

First Steps with Philips® Hue Motion Sensors driver for Control4®

Overview

The Philips Hue system is a very popular smart lighting system. At Unilogiq we also fell in love with this system and are using it quite intensively. So you can imagine that we are also very curious when Philips released a motion sensor for its system. We were so delighted about the functionality by not only offering motion detection, but also temperature and light intensity readings that we decided to include this functionality into the Control4® system.

With our driver you can connect your Control4® system to a number of Philips® Hue Motion sensors. The integration features:

- Motion detection (contact open/closed)
- Temperature measurement (degrees Celsius or Fahrenheit in 0.1 steps)
- Light Intensity measurement (lux and intensity level 0..10)
- Programmable using events, variables and conditions
- Pair action with Hue Gateway
- Discover available sensors
- Occupancy timer
- Temperature offset for manual adjustment

The Control4® system provides a powerful and flexible programming capabilities.

With this driver different use-cases can be implemented, for example

- Switching on your fan when it is warm and somebody is entering the room
- Switching off your towel heating rail when no motion is detected (anymore)

These use-case and some more are explained in very detail further down.

Who should read?

While it is not particular difficult to create new scenarios in Control4® you should have some gained exposure on how to work with drivers, how to connect outlets etc. In any case we try to give you as much information as possible to make use of Philips Hue motion together with your Control4® system.

Prerequisites

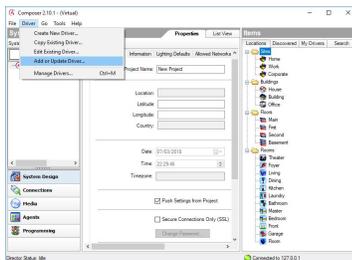
What do I need to use the Philips® Hue Motion Sensors driver?

- Control4® system (sold separately)
A Control4® OS 2.10 or higher.
- Philips® Hue Motion Sensors (sold separately)
By adding a Philips Hue motion sensor to the Philips Hue system Philips® Hue Lights can be controlled automatically. The sensor is battery powered and completely wireless. So it is up to you where you would like to place it. NOTE: For operation the Hue Motion sensors requires a Philips Hue bridge. For an installation of the Hue Motion sensors at least one Hue light must be registered to your Philips Hue system (can be removed after installation).
- Our Philips® Hue Motion Sensors and Gateway driver with activation key.
With the Hue Motion Sensor driver you are able to make use of the motion detection capabilities for your Control4® system. If you haven't got one yet, go and download your driver from our [store](#) with a free 72 hours trial license.
- Optional: TP-Link® HS100, HS105 or HS110 (sold separately)
The TP-Link® [HS100](#), [HS105](#) and [HS110](#) (sold separately) are smart plugs, which you can control via WiFi and that reports energy consumption (only HS110). They can handle a load of up to 3,6 kW (may vary in different countries) and are therefore ideal for a lot of different application scenarios. Some of the use case described below make use of HS1xx functionality, when switching on or off certain certain electrical load.

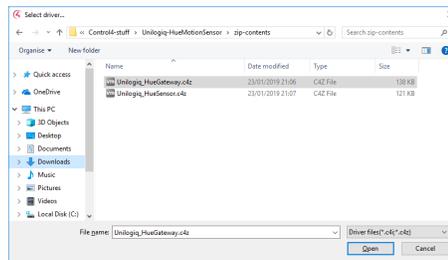
Installation

In order to integrate you Philips® Hue Motion sensor into your Control4® system here is a summary on the steps to follow:

