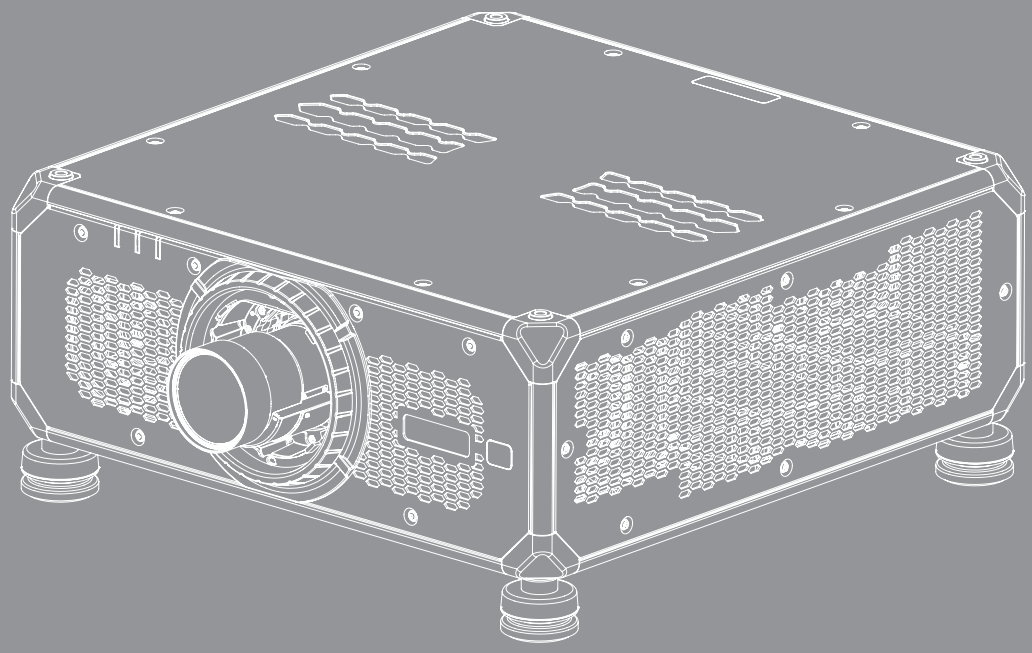
DLP® Projector



User manual

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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 manual.

Important safety instructions

- Do not block any ventilation openings. To ensure reliable operation of the projector and to protect from overheating, it is recommended to install the projector in a location that does not block ventilation. As an example, do not place the projector on a crowded surface. Do not put the projector in an enclosure such as a book case or a cabinet that restricts air flow.
- To reduce the risk of fire and/or electric shock, do not expose the projector to rain or moisture. Do not install near heat sources such as radiators, heaters, stoves or any other apparatus such as amplifiers that emits heat.
- Do not let objects or liquids enter the projector. They may touch dangerous voltage points and short out parts that could result in fire or electric shock.
- Do not use under the following conditions:
  - In extremely hot, cold or humid environments.
    (i) Ensure that the ambient room temperature is within 0°C~50ºC (32°F~122ºF)
    (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 it to melt, burn 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 straight into the projector lens during operation. The bright light may harm your eyes.
- 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 the AC outlet if the product will not be used for a long period of time.
- Do not setup the projector in places where it might be subjected to vibration or shock.
- Do not touch the lens with bare hands.
- 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.
- Warning: Do not remove the earthing pin on the mains plugs. This apparatus is equipped with a three prong earthing type mains plug. This plug will only fit an earthing-type mains socket. This is a safety feature. If you are unable to insert the plug into the mains socket, contact an electrician.
- Caution: This equipment is equipped with a three-pin grounding-type power plug. Do not remove the grounding pin on the power plug. This plug will only fit a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician.

Light Intensity Hazard Distance

This product is classified as CLASS 1 LASER PRODUCT - RISK GROUP 2 of IEC 60825-1 : 2014 and also complies with 21 CFR 1040.10 and 1040.11 except for conformance as a Risk Group 2 LIP as defined in IEC 62471-5:Ed. 1.0. For more information, see Laser Notice No. 57, dated May 8, 2019.

When set up with A22, A23 and A27 lens (throw ratio greater than 2.0), this projector may become Class 1 Laser Product-Risk Group 3 (RG3); with other lens (throw ratio less than 2.0), this projector may become Class 1 Laser Product-Risk Group 2 (RG2) according to IEC 60825-1:2014 and IEC 62471-5: 2015, and also make a variance approvals under 21 CFR 1010.4 for RG3 LIP according to Classification and Requirements for Laser Illuminated Projectors (LIPs) (Laser Notice No. 57).

Projection Lens	Throw Ratio	Classification and Requirements for Laser Illuminated Projectors (LIPs)	
• A11	• 0.65-0.75	• HD: N/A	• IEC 62471-5: 2015 • IEC 60825-1: 2014 • CLASS 1 LASER PRODUCT RISK GROUP 2
• A18	• 0.84-1.02		
• A19	• 1.02-1.36		
• A20	• 1.2-1.5		
• A21	• 1.5-2.0		

Projection Lens	Throw Ratio	Classification and Requirements for Laser Illuminated Projectors (LIPs)	
• A22	• 2.0-4.0	• HD:1.165 meters	• IEC 62471-5: 2015 • IEC 60825-1: 2014 • CLASS 1 LASER PRODUCT RISK GROUP 3
• A23	• 4.0-7.2	• HD:4.12 meters	
• A27	• 7.2-10.8	• HD:6.4 meters	

Laser radiation safety information

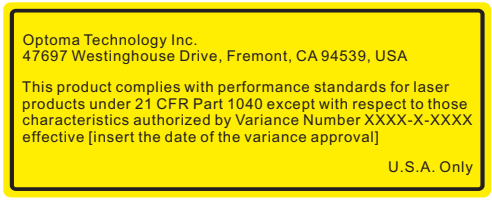
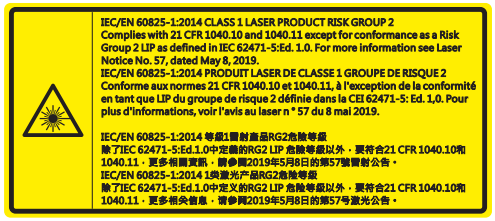
To ensure safe operation, read all laser safety precautions before installing and operating the projector.

- This projector is class 1 laser product of IEC/EN 60825-1:2014 and risk group 2 with the requirements of IEC 62471-5:2015.
- This projector uses extremely high brightness laser. Do not stare directly into the light beam, as the extremely high brightness may cause permanent eye damage. (Risk Group 2 of IEC 62471-5:2015).
- No direct exposure to the beam shall be permitted. (Risk Group 3 of IEC 62471-5:2015).
- This product is not for household use.
- 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 to laser radiation.
- The instructions for the assembly, operation, and maintenance include clear warnings to avoid possible exposure to hazardous laser radiation.
- We recommend you install this projector above the reach of children.
- Notice is given to supervise children and to never allow them to stare into the projector beam at any distance from the projector.
- Notice is given to use caution when using the remote control for starting the projector while in front of the projection lens.
- Notice is given to the user to avoid the use of optical aids such as binoculars or telescopes inside the beam.

Product safety labels

Light beam related safety labels

Label image	Label description
	"WARNING: MOUNT ABOVE THE REACH AND SIGHT OF CHILDREN." The use of a ceiling mount is recommended with this product to place it above the eye level of children. Additional warning against eye exposure for close exposures less than 1 m.
	FDA laser variance (US projectors only)
	This product is classified as Class 1 Laser Product-Risk Group 2 of IEC 60825-1:2014 and also complies with 21 CFR 1040.10 and 1040.11 as a Risk Group 2, LIP (Laser Illuminated Projector) as defined in IEC 62471-5:Ed.1.0. For more information, see Laser Notice No. 57, dated May 8, 2019.
	This projector may become Risk Group 3 product when an interchangeable lens with throw ratio greater than 2.0 is installed. Refer to the manual for the lens list and hazard distance before operation. Such combinations of projector and lens are intended for professional use only, and are not intended for consumer use. Not for household use. No direct exposure to beam shall be permitted, which can cause injury to the retina in the back of the eye. As with any bright light source, do not stare into the beam, RG2 IEC 62471-5:2015

Copyright

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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 numerique de la classe A est conforme a 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

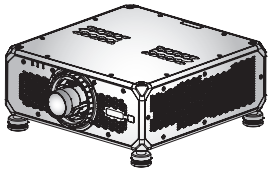
Do not throw this electronic device into the trash when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle it.

INTRODUCTION

Package overview

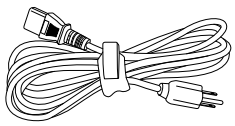
Carefully unpack and verify that the projector comes with all the standard accessories shown below. Some accessories may not be available depending on the projector model, specification and your region of purchase. The warranty card is only supplied in specific regions. Please check with your place of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

Standard accessories



Projector

Remote control(*)



Power lead
(Connectors C19)

☑ Quick Start User Manual
☑ Warranty Card(**)

Documentation

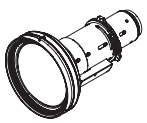
Note:

- *(*)The remote control requires two AAA batteries. See Installing/replacing the batteries on page 26 for more information.*
- *(**) For European warranty Information, please visit www.optoma.com.*

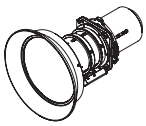
Please scan the OPAM warranty QR code or visit the following URL: https://www.optoma.com/us/support/warranty-and-return-policy/

Please scan the QR code or visit the following URL: https://www.optoma.com/support/download

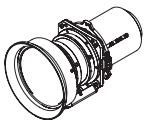
Optional accessories



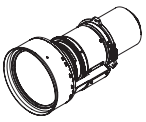
Optional lens A11
(0.65-0.75)



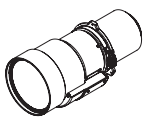
Optional lens A18
(0.84-1.02)



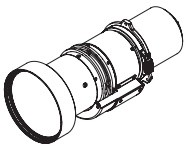
Optional lens A19
(1.02-1.36)



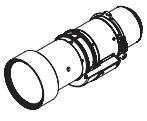
Optional lens A20
(1.20-1.50)



Optional lens A21
(1.50-2.00)



Optional lens A22
(2.00-4.00)



Optional lens A23
(4.00-7.20)

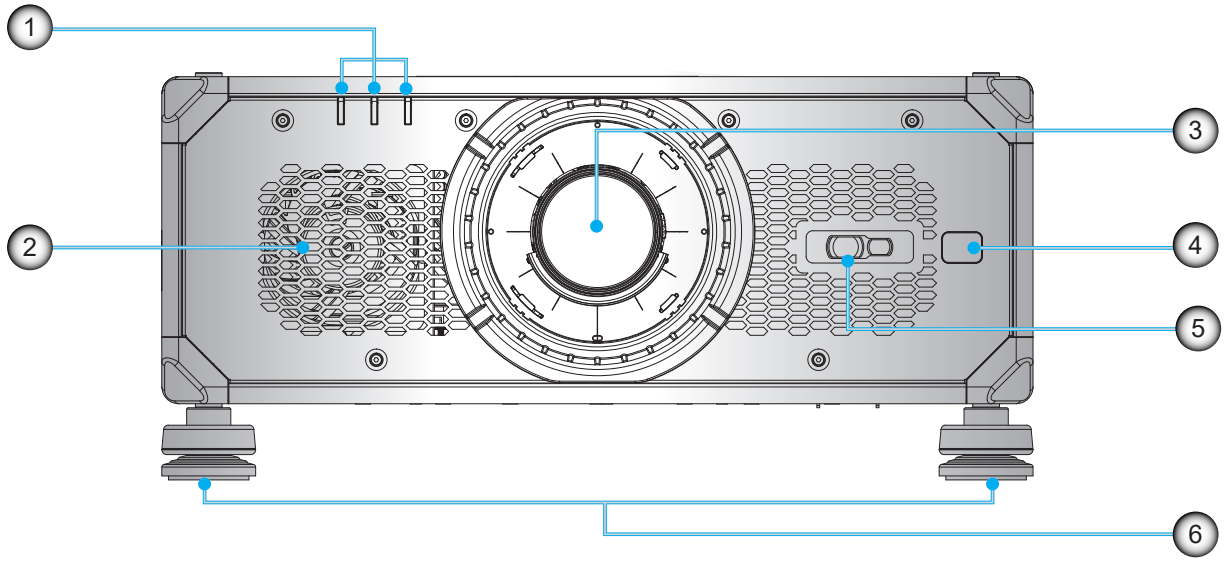
Optional lens A27
(7.2-10.8)

Note: *The accessories may vary depending on model, specification and region.*

INTRODUCTION

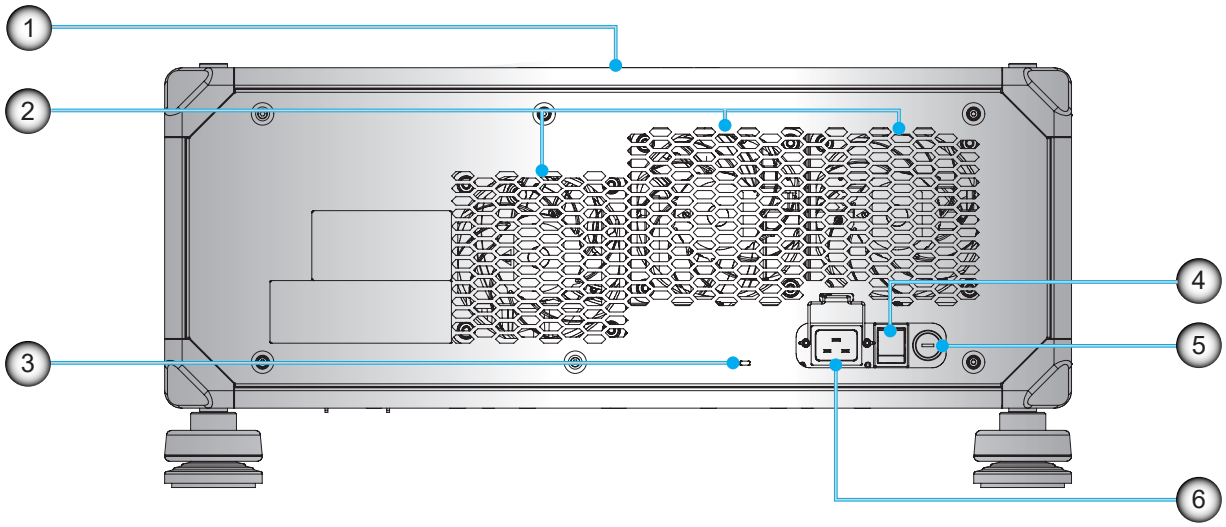
Product overview

Front view



No	Item	No	Item
1.	Status LED	4.	Front IR sensor
2.	Cooling air vents (intake)	5.	Camera window
3.	Projection lens	6.	Adjustment feet

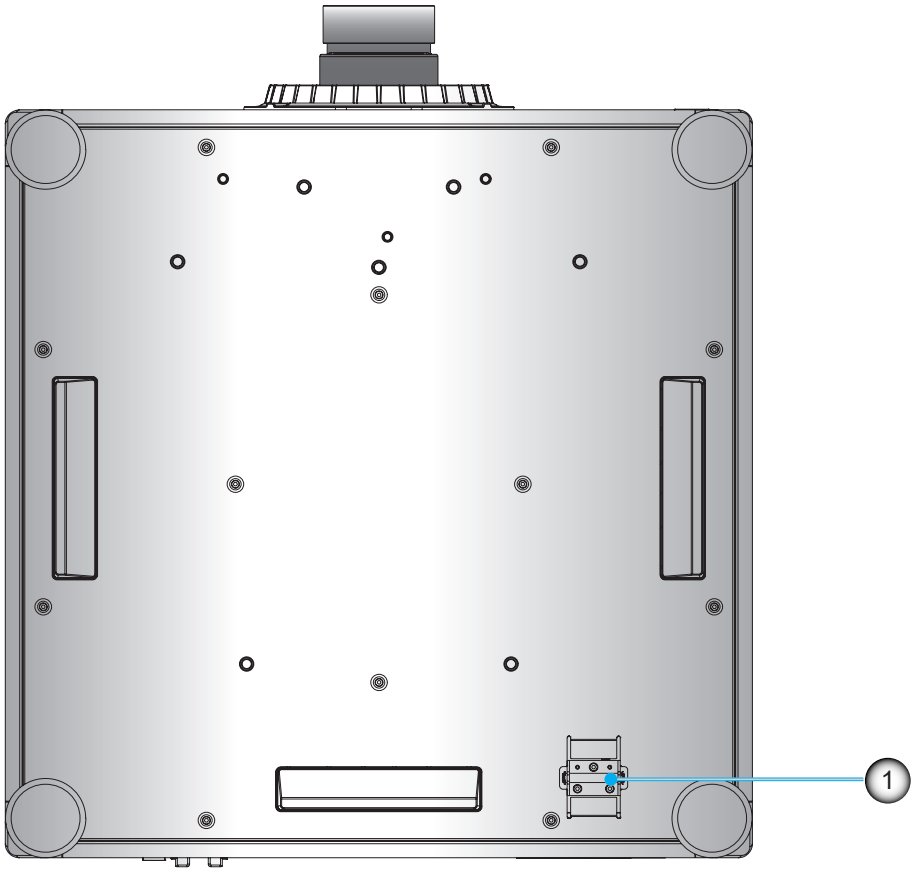
Rear view



No	Item	No	Item
1.	Top IR sensor	4.	Power switch
2.	Cooling air vents (exhaust)	5.	Fuse
3.	Kensington lock	6.	AC input (C20 inlets)

INTRODUCTION

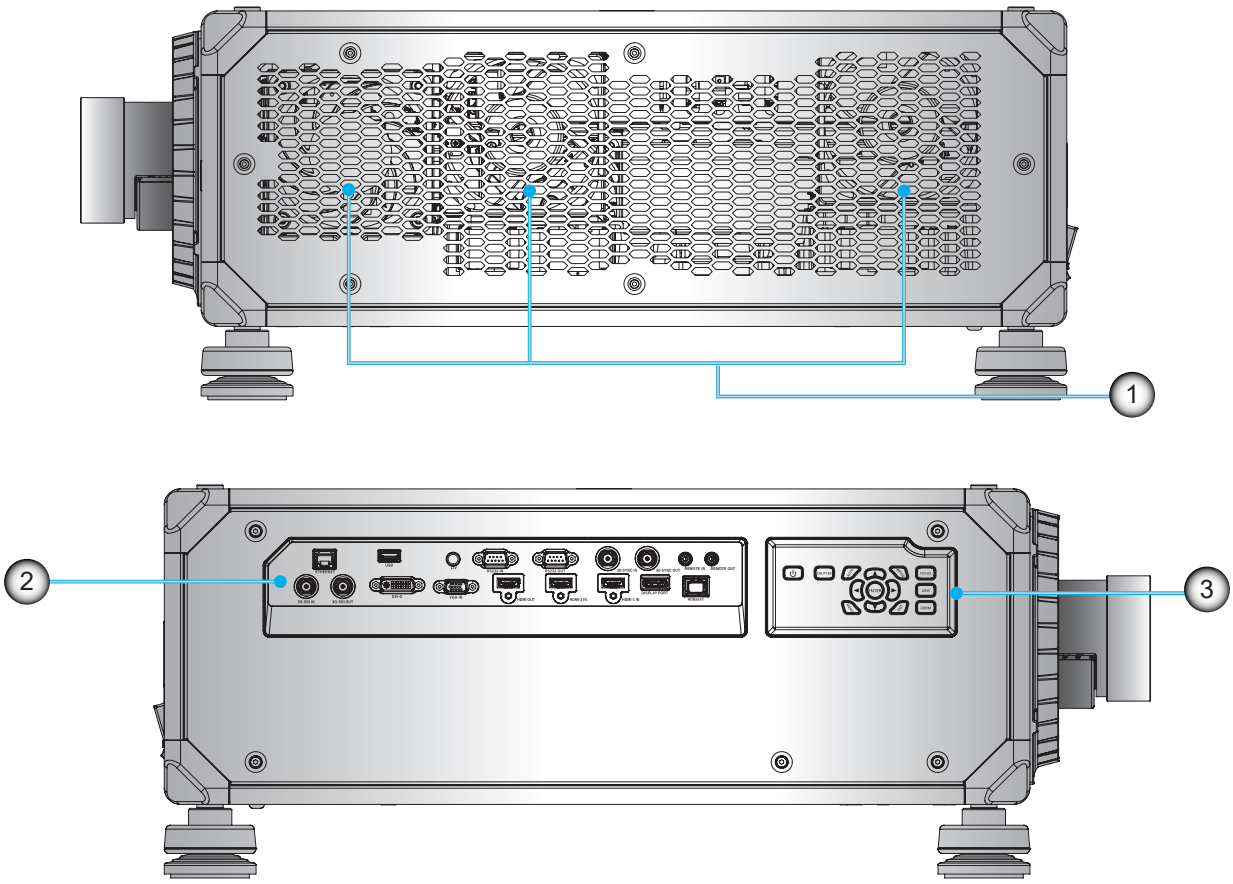
Bottom view



No	Item
1.	Security bar

INTRODUCTION

Side view



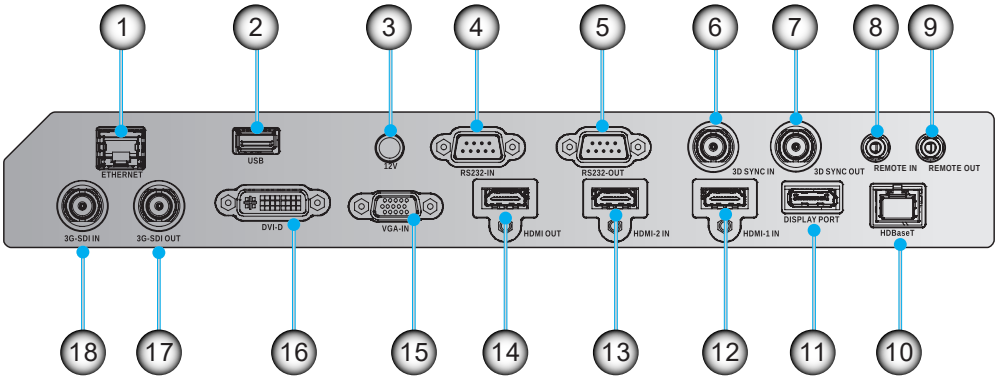
No	Item	No	Item
1.	Cooling air vents (intake)	3.	Built-in keypad
2.	Input/Output (I/O) panel		

Note: *Do not block projector intake or outlet air vents.*

INTRODUCTION

Connections

Side I/O panel

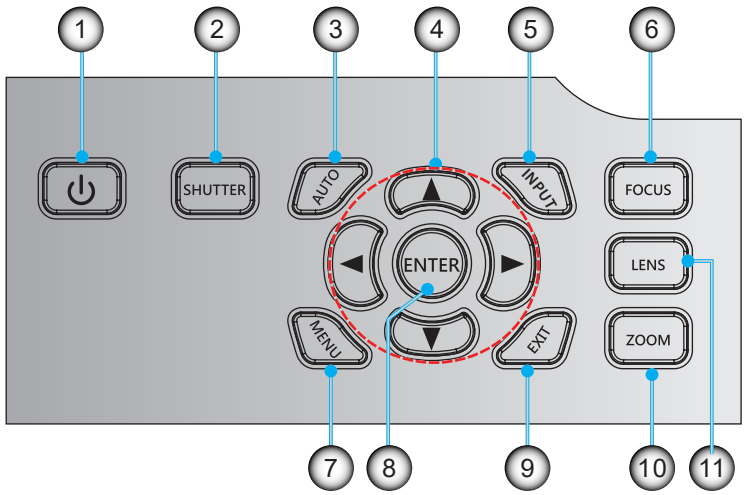


No	Item	No	Item
1.	ETHERNET	10.	HDBaseT
2.	USB	11.	DISPLAYPORT
3.	12V	12.	HDMI-1 IN
4.	RS232-IN	13.	HDMI-2 IN
5.	RS232-OUT	14.	HDMI OUT
6.	3D SYNC IN	15.	VGA-IN
7.	3D SYNC OUT	16.	DVI-D
8.	REMOTE IN	17.	3G-SDI OUT
9	REMOTE OUT	18.	3G-SDI IN

Note: *The USB port is for power (5V; 0.5A) delivery only.*

INTRODUCTION

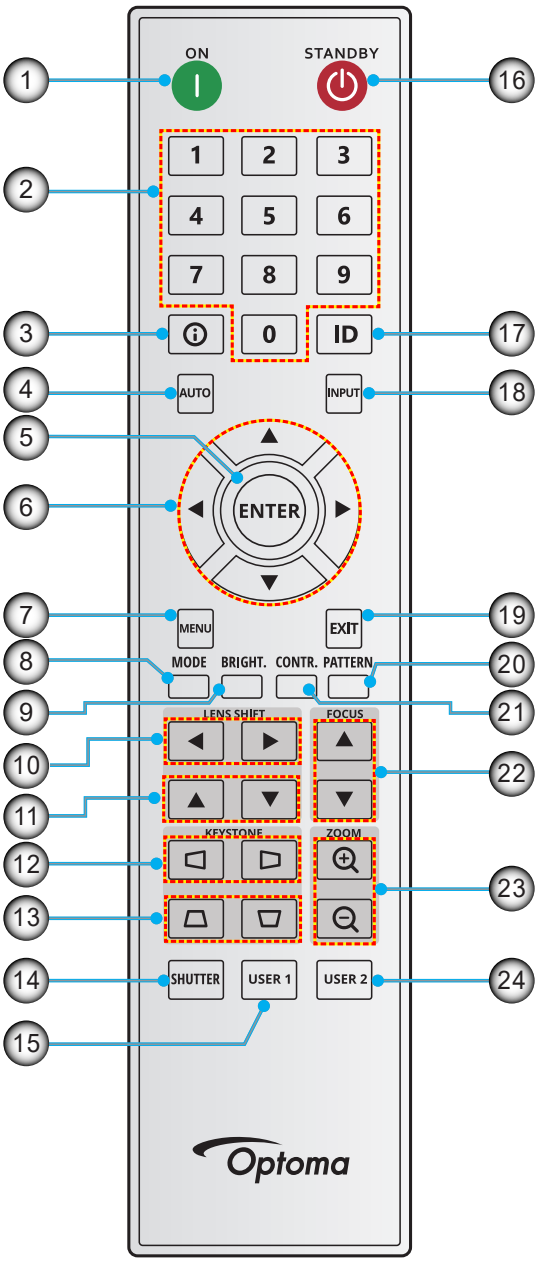
Keypad



No	Item	No	Item
1.	Power key	7.	MENU
2.	SHUTTER	8.	ENTER
3.	AUTO	9.	EXIT
4.	Arrow keys	10.	ZOOM
5.	INPUT	11.	LENS
6.	FOCUS		

INTRODUCTION

Remote control



No	Item	No	Item	No	Item
1.	Power On	9.	Bright. (brightness)	17.	ID
2.	Number Keys	10.	Left Shift (horizontal)	18.	Input
3.	Info	11.	Left Shift (vertical)	19.	Exit
4.	Auto	12.	Keystone (horizontal)	20.	Pattern
5.	Enter	13.	Keystone (vertical)	21.	Contr. (Contrast)
6.	Arrow Keys	14.	Shutter	22.	Focus
7.	Menu	15.	User 1	23.	Zoom In/Zoom Out
8.	Mode	16.	Standby	24.	User 2

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 installing or replacing the lens, switch off the power to the projector.

