

# Epson Universal Projector Installation and Usage Guide



Date: Tuesday, 7 December 2021  
Authors: Alan Chow

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## Overview

Epson provides a universal API (ESC/VP21) for their range of projectors for both IP and RS232 based controls.

The Chowmain Epson universal projector driver for Control4 provides seamless integration of all Epson projectors via this API and allows you to control all the standard features you would expect with a projector and more.

## Usage Scenarios

- The driver has the ability to automatically send notifications on warnings and errors. This makes it easily for integrators to proactively service their customers when the projector is due for a bulb change or requires immediate attention.
- On projectors that have lens memory you can recall these lens memory positions via the driver's programming commands. This is extremely useful if you combine it with something like the Chowmain Kaleidescape driver which can provide you with the aspect ratio feedback of the movie. Automate lens positions to suit the movie you are watching to ensure that 235 movies fit the screen perfectly without manual intervention!
- Have the screen blank or lens closed until certain conditions, like theatre curtains being fully opened, are met
- Dynamically set the color temperature and picture modes depending on the input source

## Features

- Bi-directional control and feedback
- Both RS232 and IP based integration
- Lamp hour feedback
- Error feedback
- Automatic email and push notification on errors (requires 4sight)
- Audio Controls (Volume Up, Volume Down)
- Power management
- Source selection
- Commands
  - Screen Mirroring
  - AV Mute
  - Freeze
  - 3D
  - Enhance 4K
  - HDR
  - HDR Color Space
  - Aspect Ratio
  - Color Mode
  - Luminance
  - Image Memory (Recall / Register / Delete)
  - Lens Position (Recall / Register / Delete)

## Change Log

### Version 20210517

Initial release

## Adding the driver to your project

**NOTE:** If you are using IP control please make sure that you have set the projector standby mode to 'communications on' otherwise you will lose control when the projector turns off.

1. Launch the **Composer Pro** and connect to your project
2. In the **System Design** page select the **Search** tab on the right hand side
3. Search for **Epson**
4. Double click the **Epson Universal Projector** driver.
5. Click on the **Connections** tab and select the **Epson Universal Projector** driver.
6. Bind appropriate AV inputs and outputs for the projector

