



Plex Home Theater Driver

Installation and Usage Guide

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Date: Monday, July 10, 2017
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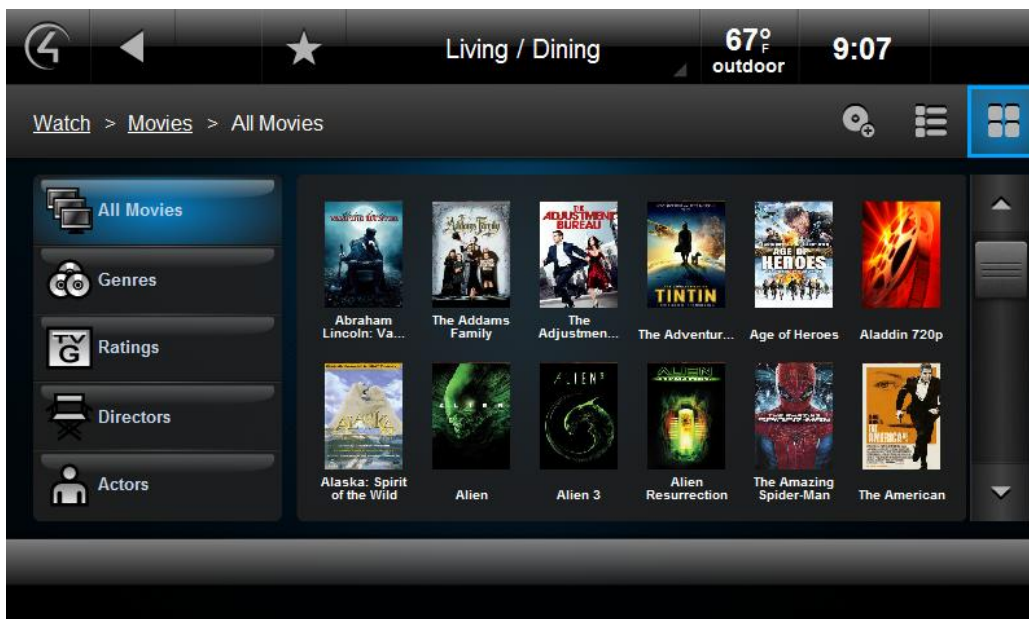
Overview

Plex Home Theater is a software based media player that can be installed on Mac and Windows based operating systems. Plex offers a beautiful simple interface that enriches your playback experience.

The Chowmain Plex Home Theater driver enables us to integrate the Plex Home Theater software into the Control4 home automation system with seamless control and feedback.

Features

- IP based communications
- Transport controls
- Movie integration into Control4's Navigator (**currently only works for windows for UNC paths. Will not work with shares with usernames and passwords**).
- Audio End-Point assignment for line level volume up/down/mute functionality
- Video End-Point assignment
- 2 way feedback via the JSON API for play, pause, stop, movie started/finished, screen saver active/deactive
- Assignable buttons for non intuitive buttons
- Wake-on Lan functionality
- Power off options
- Ability to send custom messages to Plex Home Theater via Plex Notification (similar to Control4 Announcements via Navigator).



Change Log

Version #20140325 - 05-MAR-2014

- Truncated SMB username and password as UNC does not support it. Make sure it is premounted first before using.

Version #20140214 - 14-FEB-2014

- Initial Driver Release

Important Notice

This driver is designed on Plex Home Theater version 1.0.9.180-bde1e61d. Though Chowmain aims to ensure that the driver is kept up to date with API changes it is recommended that you do not update the version of software if it is in working condition.

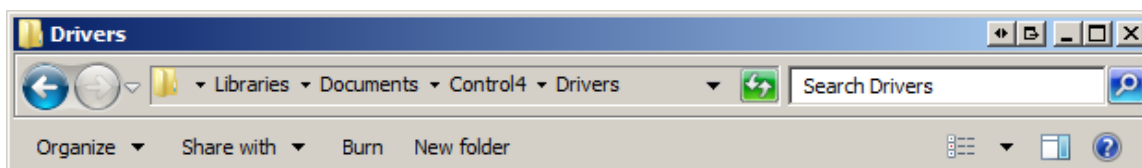
Note that this software does not work with Plex on other platforms. This includes Plex for Samsung TV's, Roku, GoogleTV or Chromecast.

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.

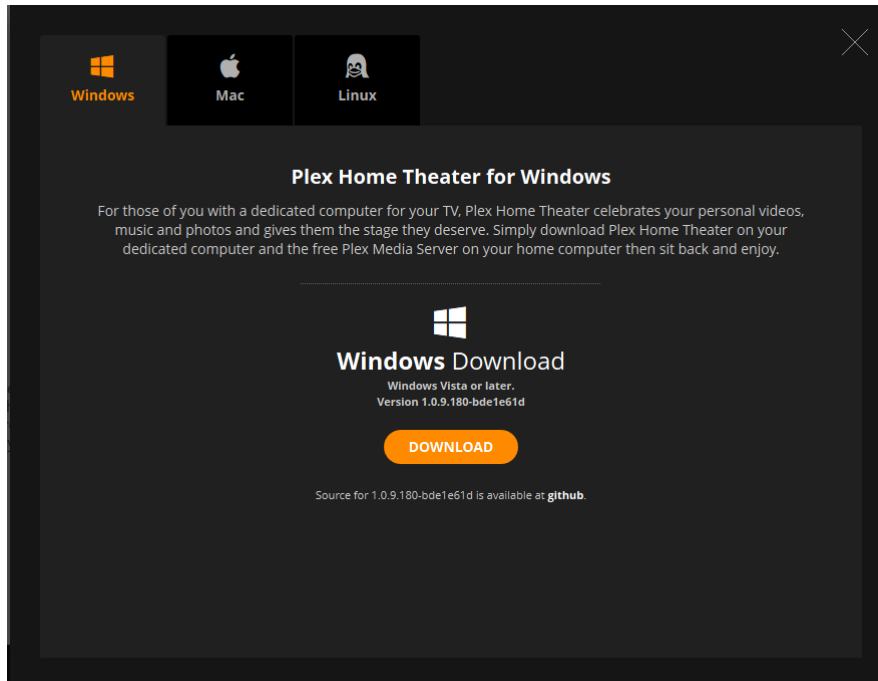


3. You are now ready to add and configure the driver via the Composer Pro software.

Setting up Plex Home Theater for Windows

The following section details how to enable 2 way control for Plex Home Theater.

