

athom Human Presence Sensor Installation and Usage Guide



Version: 20240322
Date: Friday, March 22, 2024
Authors: Alan Chow

chowmainsoft

Contents

Overview.....	3
Features.....	4
Hardware Setup.....	5
Setup Driver.....	5
Automated Lighting.....	5
Lux Level Programming.....	6
Troubleshooting.....	7
FAQ.....	8
What are the Requirements for this driver?.....	8
Why is this product so exciting?.....	8
What hardware will this work on?.....	8
Are there any installation precautions?.....	8
What are the lux events and LUX_LEVEL variable used for?.....	8
How does automated lighting work?.....	9
Do you offer any other cool drivers?.....	9
I want to try this driver out before buying it?.....	9
Licensing.....	10
Creating a Project on Driver Central.....	10
Purchasing a Driver Licence.....	11
Install the driverCentral cloud driver.....	12
Install Chowmain driver.....	13
Developer Information.....	14
Support.....	15
Ticket / Live Chat Support.....	15
Phone Support.....	15
Driver Documentation.....	15
Change Log.....	16
Version 20240322 - 22-MAR-2024.....	16

Overview

The Athom Human Presence Sensor is a multifaceted device designed to enhance smart home automation systems by detecting human presence with high precision. It incorporates mmWave and PIR (Passive Infrared) technologies for detecting human presence, micro-motions, and overall human motion within a specified area. Furthermore the device incorporates a luminance sensor for lux level feedback. Combined this allows for a more nuanced and responsive approach to lighting automation, adjusting lighting conditions not just based on motion, but on the actual presence of individuals in a space and based on current lighting conditions.

Features

- IP Control
- Auto install / Binding of official Control4 Motion Sensor driver for following sensors
 - PIR
 - mmWave
 - Occupancy
- Light/Lux Level feedback
- Events for
 - Lux below minimum specified value
 - Lux above maximum specified value
 - mmWave Sensor Sense Motion
 - mmWave Sensor Stops Sense Motion
 - Occupancy Sensor Sense Motion
 - Occupancy Sensor Stops Sense Motion
 - PIR Sensor Sense Motion
 - PIR Sensor Stops Sense Motion
- Automated lighting through driver
 - Selection of 1 or more lights through driver
 - Ability to set brightness and fade times
 - Ability to select which sensors to utilise for automated lighting
 - If any of the monitored sensor is detecting it will turn on lights
 - If all of the monitored sensors are not detecting it will turn the lights off after a designed period of time.
 - Ability to automate lighting based on lux level
 - Ability to enable / disable through programming

Hardware Setup

- Please make sure you have purchased the [ESPHome version of the hardware](#).
- Once you have plugged in the device, please connect to the wifi access point of the device and set it up to your wifi network.
- The driver requires a static ip address. You will need to reserve an IP address for the device on your router / DHCP server.
- Placement of the device is important. Please refer to the athom installation guide for reference.
- You may need to adjust the settings via the products web interface. athome support has provided the following information. mmWave Subdivision Sensitivity and Trigger Sensitivity: Trigger sensitivity refers to the ease of triggering the sensor when entering the sensing area; maintenance sensitivity refers to the sensitivity level at which the sensor continuously detects the target after being triggered. Both trigger and maintenance sensitivities have 10 levels, with higher numbers indicating higher sensitivity and lower numbers indicating lower sensitivity. 9 is the most sensitive level, and the default sensitivity value of the module is 7. Usually, only the farthest detection, fading time, and maintenance sensitivity need to be adjusted. Followed by the value range and default value
- Also note that mmWave radar will travel through walls. As such you will need to be aware of placement and also sensitivity settings.

Setup Driver

Please make sure you follow the Hardware and Firmware Setup steps outlined above before proceeding

IMPORTANT - Perform Licencing Steps as outlined first

1. Click on System Design
2. Click on the Search tab on the right hand side
3. Select Local filter only (disable online and certified). This will make it easier to find the correct driver.
4. Type in athome
5. Double click on the athome Human Presence Sensor driver to add it to your project
6. Highlight the 'athome Human Presence Sensor' driver.
7. Type in the IP address of the sensor (note you must have the device on a reserved IP address)
8. Click on File, Refresh Navigator.

