



## **IntesisBox Driver**

# Installation and Usage Guide

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## Contents

Overview .....	3
Driver Features.....	3
Change Log.....	4
Disclaimer.....	4
IntesisBox Compatibility .....	4
IntesisBox Purchase .....	4
Hardware Installation .....	4
Hardware Configuration .....	5
Driver Installation.....	8
Adding the driver to your project .....	9
Usage.....	12
Temperature .....	12
Presets.....	13
Errors.....	14
Schedule.....	15
More.....	16
Licencing.....	17
Summary .....	17
STEP 1 - Creating your project on driverCentral .....	17
STEP 2 –Purchase driver licence .....	19
STEP 3 – Install and activate the driverCentral cloud driver.....	20
STEP 4 – Install Chowmain driver.....	21

## Overview

Normally HVAC installations in the United States are easy due to the fact that the majority of thermostats utilise a universal standard and as such can be replaced easily by a 3<sup>rd</sup> party thermostat such as Control4's thermostat.

Unfortunately HVAC manufacturers outside of the United States do not always utilise this standard and some countries like Australia and New Zealand have proprietary RS485 based bus's that are specific to the HVAC manufacturer and model. This makes it extremely cumbersome for Control4 dealers to source a reliable HVAC product and in many countries Control4 dealers do not even bother with HVAC integration because it is just too hard.

Luckily Intesis have released their range of IntesisBox wifi gateways. The IntesisBox allows you to easily integrate HVAC systems into Control4 by retrofitting the IntesisBox gateway into the existing indoor unit. Intesis offer two gateway types.

Specific IntesisBox's are developed to communicate with the HVAC manufacturer's proprietary communications protocol allowing for true real time bidirectional communication with the system.

Universal IntesisBox's are developed to offer compatibility with thousands of HVAC models through infra red and offer room temperature feedback via a sensor in the IntesisBox.

Chowmain's IntesisBox driver for Control4 will work with all models of IntesisBox and will provide full two way control/feedback.

## Driver Features

- Automatic discovery of Intesisbox based on unit MAC address
- Self healing - if IP address changes the driver will automatically rediscover the unit.
- Auto configuration of available of HVAC Modes from IntesisBox.
- Auto configuration of available of Fan Speeds from IntesisBox.
- Auto configuration of set point limits (minimum and maximum)
- Auto configuration of available vane positions
- Temperature Feedback
- Setpoint Control
- Up/Down/Left/Right Vane position control
- Built in Scheduling
- Built in Presets
- HVAC System Error detection and feedback (only on non universal IntesisBox's)
- Support for multiple AC units (this will work on future IntesisBox hardware – Current version only supports single indoor units).

## Change Log

**Version #20170324 - 24-MAR-2017**

- Initial Release

## Disclaimer

This driver is designed to be used with the IntesisBox. Chowmain Ltd is not responsible if the IntesisBox is not compatible with the HVAC system installed. It is your responsibility to ensure that the module is installed and is working correctly prior to setup of the Chowmain driver.

## IntesisBox Compatibility

IntesisBox is compatible with a range of HVAC systems. Please see the intesis website to check if the HVAC system you want to integrate has a specific IntesisBox or is compatible with the universal IntesisBox.

<https://www.intesisbox.com/en/compatibilities/>

If this information is not enough to assist you please contact intesis support ([support@intesis.com](mailto:support@intesis.com)) and they will assist you with finding a compatible IntesisBox.



## IntesisBox Purchase

Intesis sells the IntesisBox in over 90 countries. They mainly sell direct. The product has regulatory compliance for Europe, US, Canada and Australia. If you have any sales enquiries please contact Intesis Sales.

[sales@intesis.com](mailto:sales@intesis.com)

## Hardware Installation

Prior to installing the driver please make sure you follow the IntesisBox installation guide and have the hardware installed, joined upto the wifi network and that the IntesisBox is setup for the HVAC system. Intesis includes documentation with the hardware when this is shipped and is also included on their website.

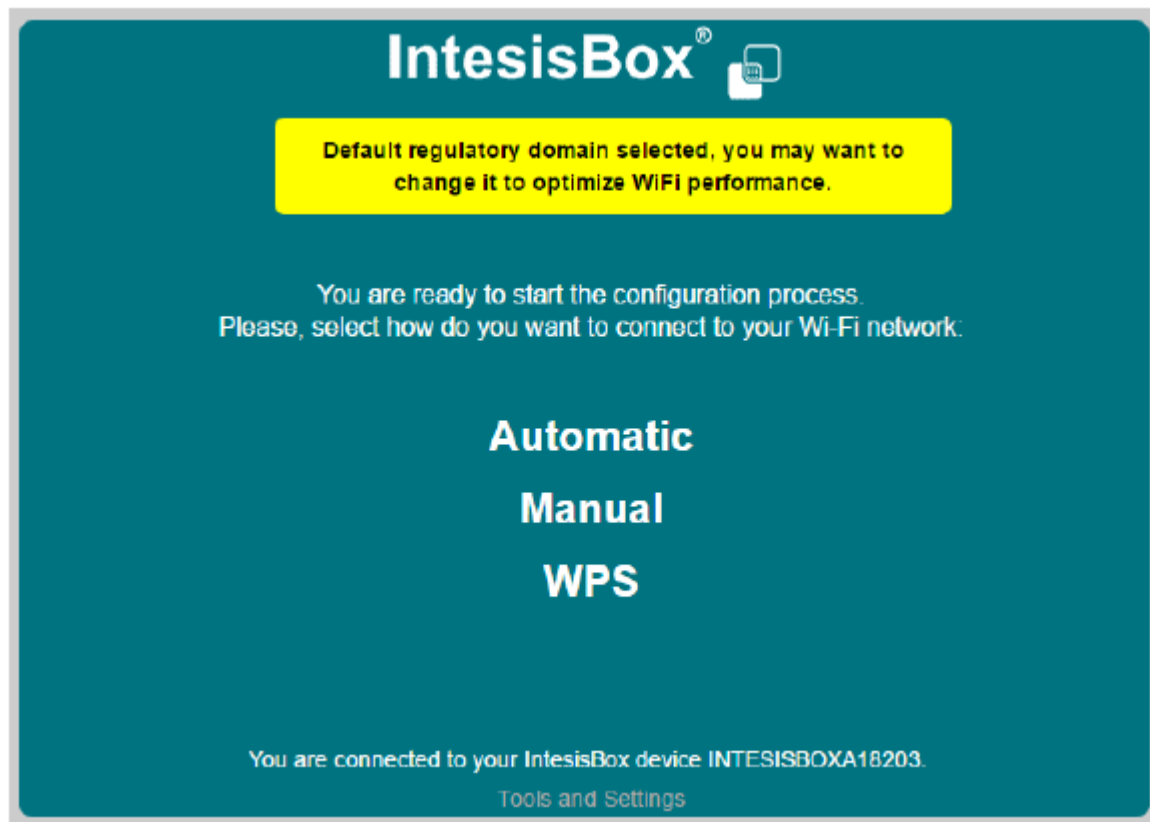
For any hardware installation technical support please contact Intesis.

