. The determination of valid measurement results, conclusions and measures derived therefrom are the sole responsibility of the user. essentim GmbH does not guarantee the correctness of the determined measurement values or measurement results. Furthermore, essentim GmbH assumes no liability for errors or damages resulting from the use of the determined measurement values.

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### Warranty and liability

The device complies with the basic safety and health requirements of the relevant EU regulations and has been tested for proper functioning at the factory. When claiming warranty, the device number must be stated (see product label on the device). Failure to comply with the manufacturer's specifications or legal requirements or unauthorized modifications to the equipment or unauthorized replacement of individual parts or accessories may significantly impair the electrical safety of this product and void the warranty. Any liability, property damage or personal injury resulting from the device being used contrary to the instructions in this manual is excluded. We reserve the right to make technical design and execution changes at any time without prior notice as a result of continuous further development and product improvement. No liability is accepted for damage resulting from improper use. Warranty claims are then also void. Liability for any damage to property or personal injury that occurs is then transferred to the operator.

## Safety Instructions

Read these instructions carefully before commissioning and using the device and always keep the instructions within easy reach!



### Warning

Always observe all safety instructions in this document! Non-observance may result in personal injury or damage to property! Always keep the safety instructions and the user manual permanently always keep the safety instructions and the user manual in an accessible and permanent place.

- Observe all technical limits as well as storage conditions for the device.
- If there is obvious damage to the device, it must be taken out of service and stored safely.
- Do not attempt to repair or modify the device. For maintenance and repair, the device must be sent to the manufacturer or to an agency designated by the manufacturer.
- Before operation, the safety instructions and the user manual must have been read and understood by the user. The device may only be operated by persons to whom this applies.
- In addition to the instructions and safety notes in this manual, the basic regulations for occupational safety must be observed.
- The system is safe and reliable and complies with the relevant EU directives. Improper use may result in damage to the user, third parties or material objects.
- Maintenance or repairs may only be performed by the manufacturer or by persons or companies authorized by the manufacturer.
- Clean the device only according to the cleaning instructions in this operating manual.
- Do not operate the device in potentially explosive atmospheres, aggressive atmospheres or explosion protection zones.
- The device is not a toy. Keep the device away from children and animals.
- Avoid contact with liquids or high humidity.
- Avoid the penetration of liquids into the device.
- Protect the device from permanent direct sunlight.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in a legible condition.
- Do not open the device!
- The product should not be sterilized!

## Intended Use and User

The essentim scouter is the base station for the essentim wireless sensor network. With the scouter, essentim sensors can be connected to the essentim cloud. In the cloud, sensors can be managed, measurement data can be stored and processed, visualized and analyzed. The scouter is installed stationary in a normal room climate.



### Warning

Always observe the safe operating conditions specified here! Failure to do so may result in personal injury and/or damage to property.

- 0°C to +40°C, non-condensing humidity up to 70%, ambient pressure.
- The scouter is a stationary unit, select a safe and central location. Observe the scouter positioning guide in this operating manual!
- Only cables and extensions approved by essentim may be used with the scouter.
- Avoid mechanical stress on the device; damage to the housing may result in damage to the electronics. This can lead to defects, short circuits and temperature development.

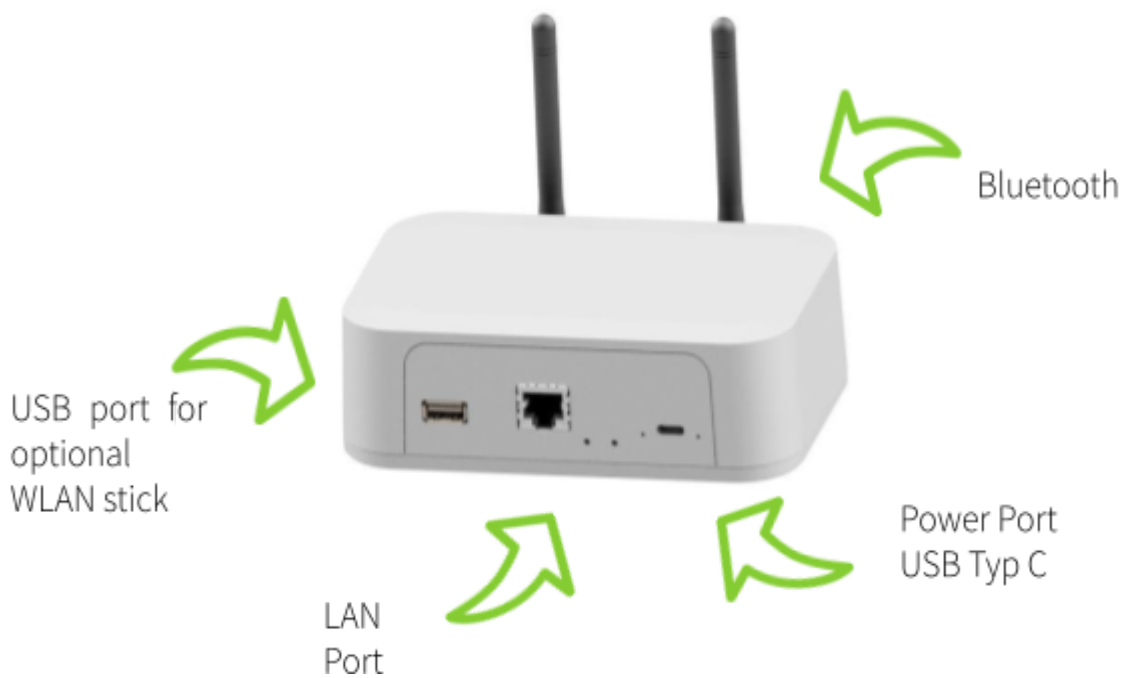
The user is for example a trained laboratory employee / assistant / technician / IT employee / student. Each user must have read and understood the safety instructions and the operating instructions.

