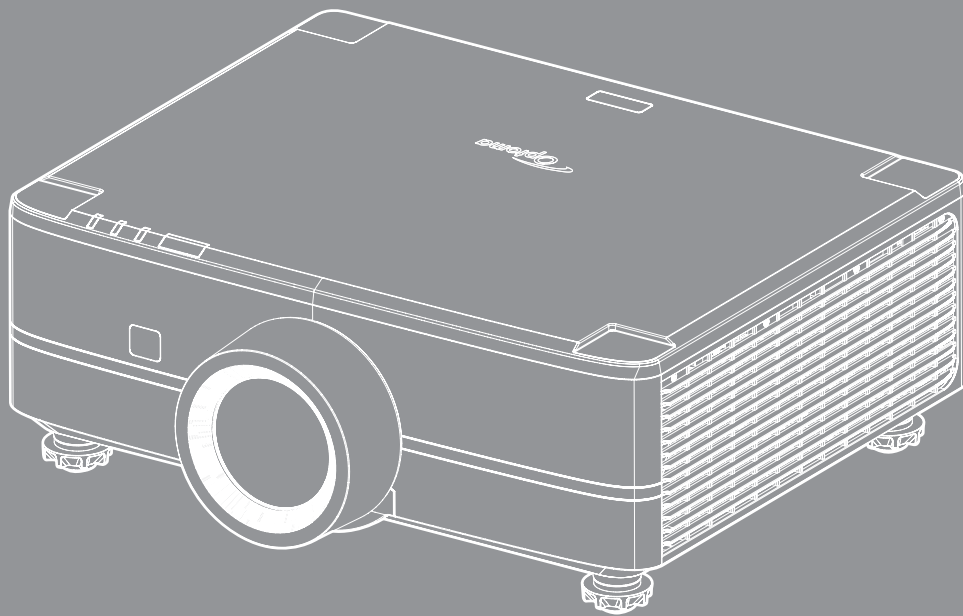


# DLP® Projector





# TABLE OF CONTENTS

<b>SAFETY</b> .....	<b>4</b>
<i>Important Safety Instruction</i> .....	4
<i>Laser Radiation Safety Information</i> .....	6
<i>Product Safety Labels and Location</i> .....	7
<i>3D Safety Information</i> .....	8
<i>Cleaning the Lens</i> .....	8
<i>Copyright</i> .....	9
<i>Disclaimer</i> .....	9
<i>Trademark Recognition</i> .....	9
<i>FCC</i> .....	9
<i>Declaration of Conformity for EU countries</i> .....	10
<i>WEEE</i> .....	10
<b>INTRODUCTION</b> .....	<b>11</b>
<i>Package Overview</i> .....	11
<i>Standard Accessories</i> .....	11
<i>Product Overview</i> .....	12
<i>Connections</i> .....	13
<i>Keypad</i> .....	14
<i>Remote control</i> .....	15
<b>SETUP AND INSTALLATION</b> .....	<b>17</b>
<i>Connecting Sources to the Projector</i> .....	17
<i>Adjusting the Projector Image</i> .....	18
<i>Adjusting the Projection Image Shift</i> .....	19
<i>Adjusting the Projector's Zoom and Focus</i> .....	22
<i>Adjusting the Projector Position</i> .....	23
<i>Remote Setup</i> .....	24
<b>USING THE PROJECTOR</b> .....	<b>26</b>
<i>Powering On / Off the Projector</i> .....	26
<i>Menu navigation and features</i> .....	28
<i>OSD menu tree</i> .....	29
<i>Image menu</i> .....	39
<i>Display menu</i> .....	44
<i>Device Setup menu</i> .....	47
<i>Input Settings menu</i> .....	52
<i>Audio menu</i> .....	53
<i>Communication menu</i> .....	54
<i>Information menu</i> .....	59

## **ADDITIONAL INFORMATION..... 62**

<i>Compatible Resolutions.....</i>	<i>62</i>
<i>RS232 Port Setting and Signals Connection.....</i>	<i>64</i>
<i>Image Size and Projection Distance.....</i>	<i>65</i>
<i>Ceiling Mount Installation .....</i>	<i>66</i>
<i>IR remote codes .....</i>	<i>67</i>
<i>Troubleshooting.....</i>	<i>69</i>
<i>LED Indicators and Lightning Messages.....</i>	<i>70</i>
<i>Specifications .....</i>	<i>71</i>
<i>RS232 protocol function list.....</i>	<i>73</i>
<i>Optoma global offices.....</i>	<i>81</i>

# SAFETY

	The lightning flash with arrow head within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Please follow all warnings, precautions and maintenance as recommended in this user manual.

## Important Safety Instruction



- Do not stare into the beam, RG2.  
As with any bright source, do not stare into the direct beam, RG2 IEC 62471-5:2015.
- Do not block any ventilation openings. To ensure reliable operation of the projector and to protect from overheating, it is recommended to install the projector in a location that does not block ventilation. As an example, do not place the projector on a crowded surface. Do not put the projector in an enclosure such as a book case or a cabinet that restricts air flow.
- To reduce the risk of fire and/or electric shock, do not expose the projector to rain or moisture. Do not install near heat sources such as radiators, heaters, stoves or any other apparatus such as amplifiers that emits heat.
- Do not let objects or liquids enter the projector. They may touch dangerous voltage points and short out parts that could result in fire or electric shock.
- Do not use under the following conditions:
  - In extremely hot, cold or humid environments.
    - (i) Ensure that the ambient room temperature is within 5°C ~ 40°C (41°F ~ 104°F)
    - (ii) Relative humidity is 10% ~ 85%
  - In areas susceptible to excessive dust and dirt.
  - Near any appliance generating a strong magnetic field.
  - In direct sunlight.
- Do not use the unit if it has been physically damaged or abused. Physical damage/abuse would be (but not limited to):
  - Unit has been dropped.
  - Power supply cord or plug has been damaged.
  - Liquid has been spilled on to the projector.
  - Projector has been exposed to rain or moisture.
  - Something has fallen in the projector or something is loose inside.
- Do not place the projector on an unstable surface. The projector may fall over resulting in injury or the projector may become damaged.
- Do not block the light coming out of the projector lens when in operation. The light will heat the object and could melt, cause burns or start a fire.
- Please do not open or disassemble the projector as this may cause electric shock.
- Do not attempt to service the unit yourself. Opening or removing covers may expose you to dangerous voltages or other hazards. Please call Optoma before you send the unit for repair.
- See projector enclosure for safety related markings.

- The unit should only be repaired by appropriate service personnel.
- Only use attachments/accessories specified by the manufacturer.
- Do not look straight into the projector lens during operation. The bright light may harm your eyes.
- When switching the projector off, please ensure the cooling cycle has been completed before disconnecting power. Allow 90 seconds for the projector to cool down.
- Turn off and unplug the power plug from the AC outlet before cleaning the product.
- Use a soft dry cloth with mild detergent to clean the display housing. Do not use abrasive cleaners, waxes or solvents to clean the unit.
- Disconnect the power plug from the AC outlet if the product will not be used for a long period of time.
- Do not setup the projector in places where it might be subjected to vibration or shock.
- Do not touch the lens with bare hands.
- Remove battery/batteries from remote control before storage. If the battery/batteries are left in the remote for long periods, they may leak.
- Do not use or store the projector in places where smoke from oil or cigarettes may be present, as it can adversely affect the quality of the projector performance.
- Please follow the correct projector orientation installation as non standard installation may affect the projector performance.
- Use a power strip and/or surge protector. As power outages and brown-outs can KILL devices.



**Warning:** Do not remove the earthing pin on the mains plugs. This apparatus is equipped with a three prong earthing type mains plug. This plug will only fit an earthing-type mains socket. This is a safety feature. If you are unable to insert the plug into the mains socket, contact an electrician. Do not defeat the purpose of the earthing plug.

**CAUTION:** This equipment is equipped with a three-pin grounding-type power plug. Do not remove the grounding pin on the power plug. This plug will only fit a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician. Do not defeat the purpose of the grounding plug.



- These requirements apply to consumer products containing button batteries or coin cells batteries. They do not apply to products that by virtue of their dedicated purpose and instructions are not intended to be used in locations where they may be accessed by children, such as products for dedicated professional use or commercial use in locations where children are not normally or typically present.
- Ground the power cord:
  - This device is designed to be used with the power cord grounded. Failure to ground the power cord may result in electric shock. Ensure the power cord is properly grounded and directly connected to a wall outlet.
  - Do not use a 2-pin adapter.
- Disclaimer: Operating this equipment in residential areas may cause radio interference.

# Laser Radiation Safety Information

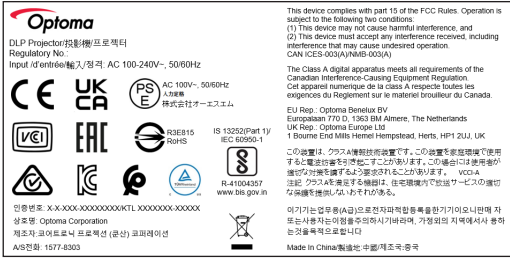
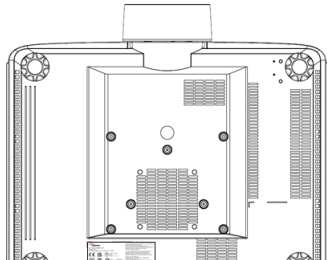

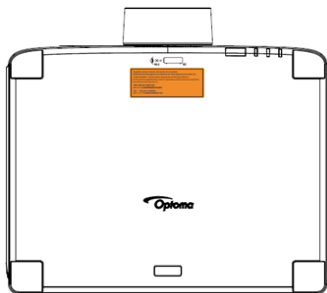

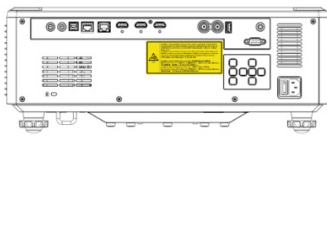
To ensure safe operation, read all laser safety precautions before installing and operating the projector.

- This projector is class 1 laser product of IEC/EN 60825-1:2014 and risk group 2 with the requirements of IEC 62471-5:2015.
- Complies with 21 CFR 1040.10 and 1040.11 except for conformance as a Risk Group 2 LIP as defined in IEC 62471-5:Ed.1.0. For more information see Laser Notice No. 57, dated May 8, 2019.
- IEC 60825-1:2014/EN 60825-1:2014+A11:2021/EN 50689:2021 class 1 consumer laser product, IEC 62741-5:2015 risk group 2.
- This product must not be used in residential areas.
- This product may cause interference if used in residential areas. Such use must be avoided unless the user takes special measures to reduce electromagnetic emissions to prevent interference to the reception of radio and television broadcasts.
- Possibly hazardous optical radiation emitted from this product.
- This projector has built-in Class 4 laser module. Disassembly or modification is very dangerous and should never be attempted.
- Any operation or adjustment not specifically instructed in the user manual creates the risk of hazardous laser radiation exposure.
- Do not open or disassemble the projector as this may cause damage by the exposure of laser radiation.
- Do not stare into beam when the projector is on. The bright light may result in permanent eye damage.
- When turning on the projector, make sure no one within projection range is looking at the lens.
- Without following the control, adjustment or operation procedure may cause damage by the exposure of laser radiation.
- Adequate instructions for assembly, operation, and maintenance, including clear warnings concerning precautions to avoid possible exposure to laser and collateral radiation in excess of the accessible emission limits in Class 2.
- The Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.
- We recommend you install this projector above the reach of children.
- Notice is given to supervise children and to never allow them to stare into the projector beam at any distance from the projector.
- Notice is given to use caution when using the remote control for starting the projector while in front of the projection lens.
- Notice is given to the user to avoid the use of optical aids such as binoculars or telescopes inside the beam.

**CAUTION:** Use of controls, adjustments, or performance of procedures other than those specified herein may result in hazardous radiation exposure.

# Product Safety Labels and Location

## Light Beam Related Safety Labels and Location

Label Name	Label Image	Label Location
Specification Label	 <p><b>Note:</b> Spec label varies by region (for reference only).</p>	
Warning Label		
Warning Label		

## 3D Safety Information

Please follow all warnings and precautions as recommended before you or your child use the 3D function.



### Warning

- Children and teenagers may be more susceptible to health issues associated with viewing in 3D and should be closely supervised when viewing these images.

### Photosensitive Seizure Warning and Other Health Risks

- Some viewers may experience an epileptic seizure or stroke when exposed to certain flashing images or lights contained in certain Projector pictures or video games. If you suffer from, or have a family history of epilepsy or strokes, please consult with a medical specialist before using the 3D function.
- Even those without a personal or family history of epilepsy or stroke may have an undiagnosed condition that can cause photosensitive epileptic seizures.
- Pregnant women, the elderly, sufferers of serious medical conditions, those who are sleep deprived or under the influence of alcohol should avoid utilizing the unit's 3D functionality.
- If you experience any of the following symptoms, stop viewing 3D pictures immediately and consult a medical specialist: (1) altered vision; (2) lightheadedness; (3) dizziness; (4) involuntary movements such as eye or muscle twitching; (5) confusion; (6) nausea; (7) loss of awareness; (8) convulsions; (9) cramps; and/ or (10) disorientation. Children and teenagers may be more likely than adults to experience these symptoms. Parents should monitor their children and ask whether they are experiencing these symptoms.
- Watching 3D projection may also cause motion sickness, perceptual after effects, disorientation, eye strain and decreased postural stability. It is recommended that users take frequent breaks to lessen the potential of these effects. If your eyes show signs of fatigue or dryness or if you have any of the above symptoms, immediately discontinue use of this device and do not resume using it for at least thirty minutes after the symptoms have subsided.
- Watching 3D projection while sitting too close to the screen for an extended period of time may damage your eyesight. The ideal viewing distance should be at least three times the screen height. It is recommended that the viewer's eyes are level with the screen.
- Watching 3D projection while wearing 3D glasses for an extended period of time may cause a headache or fatigue. If you experience a headache, fatigue or dizziness, stop viewing the 3D projection and rest.
- Do not use the 3D glasses for any other purpose than for watching 3D projection.
- Wearing the 3D glasses for any other purpose (as general spectacles, sunglasses, protective goggles, etc.) may be physically harmful to you and may weaken your eyesight.
- Viewing in 3D projection may cause disorientation for some viewers. Accordingly, DO NOT place your 3D PROJECTOR near open stairwells, cables, balconies, or other objects that can be tripped over, run into, knocked down, broken or fallen over.

## Cleaning the Lens

- Before cleaning the lens, be sure to turn off the projector and unplug the power cord to allow it to completely cool down.
- Use a compressed air tank to remove the dust.
- Use a special cloth for cleaning lens and gently wipe the lens. Do not touch the lens with your fingers.
- Do not use alkaline/acid detergents or volatile solvents such as alcohol for cleaning lens. If the lens is damaged due to the cleaning process, it is not covered by the warranty.



### Warning

- Do not use a spray containing flammable gases to remove dust or dirt from the lens. This may cause a fire due to excessive heat inside the projector.
- Do not clean the lens if the projector is warming up as this may cause the lens' surface film to peel off.
- Do not wipe or tap the lens with a hard object.



## Copyright

This publication, including all photographs, illustrations and software, is protected under international copyright laws, with all rights reserved. Neither this manual, nor any of the material contained herein, may be reproduced without written consent of the author.

© Copyright 2024

## Disclaimer

The information in this document is subject to change without notice. The manufacturer makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. The manufacturer reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation of the manufacturer to notify any person of such revision or changes.

## Trademark Recognition

Kensington is a U.S. registered trademark of ACCO Brand Corporation with issued registrations and pending applications in other countries throughout the world.

HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

DLP®, DLP Link and the DLP logo are registered trademarks of Texas Instruments and BrilliantColor™ is a trademark of Texas Instruments.

HDBaseT™ and the HDBaseT Alliance logo are trademarks of the HDBaseT Alliance.

All other product names used in this manual are the properties of their respective owners and are Acknowledged.

## FCC

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the device and receiver.
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

## Notice: Shielded cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

### Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this projector.

### Operation Conditions

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesired operation.

### Notice: Canadian users

This Class A digital apparatus complies with Canadian ICES-003.

Remarque à l'intention des utilisateurs canadiens

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

## Declaration of Conformity for EU countries

- EMC Directive 2014/30/EU (including amendments)
- Low Voltage Directive 2014/35/EU
- Radio Equipment Directive 2014/53/EU (if product has RF function)
- RoHS Directive 2011/65/EU

## WEEE



### Disposal instructions

Do not throw this electronic device into the trash when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle it.

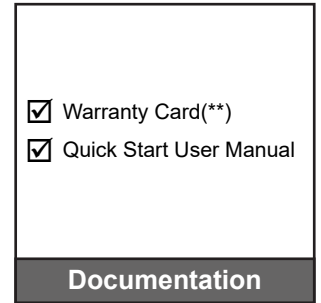
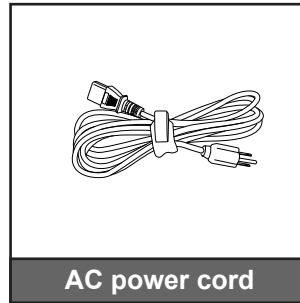
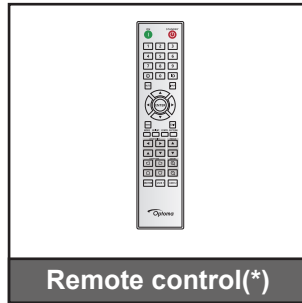
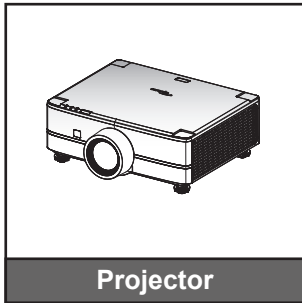
# INTRODUCTION

## Package Overview

Carefully unpack and verify that you have the items listed below under standard accessories. Some of the items under optional accessories may not be available depending on the model, specification and your region of purchase. Please check with your place of purchase. Some accessories may vary from region to region.

The warranty card is only supplied in some specific regions. Please consult your dealer for detailed information.

## Standard Accessories



### Note:

- (\*) The remote control requires two AAA batteries. See “Install / Replacing Remote Control Batteries” on page 24 for more information.
- (\*\*) For European warranty information, please visit [www.optoma.com](http://www.optoma.com).



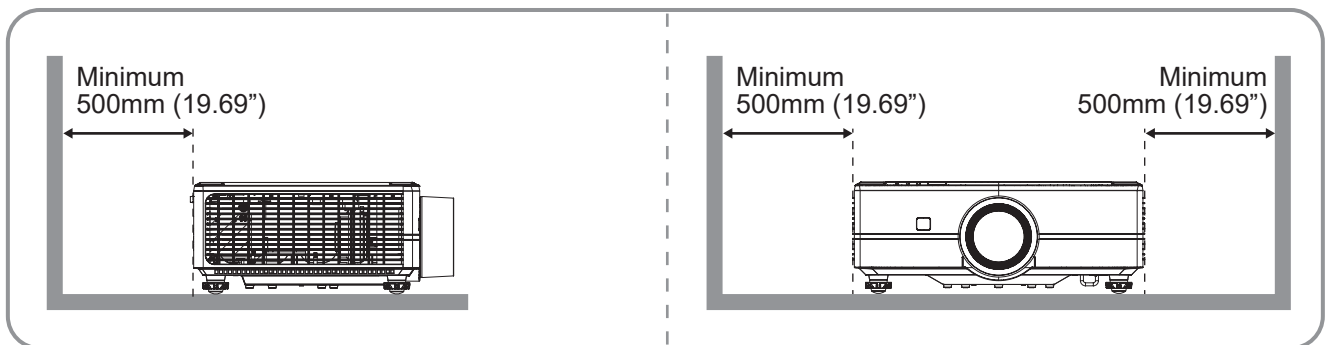
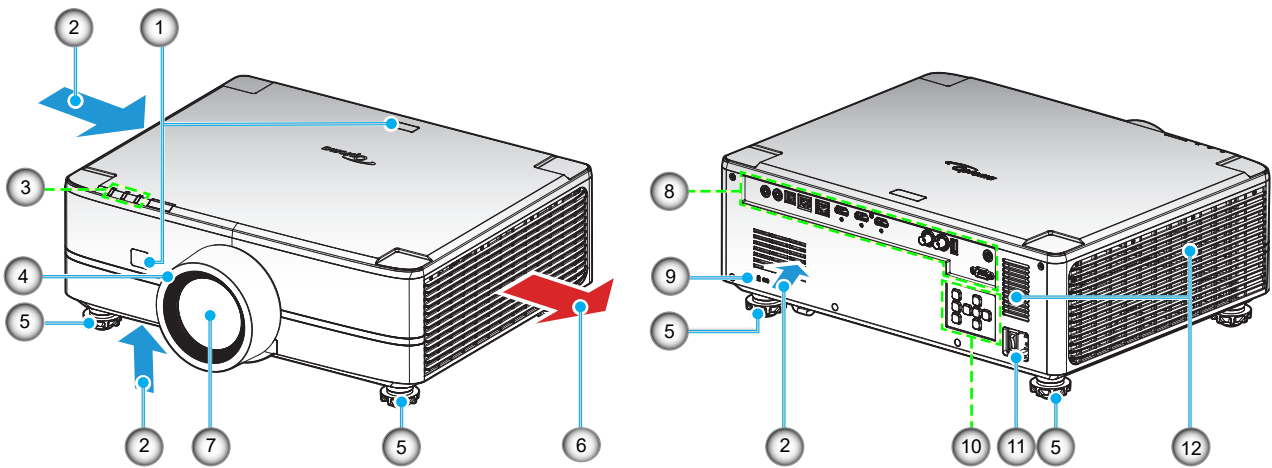
Please scan the OPAM warranty QR code or visit the following URL:  
[www.optomausa.com/OPAM/warranty](http://www.optomausa.com/OPAM/warranty)



Please scan the Asia-Pacific QR code or visit the following URL:  
<https://www.optoma.com/support/download>

# INTRODUCTION

## Product Overview



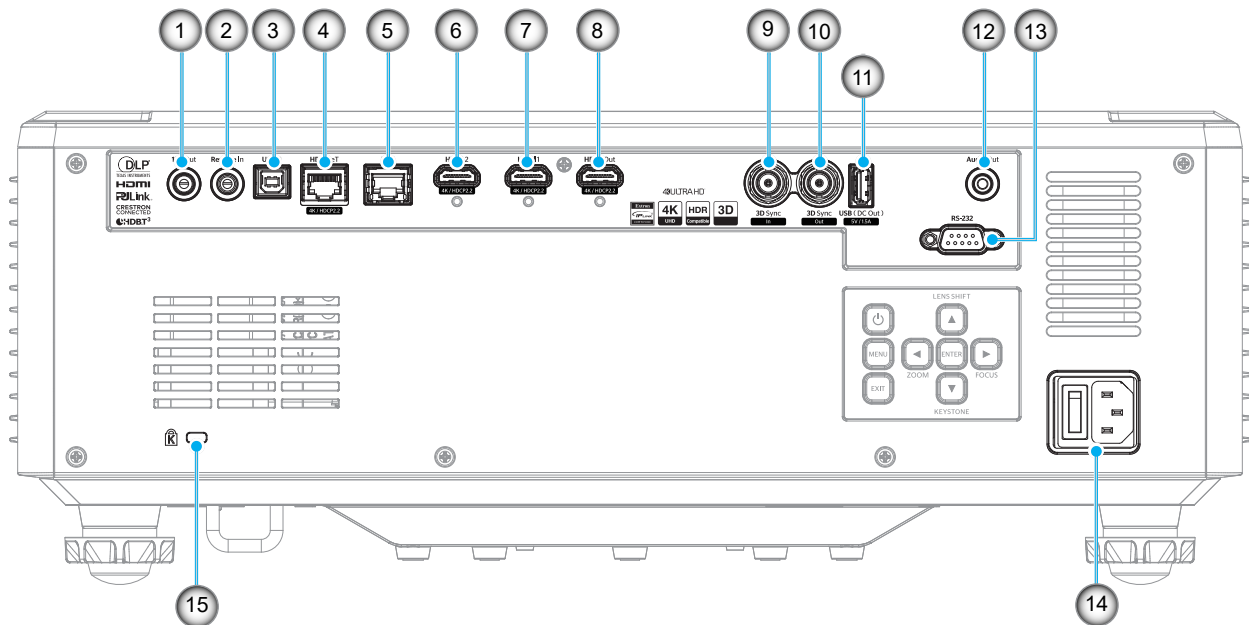
**Note:**

- Do not block projector intake and exhaust vents.
- When operating the projector in an enclosed space, allow at least 500mm (19.69") clearance around the intake and exhaust vents.