Automated Lighting

This driver supports automated lighting with no additional programming. This can be set up through the driver's properties page.

- **Enable Automated Lighting** - Set to Enabled if you wish to use this feature
- **Automated Lighting Sensors** - This will determine which sensors to utilise for your automated lighting. The default of 'Occupancy and PIR' is our recommendation and works the best from our testing.

- **Automate Lights Rules** - This allows you to set the lights to trigger all the time, if lux levels are below the 'Lux Minimum' value or below the 'Lux Maximum' level.
- **Lights Triggered** - This determines which lights should be controlled
- **Fade Time** - This is the fade time for on and fade time for off
- **Brightness** - This is the brightness for when the lights are turned on
- **Auto Off after (Seconds)** - If all sensors selected in the 'Automated Lighting Sensors' property are not sensing then the lights will turn off after this amount of time. If during this time any of the sensors are triggered it will cancel.

Lux Level Programming

The driver exposes the Lux levels for programming via a LUX_LEVEL variable and also Lux Minimum and Lux Maximum property.

- You can set the minimum and maximum lux events in programming
- If the current lux level goes below the value set in 'Lux Minimum' it will fire the 'Lux below minimum specified value'
- If the current lux level goes above the value set in 'Lux Maximum' it will fire the 'Lux above maximum specified value'
- The LUX_LEVEL variable is exposed so you can program against the current lux level detected in that location.
- This is useful for programming shading, lighting and other automation tasks that require light level feedback.

Troubleshooting

- Please make sure you have purchased the [ESPHome version of the hardware](#).
- Please make sure you have set the device up on a reserved IP address as this driver does not provide auto discovery
- Placement of the device is important. Please refer to the athom installation guide for reference.
- You may need to adjust the settings via the products web interface. athome support has provided the following information. mmWave Subdivision Sensitivity and Trigger Sensitivity: Trigger sensitivity refers to the ease of triggering the sensor when entering the sensing area; maintenance sensitivity refers to the sensitivity level at which the sensor continuously detects the target after being triggered. Both trigger and maintenance sensitivities have 10 levels, with higher numbers indicating higher sensitivity and lower numbers indicating lower sensitivity. 9 is the most sensitive level, and the default sensitivity value of the module is 7. Usually, only the farthest detection, fading time, and maintenance sensitivity need to be adjusted. Followed by the value range and default value
- Also note that mmWave radar will travel through walls. As such you will need to be aware of placement and also sensitivity settings.

FAQ

What are the Requirements for this driver?

- Control4 OS 3.3.2
- Control4 HC-XXX Series controllers are not supported

Why is this product so exciting?

Traditionally you would utilise a PIR based motion sensor. This is not effective when monitoring spaces with stationary individuals, such as those seated for extended periods. With the athom Human Presence Sensor you combine multiple sensors for occupancy. The PIR sensor will trigger fast and the mmWave sensor will determine presence even when stationary. Combined this provides an speedy, yet accurate method of determining if a room is occupied. Add to this a lux level sensor and we have everything we need for automating lighting and shades in a single device.

What hardware will this work on?

This driver is designed for the [Athom Human Presence Sensor \(model PS01\) with ESPHome firmware](#).

It is a USB-C powered Wi-Fi device which can be purchased from US, Germany, Sydney or China with US, UK, EU or A power adapters. Please make sure you order the model with the [ESP Home firmware](#).

Are there any installation precautions?

athom recommends the following.

1. Choose a suitable installation location away from air conditioners, curtains, fans, plants, etc. to avoid interference.
2. Avoid direct beam irradiation on the ground, walls or doors to minimize reflections and indirect detections.
3. Configure appropriate detection distance, sensitivity and delay time to reduce interference from objects.
4. Keep the sensor surface clean and free from dust and obstacles.
5. Ensure the sensor has enough space around it for proper air circulation.

Also note that mmWave radar will travel through walls. As such you will need to be aware of placement and also sensitivity settings.

What are the lux events and LUX_LEVEL variable used for?