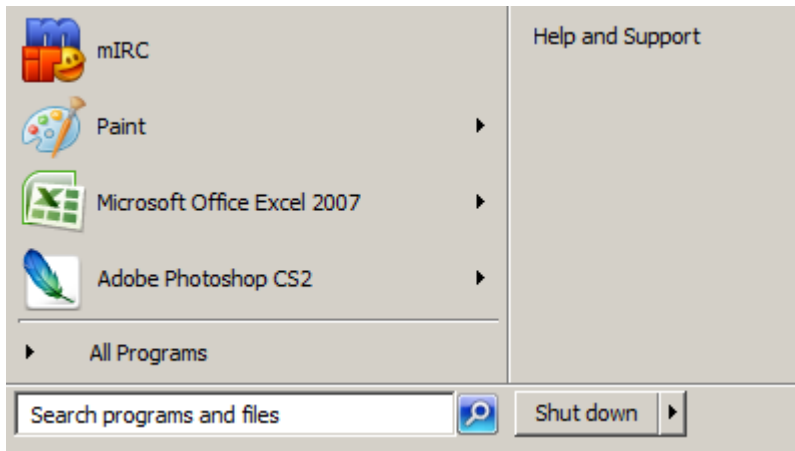
1. Visit <http://plex.tv> and and download Plex Home Theater for Windows



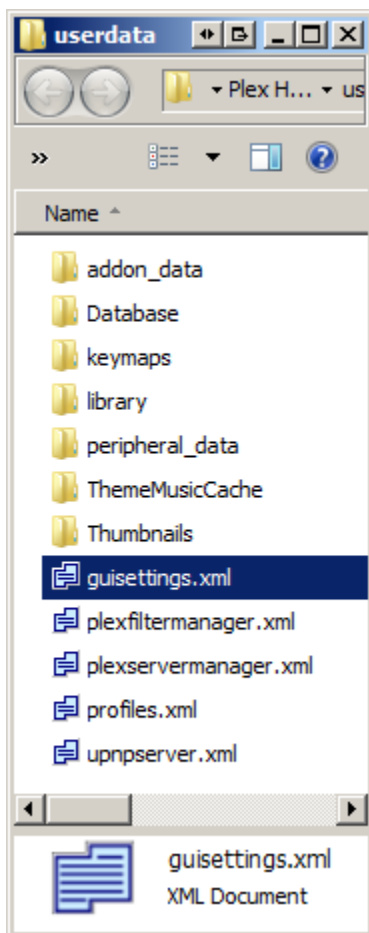
2. Install Plex Home Theater from the downloaded file (if you have trouble doing this please follow the instructions/support from <http://plex.tv>).
3. Start Plex Home Theater and run through the initial setup steps.
4. Exit Plex Home Theater (**NOTE: this is an important step**).
5. Click on the Start button in your windows task bar



6. Type in %APPDATA%\Plex Home Theater\userdata\ in the Search programs and files field and press the enter key



7. Using your favorite text editor open up the guisettings.xml file.



8. Search for the <esallinterfaces> XML tag.

```
<services>  
  <airplay>true</airplay>  
  <airplaypassword></airplaypassword>  
  <devicename>Alan-Desktop</devicename>  
  <esallinterfaces>>false</esallinterfaces>  
  <escontinuousdelay>25</escontinuousdelay>  
  <esenabled>true</esenabled>
```

9. Change the value from false to true

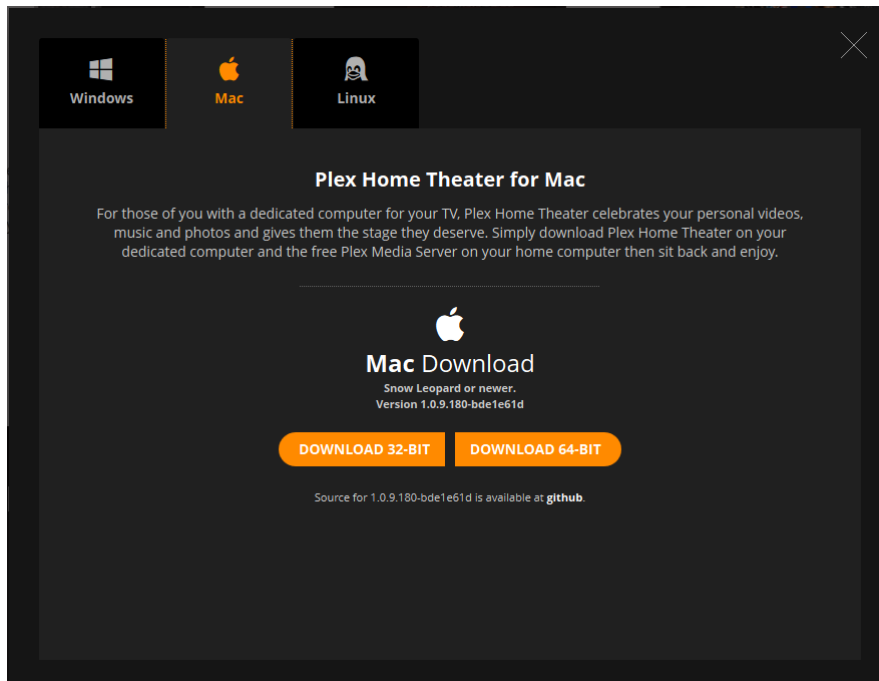
```
<services>  
  <airplay>true</airplay>  
  <airplaypassword></airplaypassword>  
  <devicename>Alan-Desktop</devicename>  
  <esallinterfaces>true</esallinterfaces>  
  <escontinuousdelay>25</escontinuousdelay>  
  <esenabled>true</esenabled>
```

10. Save the file.

Setting up Plex Home Theater for MAC OSX

The following section details how to enable 2 way control for Plex Home Theater.