[support@intesis.com](mailto:support@intesis.com)

## Hardware Configuration

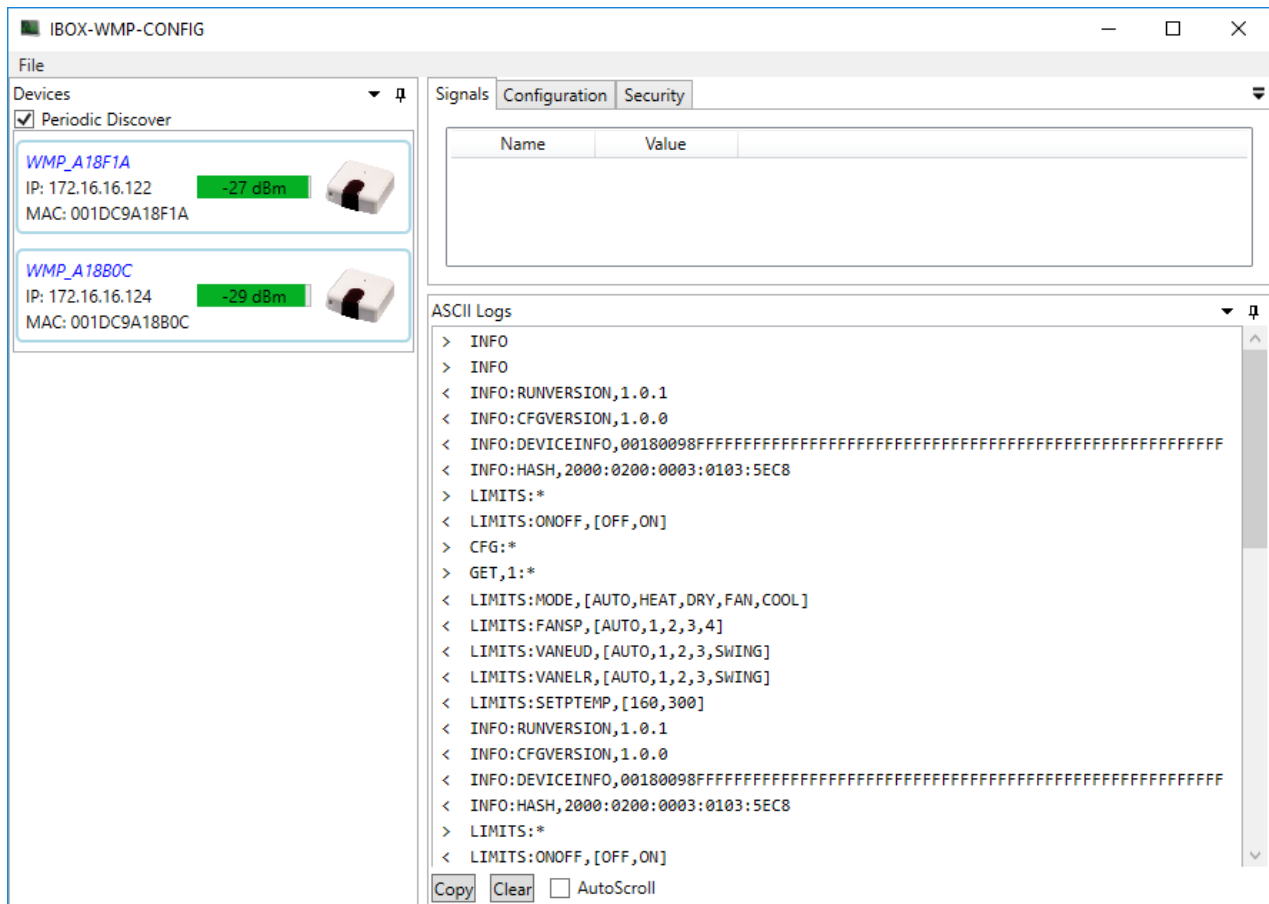
Intesis provide documentation that goes through the hardware configuration. It is recommended that you follow that documentation however we have also provided a summary below for your reference.

1. After the hardware is physical mounted and powered the IntesisBox will be visible as a wifi network with the SSID name '**INTESISBOX-----**' where the last letters are the last 6 characters of your MAC address.
2. Connect to this wifi access point using your PC or mobile device.
3. Once connected go to the following webpage **wmpconfig.com** or **192.168.1.1**
4. It will now prompt you to setup the device to connect to your wifi network.