No.	Item	No.	Item
1.	IR Receivers	7.	Projection Lens
2.	Ventilation (Inlet)	8.	Input / Output
3.	LED Indicators	9.	Kensington™ Lock Port
4.	Deco Ring (1.6x lens model)	10.	Control Panel
5.	Tilt-Adjustment Foot	11.	Power Socket / Power Switch
6.	Ventilation (Outlet)	12.	Speakers

# INTRODUCTION

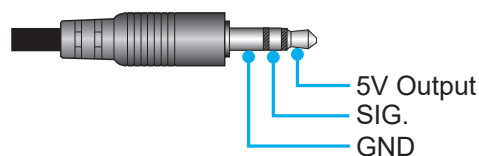
## Connections



No.	Item	Cable	Example Connections <sup>1</sup>
1.	12V Out Connector	12V Trigger Cable	Motorized screen, Curtain, etc
2.	Remote In Connector	Wired Remote Control Cable or IR Receiver Cable (3.5mm TRS type <sup>2</sup> )	RCU
3.	USB Connector	USB (A to B) Cable	Computer
4.	HDBaseT Connector	RJ-45 Cable	Media Play
5.	LAN Connector	RJ-45 Cable	Local or Company Network
6.	HDMI 2 Connector	HDMI Cable	Computer, Game, Console, Media Play
7.	HDMI 1 Connector	HDMI Cable	Computer, Game, Console, Media Play
8.	HDMI Out Connector	HDMI Cable	Screen
9.	3D Sync In Connector	3D Sync Cable	Computer
10.	3D Sync Out Connector	3D Emitter Cable	3D Emitter
11.	USB Connector (Power 5V---1.5A) <sup>3</sup>	USB (A to A) Cable	USB 5V Out
12.	Audio Out Connector	Audio Out Cable	Speaker, Media Play
13.	RS-232C Connector	RS232 Cable	Computer
14.	Power Socket / Power Switch	Power Cord	Projector
15.	Kensington™ Lock Port	Protection Cable	Projector

### Note:

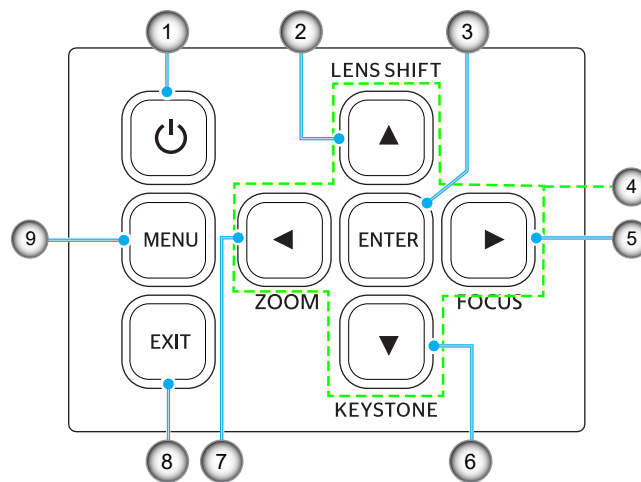
1. These are just a few examples of what you can connect. There may be more options available for each port.
2. 3.5mm TRS type.



3. Not recommended for charging a cell phone.

# INTRODUCTION

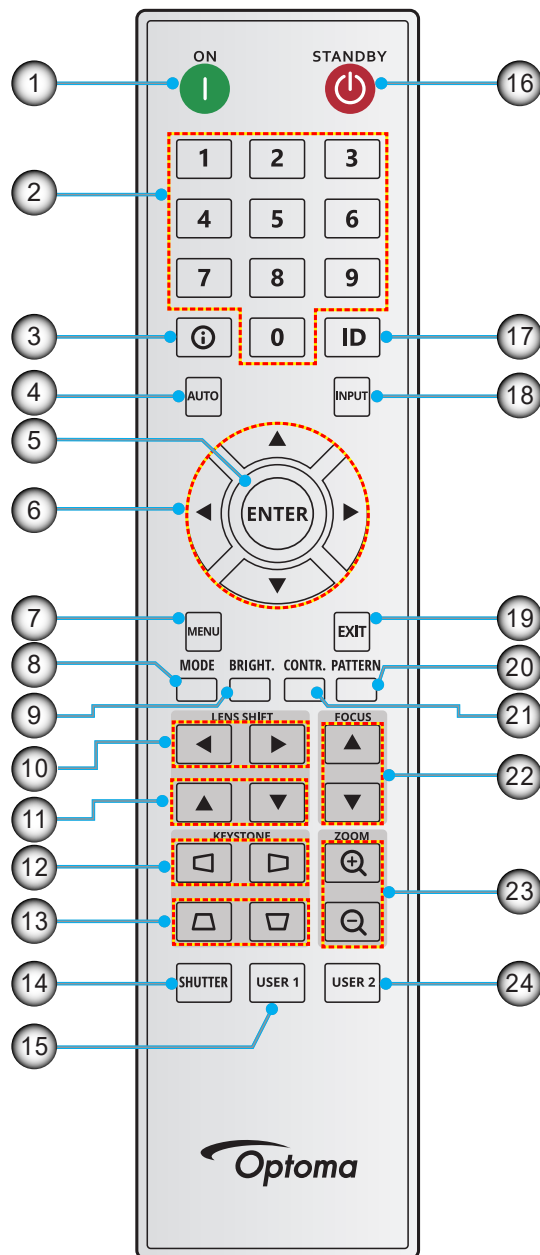
## Keypad



No.	Button	Function
1.	Power Button	Turns the projector on or off.
2.	Lens Shift	Adjust the lens vertical / horizontal position.
3.	Enter	Confirm the settings.
4.	Four Directional Select Keys	Navigation keys.
5.	Focus	Adjust the image focus.
6.	Keystone Correction	Adjust the keystone correction.
7.	Zoom	Adjust the image size.
8.	Exit	Returns to previous menu or exit menu if at top level.
9.	Menu	Shows the main menu on screen.

# INTRODUCTION

## Remote control



No.	Button	Function
1.	Power On	Turn the projector on.
2.	Number Keys	Input numbers (0-9).
3.	Info	Display information on the screen image.
4.	Auto	Automatically synchronize the projector to an input source.
5.	Enter	Press to confirm the selection.
6.	Arrow Keys	Use arrow keys to navigate through the menu or select the appropriate settings.
7.	Menu	Show the main menu on the screen.
8.	Mode	Press to select the preset display mode.
9.	Brightness	Set the brightness of the image.

# INTRODUCTION

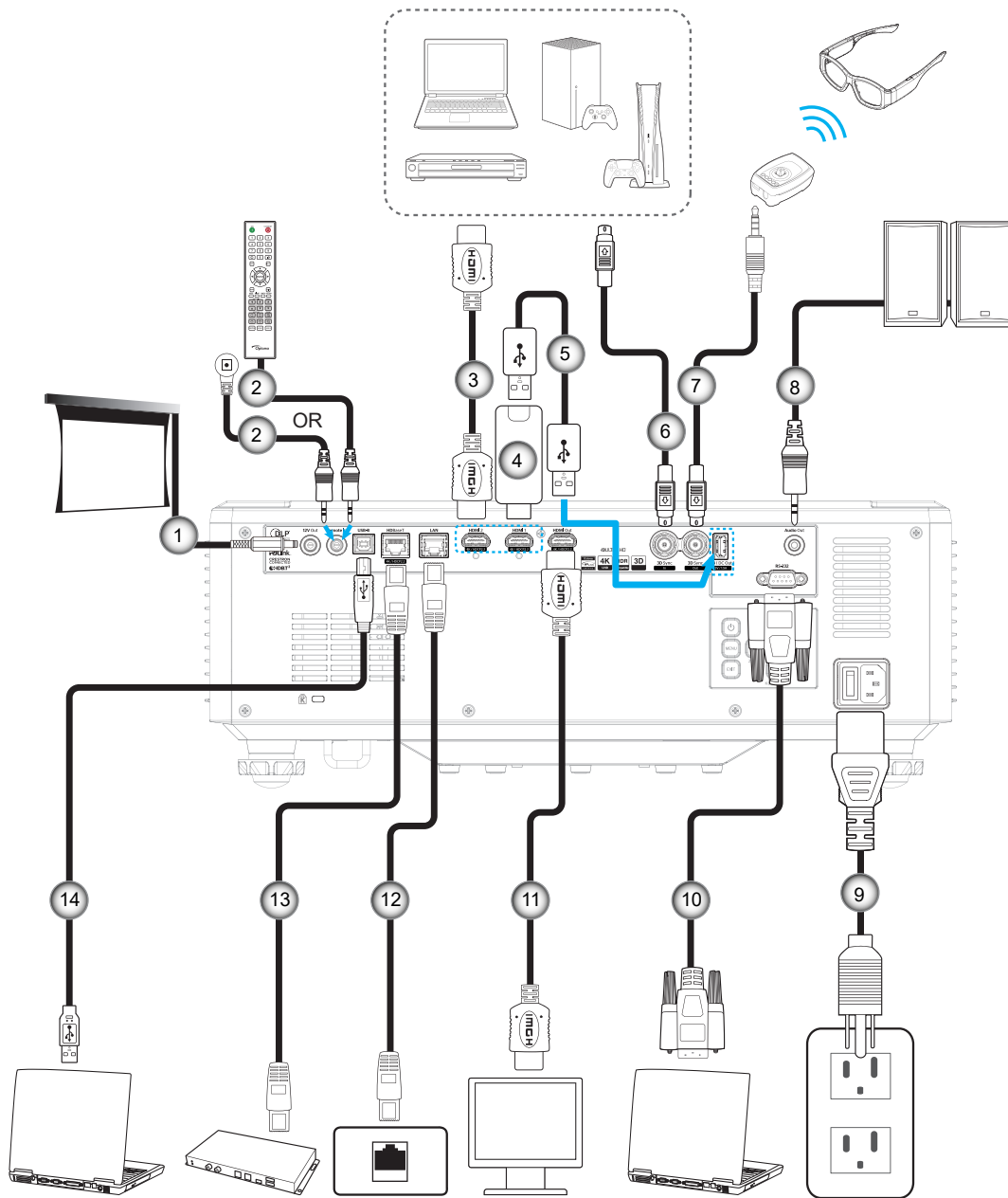
No.	Button	Function
10.	Lens Shift (Horizontal)	Adjust the image position horizontally.
11.	Lens Shift (Vertical)	Adjust the image position vertically.
12.	Keystone (Horizontal)	Adjust a horizontally keystone image.
13.	Keystone (Vertical)	Adjust a vertically keystone image.
14.	Shutter	Momentarily turn off/on the screen (AV Mute).
15.	User 1	Press to assign custom functions. See user guide for more info.
16.	Standby	Turn the projector off.
17.	ID	Set the projector address.
18.	Input	Select an input source manually.
19.	Exit	Back to previous menu.
20.	Pattern	Display test pattern.
21.	Contrast	Set the contrast of the image.
22.	Focus	Adjust the image focus.
23.	Zoom	Adjust the image size.
24.	User 2	Press to assign custom functions. See user guide for more info.

**Note:** Some keys may have no function for models that do not support these features.



# SETUP AND INSTALLATION

## Connecting Sources to the Projector



No.	Item
1.	12V DC Jack
2.	Wired Remote Control Cable or IR Receiver Cable (3.5mm TRS type)
3.	HDMI Cable
4.	HDMI Dongle
5.	USB (A to A) Cable

No.	Item
6.	3D Sync Cable
7.	3D Emitter Cable
8.	Audio Out Cable
9.	Power Cord
10.	RS232 Cable

No.	Item
11.	HDMI Cable
12.	RJ-45 Cable
13.	RJ-45 Cable
14.	USB (A to B) Cable

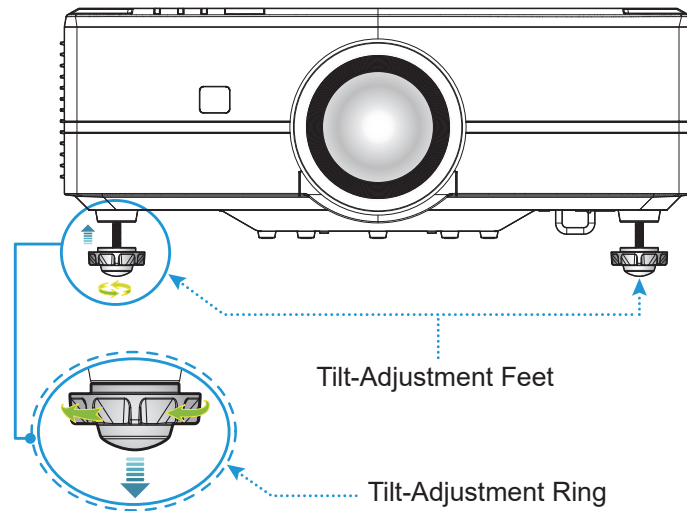
# SETUP AND INSTALLATION

## Adjusting the Projector Image

## Adjusting the Projector's Height

The projector is equipped with elevator feet for adjusting the image height.

1. Locate the adjustable foot you wish to adjust on the underside of the projector.
2. Rotate the adjustable foot clockwise or counterclockwise to raise or lower the projector.



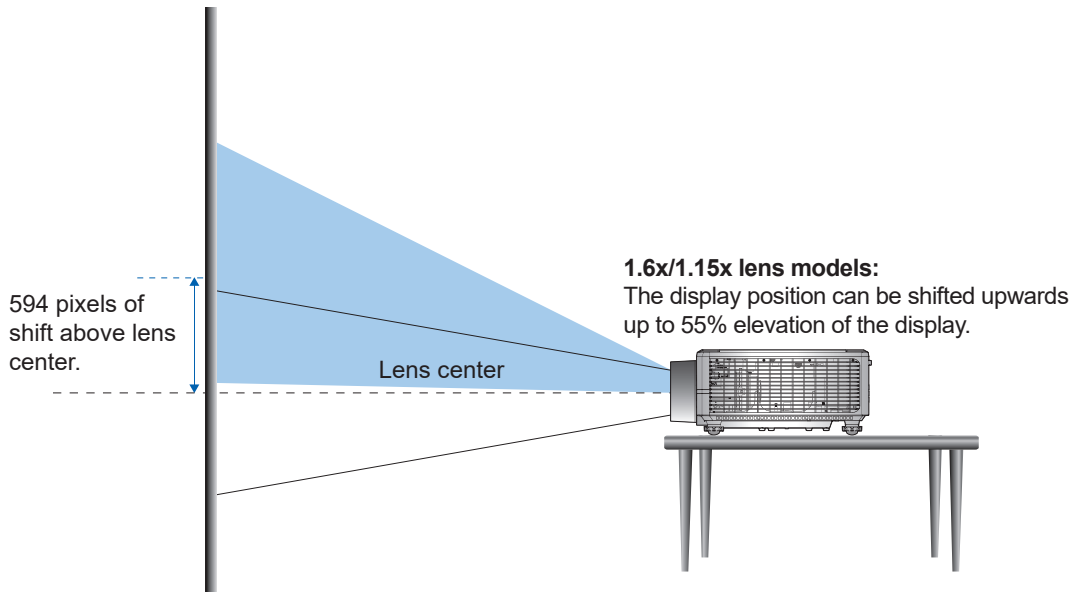
# SETUP AND INSTALLATION

## Adjusting the Projection Image Shift

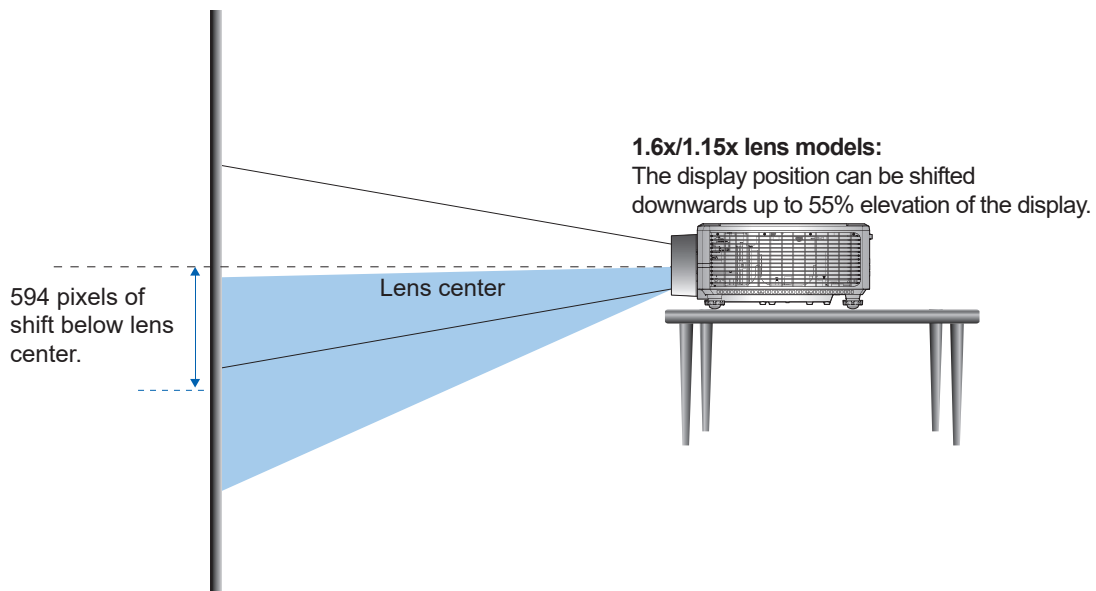
The projection lens can be moved up, down, right, and left with the motor-driven lens shift function. This function makes the positioning of images easy on the screen. Lens shift is generally expressed as a percentage of the image height or width, see below illustration.

### Vertical / Horizontal Lens Shift

When the lens is shifted to top:

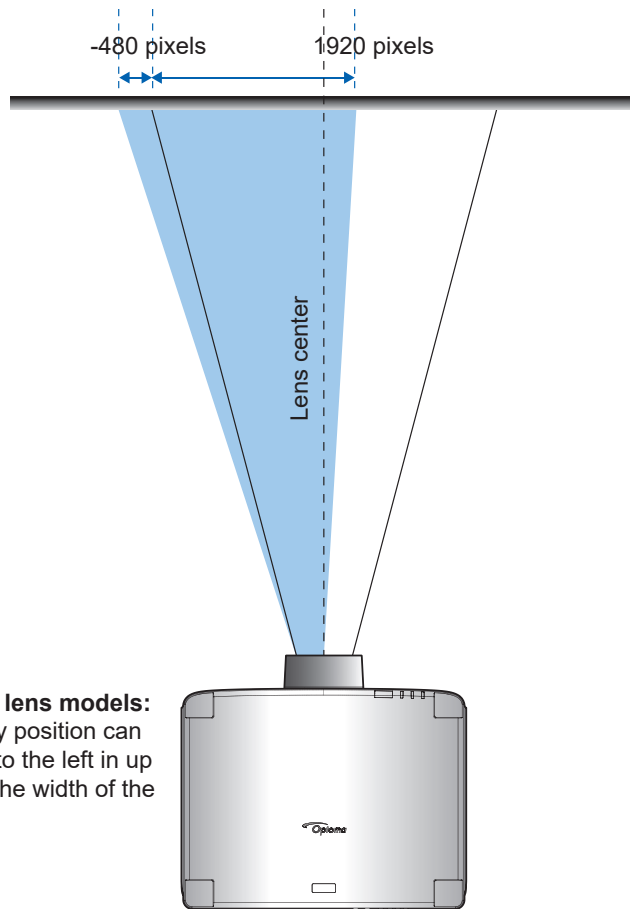


When the lens is shifted to bottom:



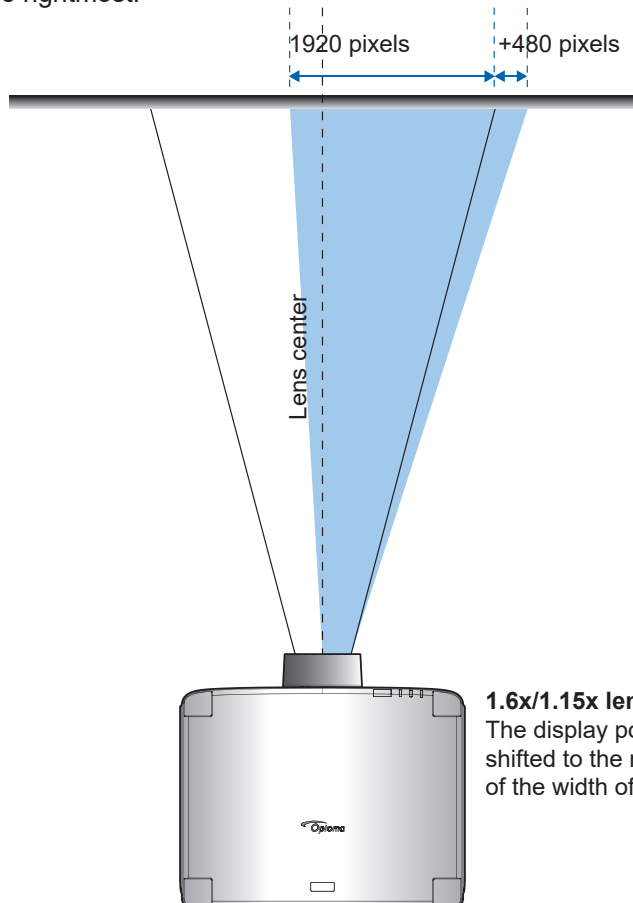
# SETUP AND INSTALLATION

When the lens is shifted to the leftmost:



**1.6x/1.15x lens models:**  
The display position can be shifted to the left in up to 25% of the width of the display.

When the lens is shifted to the rightmost:

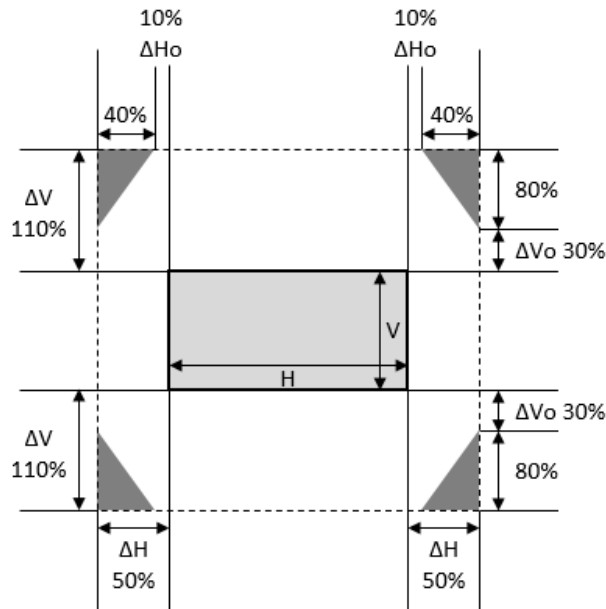


**1.6x/1.15x lens models:**  
The display position can be shifted to the right in up to 25% of the width of the display.



# SETUP AND INSTALLATION

## Lens Shift Range

Lens Type	Lens Shift Range (1/2 image)			
	$\Delta H$	$\Delta V$	$\Delta H_o$	$\Delta V_o$
1.6x/1.15x lens models	50%	110%	10%	30%



**Note:**

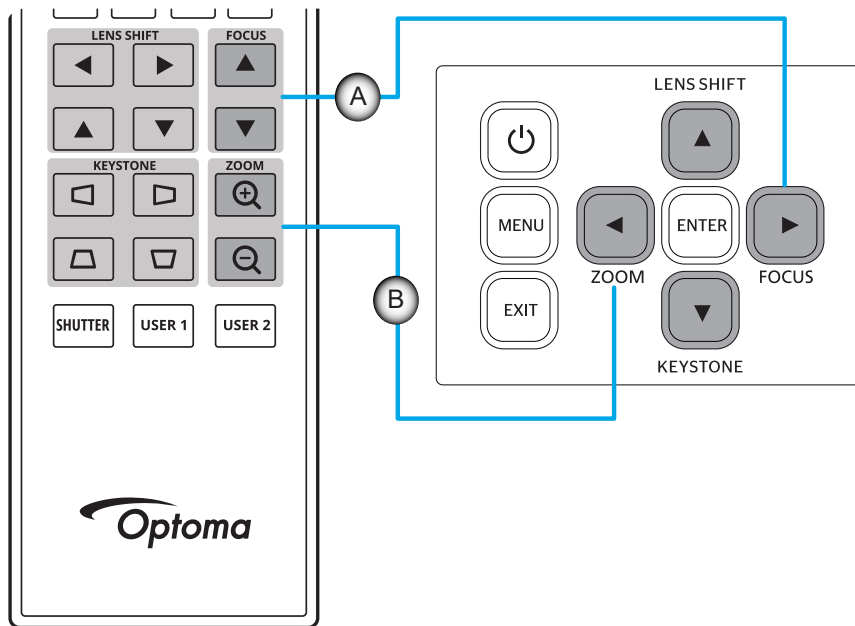
- a)  $\Delta H$ : The lens shift range in horizontal direction when the lens is at the center.
- b)  $\Delta V$ : The lens shift range in vertical direction when the lens is at the center.
- c)  $\Delta H_o$ : The lens shift range without vignetting in horizontal direction when the lens is at the top center or the bottom center.
- d)  $\Delta V_o$ : The lens shift range without vignetting in vertical direction when the lens is at the middle right or the middle left.
- e)  $V$ : Height of the projected image.
- f)  $H$ : Width of the projected image.
- g)  Projected image.
- h)  When the lens is shifted beyond the described range of operation, screen edges may become darker or image may become out of focus.

# SETUP AND INSTALLATION

## Adjusting the Projector's Zoom and Focus

Use the remote control or projector keypad to adjust the zoom and focus of the projected image.

- To adjust the image focus, press **Focus** and the ▲▼ buttons until the image is sharp and legible. **(A)**
- To adjust the image size, press **Zoom** and the 🔍🔍 buttons on the remote control or ◀▶ on the keypad to get the required image size. **(B)**



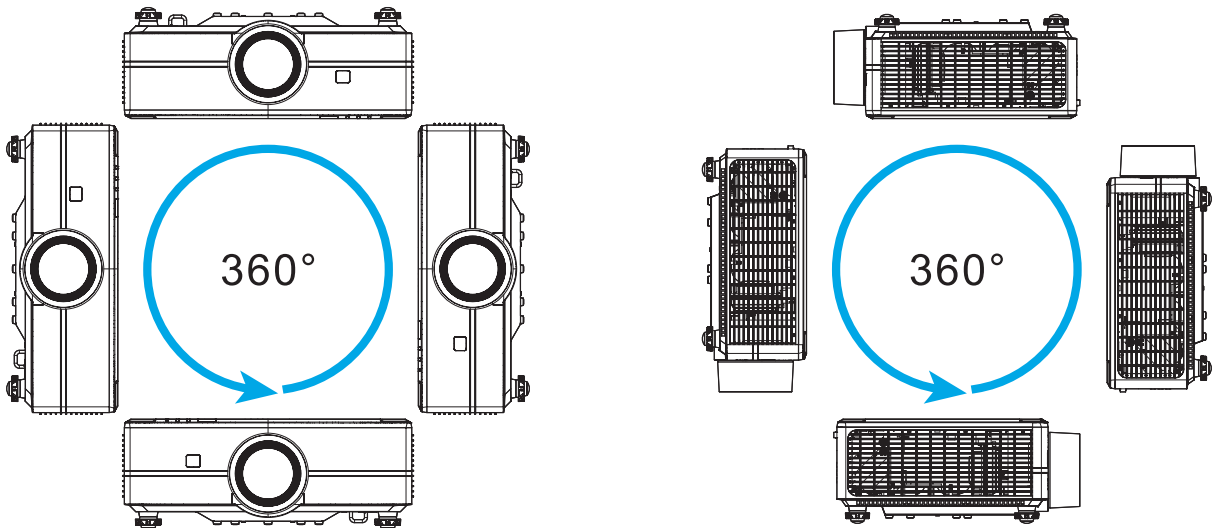
# SETUP AND INSTALLATION

## Adjusting the Projector Position

When you select a position for the projector, consider the size and shape of your screen, the location of your power outlets, and the distance between the projector and the rest of your equipment.

Follow these general guidelines:

- Position the projector on a flat surface at a right angle to the screen. The 1.6x/1.5x lens models projector (with the standard lens) must be at least 50 inch (1.6x: 1.33m/1.15x: 0.69m) from the projection screen.
- Position the projector to the desired distance from the screen. The distance from the lens of the projector to the screen, the zoom setting, and the video format determine the size of the projected image.
- Lens throw ratio:
  - 1.6x lens model: 1.25 ~ 2.0
  - 1.15x lens model: 0.65 ~ 0.75
- 360 degrees free orientation operation.



- When installing multiple projectors, keep at least 1000mm (39.4") space between the adjacent projectors.
- For ceiling/wall mount installations, make sure to leave 15 mm (0.6") between the ceiling mount and the bottom intake vents of the projector.

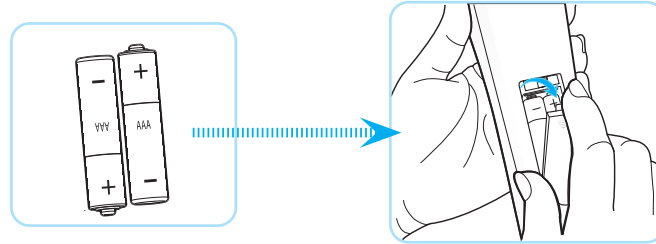
# SETUP AND INSTALLATION

## Remote Setup

### Install / Replacing Remote Control Batteries

Two AAA size batteries are supplied for the remote control.

1. Remove the battery cover on the back of the remote control.
2. Insert AAA batteries in the battery compartment as illustrated.
3. Replace back cover on remote control.



**Note:** Replace only with the same or equivalent type batteries.

### CAUTION

Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.

- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as they are depleted. Chemicals that leak from batteries that come in contact with skin can cause a rash. If you find any chemical leakage, wipe thoroughly with a cloth.
- The batteries supplied with this product may have a shorter life expectancy due to storage conditions.
- If you will not be using the remote control for an extended period of time, remove the batteries.
- When you dispose of the batteries, you must obey the law in the relative area or country.

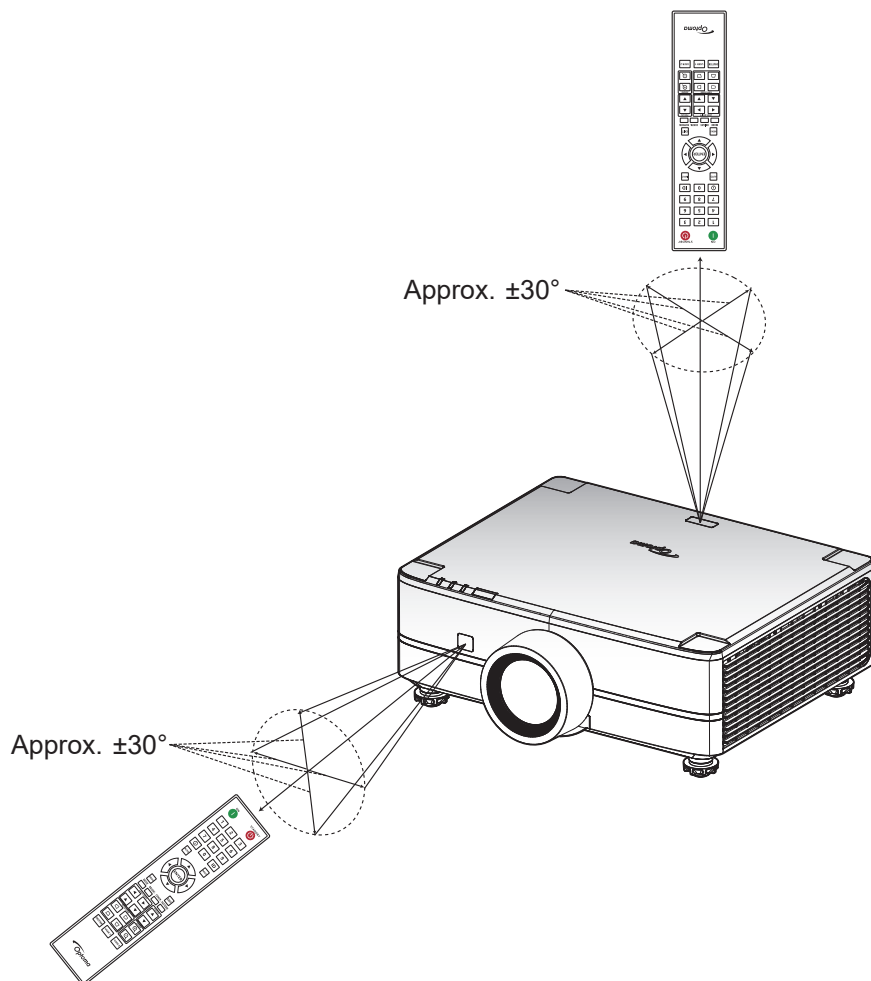


# SETUP AND INSTALLATION

## Remote Control Effective Range

Infra-Red (IR) remote control sensor is located on the top and front of the projector. Ensure to hold the remote control at an angle within 30 degrees perpendicular to the projector's IR remote control sensor to function correctly. The distance between the remote control and the sensor should not be longer than 12 meters (39.4 feet) when holding not longer than 15 meters (49.2 feet) when aiming the sensor at 0°.

- Make sure that there are no obstacles between the remote control and the IR sensor on the projector that might obstruct the infra-red beam.
- Make sure the IR transmitter of the projector/remote control is not being shined by sunlight or fluorescent lamps directly.
- Please keep the remote controller away from fluorescent lamps for over 2 m or the remote controller might become malfunction.
- If the remote control is close to Inverter-Type fluorescent lamps, it might become ineffective from time to time.
- If the remote control and the projector are within a very short distance, the remote control might become ineffective.
- When you aim at the screen, the effective distance is less than 5 m from the remote control to the screen and reflecting the IR beams back to the projector. However, the effective range might change according to screens.

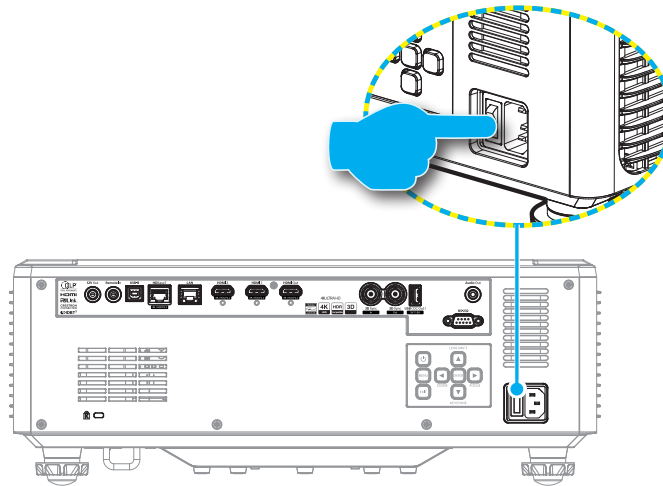


# USING THE PROJECTOR

## Powering On / Off the Projector

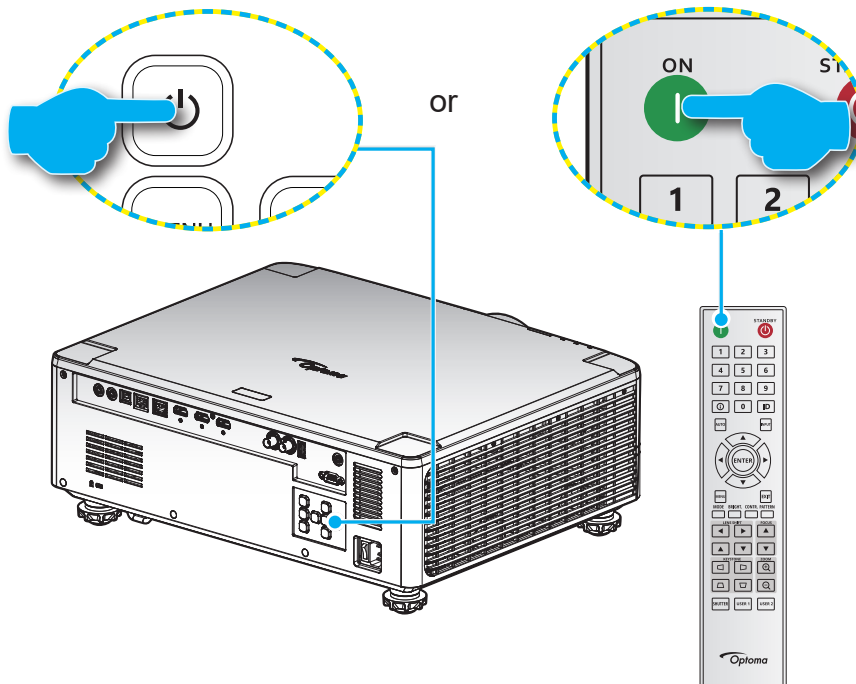
### Powering On

1. Securely connect the power lead and signal/source cable. When connected, the power LED will turn red.
2. Set the power switch to the “I” (On) position and wait until the “⏻” button on the projector keypad is solid red.



3. Turn on the projector by pressing the “⏻” button on the projector keypad or the “I” on the remote control.

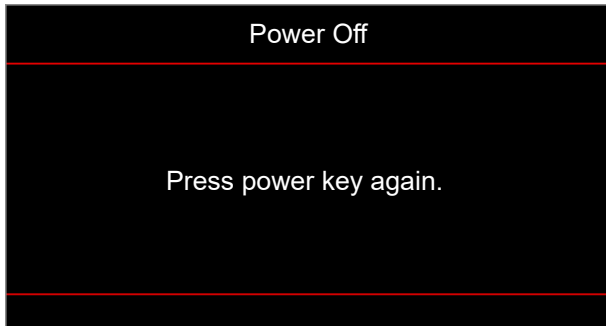
During startup the power LED is flashing red and during normal operation, the power LED is solid green.



# USING THE PROJECTOR

## Powering Off

1. Turn off the projector by pressing the “⏻” button on the projector keypad or remote control. The following message will be displayed:



2. Press the ⏻ button again to confirm, otherwise the message will disappear after 15 seconds. When you press the ⏻ button for the second time, the projector will shut down.
3. During the cooling cycle, the power LED is flashing green. When the power LED turns solid red, this indicates the projector has entered standby mode. If you wish to turn the projector back on, you must wait until the cooling cycle has finished and the projector has entered standby mode. When the projector is in standby mode, simply press the “⏻” button on the projector keypad or the “⏻” on the remote control again to turn on the projector.
4. Disconnect the power cord from the electrical outlet and the projector.

### Note:

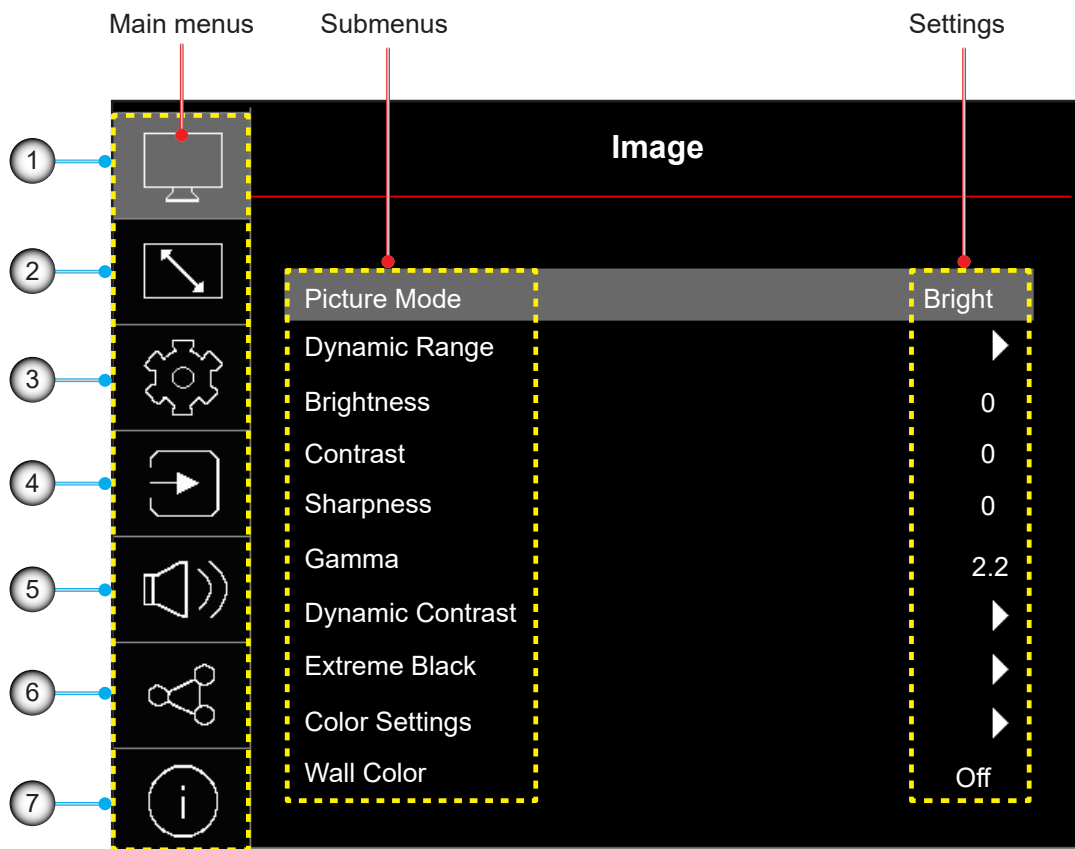
- *It is not recommended that the projector is turned on immediately, right after a power off procedure.*
- *By default, the projector turns off automatically after 20 minutes of inactivity. You can modify the idle time length in “Auto Power off (min.)” menu in “Device Setup → Power Settings”. If you want the projector to enter standby mode instead, disable auto power off and set the sleep time interval in “Device Setup → Power Settings → Sleep Timer (min.)”.*

# USING THE PROJECTOR

## Menu navigation and features

The projector has multilingual on-screen display (OSD) menus that allow you to make image adjustments and change a variety of settings.

1. To open the OSD menu, press the **Menu** key on the remote control or projector keypad.
2. To select a main menu or sub menu, use the **▲▼** buttons to highlight it. Then, press the **Enter** button to enter the sub menu.
3. Press the **Exit** button to return to the previous menu or exit the OSD menu if at top level.
4. Setting methods to adjust the function value or selection an option.
  - To adjust the slide bar values, highlight the function, and use the **◀▶** buttons to change value.
  - To check or uncheck a checkbox, highlight the function, and press **Enter**.
  - To input a number or symbol, highlight the number or symbol, and use the **▲▼** buttons to make a selection. You can also use the number keys on the remote control or keypad.
  - To select a function option, use the **▲▼◀▶** buttons to make the selection. If no **Enter** icon shows at the navigation bar, the highlighted option is automatically applied. If there is an **Enter** icon at the navigation bar, press **Enter** to confirm your selection.