- You can set the minimum and maximum lux events in programming
- If the current lux level goes below the value set in 'Lux Minimum' it will fire the 'Lux below minimum specified value'

- If the current lux level goes above the value set in 'Lux Maximum' it will fire the 'Lux above maximum specified value'
- The LUX_LEVEL variable is exposed so you can program against the current lux level detected in that location.
- This is useful for programming shading, lighting and other automation tasks that require light level feedback.

How does automated lighting work?

- The driver has built in automated lighting functionality. This can be set up in the driver's programming without any custom programming.
- You can choose which sensors to utilise in the logic. If you choose more than one then the automated lighting will trigger if any one of the sensors is triggered. We recommend leaving it on the default of 'Occupancy and PIR'
- If you wish to take lux levels (eg light from windows) into account then set the 'Automated Lights Rules'. You can choose between the Lux Minimum and Lux Maximum. For both it will trigger if the levels are below the values
- You can choose which lights to trigger using the 'Lights Triggered' selection.
- Fade Time and Brightness will set the fade time for on and off and the brightness for on.
- Auto Off After (Seconds) is used to set the period the driver turns the lights off after all sensors selected in the 'Automated Lighting Sensors' are not detecting simultaneously. If any one of the sensors triggers during this period it will cancel.

Do you offer any other cool drivers?

Control4 is a major part of our business. We develop new drivers all the time. You can see all of our drivers on our website (<https://chowmain.software>). Sign up to our newsletter to get notified when new drivers are released.

I want to try this driver out before buying it?

- All Chowmain drivers for Control4 come with a 90 day trial.

Licensing

- How does the trial period work?

All Chowmain drivers are free to use for a set trial period. When the trial expires the driver will cease to function until you purchase a licence and apply it to the driverCentral project.

- Where do I buy a Licence from?

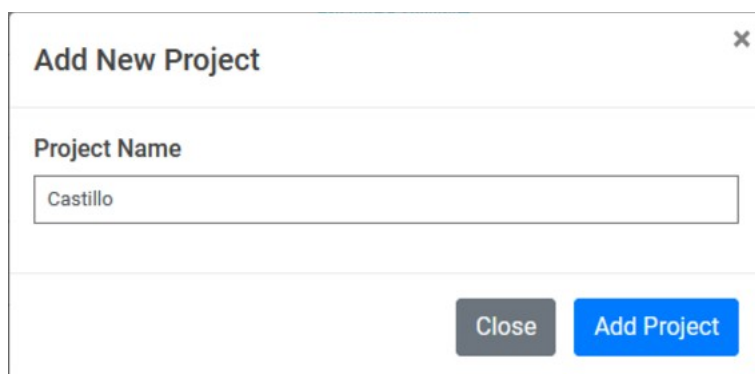
This driver is developed by Chowmain software & Apps and is distributed by driverCentral, Inc
<https://www.drivercentral.io/chowmain-ltd>

To purchase a driver:

1. On driverCentral, purchase a license and register it to your project
2. If the driver is not already installed in your project, download it and install it
3. If necessary, use the cloud driver's Action: "Check Drivers" to force the licence to download into the project

Creating a Project on Driver Central

1. Visit <http://www.drivercentral.io>
2. Log into your driver Central dealer account
3. Click **Portal**
4. Click **New Project**
5. Enter the project name



The screenshot shows a modal dialog box titled "Add New Project". Inside the dialog, there is a label "Project Name" above a text input field. The input field contains the text "Castillo". At the bottom right of the dialog, there are two buttons: a grey "Close" button and a blue "Add Project" button.

6. Click **Add Project**
7. Click on the project we just created

Project	Status	Created
 Castillo	Unassigned Project	1999-12-31 23:59:56

- Take note of the **Project Token** as this will be used later when we install the Cloud Driver

Castillo 

Project Token: ABCDEFG012

MAC: 000FFF123456

IP: 1.2.3.456

Connection Status: Offline

Last Seen:

Actions:   

There are no drivers attached to this project.