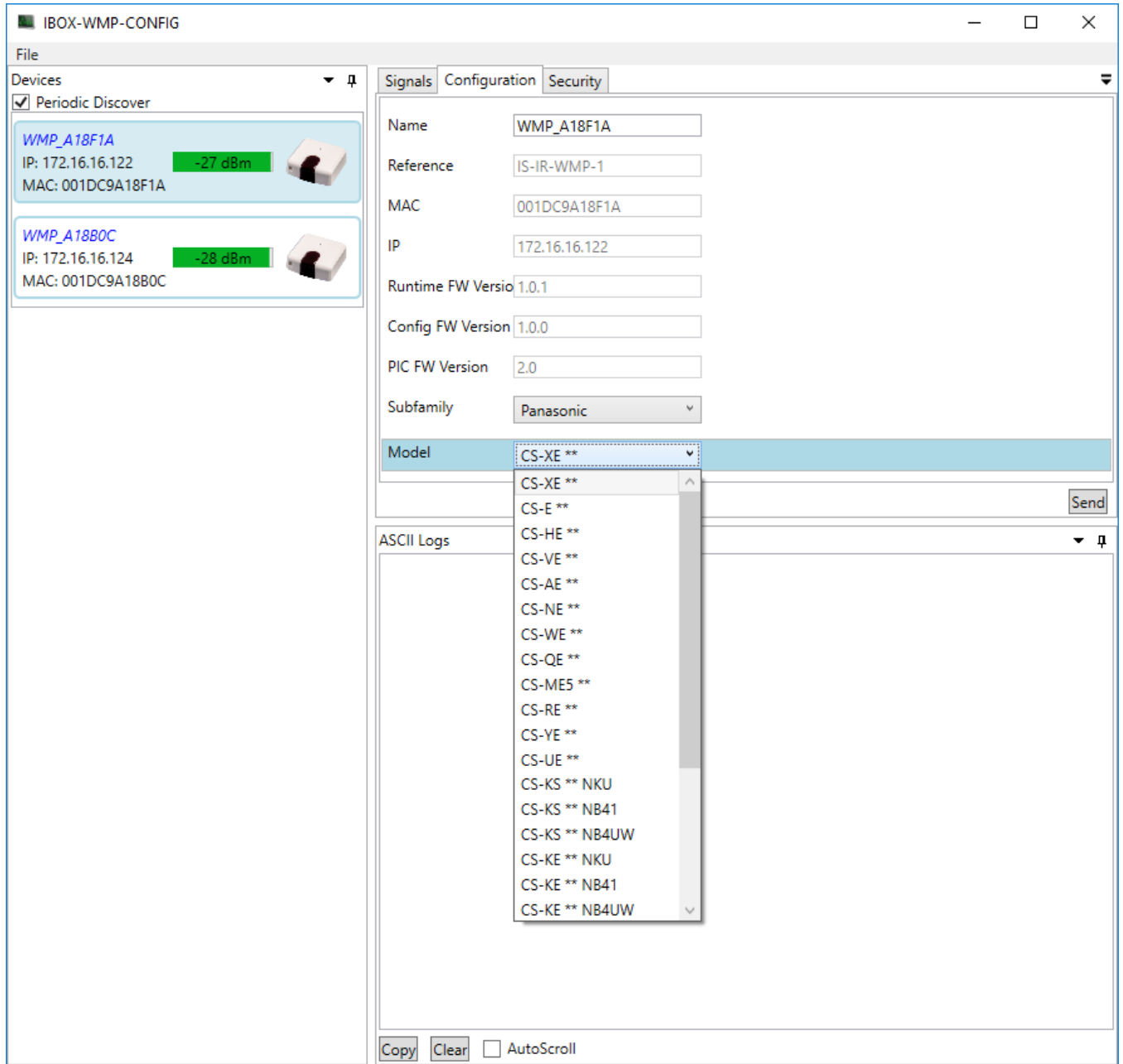


5. Automatic allows you to scan for available wifi access points and choose the SSID. Manual allows you to type in the SSID manually (useful for hidden SSIDs) and WPS is useful to join access points that support WPS.
6. During configuration you can also set the device to static IP or DHCP. The driver will work with DHCP and if the IP address changes the driver will self heal.

7. Once connected to your network please run the IBOX-WMP windows configuration tool (available from Intesis).
8. It will scan your network and find IntesisBox devices on the network. Click on the device you want to configure
9. If there is a new firmware this tool will advise you of this and will automatically update the IntesisBox to the latest firmware upon initial connection.



10. If you are using the universal IntesisBox then click on configuration will also allow you to configure the universal IntesisBox for your specific HVAC system.
11. Select the Subfamily (manufacturer) and the Model of the system you are controlling and click on Send



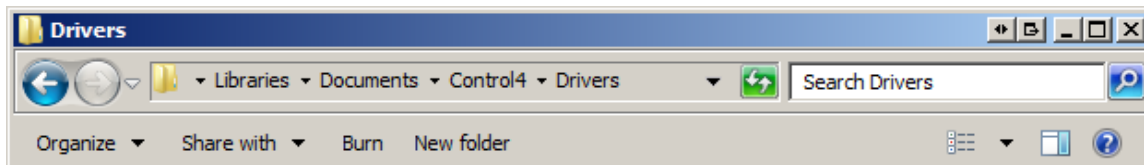
12. Congratulations you have finished configuring the IntesisBox. Now its time to setup the driver on Control4.

## Driver Installation

1. The driver you have downloaded will be in a zip file. Double click on this file to open it in your preferred zip program (WinZip, WinRar, etc.).



2. Extract the c4i file to the My Documents\Control4\Drivers directory. If you are using Windows 7 or 8 this will be extracted to the Libraries\Documents\Control4\Drivers directory.



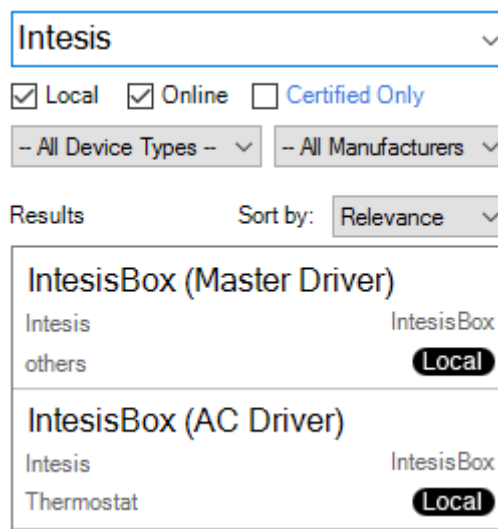
3. You are now ready to add and configure the driver via the Composer Pro software.



## Adding the driver to your project

**IMPORTANT** – Before undertaking the installation of the driver please follow the licencing steps outlined at the end of this document.

1. Launch the Composer Pro application and connect to your project
2. In the '**System Design**' page select the '**Search**' tab on the right hand side.
3. Type in '**Intesis**' in the search bar and press Enter on the keyboard



4. Double click on the '**IntesisBox (Master Driver)**' driver to add it to your project
5. Double click on the '**IntesisBox (AC Driver)**' driver to add it to your project
6. Highlight the '**IntesisBox (Master Driver)**' driver on the left hand side.
7. The driver will automatically discover your IntesisBox. If you have multiple IntesisBox devices on the network please enter in the **MAC address** for the box you want to control and **press set**.

**NOTE:** You do not need to setup the IntesisBox on a static IP address or DHCP reservation as the driver will automatically self heal should the IP address change.