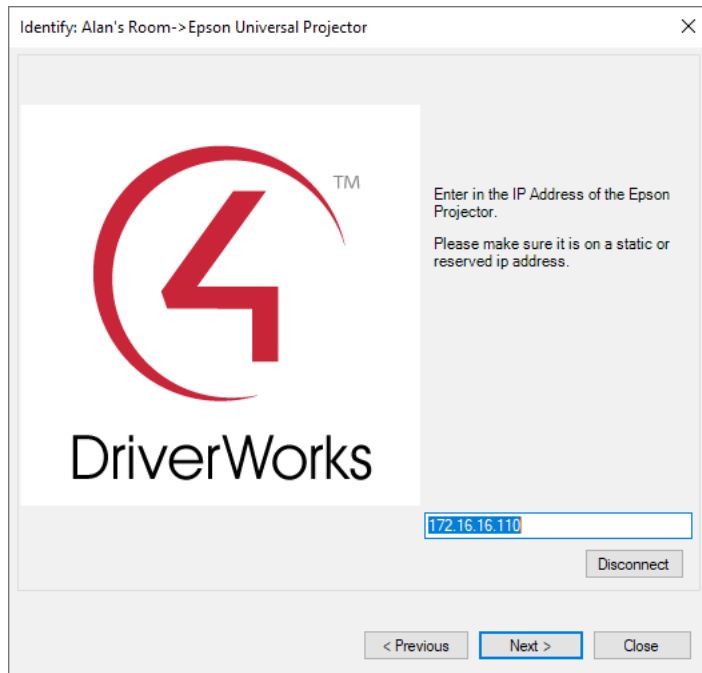
Epson Universal Projector				
Name	Type	Connection	Input/Output	Connected To
EasyMP (USB)	Video	HDMI	Input	
EasyMP (LAN)	Video	HDMI	Input	
EasyMP (Screen Mirroring)	Video	HDMI	Input	
DVI/HDMI Advanced - HDMI 2	Video	HDMI	Input	
DVI/HDMI Advanced - Digital-RGB	Video	HDMI	Input	
DVI/HDMI Advanced - Digital-RGB	Video	DVI	Input	
DVI/HDMI Advanced - Digital-RGB	Video	COMPONENT	Input	
DVI/HDMI Advanced - Digital-RGB	Video	VGA	Input	
DVI/HDMI Advanced - RGB-Video	Video	HDMI	Input	
DVI/HDMI Advanced - RGB-Video	Video	DVI	Input	
DVI/HDMI Advanced - RGB-Video	Video	COMPONENT	Input	
DVI/HDMI Advanced - RGB-Video	Video	VGA	Input	
DVI/HDMI Advanced - YCbCr	Video	HDMI	Input	
DVI/HDMI Advanced - YCbCr	Video	COMPONENT	Input	
DVI/HDMI Advanced - YCbCr	Video	VGA	Input	
DVI/HDMI Advanced - YCbCr	Video	DVI	Input	
DVI/HDMI Advanced - YPbPr	Video	COMPONENT	Input	
DVI/HDMI Advanced - YPbPr	Video	DVI	Input	
DVI/HDMI Advanced - YPbPr	Video	VGA	Input	
DVI/HDMI Advanced - YPbPr	Video	HDMI	Input	
Input 5 - (HDMI 3)	Video	HDMI	Input	
Input 5 - (Digital-RGB)	Video	HDMI	Input	
Input 5 - (Digital-RGB)	Video	DVI	Input	
Input 5 - (Digital-RGB)	Video	VGA	Input	
Input 5 - (Digital-RGB)	Video	COMPONENT	Input	
Input 5 - (RGB-Video / SCART)	Video	COMPONENT	Input	
Input 5 - (YCbCr)	Video	COMPONENT	Input	
Input 5 - (YPbPr)	Video	COMPONENT	Input	
Extended HDMI (WirelessHD)	Video	HDMI	Input	
Extended HDMI (Digital-RGB)	Video	HDMI	Input	
Extended HDMI (Digital-RGB)	Video	COMPONENT	Input	
Extended HDMI (Digital-RGB)	Video	DVI	Input	
Extended HDMI (Digital-RGB)	Video	VGA	Input	
Extended HDMI (Digital-RGB)	Video	COMPOSITE	Input	
Extended HDMI (Digital-RGB)	Video	SVIDEO	Input	
Extended HDMI (RGB-Video)	Video	HDMI	Input	
Extended HDMI (RGB-Video)	Video	COMPONENT	Input	
Extended HDMI (RGB-Video)	Video	VGA	Input	
Extended HDMI (RGB-Video)	Video	DVI	Input	
Extended HDMI (RGB-Video)	Video	COMPOSITE	Input	
Extended HDMI (RGB-Video)	Video	SVIDEO	Input	
Extended HDMI (YCbCr)	Video	HDMI	Input	
Extended HDMI (YCbCr)	Video	COMPONENT	Input	
Extended HDMI (YCbCr)	Video	VGA	Input	
Extended HDMI (YCbCr)	Video	DVI	Input	
Extended HDMI (YPbPr)	Video	HDMI	Input	
Extended HDMI (YPbPr)	Video	DVI	Input	
Extended HDMI (YPbPr)	Video	VGA	Input	
Extended HDMI (YPbPr)	Video	COMPONENT	Input	
Audio/Video Outputs				
OUTPUT	Audio	STEREO	Output	
OUTPUT	Audio	SPEAKER	Output	
OUTPUT	Audio	DIGITAL_COAX	Output	
OUTPUT	Audio	DIGITAL_OPTICAL	Output	
Control Inputs				
Serial 232	Control	RS_232	Input	EA-1->SERIAL 1

7. If you are using serial please bind the serial port.

Control Inputs				
Serial 232	Control	RS_232	Input	EA-1->SERIAL 1

8. If you are using network click on the '**Network tab**', double click on the **Epson Universal Projector driver** and enter in the **IP address**. Please make sure that the IP address is a static or reserved IP address.





## 9. Select System Design

10. Click on the **Epson Universal Projector** driver. The description below details the properties functionality.

- **Power On Delay (seconds)** - The amount of time the driver needs to wait after a power on command is issued before subsequent commands.
- **Power Off Delay (seconds)** - The amount of time the driver needs to wait after a power off command is issued before subsequent commands.
- **On Proxy Notification** - When should the driver fire the Off event in programming. Options are Warming Up or On.
- **Off Proxy Notification** - When should the driver fire the Off event in programming. Options are Cooling Down or Standby.
- **Lamp Hour Warning** - When the lamp hours reach this number it will fire an event and also send a notification (if automatic notifications is enabled)
- **Automatic Notifications (4Sight Required)** - The projector will provide feedback for certain errors. This option will notify you via push, email or both. This functionality relies on a valid 4sight licence. Errors are listed later in the events section of this document.
- **Email Address** - This is the email address for the automatic notifications.

