

LIFX Installation and Usage Guide



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chowmainsoft

Contents

Overview	4
Features	5
Important Notice	6
LIFX V3 Setup Instructions	6
Quick Setup	6
LIFX V1 / V2 Setup Instructions	6
LIFX Cloud Setup	6
Quick Setup	6
Settings (Agent V3)	8
Properties	8
Actions	8
Settings (Light V3)	8
Properties	8
Actions	9
Commands	9
Settings (Master V1/V2)	10
Properties	10
Actions	10
Commands	10
Settings (Light / Group V2)	11
Properties	11
Actions	11
Commands	11
Settings (Light V1)	12
Properties	12
Actions	12
Commands	12
Settings (Group V1)	13
Properties	13
Actions	13
Commands	13

FAQ.....	14
What is the difference between V3 and our V2 driver?.....	14
What is the difference between the V2 driver and the depreciated group and light drivers.....	14
Why is this better than other RGB solutions?.....	14
Where can I purchase this product from?.....	14
What hardware will this work on?.....	15
Licensing.....	16
Creating a Project on Driver Central.....	16
Purchasing a Driver Licence.....	17
Install the driverCentral cloud driver.....	18
Install Chowmain driver.....	19
Developer Information.....	20
Support.....	21
Change Log.....	22
Version 20220824 - 2022-AUG-24.....	22
Version 20220812 - 2022-AUG-12.....	22
Version 20220803 - 2022-AUG-03.....	22
Version 20220727 - 2022-JUL-27.....	22
Version 20220725 - 2022-JUL-25.....	22
Version 20220609 - 2022-JUN-09.....	23
Version 20220608 - 2022-JUN-08.....	23
Version 20220602 - 2022-JUN-02.....	23
Version 20210119 - 2021-JAN-19.....	24
Version 20190402 - 2019-APR-02.....	24
Version 20190116 - 2019-JAN-16.....	24
Version 20190103 - 2019-JAN-03.....	25

Overview

LIFX (pronounced Life-X) is a line of energy-efficient, multi-color, Wi-Fi enabled LED lighting products that can be controlled via a Wi-Fi equipped device such as a smartphone or smartwatch. The LIFX driver for Control4 allows for two way control and feedback of all LIFX products including bulbs, strips, beams, tiles and more.

With our new Control4 OS 3.3 V3 driver, Chowmain's driver now uses local connections, supports ColorWheel and white temperature selector and includes our one-touch setup in agent.

Features

- Direct Control using Network (V3 only. V2/V1 requires cloud)
- Two way control and feedback.
- Automatic Detection of Devices
- Brightness control
- Color Temperature control
- Color control
- One Touch Install and Configuration of lights (V3 only / OS3.3+ Required)
- ColorWheel Support (V2/V3 Driver Only / OS3.3+ required)
- Graphical White Temperature Selection (V2/V3 Driver Only / OS3.3+ Required)
- Infrared Light Brightness Control (V3 Driver Only / OS3.3+ Required)
- HEV disinfection support (V3 Driver Only / OS3.3+ Required)

Important Notice

V3 uses local network / UDP for communications. V2 and V1 however utilises the LIFX cloud API and loss of internet for V1/V2 will interrupt communications.

LIFX V3 Setup Instructions

Quick Setup

1. Ensure your Control4 controller is running OS 3.3 or later
2. Set up all your LIFX devices using the LIFX phone app.
3. Use the Add Or Update Driver Or Agent menu to add all C4Z files to your Control4 Controller. This must be done on all new controllers (even if Composer shows that the driver is already installed). Failure to do so will prevent the LIFX driver from working.
4. Please note, older LIFX drivers may interfere with discovery on V3, and should be removed.
5. Add LIFX V3 Agent to the project and Get Latest Devices
6. Run Auto Setup
7. In the event that problems are encountered, use the Display Diagnostics action and check the LUA window for more information

LIFX V1 / V2 Setup Instructions

We do NOT recommend V1/V2 for new installations. Our 3rd Generation driver is strongly recommended instead

