



DLP® Projector

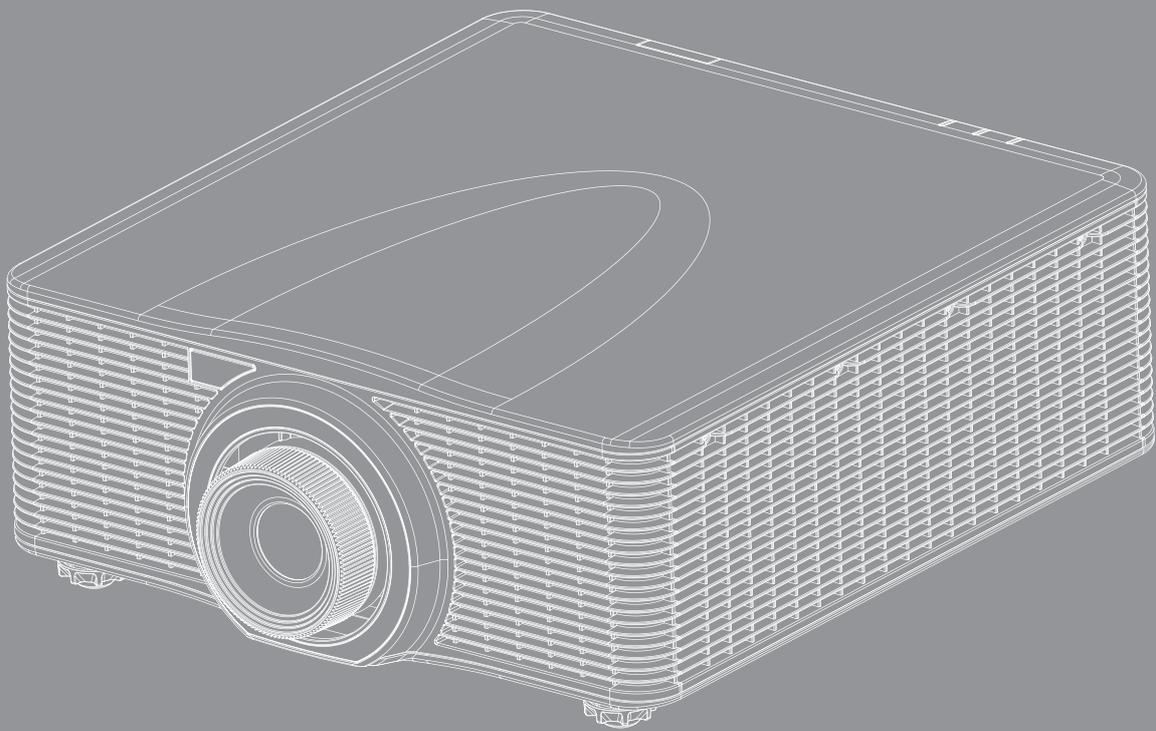


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SAFETY

	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's guide.

Important safety instruction

- Do not block any ventilation openings. To ensure reliable operation of the projector and to protect from over heating, 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 coffee table, sofa, bed, etc. 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
 - (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 cause melt, 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 authorized service personnel.
- Only use attachments/accessories specified by the manufacturer.
- Do not look into 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 projector housing. Do not use abrasive cleaners, waxes or solvents to clean the unit.
- Disconnect the power plug from AC outlet if the product is not being 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.
- Do not clean the lens when the projector is turned on. Any damage resulting from doing so will void the warranty.
- 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.

Laser radiation safety information

This product is classified as Class 1 Laser Product-Risk Group 3 of IEC 60825-1:2014 and Class 3R Laser product of IEC 60825-1:2007, complying with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No.50, dated June 24, 2007.

Laser safety precautions

To ensure safety operation and prevent personal injuries, read laser safety precautions before installation and operation.



Failure to comply with the following could result in death or serious injury.

- This projector uses extremely high brightness laser. Never attempt to look directly into the lens or at the laser beam. The bright light may result in permanent eye damage.
- Possibly hazardous optical radiation emitted from this product.
- This projector has a built-in Class 4 laser module. Never attempt to disassemble or modify the laser module.
- Any operation or adjustment not specifically instructed in the User manual creates the risk of hazardous laser radiation exposure.
- Do not stare into beam when the projector is on. When turning on the projector, make sure no one within projection range is looking into the lens.
- Follow the control, adjustment, or operation procedures to avoid damage or injury from exposure of laser radiation.
- The instructions for the assembly, operation, and maintenance include clear warnings concerning precautions to avoid possible exposure to hazardous laser radiation.

Laser labels

Learn about the laser labels used on the projectors.



Do not look directly into the lens. The extremely high brightness can cause permanent eye damage.



Do NOT deliberately look into or stare into the beam, which can cause injury to the retina in the back of the eye.



FDA laser variance (US projectors only)



IEC 60825-1:2014, CLASS 1 LASER PRODUCT - RISK GROUP 3

Class 3R Laser product of IEC 60825-1:2007 and complying with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No.50, dated June 24, 2007.

Do not look at the projector lens when the light is on. The extreme high brightness can cause permanent eye damage.

Do not look at operating beam. Eye injury may result.

Light Intensity Hazard Distance

This projector will be CLASS 1 LASER PRODUCT - RISK GROUP 3. Permanent eye injury is possible when exposed to the high intensity laser beam within the hazard distance.

Lens	Throw Ratio	Classification		
		IEC 60825-1:2014	IEC 62471:2006	Hazard Distance
A13	2.90-5.50	Class 1	Risk Group 3	9.32 meters
A03	1.52-2.92			
A06	1.22-1.52			
A01	0.95-1.22			
A15	0.75-0.95			

Follow the precautions to avoid light intensity hazard.



Failure to comply with the following could result in death or serious injury.

- NEVER look into the lens! High intensity laser beam.
- Permanent eye injury is possible when exposed to the high intensity laser light within the hazard distance.
- Do not place any reflective objects in the light path of the projector.

User definition

Throughout this manual, the term SERVICE PERSONNEL refers to Optoma or authorized persons having appropriate technical training and experience necessary to be knowledgeable of potential hazards to which they are exposed in performing a task, and of measures to minimize the potential risk to themselves or other persons. Only Optoma authorized SERVICE PERSONNEL, knowledgeable of such risks, are allowed to perform service functions inside the product enclosure.

The term USER and OPERATOR refers to any person other than SERVICE PERSONNEL. Such combination of projector and lens are intended for professional use only, and are not intended for consumer use.

FOR PROFESSIONAL USE ONLY means installation can only be carried out by Optoma AUTHORIZED PERSONNEL familiar with potential hazards associated with high intensity light beams.

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.

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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 device 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 in a residential installation. This device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, 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

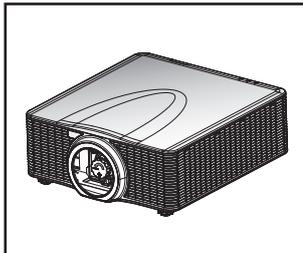
Do not throw this electronic device into the trash when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle it.

INTRODUCTION

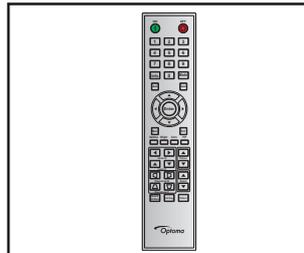
Package overview

Carefully unpack and verify that the projector comes with all the standard accessories shown below. Some accessories may not be available depending on the projector model, specification and your region of purchase. The warranty card is only supplied in specific regions. Please check with your place of purchase or consult your dealer for more information.

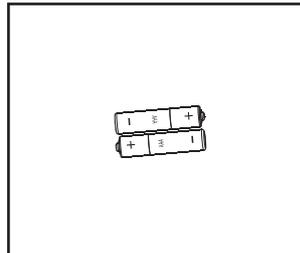
Standard accessories



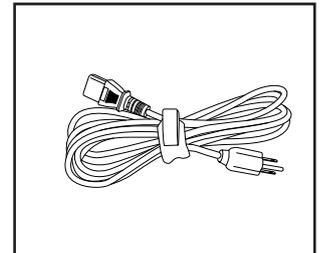
Projector



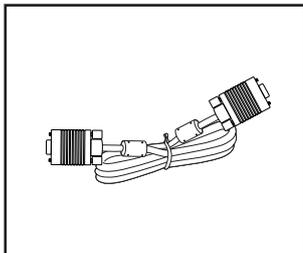
Remote control



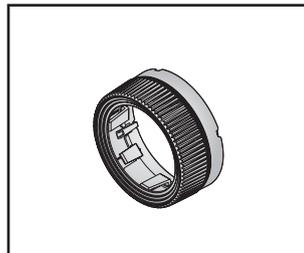
2x AAA batteries



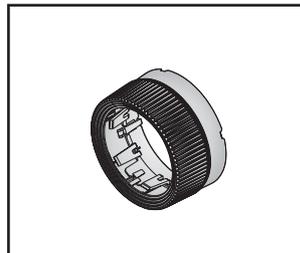
Power lead



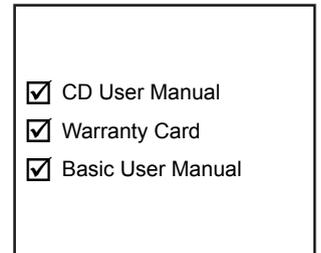
VGA cable



Standard Lens ring



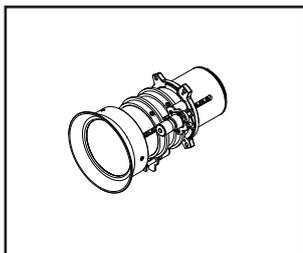
A06 Lens ring



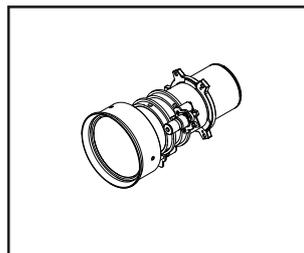
- CD User Manual
- Warranty Card
- Basic User Manual

Documentation

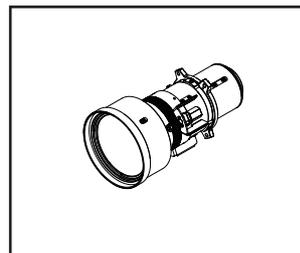
Optional accessories



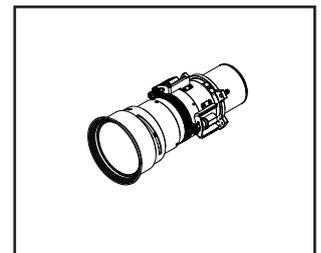
Optional lens A01
(0.95-1.22)



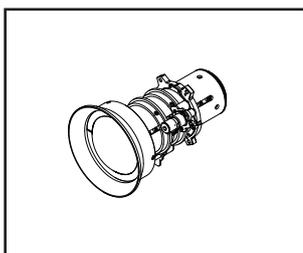
Optional lens A03
(1.52-2.92)



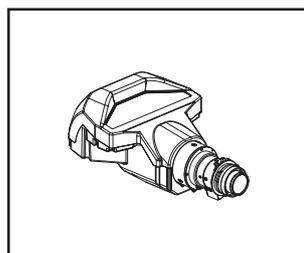
Standard lens A06
(1.22-1.52)



Optional lens A13
(2.90-5.50)



Optional lens A15
(0.75-0.95)



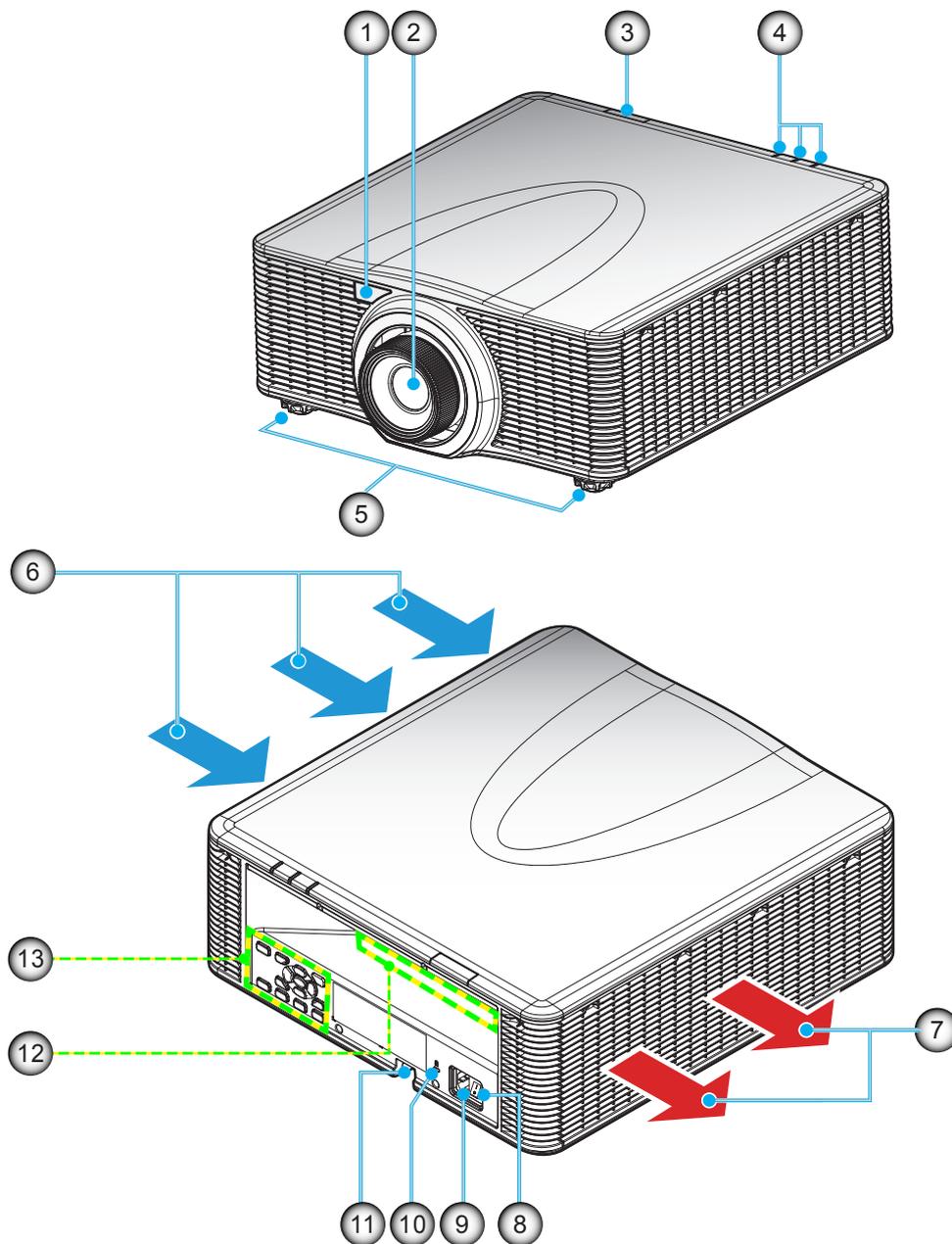
Optional UST
lens A16 (0.36)

Note:

- Accessories vary depending on model, specification and region.
- The standard lens ring is used for or A01, A03, and A13 lens.