11. Select **File** then **Refresh Navigators**

File	Driver	Go	Tools	Help
Clear Project...				Ctrl+N
Load Project...				Ctrl+O
Cloud Management...				
Backup to Cloud...				
Connect to Director...				
Disconnect from Director				
Back Up				Ctrl+S
Back Up As...				
Refresh				F5
Refresh Navigators				Shift+F5
Validate Project				Ctrl+F5
Exit				

12. Congratulations you have set up the projector

## Device Commands

The Epson driver has the following device commands. Note that availability of commands is dependent on the projector itself so please refer to the Projector's manual to verify that the option is on that particular model.

Command Name	Command Parameters
Screen Mirroring	STATE- ON / OFF
AV Mute	STATE- ON / OFF
Freeze	STATE- ON / OFF
3D	SETTING- 3D Display On, 3D Display Off, 2D to 3D Conversion Off, 2D to 3D Conversion Low, 2D to 3D Conversion Middle, 2D to 3D Conversion High, 3D Format Auto, 3D Format 2D, 3D Format Side by Side, 3D Format Top and Bottom, 3D Brightness Low 3D Brightness Middle, 3D Brightness High
Enhance 4K	SETTING- ON / OFF
3D Invert Sync	MODE- ON / OFF
HDR	SETTING- Auto, SDR, HDR10, HLG
HDR Color Space	SETTING- Auto, BT709, BT2020
Aspect Ratio	RATIO- Normal, 4:3, 16:9, Auto, Full, Zoom, Native, Wide, Anamorphic, H Squeeze
Color Mode	MODE- Natural, Living, Cinema, Cinema 2, Cinema Day, Cinema Night, Digital Cinema, Dynamic, 3D Cinema, 3D Dynamic, Theatre Black1, Theatre Black2, HD, Silver Screen, Game, Bright Cinema, Black and White Cinema, Vivid
Luminance	MODE- Normal, Medium, Eco, Extended
Recall Image Memory	MEMORY - 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A
Register Image Memory	MEMORY - 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A
Delete Image Memory	MEMORY - 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A
Recall Lens Position	MEMORY - 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A
Register Lens	MEMORY - 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A

Command  
Name

Command Parameters

Position

Delete Lens  
Position

MEMORY - 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A

# Device Feedback

## Events

The Epson driver has the following events. Note that availability of events is dependent on the projector itself so please refer to the Projector's manual to verify that the option is on that particular model.

- There is no error or the error is recovered
- Fan error
- Lamp failure at power on
- High internal temperature error
- Lamp error
- Open Lamp cover door error
- Cinema filter error
- Electric dual-layered capacitor is disconnected
- Auto iris error
- Subsystem Error
- Low air flow error
- Air filter air flow sensor error
- Power supply unit error (Ballast)
- Shutter error
- Cooling system error (peltiert element)
- Cooling system error (Pump)
- Static iris error
- Power supply unit error (Disagreement of Ballast)
- Exhaust shutter error
- Obstacle detection error
- IF board discernment error
- Standby Mode
- On
- Warm Up
- Cool Down
- Abnormality standby
- USB Power Standby
- WirelessHD Standby
- Lamp Hour Warning

## Variables

The below variables return the current value/state of the variable in question

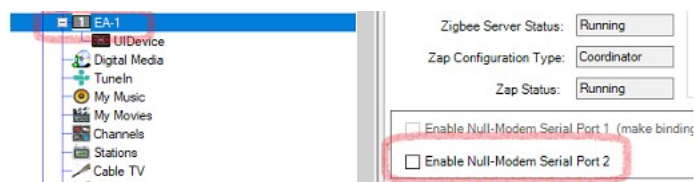
This can be useful for conditional logic

- Lamp Hours

## FAQ

### Why is my projector not responding?

- Confirm that you are using a NULL modem cable
- Do not use a gender-bender adapter
- You can also try, "Enable Null-Modem Serial Port" which is in the Advanced Properties of the Controller
- If you are using IP control please make sure that you have set the projector standby mode to 'communications on' otherwise you will lose control when the projector turns off.