LIFX Cloud Setup

1. Download LIFX app from the App Store or Google Play
2. Connect your mobile phone to your wireless network
3. Launch LIFX and follow the in-app instructions to register a LIFX account.
4. Follow the instructions to connect the LIFX lights to your network and to the LIFX account.
5. Once this is complete you will need to obtain a LIFX personal access token. This is done via the following
website: <https://cloud.lifx.com/settings>
6. Once you have logged into the site click on Generate New Token.
7. Give the token a meaningful label and click on Generate.
8. Take note of the token. There is no method to retrieve this after generation so save it somewhere safe for
future use

Quick Setup

1. It is strongly recommended to be running OS3.3+ or later. OS3.3+ is required for our LIFX V2 driver
2. Add **LIFX Master** driver to project

3. In **LIFX Master** enter your LIFX Personal Access Token
4. In Actions, select Auto Setup to create connections and bindings required for lights
5. If using OS3.3+ (Strongly Recommended)
 1. Add one **LIFX Light / Group (V2)** per light and group
6. Otherwise
 1. It is strongly recommended to upgrade to OS3.3+ and use the instructions in (5)
 2. Or. Add one **LIFX Group** driver per group
 3. Add one **LIFX Light** driver per light
7. Bind lighting connections as required

** The integrator agrees and acknowledges that Chowmain takes no responsibility due to failures if LIFX is used for security purposes. If used for security purposes the integrator agrees that any liability for such security failures falls on the integrator and/or end-user. The integrator agrees to indemnify Chowmain for any loss or damage suffered due to any indirect, incidental and/or consequential damages, lost/stolen property, lost business, lost/stolen savings, lost profits or revenues resulting from a breach of this agreement and shall include all costs, expenses and reasonable attorney's fees incurred.**

Settings (Agent V3)

Properties

- Enable Auto Discovery: Enables or Disables Auto-Detection of devices automatically.
- Default AutoSetup Room: Default Room for Devices to be added into during Auto-Setup
- Auto-Detection Poll Rate (Seconds): Detection Rate of new devices and self-healing if Enable Auto-Discovery is enabled.
- Total Devices: Total auto-discovered devices
- Provisioned Devices: Total devices which have at least 1 configured driver in Control4
- Unprovisioned Devices: Total devices which do not have a configured driver in Control4
- Total Drivers: All V2 Outlet and Light LIFX Drivers (excluding Agent) added to the Control4 project
- Invalid Drivers: Drivers in Control4 which have an undiscovered/invalid MAC Address set in Properties.
- Provisioned Drivers: Drivers in Control4 which have a valid MAC Address
- Unprovisioned Drivers: Drivers in Control4 which haven't been setup yet

Actions

- Auto Setup: Automatically Adds drivers and configures all unprovisioned LIFX devices in the Control4 Project
- Display Diagnostics: Detects common issues and displays faults to LUA window
- Display Known Devices: Displays a directory of all known LIFX devices on the network and LIFX V3 Drivers, their capabilities and provisioning states.
- Get Latest Devices: Attempts Auto-Discovery of Devices on Network
- Submit Diagnostics: Submits diagnostics information to Chowmain and provides a ticket ID to the LUA window which can be provided to Chowmain staff when requesting support

Settings (Light V3)

Properties

- Connection Status: Connectivity Status of light to Control4
- Auto Rename Device: Whether to Auto-Rename Driver using LIFX name
- Power On Behavior: Whether to power on to last state, or full brightness
- Select Device From List: Requires Agent to be installed and have auto-discover turned on. Automatically sets up driver using details discovered using Agent
- Device MAC Address: Used by LIFX V3 Agent for Self-Healing of IP Addresses
- IP Address: IP Address Required for Connection to LIFX Light

Capabilities

Detected Model: Detected Model of the device

Select Model From List: Used to setup capabilities of the Light driver automatically. Most people want to use

Auto Setup

Buttons Supported: Whether the device supports buttons

Color Supported: Whether the device supports Color

CCT Temperature Min: Minimum Color Temperature of the device in Kelvin

CCT Temperature Max: Maximum Color Temperature of the device in Kelvin

Chain Supported: The device supports a 2d matrix of zones and also has a chain of devices working as one.