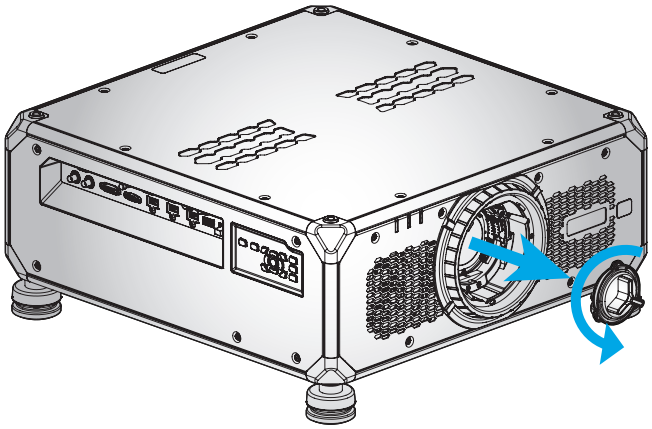
Avoid using the remote control or projector keypad button to adjust the lens shift or zoom/focus while the lens attachment process is carried out.

IMPORTANT!

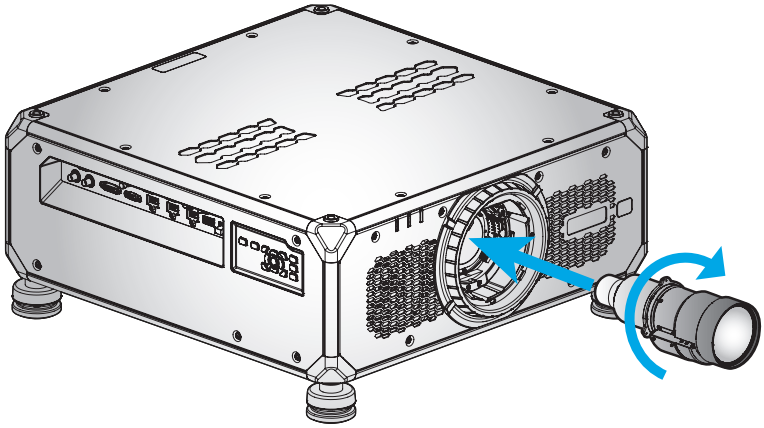
- *Before installing or replacing the lens, make sure the projector's power switch is turned off.*
- *During lens installation, do not adjust the lens shift, zoom, or focus either using the remote control or the projector keypad.*
- *To prevent damage to the lens and avoid personal injury, do not clean 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 and then remove it from the projector.



2. Insert the lens to the projector. Then rotate the lens clockwise to lock the lens in place.

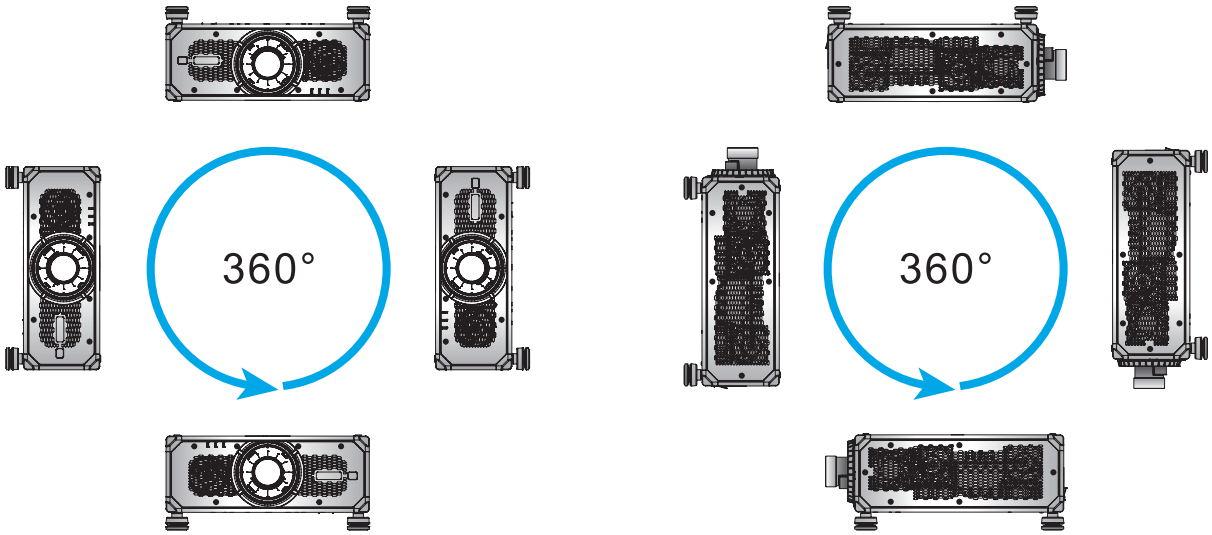


SETUP AND INSTALLATION

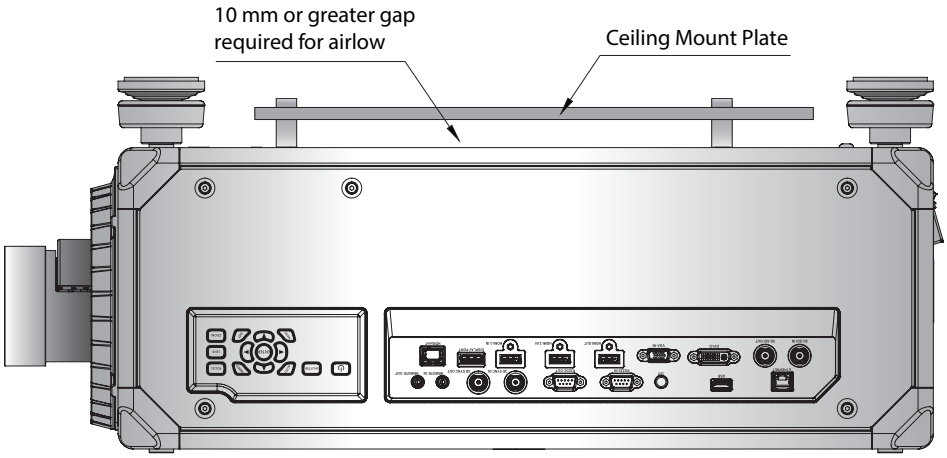
Adjusting the projector position

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.
- 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

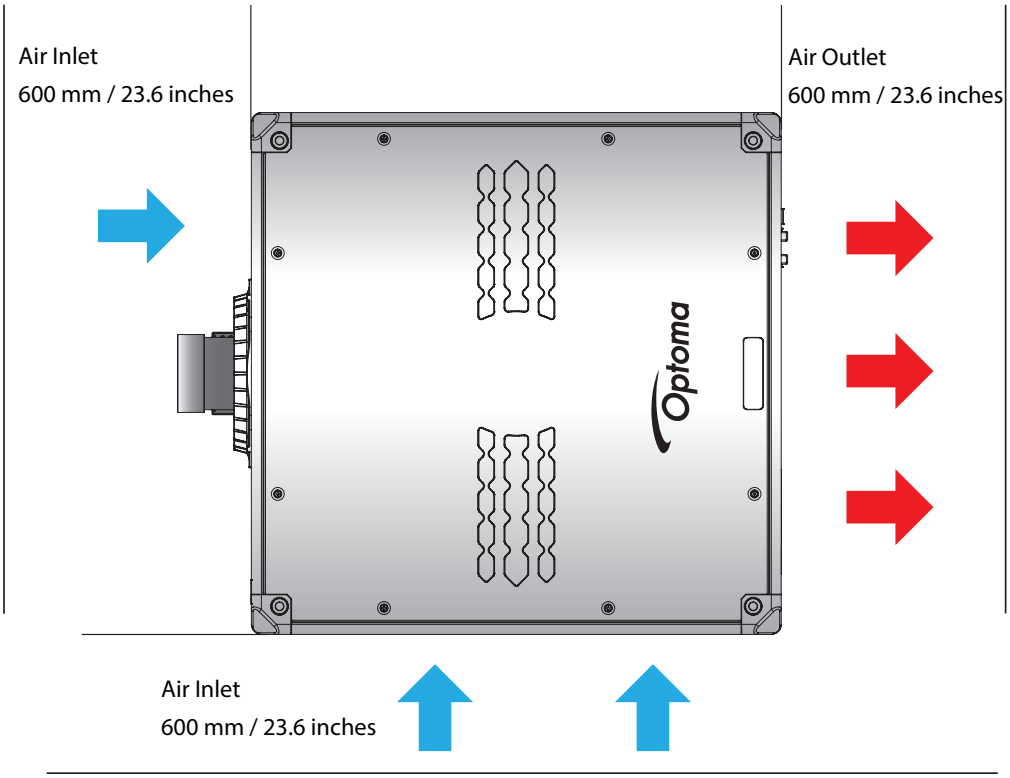


- For ceiling mount installations, make sure to leave 10 mm (0.4”) between the ceiling mount and the bottom intake vents of the projector.



SETUP AND INSTALLATION

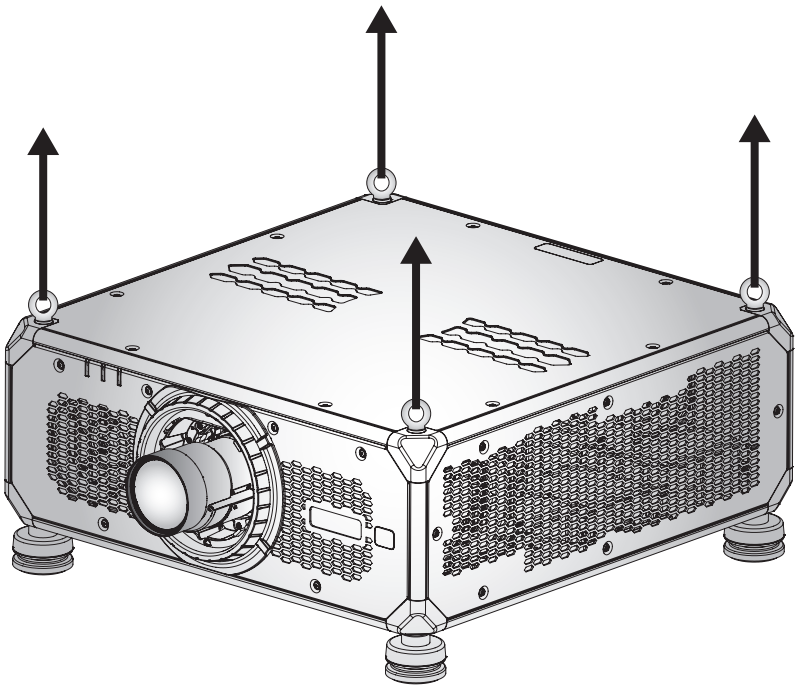
- Allowing proper space around the projector is critical for air circulation and cooling. For 360° installations and multiple projectors, make sure to leave at least 600mm (23.6”) space around the air intakes and outlet of the projector.



Hanging application

For hanging application, attach four eyebolts to the designated locations on the projector as shown below. Then use the adjustable wires to hang the projector on the ceiling. For more information on hanging application, please contact the vendor. Screw type: M10*P1.5*L20mm x 4.

IMPORTANT! *To avoid damage to the projector, use one hanging application to hang a single projector only.*



SETUP AND INSTALLATION

Boresight adjustment

Only apply a boresight adjustment in case the overall focus of the projected image is not equally sharp. The boresight adjustment helps to balance the tilt of the lens mount to sharpen the unfocused sections of the image. It tilts the lens holder to parallel the lens plane and the DMD plane.

Note: *This boresight adjustment process may cause the other areas of the image to slide out of focus. This is totally normal.*

Required tool

The following tools are required for boresight adjustment:

- Allen key, hex 4mm

For A11/A18/A27 lens, the following tools are required:

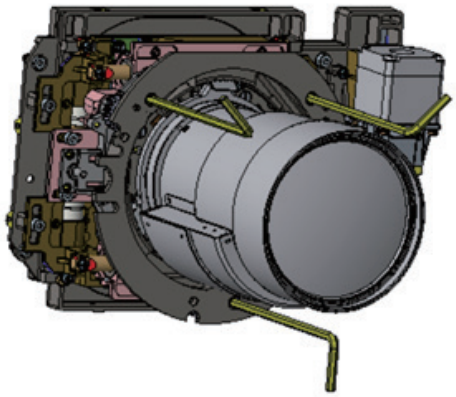
- Boresight extender with red rubber ring
- L-shape socket tool

Setting the projector start mode

1. Choose the test pattern of the OSD. Switch to full screen mode.
2. Prepare the test area. Verify that the throw ratio of the installed lens matches the requirements of the installation area (projection distance and screen size).
3. Check that the lens is correctly installed.

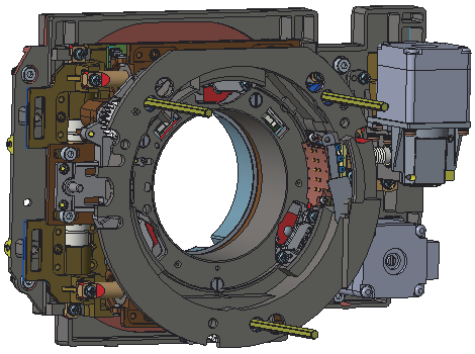
Performing the boresight adjustment

Use the Allen key screwdriver to clockwise or counter-clockwise adjust the three boresight screws.



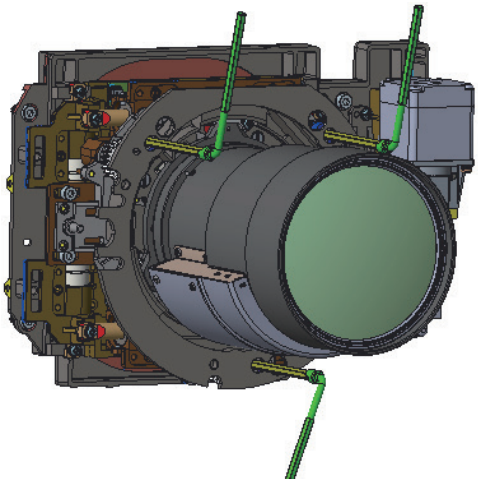
For A11/A18/A27 lens

The boresight extenders must be installed before installing the A11/A27/A18 lens.



SETUP AND INSTALLATION

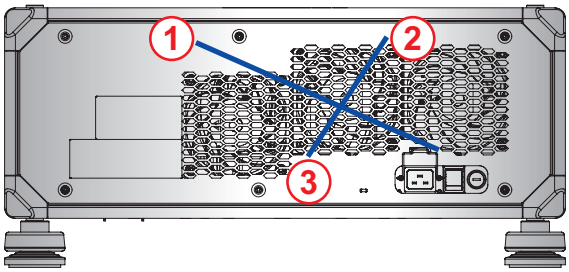
1. Use the L-shape screwdriver to adjust the three boresight screws.

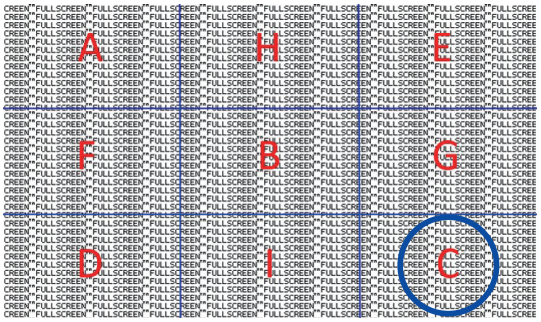


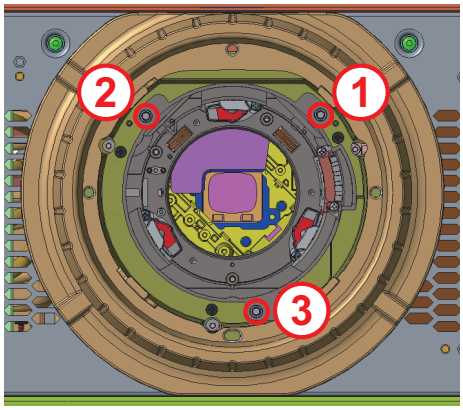
2. Zoom the lens to its widest opening.
3. Adjust the focus control to search for the best sharpness of the projected image.
4. Zone A/C boresight adjustment.

   If zone A is in focus on the screen, please check the focal plane of zone C.

   - If clear position is just on the screen then no need to adjust.
   - If clear position is out of the screen (Close to the projector), rotate screw (1) CCW and then screw (2) & (3) CW for half amount that (1) rotated. Then repeat until both A and C are clear. For example, turn (1) CCW in a circle, then turn (2) & (3) CW in half circle).
   - If clear position is in the screen (away from the projector), rotate screw (1) CW and then screw (2) & (3) CCW for half amount that (1) rotated. Then repeat until both A and C are clear.





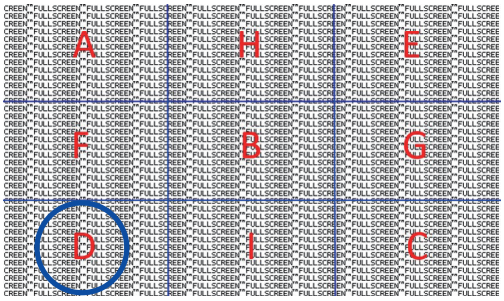


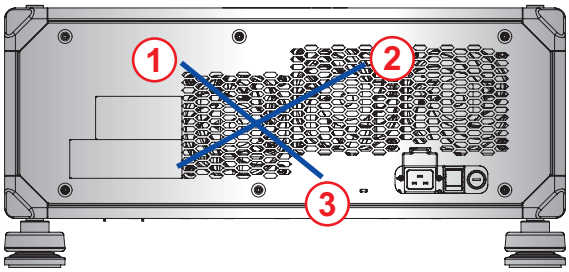
SETUP AND INSTALLATION

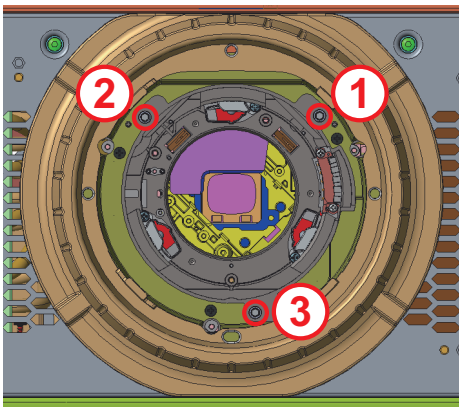
5. Zone D/E boresight adjustment.

   If zone E is in focus on the screen, please check the focal plane of zone D.

   - If clear position is just on the screen then no need to adjust.
   - If clear position is out of the screen (close to the projector), rotate screw (2) CCW and then screw (1) & (3) CW for half amount that (2) rotated. Then repeat until both D and E are clear. For example, turn (2) CCW in a circle, then turn (1) & (3) CW in half circle).
   - If clear position is in the screen (away from the projector), rotate screw (2) CW and then screw (1) & (3) CCW for half amount that (2) rotated. Then repeat until both D and E are clear.





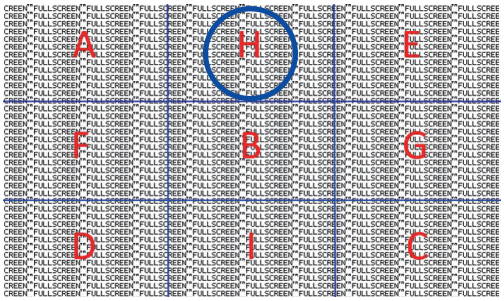


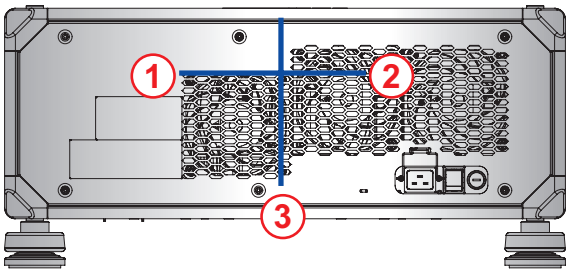
6. Zone H/I boresight adjustment.

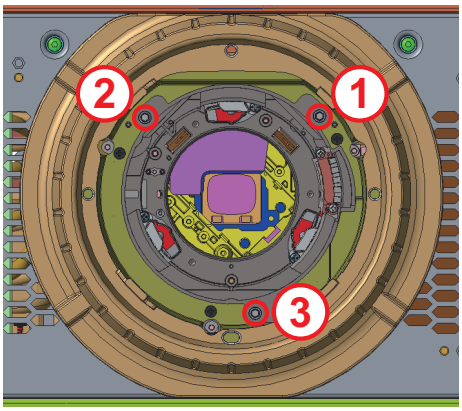
   If zone I is in focus on the screen, please check the focal plane of zone H.

   - If clear position is just on the screen then no need to adjust.
   - If clear position is out of the screen (close to the projector), rotate screw (3) CCW and then screw (1) & (2) CW for half amount that (3) rotated. Then repeat until both H and I are clear. For example, turn (3) CCW in a circle, then turn (1) & (2) CW in half circle).
   - If clear position is in the screen (away from the projector), rotate screw (3) CW and then screw (1) & (2) CCW for half amount that (3) rotated. Then repeat until both H and I are clear.

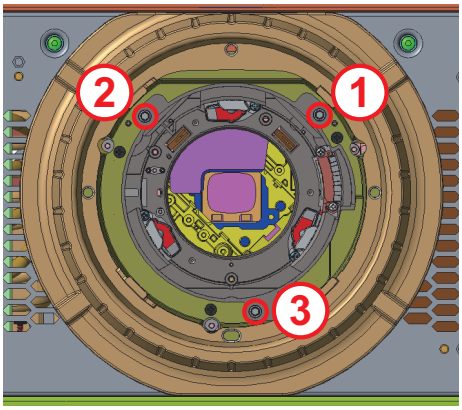
SETUP AND INSTALLATION







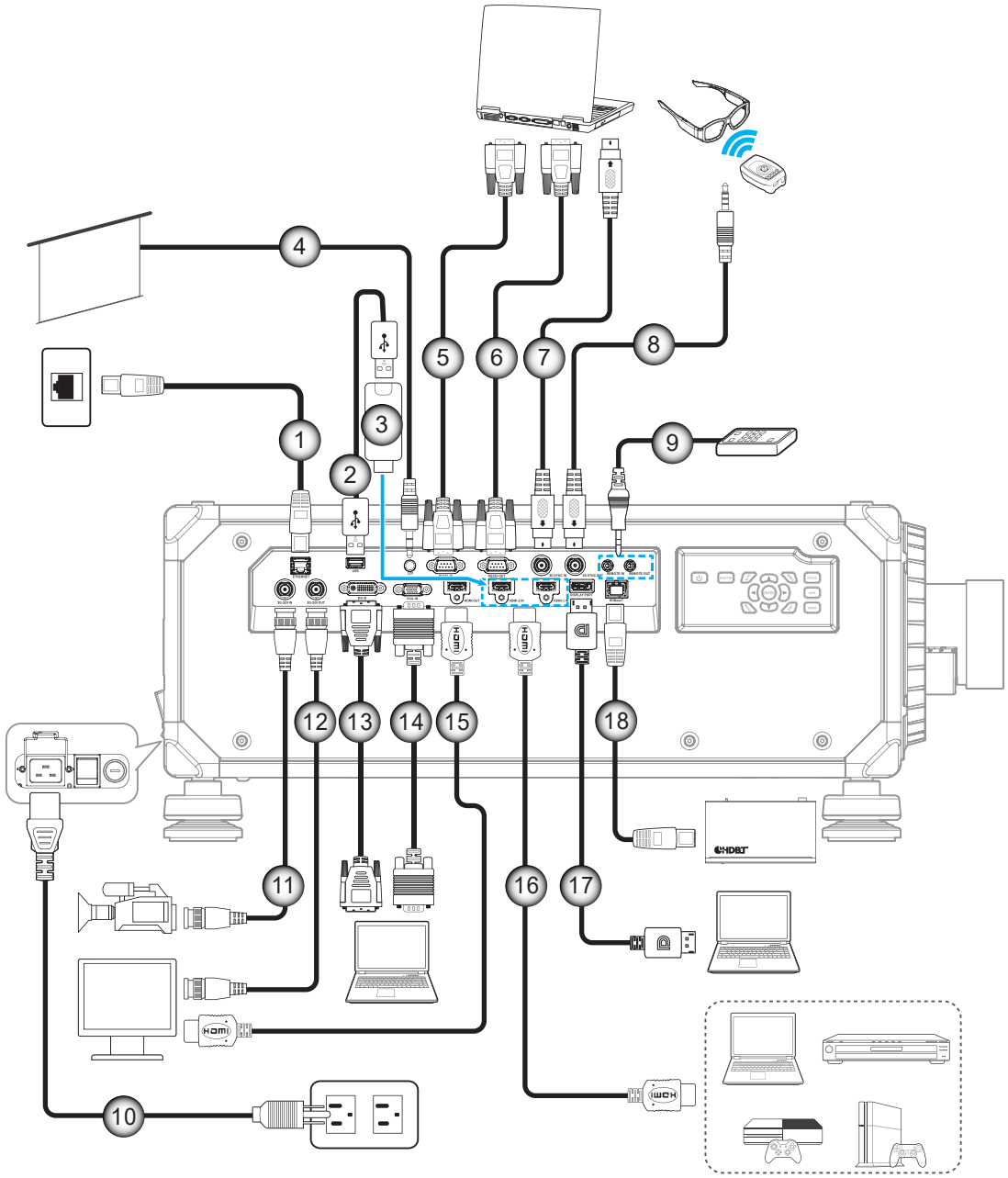
7. After the above adjustment of the viewing axis, the projected image from zone A to zone I still cannot achieve a clear focus on the screen. Please remove the PJ-lens then turn the boresight screws (1) to (3) counterclockwise to the end (STOP), and then turn clockwise 2 circles to the design value position.