No	Item	No	Item
1.	Image menu	5.	Audio menu
2.	Display menu	6.	Communication menu
3.	Device setup menu	7.	Information menu
4.	Input settings menu		

# USING THE PROJECTOR

## OSD menu tree

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values		
Image	Picture Mode					Vivid		
						HDR		
						HLG		
						Cinema		
						sRGB		
						Bright		
						DICOM SIM.		
						Blending		
						3D		
						High Frame Rate		
		Dynamic Range	HDR				Off	
						Auto [default]		
			HDR Picture Mode				0 ~ 10	
		Brightness					0 ~ 100	
		Contrast					0 ~ 100	
		Sharpness					1 ~ 15	
		Gamma					Film	
							Graphics	
							1.8	
							2.0	
							2.2	
							2.4	
							2.6	
							Vivid	
							3D	
							Blackboard	
						DICOM SIM.		
		Dynamic Contrast	Dynamic Black				Off [default]	
							On	
				Speed				1 ~ 160 [default: 160]
				Strength				0 ~ 3 [default: 3]
				Level				50% ~ 100% [default: 100%]
				Extreme Black				Off [default]
								On
				AV Mute Timer				0.0s ~ 10.0s [default: 0.0s]
		Black Signal Level				0 ~ 5 [default: 0]		
	Color Settings	Color				0 ~ 100		
			Tint				0 ~ 100	
			BrilliantColor™				0 ~ 10	
			Color Temperature				Warm	
							Standard	
					Cool			
					Cold			

# USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values			
Image	Color Settings	Color Matching	Red	Hue		0 ~ 254			
				Saturation		0 ~ 254			
				Luminance		0 ~ 254			
				Reset		Yes			
									Cancel [default]
			Green	Hue		0 ~ 254			
				Saturation		0 ~ 254			
				Luminance		0 ~ 254			
				Reset		Yes			
									Cancel [default]
			Blue	Hue		0 ~ 254			
				Saturation		0 ~ 254			
				Luminance		0 ~ 254			
				Reset		Yes			
									Cancel [default]
			Cyan	Hue		0 ~ 254			
				Saturation		0 ~ 254			
				Luminance		0 ~ 254			
				Reset		Yes			
									Cancel [default]
			Magenta	Hue		0 ~ 254			
				Saturation		0 ~ 254			
				Luminance		0 ~ 254			
				Reset		Yes			
									Cancel [default]
			Yellow	Hue		0 ~ 254			
				Saturation		0 ~ 254			
				Luminance		0 ~ 254			
				Reset		Yes			
									Cancel [default]
			White	Red		0 ~ 254			
				Green		0 ~ 254			
Blue		0 ~ 254							
Reset		Yes							
						Cancel [default]			
White Balance				Red Gain		0 ~ 100 [default: 50]			
				Green Gain		0 ~ 100 [default: 50]			
				Blue Gain		0 ~ 100 [default: 50]			
				Red Offset		0 ~ 100 [default: 50]			
				Green Offset		0 ~ 100 [default: 50]			
				Blue Offset		0 ~ 100 [default: 50]			
Color Space				(HDMI Input)		Auto [default]			
						RGB (0 ~ 255)			
						RGB (16 ~ 235)			
						YUV			

# USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values	
Image	Wall Color					Off [default]	
						Blackboard	
						Light Yellow	
						Light Green	
						Light Blue	
						Pink	
					Gray		
	3D Setup	3D Mode					Off [default]
							Auto
		3D Sync Type					DLP-link [default]
							3D Sync
		3D Format					Auto
							Frame Packing
							Side by Side
							Top and Bottom
		3D Sync Invert					Frame Sequential
							Off [default]
	3D Sync Out					On	
						To Emitter [default]	
	Reset					To Next Projector	
					Yes		
Reset					Cancel [default]		
					Yes		
Display	Light Source Settings	Light Source Mode				Normal [default]	
						Eco Mode	
						Constant Luminance	
						Constant Power	
		Brightness Level				10% ~ 100% [default: 100%]	
	Gaming Mode					Off [default]	
						On	
	Aspect Ratio					4:3	
						16:9	
						21:9	
						LBX	
						Auto [default]	
	Digital Zoom					Native	
	Image Shift	Horizontal					80 ~ 180 [default: 100]
							0 ~ 100 [default: 50]
	Geometric Correction	Vertical					0 ~ 100 [default: 50]
						0 ~ 40 [default: 20]	
Geometric Correction	V Keystone					0 ~ 40 [default: 20]	
						0 ~ 40 [default: 20]	

# USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values		
Display	Geometric Correction	4-Corner	Top Left					
			Top Right					
			Bottom Left					
			Bottom Right					
		Warping				Off [default] On		
		Warping Adjustment				(Adjust Pattern)		
		Grid Color				Green [default] Magenta Red Cyan		
			Reset			Yes Cancel [default]		
			Edge Mask			0 ~ 10 [default: 0]		
			Reset			Yes Cancel [default]		
	Device Setup	Test Pattern					Off [default] Green Grid Magenta Grid White Grid White Black Red Green Blue Yellow Magenta Cyan ANSI Contrast 4x4 Color bar 4K Full screen	
			Projection Orientation	Ceiling			Auto [default] On Off	
					Rear		Off [default] On	
			Language					English [default] Deutsch Français Italiano Español Português Polski Nederlands Norsk 繁體中文



# USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values	
Device Setup	Language					简体中文	
						日本語	
						한국어	
						Русский	
						Magyar	
					ไทย		
Menu Settings	Menu Location					Top Left	
						Top Right	
						Center [default]	
						Bottom Left	
						Bottom Right	
	Menu Timer						Off
							5s
							10s [default]
							20s
							30s
							60s
	Information Hide						Off [default]
							On
	High Altitude						Off [default]
							On
Lens Settings	Focus					[Focus for adjust]	
						[Zoom for adjust]	
	Lens Function						Lock
							Unlock [default]
	Lens Shift					[Pattern for adjust]	
	Lens Calibration						Yes
							Cancel [default]
	Lens Shift Memory	Save Memory					Memory 1 ~ Memory 5
							Memory 1 ~ Memory 5
							Yes
	Reset						Cancel [default]
							Yes
Power Settings	Direct Power On					Off [default]	
						On	
	Signal Power On						Off [default]
							On
	Auto Power Off (min.)					0, 2 ~ 180 [default: 20]	
	Sleep Timer (min.)					0 ~ 960 [default: 0]	
	Power Mode (Standby)						Eco
							Active
	12V Trigger						Communication [default]
							Off [default]
Reset						On	
						Yes	
						Cancel [default]	

# USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Device Setup	OMS					[Pop-up Binding Dialog box] [Display binding information]
	Shutter	Startup				Shutter Off [default]
						Shutter On
	Security	Security				Off [default]
						On
		Security Timer	Month			0 ~ 35 [default: 0]
			Day			0 ~ 29 [default: 0]
			Hour			0 ~ 23 [default: 0]
	Change Password					
	Keypad Lock					Off [default]
						On
	Keypad LED Settings					Off
						On [default]
	Startup Logo	Change Logo				Default
						Neutral
	Background Color					None
						Blue
						Red
						Green
						Grey
						White
	User Data	Save All Settings				Memory 1 ~ Memory 5 [default: Memory 1]
		Load All Settings				Memory 1 ~ Memory 5 [default: Memory 1]
	System Update	Auto				Off [default]
						On
		Auto Download				Off
						On [default]
	Update				Yes	
					Cancel [default]	
Device Reset	Reset OSD				Yes	
					Cancel [default]	
	Reset All Settings				Yes	
					Cancel [default]	
	Reset Selective	Image			Yes	
			Cancel [default]			
Display			Yes			
				Cancel [default]		

# USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values	
Device Setup	Device Reset	Reset Selective	Setup			Yes	
						Cancel [default]	
			Input			Yes	
						Cancel [default]	
			Audio			Yes	
						Cancel [default]	
Communication			Yes				
			Cancel [default]				
Input Settings	Auto Source					Off	
						On [default]	
	Quick Resync						Off
							On [default]
							On [default]
	Active Inputs						HDMI 1 [default]
							HDMI 2
							HDBaseT
	EDID Settings	HDMI 1 EDID					1.4
							2.0 [default]
		HDMI 2 EDID					1.4
							2.0 [default]
		HDBaseT EDID					1.4
							2.0 [default]
HDMI Out						HDMI 1 [default]	
						HDMI 2	
Reset						Yes	
						Cancel [default]	
Audio	Volume					0 ~ 10 [default: 5]	
						Off [default]	
	Mute						On
							Auto [default]
							Internal Speaker
	Audio Output						Line Out
						Yes	
Reset						Cancel [default]	
						Cancel [default]	
Communication	Device ID					0 ~ 99 [default: 0]	
						Off	
	IR Function	Front					On [default]
							Off
	Top						On [default]
							On [default]
HDBaseT						Off [default]	
						On	

# USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values		
Communication	Remote Settings	Remote Code				0 ~ 99 [default: 0]		
		Quick Switch Code				Off [default] 1 ~ 9		
	Remote Settings	User1					HDMI 1	
							HDMI 2	
							Color Matching	
							Color Temperature	
							Projection Orientation	
							Light Source Mode	
							Freeze Screen	
						Network setup		
						Reset Selective		
		User2						HDMI 1
								HDMI 2
								Color Matching
								Color Temperature
								Projection Orientation
							Light Source Mode	
							Freeze Screen	
						Network setup		
							Reset Selective	
	LAN	LAN Interface					RJ-45 [default]	
							HDBaseT	
		Network Status					Connected [read only]	
							Disconnected [read only]	
		MAC Address					[read only]	
		DHCP					Off [default]	
							On	
IP Address						---.---.---.--- [default: 192.168.0.100]		
Subnet Mask						---.---.---.--- [default: 255.255.255.0]		
Gateway						---.---.---.--- [default: 192.168.0.51]		
DNS 1						---.---.---.--- [default: 0.0.0.0]		
DNS 2						---.---.---.--- [default: 0.0.0.0]		
Apply						Yes		
						Cancel [default]		
Reset						Yes		
					Cancel [default]			
Control	Crestron					Off		
						On [default]		
	IP Address					---.---.---.--- [default: 192.168.0.2]		
	IP ID					2 ~ 255 [default: 5]		
	Port					0 ~ 65535 [default: 41794]		

# USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values	
Communication	Control	Crestron Setup	Apply			Yes	
						Cancel [default]	
		PJ Link				Off	
						On [default]	
		Extron				Off	
						On [default]	
		AMX				Off	
						On [default]	
	Telnet				Off		
					On [default]		
	HTTP				Off		
					On [default]		
	Baud Rate					9600	
						19200	
					38400		
					57600		
					115200 [default]		
Reset					Yes		
					Cancel [default]		
Information	Regulatory						
	Serial Number						
	Source Info.	Source					
		Resolution					
		Signal Format					
		Pixel Clock					
		Refresh Rate					
		Color Bit Depth					
		Color Gamut					
		Color Space					
	Picture Mode						
	Light Source Mode						
	Device ID						
	Remote Code						
	System Status	Standby Mode					
		Projection Hours					
		Total Hours					
		Normal					
		Eco Mode					
		Custom Power					
Ambient Temp.							

# USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Information	System Status	System Temp.				
	Control	Crestron				
		Extron				
		PJ Link				
		AMX				
		Telnet				
		HTTP				
	LAN	LAN Interface				
		MAC Address				
		Network Status				
		DHCP				
		IP Address				
		Subnet Mask				
		Gateway				
		DNS 1				
	DNS 2					
	FW Version	Main Version				
		F-MCU Version				
		A-MCU Version				
		LAN Version				
		Formatter Version				
		HDBaseT Version				

# USING THE PROJECTOR

## Image menu

Learn how to configure image settings.

### Submenus

- Picture Mode
- Dynamic Range
- Brightness
- Contrast
- Sharpness
- Gamma
- Dynamic Contrast
- Color Settings
- Wall Color
- 3D Setup

### Picture Mode

There are several predefined display modes that you can choose from to suit your viewing preference. Each mode has been fine-tuned by our expert colour team to ensure superior colour performance for wide range of content.

#### Vivid

In this mode, the color saturation and brightness are well-balanced. Choose this mode for playing games.

#### HDR / HLG

Decodes and displays High Dynamic Range (HDR) / Hybrid Log Gamma (HLG) content for the deepest blacks, brightest whites, and vivid cinematic color using REC.2020 color gamut. This mode will be automatically enabled if HDR/HLG is set to Auto (and HDR/HLG Content is sent to projector – 4K UHD Blu-ray, 1080p/4K UHD HDR/HLG Games, 4K UHD Streaming Video). While HDR/HLG mode is active, other display modes (Cinema, Reference, etc.) cannot be selected as HDR/HLG delivers color that is highly accurate, exceeding the color performance of the other display modes.

#### Cinema

Provides the best balance of detail and colors for watching movies.

#### sRGB

Standardized accurate color.

#### Bright

This mode is suitable for environments where extra-high brightness is required, such as using the projector in well-lit rooms.

#### DICOM SIM.

This mode has been created for viewing greyscale images, perfect for viewing X-rays and scans during medical training.

#### Blending

When using multiple projectors, this mode can eliminate the visible banding and create a single bright, high resolution image across the screen.

#### 3D

Optimized settings for watching 3D contentd.

**Note:** *To experience the 3D effect, you will need to have compatible DLP Link 3D glasses. See 3D section for more information.*

# USING THE PROJECTOR

## **High Frame Rate**

High Frame Rate (HFR) refers to higher frame rates than typical prior practice.

### **Note:**

- *The High Frame Rate mode only supports input resolutions of 1080P at 120/240Hz, with an output refresh rate of 240Hz.*
- *The system will automatically detect the input signal and switch to this mode. It is generally not available for manual use.*

## **User**

Based on Vivid, users can adjust color settings and save them.

### **Note:**

- *When 3D mode is selected, the Vivid, HDR, HLG, Cinema, sRGB, Bright, DICOM SIM., Blending, High Frame Rate, and User mode will be unavailable.*
- *When Blending mode is selected, the HDR, HLG, 3D, and High Frame Rate mode will be unavailable.*

## **HDR**

Best for playing HDR videos.

## **Dynamic Range**

Configure the HDR (High Dynamic Range) setting and its effect when displaying video from 4K Blu-ray players and streaming devices.

### **HDR**

- **Off:** Turn off HDR Processing. When set to Off, the projector will NOT decode HDR content.
- **Auto:** Auto detect HDR signal.

### **HDR Brightness**

Adjust the brightness of the HDR.

## **Brightness**

Adjust the luminous brightness of the projected image to adapt to different ambient light.

## **Contrast**

Adjust the contrast ratio of the projected image. The contrast controls the degree of difference between the lightest and darkest parts of the image.

## **Sharpness**

Adjust the clarity of details in the projected image to make the image clearer and sharper.

## **Gamma**

Select an appropriate gamma value to optimize the image conformance to different input sources.

### **Film**

Best for home theater setting.

### **Graphics**

Best for projecting photos from PC input.

### **1.8 / 2.0 / 2.2 / 2.4 / 2.6**

Select a preset gamma value to adjust the image performance. In general, the smaller the value, the brighter the dark areas of the image will become. The standard gamma value is 2.2.



# USING THE PROJECTOR

## **Vivid**

Best for playing games. In this mode, color saturation and brightness are well-balanced.

## **3D**

Best for playing 3D videos.

## **Blackboard**

Best for projecting on to a blackboard.

## **DICOM SIM.**

Best for projecting monochrome medical images, such as X-ray diagram.

**Note:** *When Blending mode is selected, only gamma 2.2 is supported.*

## **HDR**

Best for playing HDR videos.

## **Dynamic Contrast**

Set up the Dynamic Contrast to maximize the contrast for dark content.

### **Dynamic Black**

Enable this function to automatically adjust the contrast ratio for video sources. It improves the black level in dark scenes by reducing the light output.

### **Speed**

Adjust the speed of the light source correction. The value ranges from 1 to 160. A lower value makes the correction slower and less aggressive while a higher value results in the faster correction.

### **Strength**

Set the strength of the dynamic contrast adjustment. The value ranges from 0 to 3, the higher the value the stronger the correction.

### **Level**

Adjust the light source when the brightness level of the current content gets lower than the set value. The value ranges from 50% to 100%. The higher the value, the larger the range to adjust the light source.

### **Extreme Black**

Enable this function to automatically increase the contrast ratio by turning off the laser light when black image is detected.

### **AV Mute Timer**

Set a timer for the laser light to turn off after detecting black content. The set value ranges from 0s to 10s.

### **Black Signal Level**

Set a black level value as the threshold for the Real Black function. The value can be adjusted from 0% to 5%, with 0 being the darkest black and 5 being the brightest.

### **Note:**

- *When Dynamic Black is turned on, the Extreme Black will be unavailable.*
- *When Extreme Black is turned on, the Dynamic Black will be unavailable.*

# USING THE PROJECTOR

## Color Settings

Configure the color settings of the projected image to improve the color performance.

### Color

Adjust the saturation of the selected color. The value indicates the color shifts from or towards the white in the center of the chromaticity diagram.

### Tint

Adjust the color balance of red and green in video images.

### BrilliantColor™

This adjustable item utilizes a new color-processing algorithm and enhancements to enable higher brightness while providing true, more vibrant colors in picture.

### Color Temperature

Adjust the color temperature of the projected image. The available options are Warm, Standard, Cool, or Cold.

### Color Matching

Change the color of a projected image by adjusting each color component in the image. The adjustable color includes Red, Green, Blue, Cyan, Yellow, and Magenta (R / G / B / C / Y / M).

- **Red / Green / Blue / Cyan / Magenta / Yellow:** Select a color for further adjustment.
  - **Hue:** Adjust the hue of the selected color. The value reflects the number of degrees of rotation around the chromaticity diagram from the original color. Increasing value indicates counterclockwise rotation, and decreasing value, clockwise rotation.
  - **Saturation:** Adjust the saturation of the selected color. The value indicates the color shifts from or towards the white in the center of the chromaticity diagram.
  - **Luminance:** Adjust the luminance of the selected color. Increase the value to brighten the image (add white to a color) or decrease the value to darken the image (add black to a color).
  - **Reset:** Reset the Red, Green, Blue, Cyan, Magenta, or Yellow color to factory default values.
- **White:** Adjust the white color performance via setting the Red, Green, and Blue values.
  - **Red / Green / Blue:** Adjust the red, green, and blue colors to optimize the white color performance.

### White Balance

Adjust the white balance of the projected image via gain and offset. Gain and offset are individual controls for each RGB channels used to set greyscale. The Gains calibrate the color of the dark parts and Bias calibrate the white parts.

- **Red / Green / Blue Gain:** Adjust the color of the image's bright areas.
- **Red / Green / Blue Offset:** Adjust the color of the image's dark areas.

### Color Space

Select a color space that has been specifically tuned for the input signal. The available options are Auto (default), RGB (0 ~ 255), RGB (16 ~ 235), and YUV.

**Note:** When 3D, High Frame Rate, or Blending mode is selected, the Color Temperature will be unavailable.

## Wall Color

Set the wall color of the projector to achieve best color performance for a specific wall. The available options are Off, Blackboard, Light Yellow, Light Green, Light Blue, Pink, and Gray.

## 3D Setup

3D video file combines two slightly different images (frames) of the same scene representing the different views that the left and right eyes see. When these frames are displayed fast enough and viewed with 3D glasses synchronized with the left and right frames, the viewer's brain then assemble the separate images into a single 3D image. 3D Menu provides options to set up the 3D functions to correctly display 3D videos.

# USING THE PROJECTOR

## 3D Mode

- **Off:** Select “Off” to turn off 3D mode.
- **Auto:** Select “Auto” to turn on 3D mode.

## 3D Sync Type

Select a proper 3D technology according to how the 3D sync signal is processed.

- **DLP-Link:** Select DLP-Link when the 3D sync signal is generated by the DLP Link technology built into the projector. DLP Link works only with the glasses that are compatible with DLP 3D technology and the 3D function is enabled.
- **3D Sync:** Select 3D Sync when the 3D sync out signal is sent to an emitter or another projector through the 3D sync out port.

**Note:** 3D Sync out does not support 3D frame delay.

## 3D Format

Use this option to select the appropriate 3D format content.

- **Auto:** When a 3D identification signal is detected, the 3D format is selected automatically.
- **Frame Packing:** Display 3D signal in “Frame Packing” format.
- **Side by Side:** Display 3D signal in “Side-by-Side” format.
- **Top and Bottom:** Display 3D signal in “Top and Bottom” format.
- **Frame Sequential:** Display 3D signal in “Frame Sequential” format.

## 3D Sync Invert

Use this option to enable/disable the 3D sync invert function.

## 3D Sync Out

Set up the transmission of the 3D sync output signal.

- **To Emitter:** Send the 3D sync signal to the emitter connected to the 3D sync out port.
- **To Next Projector:** Send the 3D sync signal to next projector when using multiple projectors.

## Reset

Reset the function settings to factory default values.

### **Note:**

- *When Blending mode is selected, the 3D Sync Type, 3D Sync Invert, and 3D Sync Out will be unavailable.*
- *This projector is a 3D ready projector with DLP-Link 3D solution.*
- *Please ensure that 3D glasses are in use for DLP-Link 3D content before enjoying your video.*
- *This projector supports frame sequential (page-flip) 3D via HDMI1/HDMI2 ports.*
- *To enable 3D mode, the input frame rate should be set to 60Hz only, lower or higher frame rate is not supported.*
- *To reach the best performance, resolution 1920x1080 is recommended, please note that 4K (3840x2160) resolution is not supported in 3D mode.*

## **Reset**

Reset all the image settings to factory default values.

# USING THE PROJECTOR

## Display menu

Learn how to configure the settings to properly project images according to your installation circumstances.

### Submenus

- Light Source Settings
- Gaming Mode
- Aspect Ratio
- Digital Zoom
- Image Shift
- Geometric Correction
- Edge Mask

### Light Source Settings

Set up the light source to control the projector brightness.

#### Light Source Mode

Select a light source mode depending on the installation requirements. The available options are Normal, Eco Mode, Constant Luminance, and Constant Power.

#### Brightness Level

Adjust the brightness level from 10% to 100%.

#### Note:

- *Normal: Brightness Level is fixed at 100% and cannot be adjusted.*
- *Eco Mode: Brightness Level is fixed at 50% and cannot be adjusted.*
- *Constant Luminance: Brightness Level can only be adjusted from 50% to 80%.*
- *Constant Power: Brightness Level can be adjusted from 10% to 100%.*

### Gaming Mode

Enable this feature to reduce response times (input latency) during gaming to 4.5 ms (1080p120Hz). All geometric correction settings (example: Keystone, Four Corners) will be disabled when Gaming Mode is enabled. For more information is below.

#### Note:

- *The input lag by signals is described in the following table:*
- *The values in the table can vary slightly.*

Source Timing	Gaming Mode	Output Resolution	Input Lag	Frame
1080p60	On	2160p	16.9 ms	~1 frame
1080p120	On	2160p	8.9 ms	~0.5 frame
1080p240	On	2160p	4.5 ms	~0.25 frame
4K60	On	2160p	16.8 ms	~1 frame
1080p60	Off	2160p	25.22 ms	~1.5 frame
1080p120	Off	2160p	12.8 ms	~0.8 frame
1080p240	Off	2160p	6.4 ms	~0.4 frame
4K60	Off	2160p	50.2 ms	~3 frame

# USING THE PROJECTOR

## Aspect Ratio

Set the aspect ratio of the projected image. The available options are 4:3, 16:9, 21:9, LBX, Auto, or Native. Select Auto to display the detected image size.

- **4:3:** This format is for 4:3 input sources.
- **16:9:** This format is for 16:9 input sources, like HDTV and DVD enhanced for Wide screen TV.
- **21:9:** This format is for 21:9 input source, like HDTV and DVD enhanced for Wide screen TV.
- **LBX:** This format is for non-16x9, letterbox source and if you use external 16x9 lens to display 2.35:1 aspect ratio in full resolution.
- **Auto:** Automatically selects the appropriate display format.
- **Native:** This format displays the original image without any scaling.

**Note:** *Native setting is not available when the input resolution is lower than 1080p.*

## Digital Zoom

Use to reduce or magnify an image on the projection screen. Digital Zoom is not the same as optical zoom and can result in degradation of image quality.

**Note:** *Zoom settings are retained on power cycle of the projector.*

## Image Shift

Adjust the projected image position.

### Horizontal

Use the ◀ and ▶ buttons to adjust the projected image position horizontally.

### Vertical

Use the ▲ and ▼ buttons to adjust the projected image position vertically.

