Automatic passenger counting

IRMA 6

Getting started

IRMA6-SENSOR-HD-00-ETH-IO-00
IRMA6-SENSOR-HD-00-SWITCH-IO-00

iris INTELLIGENT SENSING

Model

Sensor:

IRMA 6

Sensor variant:

For Ethernet and Switch

Function:

Automatic passenger counting system with 80.000 px ToF (Time-of-Flight)-technology for vehicle and railway application, consisting of sensor unit and interface unit. Generates real-time counting data for further processing via Ethernet to on-board computer. Mounted above doors.

Used symbols

⊙	Please note
⬇	See annex
ⓘ	Information
🔧	Instruction

📄	See document on our website
✎	Please note down
www	Download

Disclaimer

The information contained in this document is based on product data resulting from the development and approval phases as well as the production of initial samples. These specifications do not claim to be error-free and will need to be updated or corrected. Such modifications may be made by iris-GmbH without notice. Characteristic or typical values given are based on our experience and are approximate values to be expected; they are by no means guaranteed by iris-GmbH.

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Table of content

1 Content of the demo set

IRMA 6 components   **Travel direction**
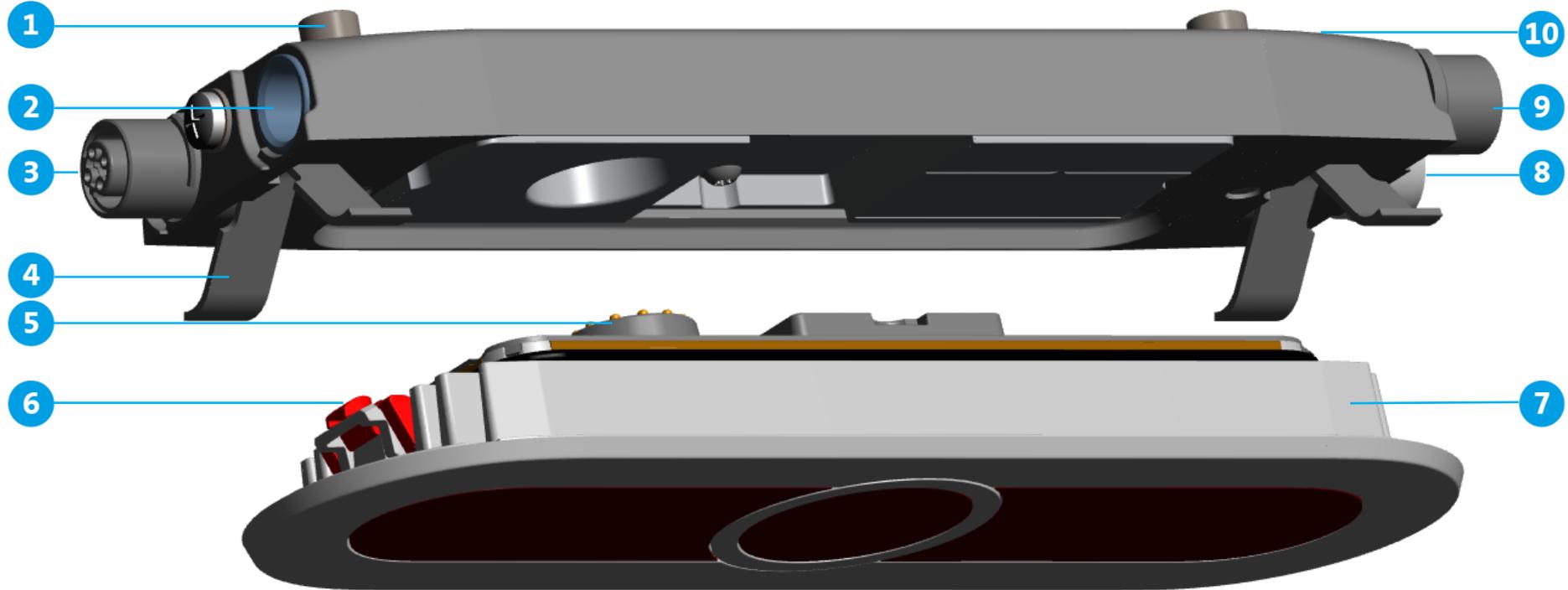
Fig. 1: IRMA 6 components

1 Mounting screws	5 Internal connector	9 M12 door contact connector (on demand) (f)
2 n.c.	6 Mounting hook	10 Interface unit
3 M12 Ethernet connector	7 Sensor unit	
4 Leaf spring	8 M12 power supply connector (m)	

ℹ The IRMA 6 sensor shown here is the sensor variant **IRMA6-SENSOR-HD-00-ETH-IO-00**.