8. Repeat steps 2 to 6 above to adjust.

SETUP AND INSTALLATION

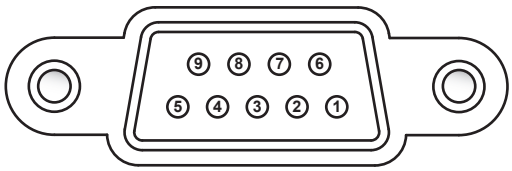
Connecting sources to the projector



No	Item	No	Item
1.	RJ-45 Cable	10.	Power Cord
2.	USB Power Cable	11.	3G-SDI Cable
3.	HDMI Dongle	12.	3G-SDI Cable
4.	12V Trigger Cable	13.	DVI-D Cable
5.	RS-232 Cable	14.	VGA Cable
6.	RS-232 Cable	15.	HDMI Cable
7.	3D Sync Cable	16.	HDMI Cable
8.	3D Emitter Cable	17.	DisplayPort Cable
9.	Wired Remote-In/Out Cable	18.	RJ-45 Cable

SETUP AND INSTALLATION

RS232 Pin assignments



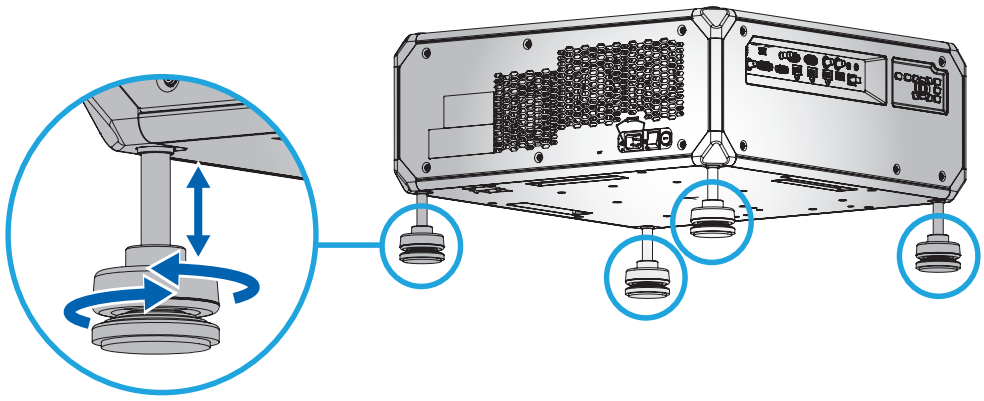
Pin No.	Signal	Pin No.	Signal
1	N/A	6	N/A
2	RXD	7	N/A
3	TXD	8	N/A
4	N/A	9	N/A
5	GND		

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.

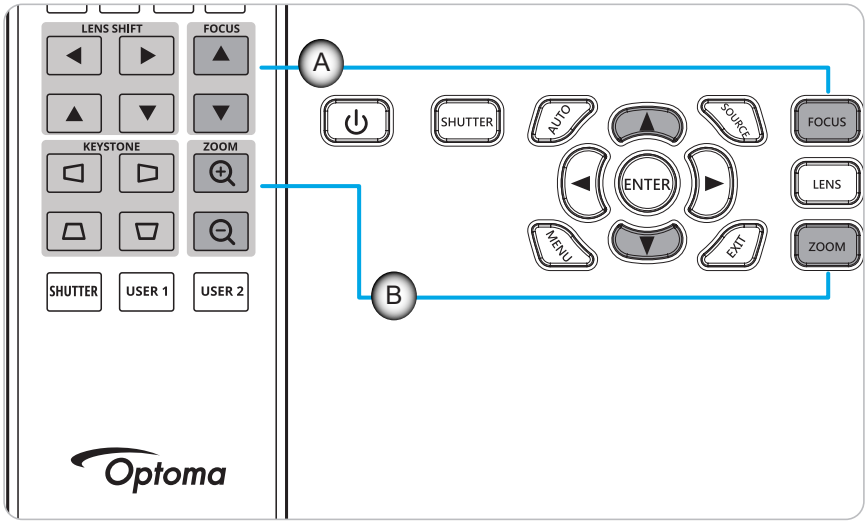


Note: *The adjustable feet can be raised up to 50mm, or may be removed for certain installations. Please ensure sufficient space around projector for proper air flow.*

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)



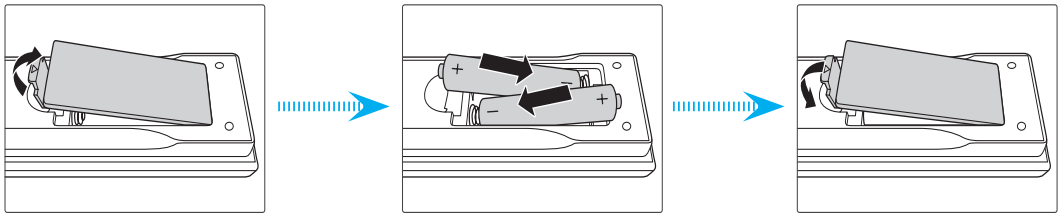
SETUP AND INSTALLATION

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 the 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 the **ID button** for 3 seconds, and press **0** then **1** within 2 seconds.	3201
02	Press the **ID button** for 3 seconds, and press **0** then **2** within 2 seconds.	3202
03	Press the **ID button** for 3 seconds, and press **0** then **3** within 2 seconds.	3203
...	...	...
10	Press the **ID button** for 3 seconds, and press **1** then **0** within 2 seconds.	3210
11	Press the **ID button** for 3 seconds, and press **1** then **1** within 2 seconds.	3211
...	...	...
98	Press the **ID button** for 3 seconds, and press **9** then **8** within 2 seconds.	3298
99	Press the **ID button** for 3 seconds, and press **9** then **9** within 2 seconds.	3299

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

For more information on setting the remote receivers on the projector, refer to *"Remote Setup" on page 68*.

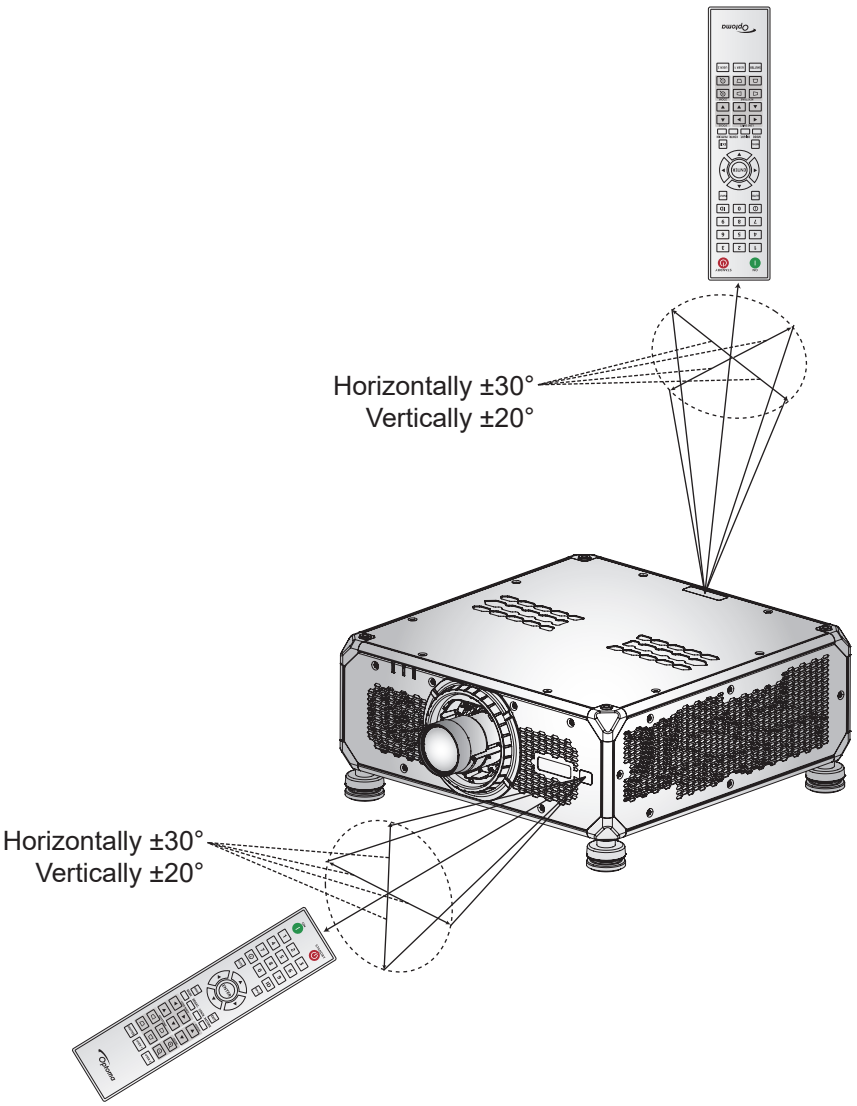
SETUP AND INSTALLATION

Effective range

The Infra-Red (IR) remote control sensors are located on the front and top sides of the projector. To have the remote control function correctly, be sure to hold the remote control at an angle of ±30° horizontally or angle of ±20° vertically within the distance of 20m (65.6 ft) or at an angle of 0° within the distance of 30m (98.4 ft) to the projector's IR remote control sensor.

- 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 obstructed by direct light from sunlight or fluorescent lamps.
- Keep the remote control away from fluorescent lamps for at least 2m or it may malfunction.
- If the remote control is near Inverter-Type fluorescent lamps, it may operate ineffectively at times.
- If the remote control and the projector are within a very short distance, it may operate ineffectively.
- When aiming at a screen, the effective distance is less than 5m from the remote control to the screen and reflects the IR beams back to the projector. However, the effective range may vary between screens.

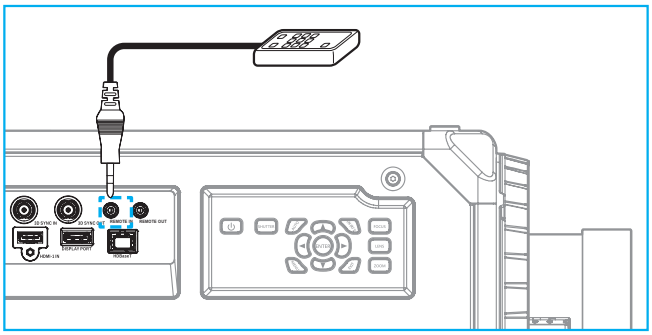
  IMPORTANT! *If you want to use the 3D IR emitter, refer to "IR Control setup when using the 3D IR emitter" on page 51.*



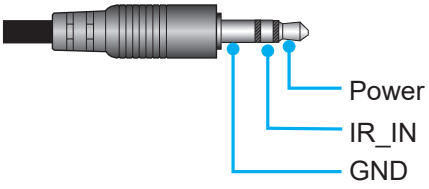
SETUP AND INSTALLATION

Wired remote

Remote In connector is designed to work with Wired Remote or IR Keypad with longer range and provides fast, easy set-up and reliable individual control of a specific projector. Remote Out connector sends the IR control signal to the next projector when using multiple projectors.



The connector type is 3.5mm Phone Jack connector:



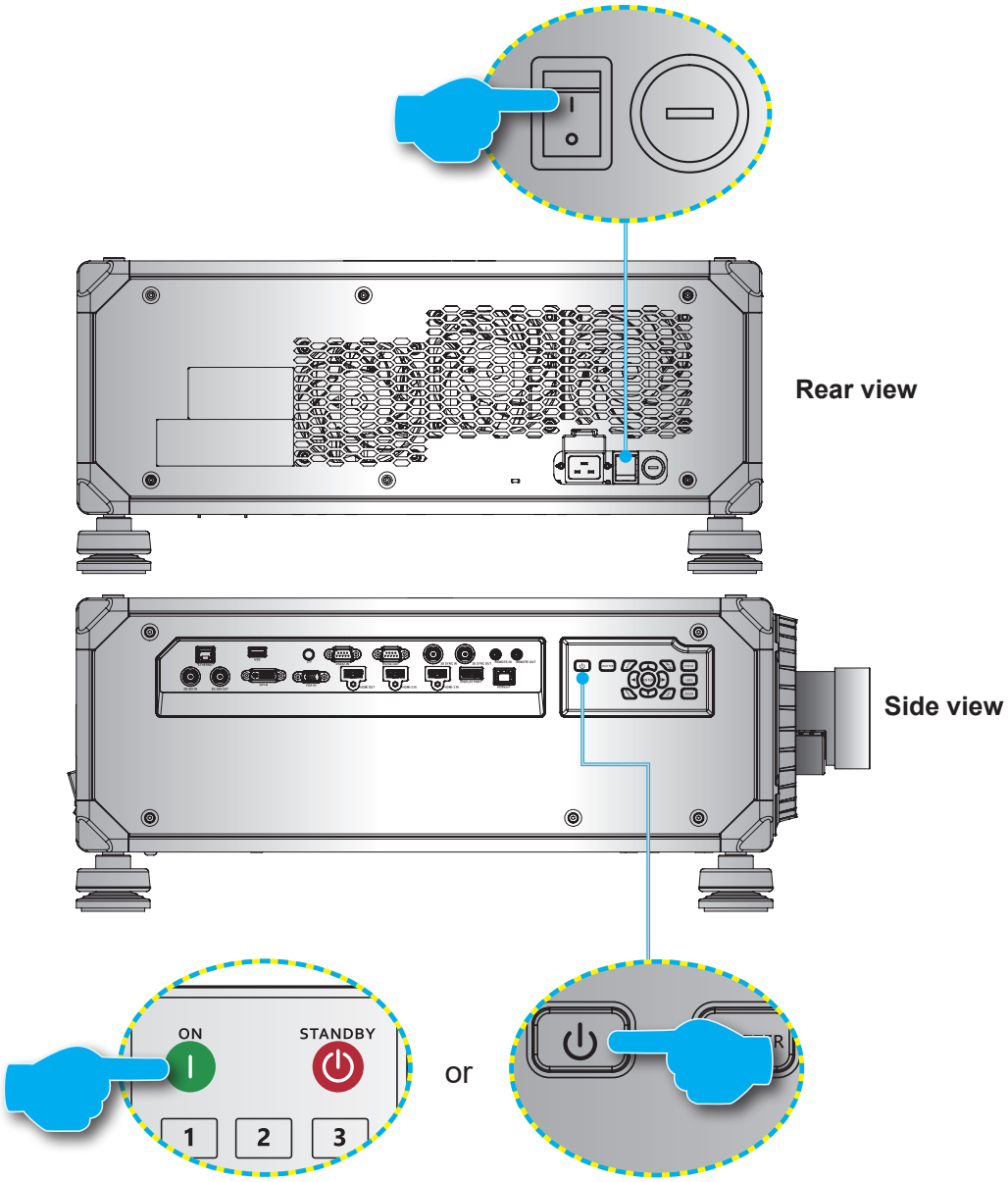
USING THE PROJECTOR

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.*

USING THE PROJECTOR

Powering off

1. Turn off the projector by pressing the power button "⏻" on the projector keypad or the **OFF** button "⏻" on the remote control.

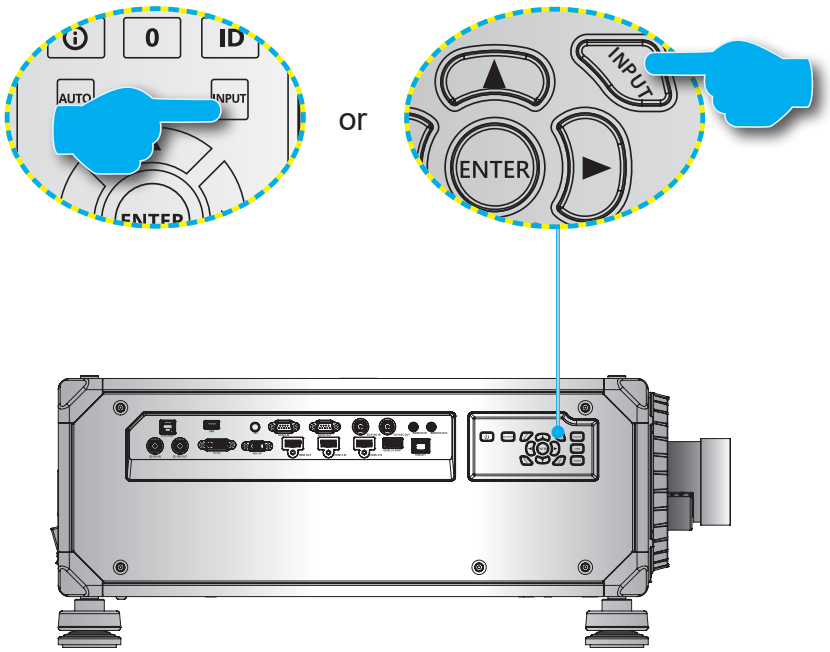
   A message will pop up to confirm that you want to turn off the projector.

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 "**o**" (OFF) position.
   The status LED turns from blinking orange to solid orange and the keypad also turns to solid orange.
4. Disconnect the power cord from both the projector and the electrical outlet.

Note: *It is not recommended to turn on the projector immediately after powering it off. Wait for 10 seconds until you power it on again.*

Selecting an input source

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

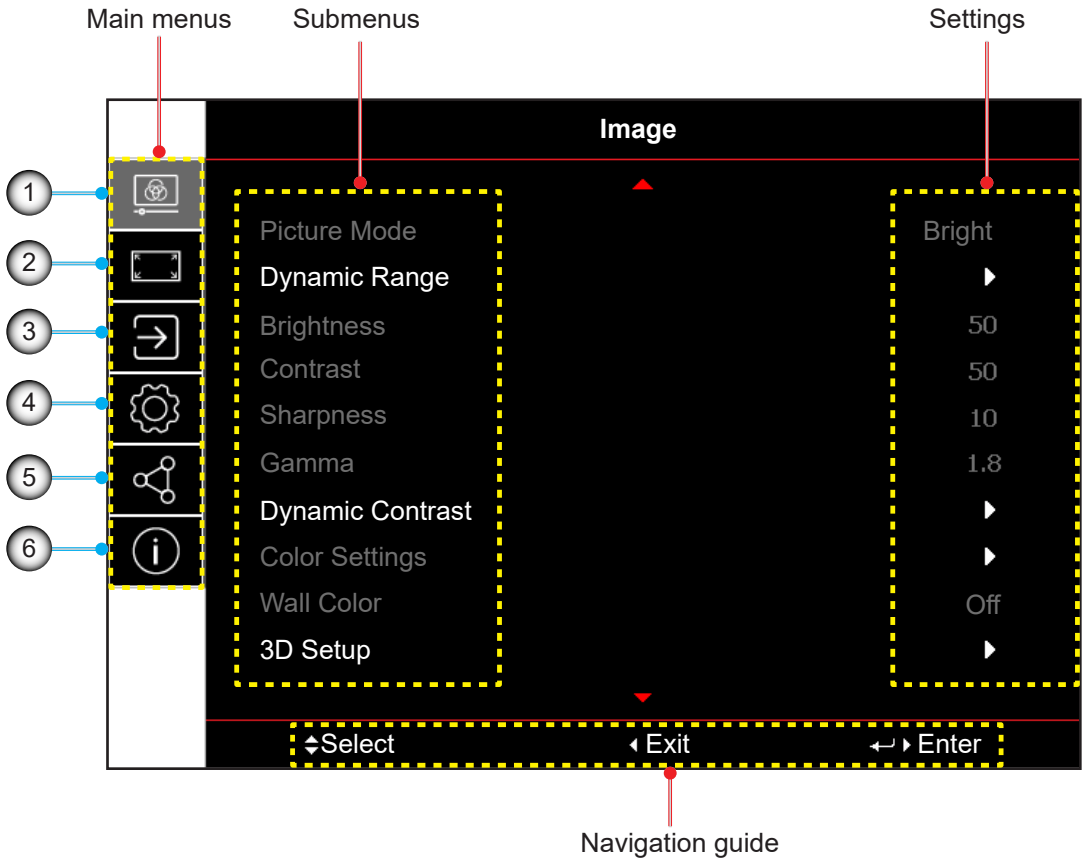


USING THE PROJECTOR

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



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

USING THE PROJECTOR

OSD menu tree

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Image	Picture Mode					Presentation
						Bright
						Super Bright (depends on model)
						Cinema
						HDR
						sRGB
						DICOM SIM.
						Blending
						3D
						2D High Speed
						User
	Dynamic Range	HDR				Off
						Auto
		HDR Picture Mode				Bright
						Standard
						Film
						Detail
	Brightness					0~100
	Contrast					0~100
	Sharpness					1-15
	Gamma					Film
						Graphics
						Standard(2.2)
						Vivid
						3D
						Blackboard
						DICOM SIM.
						1.8
						2.0
						2.4
						2.6
	Dynamic Contrast	Dynamic Black				Off
						On
		Speed				1~15
		Strength				0~3
		Level				50%~100%
		Extreme Black				Off
						On
		AV Mute Timer				0s~10s
		Black Signal Level				0~5

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Image	Color Settings	Color				0~100
		Tint				0~100
		Color Temperature				Warm
						Standard
						Cool
		White Balance	Red Gain			0-100
			Green Gain			0-100
			Blue Gain			0-100
			Red Offset			0-100
			Green Offset			0-100
			Blue Offset			0-100
		White Enhancement				0-10
		Color Space				Auto
						RGB (0-255)
						RGB (16-235)
						REC709
						REC601
		Color Matching	Auto Test Pattern			Off
						On
			Red	Hue		0~254
				Saturation		0~254
				Luminance		0~254
			Green	Hue		0~254
				Saturation		0~254
				Luminance		0~254
			Blue	Hue		0~254
				Saturation		0~254
				Luminance		0~254
			Cyan	Hue		0~254
				Saturation		0~254
				Luminance		0~254
			Magenta	Hue		0~254
				Saturation		0~254
				Luminance		0~254
			Yellow	Hue		0~254
				Saturation		0~254
				Luminance		0~254
			White	Red		0~254
				Green		0~254
				Blue		0~254
			Reset			Yes / Cancel (Dialog box)

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Image	Wall Color					Off
						Blackboard
						Light Yellow
						Light Green
						Light Blue
						Pink
						Gray
	3D Setup	3D Mode				Off
						Active 3D
						Passive 3D
		3D Format				Auto
						Frame Packing
						Side by Side
						Top and Bottom
						Frame Sequential
		3D Tech				DLP-link
						3D Sync
		3D-2D				3D
						L
						R
		3D Sync Out				To Emitter
						To Next Projector
		3D Invert				Off
						On
		Frame Delay				1~200
		Reset				Yes / Cancel (Dialog box)
	Save to User					Yes / Cancel (Dialog box)
	Apply to User					User-Presentation
						User-Bright
						User-Super Bright
						User-Cinema
						User-HDR
						User-sRGB
						User-DICOM SIM.
						User-Blending
						User-3D
						User-2D High Speed
	Reset					Yes / Cancel (Dialog box)

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Display	Aspect Ratio					Auto
						4:3
						16:9
						16:10
						LBX
						Native
	Digital Zoom	Proportional				Off
						On
		Horizontal				50%~400%
		Vertical				50%~400%
		Horizontal Shift				0~100
		Vertical Shift				0~100
		Reset				Yes / Cancel (Dialog box)
	Image Shift	H. Position				0~100
		V. Position				0~100
		Reset				Yes / Cancel (Dialog box)
	Geometric Correction	Warp Control				Basic
						Advanced
						AP
		Basic Warp	Keystone	Horizontal		0~40
				Vertical		0~40
			Pincushion	Horizontal		0~100
				Vertical		0~100
			4-Corner	Top Left		
				Top Right		
				Bottom Left		
				Bottom Right		
		Advanced Warp	Grid Color			Green
						Magenta
						Red
						Cyan
			Grid Background			Black
						Transparent
			Warp Setting	Grid Points		2x2
						3x3
						5x5
						9x9
						17x17
				Warp Inner		Off
						On
				Warp Sharpness		0~9
			Blend Setting	Blend Width		
				Overlap Grid Number		4 / 6 / 8 / 10 / 12
				Gamma		1.8 /1.9 /2 /2.1 /2.2 /2.3 /2.4

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Display	Geometric Correction	Advanced Warp	Black Level	Area		Bottom
						Top
				Enable		Off
						On
				Edit Area		
				Add Point		
				Remove Point		
				Brightness	Brightness	
					Red	0~255
					Green	0~255
					Blue	0~255
					Exit	
				Red		0~255
				Green		0~255
				Blue		0~255
				Reset	Bottom	Yes / Cancel (Dialog box)
					Top	Yes / Cancel (Dialog box)
					All	Yes / Cancel (Dialog box)
		Memory	Save Memory			Memory 1~Memory 5
			Apply Memory			Memory 1~Memory 5
			Clear Memory			Yes / Cancel (Dialog box)
		Reset				Yes / Cancel (Dialog box)
	Edge Mask					0~10
	Freeze Screen					Unfreeze
						Freeze
	Test Pattern					Off
						Green Grid
						Magenta Grid
						White Grid
						White
						Black
						Red
						Green
						Blue
						Yellow
						Magenta
						Cyan
						ANSI Contrast 4x4
						Color bar
						Full screen

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Display	PIP/PBP	Screen				Off
						PIP
						PBP
		Main Source				VGA
						HDMI1
						HDMI2
						DVI-D
						DisplayPort
						3G-SDI
						HDBaseT
		Sub Source				VGA
						HDMI1
						HDMI2
						DVI-D
						DisplayPort
						3G-SDI
						HDBaseT
		Swap				
		Size				Small
						Medium
						Large
		Location				PBP, Main Left
						PBP, Main Top
						PBP, Main Right
						PBP, Main Bottom
						PIP, Bottom Right
						PIP, Bottom Left
						PIP, Top Left
						PIP, Top Right
	Reset					Yes / Cancel (Dialog box)
Input Settings	Auto Source					Off
						On
	Active Inputs					VGA
						HDMI1
						HDMI2
						DVI-D
						DisplayPort
						3G-SDI
						HDBaseT
	Latency Adjustment					Normal
						2D Ultra

