Ubiqisense

Sensor Manual

UC2

Introduction

Preparations

Please read carefully.

Prior to installation, check all components for damage, and do not use the product if damaged.

Make sure to map out which areas in your building you would like to monitor, what metrics you want to capture, and how many sensors you need for optimal results.
For further help in planning your installation refer to our planning manual and other documentation on our website.

Note: This document is subject to change for further technical development.

About

Ubiqisense smart sensor solutions are made of intelligent sensor devices, gateways and data analytics tools. At the heart of Ubiqisense systems are UBIcapture devices. Connectivity to building automation or access to sensing data through cloud services is enabled by the UBIgateway.

UBIcapture devices observe and extract information about people and objects seen by the device. All devices are equipped with intelligent motion sensing and remote configuration capabilities. By means of a visual sensor and artificial intelligence, captured images are processed by the embedded computer vision algorithm and only meta-data is transmitted from the device. Images are never stored or transmitted by any sensor.

Functions:

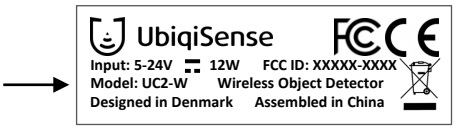
UBIcapture is an all-in-one sensor which:
- Detects and counts people
- Locates position of people
- Tracks movement
- Detects whether people are standing or sitting

In order to properly display in your BMS or Cloud, UBIcapture must have a designated cloud gateway commissioned by Ubiqisense. From the cloud gateway, the following values can be transmitted:
- RoomID
- Number of people
- X & Z coordinates/ PersonID
- Standing/Sitting
- Direction of movement
- Foot fall

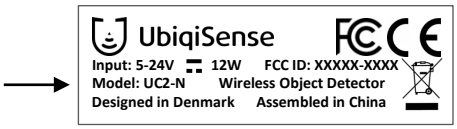
Hardware

There are two versions of the UC2 sensor. The UC2-N (normal) and the UC2-W (wide angle) To recognize which version a sensor is you must look at the back side and locate the model as seen below:

UC2-W



UC2-N

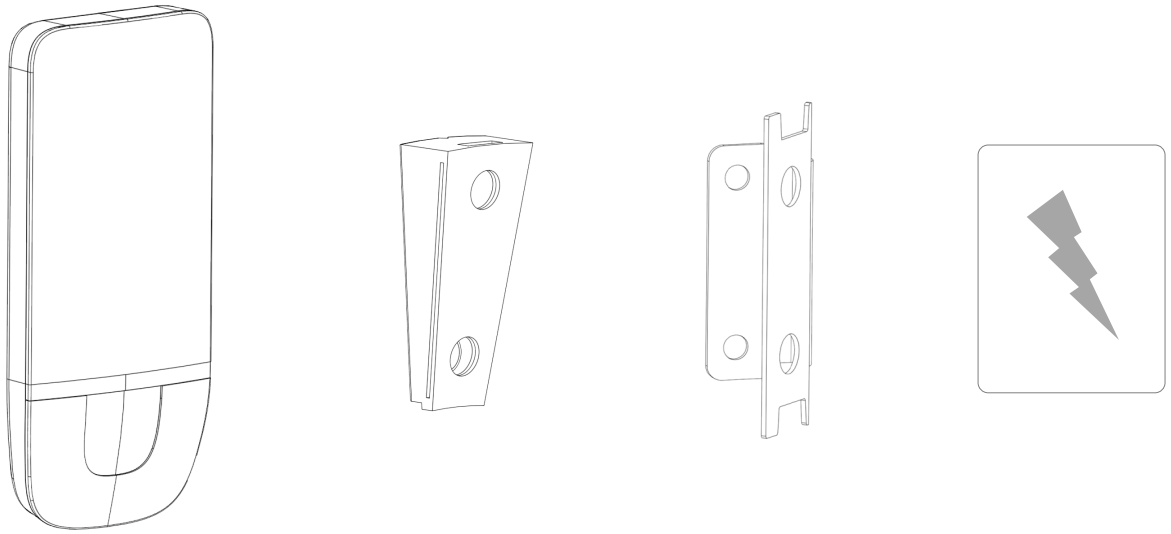


Both sensor version packages contain the same components.