Needed Tools

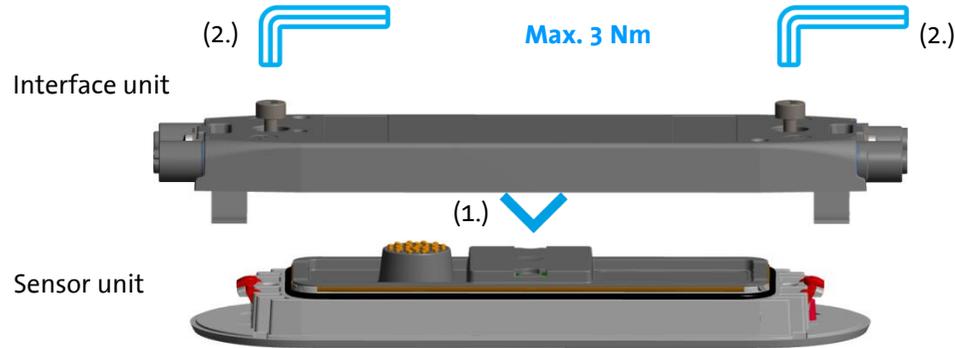**Hex Key**

size 4 mm
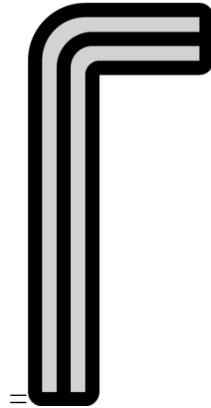
Laptop PC

With Windows OS

Sensor Radar

Available in the product package

2 Getting started

❶ Assemble the IRMA 6 sensor

Interface unit

(2.) **Max. 3 Nm** (2.)

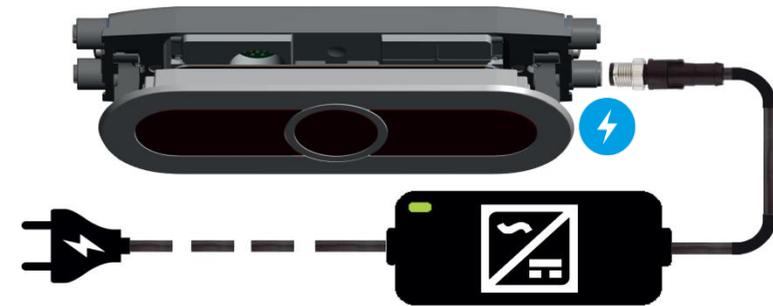(1.)

Sensor unit

(1.) Fit the interface unit onto the sensor unit (in the following graphics: **IRMA6-SENSOR-HD-00-SWITCH-IO-00**).
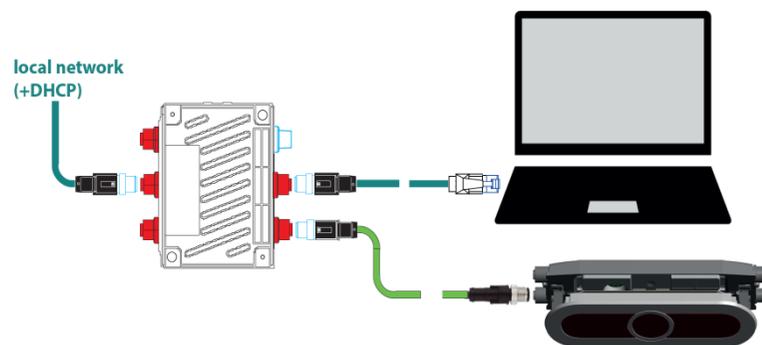(2.) Tighten both screws with max. 3 Nm using a hex key (4mm)
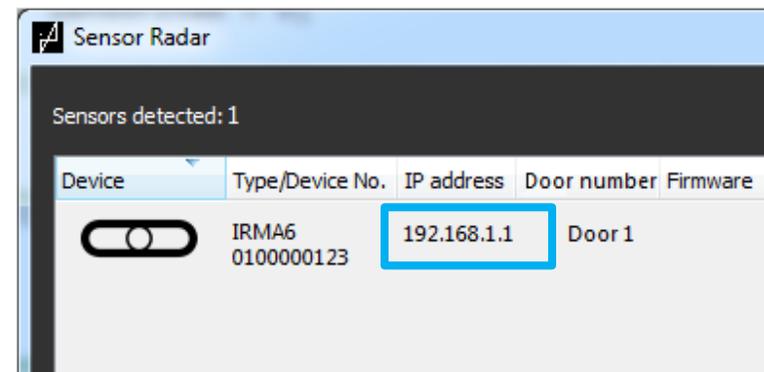
❷ Connect the sensor to power supply

Connect IRMA 6 sensor to power supply using the provided *adapter cable*.

