



Belkin WeMo Switch Driver

Installation and Usage Guide

Revision: 3.1
Date: Tuesday, June 25, 2019
Authors: Alan Chow

Contents

Overview	2
Features	3
Change Log.....	3
Important Notice.....	4
Driver Installation.....	4
Adding the driver to your project	5
Binding the driver to a motorized device	6
Binding the driver to a light	7
Binding the driver to a keypad.....	9
Monitoring and Managing Power with Insight	10
Turning the room on and off for Xbox One, Playstation 4, Wii U and other manually controlled devices.	11
Licencing.....	Error! Bookmark not defined.

Overview

Control4 supplies the wireless outlet switch that makes any household plug-in device, like lamps, appliances and electronics part of the Control4 system by turning a standard outlet into a smart outlet.

Unfortunately this device is not available to the majority of the world as it only supports 120VAC voltage for US plug type devices.

Introducing the Belkin WeMo Switch (Model Number F7C027) and Insight Switch (Model Number F7C029). It has US/UK/AU-NZ plug types and is extremely affordable. This WiFi based power outlet supports upto 10amps and can be easily integrated into the Control4 home automation system using the Chowmain Belkin WeMo driver. The Insight switch can be utilised for energy monitoring and management using our driver and Control4. It can also be useful for device health monitoring and also for automatic selection of manually controlled AV devices like Playstation 4's, Xbox One's and Wii U's.

Features

- Auto discovery of IP address and port by entering in the serial number of the WeMo
- Auto update of IP address and port upon change
- Ability to connect driver to Chowmain outlet light or relay device drivers which in turn allows you to view the correct icon on navigator interface or even eliminate standby power on AV based devices.
- Ability to connect driver to keypad buttons (with LED feedback) to allow for quick on/off/toggle programming
- Ability to monitor and manage energy using insight based switches.
- Ability to use energy monitoring in insight switches for automatic selection and room off of Playstation, Xbox One, Wii U and other manually controlled devices
- On/Off feedback from the device.

Change Log

Version #20160318 - 18-MAR-2016

- Added AV device selection options for Insight switches. Useful for devices such as Playstation 4's, Xbox One's, Wii U's where control is not possible currently. Detection of power (or lack of) will turn on or off the device/room. See installation guide for details on how to use this feature.

Version #20151023 - 23-OCT-2015

- Made improvements to licencing algorithm. Should resolve issues on OS 2.8 systems with intermittent internet connections.
- Fixed issue with 2.8 systems and IOS navigator effecting light state on ios app launch.

Version #20150914 - 14-SEP-2015

- Added support for trigger relay functionality.
- Changed mW value to W values.

Version #20150911 - 11-SEP-2015

- Added support for WeMo insight switches. Energy usage available via variables and properties page.

Version #20150910 - 10-SEP-2015

- Updated SSDP code to resolve issue introduced in WeMo firmware - WeMo_WM_2.00.9399.PVT-OWRT-SNS

Version #20150818 - 18-AUG-2015

- Implemented Dealer Demo Licencing

Version #20150428 - 28-APR-2015

- Resolved stability issues.

Version #20150407 - 07-APR-2015

- Resolved issue where logs on 2.6 systems would fill out controller storage causing system stability issues. This only effects systems where people have set the debug logs to 'print and log' or 'log' and have forgotten about it over longer periods of time.

Version #20141117- 17-NOV-2014

- Converted from C4I to C4Z file type

Version #20140621- 21-JUN-2014

- Implemented UPnP subscriptions. Now has instantaneous feedback if using Belkin WeMo app for ios or android.

Version #20140616 - 16-JUN-2014

- If the WeMo IP changes the driver will now search for the unit and send the command at the same time.

Version #20140331 - 31-MAR-2014

- Increased WeMo detection interval (will help WeMo port & IP address changes

Version #20140220 - 20-FEB-2014

- Initial Release

Important Notice

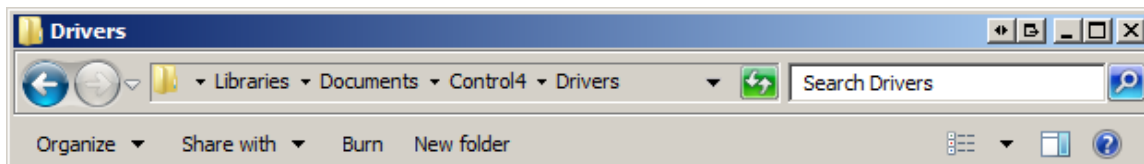
This driver has been developed for Control4 OS version 2.6.0. It may work for older versions of OS but it is recommended that you test the driver out first using the inbuilt trial licencing before purchasing a licence.