8. The connection status for the device will now state connected and will update the properties.

CONNECTION STATUS	CONNECTED
MODEL	IS-IR-WMP-1
MAC	██████████
PIN	
IP	172.16.16.124
PROTOCOL	ASCII
FIRMWARE VERSION	v1.0.1
RSSI	-26 - Excellent

9. Highlight the Thermostat driver (Intesis AC Driver)

10. Verify that the fields have populated.

Last Status Update	Tue Mar 21 13:26:47 2017
Current Room Temperatur	31 Degrees Celcius
Current Mode	OFF
Current Setpoint	23 Degrees Celcius
Current Fanspeed	1
Current Up Down Vane P	AUTO
Current Left Right Vane F	AUTO
Debug Mode	Off 

11. If you have relays connected to Control4 to handle zone dampers you can also configure this through the driver.

12. Type in the name of each zone you have (if the zone name is empty it will not display).

Zone 1 Name	Living Room
-------------	-------------

13. If the relay is inverted set it up as inverted. Eg close is open and open is close

Zone 1 Invert Relay	False
---------------------	-------

14. The zone state will tell you if the zone is open or close

Zone 1 State	OPEN
--------------	------

15. Click on the Connections tab.




16. Highlight the Thermostat driver (Intesis AC Driver)

17. Bind each Zone to the relay output.

18. Highlight the 'IntesisBox (Master Driver)'.

19. Bind the AC driver we added earlier to the **Intesis AC Number** (currently only AC Number 1 is supported).

**NOTE:** Future IntesisBox models will support multiple indoor units. At the time of writing this driver the current hardware only supports a single indoor unit.

Name	Type	Connection	Input/Output	Connected To
<b>Control Outputs</b>				
 Intesis AC Number 1	Control	INTESIS_ACNUM	Output	
 Intesis AC Number 2	Control	INTESIS_ACNUM	Output	
 Intesis AC Number 3	Control	INTESIS_ACNUM	Output	

Refresh Navigator.

20. Refresh Navigator

21. Congratulations you have successfully setup the IntesisBox driver.

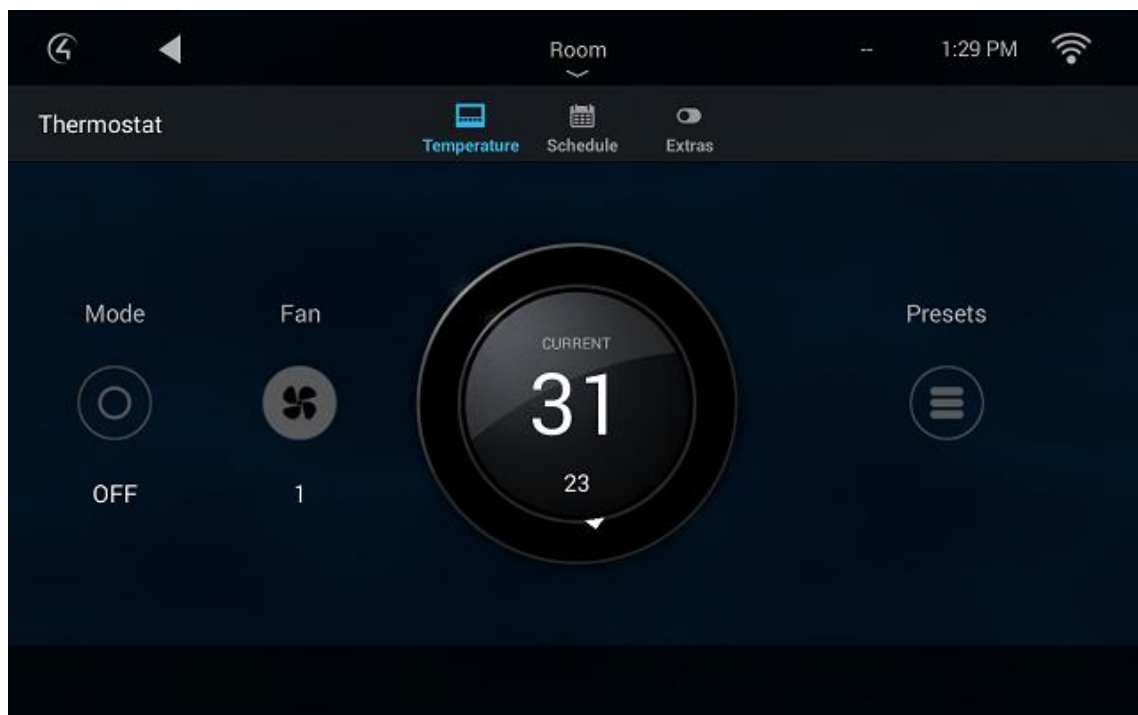
## Usage

The IntesisBox can be controlled through the Comfort icon in Control4's user interface.

## Temperature

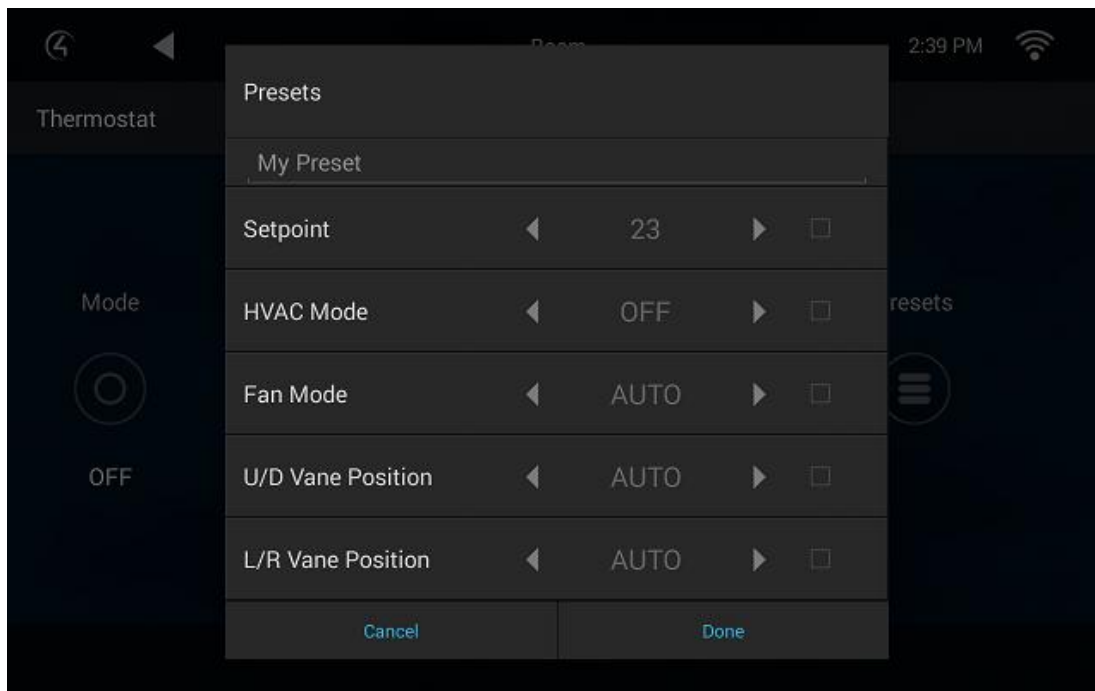
The Temperature tab allows you to control the following.