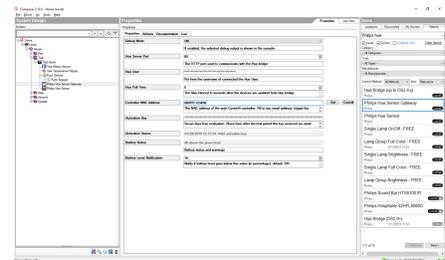
1. **Confirm** that the Philips® Hue Motion Sensor is registered to the Philips Hue Bridge and remove its eventual programming from the Hue App on your phone.
2. **Install** the Philips® Hue Motion Sensor driver from Unilogiq
 - a. Download the latest version of the driver from <https://www.unilogiq.com/control4-drivers>. You should have downloaded and unzipped a file named `Unilogiq-HueMotionSensor.zip`
 - b. Install both the Sensor and Gateway driver into the Control4® Composer via Driver→Add or Update Driver...→Browse
 - c. In the right pane under items tab, the drivers should be visible (search for hue)
 - d. Drag and drop the Gateway driver to the installation room



Install the Hue Sensor Drivers



Install both Hue drivers file from the downloaded zip file



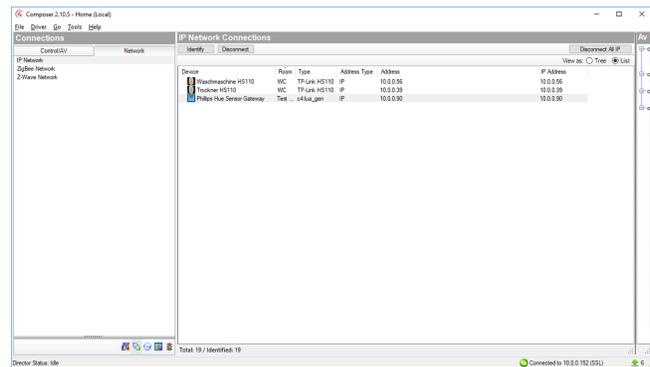
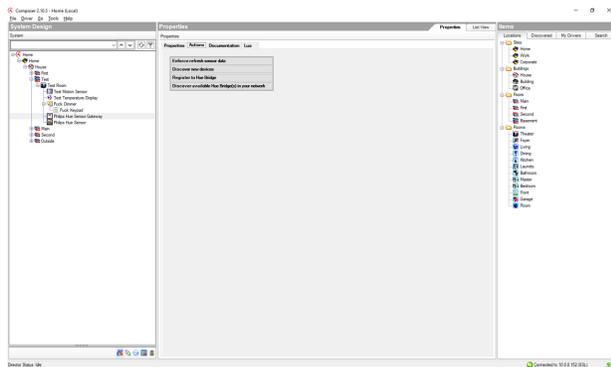
Add the Hue Sensor Gateway Driver and one Hue Sensor to your project

3. **License** the Philips Hue Motion Sensor Gateway driver
 - a. Activate the license for the driver
 An activation key is required to run this driver. After installation the driver works as a trial version without limitations for 7 days. If you would like to use the driver after this period, you need to purchase an activation key from our web site <https://www.unilogiq.com/en/control4-drivers>. Please put the received key into the Property named 'Activation Key' of the Hue Sensor Gateway Driver and then click on Set. After 1 second the Property named 'Activation Status' should update saying 'Valid activation key'.

1. **Configure** the driver to work with your Control4® system
 - a. detect the IP address of the Hue Bridge you would like to include. The easiest way to do this is to trigger the action “Detect Hue bridge(s) in your network” and the first one found is configured under connections tab, network. This