Extended MultiZone Supported: The device supports extended multizone messages

HEV Supported: The device outputs High energy Visible Light to kill harmful bacteria

Infrared Supported: The device has the ability to output infrared light. Generally used for security applications

Matrix Supported: The device supports a 2d matrix of zones

Multizone Supported: Supports Multizone messages

Relays Supported: Supports Relays

Actions

- Display Diagnostics: Detects common issues and displays faults to LUA window
- Reboot Device: Reboot the Light / Device. Generally used for troubleshooting and diagnostics
- Set Device Label: Modifies the name of the device in Control4 and the LIFX Application
- Submit Diagnostics: Submits diagnostics information to Chowmain and provides a ticket ID to the LUA window which can be provided to Chowmain staff when requesting support

Commands

- Reboot Device: Reboot the Light / Device. Generally used for troubleshooting and diagnostics
- Set HEV Level: Sets the power state and duration of the high-energy visible (HEV) light (if available) used for disinfection.
- Set Infrared Level: Sets the brightness level of the Infrared light (if available). Generally used for Security Camera applications

Settings (Master V1/V2)

Properties

- Post Action Feedback Check Delay (Milliseconds): Optimisation to improve feedback. Re-check's feedback a period after sending a command (Milliseconds). If set too low, commands may not have been yet processed
- Global Poll Rate (Seconds): Poll for feedback rate (seconds)
- Fast: Enables Fast Feedback. Server option which skips validation checks to improve server feedback
- Status: Connectivity Status to LIFX Cloud
- Personal Access Token: Personal Access Token to authenticate connection to server

Actions

- Auto Setup: Automatically create bindings/connections for lighting drivers to connect to
- Display Diagnostics: Detects issues and displays faults to lua window
- Submit Diagnostics: Submits diagnostics information to Chowmain and provides a ticket ID to the LUA window which can be provided to Chowmain staff when requesting support

Commands

- Execute Scene: Executes LIFX lighting scene

Settings (Light / Group V2)

Properties

- Auto Rename Device: Auto-Rename Control4 Device using LIFX name
- Model: Model of LIFX light
- Connection Status: Connectivity Status of light to LIFX Cloud
- Power: Current Power Status of light
- Brightness: Current Brightness of Light
- Kelvin: White Temperature Setting of Light (in Kelvin)
- Hue: Color Hue
- Saturation: Color Saturation
- Effect: Current Effect Setting of light

Actions

- Display Diagnostics: Detects issues and displays faults to lua window
- Submit Diagnostics: Submits diagnostics information to Chowmain and provides a ticket ID to the LUA window which can be provided to Chowmain staff when requesting support

Commands

- None available or required. Use native OS 3.3+ proxy commands for control

Settings (Light V1)

Properties

- Auto Rename Device: Auto-Rename Control4 Device using LIFX name
- model: Model of LIFX light
- connected: Connectivity Status of light to LIFX Cloud
- power: Current Power Status of light
- brightness: Current Brightness of Light
- kelvin: White Temperature Setting of Light (in Kelvin)
- hue: Color Hue
- saturation: Color Saturation
- effect: Current Effect Setting of light

Actions

- Display Diagnostics: Detects issues and displays faults to LUA window
- Turn Light Off: Turns Light Off
- Turn Light On: Turns Light On
- Submit Diagnostics: Submits diagnostics information to Chowmain and provides a ticket ID to the LUA window which can be provided to Chowmain staff when requesting support

Commands

- SET_RGB_VALUE: Set RGB Value efficiently as a single command. It is STRONGLY recommended to use this command when setting RGB values
- SET_COLOR_TEMP: Set Color Temperature efficiently as a single command. It is STRONGLY recommended to use this command when setting White Temperature values

Settings (Group V1)

Properties

- Auto Rename Device: Auto-Rename Control4 Device using LIFX name
- model: Model of LIFX light
- connected: Connectivity Status of light to LIFX Cloud
- power: Current Power Status of light
- brightness: Current Brightness of Light
- kelvin: White Temperature Setting of Light (in Kelvin)
- hue: Color Hue
- saturation: Color Saturation
- effect: Current Effect Setting of light

Actions

- Display Diagnostics: Detects issues and displays faults to LUA window
- Submit Diagnostics: Submits diagnostics information to Chowmain and provides a ticket ID to the LUA window which can be provided to Chowmain staff when requesting support

Commands

- SET_RGB_VALUE: Set RGB Value efficiently as a single command. It is **STRONGLY** recommended to use this command when setting RGB values
- SET_COLOR_TEMP: Set Color Temperature efficiently as a single command. It is **STRONGLY** recommended to use this command when setting White Temperature values

FAQ

What is the difference between V3 and our V2 driver?