- **MODE** – Off, Auto, Heat, Dry, Fan, Cool (note not all modes are available and is dependant on the HVAC system)
- **FAN** – Auto, 1, 2, 3, 4, 5, 6, 7, 8, 9 (note not all speeds are available and is dependant on the HVAC system)
- **SETPOINT** – min-max degrees Celcius (single setpoint – min and max is dependant on the HVAC system)
- **PRESETS** – This is used to save your favourite preset so you can recall it at any time or set it in a schedule



## Presets

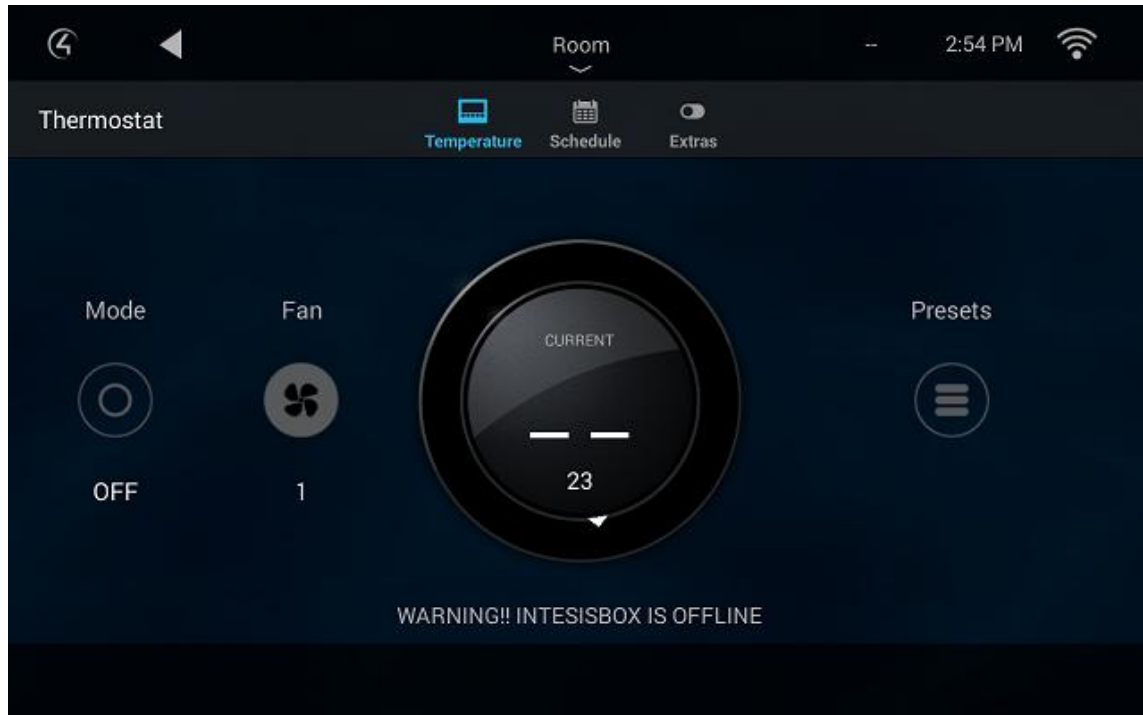
Presets under the Temperature tab can be used to save and recall your favorite HVAC preset.



## Errors

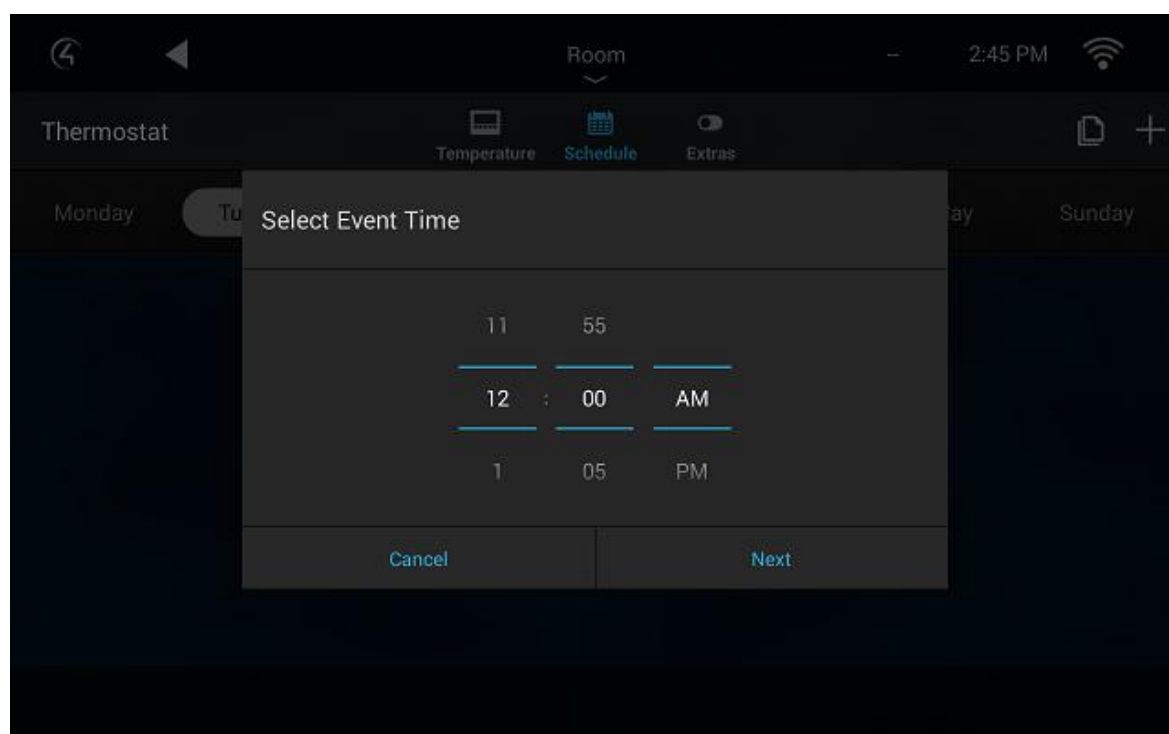
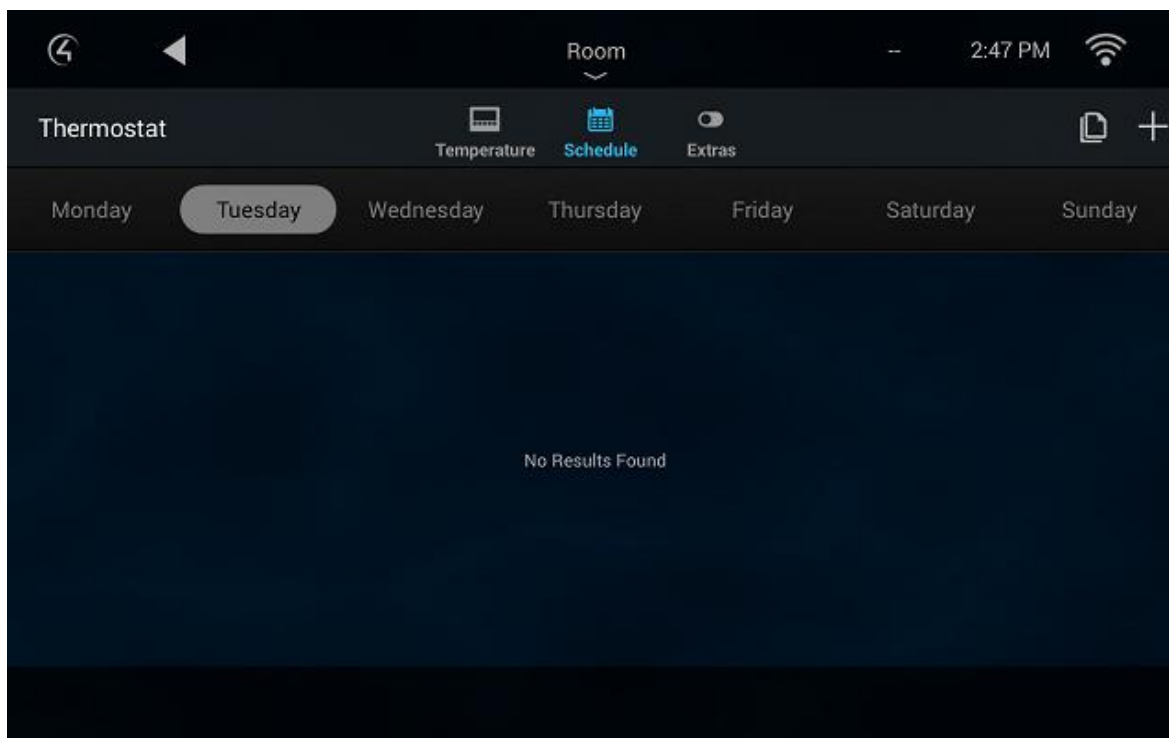
The Temperature tab will also provide the following feedback on errors.