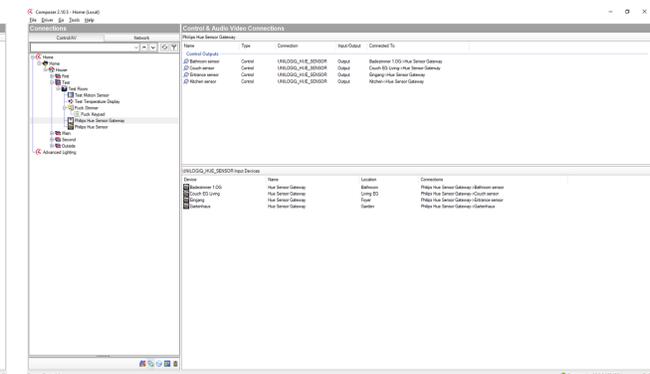
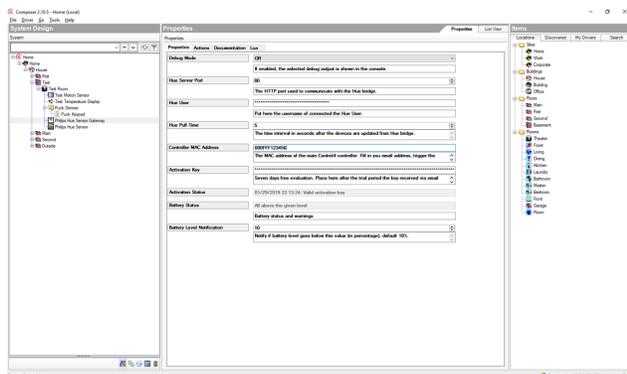
value is visible in Composer after a refresh (File→Refresh). The list of detected hue gateways is shown in the Lua Output Tab. If this list is empty, probably you did not register the Hue Bridge with the internet. Please take a look at your router, and see which IP address has been provided to the Hue Bridge. If possible we strongly recommend to provide always the same IP address to the Hue Bridge. [NOTE: If the IP address of a Hue Bridge changes it can not be controlled anymore, without manual correction of the IP address in the Control4® system.] As an alternative use a network spy tool to determine the IP address.

- b. set the IP address of the Hue Bridge in the network area (under the Connections Tab of the Control4® Composer, select Network Tab), if not already done



Register Hue Bridge action

- a. press the Hue Bridge button
- b. within the next 30 seconds, perform “Register Hue Bridge” driver action. The Hue User property should be populated within seconds (it’s value is hidden for security reasons)



Sensor Gateway: Hue User is populated automatically

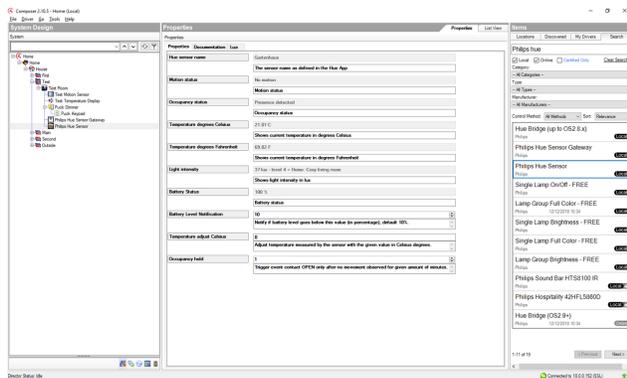
Sensor Gateway: Connections show all Hue Sensors

c. after the Hue Bridge was registered, all Philips Hue Motion Sensors are detected automatically and shown in the connections panel. New sensors are detected automatically on the next reading or can be scanned manually by performing the “Discover new devices” action.

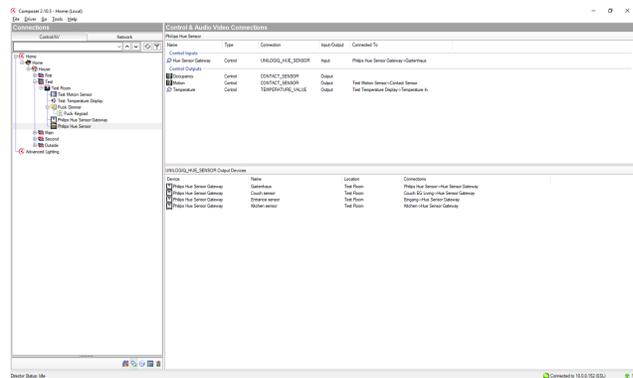
Basically you have now enabled your Control4® system to interact with the Hue motion sensors. Next step is to wire the motion sensors to the desired functionality.

5. Use or control the Hue Motion Sensor

- Add for each physical Hue Sensor a corresponding Hue Motion Sensor driver (not the Gateway driver) using drag and drop.