INTRODUCTION

Product overview

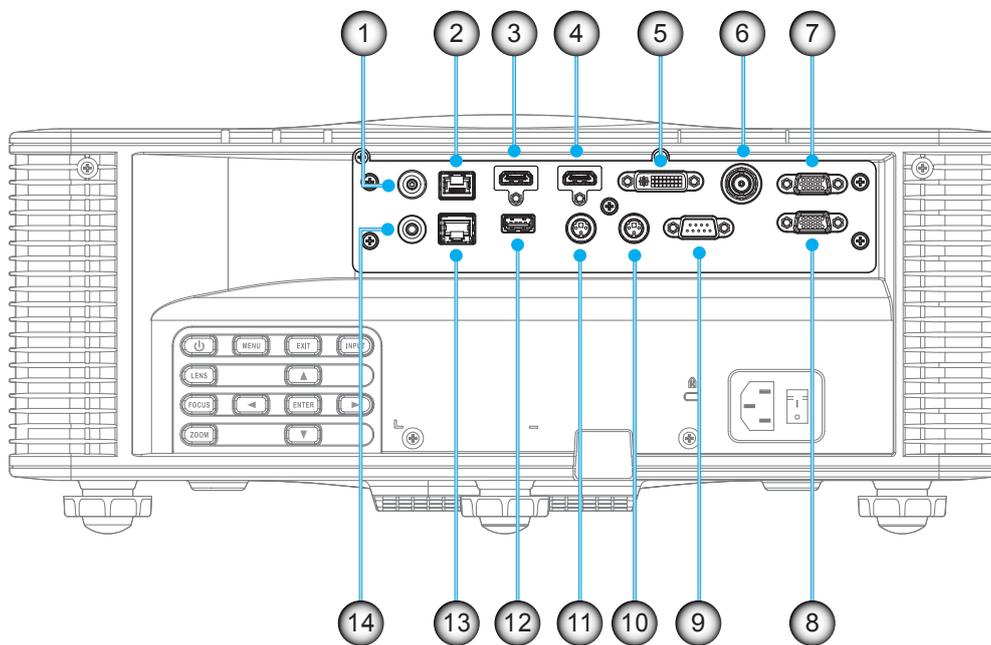


No	Item	No	Item
1.	Front IR Receiver	8.	Power Switch
2.	Lens	9.	Power Socket
3.	Top IR Receiver	10.	Kensington™ Lock Port
4.	LED Status Indicators	11.	Security Bar
5.	Tilt-Adjustment Feet	12.	Input / Output
6.	Ventilation (inlet)	13.	Keypad
7.	Ventilation (outlet)		

Note: Do not block projector inlet or outlet air vents.

INTRODUCTION

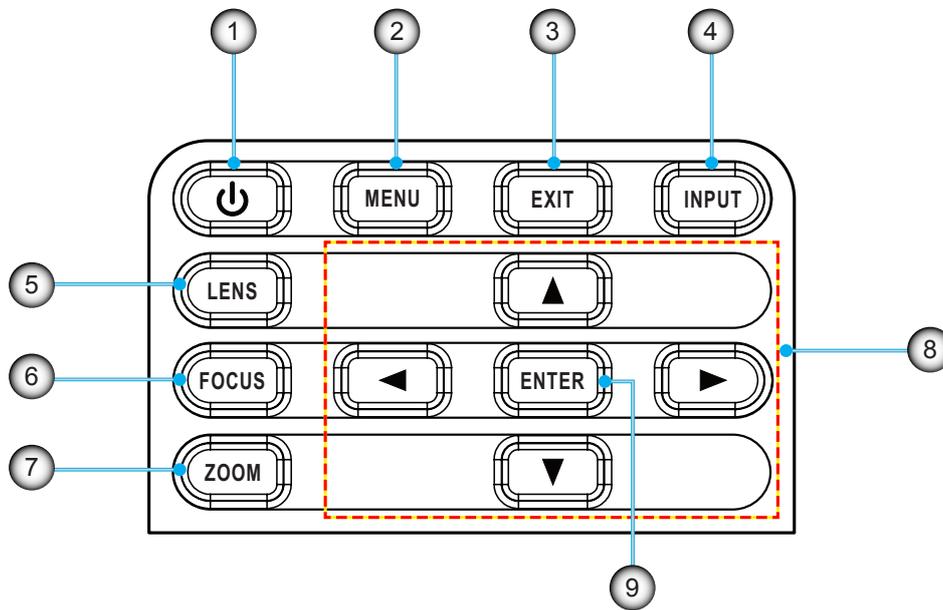
Connections



No	Item	No	Item
1.	DC-12V Connector	8.	VGA-OUT Connector
2.	HDBaseT Connector	9.	RS232-C Connector
3.	HDMI-1 Connector	10.	3D SYNC OUT Connector (5V)
4.	HDMI-2 Connector	11.	3D SYNC IN Connector
5.	DVI-D Connector	12.	USB Type A (Power out 5V, 0.5A)
6.	3G-SDI Connector	13.	RJ-45 Connector
7.	VGA-IN/YPbPr Connector	14.	Wired Remote Connector

INTRODUCTION

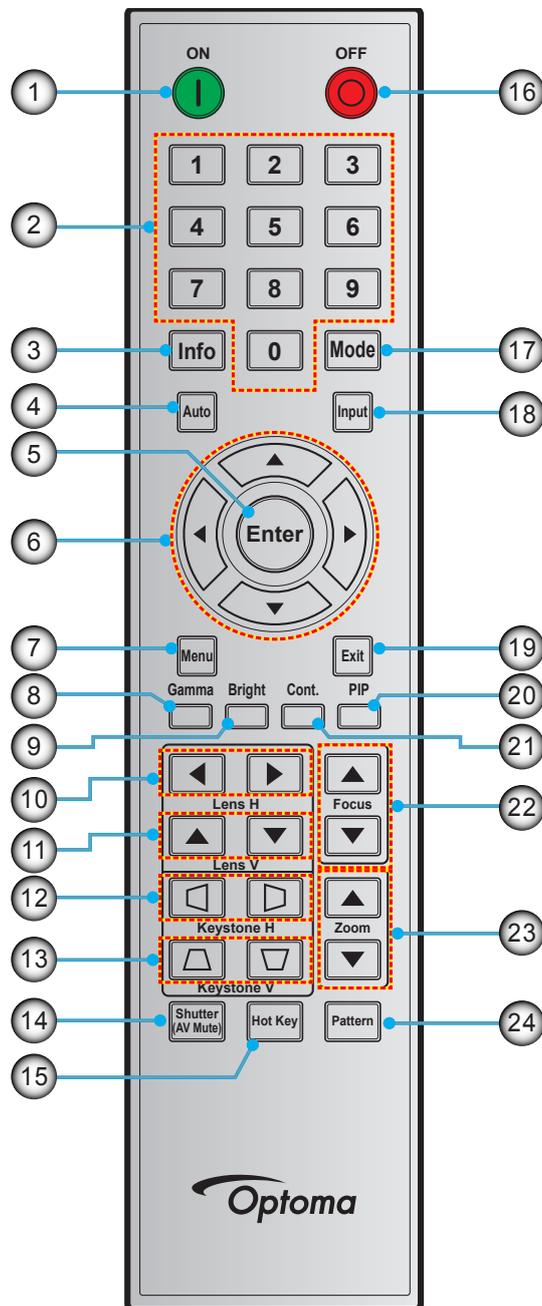
Keypad



No	Item	No	Item
1.	Power	6.	FOCUS
2.	MENU	7.	ZOOM
3.	EXIT	8.	Arrow keys
4.	INPUT	9.	ENTER
5.	LENS		

INTRODUCTION

Remote control



No	Item	No	Item	No	Item
1.	Power On	9.	Bright	17.	Mode
2.	Number Keys	10.	Lens H	18.	Input
3.	Info	11.	Lens V	19.	Exit
4.	Auto	12.	Keystone H	20.	PIP
5.	Enter	13.	Keystone V	21.	Cont. (Contrast)
6.	Arrow keys	14.	Shutter (AV Mute)	22.	Focus
7.	Menu	15.	Hot Key	23.	Zoom
8.	Gamma	16.	Power Off	24.	Pattern

SETUP AND INSTALLATION

Installing the projection lens

Before setting up the projector, install the projection lens in to the projector.

在安装或替换镜头前，关掉投影机的电源。

在镜头安装联接过程中，避免使用遥控器或投影机按键板的按钮调节侧平移镜头或缩放/聚焦。

Before install or replacing the lens, switch off the power to the projector.

Avoid using the remote control or projector keypad button to adjust the lens shift or zoom/focus while the lens attachment process is carried out.

IMPORTANT!

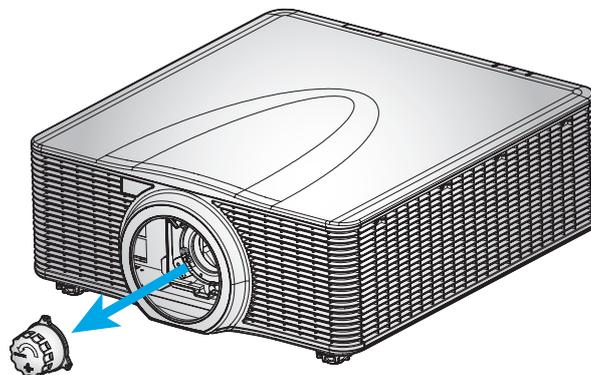
- *Before installing or replacing the lens, make sure the projector's power switch is turned off.*
- *During lens installation, do not adjust the lens shift, zoom, or focus either using the remote control or the projector keypad.*
- *To prevent damage to the lens and avoid personal injury, do not clean the lens when the projector is turned on. Any damage resulting from doing so will void the warranty.*

Procedure:

1. Rotate the lens cap counterclockwise.

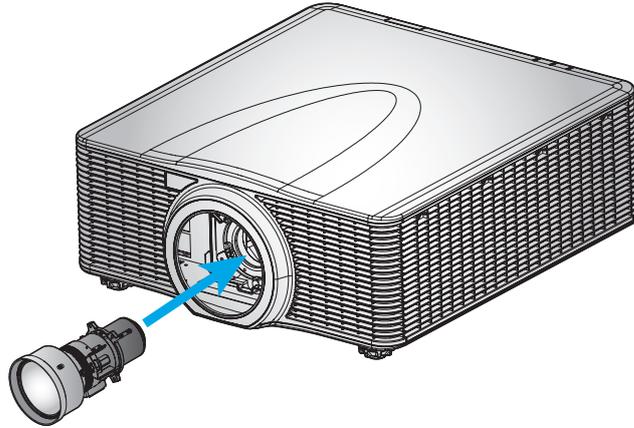


2. Remove the lens cap.

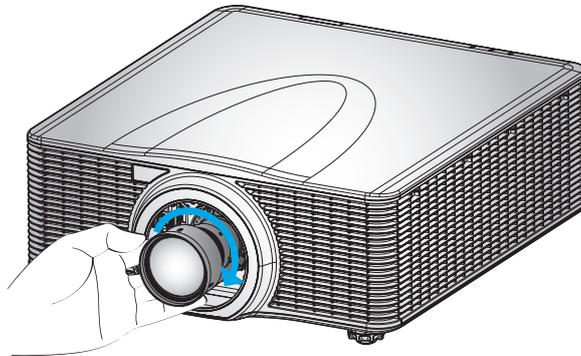


SETUP AND INSTALLATION

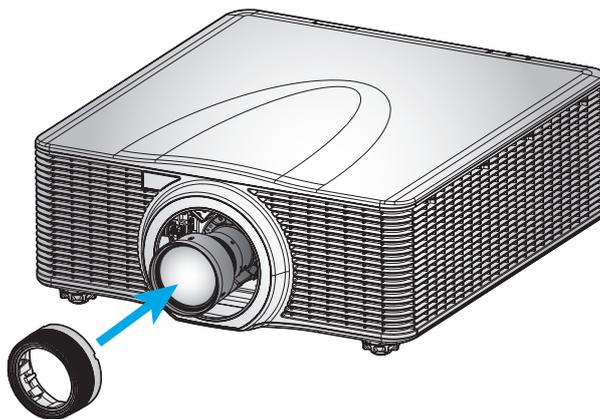
3. Install the lens in the projector.