- INTESISBOX OFFLINE (if the driver fails to communicate to the IntesisBox)
- ERROR CODE (not available on universal IntesisBox models).



## Schedule

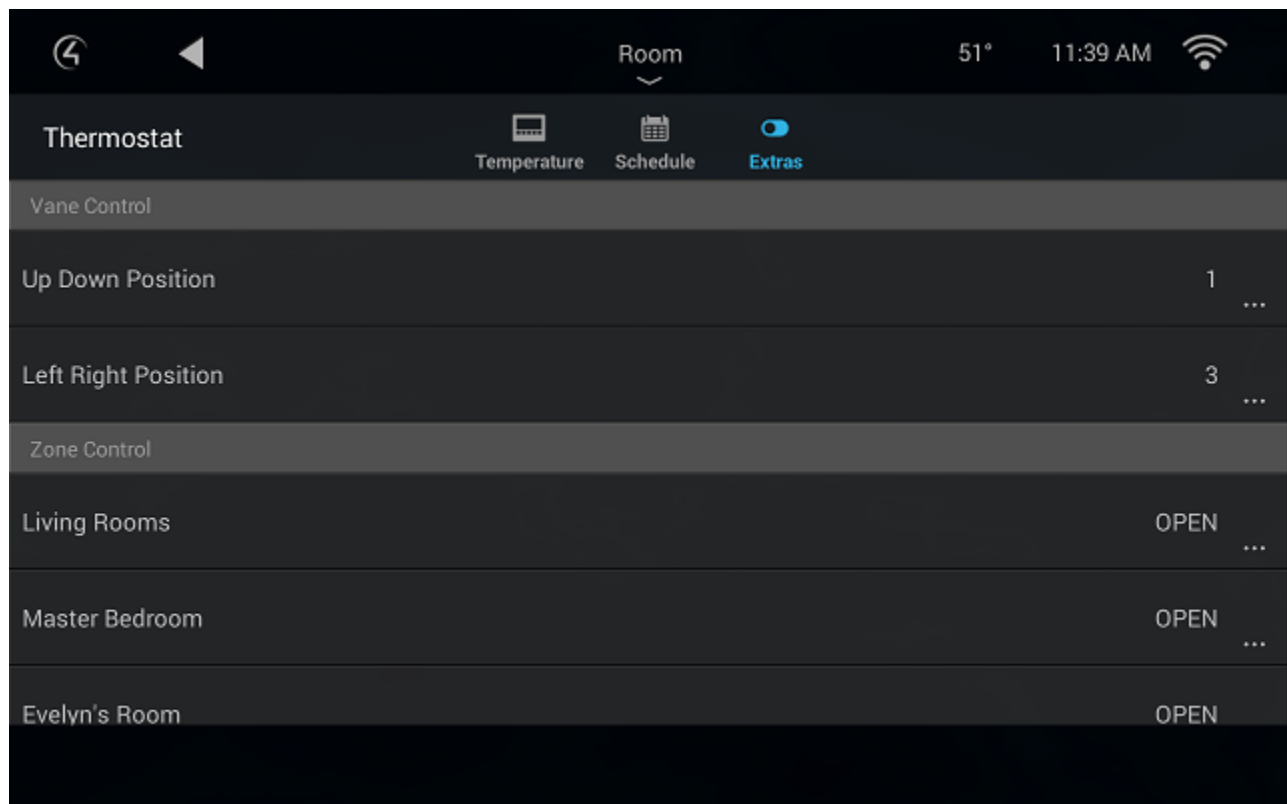
The Schedule tab is used to add schedules in to turn the HVAC system on and off to your favorite preset that we setup in the Temperature tab.



## More

The More tab allows for additional functionality.

- **Up Down Position** – AUTO, 1, 2, 3, 4, 5, 6, 7, 8, 9, SWING (note not all positions are available and is dependant on the HVAC system)
- **Left Right Position** – AUTO, 1, 2, 3, 4, 5, 6, 7, 8, 9, SWING (note not all positions are available and is dependant on the HVAC system)
- **Zone Control** – This is not a native function of IntesisBox. You will need to bind relays to each zone. The driver will tell the relays to open and close and provide feedback as to their status.