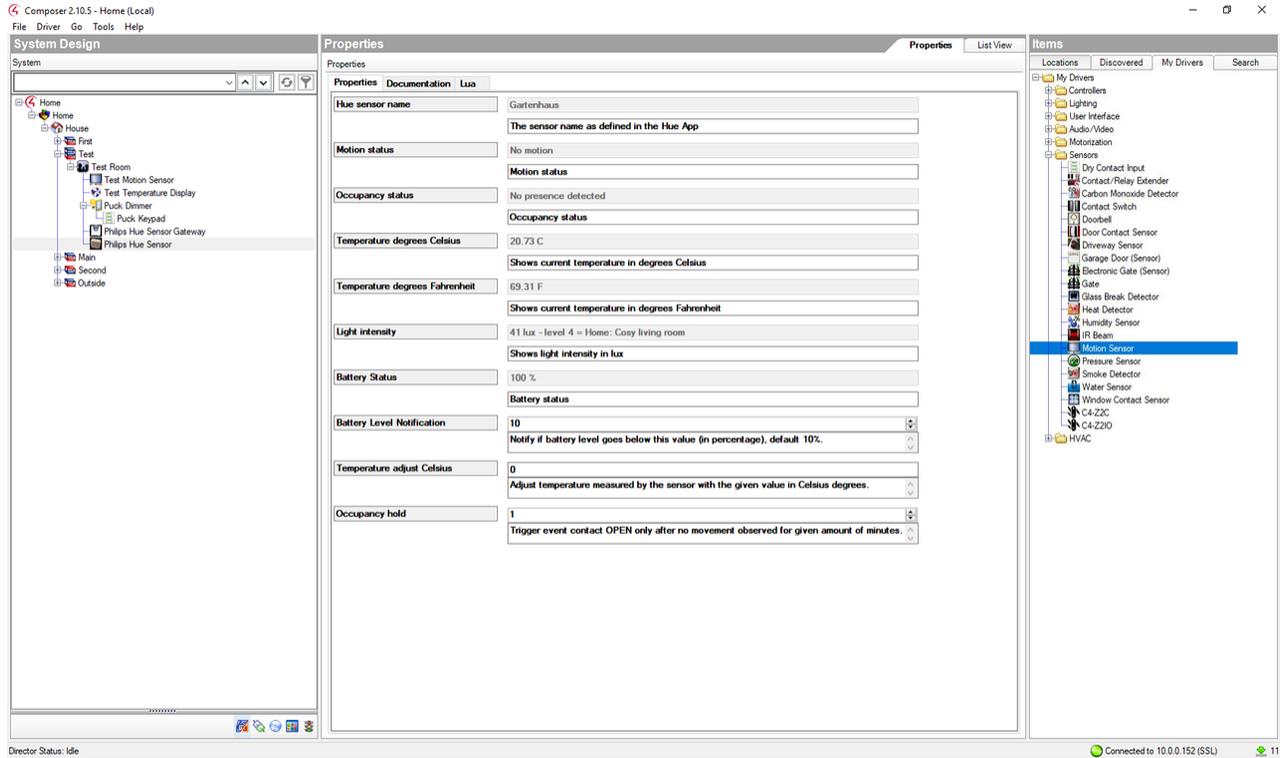


Sensor: The sensor data is shown in the properties



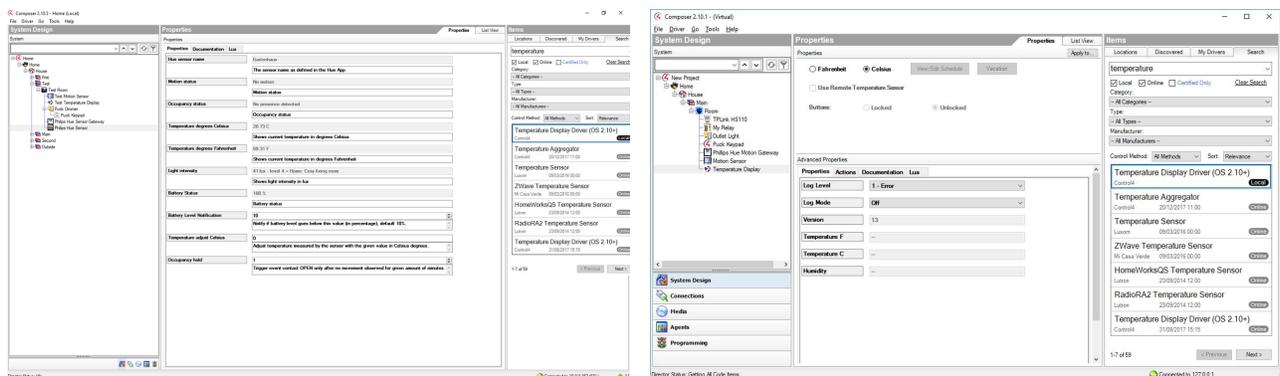
Sensor: Connect to the Hue Sensor Gateway Driver

