



# Instrukcja obsługi zestawu Synati

W skład zestawu wchodzi:  
**Centralka MagicHUB**  
**Czujnik Sentry**

PL

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



# Synati kit user manual

The kit includes:  
**MagicHUB**  
**Sentry sensor**

EN

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

## Introduction

Thank you for choosing an Exon product. Before using the devices please read this manual carefully and save it for future use.

This product was manufactured or commissioned by Exon Sp. z o.o., ul. Władysława Łokietka 5, 87-100 Toruń, Poland. Queries regarding compliance of the product with the European Union law should be directed to Exon Sp. z o.o., ul. Władysława Łokietka 5, 87-100 Toruń, Poland. Queries regarding repair or warranty should be directed as per contact details provided in separate documents concerning repair or warranty.

This wireless people counting system is an autonomous, easy to install and assemble system designed for analysis of people flow in shops, franchise networks and public institutions such as libraries or museums. The wireless technology applied in the devices allows for the system to be installed in several minutes, without interfering with the infrastructure of the place. The results are available on an on-line analysis platform (instructions on how to add the device can be found further in this document). The Exon system allows to verify the efficiency of marketing campaigns, predict peak hours, effectively manage staff and calculate convergence based on the number of visitors. A detailed description of the functionalities of the analysis platform can be found on the manufacturer's website: **[www.synati.com](http://www.synati.com)**

## First time use

Before using the device please read this manual carefully. Non-compliance with the manual may result in physical injury or damage to the device. It is an electrical device. Before undertaking any actions connected with power supply (connecting cables, installation of the device etc.) make sure that the device is not connected to electricity. Do not disassemble the device. The device should only be used indoors. The device should be protected from moisture, sun and changes in temperature. This manual should be kept safely. To avoid unnecessary mistakes and accidents make sure that everyone using the device is familiar with its functionality and safety functions. The devices should not be placed in hot, humid or dust-laden places; in places where insects can get inside, where the device may be subject to mechanical vibrations or near inflammable objects (candles etc.). Elements of the system should be protected from flooding and objects filled with water, for example vases, must not be placed on them. The devices must not be placed in humid or dusty places and in places filled with oily smoke or steam (near cookers or humidifiers). This may cause a fire, electrical shock or deformation of housing. The devices must not be touched with wet hands, without housing or with accessories not recommended by manufacturer. During thunderstorm plug out the power cord from the

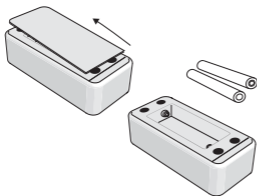
power socket and plug out the Ethernet cable. For life and property safety please apply the safety means according to this manual for the manufacturer does not take responsibility for damage caused by negligence or use not in accordance with intended use.

### **Information labels**

Information labels including model number, date of production and power parameters (in compliance with the applicable law) are at the back of the MagicHUB central unit and on the side of the Sentry sensor. MAC address and the hash ID of the Magic Hub central unit are on the back of the device while the MAC address of the Sentry sensor is under the battery cover.

**The supplied equipment:**

- MagicHUB central unit
- 5V USB power supply
- USB A-B cable (1)
- RJ45 Ethernet cable (1)
- Sentry sensor (1)
- sensor mounting bracket (1)
- 1,5V AA battery (2)
- double sided mounting tape (1)
- degreasing cloth (1)

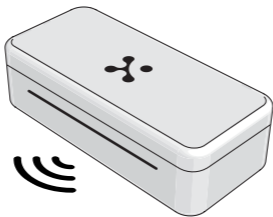
**Inserting the battery into the Sentry sensor:**

1. Press on the cover and slide it to open.
2. Insert the batteries in accordance with polarization.

**Description of the Sentry sensor**

The Sentry sensor does not have an additional power switch, inserting the batteries properly turns the device on. During the first 15-30 minutes after activation the device conducts automatic calibration of settings including ambient temperature. During this period detection of people in

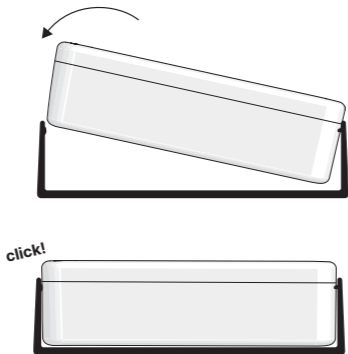
the detection area might be different from the actual state. To guarantee the highest efficiency of detection the sensor after each detection conducts additional calibration lasting 3 seconds. During this time detection of people in the detection area is not possible. Warning! The Sentry sensor has an implemented algorithm which eliminates false detections of people remaining in the detection area for example under the sensor in the doorway. As long as the sensor is detecting a person in the detection area further detections will not be made, so there will be no measurements caused by people creating artificial traffic under the sensor. For 3 seconds after a person disappears from the detection area the sensor conducts calibration after which further correct people counting is possible.