4. Rotate the lens clockwise to lock the lens in place.



5. Firmly install the lens ring onto the lens.

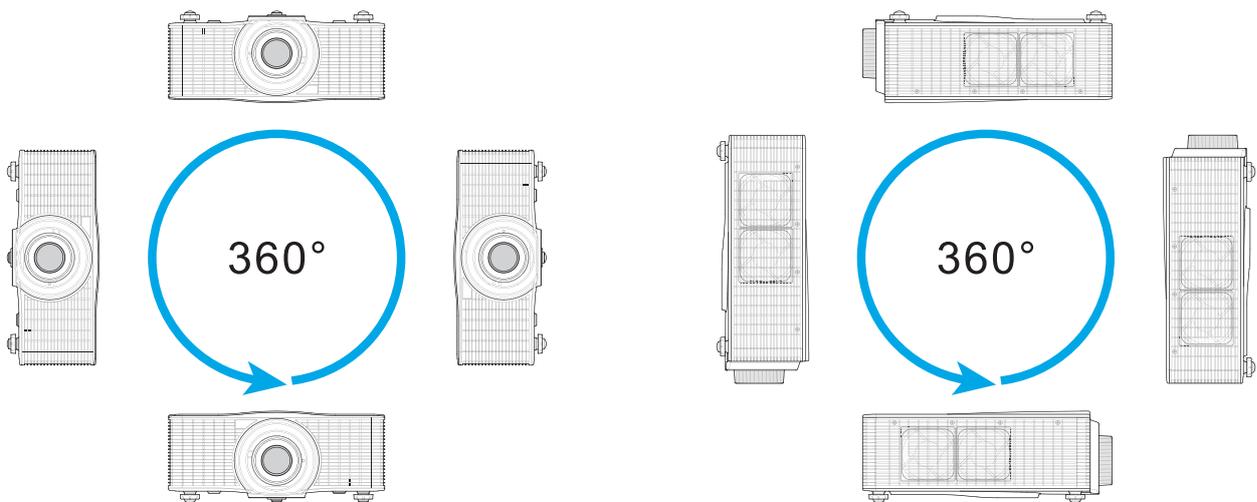


SETUP AND INSTALLATION

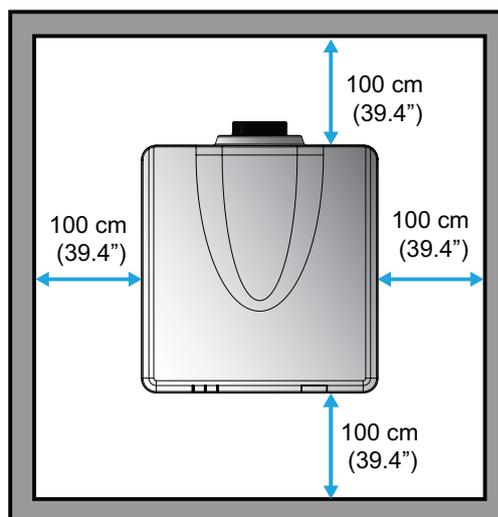
Adjusting the projector position

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 projector (with the standard lens) must be at least 4.3 feet (1.3 m) 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.
- 360 degree free orientation operation

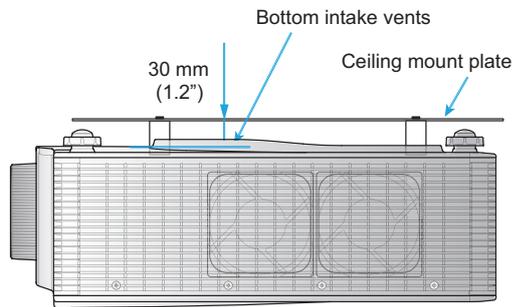


- Allow proper space around the projector is critical for air circulation and cooling. The dimensions shown below indicate the minimum space required for different installations.
 - For 360° installations, keep the projector at least 100 cm (39.4") away from the wall or floor.

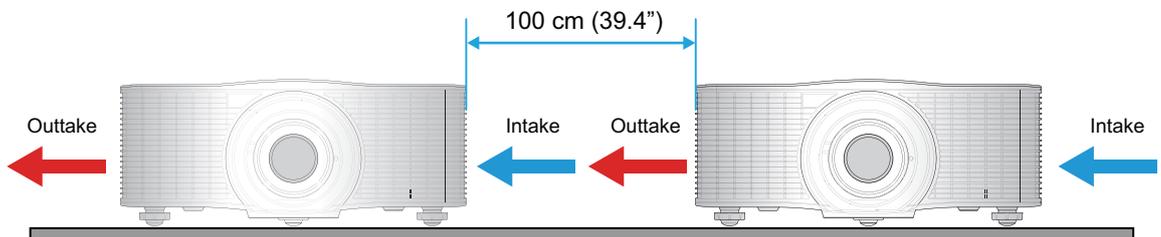


SETUP AND INSTALLATION

- For ceiling mount installations, make sure to leave 30 mm (1.2") between the ceiling mount and the bottom intake vents of the projector.

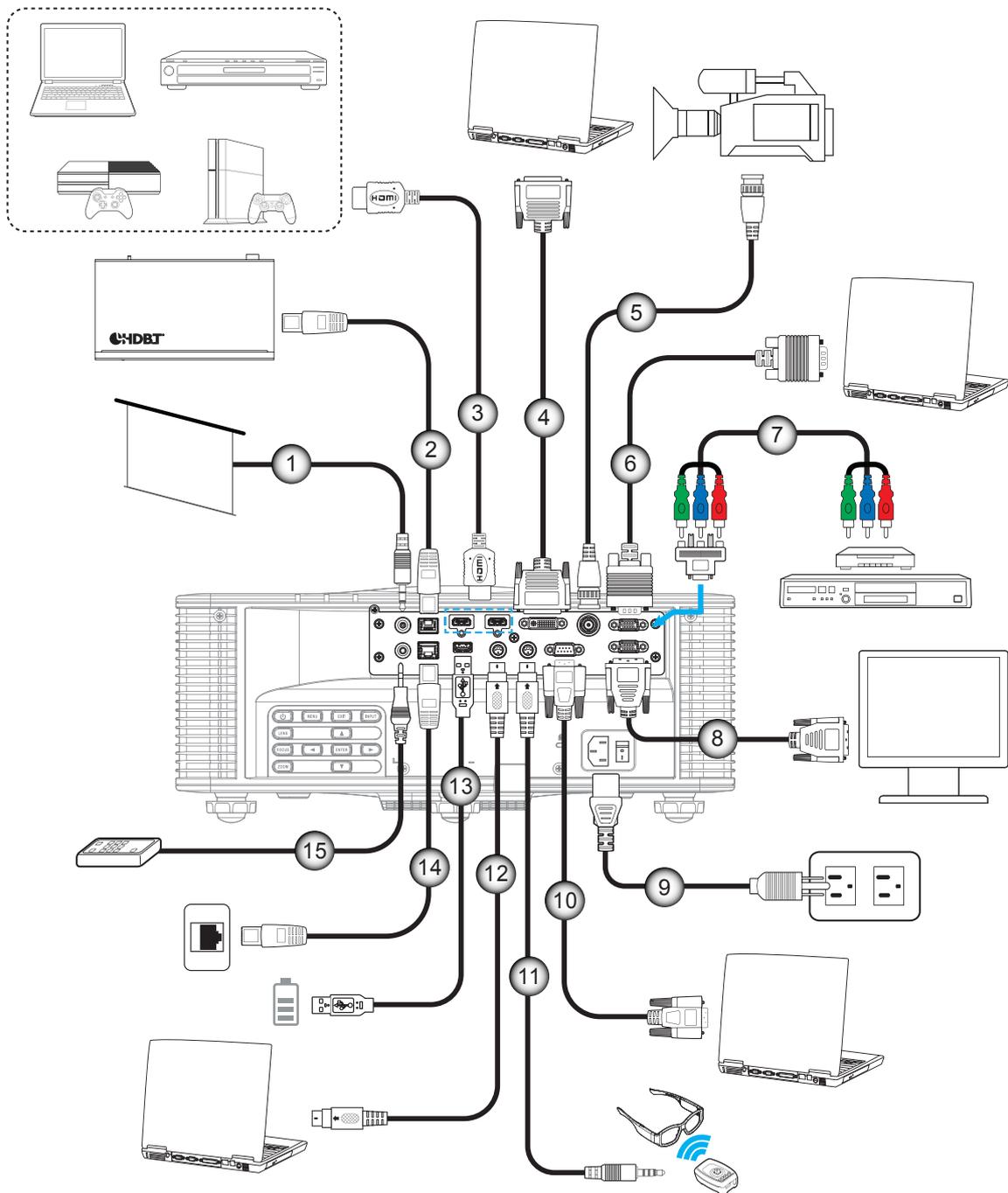


- When installing multiple projectors, keep at least 100 cm (39.4") space between the adjacent projectors.



SETUP AND INSTALLATION

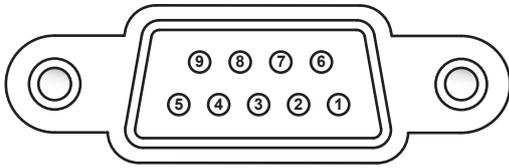
Connecting sources to the projector



No	Item	No	Item
1.	12V Trigger Cable	9.	Power Cord
2.	HDBaseT Cable	10.	RS-232C Cable
3.	HDMI Cable	11.	3D Sync Out Cable
4.	DVI-D Cable	12.	3D Sync In Cable
5.	3G-SDI Cable	13.	USB Type A Cable (5V, 0.5A)
6.	VGA-In Cable	14.	RJ-45 Cable
7.	RCA Component Cable	15.	Wired Remote-In Cable
8.	VGA-Out Cable		

SETUP AND INSTALLATION

RS232 Pin assignments



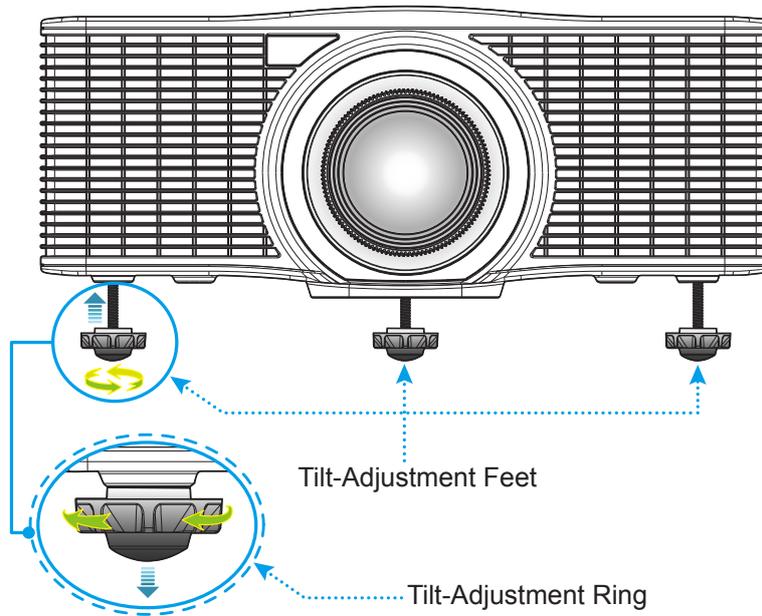
Pin No.	Signal	Pin No.	Signal
1	N/A	6	N/A
2	RXD	7	N/A
3	TXD	8	N/A
4	N/A	9	N/A
5	GND		

Adjusting the projector image

Image height

The projector is equipped with adjustable feet to change 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.

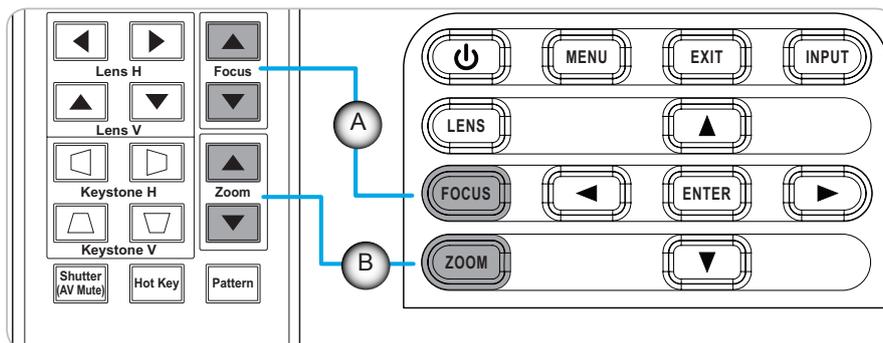


Note: The feet of projector are not removable, and the feet can be raised up to 45 mm.

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 to improve the image quality. **(A)**
- To adjust the image size, press **Zoom** and the ▲▼ buttons to get the required image size. **(B)**



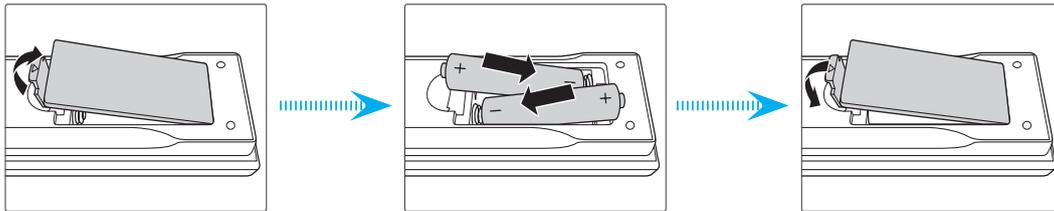
SETUP AND INSTALLATION

Remote setup

Installing / replacing the 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.

Remote control ID setup

The Infra-Red (IR) remote control supports individual addressing of projectors. The remote receiver on the projector can be set with a specific number from 00 to 99, and the projector only responds to the IR remote set to the same number. The default ID code of the IR remote is 00, allowing it to control all projectors within its effective range.

Follow below methods to set up the ID code for the IR remote control:

ID Code	Change method	Customer code
01	Press Hot Key for 3 seconds, and press 0 then 1 within 2 seconds.	0010
02	Press Hot Key for 3 seconds, and press 0 then 2 within 2 seconds.	0011
03	Press Hot Key for 3 seconds, and press 0 then 3 within 2 seconds.	0012
...
10	Press Hot Key for 3 seconds, and press 1 then 0 within 2 seconds.	0019
11	Press Hot Key for 3 seconds, and press 1 then 1 within 2 seconds.	001A
...
98	Press Hot Key for 3 seconds, and press 9 then 8 within 2 seconds.	0071
99	Press Hot Key for 3 seconds, and press 9 then 9 within 2 seconds.	0072

To have the IR remote control return to default value 00 where all projectors can be controlled, press **Hot Key** for 3 seconds, and press **0** twice within 2 seconds.

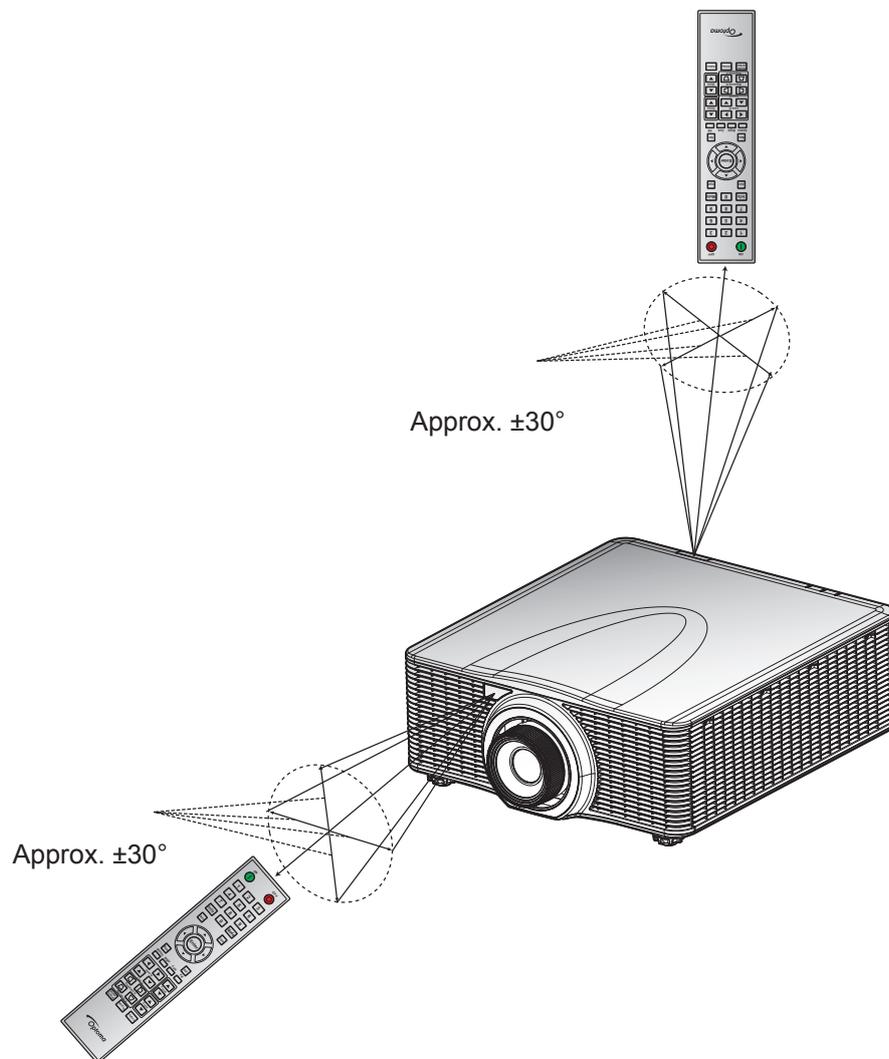
For more information on setting the remote receivers on the projector, see *Projector ID* from the setup menu on page 44.