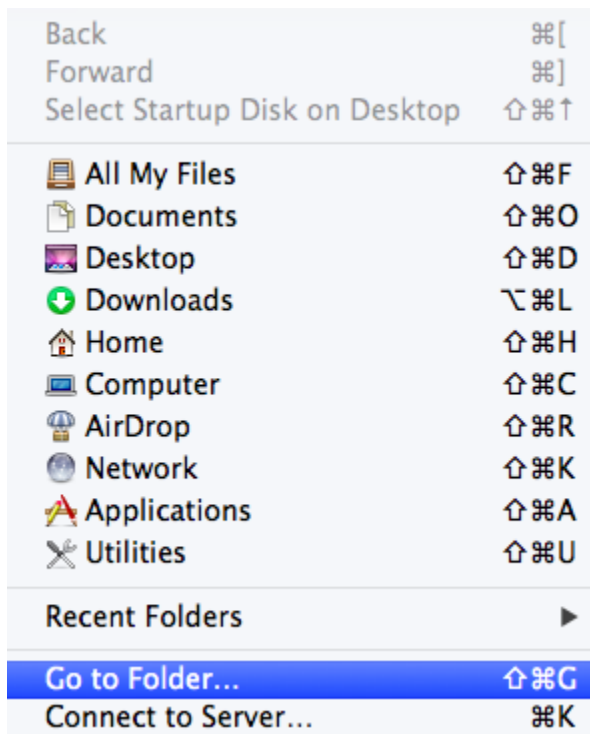
1. Visit <http://plex.tv> and and download Plex Home Theater for Mac



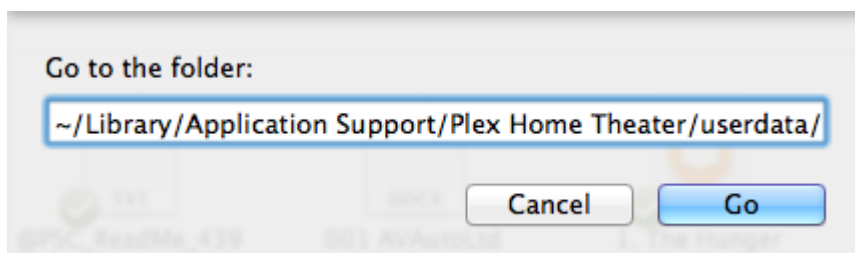
2. Install Plex Home Theater from the downloaded file (if you have trouble doing this please follow the instructions/support from <http://plex.tv>).
3. Start Plex Home Theater and run through the initial setup steps.
4. Exit Plex Home Theater (**NOTE: this is an important step**).
5. Launch the finder application.



6. Click on Go and select Go To Folder



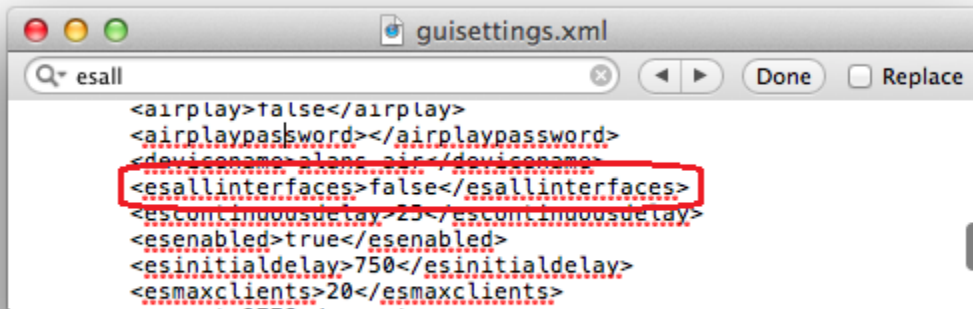
7. Visit the following folder ~/Library/Application Support/Plex Home Theater/userdata/



8. Using your favorite text editor open up the guisettings.xml file.

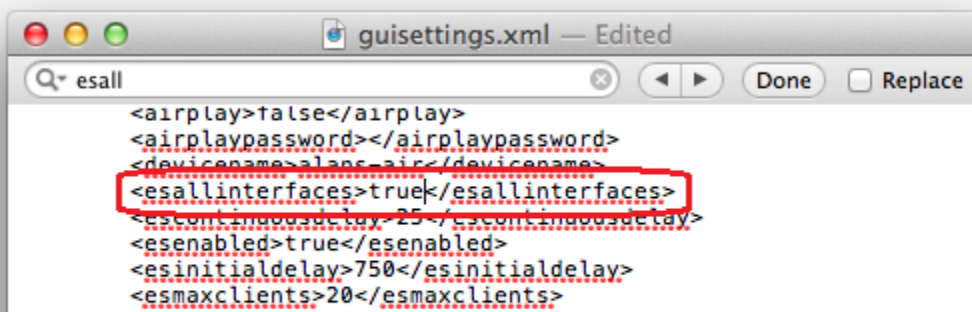
▶	addon_data	Today 9:34 am	--	Folder
▶	Database	Today 9:35 am	--	Folder
	guisettings.xml	Today 9:35 am	15 KB	XML document
▶	keymaps	Today 9:34 am	--	Folder
▶	library	Today 9:34 am	--	Folder
▶	peripheral_data	Today 9:34 am	--	Folder
	plexfiltermanager.xml	Today 9:35 am	187 bytes	XML document
	plexservermanager.xml	Today 9:35 am	1 KB	XML document
	profiles.xml	Today 9:35 am	897 bytes	XML document
▶	ThemeMusicCache	Today 9:34 am	--	Folder
▶	Thumbnails	Today 9:34 am	--	Folder