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Input Settings	Backup Input	Auto Switch				Off
						On
		Current Signal				(read only)
		First Input				HDMI1
						HDMI2
						HDBaseT
						DisplayPort
		Second Input				HDMI1
						HDMI2
						HDBaseT
						DisplayPort
		Backup Input Status				Active/Inactive (read only)
		Backup Input Change				Changed/No Change (read only)
		Backup Input Info.	Current Signal			(read only)
			Backup Input Status			Active/Inactive (read only)
			Backup Input Change			Changed/No Change (read only)
			First Input			By First Input (read only)
			Resolution			(read only)
			Horz Refresh			(read only)
			Color Space			(read only)
			HDR			Yes/No (read only)
			Second Input			By Second Input (read only)
			Resolution			(read only)
			Horz Refresh			(read only)
			Color Space			(read only)
			HDR			Yes/No (read only)
	VGA	Phase				0~100
		Resolution				(read only)
	HDMI	Output				HDMI 1
						HDMI 2
		HDMI 1 EDID				1.4
						2.0
		HDMI 2 EDID				1.4
						2.0
	HDBaseT	EDID				1.4
						2.0
	Reset					Yes / Cancel (Dialog box)

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Device Setup	Language					English
						Deutsch
						Français
						Italiano
						Español
						Português
						Polski
						Nederlands
						Norsk
						繁體中文
						簡体中文
						日本語
						한국어
						Русский
						Magyar
						ไทย
	Projection	Ceiling				Auto
						On
						Off
		Rear				Off
						On
	Lens Settings	Focus				+
						-
		Zoom				⊕
						⊖
		Lens Shift				▲
						▼
						◀
						▶
		Lens Memory	Save Memory			Memory 1~Memory 5
			Apply Memory			Memory 1~Memory 5
			Clear Memory			Yes / Cancel (Dialog box)
		Lens Calibration				Yes / Cancel (Dialog box)
		Lens Lock				Lock
						Unlock
		Reset				Yes / Cancel (Dialog box)
	Active Image Setup	Active Focus				Yes / Cancel (Dialog box)
		Active Color Uniformity	Calibration			Yes / Cancel (Dialog box)
			Target Selection			Pop-up pattern
			Reset			Yes / Cancel (Dialog box)
	Schedule	Date and Time				----/--/-- --:--
		Schedule Mode				Off / On
		View Today				Monday / Tuesday / Wednesday / Thursday / Friday / Saturday / Sunday

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Device Setup	Schedule	Monday / Tuesday / Wednesday / Thursday / Friday / Saturday / Sunday	Schedule Enable			Off
						On
			Event 01-16	Time		00:00 ~ 23:59
				Function		Off / Power Settings / Input Source / Light Source Mode / Shutter
				Event		Off
				(Function = Power Settings)		Power On / Eco / Active / Communication
				(Function = Input Source)		VGA / HDMI1 / HDMI2 / DVI-D / DisplayPort / 3G-SDI / HDBaseT
				(Function = Light Source Mode)		Normal Mode / Eco Mode / Custom Brightness
				(Function = Shutter)		Shutter On / Shutter Off
				Reset		Yes / Cancel (Dialog box)
			Copy Events To			Monday / Tuesday / Wednesday / Thursday / Friday / Saturday / Sunday
			Reset the Day			Yes / Cancel (Dialog box)
		Reset Schedule				Yes / Cancel (Dialog box)
	Date and Time	Clock Mode				Use NTP Server
						Manual
		Date				2000 ~ 2037 (Year)
						01 ~ 12 (Month)
						01 ~ 31 (Day)
		Time				00 ~ 23 (Hour)
						00 ~ 59 (Minute)
		Daylight Saving Time				Off
						On
		NTP Server				time.google.com
						asia.pool.ntp.org
						europe.pool.ntp.org
						north-america.pool.ntp.org
		Time Zone				UTC+14:00
						UTC+13:00
						UTC+12:45
						UTC+12:00
						UTC+11:00
						UTC+10:30
						UTC+10:00
						UTC+09:30
						UTC+09:00
						UTC+08:45
						UTC+08:00
						UTC+07:00

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Device Setup	Date and Time	Time Zone				UTC+06:30
						UTC+06:00
						UTC+05:45
						UTC+05:30
						UTC+05:00
						UTC+04:30
						UTC+04:00
						UTC+03:30
						UTC+03:00
						UTC+02:00
						UTC+01:00
						UTC+00:00
						UTC-01:00
						UTC-02:00
						UTC-03:00
						UTC-03:30
						UTC-04:00
						UTC-05:00
						UTC-06:00
						UTC-07:00
						UTC-08:00
						UTC-09:00
						UTC-09:30
						UTC-10:00
						UTC-11:00
						UTC-12:00
		Update Interval				Hourly
						Daily
		Apply				Yes / Cancel (Dialog box)
	Power Settings	Power Mode (Standby)				Eco
						Active
						Communication
		Signal Power On				Off
						On
		Auto Power Off				0~180 m
		Sleep Timer				0~16 h
		12V Trigger				Off
						On
		Reset				Yes / Cancel (Dialog box)
	Light Source Settings	Light Source Mode				Normal
						Eco Mode
						Custom Power
		Custom Brightness	Brightness Level			30%~100%
			Constant Brightness			Off
						On

USING THE PROJECTOR

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Device Setup	Shutter	Fade-In				0.5~5s
		Fade-Out				0.5~5s
		Startup				Shutter Off
						Shutter On
	Security	Security				Off
						On
		Security Timer	Month			0-35
			Day			0-29
			Hour			0-23
		Change Password				
	On Screen Display	Menu Location				Top Left
						Top Right
						Center
						Bottom Left
						Bottom Right
		Menu Transparency				0~9
		Menu Timer				Off
						5s
						10s
						15s
						30s
						60s
		Information Hide				Off
						On
		Background				Blue
						Black
						White
						Logo
	Logo Setup	Change Logo				Default Logo
						Neutral
						User Logo
						Captured Logo
		Logo Capture				Yes / Cancel (Dialog box)
		Delete Logo	Captured Logo			Yes / Cancel (Dialog box)
			User Logo			Yes / Cancel (Dialog box)
	Backlight	Keypad				Off
						On
		Power key				Off
						On
	High Altitude					Off
						On
	User Data	Save all settings				Memory 1~Memory 5
		Load all settings				Memory 1~Memory 5
	System Update (FOTA)	Auto				On
						Off
		Update				Yes / Cancel (Dialog box)

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Device Setup	Reset	Reset OSD				Yes / Cancel (Dialog box)
		Reset to default				Yes / Cancel (Dialog box)
		Reset Selective	Image			Yes / Cancel (Dialog box)
			Display			Yes / Cancel (Dialog box)
			Input			Yes / Cancel (Dialog box)
			Communication			Yes / Cancel (Dialog box)
			Setup			Yes / Cancel (Dialog box)
Communi-cation	Projector ID					0~99
	Remote Setup	Remote Code				0~99
		Quick Switch Code				Off
						1~9
		IR Function	Front			Off
						On
			Top			Off
						On
			HDBaseT			Off
						On
		User 1				Freeze Screen
						Blank Screen
						PIP/PBP
						Aspect Ratio
						Information Hide
						Network setup
						Projector ID
						Color Matching
						Reset Selective
		User 2				Freeze Screen
						Blank Screen
						PIP/PBP
						Aspect Ratio
						Information Hide
						Network setup
						Projector ID
						Color Matching
						Reset Selective
	Network Setup	LAN Interface				RJ-45
						HDBaseT
		MAC Address				(read only)
		Network Status				(read only) Connected / Disconnected
		DHCP				Off
						On
		IP Address				- - - . - - - . - - - . - - -
		Subnet Mask				- - - . - - - . - - - . - - -
		Gateway				- - - . - - - . - - - . - - -
		DNS				- - - . - - - . - - - . - - -
		Apply				Yes / Cancel (Dialog box)
		Network Reset				Yes / Cancel (Dialog box)

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Communi-cation	Email Notification	Email 1				Email 1 Address (read only)
		Email 2				Email 1 Address (read only)
		Event				
		Fan Error				Off/Email
		Power On/Off				Off/Email
		Video Loss				Off/Email
		Laser				Off/Email
		Reset				Yes / Cancel (Dialog box)
	Control	Crestron				Off
						On
		IP Address				- - - . - - - . - - - . - - -
		IPID				2~255
		Port				0~65535
		Crestron Setup Apply				Yes / Cancel (Dialog box)
		PJ Link				Off
						On
		Authentication				Off
						On
		Password				(read only)
		Service				- - - . - - - . - - - . - - -
		PJ Link Setup Apply				Yes / Cancel (Dialog box)
		Extron				Off
						On
		AMX				Off
						On
		Telnet				Off
						On
		HTTP				Off
						On
		Reset				Yes / Cancel (Dialog box)
	Baud Rate	Serial Port In				1200
						2400
						4800
						9600
						19200
						38400
						57600
						115200
		Serial Port Out				1200
						2400
						4800
						9600
						19200
						38400

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Communi-cation	Baud Rate	Serial Port Out				57600
						115200
	Reset					Yes / Cancel (Dialog box)
Information	Device	Regulatory				
		Serial Number				
		Projection Hours				
	System Status	Standby Mode				
		Light Source Mode				
		Light Source Hours				
		Total Hours				
		Normal				
		Eco Mode				
		Custom Power				
		Temperature				
		AC Voltage				
	Communication	Projector ID				
		Remote Code				
		LAN Interface				
		MAC Address				
		Network Status				
		DHCP				
		IP Address				
		Subnet Mask				
		Gateway				
		DNS				
		Crestron				
		Extron				
		PJ Link				
		AMX				
		Telnet				
		HTTP				
	Signal	Input Signal				
		Resolution				
		Signal Format				
		Pixel Clock				
		Horz Refresh				
		Vert Refresh				
		Color Space				
		Picture Mode				
		Second Signal				
		Resolution				
		Signal Format				
		Pixel Clock				
		Horz Refresh				
		Vert Refresh				
		Color Space				

Main Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Sub Menu 5	Sub Menu 6	Values
Information	Backup Input	Current Signal				
		Backup Input Status				
		Backup Input Change				
		First Input				
		Resolution				
		Horz Refresh				
		Color Space				
		HDR				
		Second Input				
		Resolution				
		Horz Refresh				
		Color Space				
		HDR				
	Firmware Version	Main Version				
		I-SCALER Version				
		F-MCU Version				
		M-MCU Version				
		L-MCU Version				
		A-MCU Version				
		K-MCU Version				
		LAN Version				
		Formatter Version				
		FPGA0 Version				
		FPGA1 Version				
		FPGA2 Version				
		XFPGA Version				
		HDBaseT Version				
		Camera Version				

USING THE PROJECTOR

Image menu

Learn how to configure image settings.

Submenus

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

Picture Mode

Picture Mode 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.

Presentation

Best for displaying presentation slides in a bright room.

Bright/Super Bright

Best for the installations requiring high brightness images.

Note: *Super Bright is supported only by specific model. When AC input is 100-120V, the super bright mode option will be gray out.*

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.

3D

Best for playing 3D videos.

2D High Speed

Display the status of 2D High Speed mode (This mode should not be used for medical diagnosis).

Note: *If the resolution of the input source is 800 x 600 @120Hz, 1024 x 768 @120Hz, or 1280 x 720 @120Hz, then the display mode will automatically switch to 2D High Speed then the 3D mode, PIP/PBP modes are not supported.*

User
Image settings saved by the user.

Dynamic Range

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

HDR
Enable or disable HDR processing.

HDR Picture Mode

- **Bright**: Select this mode for more saturated colors.
- **Standard**: Select this mode for natural looking images.
- **Film**: Select this mode for improved detail.
- **Detail**: Select this mode for more detail in dark scenes.

Brightness

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

Contrast

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

Sharpness

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

Gamma

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

Film
Best for home theater setting.

Graphics
Best for projecting photos from PC input.

Standard (2.2)
Standard gamma value.

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

3D
Best for playing 3D videos.

Blackboard
Best for projecting on to a blackboard.

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

1.8 / 2.0 / 2.4 / 2.6
Select a preset gamma value to adjust the image performance. In general, the smaller the value, the brighter the dark areas of the image will become.

Dynamic Contrast

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

Dynamic Black

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

- **Speed:** Adjust the speed of the light source correction. The value ranges from 1 to 15. A lower value makes the correction slower and less aggressive while a higher value results in the faster correction.
- **Strength:** Set the strength of the dynamic contrast adjustment. The value ranges from 0 to 3, the higher the value the stronger the correction.
- **Level:** Adjust the light source when the brightness level of the current content gets lower than the set value. The value ranges from 50% to 100%. The higher the value, the larger the range to adjust the light source.

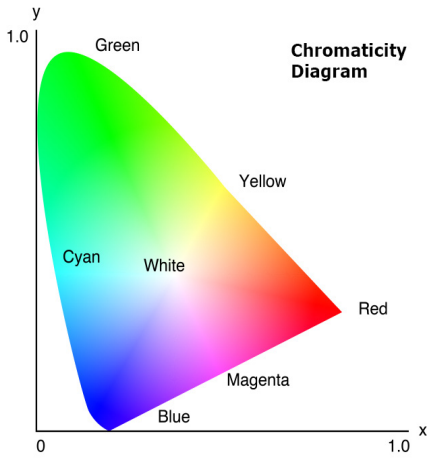
Extreme Black

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

- **AV Mute Timer:** Set a timer for the laser light to turn off after detecting black content. The set value ranges from 0s to 10s.
- **Black Signal Level:** Set a black level value as the threshold for the Real Black function. The value can be adjusted from 0% to 5%, with 0 being the darkest black and 5 being the brightest.

Color Settings

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



Color

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

Tint

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

Color Temperature

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

White Balance

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

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

White Enhancement

Adjust the image color brightness while providing more vibrant colors, in increments from 0 to 10.

Color Space

Select a color space that has been specifically tuned for the input signal. The available options are Auto, RGB (0~255), RGB (16~235), REC709, and REC601.

Note: *The Color Space function is grayed out if the Picture Mode is sRGB or without any source input.*

Color Matching

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

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

Wall Color

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

3D Setup

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

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, Frame Packing, Side by Side, Top and Bottom, and Frame Sequential.

3D Tech

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

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

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 Out

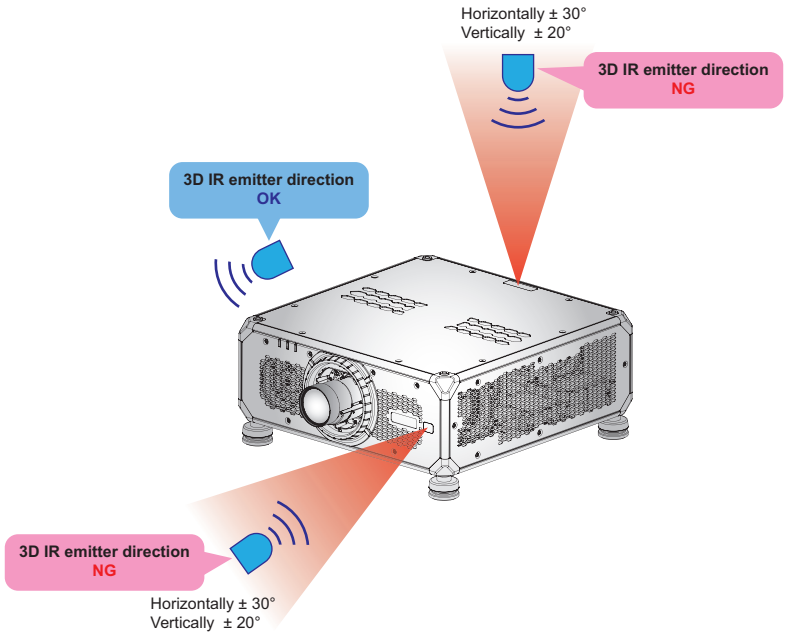
Set up the transmission of the 3D sync output signal.

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

IR Control setup when using the 3D IR emitter

Infrared devices interfere with each other if placed in the same sensing angle. If you want to use the 3D IR emitter and the IR remote function, do any of the following:

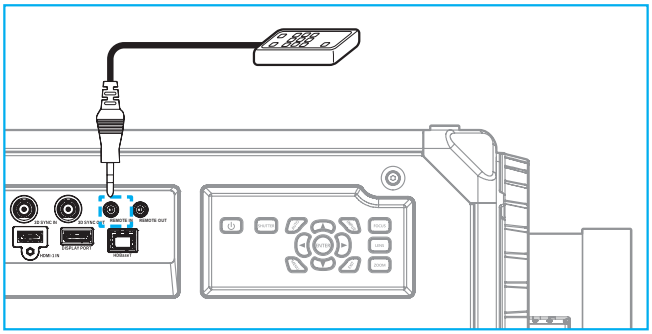
- Place the 3D IR emitter outside the IR remote control sensing angle as shown below:



- Based on the room layout, disable either the front or the top remote receiver in the OSD menu > Communication > Remote Setup > IR Function menu to avoid the 3D IR emitter interference, yet allowing to use the IR remote control function.

If neither of the two methods described above solved the problem, please use another 3D IR emitter/3D RF emitter or try any of the following two methods.

- Use a wired remote-in cable for the IR control.



- Use the IR control via the HDBaseT device (not supplied).

Note: *Disable the Front/Top remote receivers and enable the HDBaseT for IR control in the OSD menu > Communication > Remote Setup > IR Function.*

3D Invert

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

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 the function settings to factory default values.

Save to User

Save the image settings to the User mode.

Apply to User

Apply the image settings to User-Presentation, User-Bright, User-Super Bright, User-Cinema, User-HDR, User sRGB, User-DICOM SIM., User-Blending, User-3D, or User-2D High Speed.

Reset

Reset all 3D settings.

USING THE PROJECTOR

Display menu

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

Submenus

- Aspect Ratio
- Digital Zoom
- Image Shift
- Geometric Correction
- Edge Mask
- Freeze Screen
- Test Pattern
- PIP/PBP

Aspect Ratio

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

Digital Zoom

Digitally adjust the size of the projected image.

Note: *Image projection on the screen depends on the signal source..*

Proportional

Enable the function to have the image's height and width changed at the same ratio.

Horizontal

Use the ◀ and ▶ buttons to change the width of the projected image.

Vertical

Use the ▲ and ▼ buttons to change the height of the projected image.

Horizontal Shift

Use the ◀ and ▶ buttons to horizontally shift the image.

Vertical Shift

Use the ▲ and ▼ buttons to vertically shift the image.

Reset

Reset digital zoom settings to factory default values.

Image Shift

Adjust the projected image position.

Note: *Different signal sources have different range of image displacement.*

H. Position

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

V. Position

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

Reset

Reset image shift settings to factory default values.

USING THE PROJECTOR

Geometric Correction

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

Warp Control

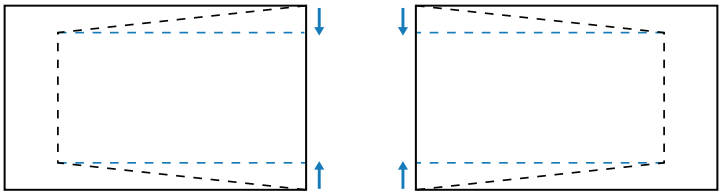
Configure warp settings. Select between Basic, Advanced, and AP.

- **Basic:** Configure keystone, pincushion, 4-corner settings.
- **Advanced:** Set the grid color and grid background, as well as configure warp and blend settings.
- **AP:** Use the warp and blend software tools to control the projector. When the software warp and blend control is enabled, the projector's built in geometry functions are disabled.

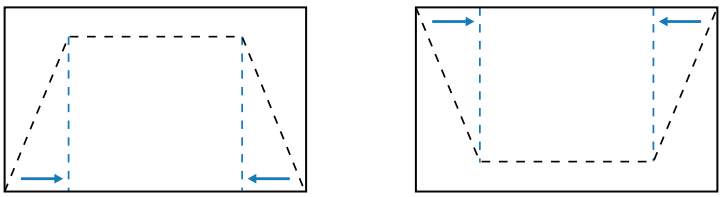
Basic Warp

Configure basic warp settings.

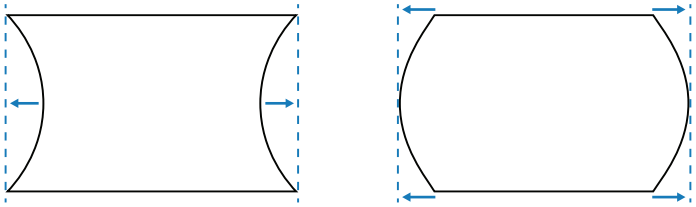
- **Keystone:** Keystone function is used to adjust the images in asymmetric rectangle shape.
  - **Horizontal:** Adjust the left and right side of the projected image to make it an even rectangle. It is used for the images with unequal left and right sides.



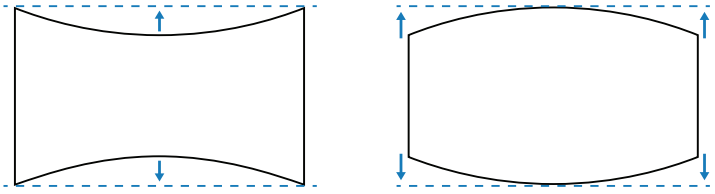
  - **Vertical:** Adjust the top and bottom side of the projected image to make it an even rectangle. It is used for the images with unequal top and bottom sides.



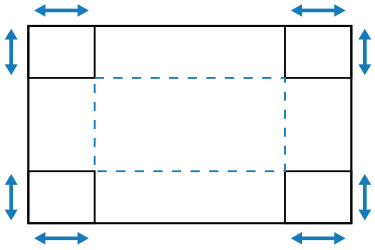
- **Pincushion:** Pincushion function is used to adjust the image with barrel or pincushion distortion.
  - **Horizontal:** Correct the projected image with horizontal barrel or pincushion distortion.



  - **Vertical:** Correct the projected image with vertical barrel or pincushion distortion.



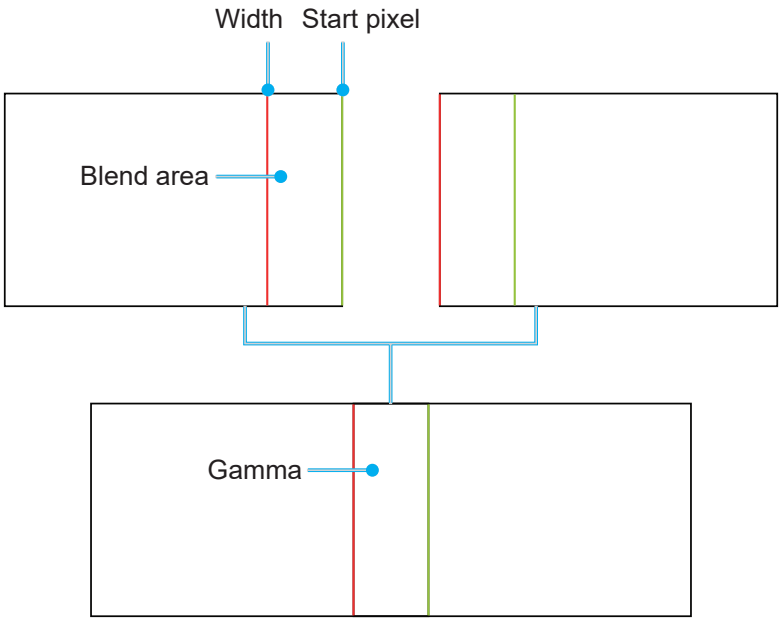
- **4-Corner:** Reshape the image by moving the 4 corners of the image to have it fit a specific projection surface.



Advanced Warp

Configure advanced warp settings.

- **Grid Color:** Select a grid color for warp and blend pattern between Green, Magenta, Red, and Cyan.
- **Grid Background:** Select the grid background between Black and Transparent.
- **Warp Setting:** Configure warp settings.
  - **Grid Point:** Adjust flat and curved surfaces.
  - **Warp Inner:** Turn on to adjust the inner grid.
  - **Warp Sharpness:** When the grid lines are warped from straight into curve, the grid lines will be distorted and become jagged. To avoid the line jagging, adjust the warp sharpness to blur or sharpen the edge of the images.
- **Blend Setting:** Configure the blend settings directly on the projector to merge two or more adjacent images into one larger and seamless image.
  - **Blend Width:** Set the blend pattern width.
  - **Overlap Grid Number:** Set the blend overlap grid number.
  - **Gamma:** Select the gamma value of the blend area to adjust the curvature of the blending effect.



- **Black Level:** Manually adjust the black level of the projected image.
  - **Area:** Mark the area that needs adjusting.
  - **Enable:** Enable or disable the black level adjustment in the selected area.
  - **Edit Area:** Modify the black level of the selected area.
  - **Add Point:** Add up to 32 area control points for black level adjustment.
  - **Remove Point:** Remove at least 4 control points from the selected area.

Note: *After adding or removing a control point, press **Enter** to move to the next point counterclockwise.*

- **Brightness:** Adjust the brightness of the selected area.
- **Red/Green/Blue:** Adjust each color individually of the selected area.
- **Reset:** Reset the black level to factory default values either on the Bottom or on the Top area or on both areas.

Memory

The projector allows the user to save up to five geometry memories, including the ones set directly on the projector and the ones configured via external software tools. The available options are Save Memory, Apply Memory, and Clear Memory.

Reset

Reset geometric settings to factory default values.

Edge Mask

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

Freeze Screen

Select to pause the display screen despite any change in the source device.

Test Pattern

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

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 or disable the function.

- **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.

Main Source

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

Sub Source

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

Swap

Swap the main source and sub source.

Size

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

Location

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

- **PBP Layout**

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

- **PIP Layout**

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

Note: *Refer to the table below for PIP/PBP compatibility.*

PIP/PBP Compatibility

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

Reset

Reset all the display settings to factory default values.

USING THE PROJECTOR

Input Settings menu

Learn how to configure the projector input settings.

Submenus

- Auto Source
- Active Inputs
- Latency Adjustment
- Backup Input
- VGA
- HDMI
- HDBaseT

Auto Source

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

Active Inputs

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

Latency Adjustment

Enable this feature to reduce response time.

Note: *If the latency adjustment is set to 2D Ultra then the 3D mode, PIP modes, and 4K 30Hz resolution are not supported.*

Backup Input

Backup Input function allows the user to set up two input sources with the same timing specification. Upon loss of one input source, the projector automatically switches to the other source.

This function can be useful for the installations requiring uninterruptedly displaying the content source, such as live show, exhibition, and critical control room. The available input sources are HDMI1, HDMI2, DisplayPort, and HDBaseT.