SETUP AND INSTALLATION

Effective range

The Infra-Red (IR) remote control sensors are located on the front and rear sides of the projector. To have the remote control functions correctly, ensure to hold the remote control at an angle within $\pm 30^\circ$ (horizontally or vertically) to the projector's IR remote control sensor. The distance between the remote control and the sensor should not be longer than 10m (32.8 ft).

- Make sure that there are no obstacles between the remote control and the IR sensor on the projector.
- Make sure the IR transmitter of the remote control is not being shined by sunlight or fluorescent lamps directly.
- Keep the remote control away from fluorescent lamps for over 2 m or it might become malfunction.
- If the remote control is closed 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, it might become ineffective.
- When you aim at a 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.



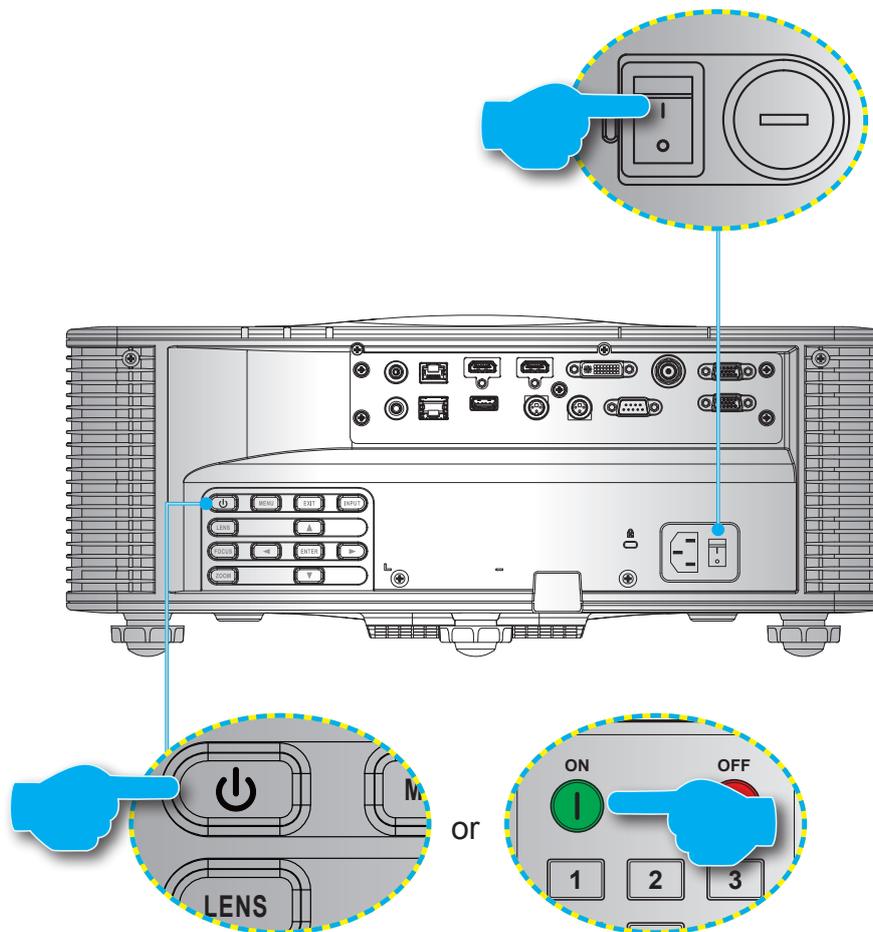
USING THE PROJECTOR

Powering on / off the projector

Powering on

1. Securely connect the AC power cord and signal/source cable to the projector.
2. Set the power switch to the “I” (ON) position and wait until the power button “⏻” on the projector keypad is solid orange.
3. Turn on the projector by pressing the **ON** button “I” on the remote control or the power button “⏻” on the projector keypad.

The status LED is orange with a long blink and the status LED will turn to solid green.



Note: If the projector is turned on for the first time, you will be prompted to select the projector language, projection orientation, and other settings.

Powering off

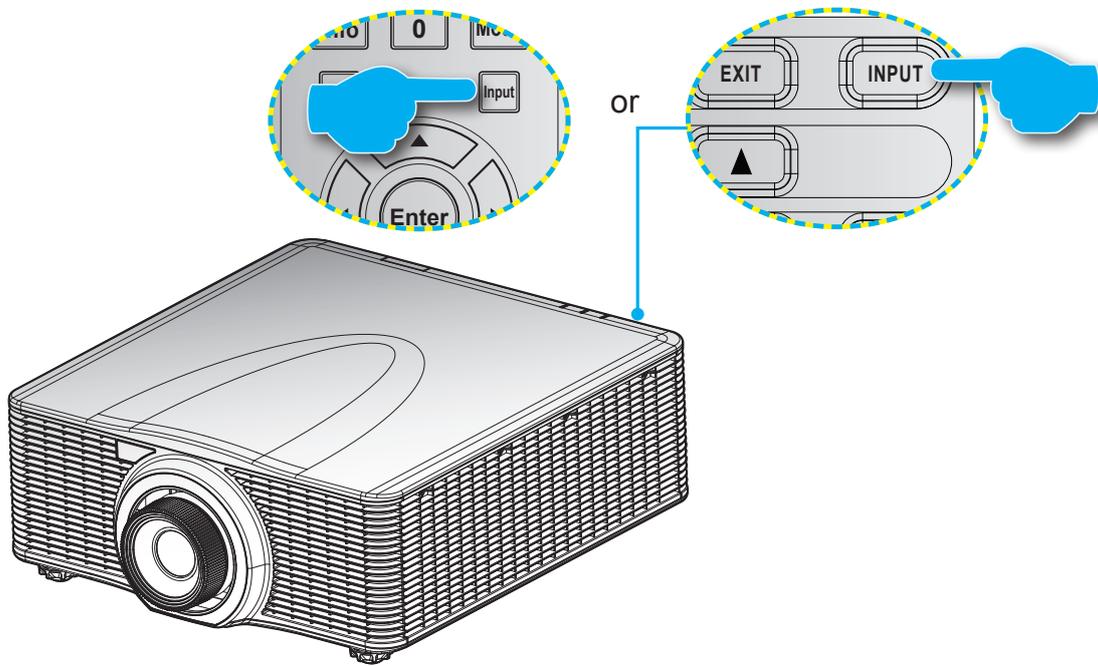
1. Turn off the projector by pressing the power button “⏻” on the projector keypad or the **OFF** button “⏻” on the remote control.
A message will pop up to confirm that you want to turn off the projector.
2. Press the power button or the **OFF** button again to confirm, otherwise the warning message disappears after 10 seconds and the projector remains on.
3. Set the Power switch to the “●” (OFF) position.
4. Disconnect the power cord from the projector and the electrical outlet.

Note: It is not recommended to turn on the projector immediately after powering off the projector.

USING THE PROJECTOR

Selecting an input source

Turn on the connected source that you want to display on the screen, such as computer, notebook, and video player. The projector will automatically detect the input source. If multiple sources are connected, press the **Input** button on the projector keypad or the remote control to select an input source.

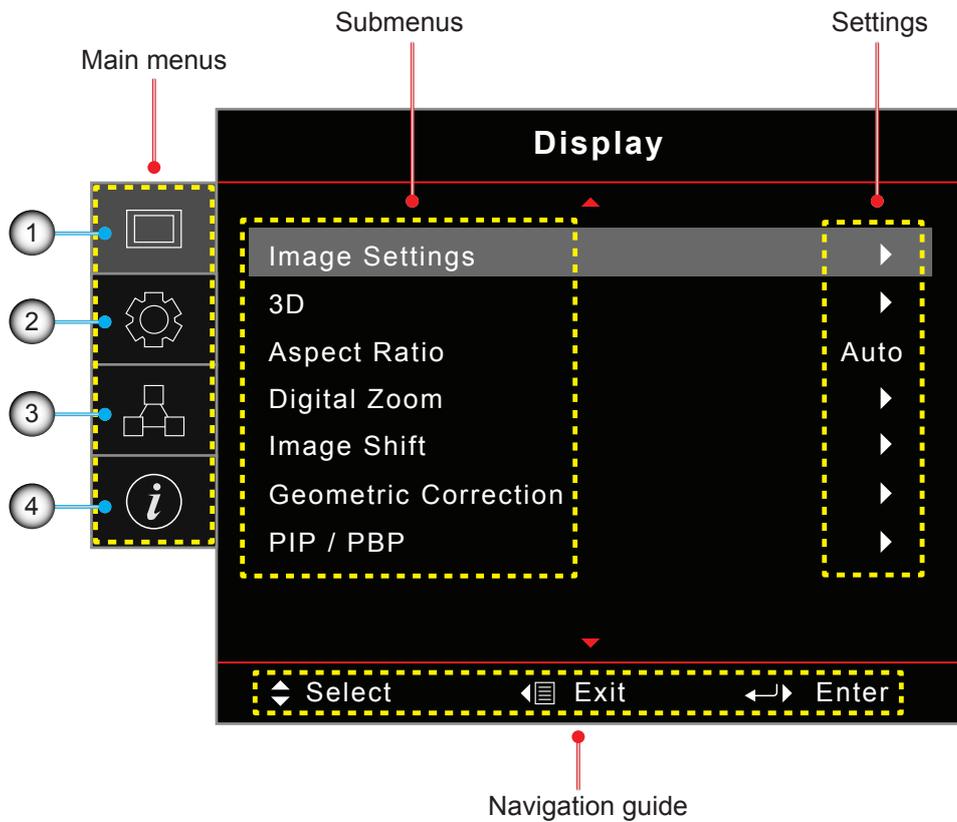


USING THE PROJECTOR

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 submenu, use the **▲** and **▼** buttons to highlight it. Then, press **▶** or **Enter** to enter the menu.
3. To select a menu item, use the **▲** and **▼** buttons to highlight it. Then, use the **▲ ▼ ◀ ▶** buttons to adjust that setting and press **Enter**.
4. Press **◀** or **Exit** to return to the previous menu or exit the OSD menu if at top level.



No	Item	No	Item
1.	Display menu	3.	Network menu
2.	Setup menu	4.	Information menu

USING THE PROJECTOR

OSD menu tree

Main menu	Submenus	Settings
Display	Image Settings	Display Mode
		Presentation / Bright / Cinema / HDR / sRGB / DICOM SIM. / Blending / 2D High Speed/ User / 3D
		Wall Color
		Off (default) / Blackboard / Light Yellow / Light Green / Light Blue / Pink / Gray
		Dynamic Range
		HDR
		Off / Auto (default)
		HDR Picture Mode
		Bright / Standard (default) / Film / Detail / SMPTE 2084
		Brightness
		0 ~ 100
		Contrast
		0 ~ 100
		Sharpness
		1 ~ 15
		Color
		0 ~ 100
		Tint
		0 ~ 100
		Gamma
		Film / Video / Graphics / Standard (2.2) / 3D / Blackboard / DICOM SIM.
		Color Settings
		BrilliantColor™
		0 ~ 10
		Color Temperature
		Warm / Standard / Cool
		Color Matching
	Color	
	Red (default) / Green / Blue / Cyan / Yellow / Magenta / White (R / G / B / C / Y / M / W)	
	R / G / B / C / Y / M	
	• Saturation: 0 ~ 254 (default: 127) • Hue: 0 ~ 254 (default: 127) • Gain: 0 ~ 254 (default: 127)	
	W	
	• Red: 0 ~ 254 (default: 127) • Green: 0 ~ 254 (default: 127) • Blue: 0 ~ 254 (default: 127)	
	Reset	
	Cancel (default) / Yes	
	Exit	
	RGB Gains/ Bias	
	Red Gain	
	0 ~ 100	
	Green Gain	
	0 ~ 100	
	Blue Gain	
	0 ~ 100	
	Red Bias	
	0 ~ 100	
	Green Bias	
	0 ~ 100	
	Blue Bias	
	0 ~ 100	
	Reset	
	Cancel (default) / Yes	
	Exit	
	Color Space	
	Auto (default) / RGB / YUV / RGB (0~255) / RGB (16~235)	
	Signal	
	Phase	
	0 ~ 31	
	H.Position	
	0 ~ 100	
	V.Position	
	0 ~ 100	
	Exit	
	Color Wheel Speed	
	2X / 3X	
	Extreme Black	
	Off (default) / On	
	Dynamic Black	
	Off (default) / On	
	Brightness Mode	
	Constant Power / Constant Luminance / Eco Mode	
	Power Level	
	1 ~ 100 (30% ~ 100%) (default: 100)	
	Reset	