9. Search for the <esallinterfaces> XML tag.



```
esall
<airplay>>false</airplay>
<airplaypassword></airplaypassword>
<devicename>alans-air</devicename>
<esallinterfaces>false</esallinterfaces>
<escontinuosdelay>25</escontinuosdelay>
<esenabled>true</esenabled>
<esinitialdelay>750</esinitialdelay>
<esmaxclients>20</esmaxclients>
```

10. Change the value from false to true



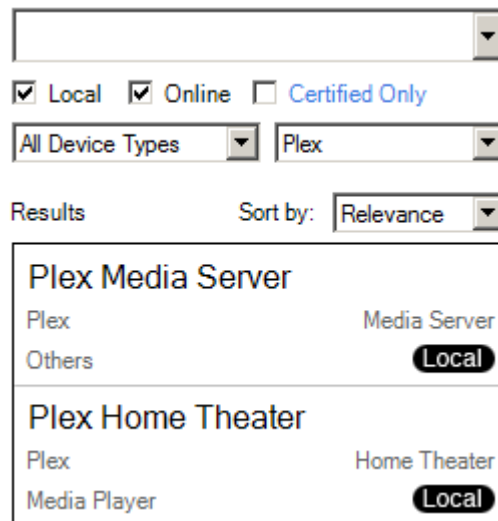
```
esall
<airplay>false</airplay>
<airplaypassword></airplaypassword>
<devicename>alans-air</devicename>
<esallinterfaces>true</esallinterfaces>
<escontinuosdelay>25</escontinuosdelay>
<esenabled>true</esenabled>
<esinitialdelay>750</esinitialdelay>
<esmaxclients>20</esmaxclients>
```

11. Save the file.

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 **'Plex'** as the manufacturer.



Search results interface showing filters and results:

- Search bar (empty)
- Filters: Local Online Certified Only
- Device Types: All Device Types (dropdown)
- Manufacturer: Plex (dropdown)
- Sort by: Relevance (dropdown)
- Results:
 - Plex Media Server**
 - Plex Media Server
 - Others **Local**
 - Plex Home Theater**
 - Plex Home Theater
 - Media Player **Local**

4. Double click on the **'Plex Home Theater'** driver to add it to your project
5. Highlight the **'Plex Home Theater'** driver on the left hand side.
6. Enter in the Houselogix licence details.
7. Enter in the Plex Home Theater IP address or Hostname
Note: It is recommended that Plex Home Theater be placed on a static IP address or have a reserved IP address for stability purposes.

IP Address	192.168.1.106
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- If you wish to startup and shutdown the computer plex is on enter in the computers MAC address, the amount of time it takes for Plex to launch from when the computer starts to boot and the shutdown command type.

WOL MAC Address	<input type="text"/>
Boot Time (seconds)	0 <input type="button" value="↑"/> <input type="button" value="↓"/>
Power Off	Shutdown <input type="button" value="↓"/>

- Assign the non intuitive buttons to the function you want.









RED BUTTON	NOTHING <input type="button" value="↓"/>
GREEN BUTTON	VIDEO_MODE FULLSCREEN_TOGGLE SHOW_SUBTITLES
YELLOW BUTTON	NEXT_SUBTITLE AUDIO_NEXT_LANGUAGE
BLUE BUTTON	OPTIONS_MENU JUMP_TO_HOME
HASH BUTTON	NOTHING
STAR BUTTON	NOTHING <input type="button" value="↓"/>
GUIDE BUTTON	NOTHING <input type="button" value="↓"/>
DVR BUTTON	NOTHING <input type="button" value="↓"/>

- Click on the Connections tab.



- Highlight the 'Plex Home Theater' driver on the left hand side.

12. Bind the audio/video outputs to the relevant inputs.

Plex Home Theater				
Name	Type	Connection	Input/Output	Connected To
Audio/Video Outputs				
 OUTPUT	Video	COMPOSITE	Output	
 OUTPUT	Video	SVIDEO	Output	
 OUTPUT	Video	COMPONENT	Output	
 OUTPUT	Video	HDMI	Output	
 OUTPUT	Video	VGA	Output	
 OUTPUT	Audio	STEREO	Output	
 OUTPUT	Audio	DIGITAL_OPTICAL	Output	
 OUTPUT	Audio	DIGITAL_COAX	Output	

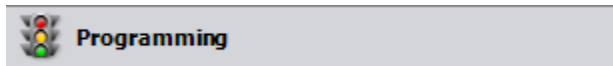
13. Click on the File and Refresh Navigators. Congratulations you have set up Plex Home Theater.

File	Driver	Go	Tools	Help
Clear Project...			Ctrl+N	
Load Project...			Ctrl+O	
Run Interview...			Ctrl+I	
Connect to Director...				
Disconnect from Director				
Back Up			Ctrl+S	
Back Up As...				
Refresh			F5	
Refresh Navigators			Shift+F5	
Exit				

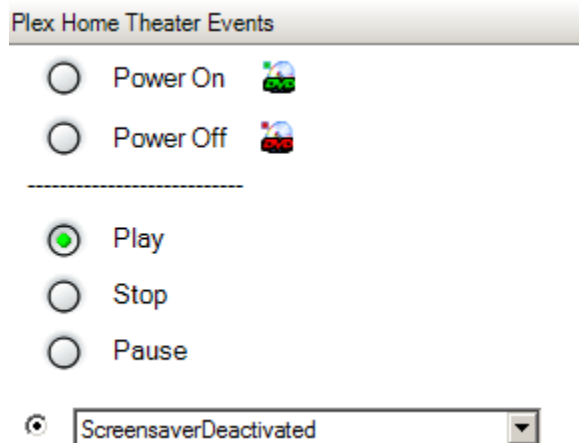
Programming Example – Turning on your system on airplay or 3rd party plex application.