## Licencing

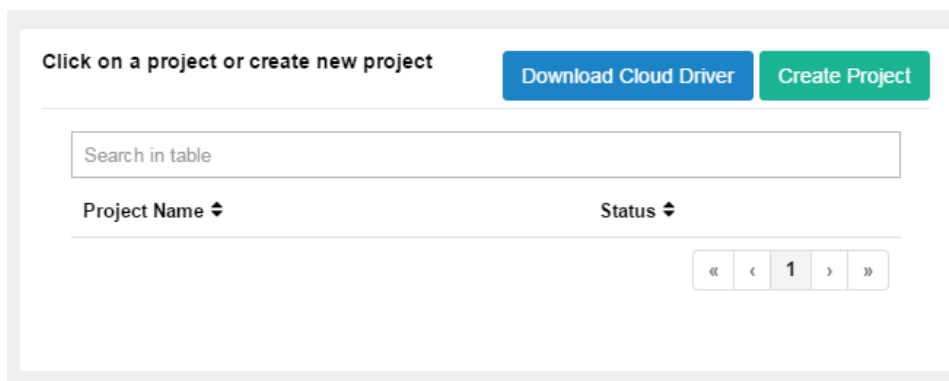
Chowmain drivers require a valid licence to use the driver. Drivers can be purchased from our distributor [driverCentral](#) however all Chowmain drivers come with a 7 day trial. We recommend that prior to purchasing a driver that you test the driver out to ensure that it will work with your hardware and will meet your requirements. The licencing procedure is broken down into 4 steps. A summary of the steps are below along however we have also provided detailed steps if the summary is not sufficient.

## Summary

1. Create your project on the driverCentral.io website (This will generate a specific token which you will use in the next step)
2. Download, install and activate the driverCentral cloud driver in your project (Only once per project. Use the token generated in step 1)
3. (Optional) To try a driver, simply download it and install it in your project
4. To purchase a driver:
  - a. On driverCentral, purchase a license and register it to your project
  - b. If the driver is not already installed in your project, download it and install it
  - c. If necessary, use the cloud driver's Action: "Check Drivers" to force licence download to the project.

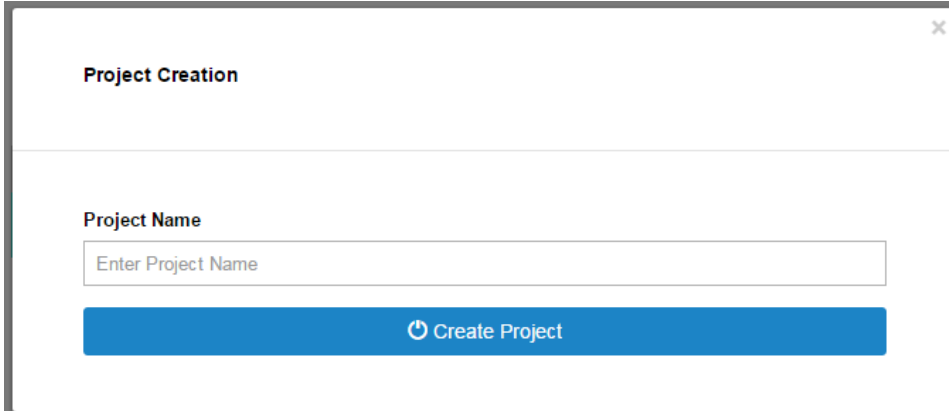
## STEP 1 - Creating your project on driverCentral

1. Visit <http://www.drivercentral.io>
2. Log into your driver Central dealer account.
3. Visit the Project Portal
4. Click on Create Project



The screenshot shows the driverCentral Project Portal interface. At the top, there is a header with the text "Click on a project or create new project" and two buttons: "Download Cloud Driver" (blue) and "Create Project" (green). Below the header is a search bar with the placeholder text "Search in table". Under the search bar, there are two columns: "Project Name" and "Status", both with a dropdown arrow. At the bottom right, there is a pagination control showing "1" in a box, with arrows for navigation.

- It will prompt you for a project name. Type in a meaningful name for your customer's project



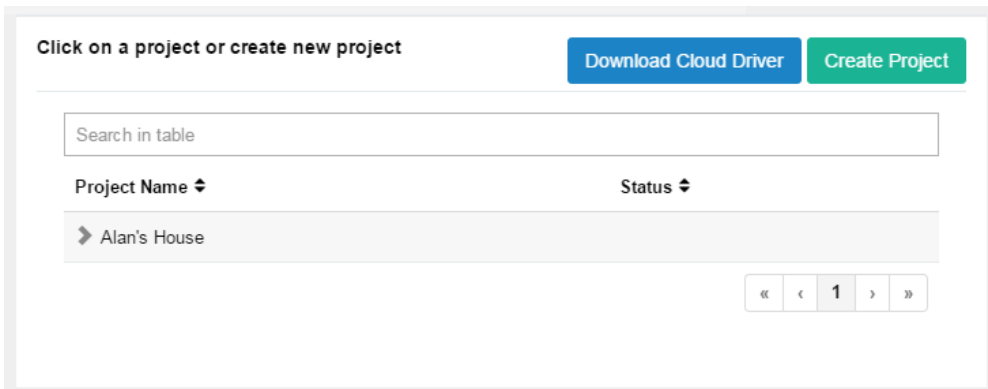
**Project Creation**

**Project Name**

Enter Project Name

Create Project

- Click on Create Project
- Click on the project we just created to expand the project



Click on a project or create new project

Download Cloud Driver Create Project

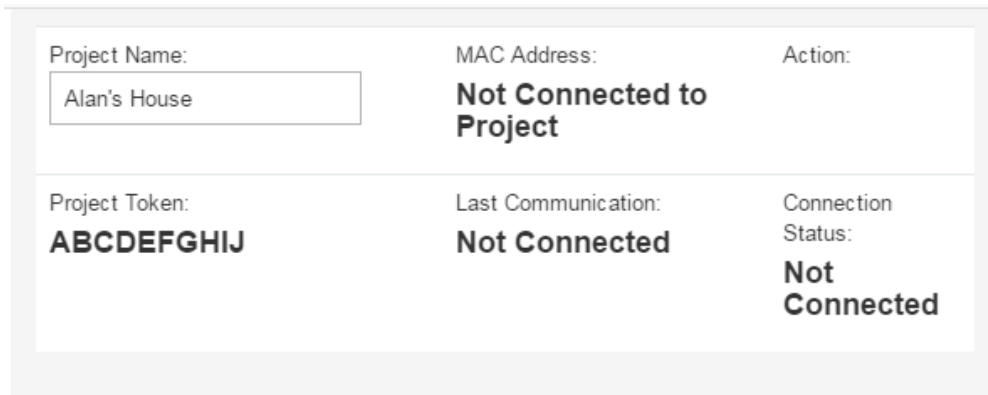
Search in table

Project Name Status

Alan's House

« < 1 > »

- Take note of the Project Token as this will be used in STEP 3 when we install the driverCentral cloud driver.