Package contents

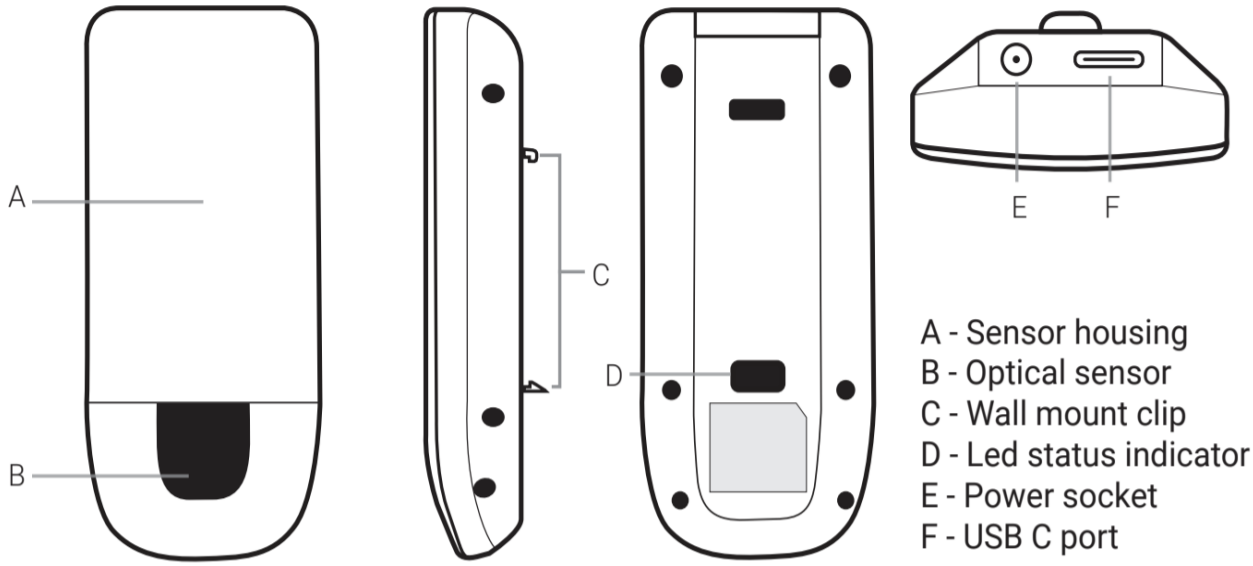
In the box you will find the following components:

1 UbiCapture device (N or W-type)
1 Plastic wall mount
1 Metal bracket
1 Power supply unit, incl. international power adapters



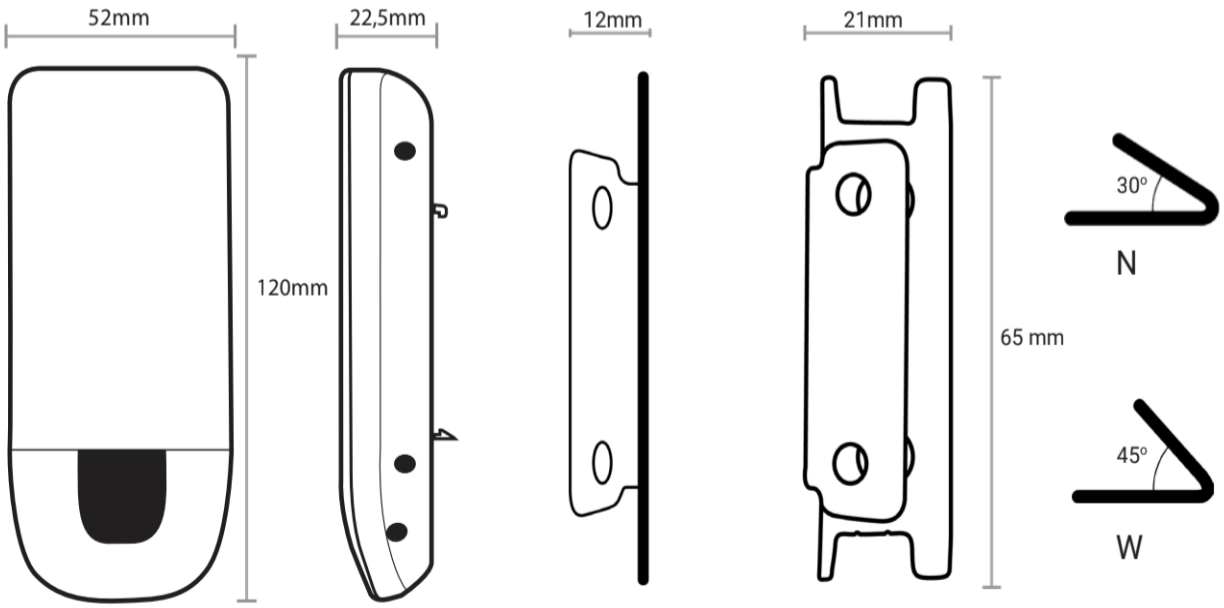
Not included
Screws or tape for mounting
Mounting equipment