❸ Connect the sensor to the local network

local network (+DHCP)

Connect PC and IRMA 6 sensor to the *same local network*. Make sure the local network has a *DHCP server*. This is the case in most home or company network.

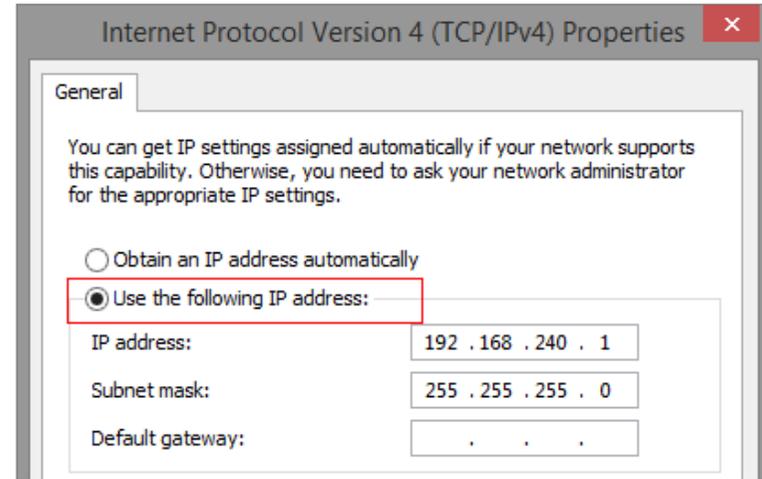## ❹ ⚠ Write down the IRMA 6 sensor's IP address

Start the tool *Sensor Radar* on your PC, locate the IRMA 6 sensor and write down the *IP address*. If this doesn't work go to step ❺, otherwise go directly to step ❻.

⑤ Troubleshoot (only if step ④ failed)
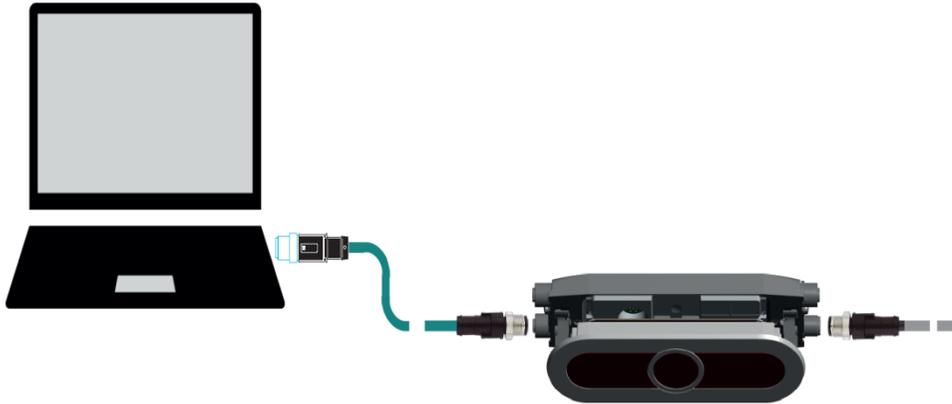
(1.) Connect the PC directly to the IRMA 6 sensor with the provided *M12-RJ45 adapter cable*.

(2.) Setup manually your PC's network adapter IPv4 settings as shown above. They can be accessed by going to NETWORK AND SHARING CENTER > CHANGE ADAPTER SETTINGS, and then edit your network card's settings as explained on this page.