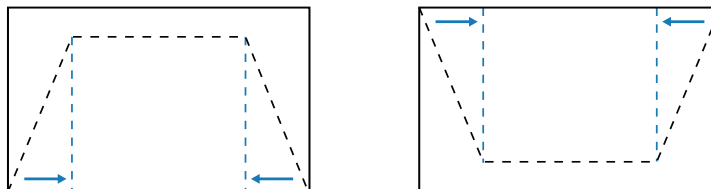
**Note:** *When 3D mode is selected, the Image Shift will be unavailable.*

## Geometric Correction

Configure the geometric settings to reshape the image for different projection surfaces.

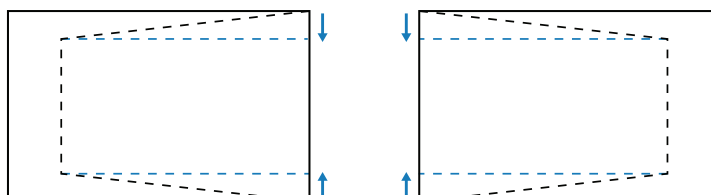
### V Keystone

Adjust image distortion vertically and make a squarer image. Vertical keystone is used to correct a keystone image shape in which the top and bottom are slanted to one of the sides. This is intended when for use with vertically on-axis applications.



### H Keystone

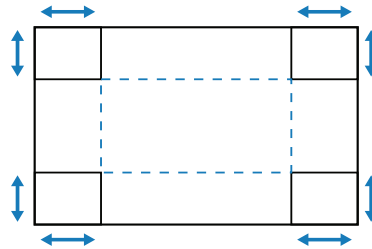
Adjust image distortion horizontally and make a squarer image. Horizontal keystone is used to correct a keystone image shape in which the left and right borders of the image are unequal in length. This is intended for use with vertically on-axis applications.



# USING THE PROJECTOR

## 4-Corner

Reshape the image by moving the 4 corners of the image to have it fit a specific projection surface.

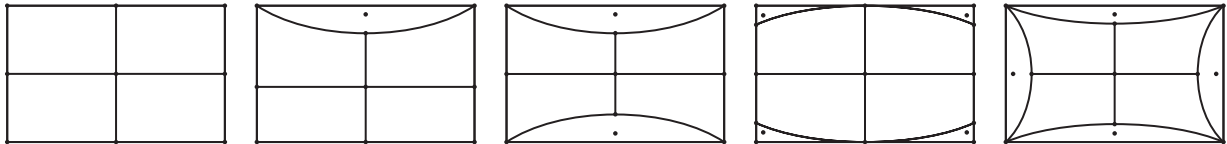


## Warping

Enable or disable the warping function.

## Warping Adjustment

Use warping to adjust the image to align with the border of the projection surface (screen) or to eliminate image distortion (caused by an uneven surface).



**Note:** *Warping adjustment only supports 5x3 grid points.*

## Grid Color

Select a grid color for warp and blend pattern between Green, Magenta, Red, and Cyan.

## Reset

Reset geometric correction settings to factory default values.

## **Edge Mask**

The edge blending function allows you to hide one or multiple edges of the projected image. You can use this function to remove the video encoding noise on the edges of the video images.

**Note:** *When 3D mode is turned on, the Edge Mask will be unavailable.*

## **Reset**

Reset all the display settings to factory default values.

# USING THE PROJECTOR

## Device Setup menu

Learn how to configure the system settings for the projector.

### Submenus

- Test Pattern
- Projection Orientation
- Language
- Menu Settings
- High Altitude
- Lens Settings
- Power Settings
- OMS
- Shutter
- Security
- Keypad Lock
- Keypad LED Settings
- Startup Logo
- Background Color
- User Data
- System Update

### Test Pattern

Select a test pattern. The available options are Off, Green Grid, Magenta Grid, White Grid, White, Black, Red, Green, Blue, Yellow, Magenta, Cyan, ANSI Contrast 4x4, Color bar, and 4K Full screen.

### Projection Orientation

Change the image direction by selecting a proper projection mode.

#### Ceiling

Enable the function for ceiling mount installation.

#### Rear

Check the function for rear projection.

### Language

Select a language for the OSD menu. The available languages are English, German, French, Italian, Spanish, Portuguese, Polish, Dutch, Norwegian, Traditional Chinese, Simplified Chinese, Japanese, Korean, Russian, Hungarian, and Thai.

### Menu Settings

#### Menu Location

Select the menu location from Top Left, Top Right, Center, Bottom Left, and Bottom Right.

**Note:** Due to the limitation of hardware, the update of Bottom Left & Right OSD will become slower.

#### Menu Timer

Set the length of time the menu displays on the screen.

#### Information Hide

Enable or disable the corner information messages, such as input source, IP address, and so on.

# USING THE PROJECTOR

## High Altitude

Select On to increase the fan speed. To ensure the image quality and prevent damage to the projector, enable High Altitude mode in high temperature, high humidity, or high altitude environment.

## Lens Settings

Configure the lens settings to adjust the image quality and position.

### Focus

Use the ▲ and ▼ buttons to adjust the focus of the projected image.

### Zoom

Use the ⊕ and ⊖ buttons to adjust the size of the projected image.

### Lens Function

Lock the lens to prevent the lens motors from moving, which disables all lens functions.

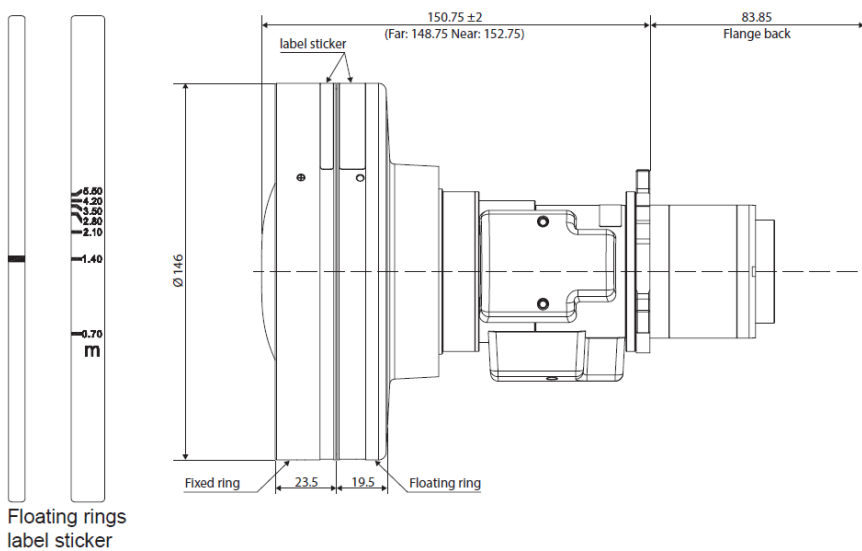
**Note:** When Lens Function is turned on, the Focus, Zoom, Lens Shift, Lens Calibration, and Lens Shift Memory will be unavailable.

### Lens Shift

Use the ▲, ▼, ◀, ▶ right buttons to adjust the lens position to shift the projected area.

**Note:** 1.15x lens model floating ring

- For better optical performance, manually adjust the floating ring before adjusting Zoom & Focus.
- Floating ring's label scale shows the projection distance.
- The projection distance is from the projector lens to the screen. For example, if the distance between the screen and the projector lens is 1.4 m, adjust the floating ring scale to "1.40" for better performance.



### Lens Calibration

Calibrate the lens position to return it to the center.



# USING THE PROJECTOR

## Lens Shift Memory

This projector can save up to five lens settings, which records the lens position.

- **Save Memory:** Select a record from 1 to 5 to save the current lens settings.
- **Apply Memory:** Select a record from 1 to 5 to apply the lens settings.
- **Clear Memory:** Clear the saved lens records.

### **Note:**

- *Process the lens calibration before setup lens shift memory.*
- *Performing a lens calibration will clear the saved lens records.*
- *When the lens calibration is not completed, the lens shift memory will be unavailable.*

## Reset

Reset the lens settings to factory default values.

## Power Settings

Configure the projector's power settings.

### Direct Power On

Choose "On" to activate Direct Power mode. The projector will automatically power on when AC power is supplied, without pressing the "Power" key on the projector keypad or on the remote control.

### Signal Power On

Turn on this function to have the projector automatically turning on when connected to HDMI input sources. It only applies to the standby projector set to Communication mode.

### Auto Power Off (min.)

Set an interval timer for the projector to automatically turn off if no signal is detected within the specified time period. Press the ◀ and ▶ buttons to add or reduce time, 1 minutes for each press.

### Sleep Timer (min.)

Set an interval timer for the projector to automatically turn off after operating for the specified amount of time.

### Power Mode (Standby)

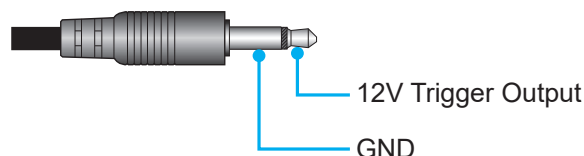
Setup the projector's standby mode.

- **Eco:** Minimum power consumption (0.5 Watt) which does not allow network control.
- **Active:** Low power consumption (< 2 Watt) which allows the LAN module to enter sleep mode and supports to be woken by Wake on LAN (WoL). When the LAN module is woken by WoL, the projector is ready to receive commands over the network.
- **Communication:** More power consumption that allows controlling the projector over the network.

### 12V Trigger

Use this function to enable or disable the trigger.

**Note:** 3.5mm TS type mini jack that outputs 12V 200mA (max.) for relay system control.



## Reset

Reset the power settings to factory default values.

# USING THE PROJECTOR

## OMS (Optoma Management Suite)

Control the projector with OMS. For more information, please visit <https://onlinemanual.optoma.com/>.

## Shutter

Set up the shutter behavior.

### Startup

Select the shutter behavior when turning on the projector.

- **Shutter Off:** Projector projects images normally after being powered on.
- **Shutter On:** Projector automatically turns on shutter after being powered on

## Security

Set up security verification to protect the projector.

### Security

Select On to protect the projector with a password.

### **Note:**

- *For the first time use security function, please enter a password when security function turned on.*
- *Non first time use security function, please enter previous password to verify when security function turned on again.*

### Security Timer

Specify the length of time the projector can be used without the password. Once the timer counts to 0, the user must enter a password to use the projector. The timer restarts every time the projector is turned on.

### Change Password

Change the projector password.

**Note:** *In the last minute before reaching a specified timer, including Auto Power Off, Sleep Timer, and Security Timer, an on-screen message will pop up warning that the projector shuts down in 60 seconds. Press any button on the remote control or projector keypad to reset the timer and the projector remains on.*

## Keypad Lock

When the keypad lock function is “On”, the Keypad will be locked. However, the projector can be operated by the remote control. By selecting “Off”, you will be able to reuse the Keypad.

# USING THE PROJECTOR

## Keypad LED Settings

Enable or disable the keypad LED.

## Startup Logo

Set up the logo for the startup screen.

### Change Logo

Change the logo for the startup screen. Apart from the Default logo, user can select from Default and Neutral.

- **Default:** The projector default logo.
- **Neutral:** The logo is not displayed on the startup screen.

## Background Color

Set a background color to display when no input signal is detected. The available options are None, Blue, Red, Green, Grey, White, and Logo.

## User Data

User can save the projector settings as user data and reload the settings later.

### Save All Settings

Save all of the projector settings as user data. User can save up to 5 records.

### Load All Settings

Load the previously saved user data.

## System Update

Update the system automatically or manually.

### Auto

System checks for new updates automatically every time it is connected to the Internet.

### Auto Download

When both “Auto” and “Auto Download” are On, new updates will be downloaded automatically when the projector is restarted.

### **Note:**

1. *When new updates are automatically downloaded, there will be no prompts.*
2. *When the Power Off button is pressed, if the download is complete, a prompt to update will pop up*
3. *Select the Update option to start the update.*

### Update

Manually update the system firmware.

## Device Reset

Reset the settings to factory default values.

### Reset OSD

Reset OSD settings to default values.

### Reset All Settings

Reset all projector settings to default values.

### Reset Selective

Reset the settings of one of the main menus. User can choose from Image, Display, Setup, Input, Audio, and Communication.

# USING THE PROJECTOR

## Input Settings menu

Learn how to configure the projector input settings.

### Submenus

- Auto Source
- Quick Resync
- Active Inputs
- EDID Settings
- HDMI Out

### Auto Source

When Auto Source is enabled, the projector automatically detects and selects the input signal. Once an input source is selected, press the Input button on the remote control or keypad to switch to other available sources. When the function is disabled, pressing Input will bring up the Active Inputs submenu.

### Quick Resync

Set the quick resync feature.

### Active Inputs

Select an input signal from the source list. The available input sources are HDMI1, HDMI2, and HDBaseT.

### EDID Settings

Set the EDID compatibility.

#### **HDMI 1 EDID / HDMI 2 EDID**

When receiving a HDMI signal, set the projector's EDID compatibility to display the signal correctly. Select 1.4 for the input devices with HDMI 1.4, or 2.0 for HDMI 2.0 devices.

#### **HDBaseT EDID**

When receiving a HDMI signal via HDBaseT, set the projector's EDID compatibility to display the signal correctly. Select 1.4 for the input devices with HDMI 1.4, or 2.0 for HDMI 2.0 devices.

### HDMI Out

Set the HDMI 1 or HDMI 2 port to output the signal.

### Reset

Reset all the input settings to factory default values.

# USING THE PROJECTOR

## Audio menu

Learn how to configure audio settings.

### Submenus

- Volume
- Mute
- Audio Output

### Volume

Adjust the volume level.

### Mute

Turn off or turn on the projector sound.

### Audio Output

Select the audio output between Internal Speaker and Line Out.

### Reset

Reset all the audio settings to factory default values.

# USING THE PROJECTOR

## Communication menu

Communication menu is used to configure the settings that allow the projector to communicate with other projectors or control devices.

### Submenus

- Device ID
- IR Function
- Remote Settings
- LAN
- HDBaseT Control
- Control
- Baud Rate

### Device ID

Assign an ID code for the projector from 00 to 99. Use this code as the projector ID when controlling the projector by RS232, Telnet or other control methods.

### IR Function

Set the remote receiver for the projector to control the communication between the projector and the IR remote.

#### Front

Enable or disable the front remote receiver.

#### Top

Enable or disable the top remote receiver.

#### HDBaseT

Select On to set the HDBaseT terminal as the remote receiver.

### Remote Settings

Configure the settings of the Infra-Red (IR) remote control.

#### Remote Code

Press and hold the remote control ID key. When all the key lights turn on, press the number key 00-99 to assign a number. When all key lights flash rapidly twice, the remote control code has been changed. At this time, release the remote control ID key.

#### Quick Switch Code

The IR receiving function of the projector can be temporarily deactivated by hot key (0 ~ 9) to avoid the IR interference between projectors. The remote ID needs to be set to All.

#### User 1 / User 2

Assign a function to the User 1 and User 2 buttons on the remote control. It allows you to use the function easily without going through the OSD menus. The available functions are HDMI 1, HDMI 2, Color Matching, Color Temperature, Projection Orientation, Light Source Mode, Freeze Screen, Network, and Reset Selective.

### LAN

Configure the projector's network settings.

#### LAN Interface

To avoid clash, specify the LAN interface to RJ-45 or HDBaseT.

#### Network Status

Display the network connection status. (Read only)

#### MAC Address

Display the MAC address. (Read only)

# USING THE PROJECTOR

## DHCP

Turn on DHCP to automatically acquire IP address, subnet mask, gateway, and DNS.

## IP Address

Assign the projector's IP address.

## Subnet Mask

Assign the projector's subnet mask.

## Gateway

Assign the projector's gateway.

## DNS 1/DNS 2

Assign the projector's DNS 1/DNS 2.

## Apply

Apply the wired network settings.

**Note:** *If you have adjusted the settings for DHCP, IP Address, Subnet Mask, Gateway, DNS1/2, please be sure to execute "Apply" so that the system will apply any changes to the network settings.*

## Reset

Reset the network settings to default factory values.

## **Control**

This projector can be controlled remotely by a computer or other external devices through wired network connection. It allows the user to control one or more projectors from a remote control center, such as powering the projector on or off, and adjusting the image brightness or contrast. Use the Control submenu to select a control device for the projector.

### Crestron

Control the projector with Crestron controller and related software (Port: 41794).

For more information, please visit <http://www.crestron.com>.

- **Crestron Setup:** Setup the Crestron IP Address, IPID, and Port. Then select Crestron Setup Apply to save the modifications.

**Note:** *Crestron settings on the OSD only support Crestron V1 functions. If you want to configure Crestron V2 functions or more detailed settings, you need to go to the web page to set them.*

### PJ Link

Control the projector with PJLink Class2 commands (Port: 4352).

For more information, please visit <http://pjlink.jbmia.or.jp/english>.

### Extron

Control the projector with Extron devices (Port: 2023).

For more information, please visit <http://www.extron.com>.

### AMX

Control the projector with AMX devices (Port: 9131).

For more information, please visit <http://www.amx.com>.

**Note:** *Only supports AMX Discovery function.*

### Telnet

Control the projector using RS232 commands through Telnet connection (Port: 23).

For more information, refer to "Using RS232 command by Telnet" on page 58.

# USING THE PROJECTOR

## HTTP

Control the projector with web browser (Port: 80).

For more information, refer to “Overview of the web control panel” on page 57.

## **Note:**

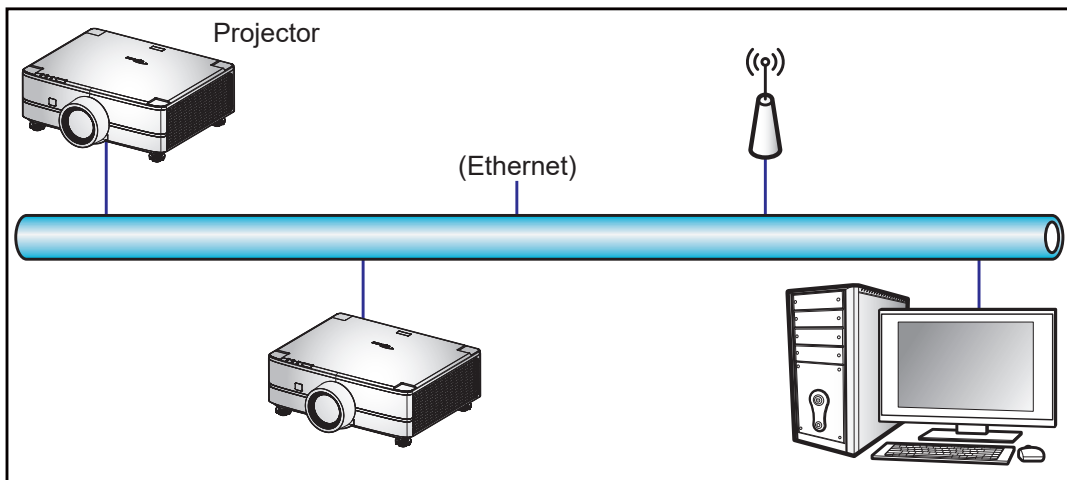
- *Crestron is a registered trademark of Crestron Electronics, Inc. of the United States.*
- *Extron is a registered trademark of Extron Electronics, Inc. of the United States.*
- *AMX is a registered trademark of AMX LLC of the United States.*
- *PJLink applied for trademark and logo registration in Japan, the United States of America, and other countries by JBMIA.*
- *For more information about the various types of external devices which can be connected to the LAN / RJ45 port and remotely control the projector, as well as the supported commands for these external devices, please contact the Support-Service directly.*
- *Support OMSC and OMSL. For more information, please contact the Support-Service directly.*

## **Setup Network Control**

### LAN RJ45 function

For simplicity and ease of operation, the projector provides diverse networking and remote management features.

The LAN / RJ45 function of the projector through a network, such as remotely manage: Power On / Off, brightness, and contrast settings.



### Wired LAN terminal functionalities

This projector can be controlled by using a PC (laptop) or other external device via LAN / RJ45 port and compatible with Crestron / Extron / AMX (Device -Discovery) / PJLink.

The projector is supported by the specified commands of the Crestron Electronics controller and related software, for example RoomView®.

### Using the web control panel

The web control panel allows the user to configure various projector settings using a web browser from any personal computer or mobile devices.

### System Requirements

To use the web control panel, make sure your devices and software meet the minimum system requirements

- RJ45 cable (CAT-5e)
- PC, laptop, mobile phone, or tablet installed with a web browser

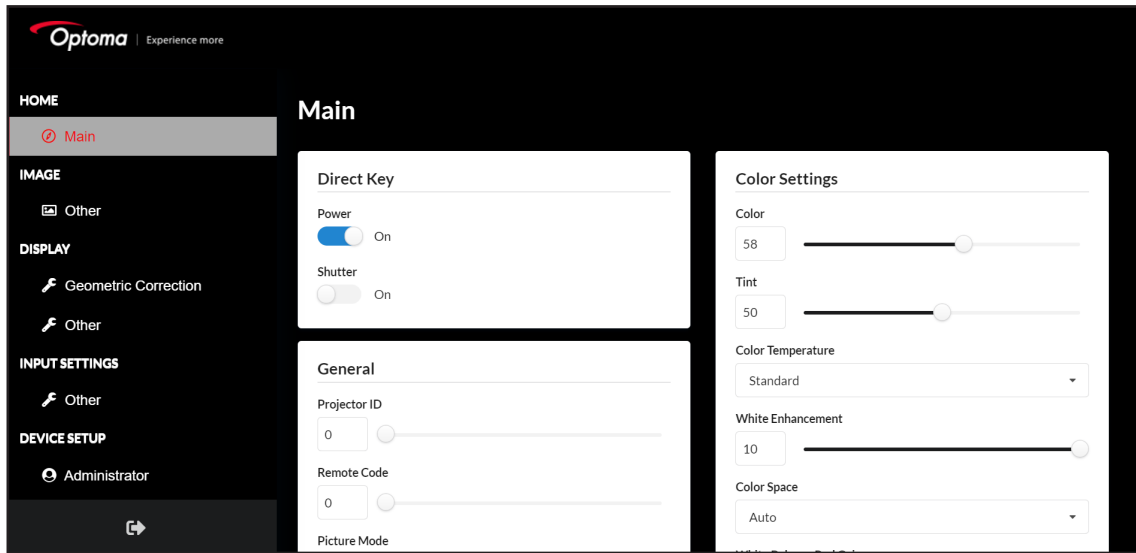


# USING THE PROJECTOR

- Compatible web browsers
  - Microsoft Edge 40 or higher version
  - Firefox 57 or higher version
  - Chrome 63 or higher version

## Overview of the web control panel

Configure the projector settings using web browser.



Menu	Description
HOME	View the projector information and firmware version details.
IMAGE	To configure image settings.
DISPLAY	To configure the settings to properly project images according to your installation circumstances.
INPUT SETTINGS	To configure the projector input settings.
DEVICE SETUP	To configure the system settings for the projector.
COMMUNICATION	Communication menu is used to configure the settings that allow the projector to communicate with other projectors or control devices.
INFORMATION	View the projector information about its status and settings. The projector information is read only.

# USING THE PROJECTOR

## Accessing the web control panel

When network is available, connect the projector and the computer to the same network. Use the projector address as the web URL to open the web control panel in a browser.

1. Check the projector address using the OSD menu.
  - Setup: **Control** → **LAN** → **IP Address**.
2. Open a web browser and type the projector address in the address bar.
3. The web page redirects to the web control panel.
4. In the Username field, type the username: admin (first time login).