- As per popular request, V3 has been completely rewritten from the ground up, to support control via LAN instead of relying on LIFX's cloud servers.
- Faster performance. Latency of commands is reduced from seconds to milliseconds
- More reliable communication with the ability to resend unacknowledged commands
- Infrared light brightness support via command (compatible hardware required)
- HEV disinfection support to kill bacteria and sanitise surfaces (compatible hardware required)
- Modern Diagnostics / Troubleshooting infrastructure
- Significantly faster deployment. New AutoSetup system will automatically install drivers for devices, and Personal Access Token is no longer required.
- Similar to V2, V3 also supports the new ColorWheel and white temperature selector (requires OS 3.3 or later)

Please note:

1. Because of the breadth of the LIFX changes, LIFX V3 is not compatible with LIFX V2/V1, and it is strongly recommended to replace all old drivers
2. Due to deficiencies in the LIFX Group LAN/UDP protocol, native LIFX groups are not supported. Advanced Lighting scenes may be used as an alternative (and native C4 scenes are expected to be implemented in the future)

What is the difference between the V2 driver and the depreciated group and light drivers

LIFX V2 Driver requires OS3.3+ to operate correctly and is recommended for both current and future installations

- Native ColorWheel Support
- Native Color Temperature Support
- Improved Color Scene support
- Support for both LIFX Groups and individual LIFX Lights. Separate drivers are no longer required.

Why is this better than other RGB solutions?

- This is an extremely affordable solution which does not require an additional hub to operate.
- We have control over color, saturation, temperature, brightness.
- Two way control / feedback. If the customer uses the original application Control4 gets the changes.

Where can I purchase this product from?

- LIFX can be purchased from various retailers such as Best Buy and Amazon.

- <https://www.lifx.com/>

What hardware will this work on?

- This will work on all LIFX models.

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:

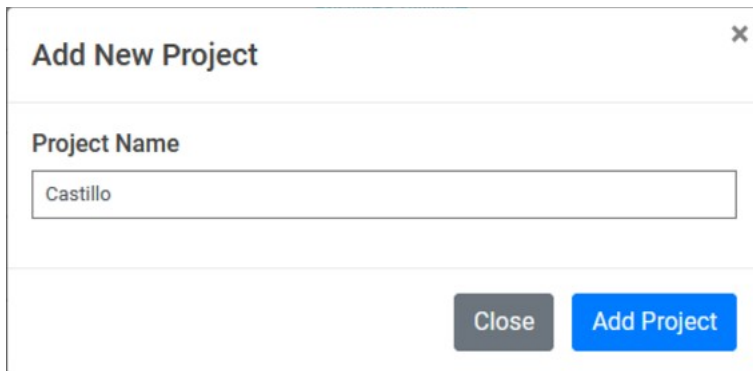
1) On driverCentral, purchase a license and register it to your project

1) If the driver is not already installed in your project, download it and install it

1) 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



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

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

8. 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.

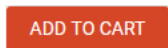
Close

9. Click **Close**

Purchasing a 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 **Add to Cart**



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

🔍
👤
🛒

BenQ universal projector

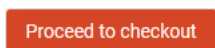
2 x \$70.00

Hikvision

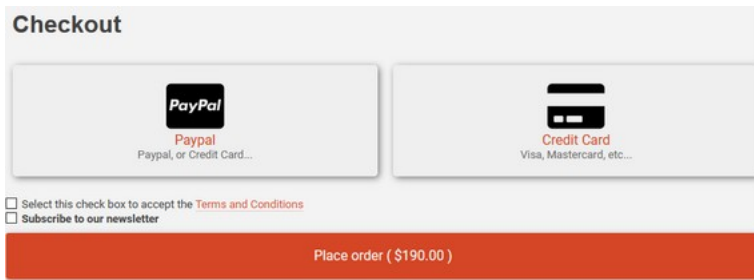
1 x \$50.00

View cart

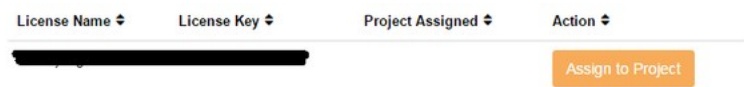
4. Confirm that your order is correct and click on **Proceed to checkout**