⑥ Open the IRMA 6 sensor's web interface
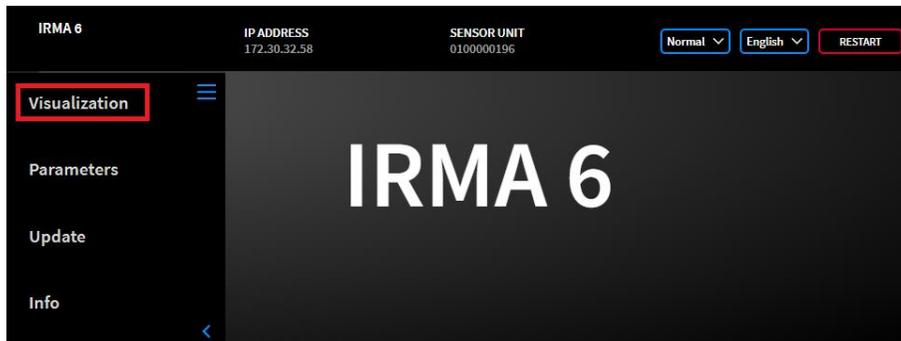
(1.) Enter in your internet browser the IP address recorded at step ④.
If you followed step ⑤, enter *192.168.240.254* instead. (2.) Click on VISUALIZATION.
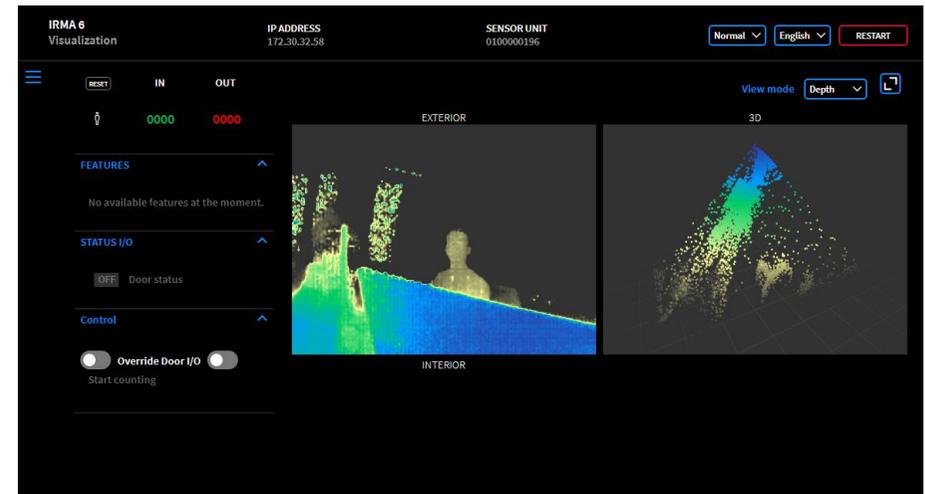
(3.) Congratulations, your IRMA 6 is now ready-to-use.

3   Playing around with the Quick Integration Protocol

❶ Tell the IRMA 6 sensor to start counting

(1.) Enter in your internet browser the url **http://:9000/qip/apc/start** where <sensor-ip> is the address you wrote down at step ❹ or ❺.This will tell the IRMA 6 sensor to start counting.

```xml
<StartResponseDelivery version="1.0">
        <RequestResponse>
                <Accepted>true</Accepted>
                <AcceptedAtTime>2012-12-13T12:11:06<AcceptedAtTime/>
                <InfoMessage>Sensor 1 starts processing</InfoMessage>
        <RequestResponse>
<StartResponseDelivery>
```

(2.) In your internet browser you should get following XML answer. This tells you that the IRMA 6 sensor accepted the activation request and will start counting.
(3.) If you can, hang the IRMA 6 sensor at your door entrance, exit and enter the room a few times to allow the IRMA 6 sensor to generate counting data.

❷ Tell the IRMA 6 sensor to stop counting

(1.) Enter in your internet browser the url **http://:9000/qip/apc/stop** where <sensor-ip> is the address you wrote down at step ❹ or ❺.This will tell the IRMA 6 sensor to stop counting.

```xml
<StopResponseDelivery version="1.0">
        <RequestResponse>
                <Accepted>true</Accepted>
                <AcceptedAtTime>2012-12-13T12:13:23<AcceptedAtTime/>
                <InfoMessage>Sensor 1 stops processing in 2 seconds</InfoMessage>
        <RequestResponse>
<StopResponseDelivery>
```

(2.) In your internet browser you should get following XML answer. This tells you that the IRMA 6 sensor accepted the deactivation request and will stop counting shortly.

❸ Read the counting results

(1.) Enter in your internet browser the url **http://<sensor-ip>:9000/qip/apc/passengerdoorcount** where <sensor-ip> is the address you wrote down at step ❹ or ❺.

```xml
<PassengerDoorCountDelivery version="1.0">
        <PassengerDoorCount>
                <RecordedAtTime>2012-12-13T12:15:04</RecordedAtTime>
                <VehicleNumber>WCBD42ZZ1KV428623</VehicleNumber>
                <DoorId>1</DoorId>

                <PassengerCounting>
                        <ObjectClass>Adult</ObjectClass>
                        <DoorPassengerIn>2</DoorPassengerIn>
                        <DoorPassengerOut>1</Direction>
                </PassengerCounting>

                <PassengerCounting>
                        <ObjectClass>Child</ObjectClass>
                        <DoorPassengerIn>1</DoorPassengerIn>
                        <DoorPassengerOut>1</DoorPassengerOut >
                </PassengerCounting>

                <PassengerCounting>
                        <ObjectClass>Wheelchair</ObjectClass>
                        <DoorPassengerIn>1</DoorPassengerIn>
                        <DoorPassengerOut>0</DoorPassengerOut>
                </PassengerCounting>
        </PassengerDoorCount>
</PassengerDoorCountDelivery>
```

(2.) In your internet browser you should get a similar XML answer as above, containing the counting data that you just generated.

❹ Going further

You now have a pretty good overview of the IRMA 6's functioning. To learn more about the software integration, check out our **Quick Integration Manual.**