Auto Switch

Check the box to enable automatically switching to the backup input source when the current source fails.

Current Signal

Displays the current active signal.

First Input

Select a signal as the first input source. Once the selected source is activated, the OSD menu lists out the signal's Resolution, Horz Refresh (horizontal refresh rate), and Color Space.

Second Input

Select a signal as the second input source. Once the selected source is activated, the OSD menu lists out the signal's Resolution, Horz Refresh (horizontal refresh rate), and Color Space.

Backup Input Status

Display the function status. The Backup Input Status is active when meeting the following conditions:

- Auto Switch is checked.
- The two sources are with the same timing specification.
- The two sources are active.
- Projector is displaying one of the two sources.

Backup Input Change

Display the function change.

Backup Input Info.

Display the function information, including Current Signal, Back Input Status, Backup Input Change, First Input and its Resolution, Horz Refresh, Color Space, HDR, Second Input and its Resolution, Horz Refresh, Color Space, and HDR.

VGA

Setup the VGA source by selecting the proper Phase and Resolution.

HDMI

Setup the projector's HDMI ports.

Output

Select a HDMI port to output the signal.

HDMI 1 EDID/HDMI 2 EDID

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

HDBaseT

Configure the HDBaseT settings to correctly display the HDMI signal transferred via the HDBaseT port.

EDID

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

Reset

Reset all the input settings to factory default values.

USING THE PROJECTOR

Device Setup menu

Learn how to configure the system settings for the projector.

Submenus

- Language
- Projection
- Lens Settings
- Auto Image Setup
- Schedule
- Date and Time
- Power Settings
- Light Source Settings
- Shutter
- Security
- On Screen Display
- Logo Setup
- Backlight
- High Altitude
- User Data
- System Update

Language

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

Projection

Change the image direction by selecting a proper projection mode.

Ceiling

Enable the function for ceiling mount installation.

Rear

Check the function for rear projection.

Lens Settings

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

Focus

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

Zoom

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

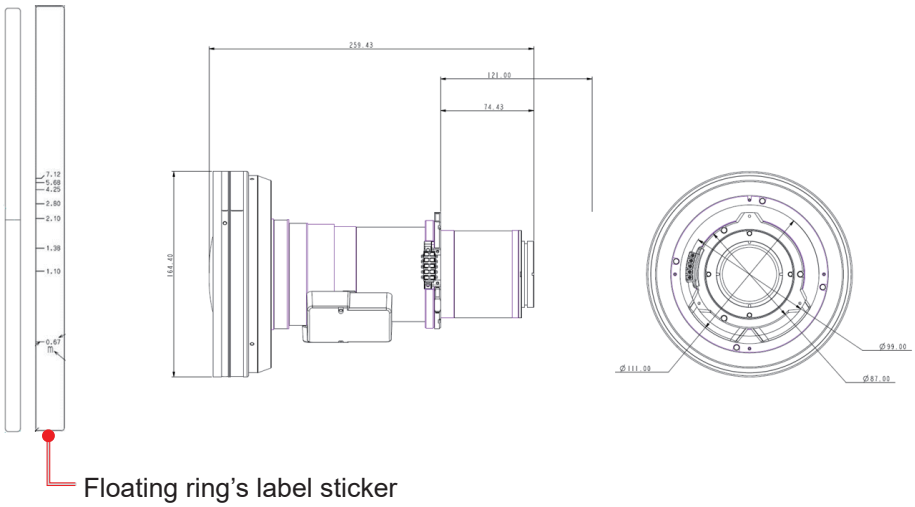
Lens Shift

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

USING THE PROJECTOR

Note: *A11 floating ring*

- *For better optical performance, manually adjust the floating ring before adjusting Zoom & Focus.*
- *Floating ring's label scale shows the projection distance.*
- *The projection distance is from the projector lens to the screen. For example, if the distance between the screen and the projector lens is 2.1m, adjust the floating ring scale to "2.10" for better performance.*



Lens Memory

This projector can save up to five lens settings, which records the lens position, zoom and focus. To record correct data, please perform lens calibration at first time processing lens memory.

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

Note:

- *Performing a lens calibration will clear the saved lens records.*
- *The A18 and A19 lens do not support saving Zoom and Focus locations.*
- *The A22 lens restrains Zoom and Focus functions that may result in synchronization inaccuracy.*

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.

Lens Lock

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

Reset

Reset the lens settings to factory default values.

Active Image Setup

Automatically adjust the image to achieve better performance.

- **Active Focus:** Automatically adjust the image focus.

Note:

- *Before adjusting the Active Focus, make sure the boresight has been adjusted to the best position.*
- *When the remote control performs focus adjustment, pressing the **Enter** key can also trigger the Active Focus function.*

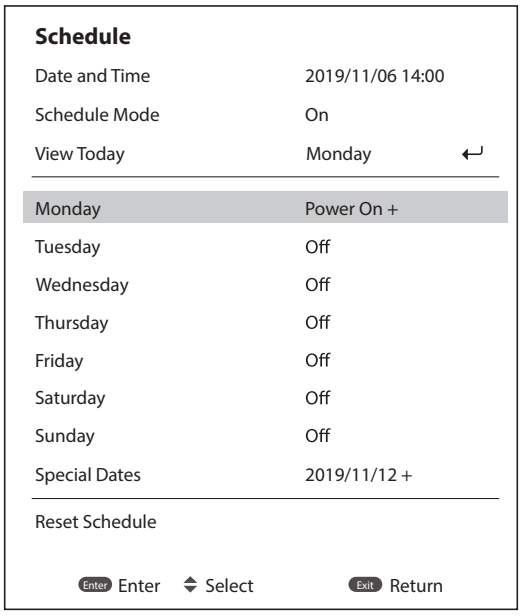
- **Active Color Uniformity:** Automatically adjust the image color to fit the color of the projection screen. To maintain the optimum focus-level, the brightness of the original content may be decreased.
  - **Calibration:** Perform the calibration process. If the target content is outside the color range of the projector, the color will not be projected correctly.
  - **Target Selection:** Select the target area for calibration. The default area is the center of the content. Press **Enter** to return to the OSD menu after the seletion is completed.
  - **Reset:** Clear the calibration result.

Note:

- *The Active Image Setup functions are performed via the built-in camera. Please make sure the camera is not covered or blocked by any objects. The auto adjustment process might take more than one minute to complete.*
- *The functions in the Active Image Setup menu are available for the projections from 100" to 300" and imaging range needs to cover the entire projection screen. It is recommended to use the Optoma Visual Suite software for seamless setups and calibration.*
- *For A11 lens the Active Image Setup functions can be applied only if the lens position is centred with the screen.*

Schedule

Schedule the projector functions to operate automatically at the set time.



Date and Time

Before setting a schedule, setup the date and time settings. Refer to "Date and Time" on page 64.

Schedule Mode

Enable or disable the schedule function. If the projector is controlled via external devices or software, the Schedule Mode displays AP Mode, and the projector's schedule functions are grayed out.

View Today

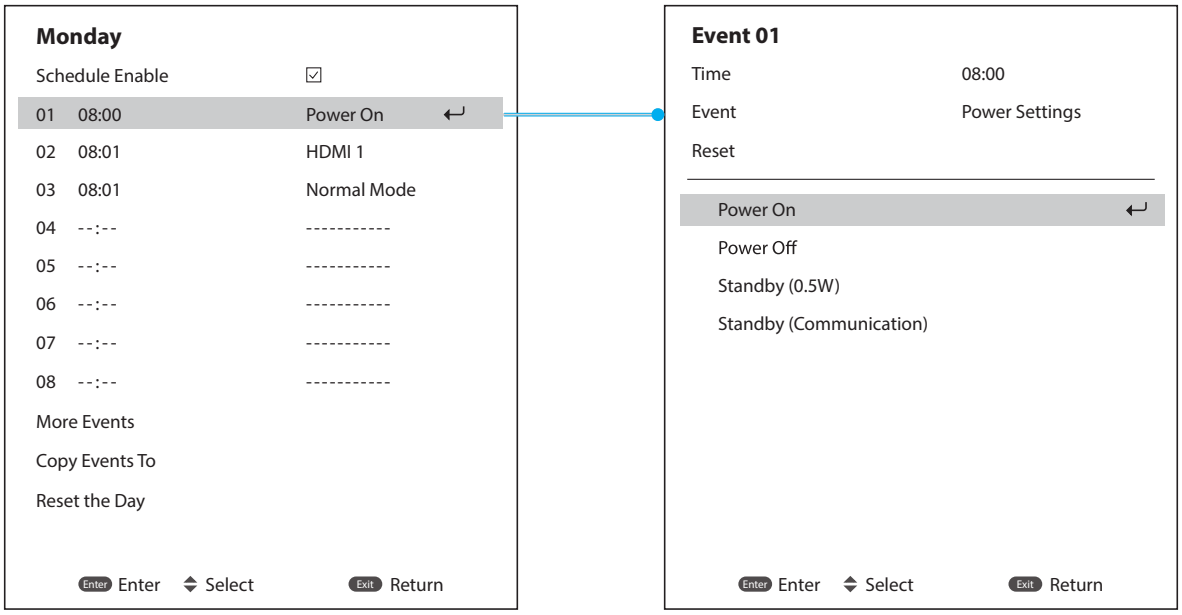
View the event list scheduled for today.

Note: *After the schedule is set up, make sure to save all the settings.*

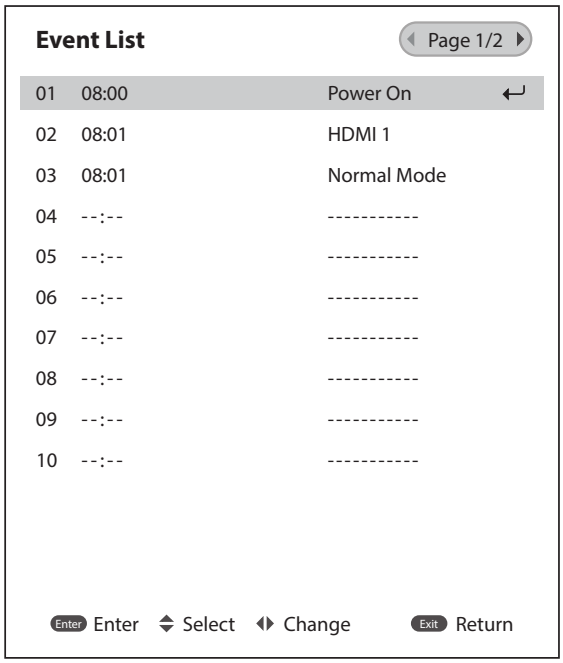
Monday to Sunday

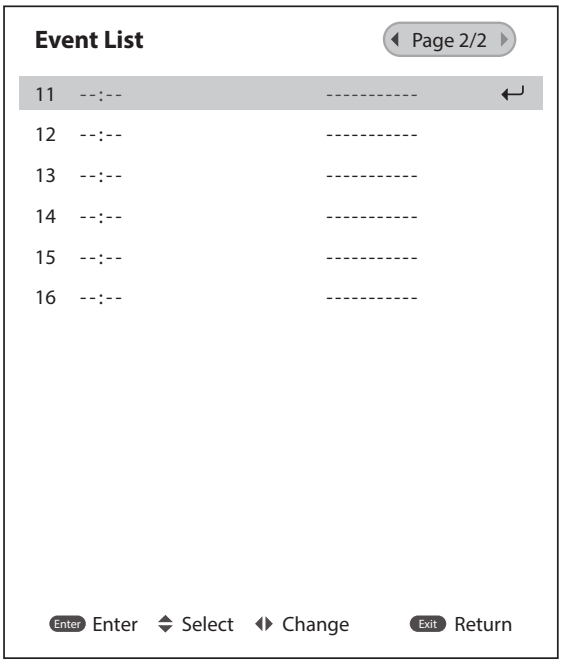
Set up the schedule for days of a week. On the Schedule menu page, select a day and configure the schedule settings.

USING THE PROJECTOR

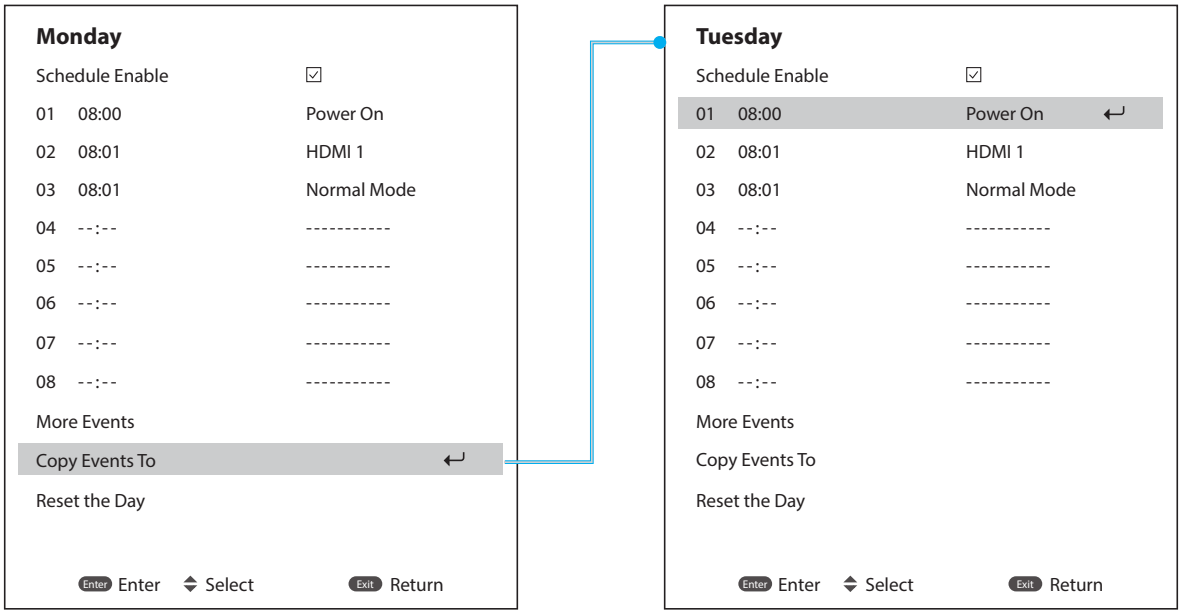


- **Schedule Enable:** Enable or disable the schedule function for the selected day.
- **Event 01-16:** Select an event record number, and set up the schedule details.
  - **Time:** Set the time for the event.
  - **Function:** Select the function. The available functions are Power Settings, Input Source, Light Source Mode, and Shutter
    Note: *If the Power Setting is set to Eco or Active, then the projector cannot boot up again.*
  - **Event:** Select a function for the event, which operates automatically at the set time.
  - **Reset:** Reset the event settings.





- **Copy Events To:** Copy the events setup for the day to another day.



- **Reset the Day:** Reset the schedule settings for the day.

Reset Schedule

Reset all of the schedule settings.

Date and Time

Set up the projector's date and time.

Clock Mode

Set the clock mode to NTP Server or Manual.

Note: *To use NTP Server, make sure the projector is connected to the Internet.*

Date

Set a date for the projector. The date format is in Year/Month/Date.

Time

Set the time for the projector.

Daylight Saving Time

Enable or disable the daylight savings function.

NTP Server

Select a NTP Server for the network clock mode.

Time Zone

Set a time zone for the network clock mode.

Update Interval

Set the date and time update interval.

Apply

Apply date and time modifications.

USING THE PROJECTOR

Power Settings

Configure the projector's power settings.

Power Mode (Standby)

Setup the projector's standby mode.

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

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

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.

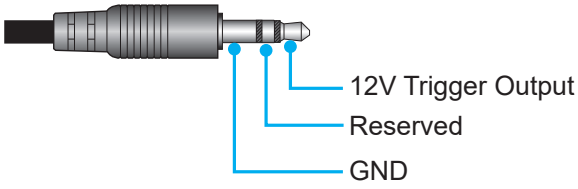
Sleep Timer

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

12V Trigger

When enabled, 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.

Note: *3.5mm mini jack that outputs 12V 500mA (max.) for relay system control.*



- **On**: Choose "On" to enable the trigger.
- **Off**: Choose "Off" to disable the trigger.

Reset

Reset the power settings to factory default values.

Light Source Settings

Set up the light source to control the projector brightness.

Light Source Mode

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

Custom Brightness

When the Light Source Mode is set to Custom Mode, set up the custom brightness level.

Set up the Constant Brightness to maintain the image brightness at a specified level. A special algorithm is designed to compensate for the natural decay of brightness so that the image can be maintained at a fixed brightness level.

- **Brightness Level:** Adjust the brightness level from 30% to 100%.
- **Constant Brightness:** Enable to maintain the image brightness at the set brightness level. A special algorithm is designed to compensate for the natural decay of brightness so that the image can be maintained at a fixed brightness level.

Shutter

Set up the shutter behavior.

Fade-In

This function allows the fading-in effect when turning off the shutter. The length of the fading effect can be adjusted from 0s to 5s.

Fade-Out

This function allows the fading-out effect when turning on the shutter. The length of the fading effect can be adjusted from 0s to 5s.

Startup

Select the shutter behavior when turning on the projector.

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

Security

Set up security verification to protect the projector.

Security

Select On to protect the projector with a password. 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, Sleep Timer, and Security Timer, an on-screen message will pop up warning that the projector shuts down in 60 seconds. Press any button on the remote control or projector keypad to reset the timer and the projector remains on.*

On Screen Display

Set up the on screen display menus.

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.

Information Hide

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

Background

Set a background color to display when no input signal is detected. The available options are Blue, Black, White, and Logo.

USING THE PROJECTOR

Logo Setup

Set up the logo for the startup screen.

Change Logo

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

- **Default:** The projector default logo.
- **Neutral:** The logo is not displayed on the startup screen.
- **User Logo:** User customized logo.
- **Captured Logo:** The logo saved via the Logo Capture function.

Note: *The supported logo format is PNG and size is 1920 x 1200 pixels.*

Logo Capture

Capture part of the projected image and save it as a customized logo.

Delete Logo

Delete the saved customized logo, including the Captured Logo and User Logo.

Backlight

Set up the projector backlight options.

Keypad

Enable or disable the keypad backlight.

Power Key

Enable or disable the backlight for the power key.

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.

User Data

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

- **Save all settings:** Save all of the projector settings as user data. User can save up to 5 records.
- **Load all settings:** Load the previously saved user data.

System Update (FOTA)

Update the system automatically or manually.

- **Auto:** System checks for new updates automatically every time it is connected to the Internet.
- **Auto Download:** System will download the firmware upgrade file in the background and starts the upgrade process when you power off the projector. When the upgrade is done, the projector will power off.
- **Update:** Manually update the system 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.
- **Reset Selective:** Reset the settings of one of the main menus. User can choose from Image, Display, Advanced, Input, Communication, and Setup.

USING THE PROJECTOR

Communication menu

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

Submenus

- Projector ID
- Remote Setup
- Network Setup
- Email Notification
- Control
- Baud Rate

Supplemental information

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

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, Telnet or other control methods.

Remote Setup

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

Remote Code

Set the remote custom code by pressing the remote ID button for 3 seconds and you will notice the remote indicator (above the Off button) starts blinking. Then, input a number between 00-99 using the keyboard numbered keys. After inserting the number, the remote indicator blinks twice quickly indicating that the remote code has changed. For more information on remote codes, refer to “Remote control ID setup” on page 26.

Quick Switch Code

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

Note: *When hotkey is on, the default functions are inactive temporarily.*

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.

User 1 / User 2

Assign a function to the User 1 and User 2 buttons on the remote control. It allows you to use the function easily without going through the OSD menus. The available functions are Freeze Screen, Blank Screen, PIP/PBP, Aspect Ratio, Information Hide, Network Setup, Projector ID, Color Matching, and Reset Selective.

USING THE PROJECTOR

Network Setup

Configure the projector's network settings.

LAN Interface

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

MAC Address

Display the MAC address. (Read only)

Network Status

Display the network connection status. (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.

Network Reset

Reset the network settings to default factory values.

Email Notification

Set up email notifications for some events, which allows them to be received as early alerts via emails.

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 remote control center, such as powering the projector on or off, and adjusting the image brightness or contrast.

Use the Control submenu to select a control device for the projector.

Crestron

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

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

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

PJ Link

Control the projector with PJLink v2.0 commands. (Port: 4352)

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

- **PJ Link Service:** Setup the address for the PJ Link service and the related settings. Then select **PJ Link Setup Apply** to save the modifications.

Extron

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

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

AMX

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

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

Telnet

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

For more information, refer to “Using RS232 command by Telnet” on page 73.

HTTP

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

For more information, refer to “Using the web control panel” on page 71.

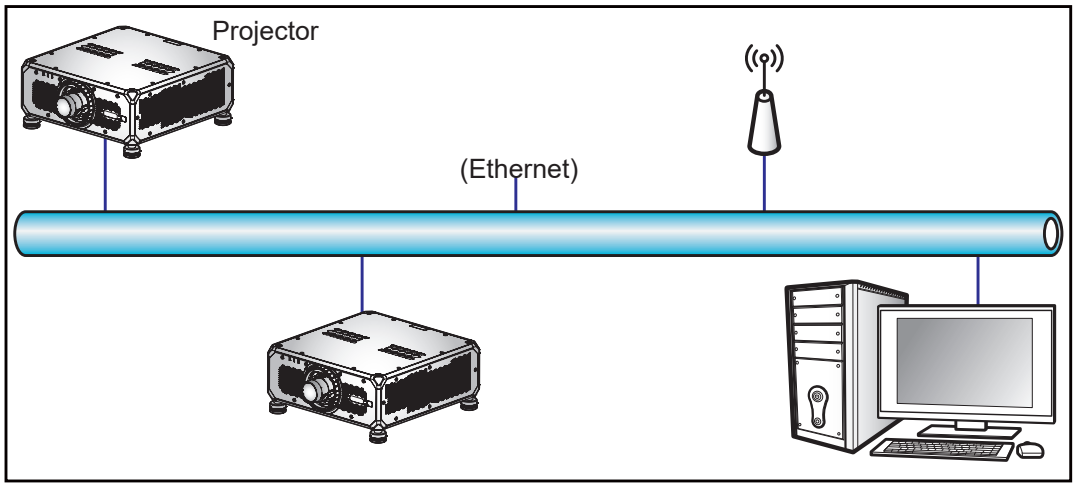
Optoma Management Suite (OMS)

Control the projector with OMS.

For more information, please visit https://www.optoma.com.

Reset

Reset the control functions to default factory values.



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.*

Baud Rate

Set the baud rate for Serial Port In and Serial Port Out. The available options are 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200.

Reset

Reset all network settings to default factory values.

USING THE PROJECTOR

Using the web control panel

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

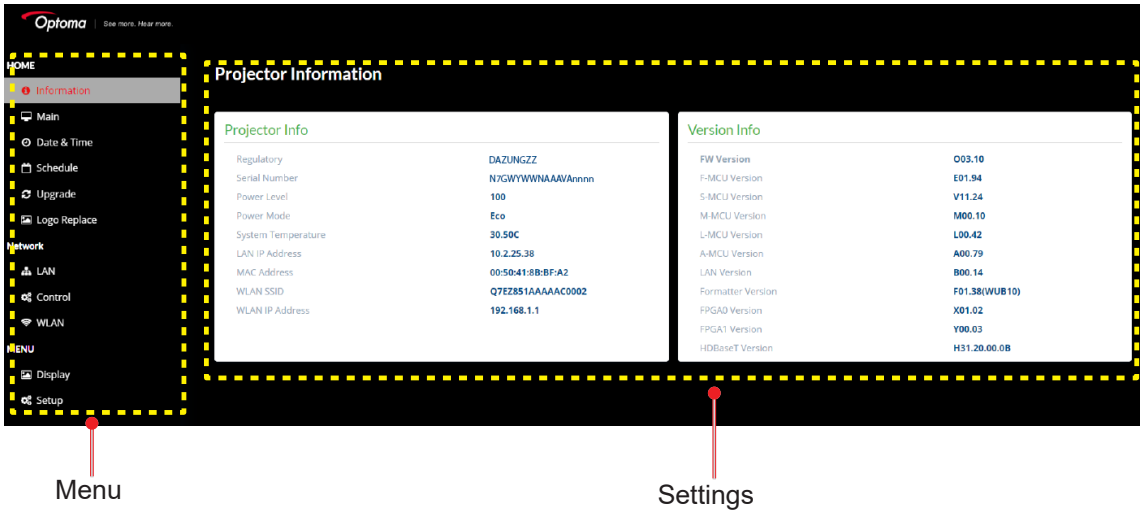
System Requirements

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

- RJ45 cable (CAT-5e) or wireless dongle
- PC, laptop, mobile phone, or tablet installed with a web browser
- Compatible web browsers:
  - Microsoft Edge 40 or higher version
  - Firefox 57 or higher version
  - Chrome 63 or higher version

Overview of the web control panel

Configure the projector settings using web browser.



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

USING THE PROJECTOR

Accessing the web control panel

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

1. Check the projector address using the OSD menu.
   - On a wired network, select **Network > LAN > IP Address**.

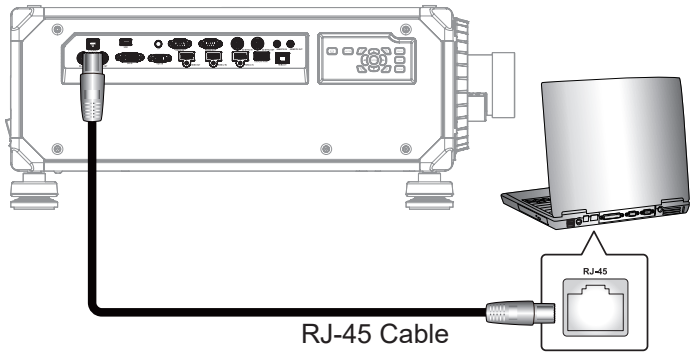
     Note: *Make sure DHCP is enabled.*
   - On a wireless network, select **Network > WLAN > Gateway**.
2. Open a web browser and type the projector address in the address bar.
3. The web page redirects to the web control panel.
4. In the Username field, type the username: admin(default) In the Password field, type the password.: Device serial number(default)

   Note: *It is needed to change the username and password once you have logged in. It is also advised to use a strong password.*

When network is not available, refer to “Directly connect the projector to a computer” on page 72.

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 a direct connection between the projector and computer. Refer to *Directly connect the projector to a computer* on page 72.
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).Information menu.