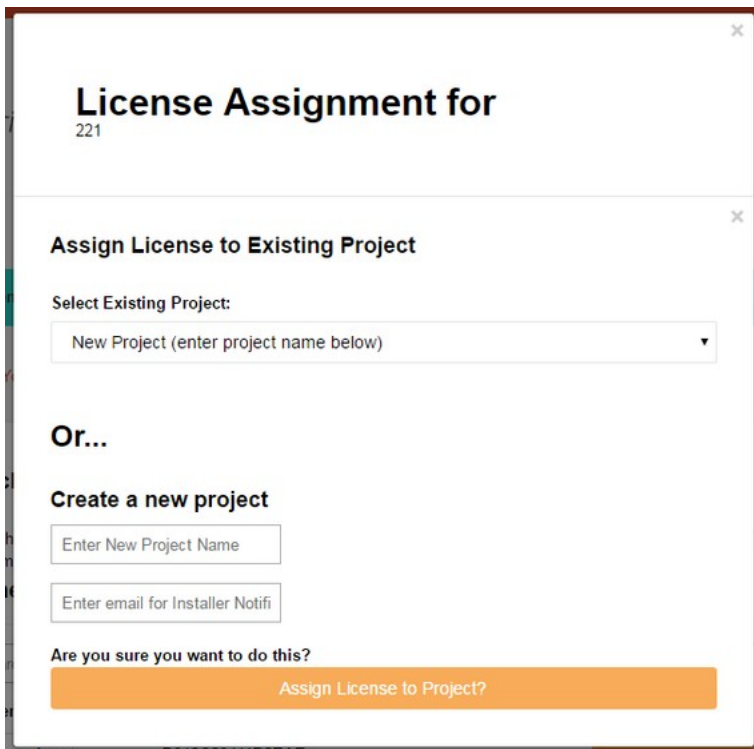
5. Choose your payment option, provide the relevant details and click **Place order**



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

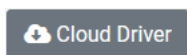


7. From here assign the licence to the project we created or if you did not follow that step create a new project



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**



- 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 earlier
- Click **Actions** tab
- Click **Check Drivers**

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"/>

Developer Information



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

Support

- Phone Support

Want to talk to us? We have 3 dial in numbers and two support desks that span multiple timezones.

Support Center	Hours of Operation	Phone Number
Australian Support Desk	8:30AM – 5:00PM Australian Eastern Time	+61 3 9028 6999
New Zealand Support Desk	10:30AM – 7:00PM New Zealand Time	+64 9 889 4000

- Online Chat

Prefer to chat to us online? We also offer live chat at our American support desk.

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

- Support Ticket Submission

Submit a ticket and get a response within the hour from our support desk during the hours of operation or next day if out of hours

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

Change Log

Version 20220824 - 2022-AUG-24

- Fix crash detected by Automated Testing. This crash may cause new rooms in project to not be correctly added to the list of AutoSetup Rooms in some circumstances (Agent V3)
- Update Documentation to use our new documentation system (All)

Version 20220812 - 2022-AUG-12

- Major Improvements to Performance and responsiveness. Requires Controller Reboot (Light V3, Agent V3)

Version 20220803 - 2022-AUG-03

- Improve Logging, Diagnostics and Troubleshooting (All)
- Fix Minor Crash (Light V3)

Version 20220727 - 2022-JUL-27

- Fix Bug with Room detection (Agent V3)

Version 20220725 - 2022-JUL-25

By popular request, we went back to the drawing board and are proud to introduce our new LIFX V3 drivers. LIFX V3 is our new from-scratch rewritten LIFX driver. Designed for OS 3.3 or later, it now utilises UDP / Local Network Connections for improved performance and reliability, and no longer requires the cloud. Due to the large number of changes required, it is not backwards compatible with our existing drivers, and they will need to be replaced entirely.