USING THE PROJECTOR

Main menu	Submenus	Settings		
Display	3D	3D Mode	On / Off	
		3D Format	Auto (default) / Side by Side / Top and Bottom / Frame Sequential / Frame Packing	
		3D Tech	DLP-link / 3D Sync (default)	
		3D-2D	3D (default) / L / R	
		3D Sync Invert	Off (default) / On	
		3D Sync Out	To Emitter (default) / To Next Projector	
		L/R Reference	Field GPIO (default) / 1ST Frame	
		3D Frame Delay	1 ~ 200	
		Reset		
	Aspect Ratio		4:3 / 16:9 / 16:10 / LBX / Native / Auto	
	Edge Mask		0 ~ 10 (default: 0)	
	Digital Zoom	H Zoom	50% ~ 400 % (default: 100%)	
		V Zoom	50% ~ 400 % (default: 100%)	
		Exit		
	Image Shift	H (Horizontal)	0 ~ 100 (default: 50)	
		V (Vertical)	0 ~ 100 (default: 50)	
	Geometric Correction	PC Mode	Off (default) / On	
		H Arc	0 ~ 100 (default: 50)	
		V Arc	0 ~ 100 (default: 50)	
		Four Corners	Top-left / Top-right / Bottom-left / Bottom-right	
		H Keystone	0 ~ 40 (default: 20)	
		V Keystone	0 ~ 40 (default: 20)	
		Reset		
	PIP/PBP	Screen	Off / PIP / PBP	
		Location	<ul style="list-style-type: none"> • PIP-Bottom Right (default) / PIP-Bottom Left / PIP-Top Left / PIP-Top Right • PBP, Main Left (default) / PBP, Main Top / PBP, Main Right / PBP, Main Bottom 	
		Size	Large / Medium / Small	
		Main Source	HDMI1 / HDMI2 / DVI-D / VGA / HDBaseT / 3G-SDI	
		Sub Source	HDMI1 / HDMI2 / DVI-D / VGA / HDBaseT / 3G-SDI	
		Swap		
	Setup	Projection	Front (default) / Rear / Ceiling-top / Rear-top	
Lens Settings		Zoom		
		Focus		
		Lens Function	Lock / Unlock (default)	
		Lens Shift	Up / Down / Left / Right	
		Lens Calibration	Normal	Yes / No
			UST	On / Off
			UST Pattern	Off (default) / Pattern 1 / Pattern 2 / Pattern 3 / Pattern 4
		Lens Memory	Apply Position	Record 1 ~ 5
			Save Current Position	Record 1 ~ 5
Reset			Yes / No	
Power Settings		Direct Power On	Off (default) / On	

USING THE PROJECTOR

Main menu	Submenus	Settings			
Setup	Power Settings	Signal Power On	Off (default) / On		
		Auto Power Off (min.)	0 ~ 180 (5 min. increments) (default: 20)		
		Sleep Timer (min.)	0 ~ 990 (30 min increments) (default: 0)		
		Always On	Yes / No (default)		
		Power Mode (Standby)	Active / Eco. (default) / Communication		
	Security	Security	Off / On		
		Security Timer	Month / Day / Hour MM / DD / HH (RS232 Only)		
		Change Password			
	Test Pattern		Off / Green Grid / Magenta Grid / White Grid / White / Black / Red / Green / Blue / Yellow / Magenta / Cyan		
	Remote Settings	IR Function	Front	Off / On (default)	
			Top	Off / On (default)	
			HDBaseT	Off (default) / On	
		Remote Code	00 ~ 99		
		Hot-Key Settings	Aspect Ratio/Freeze Screen		
	12V Trigger		Off (default) / On		
	Projector ID		00 ~ 99		
	Keypad LED Settings		Off / On (default)		
	Options	Language		English (default) / Deutsch / Français / Italiano / Español / Português / Polski / Nederlands / Svenska / Norsk/Dansk / Suomi / ελληνικά / 繁體中文 / 简体中文 / 日本語 / 한국어 / Русский / Magyar / Čeština / العربية / ไทย / Türkçe / ىسراف / Tiếng Việt / Bahasa Indonesia / Română / Slovakian	
			Menu Settings	Menu Location	Top left / Top right / Center (default) / Bottom left / Bottom right
				Menu Transparency	0 ~ 9
				Menu Timer	Off / 5 sec / 10 sec / 15 sec (default)
			Auto Source		Off (default) / On
			Input Source		HDMI1 / HDMI2 / DVI-D / VGA / HDBaseT / 3G-SDI
			High Altitude		Off (default) / On
			Information Hide		Off (default) / On
			Logo		Default / Neutral
			Background Color		None / Blue(default) / Red / Green / Gray / Logo
			Serial Port Baud Rate		9600 / 14400 / 19200 (default) / 38400 / 57600 / 115200
			Serial Port Path		RS232 (default) / HDBaseT
			HDMI 1		EDID 1 / EDID 2 (default)
			HDMI 2		EDID 1 / EDID 2 (default)
			HDBaseT		EDID 1 / EDID 2 (default)
			System Update		Cancel (default) / Yes
			Reset	Reset OSD	Cancel (default) / Yes
				Reset to Default	Cancel (default) / Yes
			Network	WLAN	WLAN
Subnet Mask					Default: 255.255.255.0
IP Address					Default: 192.168.1.1

USING THE PROJECTOR

Main menu	Submenus	Settings	
Network	WLAN	Start IP	(Read only)
		End IP	(Read only)
		SSID	(Read only)
		Apply	
	LAN	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	Default: 0.0.0.0
		Apply	
	Control	Crestron	Off / On (default)
		Extron	Off / On (default)
		PJ Link	Off / On (default)
		AMX Device Discovery	Off / On (default)
		Telnet	Off / On (default)
		HTTP	Off / On (default)
		Network Reset	
	Information	Regulatory	(Read only)
		Serial Number	(Read only)
		Main Source	(Read only)
Main Resolution		(Read only)	
Main Signal Format		(Read only)	
Main Pixel Clock		(Read only)	
Main Horz Refresh		(Read only)	
Main Vert Refresh		(Read only)	
Sub Source		(Read only)	
Sub Resolution		(Read only)	
Sub Signal Format		(Read only)	
Sub Pixel Clock		(Read only)	
Sub Horz Refresh		(Read only)	
Sub Vert Refresh		(Read only)	
Display Mode		(Read only)	
Color Space Setting		(Read only)	
Power Mode (Standby)		(Read only)	
Projection Hours		(Read only)	
Remote Code		(Read only)	
LAN IP Address		(Read only)	
SSID		(Read only)	
Projector ID		(Read only)	
Brightness Mode		(Read only)	
FW Version		Global version	(Read only)
F-MCU Version			(Read only)
S-MCU Version			(Read only)
A-MCU Version			(Read only)
Formatter Version		(Read only)	
LAN Version		(Read only)	

USING THE PROJECTOR

Display menu

Learn how to configure the projector display settings.

Submenus

- Image Settings
- 3D
- Aspect Ratio
- Edge Mask
- Digital Zoom
- Image Shift
- Geometric Correction
- PIP/PBP

Image Settings

Image Settings menu provides various functions to optimize the projected image to achieve the best image quality in all kinds of surroundings, in consideration of factors such as input source, screen color, and ambient lighting.

Display Mode

There are a number of display modes that are preset for different types of images.

- **Presentation:** Best for displaying presentation slides in a bright room.
- **Bright:** Best for the installations requiring high brightness images.
- **Cinema:** Best for videos projected in a dark room.
- **HDR:** Best for displaying High Dynamic Range (HDR) content.
- **sRGB:** Standardized image color that matches the sRGB color standard.
- **DICOM SIM.:** Best for projecting monochrome medical images, such as X-ray diagram.
- **Blending:** Best for multiple projector installations.
- **2D High Speed:** This mode is used for displaying 2D input signal at 120Hz.
- **User:** Image settings saved by the user.
- **3D:** Best for playing 3D videos.

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.

Dynamic Range

Configure the settings for the High Dynamic Range (HDR) function.

- **HDR**
 - **Off:** Turn off the projector's HDR function, and the projector announces that it does not support HDR content so that the input device only sends out SDR signals.
 - **Auto:** When receiving HDR signals, the projector automatically changes to HDR display mode.
- **HDR Picture Mode**
 - **Bright:** Increase the color saturation for bright images.
 - **Standard:** Make the images look more realistic and natural.
 - **Film:** Improve the image details for videos.
 - **Detail:** Improve image details in dark scenes.
 - **SMPTE 2084:** Optimize the image performance to meet the SMPTE 2084 standard.

USING THE PROJECTOR

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.

Color

Transform video images from black and white to fully saturated color.

Tint

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

Gamma

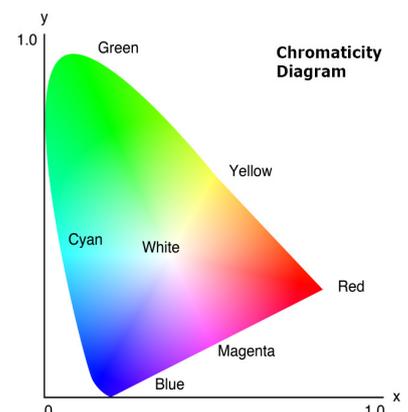
Select an appropriate gamma value to optimize the image conformance to different input sources.

- **Film:** Best for home theater setting.
- **Video:** Best for video or TV sources.
- **Graphics:** Best for projecting photos from PC input.
- **Standard (2.2):** Standard gamma value.
- **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.

Color Settings

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

- **Brilliant Color™:** Advanced image processing algorithm that enables the usage of more colors on the color wheel, resulting in higher brightness while providing truer and more vibrant colors in the projected image.
- **Color Temperature:** Adjust the color temperature of the projected image. The available options are Warm, Standard, and Cool.
- **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, Magenta, and White (R / G / B / C / Y / M / W).
 - **Color:** Select a color for further adjustment.
 - **(R / G / B / C / Y / M) Saturation / Hue / Gain:** Change the value of hue, saturation, and gain to adjust the red, green, blue, cyan, yellow, or magenta in the projected image.
 - **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.
 - **Hue:** Adjust the hue of the selected color. The value reflect the number of degrees of rotation around the chromaticity diagram from the original color. Increasing value indicates counterclockwise rotation, and decreasing value, clockwise rotation.
 - **Gain:** Adjust the gain 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).
 - **(W) Red / Green / Blue:** Change the value of red, green, and blue to adjust the white color.



USING THE PROJECTOR

- **Reset:** Reset the selected color to factory default settings.
- **Exit:** Exit the submenu.
- **RGB Gains/Bias:** Gain and bias 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 Bias:** Adjust the color of the image's dark areas.
 - **Reset:** Reset the settings to factory default values.
 - **Exit:** Exit the submenu.
- **Color Space:** Select a color space that has been specifically tuned for the input signal. The available options are Auto, RGB, YUV, RGB (0-255), and RGB (16-235). Select RGB only for HDMI input.

Signal

Improve the image quality and adjust the image position for the RGB/component signal.

- **Phase:** Synchronize the signal timing of the display with the graphic card. If the image appears to be unstable or flickers, use this function to correct it.
- **H. Position:** Adjust the horizontal position of the image.
- **V. Position:** Adjust the vertical position of the image.
- **Exit:** Exit the submenu.

Note: *This function is only available for the RGB/component signal.*

Color Wheel Speed

The speed of the phosphor color wheel determines the image performance and the service life of the projector.

- **2X:** Extends the projector's service life and reduces the noise level during operation.
- **3X:** Increases the speed to eliminate the color artifacts for best image quality.

Extreme Black

Automatically increase the contrast ratio by turning off the laser light when black image is detected.

Dynamic Black

Automatically adjust the contrast ratio for video sources. It improves the black level in dark scenes by reducing the light output.

Brightness Mode

Set up the brightness mode depending on the various installation requirements.

- **Constant Power:** Enable this mode to set the image brightness to a specific level controlled by the laser diode power level. Use *Power Level* from the upper menu to set the laser diode power level.
- **Constant Luminance:** Maintain the image brightness that is set in Constant Power. A special algorithm is designed to compensate the natural decay of brightness so that the image can be maintained at a fixed brightness level.
- **Eco Mode:** Set the image brightness to 50% of the projector's maximum brightness level, which lowers the power consumption and extends the lifetime of the projector. The projector reaches its maximum brightness level when the display mode is set to Bright.

Power Level

Set the power level of the laser diode power to adjust the image brightness. The power value ranges from 1 to 100, which covers the power level from 30% to 100%. The set power value is activated when Constant Power in Brightness Mode is enabled.

Reset

Reset all color settings to factory default values.

USING THE PROJECTOR

3D menu

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.

3D Mode

Enable or disable the 3D function.

3D Format

Select a proper 3D format for the 3D input signal. The available options are Auto, Side by Side, Top and Bottom, Frame Sequential, and Frame Packing.

3D Tech

Select the 3D technology according to the different types of 3D sync signal.

- **DLP-link:** Select it when the 3D sync signal is generated by the DLP Link technology built-in the projector. It only works if the used 3D glasses are compatible with DLP 3D technology and the 3D mode is enabled manually.
- **3D Sync:** Select it when the projector receives the 3D sync signal from an external source, and the 3D sync signal is sent out to an emitter or another projector through the 3D sync out port.

3D-2D

Transform the 3D content to 2D images.

- **3D:** Play the 3D content normally.
- **L:** Play the left images of the 3D content.
- **R:** Play the right images of the 3D content.

3D Sync Invert

When the 3D video does not appear correctly, use this function to invert the 3D left and right frames.

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 projector's 3D sync out port.
- **To Next Projector:** For multiple projector applications, send the 3D sync signal to next projector.

L/R Reference

To ensure the correct 3D synchronisation, use this function to set the signal reference for the left and right (L/R) frames.

- **Field GPIO:** When receiving an external 3D sync signal from the 3D sync in cable, the projector automatically select this option to synchronize the L/R reference with the 3D sync signal.
- **1ST Frame:** When the projector generates 3D sync signal internally, select this option to set the first frame of the input source as the projector's left reference. If the 3D image does not appear correctly, use 3D Invert function to swap the left and right frames.

3D Frame Delay

Set a frame delay value for the projector to correct the time difference between the 3D signal being given and the result being executed. This function works only when L/R Reference is set to Field GPIO.

When performing 3D blending on multiple projectors, set the frame delay for each projector to correct the non-synchronous images.

Reset

Reset all 3D settings.

USING THE PROJECTOR

Aspect Ratio

Set the aspect ratio of the projected image. The available options are 4:3, 16:9, 16:10, LBX, Native, and Auto. Select Auto to display the detected image size.

Edge Mask

Use this function to remove the video encoding noise on the edge of the video images.

Digital Zoom

Adjust the size of the projected image. The image can be resized from 50% to 400%. After resizing the image with this function, use Image Shift to adjust the image position.

- **H Zoom:** Change the height of the projected area.
- **V Zoom:** Change the width of the projected area.
- **Exit:** Exit the submenu.

Image Shift

Adjust the position of the display area within the lens offset range. The available options are H and V that stands for horizontal and vertical shifting.