Sensor Features:



A - Sensor housing
B - Optical sensor
C - Wall mount clip
D - Led status indicator
E - Power socket
F - USB C port

Sensor and Wall Mount Dimensions:



Data Sheet

	UC2-N (Normal)	UC2-W (Wide Angle)
Sensor Dimensions (H x W x D)	120 × 52 × 22,5 mm	
Mount Dimensions (H x W x D)	65 × 21 × 12 mm	
Sensor Connection	2.4/5 GHz WLAN (802.11b/g/n/ac) OR PoE+ through USB-C (adapter not included)	
Wi-Fi requirements	Security: WPA2-Personal Group cipher: CCMP Pairwise ciphers: CCMP	
Housing color	White	
Housing material	Plastic, Aluminum	
IP rating	IP20	
Temperature range	0°C to 40°C	
Light level required	20 - 10000 lux	
Sensor weight (including mount)	72 g (85 g)	
Technology	AI optical sensor	
Detection speed	0.2-10 fps	
Optical field of view (H x V)	60° × 35°	84° × 45°
Maximum Range	10 m	7m
Application	Indoor	
Mounting	Vertical wall	
Mounting height (optimal)	2 - 3 m (2.1m)	
Power input	12V/1A DC jack 5V/2A USB-C	
Power consumption	2W(peak)	
Alternative power source	PoE+ (standard 802.3at) through USB-C (adapter not included)	
Certifications	Type approved: CE, FCC	

LED Status

On the back of the sensor there is an LED light, that will guide you through the provisioning process, indicating the status of the sensor. The light is visible through the bottom hole.

LED signal	Sensor status
 CONSTANT WHITE (LOW LIGHT)	The sensor is powering up and booting
 SLOW BLUE BLINK	The sensor is looking for a QR code
 CONSTANT BLUE	The sensor has read the QR code
 FAST BLUE BLINK	The sensor is downloading and installing the latest firmare
 GREEN HEARTBEAT	The sensor has been provisioned succesfully
Errors signals	
 CONSTANT RED (AFTER READING QR CODE)	(If shown after constant blue during provisioning) The sensor has read the QR-code but was not able to connect to the network Consult network guide document for network requirements
 CONSTANT RED (AFTER STARTUP)	(If shown as first signal after powering on) Sensor may be damaged. Contact Ubiqisense support

Mounting

The bracket must be mounted on a vertical, non-slanting wall.

Use an appropriate fastening technique depending on your wall type.

This could be either
• double sided tape,
• permanen adhesive such as glue,
• screws (3mm) or
• screws (3mm) and wall plugs.

The bracket can be mounted on the wall in both directions: either with the “hinge” on the right side or on the left side, as shown in the illustration on the following page.

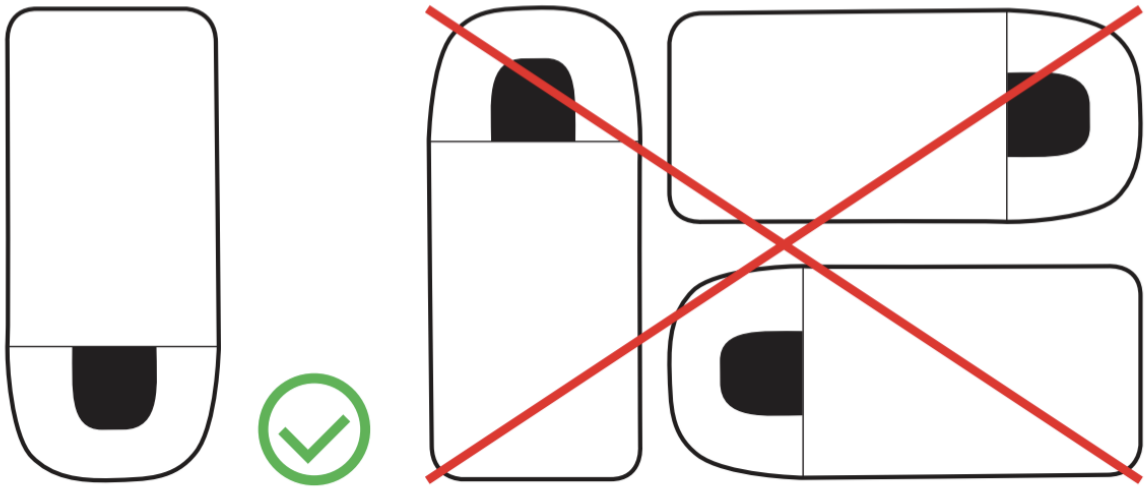
This way the sensors will monitor either the left or right side of where it is mounted.