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. Select **'Belkin'** as the manufacturer.



4. Double click on the **'Belkin WeMo Switch'** driver to add it to your project
5. Highlight the **'Belkin WeMo Switch'** driver on the left hand side.
6. Enter in the WeMo serial number. This can be found on the rear of the WeMo switch

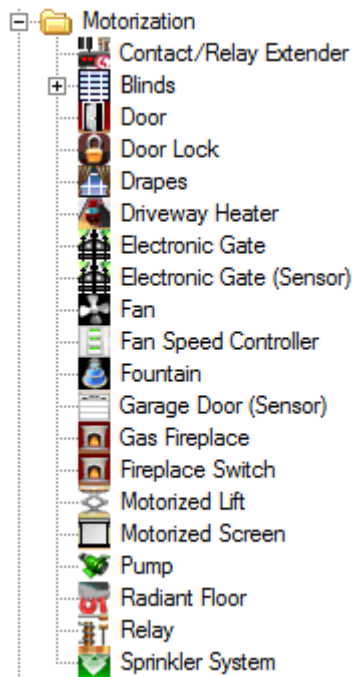


7. Once the driver finds the WeMo it will populate the other fields

WeMo MAC Address	EC1A59840334
WeMo IP Address	192.168.1.127
WeMo IP Port	49153
WeMo Description	bug zapper
WeMo Firmware Version	WeMo_WW_2.00.2769.PVT
WeMo Power Status	OFF

Binding the driver to a motorized device

1. Launch the Composer Pro application and connect to your project
2. Click on My Drivers on the right hand side.
3. Under Motorisation double click on the device type you want to use (note this will be the icon for your device).



4. In the motorised device properties make sure that it is set to hold type and not pulse type.
5. Click on the Connections tab.



6. Highlight Belkin WeMo Switch on the left hand side.
7. Bind the Relay to the device you want control over.

Control Outputs



8. Click on the File and Refresh Navigators. Congratulations you have set up Belkin WeMo Switch Driver.

Binding the driver to a light

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. Search for 'chowmain outlet light'

chowmain outlet light ▼

☒ Local ☒ Online ☐ Certified Only [Clear Search](#)

Category:
-- All Categories -- ▼

Type:
-- All Types -- ▼

Manufacturer:
-- All Manufacturers -- ▼

Control Method: All Methods ▼ Sort: Relevance ▼

Outlet Light

Chowmain Local

4. Double click on the 'Outlet Light' driver to add it to your project
5. Highlight the 'Chowmain Outlet Light' driver on the left hand side.
6. If you are binding the driver to a keypad set the ON and OFF colors for TOP and BOTTOM buttons.

Top LED color	
> ON (standard color)	Blue ▼
> (hex RGB)	0000FF
> OFF (standard color)	Cyan ▼
> (hex RGB)	00FFFF
Bottom LED color	
> ON (standard color)	LED Off ▼
> (hex RGB)	000000
> OFF (standard color)	Yellow ▼
> (hex RGB)	FFFF00

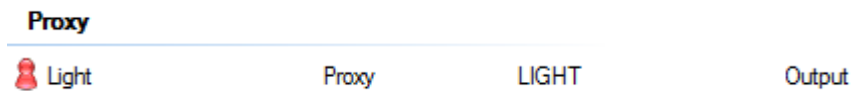
7. Rename the light to something meaningful.

8. Click on the Connections tab.



9. Highlight Belkin WeMo Switch on the left hand side.

10. Bind the Light proxy to the outlet light you added in.



11. Click on the File and Refresh Navigators. Congratulations you have set up Belkin WeMo Switch Driver.

Binding the driver to a keypad

This section assumes you have already added and have a working WeMo switch driver and Control4 keypad

1. Launch the Composer Pro application and connect to your project
2. Click on the Connections tab.






3. Highlight Belkin WeMo Switch on the left hand side.
4. Bind the Top Button, Bottom Button and/or Toggle button to the your keypad.