Geometric Correction

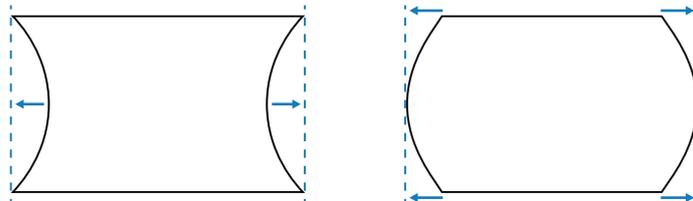
Configure the geometric settings to reshape the image for different projection surface.

PC Mode

Enable PC mode to use PC software for more complicated geometric configuration. When the PC mode is set to On, the projector will automatically load the previously applied PC geometry settings.

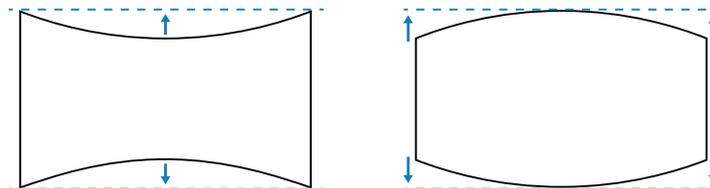
H Arc

Correct the projected image with horizontal barrel or pincushion distortion.



V Arc

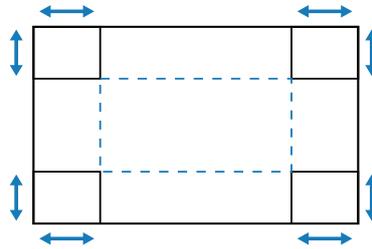
Correct the projected image with vertical barrel or pincushion distortion.



USING THE PROJECTOR

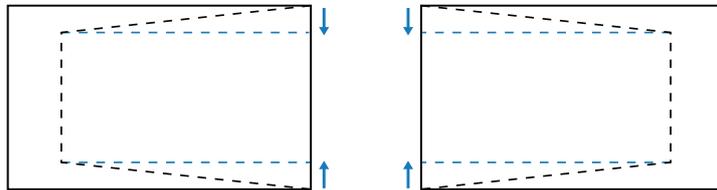
Four Corners

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



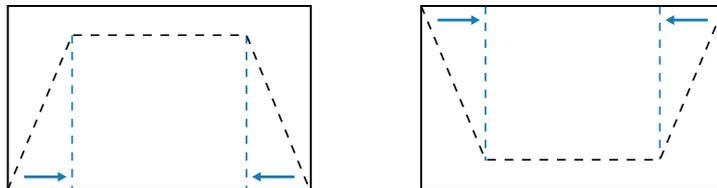
H Keystone

Adjust the left and right side of the projected image to make it an even rectangle. It is used for the images with unequal left and right sides.



V Keystone

Adjust the top and bottom side of the projected image to make it an even rectangle. It is used for the images with unequal top and bottom sides.



Reset

Reset geometric settings to factory default values.

USING THE PROJECTOR

PIP/PBP

PIP/PBP (picture in picture/picture by picture) allows simultaneously displaying two images from two input sources.

Screen

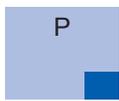
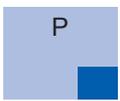
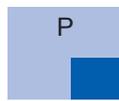
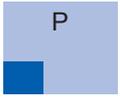
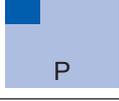
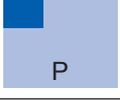
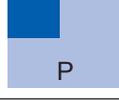
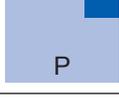
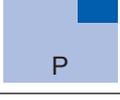
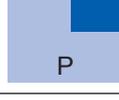
Select the appropriate PIP/PBP mode.

- **Off:** Disable PIP/PBP mode.
- **PIP:** Display one input source on the main screen and the other input source in an inset window.
- **PBP:** Display two images of the same size on the screen.

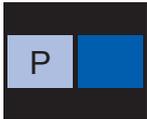
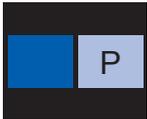
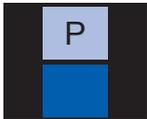
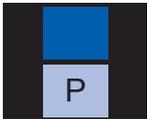
Location

Adjust the layout of the two images. In the layout chart below, the “P” indicates the main image:

- **PIP Layout**

PIP Layout	PIP Size		
	Small	Medium	Large
PIP-Bottom Right			
PIP-Bottom Left			
PIP-Top Left			
PIP-Top Right			

- **PBP Layout**

PBP Layout	
PBP, Main Left 	PBP, Main Right 
PBP, Main Top 	PBP, Main Bottom 

Size

Change the display size of the sub source in PIP mode.

Main Source

Select an input source for the main image. The available input sources are HDMI1, HDMI2, DVI-D, VGA, HDBaseT, and 3G-SDI.

Sub Source

Select an input source for the second image. The available input sources are HDMI1, HDMI2, DVI-D, VGA, HDBaseT, and 3G-SDI.

USING THE PROJECTOR

Swap

Swap the main source and sub source.

Note: See below table for the PIP/PBP compatibility.

PIP/PBP Compatibility

PIP/PBP Matrix	VGA	DVI-D	HDMI 1	HDMI 2	HDBaseT	3G-SDI
VGA	—	V	V	V	V	V
DVI-D	V	—	V	V	V	V
HDMI 1	V	V	—	V	V	V
HDMI 2	V	V	V	—	V	V
HDBaseT	V	V	V	V	—	V
3G-SDI	V	V	V	V	V	—

USING THE PROJECTOR

Setup menu

Learn how to configure the projector operation settings.

Submenus

- Projection
- Lens Settings
- Power Settings
- Security
- Test Pattern
- Remote Settings
- 12V Trigger
- Projector ID
- Keypad LED Settings
- Options
- System Update
- Reset

Projection

Change the image direction by selecting a proper projection mode. The available options are Front, Rear, Ceiling-top, and Rear-top, which support front projection, rear projection, front projection inverted for ceiling-top installation, and rear projection inverted for rear-top installation.

Lens Settings

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

Zoom

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

Focus

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

Lens Function

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

Lens Shift

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

Lens Calibration

Calibrate the lens position to return it to the center. To prevent damage to the projector and the lens, always perform lens calibration before replacing the lens.

- **Normal:** Perform a lens calibration for the non-ultra short throw lens.
- **UST:** Perform a lens calibration to get the projector ready for the ultra short throw (UST) lens.
- **UST Pattern:** Choose the test pattern to assist in the UST lens adjustment.

Lens Memory

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

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

Note: *Performing a lens calibration will clear the saved lens records.*

USING THE PROJECTOR

Power Settings

Adjust the power settings to control the projector's operation time and standby mode.

Direct Power On

When set to On, the projector will automatically turn on after being connected to a power source.

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, 5 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.

- **Sleep Timer (min):** Press the ◀ and ▶ buttons to add or reduce time, 30 minutes for each press.
- **Always On**
 - **No:** The sleep timer resets to 0 after the projector is turned off.
 - **Yes:** Activate the sleep timer every time when the projector is turned on.

Power Mode (Standby)

Select the power mode for the projector in standby status.

- **Eco.:** Minimum power consumption (0.5 Watt) which does not allow network controlling.
- **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.

Security

Set up security verification to protect the projector.

Security

Select On to protect the projector with a password. If the user enters incorrect password three times, a message will pop up warning that the projector shuts down in 10 seconds.

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 (min), Sleep Timer (min), 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.

Test Pattern

Select a test pattern. The available options are Off, Green Grid, Magenta Grid, White Grid, White, Black, Red, Green, Blue, Yellow, Magenta, and Cyan.

USING THE PROJECTOR

Remote Settings

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

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 Code

Assign an ID code from 00 to 99 for the remote receivers on the projector. The projector only responds to the IR remote control set with the same ID code.

For more details on setting an ID code for the IR remote control, see *Remote control ID setup* on page 19.

Hot Key Settings

Assign a function to the **Hot Key** button on the remote control. It allows you to use the function easily without going through the OSD menus. The available functions for the **Hot Key** button are Aspect Ratio and Freeze Screen.

12V Trigger

When set to On, the projector screen is automatically raised or lowered when the projector is turned on or off. This function only works when the projector is connected to an electrical projector screen.

Projector 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, HDBaseT, or other devices. For more information, see *Control* from the network menu on page 40.

Keypad LED Settings

Enable or disable the projector's keypad LED light.

Options

Adjust the basic projector settings.

Language

Select a language for the OSD menu. The available languages are English, German, French, Italian, Spanish, Portuguese, Polish, Dutch, Swedish, Norwegian/Danish, Finnish, Greek, Traditional Chinese, Simplified Chinese, Japanese, Korean, Russian, Hungarian, Czechoslovak, Arabic, Thai, Turkish, Persian, Vietnam, Indonesian, Romanian, and Slovakian.

Menu Settings

Adjust the settings of the OSD menu.

- **Menu location:** Select the menu location from Top left, Top right, Center, Bottom left, and Bottom right.
- **Menu Transparency:** Set the menu transparency level.
- **Menu Timer:** Set the length of time the menu displays on the screen.

Auto Source

When set to On, the projector automatically detects and selects the input source. Once an input source is selected, press the Input button on the remote control or keypad to switch to other available sources. When set to Off, press Input will bring up the Input Source submenu.

USING THE PROJECTOR

Input Source

Select an input source from the source submenu. The available input sources are HDMI1, HDMI2, DVI-D, VGA, HDBaseT, and 3G-SDI.

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.

Information Hide

Select On to hide the projector status information.

Logo

Set up the startup screen.

- **Default:** Use the default splash screen with the brand logo.
- **Neutral:** Disable the logo on the splash screen.

Background Color

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

Serial Port Baud Rate

Set the serial port baud rate. The available options are 9600, 14400, 19200, 38400, 57600, and 115200.

Serial Port Path

Select a serial port path for the serial commands. The available options are RS232 or HDBaseT.

HDMI 1

When an input device is connected to HDMI IN1, set the EDID compatibility to display the input signal properly. Select **EDID 1.4** for the input devices with HDMI 1.4, or **EDID 2.0** for the devices with HDMI 2.0.

HDMI 2

When an input device is connected to HDMI IN2, set the EDID compatibility to display the input signal properly. Select **EDID 1.4** for the input devices with HDMI 1.4, or **EDID 2.0** for the device with HDMI 2.0.

HDBaseT

When the projector receives HDMI signals from a HDBaseT box, set the EDID compatibility to properly display the HDMI content. Select **EDID 1.4** if the input signal is sent by a device with HDMI 1.4, or **EDID 2.0** if the device supports HDMI 2.0.

Note: The common HDMI versions are HDMI 1.4 and 2.0. With HDMI 1.4, the rate of 4K is limited to 30 frames per second, whereas HDMI 2.0 plays 4K video without compromise, at 50 and 60 frames per second. This projector supports both HDMI 1.4 and 2.0. In order to play the HDMI content properly, set up the projector EDID for the input devices with different HDMI specifications.

System Update

Select Yes to update the projector system software/firmware.

Reset

Reset the settings to factory default values.

- **Reset OSD:** Reset OSD settings to default values.
- **Reset to Default:** Reset all projector settings to default values.

USING THE PROJECTOR

Network menu

Learn how to configure the projector network settings.

Submenus

- WLAN
- LAN
- Control
- Network Reset

Supplemental information

- Using the web control panel
- Using RS232 command by Telnet

WLAN

The projector can connect to a wireless network using a Wifi dongle. Use the WLAN submenu to configure the wireless network settings for the projector.

- **WLAN:** Select On to enable the wireless connection.
- **Subnet Mask:** Assign the projector's subnet mask.
- **IP Address:** Assign the projector's IP address.
- **Start IP:** Display the Start IP address. (Read only)
- **End IP:** Display the End IP address. (Read only)
- **SSID:** Display the network SSID. (Read only)
- **Apply:** Apply the wireless network settings.

LAN

The projector can connect to a wired network using an RJ-45 cable. Use the LAN submenu to configure the wired network settings for the projector.

- **MAC Address:** Display the MAC address. (Read only)
- **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:** Assign the projector's DNS.
- **Apply:** Apply the wired network settings.

Control

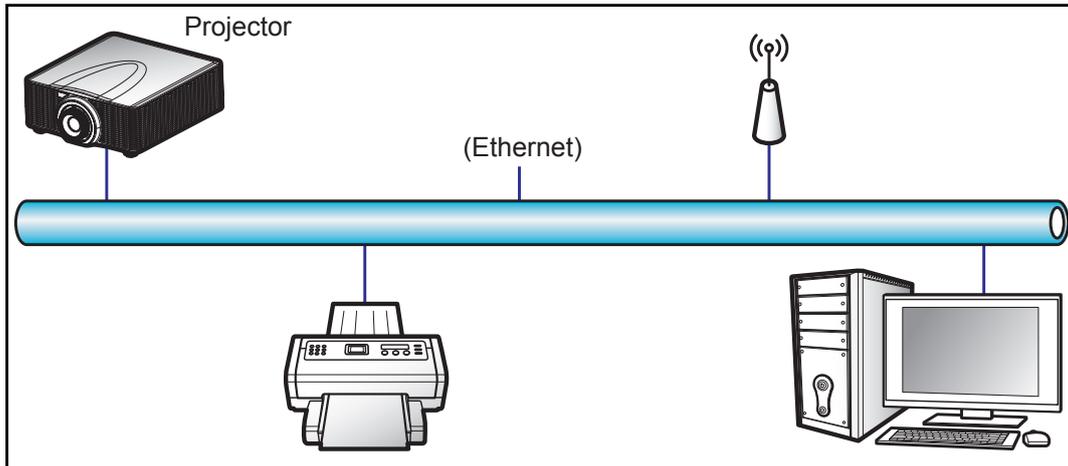
This projector can be controlled remotely by a computer or other external devices through wireless or wired network connection. It allows the user to control one or more projectors from a distant control center, such as powering the projector on or off, and adjusting the image brightness or contrast.

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>.
- **Extron:** Control the projector with Extron devices. (Port: 2023)
For more information, please visit <http://www.extron.com>.
- **PJ Link:** Control the projector with PJLink v1.0 commands. (Port: 4352)
For more information, please visit <http://pjlink.jbmia.or.jp/english>.

USING THE PROJECTOR

- **AMX Device Discovery:** Control the projector with AMX devices. (Port: 9131)
For more information, please visit <http://www.amx.com>.
- **Telnet:** Control the projector using RS232 commands through Telnet connection. (Port: 23)
For more information, see *Using RS232 command by Telnet* on page 43.
- **HTTP:** Control the projector with web browser. (Port: 80)
For more information, see *Using the web control panel* on page 41.