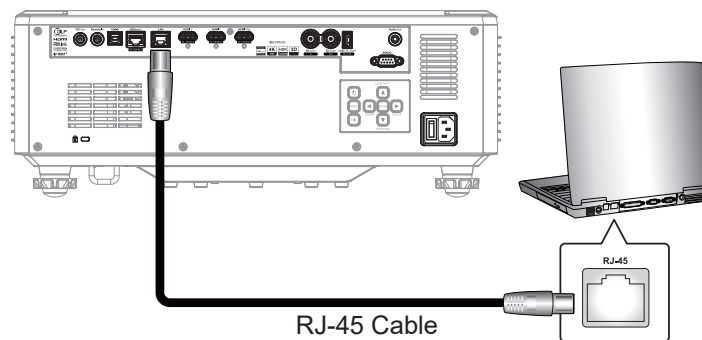
### **Note:**

- *When logging in for the first time, you don't need to enter a password.*
- *It is needed to change the username and password once you have logged in. It is also advised to use a strong password.*

When network is not available, refer to “Directly connect the projector to a computer” on page 58.

## Directly connect the projector to a computer

When network is not available, connect the projector to the computer directly using a RJ-45 cable, and configure the network settings manually.



1. Assign IP address to the projector
  - From the OSD menu, select **LAN > DHCP**.
  - Turn off DHCP, and manually set the projector's IP Address, Subnet Mask, and Gateway.
  - Press **Enter** to confirm the settings.
2. Assign IP address to the computer
  - Set the Default Gateway and Subnet Mask of the computer to match the projector.
  - Set the IP address of the computer to match the first three numbers of the projector.  
For example, if the projector IP address is 192.168.0.100, set the computer IP address to 192.168.0.xxx, where xxx is not 100.
3. Open a web browser and type the projector address in the address bar.
4. The web page redirects to the web control panel.

## Using RS232 command by Telnet

This projector supports using RS232 commands through Telnet connection.

1. Set up a direct connection between the projector and computer. Refer to *Directly connect the projector to a computer* on page 58.
2. Disable the firewall on the computer.
3. Open the command dialogue on the computer. For Windows 7 operating system, select **Start > All Programs > Accessories > Command Prompt**.
4. Input the command “telnet ttt.xxx.yyy.zzz 23”.  
Replace “ttt.xxx.yyy.zzz” with the projector IP address.
5. Press **Enter** on the computer keyboard.

# USING THE PROJECTOR

## Specification for RS232 by Telnet

- Telnet: TCP
- Telnet port: 23 (contact service team for more details)
- Telnet utility: Windows “TELNET.exe” (console mode).
- Disconnection for RS232-by-Telnet control normally: Close
- Below are the limitations for using Windows Telnet utility directly after TELNET connection is ready:
  - There is less than 50 bytes for successive network payload for Telnet-Control application.
  - There is less than 26 bytes for one complete RS232 command for Telnet-Control.
  - Minimum delay for next RS232 command must be more than 200 (ms).Information menu.

## **Baud Rate**

Set the baud rate for Serial Port In and Serial Port Out. The available options are 9600, 19200, 38400, 57600, and 115200 (default).

## **Reset**

Reset all control settings to default factory values.

## **Information menu**

View the projector information about its status and settings. The projector information is read only.

### **Submenus**

- Regulatory
- Serial Number
- Source Info.
- Light Source Mode
- Device ID
- Remote Code
- System Status
- Control
- LAN
- FW Version

## **Regulatory**

Display the projector model name.

## **Serial Number**

Display the projector serial number.

## **Source Info.**

### Source

Display the current input signal of the projector.

- **Resolution:** Display the resolution of the current input signal source of the projector.
- **Signal Format:** Display the format of the current input signal source of the projector.
- **Pixel Clock:** Display the pixel clock of the projector’s current input signal source.
- **Refresh Rate:** Display the horizontal and vertical refresh frequency of the projector’s current input signal source.
- **Color Bit Depth:** Displays the color depth of the current input signal.
- **Color Gamut:** Displays the Color Gamut of the current input signal.
- **Color Space:** Display the color space of the projector’s current input signal source.
- **Picture Mode:** Displays the Picture mode used by the projector’s current input signal.

# USING THE PROJECTOR

## **Light Source Mode**

Display the current Light Source Mode setting of the projector.

## **Device ID**

Display the current Device ID setting of the projector.

## **Remote Code**

Display the current remote code setting of the projector.

## **System Status**

Display the projector system status information.

## **Standby Mode**

Display the current standby mode setting of the projector.

## **Projection Hours**

Display the total projector usage hours.

## **Total Hours**

Displays the total laser usage time of the projector in Normal, Eco and Custom Power modes.

## **Normal**

Displays the total laser usage time of the projector in Normal mode.

## **Eco Mode**

Displays the total laser usage time of the projector in Eco mode.

## **Custom Power**

Displays the total laser usage time of the projector in Custom Power mode.

## **Ambient Temp.**

Display the current ambient temperature of the projector.

## **System Temp.**

Display the current system temperature of the projector.

## **Control**

Display projector control setting information.

## **Crestron**

Display the current Crestron on or off setting of the projector.

## **Extron**

Display the current Extron on or off setting of the projector.

## **PJLink**

Display the current PJLink on or off setting of the projector.

## **AMX**

Display the current AMX on or off setting of the projector.

## **Telnet**

Display the current Telnet on or off setting of the projector.

## **HTTP**

Display the current HTTP on or off setting of the projector.

## **LAN**

Display the projector network setting information.

### **LAN Interface**

Display the current LAN interface settings of the projector.

### **MAC Address**

Display the projector MAC address information.

### **Network Status**

Display the projector network connection status.

### **DHCP**

Display the projector DHCP settings.

### **IP Address**

Display the current IP address of the projector.

### **Subnet Mask**

Display the current Subnet Mask of the projector.

### **Gateway**

Display the current Gateway of the projector.

### **DNS 1/ DNS 2**

Display the current DNS1 and DNS2 address of the projector.

## **FW Version**

Display the projector Main, F-MCU, A-MCU, LAN, Formatter, HDBaseT firmware version information.

# ADDITIONAL INFORMATION

## Compatible Resolutions

### Digital

HDMI 2.0 / HDBaseT			
Established Timing	Standard Timing	Detail Timing	Supported Video Timing
1024x768 @60Hz	1024x768 @120Hz	3840x2160 @60Hz (Native)	1280x720 @50Hz
1024x768 @70Hz	1280x800 @75Hz	1920x1080 @60Hz	1280x720 @60Hz
1024x768 @75Hz	1280x1024 @60Hz	2560x1080 @60Hz	1280x720 @120Hz
1152x870 @75Hz	1360x765 @60Hz	1920x1080 @240Hz	1920x1080 @24Hz
1280x1024 @75Hz	1400x1050 @60Hz		1920x1080 @25Hz
	1600x1200 @60Hz		1920x1080 @50Hz
	1680x1050 @60Hz		1920x1080 @60Hz
	1920x1200 @60Hz		1920x1080i @50Hz
			1920x1080i @60Hz
			1920x1080 @120Hz
			2560x1080 @24Hz
			2560x1080 @25Hz
			2560x1080 @30Hz
			2560x1080 @50Hz
			2560x1080 @60Hz
			3840x2160 @24Hz
			3840x2160 @25Hz
			3840x2160 @30Hz
			3840x2160 @50Hz
			3840x2160 @60Hz
			4096x2160 @24Hz
			4096x2160 @25Hz
			4096x2160 @30Hz
			4096x2160 @50Hz

# ADDITIONAL INFORMATION

HDMI 1.4 / HDBaseT			
Established Timing	Standard Timing	Detail Timing	Supported Video Timing
1024x768 @60Hz	1024x768 @120Hz	720x480 @59Hz	1280x720 @50Hz
1024x768 @70Hz	1280x800 @75Hz	1366x768 @59Hz	1280x720 @60Hz
1024x768 @75Hz	1280x1024 @60Hz	1920x540 @60Hz	1280x720 @120Hz
1152x870 @75Hz	1360x765 @60Hz	1920x1080 @60Hz (Native)	1920x1080i @50Hz
1280x1024 @75Hz	1400x1050 @60Hz	1920x1200 @59Hz	1920x1080i @60Hz
	1600x1200 @60Hz	2560x1080 @60Hz	1920x1080 @24Hz
	1680x1050 @60Hz		1920x1080 @25Hz
	1920x1200 @60Hz		1920x1080 @50Hz
			1920x1080 @60Hz
			1920x1080 @120Hz
			2560x1080 @24Hz
			2560x1080 @25Hz
			2560x1080 @30Hz
			2560x1080 @50Hz
			2560x1080 @60Hz
			3840x2160 @24Hz
			3840x2160 @25Hz
			3840x2160 @30Hz
			4096x2160 @24Hz
			4096x2160 @25Hz
			4096x2160 @30Hz

## True 3D video compatibility

Input Resolutions	HDMI 1.4a 3D Input	Input timing	
		1280 x 720P @ 50Hz	Top and Bottom
1280 x 720P @ 60Hz	Top and Bottom		
1280 x 720P @ 50Hz	Frame Packing		
1280 x 720P @ 60Hz	Frame Packing		
1920 x 1080P @ 24Hz	Top and Bottom		
1920 x 1080P @ 24Hz	Frame Packing		
1920 x 1080i @ 50Hz	Side by Side		
1920 x 1080i @ 60Hz	Side by Side		
800 x 600 @ 120Hz	Frame Sequential		
1024 x 768 @ 120Hz	Frame Sequential		
1280 x 720 @ 120Hz	Frame Sequential		
1280 x 800 @ 120Hz	Frame Sequential		
1920 x 1080P @ 60Hz	Frame Sequential		
1920 x 1080P @ 120Hz	Frame Sequential		
1920 x 1200 @ 60Hz	Frame Sequential		

**Note:** If 3D input is 1080p@24Hz, the DMD should replay with integral multiple with 3D mode.

# ADDITIONAL INFORMATION

## RS232 Port Setting and Signals Connection

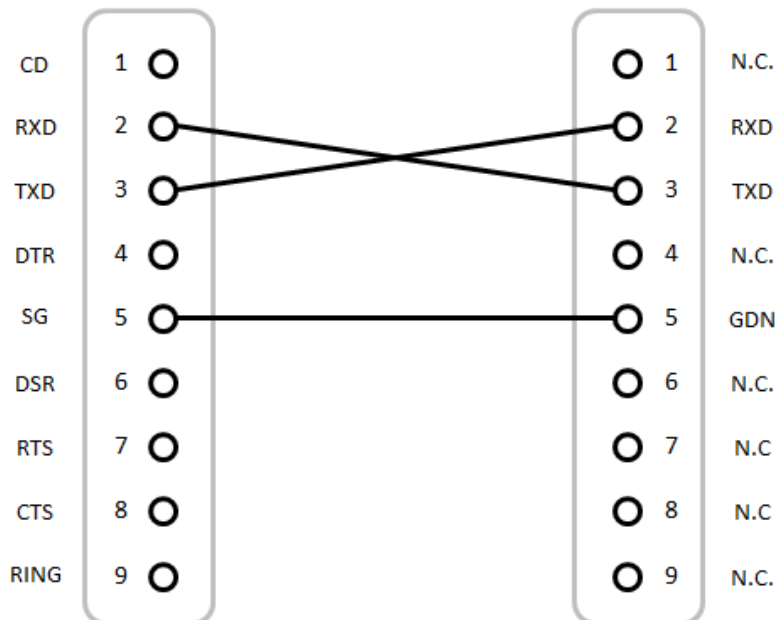
### RS232 Port Setting

Items	Method
Communication Method	Asynchronous Communication
Baud Rate	115200
Data Bits	8 bits
Parity	None
Stop Bits	1
Flow Control	None

### RS232 Signals Connection

Computer COM Port  
(D-Sub 9-pin connector)

Projector COM Port  
(D-Sub 9-pin connector)



**Note:** RS232 shell is grounded.



# ADDITIONAL INFORMATION

## Image Size and Projection Distance

### 1.6x lens model

The size of projected images is 50 ~ 300 inches (1.36 ~ 13.35 m)

Screen Size 16:9 (W x H)						Projector Distance			
Diagonal Length of Image		Width		Height		Wide		Tele	
inch	m	inch	m	inch	m	inch	m	inch	m
50	1.27	43.6	1.11	24.5	0.62	53.5	1.36	85.8	2.18
60	1.52	52.3	1.33	29.4	0.75	64.6	1.64	103.5	2.63
70	1.78	61.0	1.55	34.3	0.87	75.7	1.92	121.3	3.08
80	2.03	69.7	1.77	39.2	1.00	86.8	2.20	138.6	3.52
90	2.29	78.4	1.99	44.1	1.12	97.9	2.49	156.3	3.97
100	2.54	87.1	2.21	49.0	1.25	109.0	2.77	174.0	4.42
120	3.05	104.6	2.66	58.8	1.49	131.2	3.33	209.1	5.31
150	3.81	130.7	3.32	73.5	1.87	164.5	4.18	261.8	6.65
180	4.57	156.8	3.98	88.2	2.24	198.0	5.03	314.6	7.99
200	5.08	174.3	4.43	98.0	2.49	219.9	5.59	349.6	8.88
250	6.35	217.8	5.53	122.5	3.11	275.4	7.00	437.8	11.12
300	7.62	261.4	6.64	147.1	3.74	330.9	8.41	525.6	13.35

### 1.15x lens model

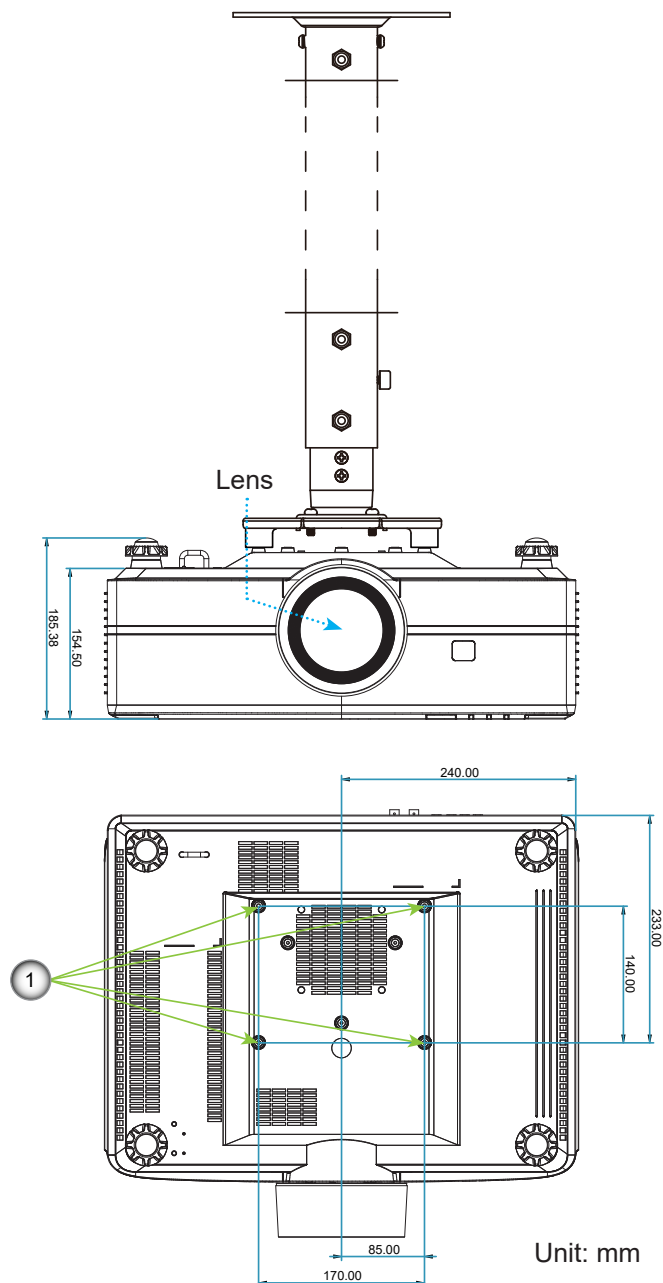
The size of projected images is 50 ~ 1000 inches (0.70 ~ 17.04 m)

Screen Size 16:9 (W x H)						Projector Distance			
Diagonal Length of Image		Width		Height		Wide		Tele	
inch	m	inch	m	inch	m	inch	m	inch	m
50	1.27	43.6	1.11	24.5	0.62	27.6	0.70	32.1	0.81
60	1.52	52.3	1.33	29.4	0.75	33.4	0.85	38.8	0.99
70	1.78	61.0	1.55	34.3	0.87	39.2	1.00	45.5	1.16
80	2.03	69.7	1.77	39.2	1.00	45.0	1.14	52.3	1.33
90	2.29	78.4	1.99	44.1	1.12	50.9	1.29	59.0	1.50
100	2.54	87.2	2.21	49.0	1.25	56.7	1.44	65.7	1.67
120	3.05	104.6	2.66	58.8	1.49	68.3	1.74	79.2	2.01
150	3.81	130.7	3.32	73.5	1.87	85.8	2.18	99.3	2.52
180	4.57	156.9	3.98	88.2	2.24	103.3	2.62	119.5	3.04
200	5.08	174.3	4.43	98.1	2.49	114.9	2.92	133.0	3.38
250	6.35	217.9	5.53	122.6	3.11	144.0	3.66	166.6	4.23
300	7.62	261.5	6.64	147.1	3.74	173.1	4.40	200.2	5.09
500	12.70	435.8	11.07	245.1	6.23	289.6	7.35	334.7	8.50
600	15.24	522.9	13.28	294.2	7.47	347.8	8.83	402.0	10.21
700	17.78	610.1	15.50	343.2	8.72	406.0	10.31	469.3	11.92
800	20.32	697.3	17.71	392.2	9.96	464.2	11.79	536.5	13.63
900	22.86	784.4	19.92	441.2	11.21	522.5	13.27	603.8	15.34
1000	25.40	871.6	22.14	490.3	12.45	580.7	14.75	671.0	17.04

# ADDITIONAL INFORMATION

## Ceiling Mount Installation

1. To prevent damage to your projector, please use the Optoma ceiling mount.
2. If you wish to use a third party ceiling mount kit, please ensure the screws used to attach a mount to the projector meet the following specifications:
  - Screw type: M4\*4
  - Minimum screw length: 8 mm

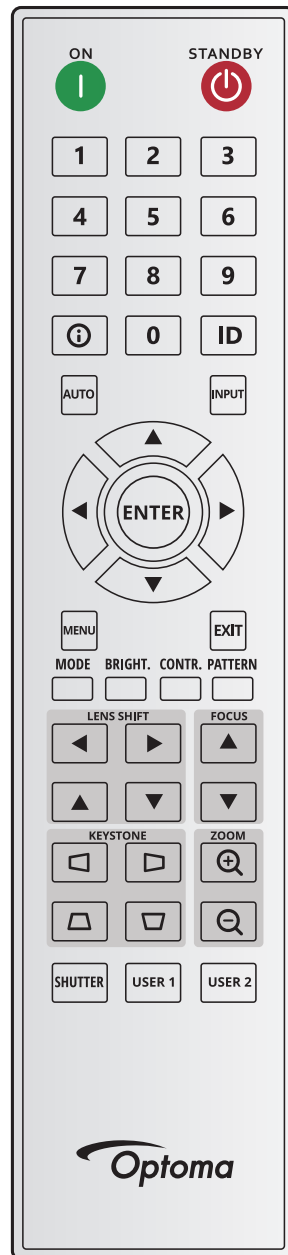


### Note:

1. Mounting holes for ceiling mount.
2. Please note that damage resulting from incorrect installation will void the warranty.

# ADDITIONAL INFORMATION

## IR remote codes



Key Legend	Key Position	Repeat Format	Address		Data		Description
			Byte 1	Byte 2	Byte 3	Byte 4	
ON (I)	1	F1	32	CD	2	FD	Press to turn on the projector.
OFF (⏻)	2	F1	32	CD	2E	D1	Press to turn off the projector.
1	3	F1	32	CD	72	8D	Use as numeric keypad number "1".
2	4	F1	32	CD	73	8C	Use as numeric keypad number "2".
3	5	F1	32	CD	74	8B	Use as numeric keypad number "3".
4	6	F1	32	CD	75	8A	Use as numeric keypad number "4".
5	7	F1	32	CD	77	88	Use as numeric keypad number "5".
6	8	F1	32	CD	78	87	Use as numeric keypad number "6".

# ADDITIONAL INFORMATION


Key Legend	Key Position	Repeat Format	Address		Data		Description
			Byte 1	Byte 2	Byte 3	Byte 4	
7	9	F1	32	CD	79	86	Use as numeric keypad number "7".
8	10	F1	32	CD	80	7F	Use as numeric keypad number "8".
9	11	F1	32	CD	81	7E	Use as numeric keypad number "9".
Info (i)	12	F1	32	CD	82	7D	Press to display source image information.
0	13	F1	32	CD	25	DA	Use as numeric keypad number "0".
ID	14	F1	32	CD	A7	58	Press to set remote ID.
Auto	15	F1	32	CD	4	FB	Press to automatically synchronize the projector to the input source.
Input	16	F1	32	CD	18	E7	Press to select an input signal.
UP (▲)	17	F1	32	CD	0F	F0	Press to select items or make adjustments to our selection.
LEFT (◀)	18	F1	32	CD	11	EE	Press to select items or make adjustments to our selection.
Enter	19	F1	32	CD	14	EB	Press to confirm your item selection.
RIGHT (▶)	20	F1	32	CD	10	EF	Press to select items or make adjustments to our selection.
DOWN (▼)	21	F1	32	CD	12	ED	Press to select items or make adjustments to our selection.
Menu	22	F1	32	CD	0E	F1	Press to display the on-screen display menus for projector.
Exit	23	F1	32	CD	2A	D5	Press to return to previous level or exit menus if at top level.
Mode	24	F1	32	CD	5	FA	Press to select the preset display mode.
Bright.	25	F1	32	CD	28	D7	Press to adjust amount of light in the image.
Contr.	26	F1	32	CD	29	D6	Press to adjust difference between dark and light.
Pattern	27	F1	32	CD	58	A7	Press to display a test pattern.
Lens Shift ◀	28	F1	32	CD	41	BE	Press to adjust the position of the image horizontally.
Lens Shift ▶	29	F1	32	CD	42	BD	
Focus ▲	30	F1	32	CD	86	79	Press to adjust focus to improve image clarity as desired.
Lens Shift ▲	31	F1	32	CD	34	CB	Press to adjust the position of the image vertically.
Lens Shift ▼	32	F1	32	CD	32	CD	Press to adjust the position of the image vertically.
Focus ▼	33	F1	32	CD	26	D9	Press to adjust focus to improve image clarity as desired.
Keystone ◻	34	F1	32	CD	87	78	Press to adjust the horizontal keystone.
Keystone ▽	35	F1	32	CD	51	AE	Press to adjust the horizontal keystone.
Zoom ⊕	36	F1	32	CD	52	AD	Press to adjust zoom to achieve a desired image size.
Keystone ▽	37	F1	32	CD	53	AC	Press to adjust the vertical keystone.
Keystone ◻	38	F1	32	CD	54	AB	Press to adjust the vertical keystone.
Zoom ⊖	39	F1	32	CD	55	AA	Press to adjust zoom to achieve a desired image size.
Shutter (AV Mute)	40	F1	32	CD	56	A9	Press to hide/unhide the screen picture.
User 1	41	F1	32	CD	57	A8	Press to assign user functions. Please refer to "Remote Setup" on page 24.
User 2	42	F1	32	CD	27	D8	Press to assign user functions. Please refer to "Remote Setup" on page 24.