## Device Description

### General Information

The essentim scouter is the central point of the essentim wireless sensor network. It collects the data from the essentim sensors and forwards them to the essentim cloud. The user can connect to the scouter via the LAN interface to perform the necessary configuration steps.

### scouter



## Technical Data

<b>Manufacturer</b>	essentim GmbH
<b>Model</b>	scouter Version 1
<b>Type</b>	Wireless Sensor Network Server / Gateway
<b>Power supply for charging</b>	5V DC (max. 3A)
<b>Battery Type</b>	Battery: CR1225
<b>Betriebsbedingungen</b> (EN / IEC 61010-1) <ul style="list-style-type: none"> <li>● Operating location</li> <li>● Ambient temperature</li> <li>● Humidity</li> <li>● Altitude</li> <li>● Other</li> </ul>	Indoor, no use or storage in explosive atmospheres.  0 °C to +40 °C  Maximum 70 % relative humidity, non-condensing  5000 m  Do not expose to chemicals or mechanical stress. The product should not be sterilized! Observe the cleaning instructions in the user manual to prevent damage.
<b>Storage and loading conditions</b> <ul style="list-style-type: none"> <li>● Temperature</li> <li>● Humidity</li> <li>● Other</li> </ul>	0 to 40°C  10 to 50%  Protected from frost and heat, not in contact with hazardous substances in a place protected from dust and sunlight.
<b>EMC/radio</b>	EN 61000-6-2:2005, EN 61326-1:2013 ETSI EN 301 489-1 V2.2.3:2019-11 ETSI EN 301 489-17 V3.1.1:2017-02 ETSI EN 300 328 V2.2.2:2019-07
<b>Other conformities</b>	RoHS, FCC, IC, CE
<b>IP protection class (EN 60529)</b>	IP20
<b>Further Information</b>	
Operating system	Embedded Linux (Raspbian)
<b>Interfaces</b>	Bluetooth Low Energy, USB, LAN
<b>Dimensions</b>	150 x 105 x 45 (mm) without Antennas
<b>Weight</b>	Ca. 260 g



## Transport and Storage



### Warning

Improper transport may result in personal injury and/or damage to property. Always observe all instructions for safe transport

The essentim scouter must be secured during transport to prevent possible mechanical impacts. The scouter must not be transported during operation. Before each transport, the antennas must be dismantled.

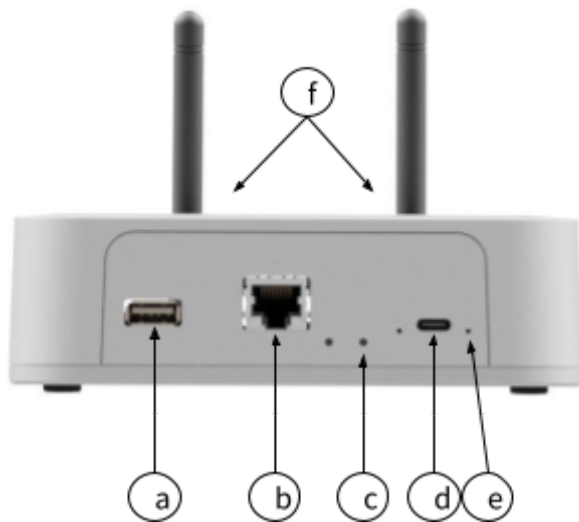
Unused scouters should be stored away from dust, sunlight and moisture.

Storage and loading conditions	
- Temperature	0 to 40°C
- Humidity	10 to 50%
- Others	Protected from frost and heat, not in contact with hazardous substances in a place protected from dust and sunlight.