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.*

Network Reset

Reset all network settings to default factory values.

Using the web control panel

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

System requirement

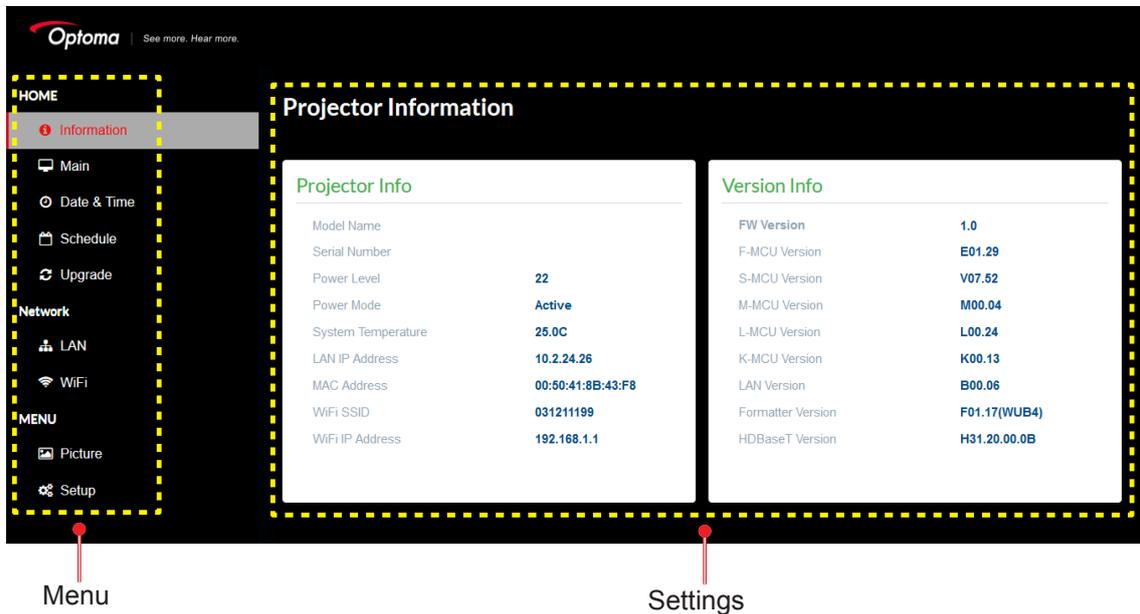
To use the web control panel, make sure your devices and software meet the minimum system requirements.

- RJ45 cable (CAT-5e) or wireless dongle
- PC, laptop, mobile phone, or tablet installed with a web browser
- Compatible web browsers:
 - Internet Explorer 11 or higher version
 - Microsoft Edge 40 or higher version
 - Firefox 57 or higher version
 - Chrome 63 or higher version
 - Safari 11 or higher version
- Operating system of the mobile devices:
 - iOS 10 or higher version
 - Android 5 or higher version

USING THE PROJECTOR

Overview of the web control panel

Configure the projector settings using web browser.



Menu	Submenu	Description
HOME	Information	View the projector information and firmware version details.
	Main	<ul style="list-style-type: none"> Select the projector input sources. Direct keys to enable or disable the projector power, shutter, and OSD.
	Date & Time	Set up the projector date and time.
	Schedule	Create schedules for the projector to turn on or off automatically.
	Upgrade	Upgrade the projector firmware.
Network	LAN	Set up the wired network and Crestron Control System (CCS) connection.
	WiFi	Set up the wireless network.
MENU	Picture	Adjust the basic image settings, such as image size and position.
	Setup	Adjust the projector general settings, lens settings, and power settings.

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.

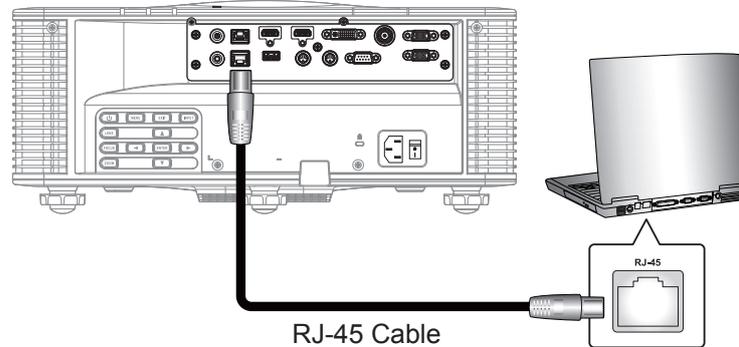
- Check the projector address using the OSD menu.
 - In a wired network, select **Network > LAN > IP Address**.
Note: Make sure DHCP is enabled.
 - In a wireless network, select **Network > WLAN > Gateway**.
- Open a web browser and type the projector address in the address bar.
- The web page redirects to the web control panel.

When network is not available, see *Directly connect the projector to a computer* on page 43.

USING THE PROJECTOR

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 **Network > LAN**.
 - 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 192.168.000.100, set the computer IP address to 192.168.000.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 direct connection between the projector and computer. See *Directly connect the projector to a computer* on *Directly connect the projector to a computer* on page 43.
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.

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).

USING THE PROJECTOR

Information menu

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

- Regulatory
- Serial Number
- Main Source
- Main Resolution
- Main Signal Format
- Main Pixel Clock
- Main Horz Refresh
- Main Vert Refresh
- Sub Source
- Sub Resolution
- Sub Signal Format
- Sub Pixel Clock
- Sub Horz Refresh
- Sub Vert Refresh
- Display Mode
- Color Space Setting
- Power Mode (Standby)
- Projection Hours
- Remote Code
- LAN IP Address
- SSID
- Projector ID
- Brightness Mode
- FW Version
- F-MCU Version
- S-MCU Version
- A-MCU Version
- Formatter Version
- LAN Version

ADDITIONAL INFORMATION

Compatible resolutions

Timing table

Signal Type	Resolution	Frame rate (Hz)	VGA	HDMI1 / 2	DVI	3G-SDI	HDBaseT
PC	640x480	60	V	V	V		V
	640x480	72	V	V	V		V
	640x480	75	V	V	V		V
	640x480	85	V	V	V		V
	640x480	66.6		V	V		V
	720x400	70	V	V	V		V
	800x600	60	V	V	V		V
	800x600	72	V	V	V		V
	800x600	75	V	V	V		V
	800x600	85	V	V	V		V
	800x600	120	V	V	V		V
	848x480	50			V	V	V
	848x480	60			V	V	V
	848x480	75			V	V	V
	848x480	85			V	V	V
	1024x768	60	V	V	V		V
	1024x768	75	V	V	V		V
	1024x768	85	V	V	V		V
	1024x768	120	V	V	V		V
	1152x720	50			V	V	V
	1152x720	60			V	V	V
	1152x720	75			V	V	V
	1152x720	85			V	V	V
	1152x864	60	V	V	V		V
	1152x864	70	V	V	V		V
	1152x864	75	V	V	V		V
	1152x864	85	V	V	V		V
	1150x870	75			V	V	
	1280x720	50			V	V	V
	1280x720	60	V	V	V		V
	1280x720	75	V	V	V		V
	1280x720	85	V	V	V		V
	1280x720	120	V	V	V		V
	1280x768	60	V	V	V		V
	1280x768	75	V	V	V		V
	1280x768	85	V	V	V		V
	1280x800	50	V	V	V		V
	1280x800	60	V	V	V		V
	1280x800	75	V	V	V		V
	1280x800	85	V	V	V		V
	1280x960	50			V	V	V
	1280x960	60	V	V	V		V
1280x960	75	V	V	V		V	
1280x960	85	V	V	V		V	
1280x1024	50			V	V	V	
1280x1024	60	V	V	V		V	

ADDITIONAL INFORMATION

Signal Type	Resolution	Frame rate (Hz)	VGA	HDMI1 / 2	DVI	3G-SDI	HDBaseT
PC	1280x1024	75	V	V	V		V
	1280x1024	85	V	V	V		V
	1360x768	50		V	V		V
	1360x768	60		V	V		V
	1360x768	75		V	V		V
	1360x768	85		V	V		V
	1368x768	60	V	V	V		V
	1400x1050	50		V	V		V
	1400x1050	60		V	V		V
	1400x1050	75	V	V	V		V
	1440x900	60	V	V	V		V
	1440x900	75		V	V		V
	1600x900	60		V	V		V
	1600x1200	60	V	V	V		V
	1680x1050	60	V	V	V		V
	1920X1080	50		V	V		V
	1920X1080	60	V	V	V		V
	1920X1200RB	60	V	V	V		V
1920X1200RB	50	V	V	V		V	
SDTV	480i	60	V	V	V		V
	576i	50	V	V	V		V
EDTV	480p	60	V	V	V		V
	576p	50	V	V	V		V
HDTV	1080i	25	V	V	V		V
	1080i	29	V	V	V		V
	1080i	30	V	V	V		V
	720p	50	V	V	V		V
	720p	59	V	V	V		V
	720p	60	V	V	V		V
	1080p	23	V	V	V		V
	1080p	24	V	V	V		V
	1080p	25	V	V	V		V
	1080p	29	V	V	V		V
	1080p	30	V	V	V		V
	1080p	50	V	V	V		V
	1080p	59	V	V	V		V
1080p	60	V	V	V		V	
Mandatory 3D	Frame Packing 1080p	24		V	V		V
	Frame Packing 720p	50		V	V		V
	Frame Packing 720p	60		V	V		V
	Side by Side 1080i	50		V	V		V
	Side by Side 1080i	60		V	V		V
	Top and Bottom 720p	50		V	V		V
	Top and Bottom 720p	60		V	V		V
	Top and Bottom 1080p	24		V	V		V

ADDITIONAL INFORMATION

Signal Type	Resolution	Frame rate (Hz)	VGA	HDMI1 / 2	DVI	3G-SDI	HDBaseT	
Frame sequential 3D	800x600	120		V	V		V	
	1024x768	120		V	V		V	
	1280x720	120		V	V		V	
	1080p	120		V	V		V	
	1080p	60		V	V		V	
	WUXGA	60		V	V		V	
SD-SDI	480i YcbCr422 10bit	59.94				V		
	576i YcbCr422 10bit	50				V		
HD-SDI	720p YcbCr422 10bit	50				V		
		59.94				V		
		60				V		
	1080i YcbCr422 10bit	50					V	
		59.94					V	
		60					V	
	1080p YcbCr422 10bit	23.98					V	
		24					V	
		25					V	
		29.97					V	
		30					V	
		30					V	
	1080sF YcbCr422 10bit	25					V	
		29.97					V	
30						V		
3GA-SDI	1080p YcbCr422 10bit	50				V		
		59.94				V		
		60				V		
3GB-SDI	1080p YcbCr422 10bit With 352M Payload ID	50				V		
		59.94				V		
		60				V		
4K	3840x2160	23.976		V	V		V	
		24.000		V	V		V	
		25.000		V	V		V	
		29.970		V	V		V	
		30.000		V	V		V	
		50.000		V	V			
		59.940		V	V			
		60.000		V	V			
	4096x2160	23.976			V	V		V
		24.000			V	V		V
		25.000			V	V		V
		29.970			V	V		V
		30.000			V	V		V
		50.000			V	V		
		59.940			V	V		
		60.000			V	V		

Note: "RB" means "reduced blanking".

ADDITIONAL INFORMATION

EDID Table

WUXGA / VGA		
Established Timing:	Standard Timing:	Detail Timing:
720x400 @ 70 Hz	1440x900 @ 75 Hz	1920x1200 @ 59 Hz
720x400 @ 88 Hz	1280x800 @ 75 Hz	1920x1080 @ 60 Hz
640x480 @ 60 Hz	1280x1024 @ 60 Hz	
640x480 @ 67 Hz	1360x765 @ 60 Hz	
640x480 @ 72 Hz	1440x900 @ 60 Hz	
640x480 @ 75 Hz	1400x1050 @ 60 Hz	
800x600 @ 56 Hz	1600x1200 @ 60 Hz	
800x600 @ 60 Hz	1680x1050 @ 60 Hz	
800x600 @ 72 Hz		
800x600 @ 75 Hz		
832x624 @ 75 Hz		
1024x768 @ 60 Hz		
1024x768 @ 70 Hz		
1024x768 @ 75 Hz		
1280x1024 @ 75 Hz		
1152x870 @ 75 Hz		

WUXGA / HDMI & HDBaseT		
Established Timing:	Standard Timing:	Detail Timing:
720x400 @ 70 Hz	1024x768 @ 120 Hz	1920x1080 @ 60 Hz
720x400 @ 88 Hz	1280x800 @ 75 Hz	1360x768 @ 60 Hz
640x480 @ 60 Hz	1280x1024 @ 60 Hz	1366x768 @ 59 Hz
640x480 @ 67 Hz	1360x765 @ 60 Hz	720x480 @ 59 Hz
640x480 @ 72 Hz	800x600 @ 120 Hz	
640x480 @ 75 Hz	1400x1050 @ 60 Hz	
800x600 @ 56 Hz	1600x1200 @ 60 Hz	
800x600 @ 60 Hz	1680x1050 @ 60 Hz	
800x600 @ 72 Hz		
800x600 @ 75 Hz		
832x624 @ 75 Hz		
1024x768 @ 60 Hz		
1024x768 @ 70 Hz		
1024x768 @ 75 Hz		
1280x1024 @ 75 Hz		
1152x870 @ 75 Hz		

ADDITIONAL INFORMATION

WUXGA / DVI-D		
Established Timing:	Standard Timing:	Detail Timing:
720x400 @ 70 Hz	1024x768 @ 120 Hz	1920x1080 @ 60 Hz
720x400 @ 88 Hz	1280x800 @ 75 Hz	1360x768 @ 60 Hz
640x480 @ 60 Hz	1280x1024 @ 60 Hz	1366x768 @ 59 Hz
640x480 @ 67 Hz	1360x765 @ 120 Hz	720x480 @ 59 Hz
640x480 @ 72 Hz	800x600 @ 120 Hz	
640x480 @ 75 Hz	1400x1050 @ 60 Hz	
800x600 @ 56 Hz	1600x1200 @ 60 Hz	
800x600 @ 60 Hz	1680x1050 @ 60 Hz	
800x600 @ 72 Hz		
800x600 @ 75 Hz		
832x624 @ 75 Hz		
1024x768 @ 60 Hz		
1024x768 @ 70 Hz		
1024x768 @ 75 Hz		
1280x1024 @ 75 Hz		
1152x870 @ 75 Hz		