Powering:	2 exchangeable AA 1,5V batteries
Wireless communication frequency:	868MHz
Wireless communication range:	up to 150m of free space
Detection range:	up to 5m
Angle of detection:	100°/12°
Time of recalibration:	3s
Dimensions: length:	98mm, width: 37mm, height: 37mm
Mass:	61g (without battery)

### Mounting bracket

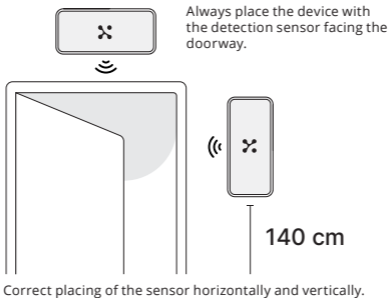
The set contains a mounting bracket which allows the sensor to be installed in any convenient place. It is designed only to mount the Sentry sensor. Thanks to it the user can remove the sensor from the mounting bracket to change batteries at any time, without having to remove the whole mounting bracket. **Warning!** The mounting bracket can be attached with the mounting tape included in the set. Alternatively it can be attached with screws (not included in the set) to rough surfaces where the mounting tape cannot be used.



**Warning!** The mounting bracket has appendages blocking the sensor on both sides, one of them is rectangular and the other is slanted. To avoid damaging the sensor and install it properly the sensor should be inserted from the side of the rectangular appendage and pushed into the free space on the other side. Installing the sensor properly makes a characteristic “click” sound.

## Mounting of the Sentry sensor

The sensor responds to changes in temperature in the area of detection, so it should not be placed near sources of warm or cold air, for example near air conditioning or heater. The best spot for the sensor is the space directly above the doors or on the side 1,40m above the floor.

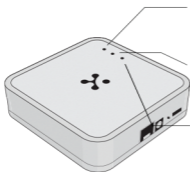


If the entrance to your premises is directly from outdoors, the sensor should be placed far enough from the door as to prevent generating false detections caused by changing weather conditions. The Sentry sensor can be installed

both vertically and horizontally, however it is important that the detection clearance (sensor) faces the doorway (see the above figure). Warning! Before installing the sensor the surface of the mounting bracket and the sensor should be degreased to prevent it from falling down. Improperly degreased surface may cause the sensor to unstick and fall down which may cause damage to the Sentry sensor. Such damage is not covered by the warranty and the manufacturer does not take responsibility for incorrect installation.

## Description of the MagicHUB

The MagicHUB allows quick implementation of analysis designed for shops. Thanks to it you will know how many people visits your premises and if the money spent on marketing brings tangible results. The MagicHUB automatically and wirelessly communicates with the Sentry sensor included in the set. The MagicHUB has built-in memory of 8GB assuring uninterrupted work in case of a network outage. Use of the encrypted SSL protocol guarantees full safety of the transmitted data. To work properly it only requires connection to power (5V USB) and to the Internet with Ethernet or Wi-Fi.

**MagicHUB Illustration**

**Green LED blinking** - device works properly, sends data directly to the server.

**Blue LED blinking** - device is not connected to the server.

**Red LED blinking** - device is not connected to the network.

**RF active LED** (changes on data received).

**MagicHUB power LED**

Warning! In some cases when installing the device in complicated network structures it may be required to reconfigure the network in order to allow the MagicHUB to connect to the Internet (whitelist, blacklist, other network settings). The information label including the MAC address of the device is on the underside of the housing.