## Commissioning

When using the essentim scouter for the first time, the following steps must be performed:

1. Set up system
2. Establish connection to the essentim Cloud



- a USB A port (WLAN stick)
- b LAN port
- c Reset Button
- d Power Supply connector
- e Power LED
- f 2 x antenna connector

## Mounting the System

- Screw the enclosed antennas to the scouter.
- Position the scouter in a place protected from dust, sunlight and moisture.



### Note

Observe the scouter positioning aid in this user manual.

- Connect the scouter to a 230 V power supply using the enclosed power supply unit.



### Warning

Lay all cables so that no person can trip over them. Position the scouter so that no person can trip over it. Do not use any accessories that show external damage or strange behavior. Only use accessories approved by essentim.

- If the scouter is properly connected to the mains, the power LED lights up green.

## scouter Positioning Guide

When positioning the scouter, some aspects should be taken into account to achieve optimal network coverage. For large rooms, several scouters are required for the wireless sensor network. If you have problems with the connection of the scouter, please contact essentim support at [support@essentim.com](mailto:support@essentim.com).

## General Notes on Positioning

### Dos

- The scouter should be clearly visible from any point in the laboratory
- The antennas should be oriented vertically
- Position the scouter with a bias towards the incubators as these strongly shield signals

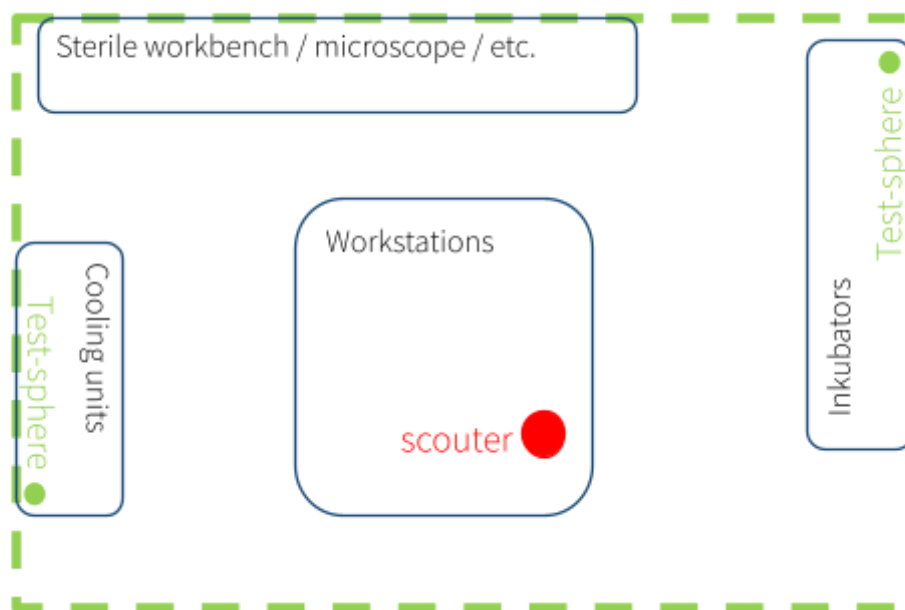
### Don'ts

- Do not position the scouter in a cabinet or behind large devices or obstacles.
- The antennas must not touch anything
- The antennas must not be surrounded by large (metallic) objects

## essentim Recommends the Following Positioning Procedure

- Position the scouter at your desired location, taking into account the "Dos and Don'ts" from the previous paragraph.

### Example 1



- Use an essentim sensor unit (e.g. sphere or scope) to test the receiving characteristics at different, critical points in the laboratory.

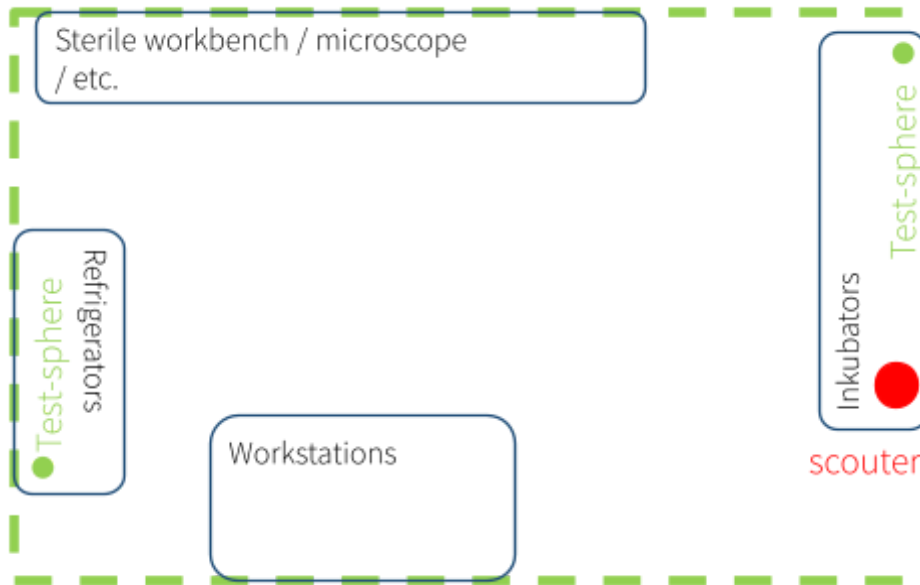
Place the sensor unit in the incubator or refrigerator furthest away. Check in the webapp whether data is still being received from the corresponding sensor unit.