As the driver can detect whether or not the media player is in playback mode we can programmatically set up the system to automatically turn on your AV equipment and switch to the right inputs when a play command is received. This is great when you are using a 3rd party Plex application or if you are using Airplay with Plex.


1. Click on the '**Programming**' tab.



2. Under Device Events select '**Plex Home Theater**'
3. In the Plex Home Theater events select '**Play**'



4. Under the room actions **select the Room->Plex Home Theater driver** for ‘Select a Video Device’.

 **Select the Plex Home Theater as the video source in Development**

Commands Conditionals Loops

Turn the Room Off

Select Media

Select an Audio Device

Select a Video Device


Development->Plex Home Theater

Development->Plex Home Theater

5. Drag the green arrow and drop it onto the script section.



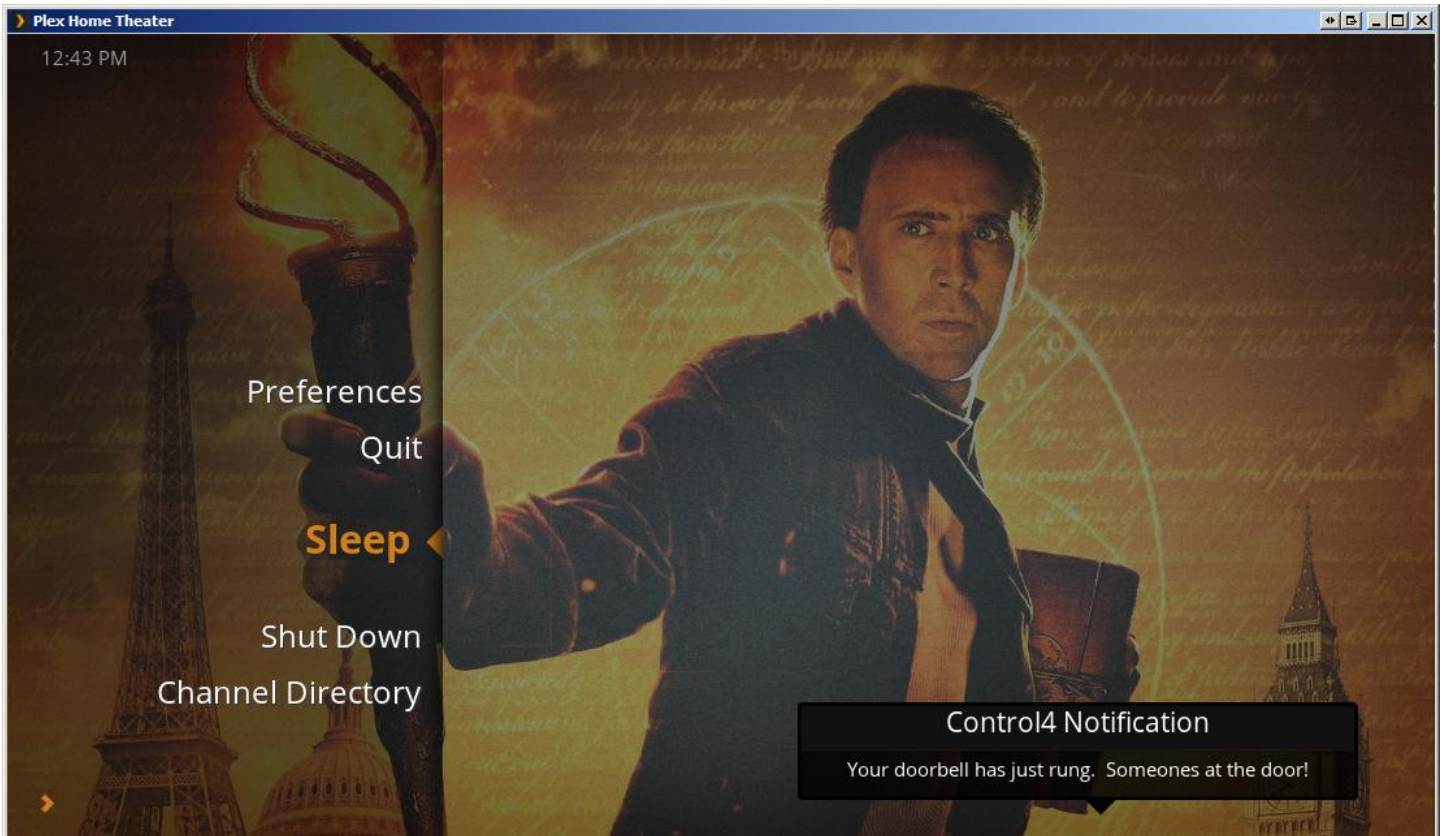
When Development->Plex Home Theater plays

 **Select the Plex Home Theater as the video source in Development**

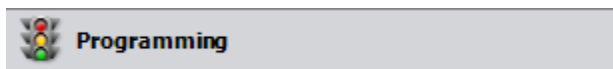
6. Congratulations you have set up the system to automatically select Plex Home Theater as a source when airplay content is played.

Programming Example – Executing announcements via Plex notifications

Plex has the abilities to show custom notifications on the bottom right hand corner of the screen. This is usually used for system messages however we can use it to output messages from the Control4 system. This can include anything that is text based.