Top Button: Turns on your WeMo

Bottom Button: Turns off your WeMo

Toggle Button: Toggles your WeMo from On to Off

Control Outputs

 Top Button Link	Control	BUTTON_LINK	Output
 Bottom Button Link	Control	BUTTON_LINK	Output
 Toggle Button Link	Control	BUTTON_LINK	Output

5. Congratulations you have set up your keypad to control your Belkin WeMo Switch.

Monitoring and Managing Power with Insight

1. Highlight the '**Belkin WeMo Switch**' driver on the left hand side.

--Insight Data--	
Last On	09/14/15 11:20:59
Seconds since Last On	41
Seconds ON Today	4956
Seconds ON Fortnight	4852
Average Power (W)	1347
Instantaneous Power (W)	2027.245
Energy used today (W)	125267.606
Energy used Fortnight (W)	125267.606
Min watts	0
Max watts	1000

2. If your WeMo is an insight WeMo the data should be already populated. This data gets updated almost instantaneously when power is consumed via the outlet.
3. Min and Max watt properties are used as an event trigger. If the instantaneous power level goes above the max watts it will fire the 'Meter reached maximum value' event. If the instantaneous power level goes below the min watts it will fire the 'Meter reached minimum value' event. Leave the values as zero if you do not wish to utilise this functionality.
4. Click on the programming tab
5. Highlight the Belkin WeMo Switch on the Devices Events side.
6. Add in desired actions for the Meter reached maximum value event and Meter reached minimum value event.

Turning the room on and off for Xbox One, Playstation 4, Wii U and other manually controlled devices.

Gaming Consoles are pretty hard to integrate. In the past we can select the device upon video sense signal and also turn off the room when the video sense signal disappears. Unfortunately for HDMI products this is not an option and as such we have lost this ability. With the Belkin WeMo Insight we now have the ability to detect the instantaneous power consumption of the device. Using this we can detect if a device is powered on or off. We have added a few properties to our driver to allow for selection of the AV source connected to the outlet as a video source or audio source. If the device powers off you also have the ability to turn the room off as well. This makes an automated setup for non controllable AV devices.

Note: We assume that you have already added the Belkin WeMo driver in and have communications with a Belkin WeMo insight switch.

1. Highlight the '**Belkin WeMo Switch**' driver on the left hand side.

--Insight Data--	
Last On	09/14/15 11:20:59
Seconds since Last On	41
Seconds ON Today	4956
Seconds ON Fortnight	4852
Average Power (W)	1347
Instantaneous Power (W)	2027.245
Energy used today (W)	125267.606
Energy used Fortnight (W)	125267.606
Min watts	0
Max watts	1000

2. Turn your AV device on.
3. Wait a couple of seconds and note down the Instantaneous Power

4. Turn your AV device off.
5. Wait a couple of seconds and note down the Instantaneous Power
6. In the driver's Min watts add in the device's standby power (AV device off instantaneous power) that we have noted. To account for fluctuations in idle power add on +20% at a minimum to the value (you may need to play with this value).

Min watts	120
------------------	-----

7. In the driver's Max watts add in the device's on power (AV device on instantaneous power) that we have noted. To account for fluctuations in power take away -20% at a minimum to the value (you may need to play with this value).

Max watts	2200
------------------	------

8. Select the AV Device you want to control upon the min/max properties

AV Device		Select
------------------	--	---------------

9. Select the Room/s you want to control upon the min/max properties

Auto Room(s) Select		Select
----------------------------	--	---------------

10. If you want the Room/s to turn off when the power goes under the minimum watts then select True in the "Room Off if < Min Watts" property

Room Off if < Min Watts	True
-----------------------------------	------

11. If you want the Room/s to turn on when the power goes above the maximum watts then select a value in the "Select Device if > Max Watts" property

- Video – Use this option if you want the device to be selected as a video source
- Audio – Use this option if you want the device to be selected as an audio source
- Nothing – Use this option if you do not want the device to be selected at all

Select Device if > Max W	Video
------------------------------------	-------

12. Congratulations you have setup the AV automatic room on/off properties.

Licencing

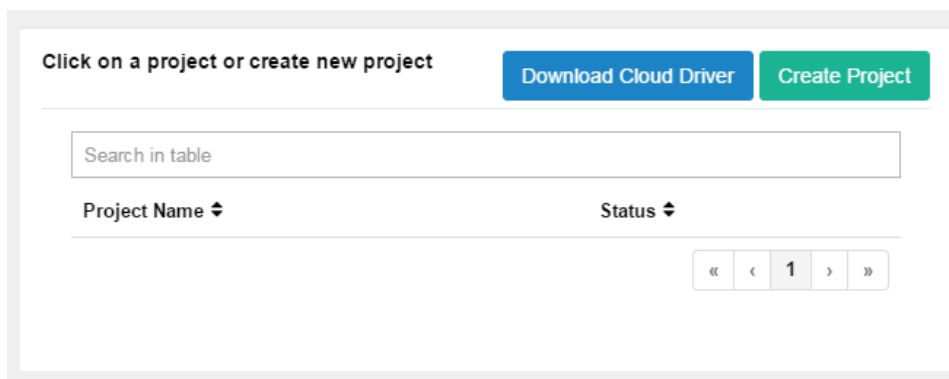
Chowmain drivers require a valid licence to use the driver. Drivers can be purchased from our distributor [driverCentral](#) however all Chowmain drivers come with a 7 day trial. We recommend that prior to purchasing a driver that you test the driver out to ensure that it will work with your hardware 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.