### What projectors does this driver work on?

- This driver utilises Epson's universal API. It is standard across all models for both IP and serial communications.

## 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:

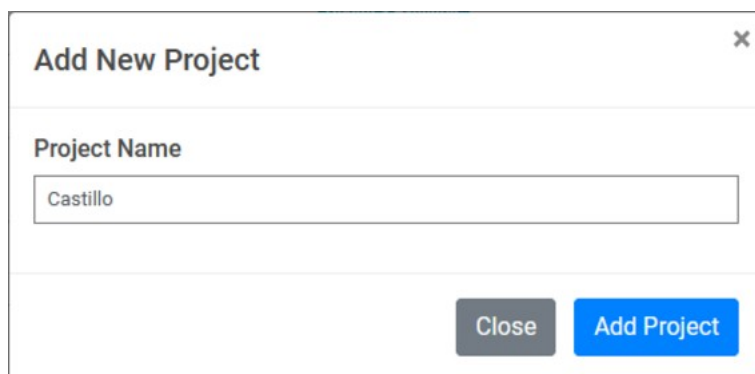
1) On driverCentral, purchase a license and register it to your project

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




The screenshot shows a modal dialog titled "Add New Project". It contains a text input field labeled "Project Name" with the value "Castillo" entered. Below the input field are two buttons: "Close" and "Add Project".

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

Project	Status	Created
 Castillo	<span style="background-color: yellow;">Unassigned Project</span>	1999-12-31 23:59:56

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

Castillo 




Project Token:  
ABCDEFG012

MAC:  
000FFF123456

IP:  
1.2.3.456

Connection Status:  
Offline

Last Seen:

Actions:  
  

There are no drivers attached to this project.

Close

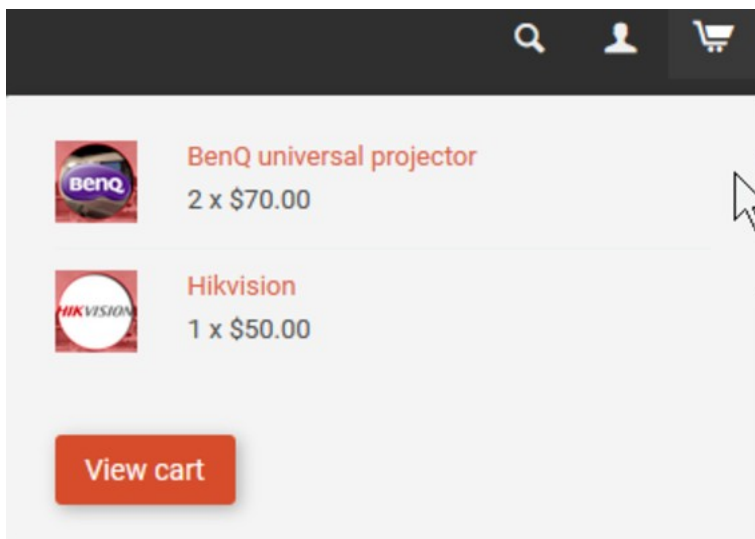
- Click **Close**

## Purchasing a Driver Licence

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

ADD TO CART

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



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

Proceed to checkout

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



**Checkout**

**Paypal**  
Paypal, or Credit Card...

**Credit Card**  
Visa, Mastercard, etc...

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

☐ Subscribe to our newsletter

**Place order ( \$190.00 )**

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

License Name	License Key	Project Assigned	Action
[Redacted License Information]			<b>Assign to Project</b>

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

**License Assignment for**  
221

**Assign License to Existing Project**

Select Existing Project:

New Project (enter project name below)

**Or...**

**Create a new project**

Enter New Project Name

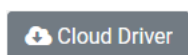
Enter email for Installer Notifi

Are you sure you want to do this?

**Assign License to Project?**

## Install the driverCentral cloud driver

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



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

Cloud Status	Please enter cloud project token below...
Project Information	(1) Total, (0) Licensed, (0) Trials, (1) Expired, (0) Updates.
Driver Version	1001
Project Token	<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"/>

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

## Install Chowmain driver

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

Activation Status	Update Available!!! License Activated
Driver Version	1002
Driver Information	Navigate to connections tab and make serial binding
Automatic Updates	Off <input type="button" value="v"/>