Some of the new benefits over V2/V1 includes:

- Faster performance. Latency of commands is reduced from seconds to milliseconds
- More reliable communication with the ability to resend unacknowledged commands
- Infrared light brightness support via command (compatible hardware required)
- HEV disinfection support to kill bacteria and sanitise surfaces (compatible hardware required)
- Modern Diagnostics / Troubleshooting infrastructure
- Significantly faster deployment. New One-Touch Auto-Setup will install drivers and setup devices. Personal Access Token is no longer required.
- And many new features

Our new driver is composed of 2 parts:

LIFX V3 Agent (Optional)

- Provides device management, IP Healing capabilities and troubleshooting
- Detect and display information on all devices
- One-Touch Automatic setup of new drivers
- This new Agent replaces the original Master Driver. Tokens are not required for local control (for many installers, it will be plug and play)

LIFX V3 Light

- Provides Lighting control
- Auto-Detection of lighting capabilities, and self-setup of the device
- This new driver requires OS 3.3 or later.

Please note:

1. Because of the breadth of the LIFX changes, LIFX V3 is not compatible with LIFX V2/V1, and it is strongly recommended to replace all old drivers
2. Due to deficiencies in the LIFX Group LAN/UDP protocol, native LIFX groups are not supported. Advanced Lighting scenes may be used as an alternative (and native C4 scenes are expected to be implemented in the future)

We would like to thank everyone who assisted with testing including:

- All of our Beta testers
- Tony Audia
- TundraSonic
- Mitch Greenfield
- Carlos Kam

Version 20220609 - 2022-JUN-09

- More defence against Code crashes. Bad feedback won't break feedback for all lights (Master)
- Fix Crash caused when Lights are added after initial setup. Detected by Automated code tests (Master)

Version 20220608 - 2022-JUN-08

- Fix Voice Scene / Alexa support (Light) - Thanks Trey Nolan / Eldon

Version 20220602 - 2022-JUN-02

This is a huge new release with some major new changes

- New OS3.3.0 compliant Lighting driver, with Lightwheel support (Light V2).
 - This new driver supports both groups and lights
 - Native Color Support

- Hue / CCT button links for integration with SnapAV's Keypads or other compatible hardware.
-- Thanks Kenton Matthews
- Add Power On Behavior to adjust default Power on Mode (Light V2) - Thanks Kenton Matthews
- Improved Ramping System (Light V2) -- Thanks Kenton Matthews
- Load Groups
- Lights can now be used in combination with Control4's Dimmer Load Group Driver for control of multiple lights with a single driver. Please note, color control is not supported at this time
- New Diagnostics System (all)
 - Improved Debugging on all drivers to assist with troubleshooting
 - Self-diagnose issues. Simply use the Display Diagnostics action built into the driver.
 - Or, for additional assistance, use Submit Diagnostics to send a diagnostic report to the Chowmain support team, which you can use in your support ticket.
- Fix Crash on Feedback for original V1 Lighting Driver (Light)
- Improve Handling of bad feedback (Light)
- Fix Turn On / Off Light Action (Light) -- Thanks Mitch Greenfield
- Allow Poll Rate To be Set for general polling, and post-action polling to improve performance.
WARNING, setting these rates too fast may lead to Rate Limits being hit on server (Master)
- Fix Minor Crash (Master) - Thanks Mitch Greenfield
- Remove Auto Setup From Group Driver. (Group)
- Modify Button Link Connections. Add Hue / CCT button links. Fix All Button Links (Light V2) -- Thanks Kenton Matthews

Version 20210119 - 2021-JAN-19

- Updated to new Driver Central licensing

Version 20190402 - 2019-APR-02

- Added property to disable auto renaming of device
- Fixed issue effecting ON and OFF proxy commands

Version 20190116 - 2019-JAN-16

- Added support for groups (New slave driver)
- Added support for scenes (Master Driver - programming tab)
- Added support for RGB command via (Light Driver - programming tab)
- Added support for Color Temp command via (Light Driver - programming tab)
- Fixed issue with ramp rates
- Fixed issue where driver would unhide proxies in all rooms (now it only hides proxies).
- Fixed issue with CLICK_RAMP_RATE_UP, CLICK_RAMP_RATE_DOWN, PRESET_LEVEL

Version 20190103 - 2019-JAN-03

- Initial Version