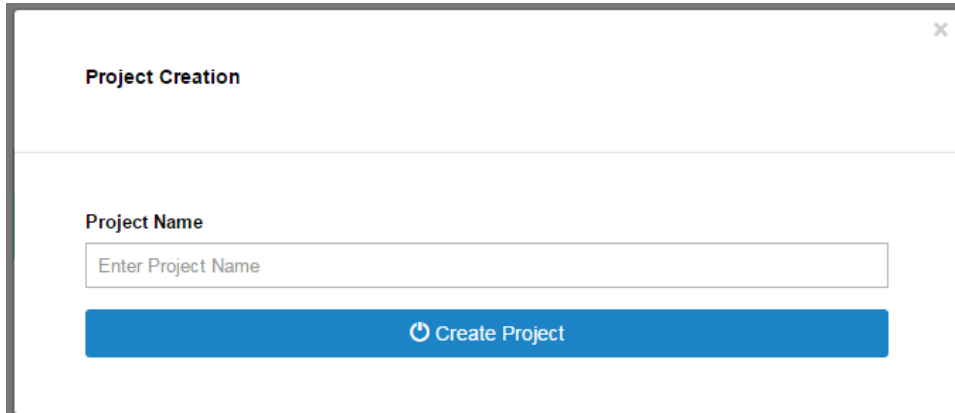
STEP 1 - Creating your project on driverCentral

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 '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', '>', and '»'.

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



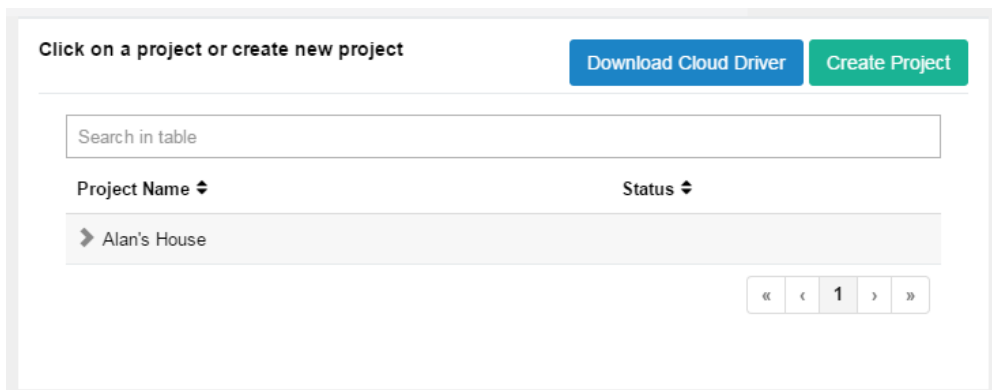
Project Creation

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

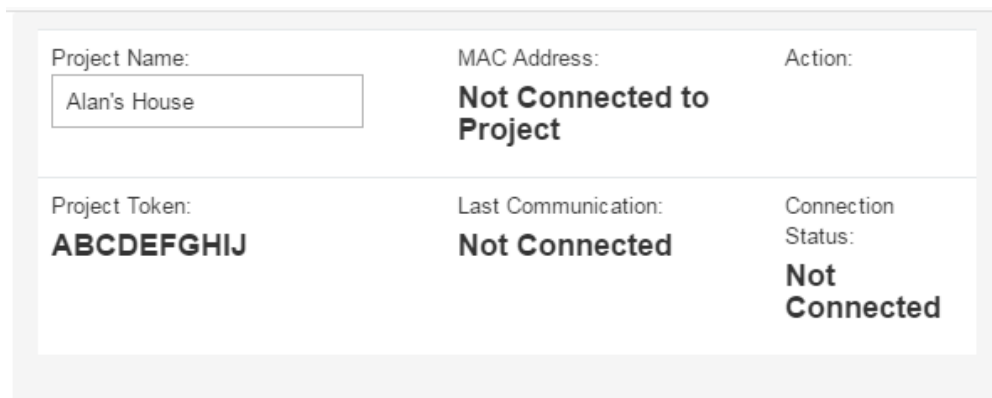
Search in table

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.