# ADDITIONAL INFORMATION

## Troubleshooting

If you experience a problem with your projector, please refer to the following information. If a problem persists, please contact your local reseller or service center.

### Image problems

- ❓ *No image appears on-screen*
  - Ensure all the cables and power connections are correctly and securely connected as described in the *Setup and Installation* section.
  - Ensure the pins of connectors are not crooked or broken.
  - Ensure that the Shutter (AV Mute) feature is not turned on.
- ❓ *Image is out of focus*
  - Press the **Focus ▲** or **Focus ▼** button on the remote control or projector keypad to adjust the focus until the image is sharp and legible.
  - Make sure the projection screen is between the required distance from the projector. (Please refer to *Image size and projection distance* page 65).
- ❓ *The image is stretched when displaying 16:10 DVD title*
  - When you play anamorphic DVD or 16:10 DVD, the projector will show the best image in 16:10 format on projector side.
  - If you play 4:3 format DVD title, please change the format as 4:3 in projector OSD.
  - Please setup the display format as 16:10 (wide) aspect ratio type on your DVD player.
- ❓ *Image is too small or too large*
  - Press the **Zoom ⊕** or **Zoom ⊖** button on the remote control or projector keypad to adjust the projected image size.
  - Move the projector closer to or further from the screen.
  - From the OSD menu, select **Display > Aspect Ratio** to change the aspect ratio.
- ❓ *Image has slanted sides:*
  - If possible, reposition the projector so that it is centered on the screen and below the bottom of the screen.
  - Press the **Keystone**  buttons on the remote control to adjust the screen shape.
- ❓ *Image is reversed*
  - From the OSD menu, select **Device Setup > Projection Orientation > Rear** to reverse the image so you can project from behind a translucent screen.

### Other problems

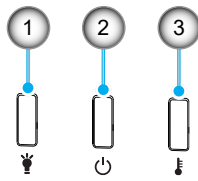
- ❓ *The projector stops responding to all controls*
  - If possible, turn off the projector, then unplug the power cord and wait at least 20 seconds before reconnecting power.

### Remote control problems

- ❓ *If the remote control does not work*
  - Check that the operating angle of the remote control is pointed within  $\pm 30^\circ$  to the IR receivers on the projector.
  - Make sure there are not any obstructions between the remote control and the projector. Move to within 6 meters (19.7 feet) of the projector.
  - Make sure batteries are inserted correctly.
  - Replace batteries if they are exhausted.

# ADDITIONAL INFORMATION

## LED Indicators and Lightning Messages



No.	Item
1.	Light LED
2.	Power LED
3.	Temp LED

Status	Light LED	Power LED		Temp LED
	Red	Red	Green	Red
Standby	N/A	Steady light	N/A	N/A
Power On	N/A	N/A	Steady light	N/A
Warning Up Start	N/A	Flashing (1 sec off / 1 sec on)	N/A	N/A
Cooling Down Start	N/A	N/A	Flashing (0.5 sec off / 0.5 sec on)	N/A
AV Mute	Flashing (1 sec off / 1 sec on)	N/A	Steady light	N/A
Error (Power Failure)	Steady light	N/A	N/A	Steady light
Error (Fan Failure)	N/A	N/A	N/A	Flashing (3 sec on / 3 sec off)
Error (DIM Power)	N/A	N/A	N/A	Flashing (0.5 sec off / 0.5 sec on)
Error (Over Temp)	N/A	N/A	N/A	Steady light
Error (LD Over Temp)	N/A	N/A	N/A	Steady light
OPFU Mode	Steady light	Steady light	Steady light	Steady light

**Note:** The light off for 10min when projector into upgrade process and All LED Flashing (3 sec off/ 3 sec on)

# ADDITIONAL INFORMATION

## Specifications

Optical	Description
Display resolution	4K UHD 3840 x 2160
Maximum resolution	3840 x 2160 @ 60Hz for HDMI
Lens	Throw ratio <ul style="list-style-type: none"> <li>• 1.6x lens model: 1.25 ~ 2.0</li> <li>• 1.15x lens model: 0.65 ~ 0.75</li> </ul> F-stop <ul style="list-style-type: none"> <li>• 1.6x lens model: 2.0 ~ 2.4</li> <li>• 1.15x lens model: 2.0 ~ 2.1</li> </ul> Focal length <ul style="list-style-type: none"> <li>• 1.6x lens model: 18.72 ~ 29.59</li> <li>• 1.15x lens model: 9.69 ~ 11.19</li> </ul>
Offset	0
Image size	<ul style="list-style-type: none"> <li>• 1.6x lens model: 50" ~ 300" (mechanical travel) (optimized@120")</li> <li>• 1.15x lens model: 50" ~ 1000" (mechanical travel) (optimized@100")</li> </ul>
Projection distance	<ul style="list-style-type: none"> <li>• 1.6x lens model: 1.33m ~ 13.06m (mechanical travel)</li> <li>• 1.15x lens model: 0.7m ~ 16.6m (mechanical travel)</li> </ul>
Input Interface	<ul style="list-style-type: none"> <li>• HDMI in 2.0 x 2</li> <li>• HDBaseT x 1</li> <li>• 3D Sync in x 1</li> </ul>
Output Interface	<ul style="list-style-type: none"> <li>• HDMI out 2.0 x 1</li> <li>• USB type-A x 1 for power USB 5V/1.5A</li> <li>• 3D Sync out x 1</li> <li>• Audio out x 1</li> </ul>
Control Interface	<ul style="list-style-type: none"> <li>• USB type-B x 1 for service</li> <li>• LAN x 1</li> <li>• 12V Trigger x 1</li> <li>• Wired Remote x 1</li> <li>• RS232 control x 1</li> </ul>
Colour	1073.4 Million color
Scan rate	<ul style="list-style-type: none"> <li>• Horizontal scan rate: 15.375 ~ 91.146 KHz</li> <li>• Vertical scan rate: 24 ~ 85 Hz (120Hz for 3D feature)</li> </ul>
Speaker	10W x 2
Power consumption	Normal mode (typical) <ul style="list-style-type: none"> <li>• 530W ± 15% @ 110Vac</li> <li>• 520W ± 15% @ 220Vac</li> </ul> ECO mode (typical) <ul style="list-style-type: none"> <li>• 285W ± 15% @ 110Vac</li> <li>• 280W ± 15% @ 220Vac</li> </ul>
Power requirement	AC 100 ~ 240V ±10%, 50/60Hz
Input current	6.5A
Installation orientations	Front, Rear, Ceiling, Rear-top

# ADDITIONAL INFORMATION

Optical	Description
Dimensions (W x D x H)	1.6x lens model: <ul style="list-style-type: none"><li>• Without feet: 486 x 432.5 x 176 mm (19.1 x 17.0 x 6.9 inches)</li><li>• With feet: 486 x 432.5 x 185.5 mm (19.1 x 17.0 x 7.3 inches)</li></ul> 1.15x lens model: <ul style="list-style-type: none"><li>• Without feet: 486 x 427.5 x 176 mm (19.1 x 16.8 x 6.9 inches)</li><li>• With feet: 486 x 427.5 x 185.5 mm (19.1 x 16.8 x 7.3 inches)</li></ul>
Weight	<ul style="list-style-type: none"><li>• 1.6x lens model: 13.5 Kg ± 0.3 Kg (29.76 lbs ± 0.66 lbs)</li><li>• 1.15x lens model: 13.2 Kg ± 0.3 Kg (29.10 lbs ± 0.66 lbs)</li></ul>
Environmental	Operating in 5 ~ 40°C, 10% to 85% humidity (non-condensing)

**Note:** All specifications are subject to change without notice.



# ADDITIONAL INFORMATION

## RS232 protocol function list

Baud Rate : 115200

Data Bits: 8

Parity: None

Stop Bits: 1

Flow Control : None

UART16550 FIFO: Disable

### ■ Write Command

~	X	X	X	X	X		n	CR
Lead Code	Projector ID		Command			space	variable	carriage return
Prefix	00~99 (Default: 00)		000~999				0~9999	suffix

Pass:

Fail:

### ■ Read Command

~	X	X	X	X	X		n	CR
Lead Code	Projector ID		Command			space	variable	carriage return
Prefix	00~99 (Default: 00)		000~999				0~9999	suffix

### Response Format

Pass:     
      Fail:

### ■ System Automatically Send

I	N	F	O	n
				Variable

**Note:** There is a <CR> after all ASCII commands. 0D is the HEX code for <CR> in ASCII code.

# ADDITIONAL INFORMATION

Level 1	Level 2	Level 3	Level 4	Level 5	n value	Write Command			Read Command							
						Command	Command	Pass	Command	Command Value	Pass					
Image	Picture Mode	[None]							XX123	1		O	k	0		
		Vivid					XX20	16		XX123	1		O	k	16	
		HDR					XX20	25		XX123	1		O	k	25	
		HLG					XX20	25		XX123	1		O	k	25	
		Cinema					XX20	3		XX123	1		O	k	3	
		SRGB					XX20	4		XX123	1		O	k	4	
		Depth					XX20	2		XX123	1		O	k	2	
		DICOM SIM					XX20	13		XX123	1		O	k	13	
		Blending					XX20	19		XX123	1		O	k	19	
		BD					XX20	9		XX123	1		O	k	9	
	High Frame Rate					XX20	18		XX123	1		O	k	18		
	User					XX20	5		XX123	1		O	k	5		
	Dynamic Range	HDR	Off				XX565	0		XX291	1		O	k	0	
		HDR Brightness	Auto				XX565	0		XX291	1		O	k	1	
			0~100				XX288	0~10								
	Brightness	0~100				XX21	0~100		XX125	1		O	k	0~100		
	Contrast	0~100				XX22	0~100		XX126	1		O	k	0~100		
	Sharpness	1~15				XX23	1~15									
	Gamma	File					XX35	3								
		Graphics					XX35	3								
		1.8					XX35	5								
		2.0					XX35	6								
		2.2					XX35	7								
		2.4					XX35	12								
		2.6					XX35	8								
		3D					XX35	23								
		Blackboard					XX35	9								
		Blackboard					XX35	10								
		DICOM SIM					XX35	11								
	Dynamic Contrast	Dynamic Black	Off				XX191	0								
		Speed	On				XX191	1								
		Strength	0~160				XX193	1~160								
		Level	0~3				XX254	0~3								
		Extreme Black	Off				XX255	50~100								
		AV Mute Timer	On				XX218	0								
		Black Signal Level	0.0s~10.0s				XX218	1								
		Color	0~5				XX256	0~20								
		Time	0~100				XX257	0~5								
		BrilliantColor**	0~100				XX45	0~100		XX292	1		O	k	0~100	
	Color Settings	Color Temperature	Warm				XX44	0~100		XX293	1		O	k	0~100	
			Standard				XX34	1~10		XX294	1		O	k	0~10	
			Cool				XX36	4		XX128	1		O	k	3	
		Color Matching	Red	Mute				XX36	1		XX128	1		O	k	0
				Saturation	0~254			XX36	2		XX128	1		O	k	1
				Luminance	0~254			XX36	3		XX128	1		O	k	2
			Green	Mute				XX327	0~254		XX491	1		O	k	0~254
				Saturation	0~254			XX333	0~254		XX491	2		O	k	0~254
				Luminance	0~254			XX339	0~254		XX491	3		O	k	0~254
			Blue	Mute				XX328	0~254		XX492	1		O	k	0~254
	Saturation			0~254			XX334	0~254		XX492	2		O	k	0~254	
	Luminance			0~254			XX340	0~254		XX492	3		O	k	0~254	
	Cyan		Mute				XX329	0~254		XX493	1		O	k	0~254	
			Saturation	0~254			XX335	0~254		XX493	2		O	k	0~254	
			Luminance	0~254			XX341	0~254		XX493	3		O	k	0~254	
	Magenta	Mute				XX330	0~254		XX494	1		O	k	0~254		
		Saturation	0~254			XX336	0~254		XX494	2		O	k	0~254		
		Luminance	0~254			XX342	0~254		XX494	3		O	k	0~254		
	Yellow	Mute				XX332	0~254		XX495	1		O	k	0~254		
		Saturation	0~254			XX338	0~254		XX495	2		O	k	0~254		
		Luminance	0~254			XX344	0~254		XX495	3		O	k	0~254		
	White	Mute				XX331	0~254		XX496	1		O	k	0~254		
		Saturation	0~254			XX337	0~254		XX496	2		O	k	0~254		
		Luminance	0~254			XX343	0~254		XX496	3		O	k	0~254		
		Mute				XX345	0~254		XX497	1		O	k	0~254		
		Red				XX346	0~254		XX497	2		O	k	0~254		
		Green				XX347	0~254		XX497	3		O	k	0~254		

**Note:** Some commands are not supported, it depends on models.

# ADDITIONAL INFORMATION

Level 1	Level 2	Level 3	Level 4	Level 5	n value	Write Command			Read Command					
						CMD	Set Parts	Command	CMD Value	Pass				
Image	Color Settings	White Balance	Reset All (CU Only)			XX215	1							
			Red Gain	0 ~ 100		XX224	0~100	XX498	1	O	K	0~100		
			Green Gain	0 ~ 100		XX225	0~100	XX498	2	O	K	0~100		
			Blue Gain	0 ~ 100		XX226	0~100	XX498	3	O	K	0~100		
			Red Offset	0 ~ 100		XX227	0~100	XX499	1	O	K	0~100		
		Green Offset	0 ~ 100		XX228	0~100	XX499	2	O	K	0~100			
		Blue Offset	0 ~ 100		XX229	0~100	XX499	3	O	K	0~100			
		Color Space (HDMI Input)	Auto		XX237	1	XX295	1	O	K	1			
		RGB (ID-255)			XX237	2	XX295	1	O	K	2			
		RGB (16-235)			XX237	4	XX295	1	O	K	4			
	YUV			XX237	3	XX295	1	O	K	3				
	Wall Color	Off				XX206	0	XX296	1	O	K	0		
		Blackboard				XX206	1	XX296	1	O	K	1		
		Light Yellow				XX206	7	XX296	1	O	K	7		
		Light Green				XX206	3	XX296	1	O	K	3		
		Light Blue				XX206	4	XX296	1	O	K	4		
		Pink				XX206	5	XX296	1	O	K	5		
		Gray				XX206	6	XX296	1	O	K	6		
		3D Mode	Off			XX230	0	XX297	1	O	K	0		
		3D Sync Type	Auto			XX230	4	XX297	1	O	K	4		
		DLP Link	Off			XX230	1	XX298	1	O	K	1		
	3D Setup	3D Sync	Off			XX230	3	XX298	1	O	K	3		
		3D Format	Auto			XX405	0							
		Frame Packing	Off			XX405	7							
		SBS	Off			XX405	1							
		Top and Bottom	Off			XX405	2							
		Frame Sequential	Off			XX405	3							
		3D Sync Invert	On			XX231	0							
		3D Sync Out	To Emitter			XX232	0							
		To Next Projector				XX232	1							
Reset					XX234	1								
Display	Light Source Settings	Light Source Mode	Normal			XX110	1	XX241	1	O	K	1		
			Eco Mode			XX110	2	XX241	1	O	K	2		
			Constant Luminance			XX110	6	XX241	1	O	K	6		
		Constant Power			XX110	7	XX241	1	O	K	7			
		Brightness Level	10%~100%			XX226	10~100	XX281	1	O	K	10~100		
	Gaming Mode	On				XX220	0	XX233	1	O	K	0		
		4:3				XX220	1	XX233	1	O	K	1		
		16:9				XX220	2	XX233	1	O	K	2		
	Aspect Ratio	21:9				XX220	16	XX233	1	O	K	16		
		LBX				XX220	5	XX233	1	O	K	5		
		Auto				XX220	7	XX233	1	O	K	7		
	Digital Zoom	Native				XX220	6	XX233	1	O	K	6		
		20%~180				XX220	80~180	XX543	9	O	K	80~180		
	Image Shift	Horizontal	0 ~ 100			XX263	0~100	XX543	1	O	K	0~100		
		Vertical	0 ~ 100			XX264	0~100	XX543	2	O	K	0~100		
	Geometric Correction	Keystone	Keystone	0 ~ 40			XX266	0~40	XX543	3	O	K	0~40	
			Keystone	0 ~ 40			XX265	0~40	XX543	4	O	K	0~40	
		4-Corner	Top Left	right (0 ~ 1152)	0		XX268	1	XX558	1	O	K	0~1152	
				left (0 ~ 1152)	0		XX268	2	XX558	1	O	K	0~1152	
				up (0 ~ 648)	0		XX268	3	XX558	2	O	K	0~648	
				down (0 ~ 648)	0		XX268	4	XX558	2	O	K	0~648	
			Top Right	right (2688 ~ 3839)	3839			XX268	5	XX558	3	O	K	2688~3839
				left (2688 ~ 3839)	3839			XX268	6	XX558	3	O	K	2688~3839
				up (0 ~ 648)	0			XX268	7	XX558	4	O	K	0~648
				down (0 ~ 648)	0			XX268	8	XX558	4	O	K	0~648
			Bottom Left	right (0 ~ 1152)	0			XX268	9	XX558	5	O	K	0~1152
				left (0 ~ 1152)	0			XX268	10	XX558	5	O	K	0~1152
				up (1512 ~ 2159)	2159			XX268	11	XX558	6	O	K	1512~2159
				down (1512 ~ 2159)	2159			XX268	12	XX558	6	O	K	1512~2159
		Bottom Right	right (2688 ~ 3839)	3839			XX268	13	XX558	7	O	K	2688~3839	
left (2688 ~ 3839)			3839			XX268	14	XX558	7	O	K	2688~3839		
up (1512 ~ 2159)			2159			XX268	15	XX558	8	O	K	1512~2159		
down (1512 ~ 2159)			2159			XX268	16	XX558	8	O	K	1512~2159		
Warping		Off			XX142	0	XX380	1	O	K	0			
Warping Adjustment		(Adjust Pattern)			XX142	3	XX380	1	O	K	3			
Grid Color	Green				XX143	1	XX379	1	O	K	1			
	Magenta				XX143	2	XX379	1	O	K	2			
	Red				XX143	3	XX379	1	O	K	3			
	Cyan				XX143	4	XX379	1	O	K	4			
Reset					XX561	1								

**Note:** Some commands are not supported, it depends on models.

# ADDITIONAL INFORMATION

Level 1	Level 2	Level 3	Level 4	Level 5	n value	Write Command			Read Command					
						Command	Set Para.	Pass	Command	CMD Value	Pass			
Device Setup	Edge Mask	0~10				*X061	0~10		*X0378	1	0	0~10		
	Freeze Screen (CU Only)	Unfreeze				*X004	0		*X0377	1	0	0		
	Reset	Freeze				*X021	1		*X0377	1	0	1		
	Test Pattern	Off					*X0195	0						
		Green Grid					*X0195	3						
		Magenta Grid					*X0195	4						
		White Grid					*X0195	1						
		White					*X0195	2						
		Black					*X0195	11						
		Red					*X0195	5						
		Green					*X0195	6						
		Blue					*X0195	7						
		Yellow					*X0195	8						
		Magenta					*X0195	9						
		Cyan					*X0195	10						
		ANSI Contrast 4x4					*X0195	14						
		Color bar					*X0195	13						
		OK Full screen					*X0195	16						
		Projection Orientation	Ceiling	Auto				*X0523	3		*X0370	1	0	3
	On						*X0523	1		*X0370	1	0	1	
	Off						*X0523	0		*X0370	1	0	0	
	Off						*X0524	0		*X0371	1	0	0	
	Rear	On					*X0524	1		*X0371	1	0	1	
	Language	English					*X070	1		*X0299	1	0	1	
		Deutsch					*X070	2		*X0299	1	0	2	
		Français					*X070	3		*X0299	1	0	3	
		Italiano					*X070	4		*X0299	1	0	4	
		Español					*X070	5		*X0299	1	0	5	
		Português					*X070	6		*X0299	1	0	6	
		Polski					*X070	7		*X0299	1	0	7	
		Nederlands					*X070	8		*X0299	1	0	8	
		Norsk					*X070	10		*X0299	1	0	10	
		繁體中文					*X070	13		*X0299	1	0	13	
		简体中文					*X070	14		*X0299	1	0	14	
		日本語					*X070	15		*X0299	1	0	15	
		한국어					*X070	16		*X0299	1	0	16	
		Русский					*X070	17		*X0299	1	0	17	
		Magyar					*X070	18		*X0299	1	0	18	
		其他					*X070	21		*X0299	1	0	21	
	Menu Settings	Menu Location	Top Left				*X072	1						
			Top Right				*X072	2						
			Center				*X072	3						
			Bottom Left				*X072	4						
		Menu Timer	Off					*X0515	0		*X0382	1	0	0
			5s					*X0515	1		*X0382	1	0	1
			10s					*X0515	3		*X0382	1	0	3
			30s					*X0515	7		*X0382	1	0	7
		Information Hide	Off					*X0515	5		*X0382	1	0	5
			10s					*X0515	6		*X0382	1	0	6
			30s					*X0515	6		*X0382	1	0	6
			Off					*X0102	0		*X0383	1	0	0
	High Altitude	Off					*X0101	0		*X0150	22	0	0	
		On					*X0101	1		*X0150	22	0	1	
	Lens Settings	Focus	-				*X0308	1						
		Zoom	+				*X0307	1						
		Lens Function	Lock					*X0349	1		*X0545	4	0	0
			Unlock					*X0349	2		*X0545	4	0	1
			Up					*X084	3					
			Down					*X084	4					
		Lens Shift	Left					*X084	5					
			Right							*X084	6			
		Lens Calibration						*X0525	1					
		Lens Shift Memory		Save Memory	Memory 1 ~ Memory 5				*X0360	1~5				
			Apply Memory	Memory 1 ~ Memory 5				*X0359	1~5		*X0384	1	0	1~5
			Clear Memory					*X0361	1					
	Reset					*X0376	1							
	Schedule (CU Only)	Date and Time												
		Schedule Mode	Off				*X0284	0		*X0243	1	0	YYYYMMDDhhmm (201210051750)	
		On					*X0284	1		*X0244	1	0	1	
		View Today	Monday / Tuesday / Wednesday / Thursday / Friday / Saturday / Sunday							*X0243	2	0	d=2~Tuesday d=3~Wednesday d=4~Thursday d=5~Friday d=6~Saturday d=7~Sunday	
	Reset Schedule					*X0284	9							
	Power Settings	Direct Power On	Off				*X0105	0		*X0385	1	0	0	
		On					*X0105	1		*X0385	1	0	1	
		Signal Power On	Off				*X0113	0		*X0385	2	0	0	
		On					*X0113	1		*X0385	2	0	1	
		Auto Power Off (min.)	0 ~ 180				*X0106	0~180		*X0387	1	0	0~180	
		Sleep Timer (min.)	0 ~ 960				*X0107	0~960		*X0388	1	0	0~960	
		Power Mode (Standby)	Eco				*X0114	0		*X0150	16	0	0	
		Active					*X0114	1		*X0150	16	0	1	
		Communication					*X0114	3		*X0150	16	0	3	
		12V Trigger	Off				*X0192	0		*X0389	1	0	0	
	On					*X0192	1		*X0389	1	0	1		
	Reset					*X0177	1							
	Shutter	Startup	Shutter Off				*X0269	0		*X0247	1	0	and without bind as1 Binded	
		Shutter On					*X0269	1		*X0390	1	0	0	
	Security	Security	Off				*X078	0~minn		*X0391	1	0	0	
		On					*X078	1~minn		*X0391	1	0	1	
		Month	0~35				*X0337	00~35		*X0344	1	0	00~35	
		Day	0~29				*X0338	00~29		*X0344	2	0	00~29	
		Hour	0~23				*X0339	00~23		*X0344	3	0	00~23	
		Change Password					*X077	"MMDDHH mmmm" minn						