The sensor should be installed on vertical walls at a height of approximately 2.1 m, depending on room size, use case and single/dual sensor installation.

UBIcapture sensors are developed for indoor use only, and intended for mounting on vertical walls.

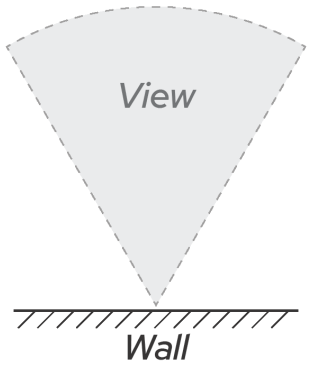
Before you start checklist:
-Floorplan with locations and mounting direction of sensors indicated
-Enough sensors of each type, to complete the floor plan. See section 2 for contents of box, and make sure you have everything
-Laser measure or tape measure
-Tools for mounting (double sided tape/ screws+drill)

After you are done checklist:
-Sensor mounts in correct position as indicated on floor plan
-Power and ethernet or wifi available at all sensor mounts

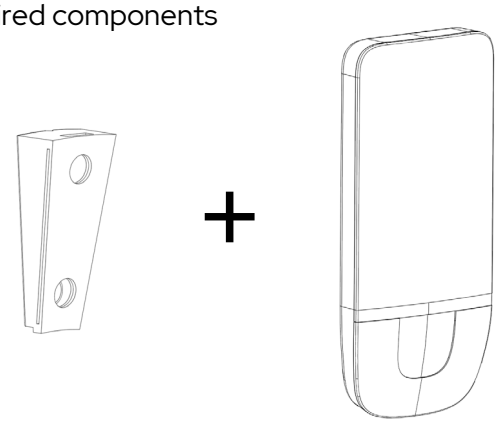


Straight view

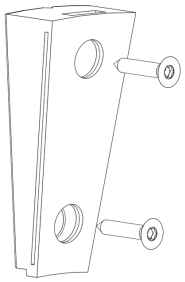
Desired view



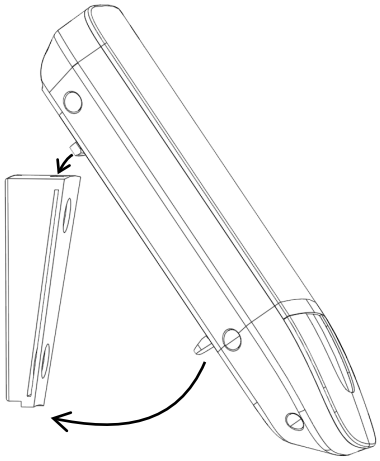
Required components



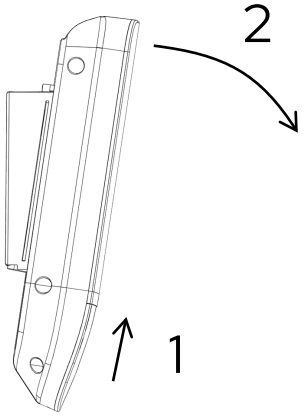
1 Fasten plastic bracket to wall using screws or double sided tape