1. Click on the '**Programming**' tab.



2. Under Device Events select the event you want to trigger the notification on.
3. Under Device Actions select the Plex Home Theater driver.
4. Select the radio button next to Device Specific Command
5. Select Send Plex Notification

- Type in the Title and Message you want to send to Plex Home Theater

Device Specific Command

Send Plex Notification

Title	Control4 Notification
Message	Your doorbell has just rung. Someones at the door!

- Drag the green arrow and drop it onto the script section.



When the Living / Dining->Doorbell is released

➔ Send Plex Notification Control4 Notification Your doorbell has just rung. Someones at the door!

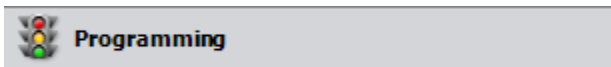
- Congratulations you have set up the system to send a plex notification.

Programming Example – Starting up and Shutting down based upon Security Armed/Disarmed events.

One of the issues with using a Home Theater PC is that the power consumption whilst it is not being used is quite high. A method we can use to introduce power saving to help improve this issue is to shut the system down when we're not at home and to start it back up when we are at home.

Note that you will need to set up your PC to allow for wake on lan for this to work. It is also assumed that you have setup the driver properties correctly as per the section labelled 'Adding the driver to your project'.

- Click on the '**Programming**' tab.




- Under Device Events select your integrated **security system**.
- Select the '**has been armed to Away**' event

When Ness M1 has been armed to Away

- Under Device Actions select the **Plex Home Theater** driver.
- Select the radio button next to **Device Specific Command**

6. Select **Send Shutdown Command**

 **Device Specific Command**

Send Shutdown Command 

7. **Drag the green arrow and drop** it onto the script section.



When Outdoor / Other Areas->Ness M1 has been armed to Away



Send Shutdown Command

8. Select the '**has been Disarmed**' event

9. Under Device Actions select the **Plex Home Theater** driver.

10. Select the radio button next to **Device Specific Command**

11. Select **Send WOL**

12. **Drag the green arrow and drop** it onto the script section.



Device Specific Command

Send WOL 



When Outdoor / Other Areas->Ness M1 has been Disarmed



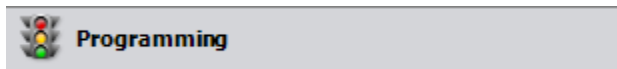
Send WOL Packet

13. Congratulations you have set up the system to startup and shutdown when your security system arms/disarms.

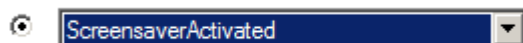
Programming Example – Turning off your system when Plex goes into screen saver

Have you ever left your system on because you have been distracted or have fallen asleep? Ever walked away only to have returned hours later? Our Plex driver can be utilised to shut down your system if you have left it on as a source.

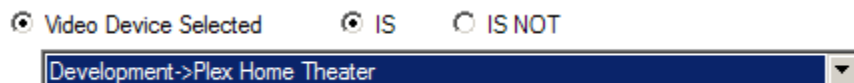
1. Click on the '**Programming**' tab.



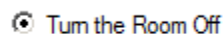
7. Under Device Events select '**Plex Home Theater**'
8. In the Plex Home Theater events select '**ScreensaverActivated**' in the dropdown box



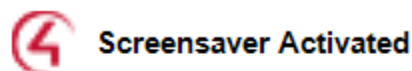
9. On the Device Actions side select the room you want monitored.
10. Click on the Conditionals tab.
11. Select the radio button labelled '**Video Device Selected**' and make sure that the radio button labelled '**IS**' is selected.
12. Select Plex Home Theater from the dropdown box.



13. Drag the question mark into the script
14. Under the room '**Commands**' tab select '**Turn the Room off**'



15. Drag the green arrow and drop it onto the question mark in your scripts section (make sure that the action is indented. See screenshot below for example).



16. Congratulations you have set up the system to automatically turn off when the screen saver is activated. Note you will probably want to adjust the screen saver timeout to suit your needs.

Button Mapping

The plex driver maps the controls to the following buttons. This is universal across all control4 user interface devices whether it be the SR150, SR250 or touch screen devices. Note that touch screens do not offer the full range of buttons on its user interface. This is a limitation of Control4 and cannot be modified.

DEFINABLE BUTTONS

As the Red, Green, Yellow, Button, Guide, DVR, */-, #/- buttons are non intuitive they can be custom definable in the properties page of the driver to the following commands

VIDEO_MODE	FULLSCREEN_TOGGLE
SHOW_SUBTITLES	NEXT_SUBTITLES
AUDIO_NEXT_LANGUAGE	OPTIONS_MENU
JUMP_TO_HOME	NOTHING

NUMBER BUTTONS

These buttons have a dual function. In navigation mode they can be used to perform SMS style searching within a list of items. In video playback mode they can be used to jump to a percentage of the video.

TRANSPORT & OTHER BUTTONS

Play/Pause – These buttons fire the same Play/Pause command.

Stop – Stops the media playback

Skip Forward – Skips to the next chapter or performs a big jump forwards.

Skip Reverse – Skips to the previous chapter or performs a big jump backwards.

Fast Forward – If held sets speed to 8x. If tapped performs a small jump forwards.

Rewind – If held sets speed to -8x. If tapped performs a small jump backwards.

Cancel – Cancels the menu item or jumps to home screen.