**Note:** Some commands are not supported, it depends on models.

# ADDITIONAL INFORMATION

Level 1	Level 2	Level 3	Level 4	Level 5	n value	Write Command			Read Command						
						CMD	Set Para.	Pass	CMD	CMD Value	Pass	Pass			
Device Setup	Keypad Lock	Off				*XX103	0		*XX392	1		O	K	0	
		On				*XX103	1		*XX392	1		O	K	1	
	Keypad LED Settings	Off				*XX362	0		*XX393	1		O	K	0	
		On				*XX362	1		*XX393	1		O	K	1	
	Startup Logo	Change Logo	Default				*XX82	1		*XX395	1		O	K	1
			Neutral				*XX82	3		*XX395	1		O	K	3
	Background Color		None				*XX104	0		*XX396	1		O	K	0
			Blue				*XX104	1		*XX396	1		O	K	1
			Red				*XX104	3		*XX396	1		O	K	3
			Green				*XX104	4		*XX396	1		O	K	4
			Grey				*XX104	6		*XX396	1		O	K	6
			White				*XX104	5		*XX396	1		O	K	5
			Logo				*XX104	7		*XX396	1		O	K	7
	User Data	Save all settings	Memory 1 ~ Memory 5				*XX258	1~5		*XX397	1		O	K	1~5
		Load all settings	Memory 1 ~ Memory 5				*XX259	1~5		*XX397	1		O	K	1~5
	System Update	Auto	Off				*XX168	0		*XX158	1		O	K	0
			On				*XX168	1		*XX158	1		O	K	1
			Off				*XX168	3		*XX158	1		O	K	3
			On				*XX168	4		*XX158	1		O	K	4
	Device Reset	Reset DSD					*XX168	9		*XX158	1		O	K	9
		Reset All Settings					*XX546	1							
	Input Setup	Auto Source	Off				*XX112	1							
			On				*XX112	1							
		Quick ReSync	Off				*XX509	1							
			On				*XX173	1							
Active Inputs		(None)					*XX179	1							
							*XX176	1							
							*XX180	1							
							*XX181	1							
EDID Settings		HDMI 1	HDMI 1 EDID	1.4			*XX563	0		*XX372	1		O	K	0
			HDBaseT				*XX563	1		*XX372	1		O	K	1
	HDMI 2		1.4			*XX315	0		*XX373	1		O	K	0	
	HDBaseT					*XX315	1		*XX373	1		O	K	1	
	HDMI 1		2			*XX12	1		*XX121	1		O	K	0	
	HDBaseT					*XX12	15		*XX121	1		O	K	15	
HDMI Out	HDMI 1	HDMI 1 EDID	1.4			*XX12	21		*XX121	1		O	K	21	
		HDBaseT				*XX236	1		*XX374	1		O	K	1	
Audio	Reset	HDMI 2	1.4			*XX236	2		*XX374	1		O	K	2	
		HDBaseT				*XX237	1		*XX375	1		O	K	1	
		HDMI 1	2			*XX237	2		*XX375	1		O	K	2	
		HDBaseT				*XX238	1		*XX376	1		O	K	1	
Volume	Reset	HDMI 2	1.4			*XX238	2		*XX376	1		O	K	2	
		HDBaseT				*XX309	5								
Mute	Off	HDMI 1	2			*XX309	6								
		HDBaseT				*XX178	1								
Audio Output	Auto	Internal Speaker				*XX03	0~10		*XX120	1		O	K	0~10	
		Line Out				*XX03	0		*XX356	1		O	K	0	
Remote Settings	Quick Switch Code	1~9				*XX03	1		*XX356	1		O	K	1	
		0~99				*XX510	3		*XX399	1		O	K	3	
Communication	Device ID	0~99				*XX510	4		*XX399	1		O	K	4	
		0~99				*XX510	5		*XX399	1		O	K	5	
	IR Function	Front	Off				*XX180	1		*XX558	1		O	K	00~99
			On				*XX09	4		*XX542	1		O	K	0
			Off				*XX11	5		*XX542	1		O	K	1
			On				*XX11	6		*XX542	2		O	K	0
	Remote Settings	Quick Switch Code	0~99				*XX11	7		*XX542	2		O	K	1
			1~9				*XX11	10		*XX542	3		O	K	0
	Quick Switch Code	1~9	0~99				*XX11	9		*XX542	3		O	K	1
			0~99				*XX350	00~99		*XX138	1		O	K	00~99
Quick Switch Code	1~9	0~99				*XX314	0		*XX138	3		O	K	0	
		1~9				*XX314	1~9		*XX138	3		O	K	1~9	

**Note:** Some commands are not supported, it depends on models.

# ADDITIONAL INFORMATION

Level 1	Level 2	Level 3	Level 4	Level 5	n value	Write Command		Read Command			
						Command	Set Para.	Command	Pass		
Communication	Remote Settings	User 1	HDMI 1			**X117	8	**X394	1	O k 8	
			HDMI 2			**X117	9	**X394	1	O k 9	
			Color Matching			**X117	13	**X394	1	O k 13	
			Color Temperature			**X117	4	**X394	1	O k 4	
			Projection Orientation			**X117	14	**X394	1	O k 14	
			Light Source Mode			**X117	15	**X394	1	O k 15	
			Freeze Screen			**X117	17	**X394	1	O k 17	
			Network Setup			**X117	20	**X394	1	O k 20	
			Reset Selective			**X117	21	**X394	1	O k 21	
			HDMI 1			**X118	8	**X394	2	O k 8	
		HDMI 2			**X118	9	**X394	2	O k 9		
		Color Matching			**X118	13	**X394	2	O k 13		
		Color Temperature			**X118	4	**X394	2	O k 4		
		Projection Orientation			**X118	14	**X394	2	O k 14		
		Light Source Mode			**X118	15	**X394	2	O k 15		
		Freeze Screen			**X118	17	**X394	2	O k 17		
		Network Setup			**X118	20	**X394	2	O k 20		
		Reset Selective			**X118	21	**X394	2	O k 21		
		LAN Interface			RJ-45		**X460	1	**X386	1	O k 1
					HDBaseT		**X460	2	**X386	1	O k 2
	Network Status			(read only) Connected				**X087	1	O k 1	
				(read only) Disconnected				**X087	1	O k 1	
	MAC Address			(read only)				**X087	1	O k 1	
	DHCP			Off		**X462	0	**X150	17	O k 17	
				On		**X462	1	**X150	17	O k 17	
	IP Address			.....				**X087	3	O k min.min.min.min	
	Subnet Mask			.....				**X087	4	O k min.min.min.min	
	Gateway			.....				**X087	5	O k min.min.min.min	
	DNS 1			.....				**X087	6	O k min.min.min.min	
	DNS 2			.....				**X087	7	O k min.min.min.min	
	Apply					**X462	9				
	Reset					**X462	1				
	Crestron			Off		**X454	0	**X441	1	O k 1	
				On		**X454	1	**X441	1	O k 1	
	IP Address			.....		**X465	1 *min.min.min.min	**X441	2	O k min.min.min.min	
	IP2			.....		**X465	1 *min.min.min.min	**X441	2	O k min.min.min.min	
	Port			0-65535		**X467	1 *min	**X441	4	O k 0-65535	
	Crestron Setup Apply					**X454	9				
	PI Link			Off		**X456	0	**X440	2	O k 1	
				On		**X456	1	**X440	2	O k 1	
	Extron			Off		**X455	0	**X442	1	O k 1	
				On		**X455	1	**X442	1	O k 1	
	AMX			Off		**X457	0	**X444	1	O k 1	
				On		**X457	1	**X444	1	O k 1	
	Teinert			Off		**X458	0	**X445	1	O k 1	
				On		**X458	1	**X445	1	O k 1	
	HTTP			Off		**X459	0	**X446	1	O k 1	
				On		**X459	1	**X446	1	O k 1	
	Baud Rate			9600				**X153	1	O k 9600	
				19200				**X153	1	O k 19200	
				38400				**X153	1	O k 38400	
				57600				**X153	1	O k 57600	
				115200				**X153	1	O k 115200	
	Reset					**X181	1				
	Information	Regulatory	Serial Number				**X151	3	**X151	3	O k minminmin
			Source Info.	Source			**X353	1	**X150	3	O k minminminminmin
				Signal Format			**X150	4	**X150	4	O k min_nm (e.g. OKHDMI)
				Pixel Clock			**X150	4	**X150	4	O k min_nm (e.g. Oh1920x1080)
				Refresh Rate			**X150	5	**X150	5	O k minminminminmin (e.g. BT 2020 HDR)
				Color Bit Depth			**X150	6	**X150	6	O k min_nm
				Color Gamut			**X150	19	**X150	19	O k min_nm
				Color Space			**X156	1	**X156	1	O k minnmnmnm (e.g. sRGB)
							**X295	1	**X295	1	O k a=1 Auto a=2 RGB ( RGB (D-255)* a=3 Vivid a=4 RGB(16 - 235)* a=5 Rec709
				Picture Mode			**X123	1	**X123	1	O k a=1 Presentation a=2 Bright a=3 Cinema a=4 sRGB(Reference/Standard) a=5 User 1 a=6 User 2 / 3D User a=9 3D a=10 DICOM S.M. a=14 Vivid (Photo) a=19 Blending a=21 HDR
		Light Source Mode									
		Device ID						**X79	00-99	**X158	1	O k 00-99
		Remote Code						**X350	00-99	**X138	1	O k 00-99
		System Status		Standby Mode						**X150	16	O k a=1 Active a=0 Eco.
			Projection Hours						**X150	21	O k minmin (minmin: hour digits)
			Total Hours						**X108	1	O k minmin (minmin: hour digits)
			Normal						**X108	3	O k minmin (minmin: hour digits)
			Eco Mode						**X108	4	O k minmin (minmin: hour digits)
			Custom Power						**X108	7	O k minmin (minmin: hour digits)
			Ambient Temp.						**X150	18	O k min_nm (e.g. OK48)
			Custom Temp.						**X52	1	O k min_nm (e.g. OK48)
			Crestron					**X441	1	O k a=0 Off; a=1 On	
			Extron					**X442	1	O k a=0 Off; a=1 On	
		PI Link						**X440	2	O k a=0 Off; a=1 On	
		AMX						**X444	1	O k a=0 Off; a=1 On	
		Teinert						**X445	1	O k a=0 Off; a=1 On	
		HTTP						**X446	1	O k a=0 Off; a=1 On	
		LAN		LAN Interface						**X386	1	O k a=1 RJ45; a=2 HDBaseT
			MAC Address						**X55	1	O k minminminminmin
			Network Status						**X087	1	O k a=0 Disconnected a=1 Connected
			DHCP						**X150	17	O k a=0 Off; a=1 On
			IP Address						**X087	3	O k min.min.min.min
			Subnet Mask						**X087	4	O k min.min.min.min
			Gateway						**X087	5	O k min.min.min.min
			DNS 1						**X087	6	O k min.min.min.min
			DNS 2						**X087	7	O k min.min.min.min
			FW Version							**X122	1	O k Pmm.mn.mn

**Note:** Some commands are not supported, it depends on models.

# ADDITIONAL INFORMATION

Level 1	Level 2	Level 3	Level 4	Level 5	n value
---------	---------	---------	---------	---------	---------

## When projector in standby, RS232 have to support

Command	Set Para.	Pass
Power Off	0	O K
Power On	1	O K
Power On with password	1	O K
Information	Info String	O K
Light Source Hours		mmmm (mmmm= hour digit)

## Other Items

Command	Set Para.	Pass
Power Off	0	O K
Power On	1	O K
Power On with password	1	O K
Re-Sync	1	O K
AV Mute	Off	O K
Mute	Off	O K
Freeze	On	O K
3D Sync Out	To Emitter	O K
Output 3D state	To Next Projector	O K
Standby Mode	Standby Mode	O K
Warming up	Warming up	O K
Cooling Down	Cooling Down	O K
Out of Range	Out of Range	O K
Over Temperature	Over Temperature	O K
Cover Open	Cover Open	O K
Cover Wheel Unexpected Stop	Cover Wheel Unexpected Stop	O K
FAN 1 Lock	FAN 1 Lock	O K
FAN 2 Lock	FAN 2 Lock	O K
FAN 3 Lock	FAN 3 Lock	O K
FAN 4 Lock	FAN 4 Lock	O K
FAN 5 Lock	FAN 5 Lock	O K
LD MTC (1) Over Temperature	LD MTC (1) Over Temperature	O K
LD MTC (2) Over Temperature	LD MTC (2) Over Temperature	O K
High Ambient Temperature	High Ambient Temperature	O K
System Ready	System Ready	O K
FAN 7 Lock	FAN 7 Lock	O K
FAN 8 Lock	FAN 8 Lock	O K
System Temperature Level	Green/Normal	O K
Orange/Notice	Orange/Notice	O K
Red/Warning	Red/Warning	O K
About to trigger shutdown	About to trigger shutdown	O K
Fan Status Level	Green/Normal	O K
Orange/Notice	Orange/Notice	O K
Red/Warning	Red/Warning	O K
About to trigger shutdown	About to trigger shutdown	O K
Device Type	Projector	O K
Model Name	Optoma UHD	O K
OSD Lock	On	O K
Regulatory Model	Off	O K
Software Version		O K
LAN FW version		O K
Fan Speed	Fan 1 Speed 0000~9999	O K
Fan 2 Speed 0000~9999	Fan 2 Speed 0000~9999	O K
Fan 3 Speed 0000~9999	Fan 3 Speed 0000~9999	O K
Fan 4 Speed 0000~9999	Fan 4 Speed 0000~9999	O K
Fan 5 Speed 0000~9999	Fan 5 Speed 0000~9999	O K
Fan 6 Speed 0000~9999	Fan 6 Speed 0000~9999	O K
Fan 7 Speed 0000~9999	Fan 7 Speed 0000~9999	O K
Fan 8 Speed 0000~9999	Fan 8 Speed 0000~9999	O K
System Temperature		O K
Info String		O K
Native Resolution		O K
Main Source		O K
Resolution		O K
Signal Format		O K
Pixel Clock		O K
Horiz Refresh		O K
Vert Refresh		O K
Light Source Mode	Active	O K
Standby Power Mode	Eco	O K
Communication		O K
DhCP	Off	O K
System Temperature	On	O K
Refresh rate		O K
Source Lock	On	O K
Display message on the OSD	Off	O K
Filter Wheel Index		O K
Projection Wheel Index		O K

## Remote Control Simulation

Command	Set Para.	Pass
Power Off	0	O K
Up	1	O K
Left	2	O K
Enter (for projection MENU)	10	O K
Right	11	O K
Down	12	O K
V Keystone +	13	O K
V Keystone -	14	O K
Sharpness	15	O K
Menu	16	O K
AV Mute	19	O K
Contrast	20	O K
Zoom +	24	O K
Zoom -	28	O K
Focus +	33	O K
Focus -	34	O K
Mode	35	O K
Info	36	O K
Re-sync	41	O K
HDMI 1	42	O K
HDMI 2	43	O K
Source	44	O K
E	51	O K
D	52	O K
C	53	O K
B	54	O K
A	55	O K
0	56	O K
9	57	O K
8	58	O K
7	59	O K
6	60	O K
5	61	O K
4	64	O K
3	65	O K
2	66	O K
1	67	O K
0	68	O K
Keystone +	69	O K
Keystone -	70	O K
Hot Key Laser1(F1)	71	O K
Hot Key Laser2(F2)	72	O K
Content	73	O K
Exit	74	O K
Mute	77	O K
Return	82	O K

Write Command			Read Command		
Command	Set Para.	Pass	Command	Cmd Value	Pass
*XX000	0	O K	*XX124	1	O K
*XX000	1	O K	*XX124	1	O K
*XX000	1~mmmm	O K	*XX150	1	O K
			*XX108	1	mmmm (mmmm= hour digit)

Command	Set Para.	Pass
*XX000	0	O K
*XX000	1	O K
*XX000	1~mmmm	O K
*XX001	1	O K
*XX002	0	O K
*XX002	1	O K
*XX002	1	O K
*XX003	0	O K
*XX003	1	O K
*XX004	0	O K
*XX004	1	O K
*XX232	0	O K
*XX232	1	O K
*XX124	1	O K
*XX124	1	O K
*XX155	1	O K
*XX155	1	O K
*XX156	1	O K
*XX156	1	O K
*XX159	1	O K
*XX159	1	O K
*XX159	1	O K
*XX159	1	O K
*XX148	1	O K
*XX151	1	O K
*XX229	1	O K
*XX229	1	O K
*XX151	3	O K
*XX122	1	mmmmmm (Software Version)
*XX157	1	mmmmmm (LAN FW version)
*XX351	0	O K
*XX351	1	O K
*XX351	2	O K
*XX351	3	O K
*XX351	4	O K
*XX351	5	O K
*XX351	6	O K
*XX351	7	O K
*XX352	1	O K
*XX150	1	O K
*XX150	2	mmmm (e.g. OK1920x1080)
*XX150	3	mmmm (e.g. OK1080)
*XX150	4	mmmm (e.g. OK1920x1080)
*XX150	5	mmmm
*XX150	6	mmmm
*XX150	7	mmmm
*XX150	8	mmmm
*XX150	15	mmmm
*XX150	16	O K
*XX150	16	O K
*XX150	17	O K
*XX150	17	O K
*XX150	18	mmmm (e.g. OK48)
*XX150	19	mmmm (e.g. OK60Hz)
*XX100	0	O K
*XX100	1	O K
*XX210	mm_n (50 characters)	O K
*XX528	0000~9999	O K
*XX528	0000~9999	O K

**Note:** Some commands are not supported, it depends on models.

# ADDITIONAL INFORMATION

Power		Light Source Life				Input Source		Firmware Version				Display Mode	
a	b	b	b	b	b	c	c	d	d	d	d	e	e
a=0 Power Off		Light Source Life = nnnn				cc=00 None		#	#	#	#	ee=00 None	
a=1 Power On		Calucalte by each mode formula				cc=01 DVI						ee=01 Presentation (Old: Cinema)	
						cc=02 VGA1						ee=02 Bright	
						cc=03 VGA2						ee=03 Cinema (Old: Movie/Photo)	
						cc=04 S-Video						ee=04 sRGB\Reference\Standard	
						cc=05 Video						ee=05 User(1)	
						cc=06 BNC						ee=06 User2	
						cc=07 HDMI 1						ee=07 Blackboard	
						cc=08 HDMI 2						ee=08 Classroom	
						cc=09 Wireless						ee=09 3D	
						cc=10 Complant						ee=10 DICOM SIM.	
						cc=11 Flash drive						ee=11 Film	
						cc=12 Network Display(Presenter)						ee=12 Game	
						cc=13 USB Display						ee=13 Cinema	
						cc=14 HDMI 3						ee=14 Vivid	
						cc=15 DisplayPort						ee=15 ISF Day	
						cc=16 HDBaseT						ee=16 ISF Night	
						cc=17 Multimedia						ee=17 ISF 3D	
						cc=18 Android						ee=18 Blending	
						cc=19 Slot in PC						ee=21 HDR	
						cc=20 HDMI Front						ee=22 HDR SIM.	
						cc=21 USB Type C1						ee=23 Super Bright	
						cc=22 3G-SDI						ee=24 (Alexa auto check 2D/3D User)	
						cc=23 3G-SDI 2						ee=25 HLG	
						cc=24 HDMI 4							
						cc=25 USB Type C2							






# ADDITIONAL INFORMATION

## Optoma global offices

For service or support, please contact your local office.




### USA

Optoma Technology, Inc.  
47697 Westinghouse Drive.  
Fremont, Ca 94539

 888-289-6786  
 510-996-4794  
 [services@optoma.com](mailto:services@optoma.com)




### Canada

Optoma Technology, Inc.  
47697 Westinghouse Drive.  
Fremont, Ca 94539

 888-289-6786  
 510-996-4794  
 [services@optoma.com](mailto:services@optoma.com)




### Latin America

Optoma Technology, Inc.  
47697 Westinghouse Drive.  
Fremont, Ca 94539

 888-289-6786  
 510-996-4794  
 [services@optoma.com](mailto:services@optoma.com)



### Europe

1 Bourne End Mills  
Hemel Hempstead  
Hertfordshire  
HP1 2UJ  
United Kingdom  
[www.optoma.eu](http://www.optoma.eu)  
Service Tel : +44 (0)1923 691865

 +44 (0) 1923 691 800  
 +44 (0) 1923 691 888  
 [service@tsc-europe.com](mailto:service@tsc-europe.com)




### Benelux BV

Optoma Benelux BV  
Europalaan 770 D  
1363BM Almere  
The Netherlands  
[www.optoma.nl](http://www.optoma.nl)

 +31 (0) 36 8200 250  
 +31 (0) 36 548 9052



### France

Bâtiment E  
81-83 avenue Edouard Vaillant  
92100 Boulogne Billancourt, France

 +33 1 41 46 12 20  
 +33 1 41 46 94 35  
 [savoptoma@optoma.fr](mailto:savoptoma@optoma.fr)




### Spain

C/ José Hierro, 36 Of. 1C 28529 Rivas  
Vaciamadrid, Spain

 +34 91 499 06 06  
 +34 91 670 08 32




### Deutschland

Optoma Deutschland GmbH  
Am Nordpark 3  
41069 Mönchengladbach  
Deutschland

 +49 (0) 2161 68643 0  
 +49 (0) 2161 68643 99  
 [info@optoma.de](mailto:info@optoma.de)

### Scandinavia

Postboks 9515 Askollen  
Kniveveien 29  
Drammen  
3036  
Norway

 +47 32 98 89 90  
 +47 32 98 89 99  
 [info@optoma.no](mailto:info@optoma.no)

### Korea

<https://www.optoma.com/kr/>

### Japan



<https://jp.optoma.com/>

### Taiwan

<https://www.optoma.com/tw/>

### China

Room 2001, 20F, Building 4,  
No.1398 Kaixuan Road,  
Changning District  
Shanghai, 200052, China

 +86-21-62947376  
 +86-21-62947375  
[www.optoma.com.cn](http://www.optoma.com.cn)

### Australia

<https://www.optoma.com/au/>