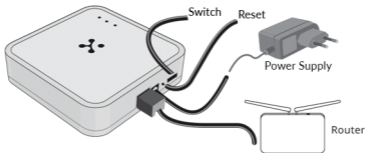
Powering:	5V (USB A-B)
Wireless communication frequency:	868MHz
Wireless communication range:	up to 150m of free space
Built in memory:	8 GB
Network interface:	Ethernet or Wi-Fi
Dimensions: length:	77mm, width: 77mm, height: 25,5mm
Mass:	66g

## Connections

MagicHUB has 2 possible connections. 1- an Ethernet socket for connecting a cable for Internet access, 2 - powering socket USB A-B (5V). Both cables necessary to install the device correctly are included in the set.

3. Wi-Fi / Ethernet switch

4. "Reset" button - clears Wi-Fi access point credentials



**Caution!** To clear Wi-Fi access point credentials, please push the "reset" button" and hold it for at least 20 seconds. If you toggle a "network switch" to a "Wi-Fi" position and there was no Wi-Fi credentials saved in the HUB memory, it will turn AP mode on. Now you can connect it to your Wi-Fi network. To do so, scan for a Wi-Fi network named "Synati\_mac address", connect to it and using a web browser open a config panel (a captive portal).



## Analytics platform

For data visualization an account on the on-line platform ([www.platform.synati.com](http://www.platform.synati.com)) must be created and the below steps followed.

1. Go to [www.platform.synati.com](http://www.platform.synati.com).
2. Register a new account by clicking the “registration” button.
3. Fill in your personal details and click “create an account”
4. Check your email and open the message you got from us. If you cannot see the email check the junk folder.
5. Confirm creation of the account by clicking “create an account”
6. Log in to the [www.platform.synati.com](http://www.platform.synati.com) with the details provided during registration.
7. Go to the “add device” tab and fill in all the fields. The hash identifier is the 36 digit number which can be found on the bottom of the cover of the MagicHUB. Provide the number according to the example below:  
**0123456789abcdef0123456789abcdef0123.**

By adding localization details you will gain access to comparison of weather conditions in the chosen location.

8. Click the “save” button. From now on all the results on the number of visits to your premises can be found on the platform.

Description of all the functionalities of the on-line platform can be found if you follow the link:

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

## Disposal of waste:



Disposal of used equipment (applicable in the European Union and in other European countries with their own disposal systems). This symbol on the product or its packaging means that the product cannot be treated as municipal solid waste and it should be delivered to the appropriate waste collection point for electric and electronic devices in order to be recycled. Proper disposal of the used product prevents potential negative influence on the natural environment and human health which could occur in result of improper disposal of waste. Recycling helps protect the natural environment. To get more information on recycling of this product please contact your local authorities and waste disposal services.

 **Synati**

Disposal of used batteries (applicable in the European Union and in other European countries with their own disposal systems). This symbol on a battery or its packaging means that the battery cannot be treated as municipal solid waste. For some types of batteries this symbol can be used together with a chemical symbol. The chemical symbols of mercury (Hg) or lead (Pb) are additionally used if the battery contains more than 0.0005% mercury and 0.004% lead. By proper disposal of waste you can prevent potential negative influence on the natural environment and human health which could occur in result of improper disposal of waste. Recycling of batteries helps preserve the natural environment. In case of products which because of safety, proper function or integrity of data require constant connection to battery, replacement of the battery should be conducted by qualified repair services staff. To make sure that the battery in the used electronic devices will be properly disposed of it should be delivered to the appropriate waste collection point. Regarding all other used batteries please read the section of this manual devoted to safe removal of batteries. The used battery should be delivered to the appropriate waste collection point. To get more information on recycling of this product please contact your local authorities and waste disposal services.

## Problem solving (FAQ):

1. The Sentry sensor does not work
  - replace batteries
  - decrease the distance between the Sentry sensor and the MagicHUB
  - check if the sensor is mounted correctly (sensor facing the doorway)
2. The MagicHUB does not work (the LED is not blinking in any color)
  - check if the MagicHUB is properly plugged to the power supply (5V power supply)
  - replace the power supply
3. No results on the on-line platform
  - check if the correct hash identifier has been provided
  - check if the MagicHUB is correctly connected to the Ethernet cable (proper function is indicated by green flashing light)
  - replace the Ethernet cable
  - check if the LAN is properly configured (whitelist, blacklist – access to the Internet is required)
4. Blue light is flashing on the MagicHUB
  - check if the LAN is properly configured (whitelist, blacklist – access to the Internet is required)
5. False measurements
  - read the above instructions on mounting of the device.



More information about the products:

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