- Connect the Hue Motion Sensor driver to the desired output of the Hue Motion Sensor Gateway driver
- Go to **My Drivers** and add one virtual motion sensor driver for each Hue sensor and connect it's contact inputs to the appropriate Motion Hue Sensor Output



Add Control4 Virtual Motion Sensor Driver if needed to be shown in GUI

- Optionally you can use the property named "Temperature adjust Celsius" to adjust the temperature shown by the Hue Sensor by adding positive or negative value to the current value
- Connect the temperature output of the Philips® Hue Motion Sensor driver to the inputs of a virtual temperature display (from My Drivers select Temperature Display Driver OS 2.10+) or thermostat and select the desired temperature scale (Celsius or Fahrenheit)



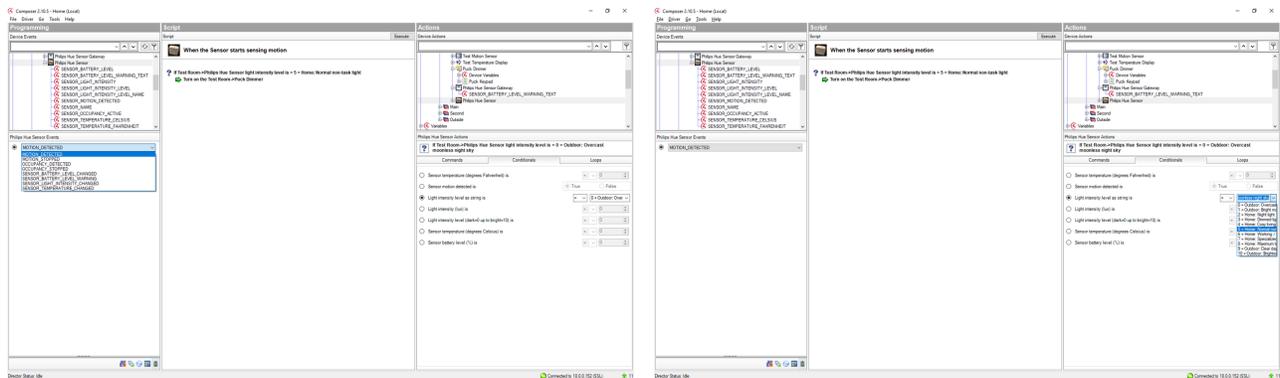
Add a temperature display driver

Configure the temperature display

- The Occupancy feature included in this driver allows to determine if an area is currently used or not. This feature can be used e.g. to turn off the lights if no motion was detected for a period of time. The sensor properties provide also the

possibilities to specify the amount of time after which the occupancy is released. By default after 3 minutes of inactivity the occupancy is released.

- The light intensity, temperature, motion, occupancy and battery level values can be also used in the programming by reacting on value change events and motion detection. The available conditions and variables can be used to test certain states.



Hue Sensor Events

Hue Sensor Conditions

Note that if your sensors are far away from the Philips Hue Bridge, the radio signal is weaker, thus the time until the movement was detected and the value was transmitted successfully might vary by 30 seconds and more. The Philips Hue Lightbulbs can act as relays in this cases due to the Zigbee Mesh properties.