Info menu

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

Submenus

- Device
- System Status
- Communication
- Signal
- Backup Input
- Firmware Version

ADDITIONAL INFORMATION

Compatible resolutions

Timing table

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	VGA	
						RGB	YPbPr
PC	VGA	640 x 350	1.33	16:10	85	V	NA
		640 x 400			85	NA	NA
		640 x 480		4:3	60	NA	NA
					72	V	NA
					75	V	NA
					85	V	NA
		720 x 400	1.8	9:5	70	V	NA
					85	V	NA
	SVGA	800 x 600	1.33	4:3	60	V	NA
					72	V	NA
					75	V	NA
					85	V	NA
					120	NA	NA
		832 x 624	1.33	4:3	75	V	NA
		848 x 480			60	V	NA
	XGA	1024 x 768	1.33	4:3	60	NA	NA
					70	V	NA
					75	V	NA
					85	V	NA
					120	NA	NA
	SXGA	1152 x 864	1.33	4:3	75	V	NA
		1152 x 870	1.32		75	V	NA
	WXGA	1280 x 768	1.67	5:3	60	V	NA
					75	V	NA
					85	V	NA
	WXGA	1280 x 800	1.6	16:10	60	V	NA
					75	V	NA
					85	V	NA
	SXGA	1280x960	1.33	4:3	60	NA	NA
					85	NA	NA
		1280 x 1024	1.25	5:4	60	V	NA
					75	V	NA
					85	NA	NA
	WXGA	1360 x 765	1.78	16:9	60	NA	NA
		1360 x 768			60	V	NA
		1366 x 768			60	NA	NA
	SXGA+	1400 x 1050	1.33	4:3	60	NA	NA
	WXGA+	1440 x 900	1.6	16:10	60	V	NA
					75	V	NA
					85	NA	NA
	WXGA++	1600 x 900	1.78	16:9	60	V	NA
	UXGA	1600 x 1200	1.33	4:3	50	NA	NA
					60	NA	NA
	WSXGA+	1680 x 1050	1.6	16:10	60	NA	NA

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	VGA	
						RGB	YPbPr
PC	WUXGA RB	1920 x 1200RB	1.6	16:10	50	V	NA
					60	NA	NA
	2K	2560 x 1440RB	1.78	16:9	60	NA	NA
TV	SDTV (480i)	720 x 480	1.5	3:2	59.94	V	NA
	SDTV (480i)	720 x 480	1.5	3:2	60	V	NA
	SDTV (576i)	720 x 576	1.25	5:4	50	V	NA
	EDTV (480p)	720 x 480	1.5	3:2	59.94	V	NA
	EDTV (480p)	720 x 480	1.5	3:2	60	V	NA
	EDTV (576p)	720 x 576	1.25	5:4	50	V	NA
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	V	NA
					59.94	V	NA
					60	V	NA
	HDTV (720p)	1280 x 720	1.78	16:9	50	V	NA
					59.94	V	NA
					60	V	NA
					120	NA	NA
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	V	NA
					24	V	NA
					25	V	NA
					29.97	V	NA
					30	V	NA
					50	NA	NA
					59.94	NA	NA
					60	NA	NA
SD-SDI	SDTV (480i)	720 x 480	1.5	3:2	59.94	NA	NA
	SDTV (576i)	720 x 576	1.25	5:4	50	NA	NA
HD-SDI	HDTV (720p)	1280 x 720	1.78	16:9	50	NA	NA
					59.94	NA	NA
					60	NA	NA
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	NA	NA
					59.94	NA	NA
					60	NA	NA
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	NA	NA
					24	NA	NA
					25	NA	NA
					29.97	NA	NA
					30	NA	NA
	HDTV (1080sF)	1920 x 1080	1.78	16:9	25	NA	NA
					29.97	NA	NA
					30	NA	NA
3GA-SDI	HDTV (1080p)	1920 x 1080	1.78	16:9	50	NA	NA
					59.94	NA	NA
					60	NA	NA
3GB-SDI	HDTV (1080p)	1920x1080with 352M Payload ID	1.78	16:9	50	NA	NA
					59.94	NA	NA
					60	NA	NA
Mandatory 3D	Frame Packing (1080p)	1920 x 1080	1.78	16:9	23.98	NA	NA
					24	NA	NA

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	VGA	
						RGB	YPbPr
Mandatory 3D	Frame Packing (720p)	1280 x 720	1.78	16:9	50	NA	NA
					59.94	NA	NA
					60	NA	NA
	Side by Side (1080i)	1920 x 1080	1.78	16:9	50	NA	NA
					59.94	NA	NA
					60	NA	NA
	Side by Side (1080p)	1920 x 1080	1.78	16:9	24	NA	NA
					50	NA	NA
					59.9	NA	NA
					60	NA	NA
	Top and Bottom (720p)	1280 x 720	1.78	16:9	50	NA	NA
					59.94	NA	NA
					60	NA	NA
	Top and Bottom (1080p)	1920 x 1080	1.78	16:9	23.98	NA	NA
					24	NA	NA
					59.9	NA	NA
					60	NA	NA
Frame Sequential 3D	SVGA	800 x 600	1.33	4:3	120	NA	NA
	XGA	1024 x 768	1.33	4:3	120	NA	NA
	HDTV	1280 x 720	1.78	16:9	120	NA	NA
	HDTV	1280 x 800	1.78	16:9	120	NA	NA
	1080p	1920 x 1080	1.78	16:9	120	NA	NA
					60	NA	NA
					50	NA	NA
	WUXGA	1920 x 1200	1.6	16:10	120	NA	NA
					60	NA	NA
4K	3840 x 2160	3840 x 2160	1.78	16:9	24	NA	NA
					25	NA	NA
					30	NA	NA
					50	NA	NA
					60	NA	NA
	4096 x 2160 SMPTE	4096 x 2160	1.9	N/A	24	NA	NA
					25	NA	NA
					30	NA	NA
					50	NA	NA
					60	NA	NA

Note:

- *"V" means supported and "NA" means not supported.*
- *"RB" means "reduced blanking".*

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	HDMI 1/HDMI 2						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
PC	VGA	640 x 350	1.33	16:10	85	V	V	V	V	V	V	V
		640 x 400			85	V	V	V	V	V	V	V
		640 x 480		4:3	60	V	V	V	V	V	V	V
					72	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
		720 x 400	1.8	9:5	70	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	SVGA	800 x 600	1.33	4:3	60	V	V	V	V	V	V	V
					72	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
		832 x 624	1.33	4:3	75	V	V	V	V	V	V	V
		848 x 480			60	V	V	V	V	V	V	V
	XGA	1024 x 768	1.33	4:3	60	V	V	V	V	V	V	V
					70	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
	SXGA	1152 x 864	1.33	4:3	75	V	V	V	V	V	V	V
		1152 x 870	1.32		75	V	V	V	V	V	V	V
	WXGA	1280 x 768	1.67	5:3	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA	1280 x 800	1.6	16:10	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	SXGA	1280x960	1.33	4:3	60	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
		1280 x 1024	1.25	5:4	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA	1360 x 765	1.78	16:9	60	V	NA	NA	V	NA	NA	NA
		1360 x 768			60	V	V	V	V	V	V	V
		1366 x 768			60	V	V	V	V	V	V	NA
	SXGA+	1400 x 1050	1.33	4:3	60	V	V	V	V	V	V	V
	WXGA+	1440 x 900	1.6	16:10	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA++	1600 x 900	1.78	16:9	60	V	V	V	V	V	V	V
	UXGA	1600 x 1200	1.33	4:3	50	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	WSXGA+	1680 x 1050	1.6	16:10	60	V	V	V	V	V	V	V
	WUXGA RB	1920 x 1200RB	1.6	16:10	50	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	HDMI 1/HDMI 2						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
PC	2K	2560 x 1440RB	1.78	16:9	60	V	V	V	V	V	V	V
TV	SDTV (480i)	720 x 480	1.5	3:2	59.94	V	V	V	V	V	V	V
	SDTV (480i)	720 x 480	1.5	3:2	60	V	V	V	V	V	V	V
	SDTV (576i)	720 x 576	1.25	5:4	50	V	V	V	V	V	V	V
	EDTV (480p)	720 x 480	1.5	3:2	59.94	V	V	V	V	V	V	V
	EDTV (480p)	720 x 480	1.5	3:2	60	V	V	V	V	V	V	V
	EDTV (576p)	720 x 576	1.25	5:4	50	V	V	V	V	V	V	V
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	HDTV (720p)	1280 x 720	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	V	V	V	V	V	V	V
					24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					29.97	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
SD-SDI	SDTV (480i)	720 x 480	1.5	3:2	59.94	NA	NA	NA	NA	NA	NA	NA
	SDTV (576i)	720 x 576	1.25	5:4	50	NA	NA	NA	NA	NA	NA	NA
HD-SDI	HDTV (720p)	1280 x 720	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	NA	NA	NA	NA	NA	NA	NA
					24	NA	NA	NA	NA	NA	NA	NA
					25	NA	NA	NA	NA	NA	NA	NA
					29.97	NA	NA	NA	NA	NA	NA	NA
					30	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080sF)	1920 x 1080	1.78	16:9	25	NA	NA	NA	NA	NA	NA	NA
					29.97	NA	NA	NA	NA	NA	NA	NA
					30	NA	NA	NA	NA	NA	NA	NA
3GA-SDI	HDTV (1080p)	1920 x 1080	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
3GB-SDI	HDTV (1080p)	1920x1080 with 352M Payload ID	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
Mandatory 3D	Frame Packing (1080p)	1920 x 1080	1.78	16:9	23.98	V	V	V	V	V	V	V
					24	V	V	V	V	V	V	V

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	HDMI 1/HDMI 2						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
Mandatory 3D	Frame Packing (720p)	1280 x 720	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Side by Side (1080i)	1920 x 1080	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Side by Side (1080p)	1920 x 1080	1.78	16:9	24	V	V	V	V	V	V	V
					50	V	V	V	V	V	V	V
					59.9	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Top and Bottom (720p)	1280 x 720	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Top and Bottom (1080p)	1920 x 1080	1.78	16:9	23.98	V	V	V	V	V	V	V
					24	V	V	V	V	V	V	V
					59.9	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
Frame Sequential 3D	SVGA	800 x 600	1.33	4:3	120	V	V	V	V	V	V	V
	XGA	1024 x 768	1.33	4:3	120	V	V	V	V	V	V	V
	HDTV	1280 x 720	1.78	16:9	120	V	V	V	V	V	V	V
	HDTV	1280 x 800	1.78	16:9	120	V	V	V	V	V	V	V
	1080p	1920 x 1080	1.78	16:9	120	V	V	V	V	V	V	V
					60	V	V	V	NA	V	V	X
					50	V	V	V	V	V	V	X
	WUXGA	1920 x 1200	1.6	16:10	120	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
4K	3840 x 2160	3840 x 2160	1.78	16:9	24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	NA	NA	V	NA	NA	V
					60	V	NA	NA	V	NA	NA	V
	4096 x 2160 SMPTE	4096 x 2160	1.9	N/A	24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	NA	NA	V	NA	NA	V
					60	V	NA	NA	V	NA	NA	V

Note:

- *"V" means supported and "NA" means not supported.*
- *"RB" means "reduced blanking".*

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	DVI						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
PC	VGA	640 x 350	1.33	16:10	85	V	V	V	V	V	V	V
		640 x 400			85	V	V	V	V	V	V	V
		640 x 480		4:3	60	V	V	V	V	V	V	V
					72	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
		720 x 400	1.8	9:5	70	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	SVGA	800 x 600	1.33	4:3	60	V	V	V	V	V	V	V
					72	NA	NA	NA	NA	NA	NA	V
					75	NA	NA	NA	NA	NA	NA	V
					85	V	V	V	NA	NA	NA	V
					120	NA	NA	NA	NA	NA	NA	NA
		832 x 624	1.33	4:3	75	V	V	V	NA	NA	NA	V
		848 x 480			60	V	V	V	V	V	V	V
	XGA	1024 x 768	1.33	4:3	60	V	V	V	V	V	V	V
					70	NA	NA	NA	NA	NA	NA	V
					75	NA	NA	NA	V	V	V	V
					85	V	V	V	V	V	V	V
					120	NA	NA	NA	NA	NA	NA	NA
	SXGA	1152 x 864	1.33	4:3	75	V	V	V	V	V	V	V
		1152 x 870	1.32		75	V	V	V	V	V	V	V
	WXGA	1280 x 768	1.67	5:3	60	NA	NA	NA	V	NA	NA	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA	1280 x 800	1.6	16:10	60	NA	NA	NA	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	SXGA	1280x960	1.33	4:3	60	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
		1280 x 1024	1.25	5:4	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA	1360 x 765	1.78	16:9	60	V	NA	NA	V	NA	NA	NA
		1360 x 768			60	V	V	V	V	V	V	V
		1366 x 768			60	V	V	V	V	V	V	V
	SXGA+	1400 x 1050	1.33	4:3	60	V	V	V	V	V	V	V
	WXGA+	1440 x 900	1.6	16:10	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA++	1600 x 900	1.78	16:9	60	V	V	V	V	V	V	V
	UXGA	1600 x 1200	1.33	4:3	50	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	WSXGA+	1680 x 1050	1.6	16:10	60	V	V	V	V	V	V	V
	WUXGA RB	1920 x 1200RB	1.6	16:10	50	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	DVI						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
PC	2K	2560 x 1440RB	1.78	16:9	60	NA	NA	NA	NA	NA	NA	NA
TV	SDTV (480i)	720 x 480	1.5	3:2	59.94	V	V	V	V	V	V	V
	SDTV (480i)	720 x 480	1.5	3:2	60	V	V	V	V	V	V	V
	SDTV (576i)	720 x 576	1.25	5:4	50	V	V	V	V	V	V	V
	EDTV (480p)	720 x 480	1.5	3:2	59.94	V	V	V	V	V	V	V
	EDTV (480p)	720 x 480	1.5	3:2	60	V	V	V	V	V	V	V
	EDTV (576p)	720 x 576	1.25	5:4	50	V	V	V	V	V	V	V
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	HDTV (720p)	1280 x 720	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
					120	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	V	V	V	V	V	V	V
					24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					29.97	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
SD-SDI	SDTV (480i)	720 x 480	1.5	3:2	59.94	NA	NA	NA	NA	NA	NA	NA
	SDTV (576i)	720 x 576	1.25	5:4	50	NA	NA	NA	NA	NA	NA	NA
HD-SDI	HDTV (720p)	1280 x 720	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	NA	NA	NA	NA	NA	NA	NA
					24	NA	NA	NA	NA	NA	NA	NA
					25	NA	NA	NA	NA	NA	NA	NA
					29.97	NA	NA	NA	NA	NA	NA	NA
					30	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080sF)	1920 x 1080	1.78	16:9	25	NA	NA	NA	NA	NA	NA	NA
					29.97	NA	NA	NA	NA	NA	NA	NA
					30	NA	NA	NA	NA	NA	NA	NA
3GA-SDI	HDTV (1080p)	1920 x 1080	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
3GB-SDI	HDTV (1080p)	1920x1080 with 352M Payload ID	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
Mandatory 3D	Frame Packing (1080p)	1920 x 1080	1.78	16:9	23.98	NA	NA	NA	NA	NA	NA	NA
					24	NA	NA	NA	NA	NA	NA	NA

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	DVI						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
Mandatory 3D	Frame Packing (720p)	1280 x 720	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	Side by Side (1080i)	1920 x 1080	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	Side by Side (1080p)	1920 x 1080	1.78	16:9	24	NA	NA	NA	NA	NA	NA	NA
					50	NA	NA	NA	NA	NA	NA	NA
					59.9	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	Top and Bottom (720p)	1280 x 720	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	Top and Bottom (1080p)	1920 x 1080	1.78	16:9	23.98	NA	NA	NA	NA	NA	NA	NA
					24	NA	NA	NA	NA	NA	NA	NA
					59.9	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
Frame Sequential 3D	SVGA	800 x 600	1.33	4:3	120	NA	NA	NA	NA	NA	NA	NA
	XGA	1024 x 768	1.33	4:3	120	NA	NA	NA	NA	NA	NA	NA
	HDTV	1280 x 720	1.78	16:9	120	NA	NA	NA	NA	NA	NA	NA
	HDTV	1280 x 800	1.78	16:9	120	NA	NA	NA	NA	NA	NA	NA
	1080p	1920 x 1080	1.78	16:9	120	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
					50	NA	NA	NA	NA	NA	NA	NA
	WUXGA	1920 x 1200	1.6	16:10	120	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
4K	3840 x 2160	3840 x 2160	1.78	16:9	24	NA	NA	NA	NA	NA	NA	NA
					25	NA	NA	NA	NA	NA	NA	NA
					30	NA	NA	NA	NA	NA	NA	NA
					50	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	4096 x 2160 SMPTE	4096 x 2160	1.9	N/A	24	NA	NA	NA	NA	NA	NA	NA
					25	NA	NA	NA	NA	NA	NA	NA
					30	NA	NA	NA	NA	NA	NA	NA
					50	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA

Note:

- *"V" means supported and "NA" means not supported.*
- *"RB" means "reduced blanking".*

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	3G-SDI YCbCr 4:2:2 10 bit
PC	VGA	640 x 350	1.33	16:10	85	NA
		640 x 400			85	NA
		640 x 480		4:3	60	NA
					72	NA
					75	NA
					85	NA
		720 x 400	1.8	9:5	70	NA
					85	NA
	SVGA	800 x 600	1.33	4:3	60	NA
					72	NA
					75	NA
					85	NA
					120	NA
		832 x 624	1.33	4:3	75	NA
		848 x 480			60	NA
	XGA	1024 x 768	1.33	4:3	60	NA
					70	NA
					75	NA
					85	NA
					120	NA
	SXGA	1152 x 864	1.33	4:3	75	NA
		1152 x 870	1.32		75	NA
	WXGA	1280 x 768	1.67	5:3	60	NA
					75	NA
					85	NA
	WXGA	1280 x 800	1.6	16:10	60	NA
					75	NA
					85	NA
	SXGA	1280x960	1.33	4:3	60	NA
					85	NA
		1280 x 1024	1.25	5:4	60	NA
					75	NA
					85	NA
	WXGA	1360 x 765	1.78	16:9	60	NA
		1360 x 768			60	NA
		1366 x 768			60	NA
	SXGA+	1400 x 1050	1.33	4:3	60	NA
	WXGA+	1440 x 900	1.6	16:10	60	NA
					75	NA
					85	NA
	WXGA++	1600 x 900	1.78	16:9	60	NA
	UXGA	1600 x 1200	1.33	4:3	50	NA
					60	NA
	WSXGA+	1680 x 1050	1.6	16:10	60	NA
	WUXGA RB	1920 x 1200RB	1.6	16:10	50	NA
					60	NA
	2K	2560 x 1440RB	1.78	16:9	60	NA

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	3G-SDI YCbCr 4:2:2 10 bit
TV	SDTV (480i)	720 x 480	1.5	3:2	59.94	NA
	SDTV (480i)	720 x 480	1.5	3:2	60	NA
	SDTV (576i)	720 x 576	1.25	5:4	50	NA
	EDTV (480p)	720 x 480	1.5	3:2	59.94	NA
	EDTV (480p)	720 x 480	1.5	3:2	60	NA
	EDTV (576p)	720 x 576	1.25	5:4	50	NA
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	NA
					59.94	NA
					60	NA
	HDTV (720p)	1280 x 720	1.78	16:9	50	NA
					59.94	NA
					60	NA
					120	NA
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	NA
					24	NA
					25	NA
					29.97	NA
					30	NA
					50	NA
					59.94	NA
					60	NA
SD-SDI	SDTV (480i)	720 x 480	1.5	3:2	59.94	V
	SDTV (576i)	720 x 576	1.25	5:4	50	V
HD-SDI	HDTV (720p)	1280 x 720	1.78	16:9	50	V
					59.94	V
					60	V
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	V
					59.94	V
					60	V
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	V
					24	V
					25	V
					29.97	V
					30	V
	HDTV (1080sF)	1920 x 1080	1.78	16:9	25	V
					29.97	V
					30	V
3GA-SDI	HDTV (1080p)	1920 x 1080	1.78	16:9	50	V
					59.94	V
					60	V
3GB-SDI	HDTV (1080p)	1920x1080 with 352M Payload ID	1.78	16:9	50	V
					59.94	V
					60	V
Mandatory 3D	Frame Packing (1080p)	1920 x 1080	1.78	16:9	23.98	NA
					24	NA

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	3G-SDI YCbCr 4:2:2 10 bit
Mandatory 3D	Frame Packing (720p)	1280 x 720	1.78	16:9	50	NA
					59.94	NA
					60	NA
	Side by Side (1080i)	1920 x 1080	1.78	16:9	50	NA
					59.94	NA
					60	NA
	Side by Side (1080p)	1920 x 1080	1.78	16:9	24	NA
					50	NA
					59.9	NA
					60	NA
	Top and Bottom (720p)	1280 x 720	1.78	16:9	50	NA
					59.94	NA
					60	NA
	Top and Bottom (1080p)	1920 x 1080	1.78	16:9	23.98	NA
					24	NA
					59.9	NA
					60	NA
Frame Sequential 3D	SVGA	800 x 600	1.33	4:3	120	NA
	XGA	1024 x 768	1.33	4:3	120	NA
	HDTV	1280 x 720	1.78	16:9	120	NA
	HDTV	1280 x 800	1.78	16:9	120	NA
	1080p	1920 x 1080	1.78	16:9	120	NA
					60	NA
					50	NA
	WUXGA	1920 x 1200	1.6	16:10	120	NA
					60	NA
4K	3840 x 2160	3840 x 2160	1.78	16:9	24	NA
					25	NA
					30	NA
					50	NA
					60	NA
	4096 x 2160 SMPTE	4096 x 2160	1.9	N/A	24	NA
					25	NA
					30	NA
					50	NA
					60	NA

Note:

- *“V” means supported and “NA” means not supported.*
- *“RB” means “reduced blanking”.*

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	HDBaseT						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
PC	VGA	640 x 350	1.33	16:10	85	V	V	V	V	V	V	V
		640 x 400			85	V	V	V	V	V	V	V
		640 x 480		4:3	60	V	V	V	V	V	V	V
					72	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
		720 x 400	1.8	9:5	70	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	SVGA	800 x 600	1.33	4:3	60	V	V	V	V	V	V	V
					72	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
		832 x 624	1.33	4:3	75	V	V	V	V	V	V	V
		848 x 480			60	V	V	V	V	V	V	V
	XGA	1024 x 768	1.33	4:3	60	V	V	V	V	V	V	V
					70	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
	SXGA	1152 x 864	1.33	4:3	75	V	V	V	V	V	V	V
		1152 x 870	1.32		75	V	V	V	V	V	V	V
	WXGA	1280 x 768	1.67	5:3	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA	1280 x 800	1.6	16:10	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	SXGA	1280x960	1.33	4:3	60	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
		1280 x 1024	1.25	5:4	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V		V
	WXGA	1360 x 765	1.78	16:9	60	V	NA	NA	V	NA	NA	NA
		1360 x 768			60	V	V	V	V	V	V	V
		1366 x 768			60	V	V	V	V	V	V	NA
	SXGA+	1400 x 1050	1.33	4:3	60	V	V	V	V	V	V	V
	WXGA+	1440 x 900	1.6	16:10	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA++	1600 x 900	1.78	16:9	60	V	V	V	V	V	V	V
	UXGA	1600 x 1200	1.33	4:3	50	V	V	V	V	V	V	V
					60	V	V	V	V	V	NA	V
	WSXGA+	1680 x 1050	1.6	16:10	60	V	V	V	V	V	V	V
	WUXGA RB	1920 x 1200RB	1.6	16:10	50	V	V	V	V	V	V	V
					60	V	V	V	V	V	NA	V

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	HDBaseT						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
PC	2K	2560 x 1440RB	1.78	16:9	60	V	NA	NA	V	NA	NA	V
TV	SDTV (480i)	720 x 480	1.5	3:2	59.94	V	V	V	V	V	V	V
	SDTV (480i)	720 x 480	1.5	3:2	60	V	V	V	V	V	V	V
	SDTV (576i)	720 x 576	1.25	5:4	50	V	V	V	V	V	V	V
	EDTV (480p)	720 x 480	1.5	3:2	59.94	V	V	V	V	V	V	V
	EDTV (480p)	720 x 480	1.5	3:2	60	V	V	V	V	V	V	V
	EDTV (576p)	720 x 576	1.25	5:4	50	V	V	V	V	V	V	V
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	HDTV (720p)	1280 x 720	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	V	V	V	V	V	V	V
					24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					29.97	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
SD-SDI	SDTV (480i)	720 x 480	1.5	3:2	59.94	NA	NA	NA	NA	NA	NA	NA
	SDTV (576i)	720 x 576	1.25	5:4	50	NA	NA	NA	NA	NA	NA	NA
HD-SDI	HDTV (720p)	1280 x 720	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	NA	NA	NA	NA	NA	NA	NA
					24	NA	NA	NA	NA	NA	NA	NA
					25	NA	NA	NA	NA	NA	NA	NA
					29.97	NA	NA	NA	NA	NA	NA	NA
					30	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080sF)	1920 x 1080	1.78	16:9	25	NA	NA	NA	NA	NA	NA	NA
					29.97	NA	NA	NA	NA	NA	NA	NA
					30	NA	NA	NA	NA	NA	NA	NA
3GA-SDI	HDTV (1080p)	1920 x 1080	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
3GB-SDI	HDTV (1080p)	1920x1080 with 352M Payload ID	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
Mandatory 3D	Frame Packing (1080p)	1920 x 1080	1.78	16:9	23.98	V	V	V	V	V	V	V
					24	V	V	V	V	V	V	V

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	HDBaseT						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
Mandatory 3D	Frame Packing (720p)	1280 x 720	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Side by Side (1080i)	1920 x 1080	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Side by Side (1080p)	1920 x 1080	1.78	16:9	24	V	V	V	V	V	V	V
					50	V	V	V	V	V	V	V
					59.9	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Top and Bottom (720p)	1280 x 720	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Top and Bottom (1080p)	1920 x 1080	1.78	16:9	23.98	V	V	V	V	V	V	V
					24	V	V	V	V	V	V	V
					59.9	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
Frame Sequential 3D	SVGA	800 x 600	1.33	4:3	120	V	V	V	V	V	V	V
	XGA	1024 x 768	1.33	4:3	120	V	V	V	V	V	V	V
	HDTV	1280 x 720	1.78	16:9	120	V	V	V	V	V	V	V
	HDTV	1280 x 800	1.78	16:9	120	V	V	V	V	V	V	V
	1080p	1920 x 1080	1.78	16:9	120	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
					50	V	V	V	V	V	V	V
	WUXGA	1920 x 1200	1.6	16:10	120	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
4K	3840 x 2160	3840 x 2160	1.78	16:9	24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	NA	NA	V	NA	NA	V
					60	V	NA	NA	V	NA	NA	V
	4096 x 2160 SMPTE	4096 x 2160	1.9	N/A	24	NA	NA	NA	NA	NA	NA	NA
					25	NA	NA	NA	NA	NA	NA	NA
					30	NA	NA	NA	NA	NA	NA	NA
					50	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA

Note:

- *"V" means supported and "NA" means not supported.*
- *"RB" means "reduced blanking".*

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	DisplayPort						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
PC	VGA	640 x 350	1.33	16:10	85	V	V	V	V	V	V	V
		640 x 400			85	V	V	V	V	V	V	V
		640 x 480		4:3	60	V	V	V	V	V	V	V
					72	V	V	V	V	V	V	NA
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	NA
		720 x 400	1.8	9:5	70	V	V	V	V	V	V	NA
					85	V	V	V	V	V	V	V
	SVGA	800 x 600	1.33	4:3	60	V	V	V	V	V	V	V
					72	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
		832 x 624	1.33	4:3	75	V	V	V	V	V	V	NA
		848 x 480			60	V	V	V	V	V	V	V
	XGA	1024 x 768	1.33	4:3	60	V	V	V	V	V	V	NA
					70	V	V	V	V	V	V	NA
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
	SXGA	1152 x 864	1.33	4:3	75	V	V	V	V	V	V	V
		1152 x 870	1.32		75	V	V	V	V	V	V	NA
	WXGA	1280 x 768	1.67	5:3	60	V	V	V	V	V	V	NA
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	NA
	WXGA	1280 x 800	1.6	16:10	60	V	V	V	V	V	V	NA
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	SXGA	1280x960	1.33	4:3	60	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
		1280 x 1024	1.25	5:4	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA	1360 x 765	1.78	16:9	60	V	NA	NA	V	NA	NA	NA
		1360 x 768			60	V	V	V	V	V	V	V
		1366 x 768			60	V	V	V	V	V	V	V
	SXGA+	1400 x 1050	1.33	4:3	60	V	V	V	V	V	V	NA
	WXGA+	1440 x 900	1.6	16:10	60	V	V	V	V	V	V	NA
					75	V	V	V	V	V	V	NA
					85	V	V	V	V	V	V	V
	WXGA++	1600 x 900	1.78	16:9	60	V	V	V	V	V	V	V
	UXGA	1600 x 1200	1.33	4:3	50	V	V	V	V	V	V	NA
					60	V	V	V	V	V	V	NA
	WSXGA+	1680 x 1050	1.6	16:10	60	V	V	V	V	V	NA	NA
	WUXGA RB	1920 x 1200RB	1.6	16:10	50	V	V	V	V	V	V	NA
					60	V	V	V	V	V	V	V

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	DisplayPort						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
PC	2K	2560 x 1440RB	1.78	16:9	60	V	V	V	V	V	V	V
TV	SDTV (480i)	720 x 480	1.5	3:2	59.94	V	V	V	V	V	V	NA
	SDTV (480i)	720 x 480	1.5	3:2	60	V	V	V	V	V	V	NA
	SDTV (576i)	720 x 576	1.25	5:4	50	V	V	V	V	V	V	NA
	EDTV (480p)	720 x 480	1.5	3:2	59.94	V	V	V	V	V	V	V
	EDTV (480p)	720 x 480	1.5	3:2	60	V	V	V	V	V	V	V
	EDTV (576p)	720 x 576	1.25	5:4	50	V	V	V	V	V	V	V
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	V	V	V	V	V	V	NA
					59.94	V	V	V	V	V	V	NA
					60	V	V	V	V	V	V	V
	HDTV (720p)	1280 x 720	1.78	16:9	50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	V	V	V	V	V	V	V
					24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					29.97	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
SD-SDI	SDTV (480i)	720 x 480	1.5	3:2	59.94	NA	NA	NA	NA	NA	NA	NA
	SDTV (576i)	720 x 576	1.25	5:4	50	NA	NA	NA	NA	NA	NA	NA
HD-SDI	HDTV (720p)	1280 x 720	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080i)	1920 x 1080	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080p)	1920 x 1080	1.78	16:9	23.98	NA	NA	NA	NA	NA	NA	NA
					24	NA	NA	NA	NA	NA	NA	NA
					25	NA	NA	NA	NA	NA	NA	NA
					29.97	NA	NA	NA	NA	NA	NA	NA
					30	NA	NA	NA	NA	NA	NA	NA
	HDTV (1080sF)	1920 x 1080	1.78	16:9	25	NA	NA	NA	NA	NA	NA	NA
					29.97	NA	NA	NA	NA	NA	NA	NA
					30	NA	NA	NA	NA	NA	NA	NA
3GA-SDI	HDTV (1080p)	1920 x 1080	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
3GB-SDI	HDTV (1080p)	1920x1080 with 352M Payload ID	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA

ADDITIONAL INFORMATION

Signal Type	Signal Format	Resolution	Aspect Ratio		V Sync (Hz)	DisplayPort						
						RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
Mandatory 3D	Frame Packing (1080p)	1920 x 1080	1.78	16:9	23.98	NA	NA	NA	NA	NA	NA	NA
					24	NA	NA	NA	NA	NA	NA	NA
	Frame Packing (720p)	1280 x 720	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	Side by Side (1080i)	1920 x 1080	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	Side by Side (1080p)	1920 x 1080	1.78	16:9	24	NA	NA	NA	NA	NA	NA	NA
					50	NA	NA	NA	NA	NA	NA	NA
					59.9	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	Top and Bottom (720p)	1280 x 720	1.78	16:9	50	NA	NA	NA	NA	NA	NA	NA
					59.94	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
	Top and Bottom (1080p)	1920 x 1080	1.78	16:9	23.98	NA	NA	NA	NA	NA	NA	NA
					24	NA	NA	NA	NA	NA	NA	NA
					59.9	NA	NA	NA	NA	NA	NA	NA
					60	NA	NA	NA	NA	NA	NA	NA
Frame Sequential 3D	SVGA	800 x 600	1.33	4:3	120	V	V	V	V	V	V	V
	XGA	1024 x 768	1.33	4:3	120	NA	NA	NA	NA	NA	NA	NA
	HDTV	1280 x 720	1.78	16:9	120	V	V	V	V	V	V	V
	HDTV	1280 x 800	1.78	16:9	120	V	V	V	V	V	V	V
	1080p	1920 x 1080	1.78	16:9	120	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
					50	V	V	V	V	V	V	V
	WUXGA	1920 x 1200	1.6	16:10	120	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
4K	3840 x 2160	3840 x 2160	1.78	16:9	24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	NA	NA	V	NA	V	V
					60	V	NA	NA	V	NA	NA	V
	4096 x 2160 SMPTE	4096 x 2160	1.9	N/A	24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	NA	NA	V	NA	NA	V
					60	V	NA	NA	V	NA	NA	V

Note:

- *"V" means supported and "NA" means not supported.*
- *"RB" means "reduced blanking".*

ADDITIONAL INFORMATION

EDID table

VGA		
Established Timing:	Standard Timing:	Detail Timing:
720 x 400 @70Hz	1440 x 900 @75Hz	1920 x 1200 @59Hz
720 x 400 @88Hz	1280 x 800 @75Hz	1920 x 1080 @60Hz
640 x 480 @60Hz	1280 x 1024 @60Hz	
640 x 480 @67Hz	1360 x 765 @60Hz	
640 x 480 @72Hz	1440 x 900 @60Hz	
640 x 480 @75Hz	1400 x 1050 @60Hz	
800 x 600 @56Hz	1600 x 1200 @60Hz	
800 x 600 @60Hz	1680 x 1050 @60Hz	
800 x 600 @72Hz		
800 x 600 @75Hz		
832 x 624 @75Hz		
1024 x 768 @60Hz		
1024 x 768 @70Hz		
1024 x 768 @75Hz		
1280 x 1024 @75Hz		
1152 x 870 @75Hz		

DVI		
Established Timing:	Standard Timing:	Detail Timing:
720 x 400 @70Hz	1024 x 768 @120Hz	1920 x 1200 @59Hz
720 x 400 @88Hz	1280 x 800 @75Hz	1920 x 1080 @60Hz
640 x 480 @60Hz	1280 x 1024 @60Hz	640 x 480 @60Hz
640 x 480 @67Hz	1360 x 765 @60Hz	720 x 480 @60Hz
640 x 480 @72Hz	800 x 600 @120Hz	1280 x 720 @60Hz
640 x 480 @75Hz	1400 x 1050 @60Hz	1920 x 1080i @60Hz
800 x 600 @56Hz	1600 x 1200 @60Hz	720 x 480i @60Hz
800 x 600 @60Hz	1680 x 1050 @60Hz	720 x 576 @50Hz
800 x 600 @72Hz		1280 x 720 @50Hz
800 x 600 @75Hz		1920 x 1080i @50Hz
832 x 624 @75Hz		720 x 576i @50Hz
1024 x 768 @60Hz		1920 x 1080 @50Hz
1024 x 768 @70Hz		1920 x 1080 @24Hz
1024 x 768 @75Hz		1440 x 480 @60Hz
1280 x 1024 @75Hz		1920 x 1080 @25Hz
1152 x 870 @75Hz		

ADDITIONAL INFORMATION

HDMI 1.4		
Established Timing:	Standard Timing:	Detail Timing:
720 x 400 @70Hz	1024 x 768 @120Hz	1920 x 1200 @59Hz
720 x 400 @88Hz	1280 x 800 @75Hz	1920 x 1080 @60Hz
640 x 480 @60Hz	1280 x 1024 @60Hz	640 x 480 @60Hz
640 x 480 @67Hz	1360 x 765 @60Hz	720 x 480 @60Hz
640 x 480 @72Hz	800 x 600 @120Hz	1280 x 720 @60Hz
640 x 480 @75Hz	1400 x 1050 @60Hz	1920 x 1080i @60Hz
800 x 600 @56Hz	1600 x 1200 @60Hz	720 x 480i @60Hz
800 x 600 @60Hz	1680 x 1050 @60Hz	720 x 576 @50Hz
800 x 600 @72Hz		1280 x 720 @50Hz
800 x 600 @75Hz		1920 x 1080i @50Hz
832 x 624 @75Hz		720 x 576i @50Hz
1024 x 768 @60Hz		1920 x 1080 @50Hz
1024 x 768 @70Hz		1920 x 1080 @24Hz
1024 x 768 @75Hz		1440 x 480 @60Hz
1280 x 1024 @75Hz		1920 x 1080 @25Hz
1152 x 870 @75Hz		1280 x 720 @120Hz
		1920 x 1080 @120Hz
		3840 x 2160 @24Hz
		3840 x 2160 @25Hz
		3840 x 2160 @30Hz
		4096 x 2160 @24Hz
		4096 x 2160 @25Hz
		4096 x 2160 @30Hz

Note:

- *“V” means supported and “NA” means not supported.*
- *“RB” means “reduced blanking”.*

ADDITIONAL INFORMATION

HDMI 2.0		
Established Timing:	Standard Timing:	Detail Timing:
720 x 400 @70Hz	1024 x 768 @120Hz	1920 x 1200 @59Hz
720 x 400 @88Hz	1280 x 800 @75Hz	1920 x 1080 @60Hz
640 x 480 @60Hz	1280 x 1024 @60Hz	640 x 480 @60Hz
640 x 480 @67Hz	1360 x 765 @60Hz	720 x 480 @60Hz
640 x 480 @72Hz	800 x 600 @120Hz	1280 x 720 @60Hz
640 x 480 @75Hz	1400 x 1050 @60Hz	1920 x 1080i @60Hz
800 x 600 @56Hz	1600 x 1200 @60Hz	720 x 480i @60Hz
800 x 600 @60Hz	1680 x 1050 @60Hz	720 x 576 @50Hz
800 x 600 @72Hz		1280 x 720 @50Hz
800 x 600 @75Hz		1920 x 1080i @50Hz
832 x 624 @75Hz		720 x 576i @50Hz
1024 x 768 @60Hz		1920 x 1080 @50Hz
1024 x 768 @70Hz		1920 x 1080 @24Hz
1024 x 768 @75Hz		1440 x 480 @60Hz
1280 x 1024 @75Hz		1920 x 1080 @25Hz
1152 x 870 @75Hz		1280 x 720 @120Hz
		1920 x 1080 @120Hz
		3840 x 2160 @24Hz
		3840 x 2160 @25Hz
		3840 x 2160 @30Hz
		3840 x 2160 @50Hz
		3840 x 2160 @60Hz
		4096 x 2160 @24Hz
		4096 x 2160 @25Hz
		4096 x 2160 @30Hz
		4096 x 2160 @50Hz
		4096 x 2160 @60Hz

Note:

- *“V” means supported and “NA” means not supported.*
- *“RB” means “reduced blanking”.*

ADDITIONAL INFORMATION

Image size and projection distance

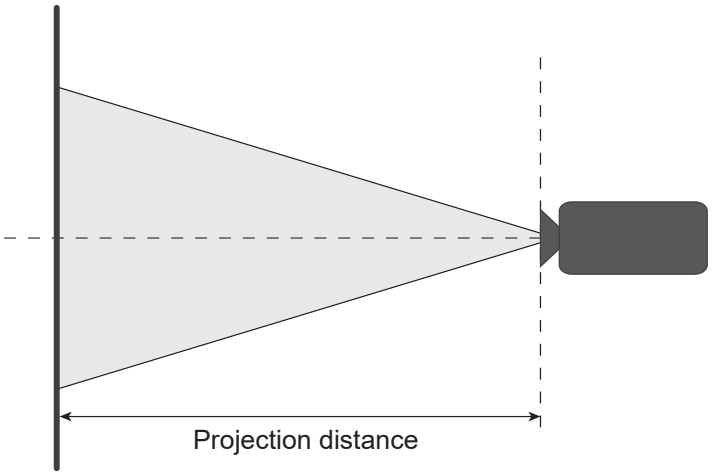
Platform			WUXGA (16:10)															
DMD			0.96"															
Projection Lens			A11		A18		A19		A20		A21		A22		A23		A27	
Throw Ratio Spec.(Wide/Tele)			0.65	0.75	0.84	1.02	1.02	1.36	1.2	1.5	1.50	2.00	2.00	4.00	4.00	7.20	7.2	10.8
Zoom Ratio			1.15x		1.2x		1.33x		1.25x		1.33x		2x		1.8x		1.5x	
Throw Distance (m) (min/max)			0.67	16.51	0.90	21.97	1.10	29.29	1.34	33.39	1.64	43.51	2.10	84.86	4.25	153.79	7.80	232.60
Projection screen size			Throw distance (m)															
Diagonal (inch)	Height (m)	Width (m)	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele
50	0.67	1.08	0.67	0.78	0.90	1.10	1.10	1.46	1.34	1.67	1.64	2.18	2.10	4.24	4.25	7.69	7.80	11.69
60	0.81	1.29	0.81	0.94	1.09	1.32	1.32	1.76	1.60	2.00	1.96	2.61	2.52	5.09	5.10	9.23	9.35	14.02
70	0.94	1.51	0.95	1.11	1.27	1.54	1.54	2.05	1.87	2.34	2.29	3.05	2.94	5.94	5.96	10.77	10.89	16.34
80	1.08	1.72	1.10	1.27	1.45	1.76	1.76	2.34	2.14	2.67	2.62	3.48	3.36	6.79	6.81	12.30	12.44	18.67
90	1.21	1.94	1.24	1.44	1.63	1.98	1.98	2.64	2.40	3.00	2.95	3.92	3.78	7.64	7.66	13.84	13.98	20.99
100	1.35	2.15	1.38	1.61	1.81	2.20	2.20	2.93	2.67	3.34	3.27	4.35	4.20	8.49	8.51	15.38	15.53	23.32
110	1.48	2.37	1.53	1.77	1.99	2.42	2.42	3.22	2.94	3.67	3.60	4.79	4.62	9.34	9.36	16.92	17.08	25.65
120	1.62	2.58	1.67	1.94	2.17	2.64	2.64	3.52	3.21	4.01	3.93	5.22	5.04	10.18	10.21	18.45	18.62	27.97
130	1.75	2.80	1.81	2.10	2.35	2.86	2.86	3.81	3.47	4.34	4.26	5.66	5.46	11.03	11.06	19.99	20.17	30.30
140	1.88	3.02	1.96	2.27	2.53	3.08	3.08	4.10	3.74	4.67	4.58	6.09	5.88	11.88	11.91	21.53	21.72	32.62
150	2.02	3.23	2.10	2.43	2.71	3.30	3.30	4.39	4.01	5.01	4.91	6.53	6.30	12.73	12.76	23.07	23.26	34.95
160	2.15	3.45	2.24	2.60	2.89	3.52	3.52	4.69	4.27	5.34	5.24	6.96	6.72	13.58	13.61	24.61	24.81	37.27
170	2.29	3.66	2.39	2.77	3.08	3.73	3.73	4.98	4.54	5.68	5.57	7.40	7.14	14.43	14.46	26.14	26.36	39.60
180	2.42	3.88	2.53	2.93	3.26	3.95	3.95	5.27	4.81	6.01	5.89	7.83	7.56	15.28	15.31	27.68	27.90	41.92
190	2.56	4.09	2.67	3.10	3.44	4.17	4.17	5.57	5.07	6.34	6.22	8.27	7.98	16.12	16.17	29.22	29.45	44.25
200	2.69	4.31	2.82	3.26	3.62	4.39	4.39	5.86	5.34	6.68	6.55	8.70	8.40	16.97	17.02	30.76	31.00	46.57
250	3.37	5.38	3.53	4.09	4.52	5.49	5.49	7.32	6.68	8.35	8.18	10.88	10.50	21.22	21.27	38.45	38.73	58.20
300	4.04	6.46	4.25	4.92	5.43	6.59	6.59	8.79	8.01	10.02	9.82	13.05	12.60	25.46	25.52	46.14	46.46	69.83
350	4.71	7.54	4.97	5.75	6.33	7.69	7.69	10.25	9.35	11.68	11.46	15.23	14.70	29.70	29.78	53.83	54.19	81.45
400	5.38	8.62	5.68	6.58	7.24	8.79	8.79	11.72	10.68	13.35	13.10	17.40	16.80	33.95	34.03	61.52	61.93	93.08
450	6.06	9.69	6.40	7.40	8.14	9.89	9.89	13.18	12.02	15.02	14.73	19.58	18.90	38.19	38.29	69.21	69.66	104.71
500	6.73	10.77	7.12	8.23	9.05	10.98	10.98	14.65	13.35	16.69	16.37	21.75	21.00	42.43	42.54	76.89	77.39	116.33
550	7.40	11.85	7.84	9.06	9.95	12.08	12.08	16.11	14.69	18.36	18.01	23.93	23.10	46.68	46.79	84.58	85.12	127.96
600	8.08	12.92	8.55	9.89	10.86	13.18	13.18	17.58	16.03	20.03	19.64	26.11	25.20	50.92	51.05	92.27	92.86	139.59
650	8.75	14.00	9.27	10.72	11.76	14.28	14.28	19.04	17.36	21.70	21.28	28.28	27.30	55.16	55.30	99.96	100.59	151.21
700	9.42	15.08	9.99	11.54	12.67	15.38	15.38	20.51	18.70	23.37	22.92	30.46	29.40	59.40	59.56	107.65	108.32	162.84
750	10.10	16.15	10.70	12.37	13.57	16.48	16.48	21.97	20.03	25.04	24.55	32.63	31.50	63.65	63.81	115.34	116.05	174.47
800	10.77	17.23	11.42	13.20	14.47	17.58	17.58	23.43	21.37	26.71	26.19	34.81	33.60	67.89	68.06	123.03	123.79	186.10
850	11.44	18.31	12.14	14.03	15.38	18.67	18.67	24.90	22.70	28.38	27.83	36.98	35.70	72.13	72.32	130.72	131.52	197.72
900	12.12	19.39	12.85	14.86	16.28	19.77	19.77	26.36	24.04	30.05	29.47	39.16	37.80	76.38	76.57	138.41	139.25	209.35
950	12.79	20.46	13.57	15.69	17.19	20.87	20.87	27.83	25.37	31.72	31.10	41.33	39.90	80.62	80.83	146.10	146.98	220.98
1000	13.46	21.54	14.29	16.51	18.09	21.97	21.97	29.29	26.71	33.39	32.74	43.51	42.00	84.86	85.08	153.79	154.72	232.60

Note: *If the screen is larger than 300 inches, then fine text and images may not display clearly.*

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 projected image will be. The image size also varies depending on the aspect ratio, zoom and other settings.



Powered lens shift range

Projection Lens	Optical Lens Shift Range		Mechanical Shift Range	
	ΔHo	ΔVo	Max. of ΔHm	Max. of ΔVm
A18, A19	11%	27%	50%	120%

V: Height of the projected image

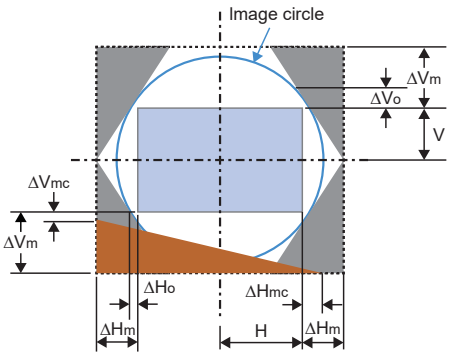
H: Width of the projected image

☐ Projected image

When the lens is shifted beyond the described range of operation, screen edges may become darker or images may become out of focus.

The lens cannot be shifted to this area by system control. (ΔH_{mc}: 23%, ΔV_{mc}: 0%)

Note: *The calculation is based on 1/2 image width and 1/2 image height.*



Projection Lens	Optical Lens Shift Range		Mechanical Shift Range	
	ΔHo	ΔVo	Max. of ΔHm	Max. of ΔVm
A11	48%	102%	50%	120%

V: Height of the projected image

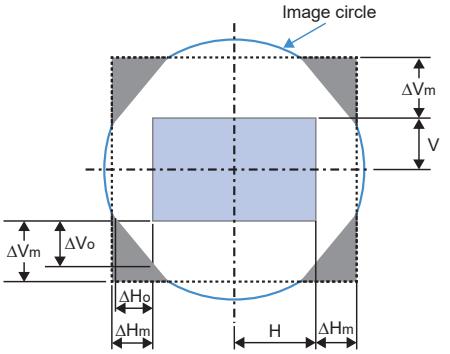
H: Width of the projected image

☐ Projected image

When the lens is shifted beyond the described range of operation, screen edges may become darker or images may become out of focus.

Note:

- *The calculation is based on 1/2 image width and 1/2 image height.*
- *Lens shift accuracy is 0.5 pixel per step.*



ADDITIONAL INFORMATION

Projection Lens	Optical Lens Shift Range		Mechanical Shift Range	
	ΔHo	ΔVo	Max. of ΔHm	Max. of ΔVm
A20, A21, A22, A23, A27	50%	120%	50%	120%

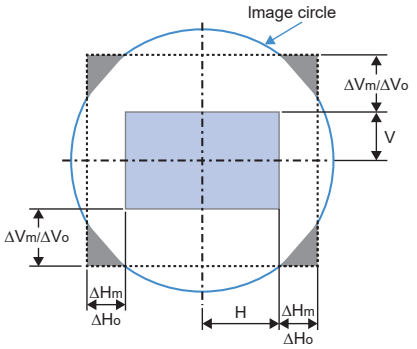
V: Height of the projected image

H: Width of the projected image

Projected image

When the lens is shifted beyond the described range of operation, screen edges may become darker or images may become out of focus.

Note: *The calculation is based on 1/2 image width and 1/2 image height.*

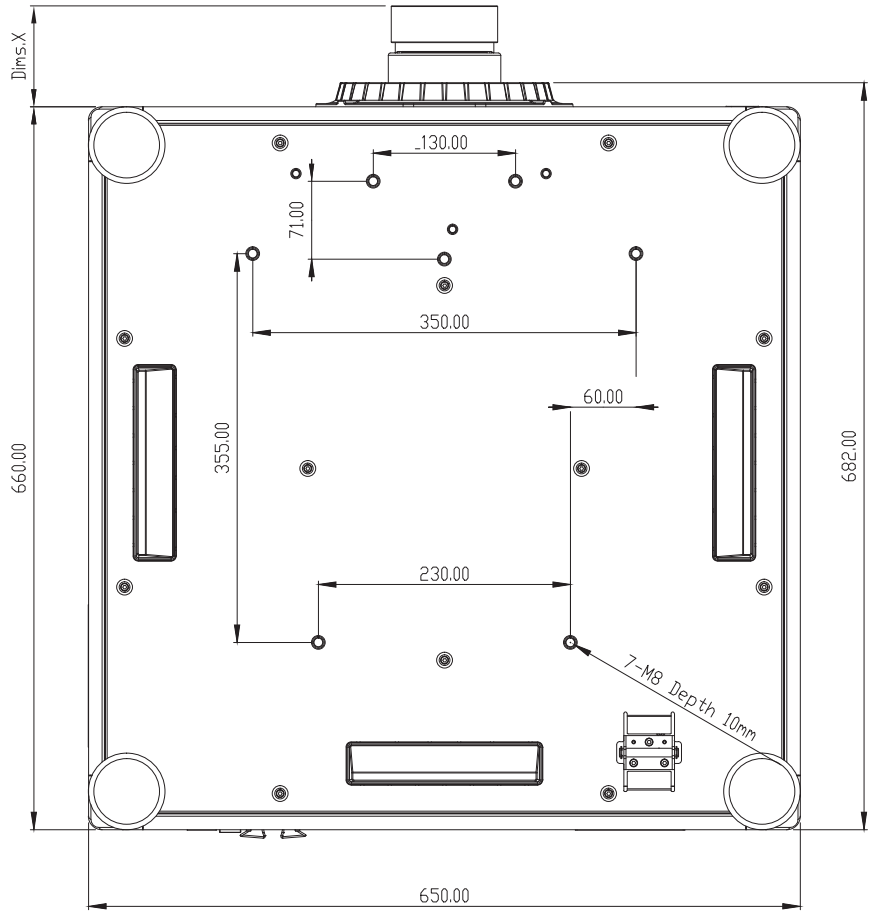


ADDITIONAL INFORMATION

Projector dimensions and ceiling mount installation

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: M8*1.25P x4
- MIN. 10mm - MAX. 15mm



Lens	Dims. X
A11	132.1
A18	103.1
A19	56.5
A20	106.868
A21	92.1
A22	126.309
A23	151.281
A27	223.15

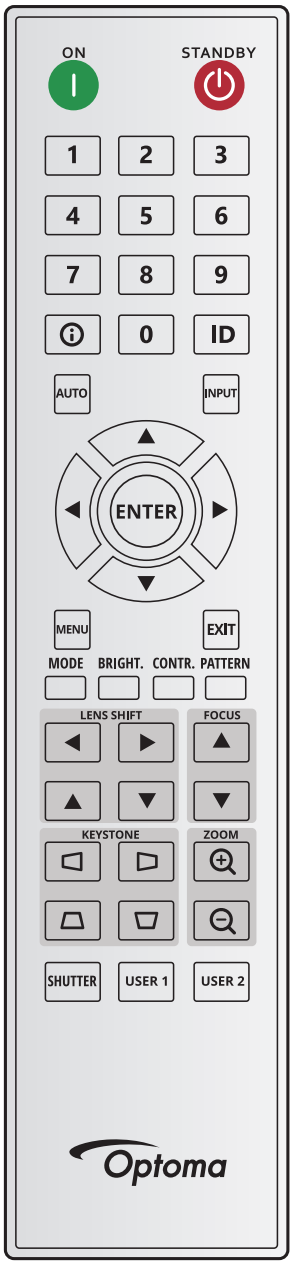
Dimensions given in millimeters

Warning:

- If you buy a ceiling mount from a third party, 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 a 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	2	FD	Press to turn on the projector.
OFF ( )	2	F1	32	CD	2E	D1	Press to turn off the projector.
1	3	F1	32	CD	72	8D	Use as numeric keypad number “1”.
2	4	F1	32	CD	73	8C	Use as numeric keypad number “2”.
3	5	F1	32	CD	74	8B	Use as numeric keypad number “3”.
4	6	F1	32	CD	75	8A	Use as numeric keypad number “4”.
5	7	F1	32	CD	77	88	Use as numeric keypad number “5”.
6	8	F1	32	CD	78	87	Use as numeric keypad number “6”.