2 Click sensor onto plastic bracket

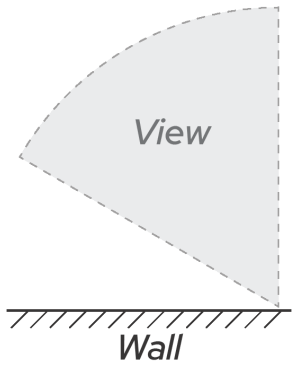


To remove sensor from bracket
1) lift sensor slightly up
2) pivot off bracket

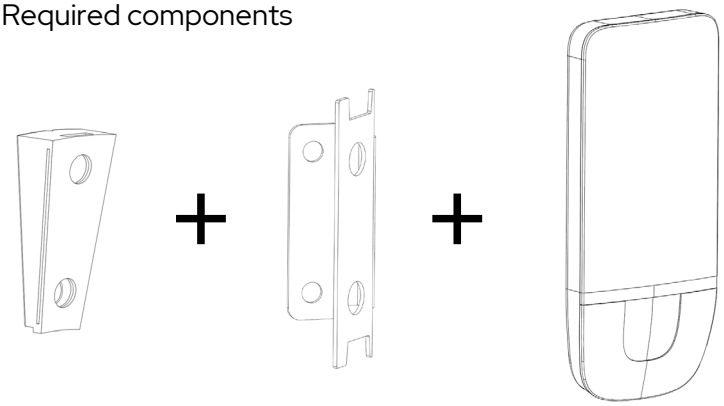


Left view

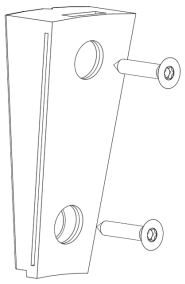
Desired view



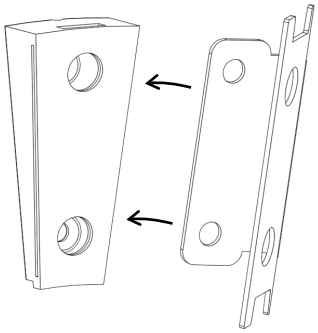
Required components



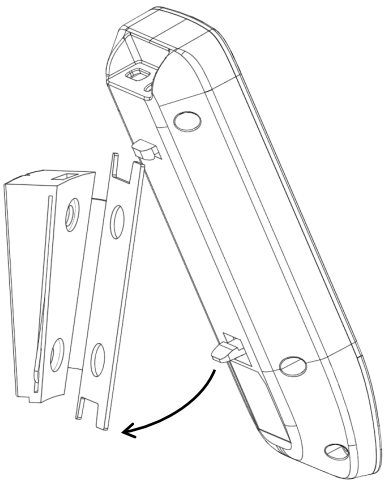
1 Fasten plastic bracket to wall using screws or double sided tape



2 Slide metal bracket into right side of plastic bracket

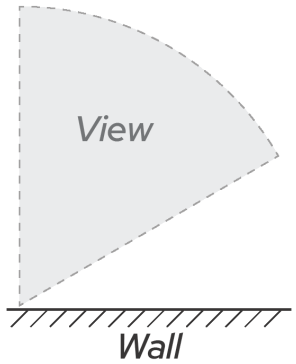


3 Click sensor onto metal bracket

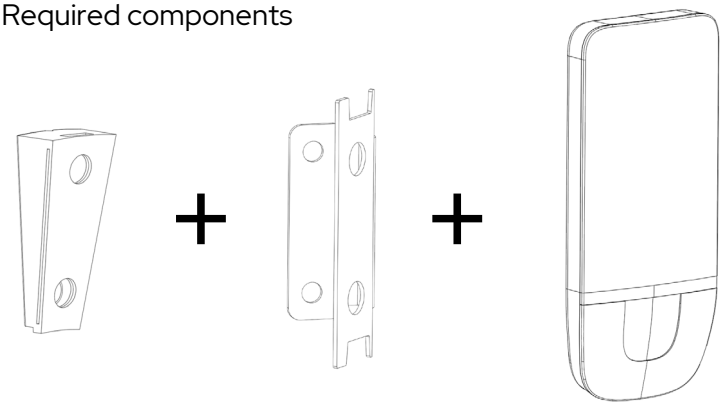


Right view

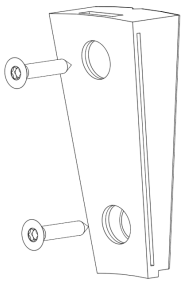
Desired view



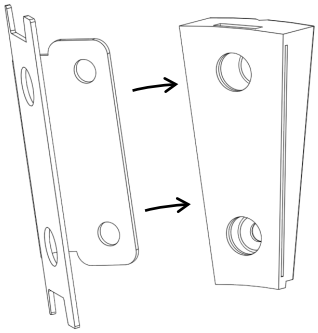
Required components



1 Fasten plastic bracket to wall using screws or double sided tape



2 Slide metal bracket into left side of plastic bracket



3 Click sensor onto metal bracket