ADDITIONAL INFORMATION

Image size and projection distance

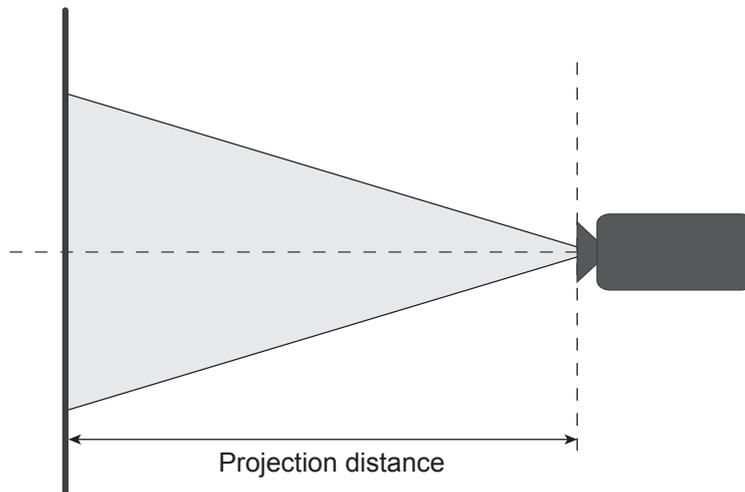
Aspect Ratio			WUXGA (16:10)										
DMD			0.67"										
Projection Lens			A16	A01		A06		A03		A13		A15	
Throw Ratio			0.361 (120")	0.95-1.22		1.22-1.52		1.52-2.92		2.90-5.50		0.75-0.95	
Zoom Ratio			N/A	1.28X		1.25X		1.9X		1.9X		1.26X	
Throw Distance			0.96- 3.01m	1.02-13.33m		1.31-16.58m		1.64-31.70m		3.12-57.86m		0.81-10.38m	
Projection screen size			Projection distance (m)										
Throw Ratio			0.361 (120")	0.95	1.22	1.22	1.52	1.52	2.92	2.90	5.50	0.75	0.95
Diagonal (inch)	Height (m)	Width (m)	(m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)
50	0.67	1.08	-	1.02	1.31	1.31	1.65	1.64	3.14	3.12	5.92	0.81	1.02
60	0.81	1.29	-	1.23	1.58	1.58	1.98	1.96	3.77	3.75	7.11	0.97	1.23
70	0.94	1.51	-	1.43	1.84	1.84	2.31	2.29	4.40	4.37	8.29	1.13	1.43
80	1.08	1.72	-	1.64	2.10	2.10	2.64	2.62	5.03	5.00	9.48	1.29	1.64
90	1.21	1.94	-	1.84	2.36	2.36	2.97	2.95	5.66	5.62	10.66	1.45	1.84
100	1.35	2.15	-	2.05	2.63	2.63	3.30	3.27	6.29	6.25	11.85	1.62	2.05
110	1.48	2.37	-	2.25	2.89	2.89	3.63	3.60	6.92	6.87	13.03	1.78	2.25
120	1.62	2.58	0.96	2.46	3.15	3.15	3.95	3.93	7.55	7.50	14.22	1.94	2.46
130	1.75	2.80	1.04	2.66	3.42	3.42	4.28	4.26	8.18	8.12	15.40	2.10	2.66
140	1.88	3.02	1.11	2.86	3.68	3.68	4.61	4.58	8.81	8.74	16.59	2.26	2.86
150	2.02	3.23	1.18	3.07	3.94	3.94	4.94	4.91	9.43	9.37	17.77	2.42	3.07
160	2.15	3.45	1.26	3.27	4.20	4.20	5.27	5.24	10.06	9.99	18.95	2.58	3.27
170	2.29	3.66	1.33	3.48	4.47	4.47	5.60	5.57	10.69	10.62	20.14	2.75	3.48
180	2.42	3.88	1.40	3.68	4.73	4.73	5.93	5.89	11.32	11.24	21.32	2.91	3.68
190	2.56	4.09	1.48	3.89	4.99	4.99	6.26	6.22	11.95	11.87	22.51	3.07	3.89
200	2.69	4.31	1.55	4.09	5.26	5.26	6.59	6.55	12.58	12.49	23.69	3.23	4.09
250	3.37	5.38	1.91	5.12	6.57	6.57	8.24	8.18	15.72	15.62	29.62	4.04	5.12
300	4.04	6.46	2.28	6.14	7.88	7.88	9.89	9.82	18.87	18.74	35.54	4.85	6.14
350	4.71	7.54	2.65	7.25	9.32	9.28	11.59	11.60	22.17	21.41	40.54	5.71	7.26
400	5.38	8.62	3.01	8.29	10.66	10.61	13.25	13.26	25.35	24.45	46.31	6.53	8.30
450	6.06	9.69	-	9.33	11.99	11.94	14.92	14.93	28.52	27.49	52.09	7.35	9.34
500	6.73	10.77	-	10.37	13.33	13.27	16.58	16.59	31.70	30.53	57.86	8.17	10.38

Note: The optical performance of the image is the best when the image size is below 300 inch. Under certain circumstances, the image quality may not be ideal when the image size is over 300 inch.

ADDITIONAL INFORMATION

Projection distance

The distance between the projector and its screen determines the approximate size of the image. The farther the projector is from the screen, the larger the image will be projected. But the image size also varies depending on the aspect ratio, zoom and other settings.



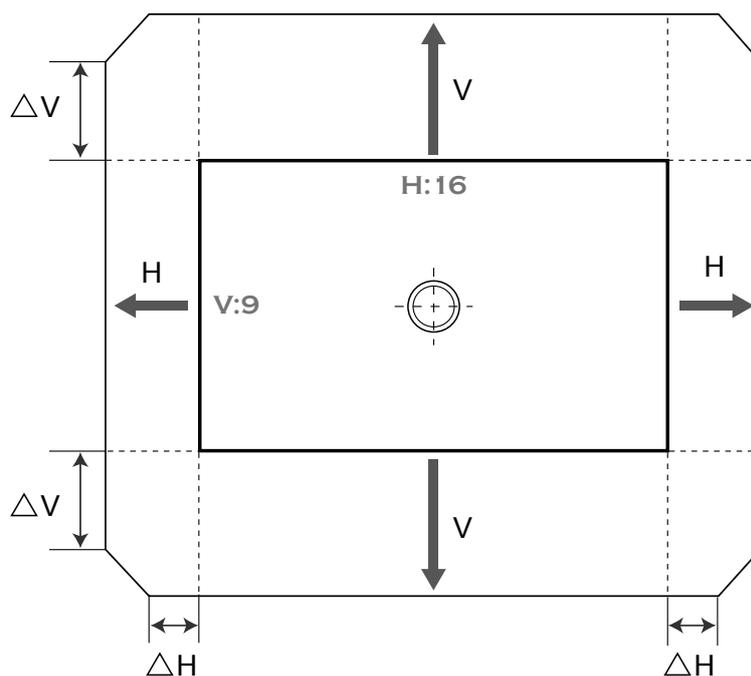
Powered lens shift range

Lens type	H	V	▲H	▲V
A01, A03, A13	15%	50%	15%	50%
A06	15%	50%	10%	40%
A15	15%	50%	5%	25%

V: Height of the projected image

H: Width of the projected image

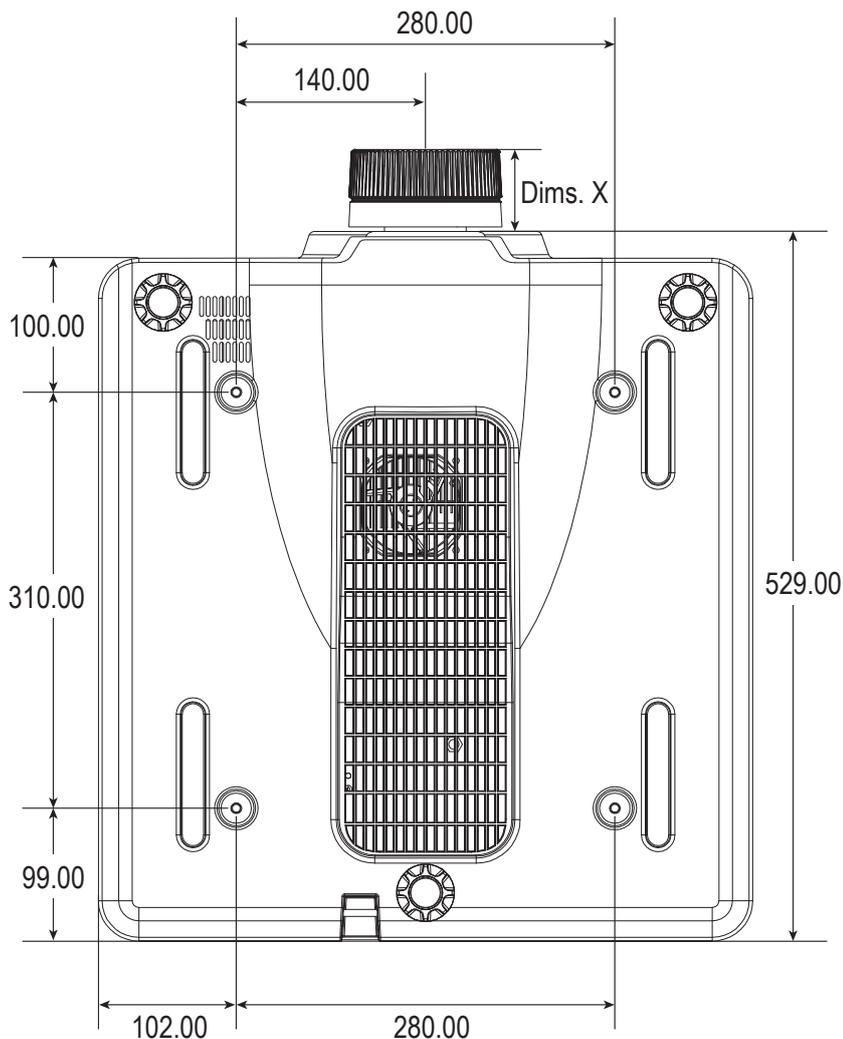
□ Projected image



ADDITIONAL INFORMATION

Projector dimensions and 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: M6 x 4
 - Minimum screw length: 10mm



Dimensions given in millimeters



Warning:

- If you buy a ceiling mount from another company, please be sure to use the correct screw size. Screw size will vary depending on the thickness of the mounting plate.
- Be sure to keep at least 10mm (1cm) gap between the ceiling and the bottom of the projector.
- Avoid installing the projector near a heat source.
- 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 (🟢)	1	F1	32	CD	02	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	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".
Mode	14	F1	32	CD	05	FA	Press to select the preset display mode.
Auto	15	F1	32	CD	04	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.
Gamma	24	F1	32	CD	2B	D4	Press to adjust mid-range levels..
Bright	25	F1	32	CD	28	D7	Press to adjust amount of light in the image.
Cont.	26	F1	32	CD	29	D6	Press to adjust difference between dark and light.
PIP	27	F1	32	CD	43	BC	Press to turn on/off the PIP/PBP function.
Lens H◀	28	F1	32	CD	41	BE	Press to adjust the position of the image horizontally.
Lens H▶	29	F1	32	CD	42	BD	
Focus ▲	30	F1	32	CD	86	79	Press to adjust focus to improve image clarity as desired.
Lens V ▲	31	F1	32	CD	34	CB	Press to adjust the position of the image vertically.
Lens V ▼	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 vertical keystone.
Keystone ◻	35	F1	32	CD	51	AE	Press to adjust the vertical 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 horizontal keystone.
Keystone ◻	38	F1	32	CD	54	AB	Press to adjust the horizontal 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.
Hot Key	41	F1	32	CD	57	A8	Press to select your preset keys quickly.
Pattern	42	F1	32	CD	58	A7	Press to display a test pattern.

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 50).
- ❓ *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 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.
 - From the OSD menu, select **Display > Geometric Correction > V. Keystone** or **H. Keystone** to adjust the screen shape.
- ❓ *Image is reversed*
 - From the OSD menu, select **Setup > Projection > 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 the operating angle of the remote control is pointed within $\pm 30^\circ$ (horizontally or vertically) to the IR receivers on the projector.
 - Make sure there are not any obstructions between the remote control and the projector. Move to within 10 m (32.8 ft) of the projector.
 - Make sure batteries are inserted correctly.
 - Replace batteries if they are exhausted.

ADDITIONAL INFORMATION

LED status indicators

The LED status indicators are located on the rear of the projector. Each LED is defined below.

Message	Light			Status			AV Mute	
	Green	Orange	Red	Green	Orange	Red	Green	Orange
Standby State								
Power on (Warm up)					Flashing			
Power on & Laser diode on	Steady			Steady			Steady	
Power off (Cooling down)					Flashing			
AV mute is off (Image is displayed)	Steady			Steady			Steady	
AV mute is on (Image is black)	Steady			Steady				Steady
Projector communication	Steady			Flashing			Steady	
Firmware upgrade				Flashing	Flashing			
Laser diode time has expired		Steady						
Unit loses over 60% initial luminance			Flashing					
Error (Over temperature)						Steady		
Error (Fan failure)						Flashing		

Note: Power key of the keypad is in steady red light when the projector enters standby mode.

ADDITIONAL INFORMATION

Specifications

Optical	Description
Resolution	Native Resolution: WUXGA (1920x1200) Supported Resolution: Up to WUXGA@60Hz (Reduced Blanking)
Lens	Power Zoom/Focus and full lens shift
Image size (diagonal)	50~500"
Projection distance	Please refer to "Image size and projection distance" table on page 50.

Electrical	Description
Inputs	2 x HDMI In (version 2.0) (with locking screw) 1 x DVI-D (only support digital signal) 1 x VGA In (D-Sub 15pin) (Computer In or Component) 1 x HDBaseT 1 x 3D SYNC In 1 x 3G SDI
Outputs	1 x VGA Out (Support VGA loops through to monitor) (Monitor Out) 1 x DC12V out 1 x 3D SYNC Out
Control port	1 x RS232 (D-sub 9 pin) (PC Control) 1 x Wired In (3.5mm phone jack) (Remote In) 1 x RJ-45 (LAN) 1 x USB type A (only for USB power out)
Power requirement	100-240 VAC, 50/60 Hz, 7 A

Mechanical	Description
Installation orientation	360° rotation, no restrictions
Dimensions	484 (W) x 529 (D) x 195 (H) mm (w/o lens, w/o elevators)
Weight	N.W. 17.6 kg (without lens); 18.1 kg (with standard lens) G.W. 22.6 kg (with package, without lens)
Environmental conditions	Operating: 5~40°C; 10~85%RH, non-condensing Storage: -10~60°C; 5~90%RH, non-condensing

Note: All specifications are subject to change without notice.

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