Menu – Brings up the playback menu

Info – Brings up the media information

Mute – Mutes the audio (if set to audio endpoint)

Vol + - Increases the volume (if set to audio endpoint)

Vol - - Decreases the volume (if set to audio endpoint)

Prev – Jumps back one level in the menu

Page Up – Jumps up one page in navigation

Page Down – Jumps down one page in navigation

Select – Selects the current highlighted item

Up,Down,Left,Right – Menu Navigation



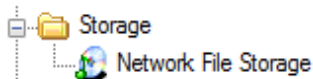
Importing movies for playback

The Plex Home Theater driver is designed to work with Control4 Network File Storage drivers. This will give you the capability to add movie cover art and meta data to your Control4 Navigator user interface.

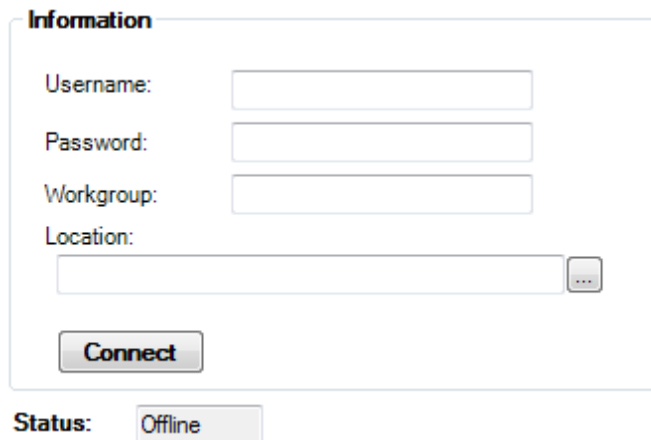
NOTE: That due to an issue in the OSX build of Plex Home Theater only the Windows build currently works with movie playback from navigator. As such until further notice from Plex do not use this feature with Mac OSX.

Method 1 : - Traditional Control4 Method

1. Click on **'System Design'**
2. Click on **'My Drivers'**
3. Add in the **'Network File Storage'** driver



4. Select the **'Network File Storage'** Driver. Set up the **'location'** of your file share and click on the **'Connect'** button.



Information

Username:

Password:

Workgroup:

Location:

Status:

5. Click on the **'Media'** tab and select the Video Media portion of the Network File Storage Driver.
6. Click on the **'New'** button to add a new movie. Click on the icon to select the location of the movie.
7. Type in the title and click on the search button to search for the movie information. Note you have to be registered on my.control4.com to utilise the search functionality.
8. Select the Title you want to grab the information from and click on the next button.

9. Modify any information you would like and press the **'Finished'** button.

10. Press the **'OK'** button to add the movie to your media database.

11. Repeat steps 1 to 10 for each additional movie.

Method 2 : - Plex Media Server Method

Chowmain's Plex Media Server driver for Control4 can be used to integrate the Plex Media Server database into Control4 for ease of use media management. This method provides an automated movie management experience. Plex Media Server can be installed on Windows, Mac OSX, Linux or on supported NAS drives. A licence for this driver can be purchased through the Houselogix website.

Licencing

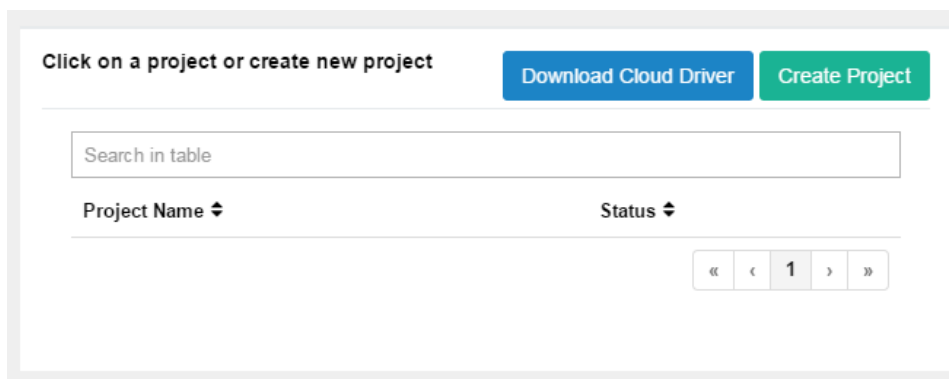
Chowmain drivers require a valid licence to use the driver. Drivers can be purchased from our distributor [driverCentral](#) however all Chowmain drivers come with a 7 day trial. We recommend that prior to purchasing a driver that you test the driver out to ensure that it will work with your hardware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

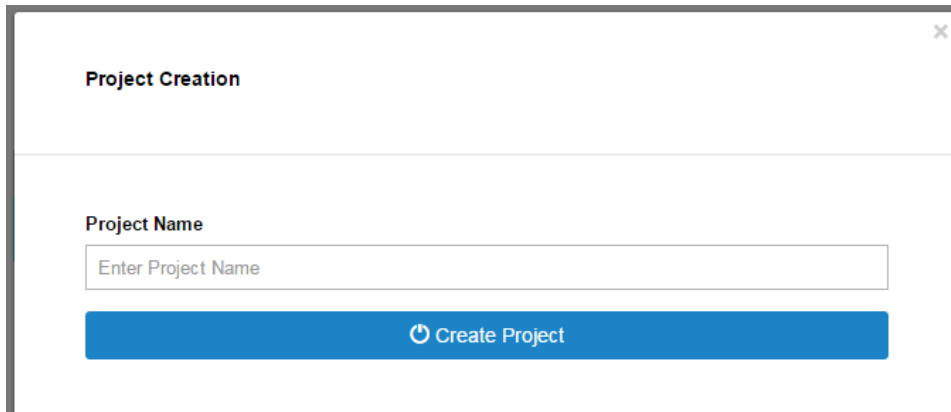
1. Create your project on the driverCentral.io website (This will generate a specific token which you will use in the next step)
2. Download, install and activate the driverCentral cloud driver in your project (Only once per project. Use the token generated in step 1)
3. (Optional) To try a driver, simply 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