Close

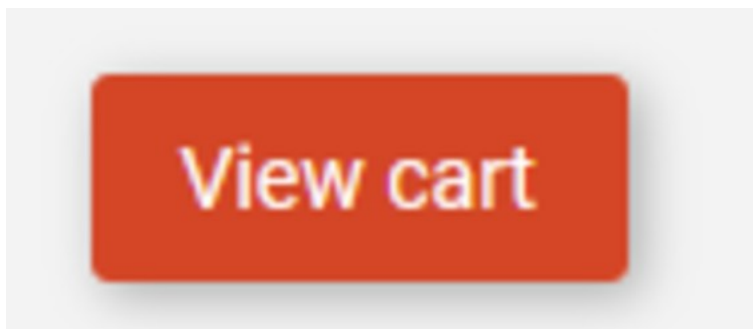
- Click **Close**

Purchasing a Driver Licence

- Visit <https://www.drivercentral.io/chowmain-ltd/> and find the product/driver you want to purchase a licence for
- Click on **Add to Cart**

ADD TO CART

- Now click the shopping cart icon (top right) and click **View cart**



- Confirm that your order is correct and click on **Proceed to checkout**

Proceed to checkout

- Choose your payment option, provide the relevant details and click **Place order**

Checkout

Paypal
Paypal, or Credit Card...

Credit Card
Visa, Mastercard, etc...

☐ Select this check box to accept the [Terms and Conditions](#)

☐ Subscribe to our newsletter

Place order (\$190.00)

6. You will now be at a page where you can see your purchased licence

License Name	License Key	Project Assigned	Action
[Redacted License Information]			Assign to Project

7. From here assign the licence to the project we created or if you did not follow that step create a new project

License Assignment for 221

Assign License to Existing Project

Select Existing Project:

New Project (enter project name below) ▼

Or...

Create a new project

Enter New Project Name

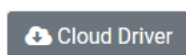
Enter email for Installer Notifi

Are you sure you want to do this?

Assign License to Project?

Install the driverCentral cloud driver

1. Visit <http://www.drivercentral.io>
2. Log into your driver Central dealer account
3. Click **Portal**
4. Click **Cloud Driver**



5. Copy the C4Z driver to My Documents\Control4\Drivers directory
6. Add the driver to your project
7. Click on the driver to view it's properties

Cloud Status	Please enter cloud project token below...
Project Information	(1) Total, (0) Licensed, (0) Trials, (1) Expired, (0) Updates.
Driver Version	1001
Project Token	
	Project token from driverCentral.io project portal
Driver Actions	v
Debug Mode	Off v

8. Type in the project token we took note of earlier
9. Click **Actions** tab
10. Click **Check Drivers**

Install Chowmain driver

1. Install the Chowmain driver
2. You will notice that the Activation Status reflects a Licence Activated state
3. Any driver that does not have a purchased licence will have a trial licence activated via the marketplace
Note that there is no way to reactivate the trial so please use wisely
4. If you do not then press the Check Drivers action in the driverCentral Cloud driver again

Activation Status	Update Available!!! License Activated
Driver Version	1002
Driver Information	Navigate to connections tab and make serial binding
Automatic Updates	Off v

Developer Information



Copyright © 2024 Chowmain Ltd. <http://www.chowmainsoft.com>

All information contained herein is, and remains the property of Chowmain Ltd and its suppliers, if any. The intellectual and technical concepts contained herein are proprietary to Chowmain Ltd and its suppliers and may be covered by U.S. and Foreign Patents, patents in process, and are protected by trade secret or copyright law. Dissemination of this information or reproduction of this material is strictly forbidden unless prior written permission is obtained from Chowmain Ltd.

Information stated in this document is current as of July 2020 and may change. For latest information please visit <http://www.chowmainsoft.com>

Support

Ticket / Live Chat Support

We provide ticket based support and live chat support for those who can't contact us via phone. Click the button below to visit our online helpdesk.

Support Centre	Hours of Operation	URL
American Support Desk	8:30AM – 4:30PM Mountain Time	https://help.drivercentral.io/

Phone Support

Support Center	Hours of Operation	Phone Number
Australian Support Desk	6:30AM – 5:30PM Australian Eastern Time	+61 3 9028 6999

Driver Documentation

All of our drivers come with detailed instructions on how to install and configure the driver for use in different projects. Please refer to the documentation included with the driver you downloaded, or [contact us](#) if you are unable to locate the documentation for your driver.

Change Log

Version 20240322 - 22-MAR-2024

- Initial release