Well, you have finished the integration of the motion sensors into your system. Now it is up to you to create the respective scenarios.

Use Cases

To get used on how to use the Philips® Hue Motion Sensor driver we will show you how some recurring use-case can be implemented.

Please note that in this section we might make assumptions on devices or functionalities that are already integrated and available via the Control4 system. By no means the requirement for certain devices in a particular use-case described here implies that this devices are mandatory to make use of the Philips Hue Motion Sensor via the the Unilogiq driver. The only purpose of this section is to illustrate the usage of the Unilogiq driver. Furthermore, all examples shown here are for educational

purposes only and designed to demonstrate on how you could use the Unilogiq driver. The examples shown here are by no means, neither explicitly nor implicitly intended to be used in a production environment. So read them, learn from them, and use them at your own risk.

Switching [your favourite device] on, under certain condition, when motion is detected

Tags: Philips Hue Motion Sensor, motion, lamp, fan, temperature, HS1xx

The idea

We believe that this one is one of the fundamental scenarios in any smart home installation. When you enter a room you would like a light to switch on. However, with the Philips Hue Motion Sensor we can make it smarter. For example: In the summer, when I enter a room I would like to switch on a fan, that is a connected to a smart wall plug, if the temperature in the room is more than 25 degree Celsius (77 degree Fahrenheit).

Required devices

To implement this use-case we will need

- Philips Hue motion sensor
- TP-Link HS1xx smart wall plug
- Occupancy driver to bundle multiple motions sensors (it is optionally needed for larger areas that can't be covered by a single motion sensor)

The logic

1. Detect motion in a room
2. Check whether the temperature in the room is above a certain threshold `TempMin`
3. If temperature is above `TempMin` switch on the fan that is plugged into a smart wall plug
4. Stop the fan either when the temperature is 5 degrees under `TempMin` or the room is not used (occupancy is released)

Switching [your favourite device] off when no motion is detected (anymore)

Tags: Philips Hue Motion Sensor, towel heating rail, HS1xx

The idea

Why waisting energy, when nobody is in the room to enjoy the warming heat of a heating rail. So in our bathroom, after we have switched on manually a towel heating rail, that is connected via a HS110 smart wall plug, we would like to switch off the heating rail if no motion is detected for more than 5 minutes.

Required devices

To implement this use-case we will need

- Philips Hue motion sensor
- TP-Link HS110 smart wall plug

The logic

1. Trigger turning on the wall-plug via Control4®
2. Start a timer of specified length
3. If motion is detected restart the timer
4. If the timer expires switch-off the wall plug

Licensing

An activation key is required to run this driver. We tried to cover the steps under **Installation**

While we try to keep things as simple as possible, there is always a chance that you might have some questions or problems.

If you encounter any issues with the license action, please send the 'Controller MAC Address' and the driver name to contact@unilogiq.com to receive an activation key.

Download the latest version of the driver from <https://www.unilogiq.com/control4-drivers>. Please make sure you upgraded to Control4® OS 2.10 or newer in order to use this driver.

Ressources

Unilogiq Control4 drivers - <https://www.unilogiq.com/en/control4-drivers>

Control4® - <https://www.control4.com>

Philips Hue® - <https://www.meethue.com>

TP-Link® WiFi Smart Plugs - https://www.tp-link.com/en/products/details/cat-5258_HS100.html

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Philips Hue® is a registered trade mark of Philips Corporation

TP-Link® is a registered trade mark of TP-Link Technologies Co., Ltd.

About Unilogiq



UnilogIQ provides the simplest solutions to complex customer needs. Our aim is to inspire others to bring simplicity to a world overloaded with information.

Working on diverse projects over the last 20 years, our team has gained expertise in a number of fields such as web and mobile applications, services, testing, etc.. We are happy to bring our experience and your ideas together and turn them into

successful projects.

The same approach we use to analyse customer needs, taking a step back and looking at them through children eyes, selecting only the important ones. Everything is possible! Together we will find the best way to implement your needs.

Contact

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Version: 1.0 - January 2019

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