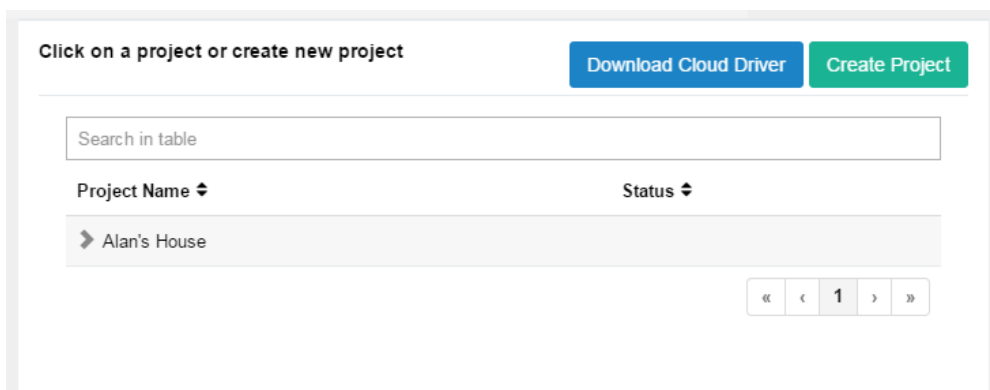
1. Visit <http://www.drivercentral.io>
2. Log into your driver Central dealer account.
3. Visit the Project Portal
4. Click on Create Project



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



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



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

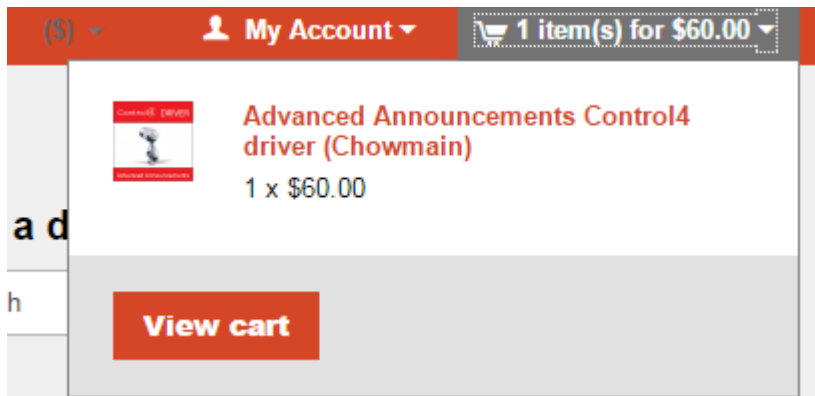
Project Name: <input type="text" value="Alan's House"/>	MAC Address: Not Connected to Project	Action:
Project Token: ABCDEFGHIJ	Last Communication: Not Connected	Connection Status: Not Connected

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



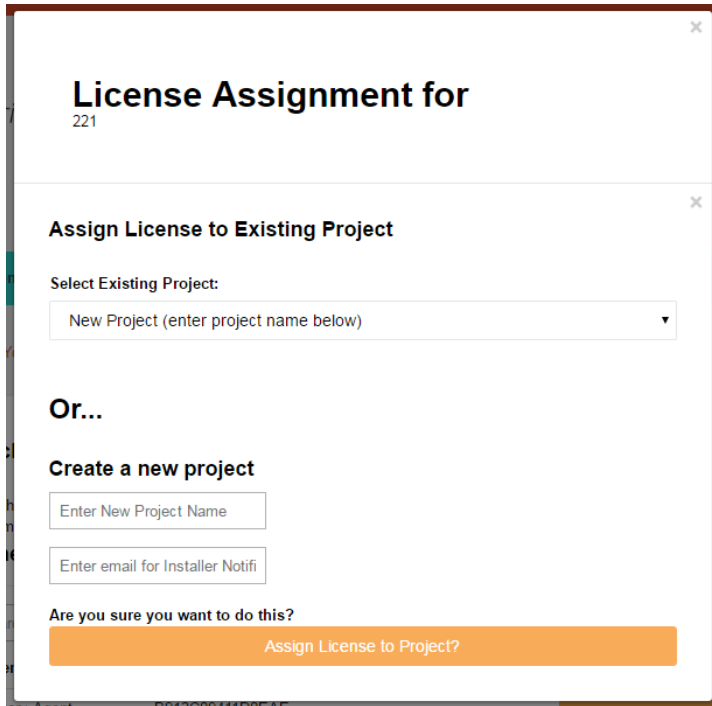
5. Follow the prompts and click on Submit my order



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 ↕
[REDACTED]			Assign to Project

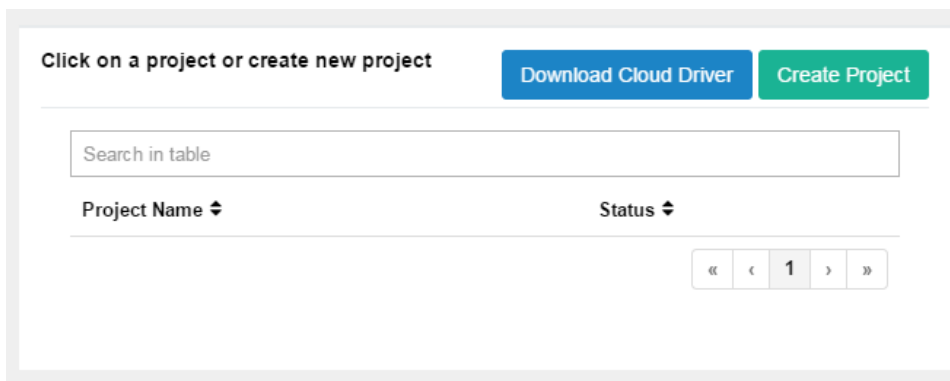
- From here assign the licence to the project we created or if you did not follow that step create a new project



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



- 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"/>