- Data is being received: Perfect, the scouter is receiving signals from "worst case positions".

- Data is not being received: Try to change the antenna orientation of the scouter or, if possible, try to place the scouter at a different position

If you do not have the possibility to place the scouter centrally in the laboratory, a position close to the incubators should be chosen:

### Example 2



- Again, use an essentim sensor unit to test the receiving characteristics at various, critical points in the lab.

If you do not achieve full signal coverage in your laboratory, you will of course not lose any data. The sensor units store all measurement data and deliver this as soon as you are back in the reception area. However, please note that the capacity of the local memory of the sensor units depends on the measurement mode (adjustable via the essentim lab app).

#### Note



Units that are outside the receiving range will be displayed as offline after a certain time. As soon as they are in the reception range again, the missed measured values are read out. No live data can be displayed for devices outside the receiving range.

## Cleaning, Maintenance and Repair

### Cleaning

The scouter can be cleaned with a damp cloth. essentim GmbH recommends the following procedure for cleaning:

1. Switch off the scouter (unplug it).
2. Clean the scouter with a microfiber cloth or a cloth moistened with water.
3. Wait until the scouter is completely dry again
4. The scouter can be used again



#### Warning

The scouter should not be sterilized! essentim GmbH does not give approval for sterilization processes of any kind, as both thermal and chemical processes can destroy the scouter and cause damage to property and personal injury!

### Maintenance and Repair

The scouter is maintenance-free. Updates are provided automatically via the essentim cloud connection.

#### Defect

In case of a defect, please contact essentim GmbH.

[support@essentim.com](mailto:support@essentim.com)

[www.essentim.com](http://www.essentim.com)

## Disposal

The scouter is marked in accordance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE).



WEEE registration number of essentim GmbH: DE 22316070.

This product should not be disposed of with household waste.

The scouter can be taken to a designated primary treatment facility for the disposal of electrical and electronic equipment at your own expense for environmentally sound disposal. As a designated B2B product, you can alternatively return the scouter (sufficiently stamped) to essentim GmbH. We will dispose of the device at our expense in a proper and environmentally friendly manner.

## FAQs

### 1. What are the main functions of the scouter?

The scouter is the central point in the essentim sensor network. It collects the data and sends it to the essentim cloud.

### 2. Is my browser properly supported?

- *The currently supported browsers are:*
  - Chrome as of version x
  - Safari as of version 12
  - Firefox as of version
  - Edge as of version
- *With restrictions to use are:*
  - IE as of version x
- *Not supported or tested:*
  - All other versions or browsers

## Troubleshooting

1. **Although I have connected the scouter to the power supply, no network with the name "essentim" appears.**
  - a. Check whether the LEDs are flashing and whether the scouter is actually supplied with power.
  - b. The access point has been switched off in the configuration. Connect to local network and try access or ask admin
  - c. The network has been renamed, contact your admin
  
2. **I have connected to the scouter, but no sensors (e.g. scopes) show up on the dashboard.**
  - a. Make sure that the scopes are turned on. To do this, press the button and see if the scope starts blinking. If not, charge the scope.
  - b. Make sure that you have selected the Devices tab on the dashboard.
  - c. Make sure all antennas included with the lab kit are plugged in on the scouter. If not, plug in all peripherals and restart the scouter.
  
3. **The app does not look as described in the operating instructions, why?**
  - a. This could be related to display difficulties due to browser incompatibility, please refer to the compatibility list in the FAQs (previous chapter).
  
4. **I keep having data gaps in the graph, what can I do?**
  - a. Try to find out where the sensors are located when data gaps occur. Probably the reception at this location is not sufficient. Follow the positioning guide in the operating manual to optimize the scouter position.



## Changelog

18.01.2018	Erstellung der Bedienungsanleitung
28.07.2020	Anpassung
15.09.2021	Versionsableitung Bedienungsanleitung ohne Mobile App
21.02.2022	Adressänderung, Cloudanpassung
14.04.2022	Übersetzung
22.04.2022	Entfernung der EC Declaration of Conformity