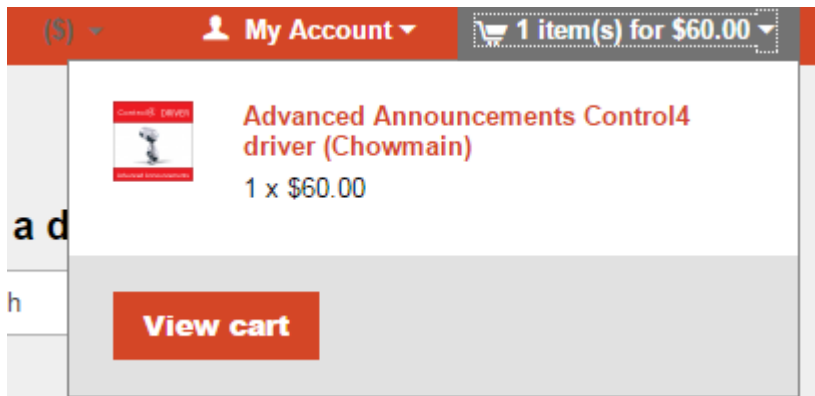
Project Name: Alan's House	MAC Address: Not Connected to Project	Action:
Project Token: ABCDEFGHIJ	Last Communication: Not Connected	Connection Status: Not Connected

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



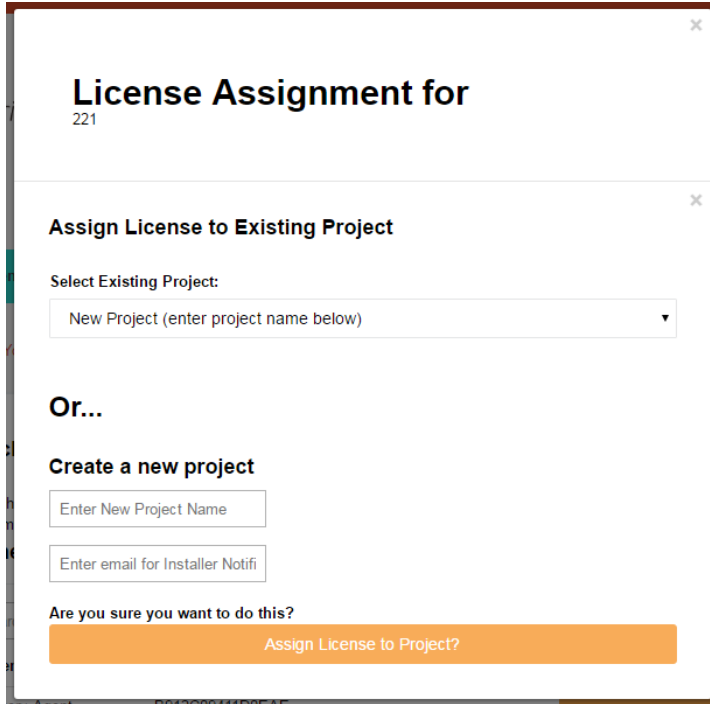
5. Follow the prompts and click on Submit my order



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

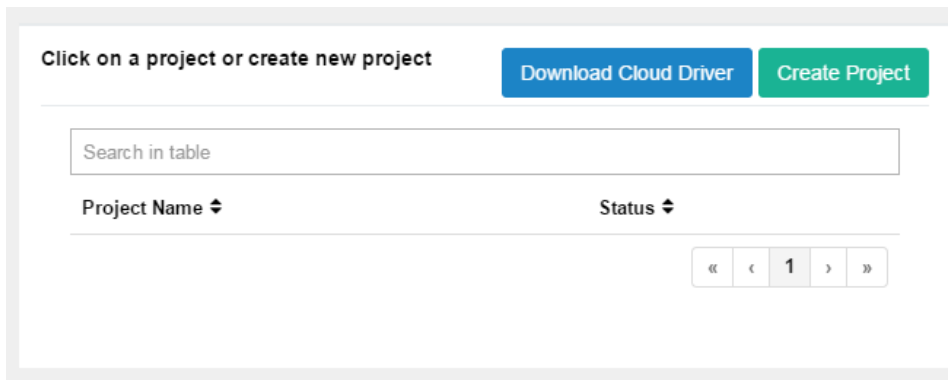
Enter New Project Name
Enter email for Installer Notifi

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"/>