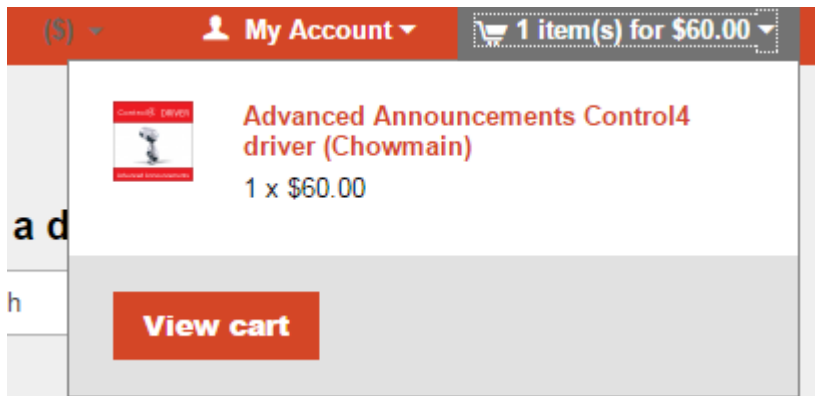
Project Name: Alan's House	MAC Address: <b>Not Connected to Project</b>	Action:
Project Token: <b>ABCDEFGHIJ</b>	Last Communication: <b>Not Connected</b>	Connection Status: <b>Not Connected</b>

## STEP 2 –Purchase driver licence

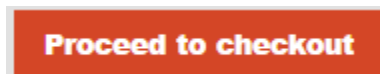
1. Visit <https://www.drivercentral.io/chowmain-ltd/> and find the product/driver you want to purchase a licence for.
2. Click on the Add to Cart button



3. Click on the Shopping Cart icon in the top right corner and click on View cart




4. Confirm that your order is correct and click on Proceed to checkout



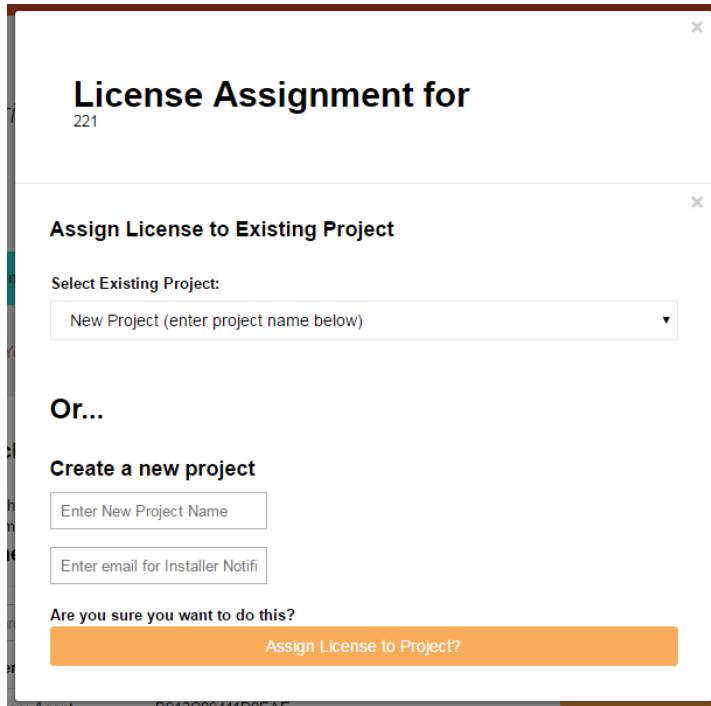
5. Follow the prompts and click on Submit my order



6. This will take you to PayPal for payment.
7. Pay via PayPal. It will automatically return to the marketplace when confirmed.
8. You will now be at a page where you can see your purchased licence.

License Name ↕	License Key ↕	Project Assigned ↕	Action ↕
			<button>Assign to Project</button>

- 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**

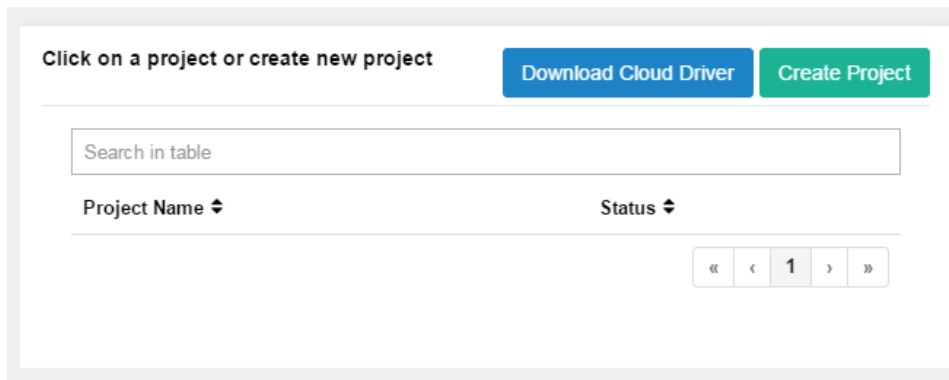
Enter New Project Name  
Enter email for Installer Notifi

Are you sure you want to do this?  
Assign License to Project?

### STEP 3 – Install and activate the driverCentral cloud driver

**NOTE:** Only one instance of the driverCentral cloud driver installed per project. Do not install additional cloud drivers.

- Visit <http://www.drivercentral.io>
- Log into your driver Central dealer account.
- Visit the Project Portal
- Click on Download Cloud Driver



Click on a project or create new project

Download Cloud Driver Create Project

Search in table

Project Name ↕	Status ↕
« < 1 > »	

- Copy the C4Z driver to My Documents\Control4\Drivers directory.
- Add the driver to your project.

- 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	<input type="text"/>
	Project token from driverCentral.io project portal
Driver Actions	<input type="button" value="v"/>
Debug Mode	Off <input type="button" value="v"/>

- Type in the project token we took note of in STEP 1.
- Click on the Actions tab
- Click on Check Drivers

#### STEP 4 – Install Chowmain driver

- Install the Chowmain driver
- You will notice that the Activation Status reflects a Licence Activated state.
- 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.
- 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 <input type="button" value="v"/>