ADDITIONAL INFORMATION

Key Legend	Key Position	Repeat Format	Address		Data		Description
			Byte 1	Byte 2	Byte 3	Byte 4	
7	9	F1	32	CD	79	86	Use as numeric keypad number “7”.
8	10	F1	32	CD	80	7F	Use as numeric keypad number “8”.
9	11	F1	32	CD	81	7E	Use as numeric keypad number “9”.
Info (ⓘ)	12	F1	32	CD	82	7D	Press to display source image information.
0	13	F1	32	CD	25	DA	Use as numeric keypad number “0”.
ID	14	F1	32	CD	A7	58	Press to set remote ID. Please refer to “Remote control ID setup” on page 26.
Auto	15	F1	32	CD	4	FB	Press to automatically synchronize the projector to the input source.
Input	16	F1	32	CD	18	E7	Press to select an input signal.
UP (▲)	17	F1	32	CD	0F	F0	Press to select items or make adjustments to our selection.
LEFT (◄)	18	F1	32	CD	11	EE	Press to select items or make adjustments to our selection.
Enter	19	F1	32	CD	14	EB	Press to confirm your item selection.
RIGHT (►)	20	F1	32	CD	10	EF	Press to select items or make adjustments to our selection.
DOWN (▼)	21	F1	32	CD	12	ED	Press to select items or make adjustments to our selection.
Menu	22	F1	32	CD	0E	F1	Press to display the on-screen display menus for projector.
Exit	23	F1	32	CD	2A	D5	Press to return to previous level or exit menus if at top level.
Mode	24	F1	32	CD	5	FA	Press to select the preset display mode.
Bright.	25	F1	32	CD	28	D7	Press to adjust amount of light in the image.
Contr.	26	F1	32	CD	29	D6	Press to adjust difference between dark and light.
Pattern	27	F1	32	CD	58	A7	Press to display a test pattern.
Lens Shift◄	28	F1	32	CD	41	BE	Press to adjust the position of the image horizontally.
Lens Shift ►	29	F1	32	CD	42	BD	
Focus ▲	30	F1	32	CD	86	79	Press to adjust focus to improve image clarity as desired.
Lens Shift ▲	31	F1	32	CD	34	CB	Press to adjust the position of the image vertically.
Lens Shift ▼	32	F1	32	CD	32	CD	Press to adjust the position of the image vertically.
Focus ▼	33	F1	32	CD	26	D9	Press to adjust focus to improve image clarity as desired.
Keystone	34	F1	32	CD	87	78	Press to adjust the horizontal keystone.
Keystone	35	F1	32	CD	51	AE	Press to adjust the horizontal keystone.
Zoom	36	F1	32	CD	52	AD	Press to adjust zoom to achieve a desired image size.
Keystone	37	F1	32	CD	53	AC	Press to adjust the vertical keystone.
Keystone	38	F1	32	CD	54	AB	Press to adjust the vertical keystone.
Zoom	39	F1	32	CD	55	AA	Press to adjust zoom to achieve a desired image size.
Shutter (AV Mute)	40	F1	32	CD	56	A9	Press to hide/unhide the screen picture.
User 1	41	F1	32	CD	57	A8	Press to assign user functions. Please refer to “Remote Setup” on page 68.
User 2	42	F1	32	CD	27	D8	Press to assign user functions. Please refer to “Remote Setup” on page 68.

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 *95*).

The image is stretched when displaying 16:10 DVD title

- When you play anamorphic DVD or 16:10 DVD, the projector will show the best image in 16:10 format on projector side.
- If you play 4:3 format DVD title, please change the format as 4:3 in projector OSD.
- Please setup the display format as 16:10 (wide) aspect ratio type on your DVD player.

Image is too small or too large

- Press the **Zoom** ⊕ or **Zoom** ⊖ button on the remote control or projector keypad to adjust the projected image size.
- Move the projector closer to or further from the screen.
- From the OSD menu, select **Installation > Aspect Ratio** to change the aspect ratio.

Image has slanted sides:

- If possible, reposition the projector so that it is centered on the screen and below the bottom of the screen.
- Press the **Keystone** ◇/◇/◇/◇ buttons on the remote control to adjust the screen shape.

Image is reversed

- From the OSD menu, select **Installation > Orientation > Direction > Rear Projection** to reverse the image so you can project from behind a translucent screen.

Other problems

The projector stops responding to all controls

- If possible, turn off the projector, then unplug the power cord and wait at least 20 seconds before reconnecting power.

Remote control problems

If the remote control does not work

- Check that the operating angle of the remote control is pointed within ±30° horizontally or ±20° 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/ operation	Steady			Flashing			Steady	
Firmware upgrade				Flashing	Flashing			
Burnin	Steady			Steady			Steady	
Factory Reset			Steady	Steady				
Error (Over temperature)						Steady		
Error (Fan failure)						Flashing		
Error (Color Wheel failure)						Flashing		

Note: *Keypad LED (Power Key) will be in steady red for standby mode.*

ADDITIONAL INFORMATION

Specifications

Optical	Description
Resolution	WUXGA (1920 x 1200)
Lens	Power Zoom/Focus and full lens shift
Image size (diagonal)	50”~500”
Projection distance	Please refer to “Throw Distance” spec. in “Image size and projection distance” on page 95.

Electrical	Description
Inputs	2 x HDMI In (version 2.0) (with locking screw) 1 x DisplayPort 1.2a 1 x DVI-D 1 x VGA In 1 x HDBaseT 1 x 3G-SDI In 1 x 3D SYNC In
Outputs	1 x HDMI Out (version 2.0) (with locking screw) 1 x 3G-SDI Out 1 x 3D SYNC Out
Control port	2 x RS232 (D-sub 9 pin) (PC Control) 2 x Wired in/out (3.5mm phone jack) (Remote In/out) 1 x 12V Trigger (3.5mm phone jack / Black) 1 x USB type A (5V/0.5A) 1 x RJ-45 (LAN) 2 x IR Receiver (Front / Top)
Power requirement	100-240V~, 50/60Hz, 16A 200-240V~, 50/60Hz, 8A

Mechanical	Description
Installation orientation	360° rotation, no restrictions
Dimensions	650 (W) x 682 (D) x 300.9 (H) mm (w/o lens, with feet) 650 (W) x 682 (D) x 251 (H) mm (w/o lens, w/o feet)
Environmental conditions	Operating: 0~50°C(32~122°F); 10~85%RH, non-condensing Storage: -10~60°C(14~140°F); 5~90%RH, non-condensing **Note:** *If temperature is >40°C(104°F) or altitude >5000 ft, then the system will dim output brightness to ensure the normal operation of the projector.*

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

ADDITIONAL INFORMATION

RS232 protocol function list

Baud Rate : 115200 (default, depends on user setting)

Data Bits: 8

Parity: None

Stop Bits: 1

Flow Control : None

UART16550 FIFO: Disable

■ Write Command

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

Pass:	P
Fail:	F

■ Read Command

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

Response Format

Pass:	O	k	n
			Variable

Fail:	F

■ System Automatically Send

I	N	F	O	n
				Variable

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

ADDITIONAL INFORMATION

Character to HEX table

Character	HEX
~	7E
0	30
1	31
2	32
3	33
4	34
5	35
6	36
7	37
8	38
9	39
Space	20
CR (Enter)	0D

e.g.

ASCII to HEX

RS232 Command	~	0	0	1	9	5		1	CR
HEX	7E	30	30	31	39	35	20	31	0D

Main Menu: Image

Level 2	Level 3	Level 4	Level 5	Option / Value	Step	Write Command: Command CMD	space	Set Para.	Write Command: Response Fail	Pass	Read Command: Command CMD	space	CMD Value	Read Command: Response Fail	Pass
Picture Mode				[None]											
				Presentation		~XX20	1		F	P	~XX123	1		F	O k 0
				Bright		~XX20	2		F	P	~XX123	1		F	O k 1
				Super Bright (Depends on model)		~XX20	23		F	P	~XX123	1		F	O k 2
				Cinema		~XX20	3		F	P	~XX123	1		F	O k 23
				HDR		~XX20	21		F	P	~XX123	1		F	O k 3
				sRGB		~XX20	4		F	P	~XX123	1		F	O k 21
				DICOM SIM.		~XX20	13		F	P	~XX123	1		F	O k 4
				Blending		~XX20	19		F	P	~XX123	1		F	O k 10
				3D		~XX20	9		F	P	~XX123	1		F	O k 19
				2D High Speed		~XX20	18		F	P	~XX123	1		F	O k 9
				User		~XX20	6,26,30~37		F	P	~XX123	1		F	O k 18
Dynamic Range	HDR			Off		~XX565	0		F	P	~XX123	1		F	O k 6,26,30~37
				Auto		~XX565	1		F	P					
	HDR Picture Mode			Bright		~XX566	0		F	P					
				Standard		~XX566	1		F	P					
				Film		~XX566	2		F	P					
				Detail		~XX566	3		F	P					
Brightness				0-100	1	~XX21	0~100		F	P	~XX125	1		F	O k 0~100
Contrast				0-100	1	~XX22	0~100		F	P	~XX126	1		F	O k 0~100
Sharpness				1 - 15	1	~XX23	1~15		F	P					
Gamma				Film		~XX35	1		F	P					
				Graphics		~XX35	3		F	P					
				Standard(2.2)		~XX35	4		F	P					
				Vivid		~XX35	21		F	P					
				3D		~XX35	9		F	P					
				Blackboard		~XX35	10		F	P					
				DICOM SIM.		~XX35	11		F	P					
				1.8		~XX35	5		F	P					
				2		~XX35	6		F	P					
				2.4		~XX35	12		F	P					
				2.6		~XX35	8		F	P					
Dynamic Contrast	Dynamic Black			Off		~XX191	0		F	P					
				On		~XX191	1		F	P					
	Speed			1-15	1	~XX253	1~15		F	P					
	Strength			0-3	1	~XX254	0~3		F	P					
	Level			50%-100%	1%	~XX255	50~100		F	P					
	Extreme Black			Off		~XX218	0		F	P					
				On		~XX218	1		F	P					
	AV Mute Timer			0.0s-10.0s	0.5s	~XX256	0~20		F	P					
	Black Signal Level			0-5	1	~XX257	0~5		F	P					
Color Settings	Color			0-100	1	~XX45	0~100		F	P					
	Tint			0-100	1	~XX44	0~100		F	P					
	Color Temperature			Warm		~XX36	4		F	P	~XX128	1		F	O k 3
				Standard		~XX36	1		F	P	~XX128	1		F	O k 0
				Cool		~XX36	2		F	P	~XX128	1		F	O k 1
	White Balance	Red Gain		0-100	1	~XX24	0~100		F	P					
		Green Gain		0-100	1	~XX25	0~100		F	P					
		Blue Gain		0-100	1	~XX26	0~100		F	P					
		Red Offset		0-100	1	~XX27	0~100		F	P					
		Green Offset		0-100	1	~XX28	0~100		F	P					

ADDITIONAL INFORMATION

Level 2	Level 3	Level 4	Level 5	Option / Value	Step	Write Command				Read Command			
						Command			Response	Command		Response	
						CMD	space	Set Para.	Fail / Pass	CMD	space / CMD Value	Fail	Pass
		Blue Offset		0-100	1	~XX29		0~100	F P				
	White Enhancement			0-10	1	~XX34		0~10	F P				
	Color Space			Auto		~XX37		1	F P				
				RGB (0-255)		~XX37		2	F P				
				RGB (16-235)		~XX37		4	F P				
				REC709		~XX37		5	F P				
				REC601		~XX37		6	F P				
	Color Matching	Auto Test Pattern		Off		~XX411		0	F P				
				On		~XX411		1	F P				
		Red	Hue	0-254	1	~XX327		0-254	F P				
			Saturation	0-254	1	~XX333		0-254	F P				
			Luminance	0-254	1	~XX339		0-254	F P				
		Green	Hue	0-254	1	~XX328		0-254	F P				
			Saturation	0-254	1	~XX334		0-254	F P				
			Luminance	0-254	1	~XX340		0-254	F P				
		Blue	Hue	0-254	1	~XX329		0-254	F P				
			Saturation	0-254	1	~XX335		0-254	F P				
			Luminance	0-254	1	~XX341		0-254	F P				
		Cyan	Hue	0-254	1	~XX330		0-254	F P				
			Saturation	0-254	1	~XX336		0-254	F P				
			Gain	0-254	1	~XX342		0-254	F P				
		Magenta	Hue	0-254	1	~XX332		0-254	F P				
			Saturation	0-254	1	~XX338		0-254	F P				
			Luminance	0-254	1	~XX344		0-254	F P				
		Yellow	Hue	0-254	1	~XX331		0-254	F P				
			Saturation	0-254	1	~XX337		0-254	F P				
			Luminance	0-254	1	~XX343		0-254	F P				
		White	Red	0-254	1	~XX345		0-254	F P				
			Green	0-254	1	~XX346		0-254	F P				
			Blue	0-254	1	~XX347		0-254	F P				
		Reset				~XX215		1	F P				
Wall Color				Off		~XX506		0	F P				
				Blackboard		~XX506		1	F P				
				Light Yellow		~XX506		7	F P				
				Light Green		~XX506		3	F P				
				Light Blue		~XX506		4	F P				
				Pink		~XX506		5	F P				
				Gray		~XX506		6	F P				
3D Setup	3D Mode			Off		~XX230		4	F P				
				Active 3D		~XX230		0	F P				
				Passive 3D		~XX230		5	F P				
	3D Format			Auto		~XX405		0	F P				
				Frame Packing		~XX405		7	F P				
				Side by Side		~XX405		1	F P				
				Top and Bottom		~XX405		2	F P				
				Frame Sequential		~XX405		3	F P				
	3D Tech			DLP-link		~XX230		1	F P				
				3D Sync		~XX230		3	F P				
	3D-2D			3D		~XX400		0	F P				
				L		~XX400		1	F P				
				R		~XX400		2	F P				

Level 2	Level 3	Level 4	Level 5	Option / Value	Step	Write Command				Read Command			
						Command			Response	Command		Response	
						CMD	space	Set Para.	Fail / Pass	CMD	space / CMD Value	Fail	Pass
	3D Sync Out			To Emitter		~XX232		0	F P				
				To Next Projector		~XX232		1	F P				
	3D Invert			Off		~XX231		0	F P				
				On		~XX231		1	F P				
	Frame Delay			1-200	1	~XX233		1~500	F P				
	Reset					~XX234		1	F P				
Save to User				User-Presentation		~XX424		31	F P				
				User-Bright		~XX424		32	F P				
				User-Super Bright (Depends on model)		~XX424		30	F P				
				User-Cinema		~XX424		33	F P				
				User-HDR		~XX424		26	F P				
				User-sRGB		~XX424		34	F P				
				User-DICOM SIM.		~XX424		35	F P				
				User-Blending		~XX424		36	F P				
				User-3D		~XX424		6	F P				
				User-2D High Speed		~XX424		37	F P				
Apply to User				User-Presentation		~XX20		31	F P	~XX123	1	F	O k 31
				User-Bright		~XX20		32	F P	~XX123	1	F	O k 32
				User-Super Bright (Depends on model)		~XX20		30	F P	~XX123	1	F	O k 30
				User-Cinema		~XX20		33	F P	~XX123	1	F	O k 33
				User-HDR		~XX20		26	F P	~XX123	1	F	O k 26
				User-sRGB		~XX20		34	F P	~XX123	1	F	O k 34
				User-DICOM SIM.		~XX20		35	F P	~XX123	1	F	O k 35
				User-Blending		~XX20		36	F P	~XX123	1	F	O k 36
				User-3D		~XX20		6	F P	~XX123	1	F	O k 6
				User-2D High Speed		~XX20		37	F P	~XX123	1	F	O k 37
Reset						~XX509		1	F P				

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

ADDITIONAL INFORMATION

Main Menu: Display

Level 2	Level 3	Level 4	Level 5	Level 6	Option / Value	Step	Write Command				Read Command				
							Command			Response	Command		Response		
							CMD	space	Set Para	Fail	Pass	CMD	space	CMD Value	Fail	Pass
Aspect Ratio					Auto		~XX60		7	F	P	~XX127		1	F	O k 7
					4:3		~XX60		1	F	P	~XX127		1	F	O k 1
					16:9		~XX60		2	F	P	~XX127		1	F	O k 2
					16:10		~XX60		3	F	P	~XX127		1	F	O k 3
					LBX		~XX60		5	F	P	~XX127		1	F	O k 5
					Native		~XX60		6	F	P	~XX127		1	F	O k 6
Digital Zoom	Proportional				Off		~XX364		0	F	P					
					On		~XX364		1	F	P					
	Horizontal				50%-400%	1	~XX504		50~400	F	P					
	Vertical				50%-400%	1	~XX505		50~400	F	P					
	Horizontal Shift				0-100	1	~XX365		0~100	F	P					
	Vertical Shift				0-100	1	~XX366		0~100	F	P					
	Reset						~XX364		9	F	P					
Image Shift	H. Position				0-100	1	~XX63		0~100	F	P					
	V. Position				0-100	1	~XX64		0~100	F	P					
	Reset						~XX172		1	F	P					
Geometric Correction	Warp Control				Basic		~XX142		1	F	P					
					Advanced		~XX142		5	F	P					
					AP		~XX142		2	F	P					
	Basic Warp	Keystone	Horizontal		0-40	1	~XX65		0~40	F	P	~XX543		4	F	O k 0~40
			Vertical		0-40	1	~XX66		0~40	F	P	~XX543		3	F	O k 0~40
		Pincushion	Horizontal		0-100	1	~XX300		0~100	F	P	~XX543		6	F	O k 0~100
			Vertical		0-100	1	~XX301		0~100	F	P	~XX543		5	F	O k 0~100
		4-Corner	Top Left (icon)		right +1	1	~XX59		1	F	P					
					left +1		~XX59		2	F	P					
					up + 1		~XX59		3	F	P					
					down +1		~XX59		4	F	P					
			Top Right (icon)		right +1	1	~XX59		5	F	P					
					left +1		~XX59		6	F	P					
					up + 1		~XX59		7	F	P					
					down +1		~XX59		8	F	P					
			Bottom Left (icon)		right +1	1	~XX59		9	F	P					
					left +1		~XX59		10	F	P					
					up + 1		~XX59		11	F	P					
					down +1		~XX59		12	F	P					
			Bottom Right (icon)		right +1	1	~XX59		13	F	P					
					left +1		~XX59		14	F	P					
					up + 1		~XX59		15	F	P					
					down +1		~XX59		16	F	P					
	Advanced Warp	Grid Color			Green		~XX143		1	F	P					
					Magenta		~XX143		2	F	P					
					Red		~XX143		3	F	P					
					Cyan		~XX143		4	F	P					
		Grid Background			Black		~XX145		1	F	P					
					Transparent		~XX145		2	F	P					
		Warp Setting	Grid Points		2x2		~XX144		1	F	P					
					3x3		~XX144		2	F	P					
					5x5		~XX144		3	F	P					
					9x9		~XX144		4	F	P					
					17x17		~XX144		5	F	P					
			Warp Inner		Off		~XX146		0	F	P					
					On		~XX146		1	F	P					
			Warp Sharpness		0 ~ 9	1	~XX148		0~9	F	P					
		Blend Setting	Blend Width			4										

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

ADDITIONAL INFORMATION

Level 2	Level 3	Level 4	Level 5	Level 6	Option / Value	Step	Write Command				Read Command			
							Command			Response	Command		Response	
							CMD	space Set Para	Fail	Pass	CMD	space CMD Value	Fail	Pass
			Overlap Grid Number		4		~XX169	1	F	P				
					6		~XX169	2	F	P				
					8		~XX169	3	F	P				
					10		~XX169	4	F	P				
					12		~XX169	5	F	P				
			Gamma		1.8		~XX170	1	F	P				
					1.9		~XX170	2	F	P				
					2		~XX170	3	F	P				
					2.1		~XX170	4	F	P				
					2.2		~XX170	5	F	P				
					2.3		~XX170	6	F	P				
					2.4		~XX170	7	F	P				
		Black Level	Area		Bottom									
					Top									
			Enable		Off		~XX166	4/6	F	P				
					On		~XX166	3/5	F	P				
			Edit Area											
			Add Point											
			Remove Point											
			Brightness	Brightness		RGB + 1	~XX263	1/2/3/4	F	P				
				Red	0-255	1	~XX281	~XX2 nnn	F	P	~XX272	~XX 1	F	O k nnn
				Green	0-255	1	~XX282	~XX2 nnn	F	P	~XX272	~XX 2	F	O k nnn
				Blue	0-255	1	~XX283	~XX2 nnn	F	P	~XX272	~XX 3	F	O k nnn
				Exit										
			Red		0-255									
			Green		0-255									
			Blue		0-255									
			Reset	Bottom			~XX167	3	F	P				
				Top			~XX167	5	F	P				
				All			~XX167	1	F	P				
		Save Memory			Memory 1 - Memory 5		~XX141	1~5	F	P				
		Apply Memory			Memory 1 - Memory 5		~XX147	1~5	F	P	~XX137	1	F	O k 1~5
		Clear Memory					~XX174	1	F	P				
	Reset						~XX561	1	F	P				
Edge Mask					0-10	1	~XX61	0~10	F	P				
Freeze Screen					Unfreeze		~XX04	0	F	P				
					Freeze		~XX04	1	F	P				

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

ADDITIONAL INFORMATION

Level 2	Level 3	Level 4	Level 5	Level 6	Option / Value	Step	Write Command					Read Command				
							Command			Response		Command		Response		
							CMD	space	Set Para	Fail	Pass	CMD	space CMD Value	Fail	Pass	
Test Pattern					Off		~XX195		0	F	P					
					Green Grid		~XX195		3	F	P					
					Magenta Grid		~XX195		4	F	P					
					White Grid		~XX195		1	F	P					
					White		~XX195		2	F	P					
					Black		~XX195		11	F	P					
					Red		~XX195		5	F	P					
					Green		~XX195		6	F	P					
					Blue		~XX195		7	F	P					
					Yellow		~XX195		8	F	P					
					Magenta		~XX195		9	F	P					
					Cyan		~XX195		10	F	P					
					ANSI Contrast 4x4		~XX195		14	F	P					
					Color bar		~XX195		13	F	P					
					Full screen		~XX195		15	F	P					
PIP/PBP	Screen				Off		~XX302		0	F	P					
					PIP		~XX302		1	F	P					
					PBP		~XX302		2	F	P					
	Main Source				[no Signal]							~XX121	1	F	O k	0
					VGA		~XX12		5	F	P	~XX121	1	F	O k	2
					HDMI1		~XX12		1	F	P	~XX121	1	F	O k	7
					HDMI2		~XX12		15	F	P	~XX121	1	F	O k	8
					DVI-D		~XX12		2	F	P	~XX121	1	F	O k	1
					Display Port		~XX12		20	F	P	~XX121	1	F	O k	15
					3G-SDI		~XX12		22	F	P	~XX121	1	F	O k	18
					HDBaseT		~XX12		21	F	P	~XX121	1	F	O k	16
	Sub Source				[no Signal]							~XX131	1	F	O k	0
					VGA		~XX305		2	F	P	~XX131	1	F	O k	2
					HDMI1		~XX305		1	F	P	~XX131	1	F	O k	7
					HDMI2		~XX305		4	F	P	~XX131	1	F	O k	8
					DVI-D		~XX305		9	F	P	~XX131	1	F	O k	1
					Display Port		~XX305		17	F	P	~XX131	1	F	O k	15
					3G-SDI		~XX305		11	F	P	~XX131	1	F	O k	17
					HDBaseT		~XX305		10	F	P	~XX131	1	F	O k	16
	Swap						~XX306		1	F	P					
	Size				Small		~XX304		3	F	P					
					Medium		~XX304		2	F	P					
					Large		~XX304		1	F	P					
	Location				PBP, Main Left		~XX303		5	F	P					
					PBP, Main Top		~XX303		6	F	P					
					PBP, Main Right		~XX303		7	F	P					
					PBP, Main Bottom		~XX303		8	F	P					
					PIP, Bottom Right		~XX303		4	F	P					
					PIP, Bottom Left		~XX303		3	F	P					
					PIP, Top Left		~XX303		1	F	P					
					PIP, Top Right		~XX303		2	F	P					
Reset							~XX173		1	F	P					

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

ADDITIONAL INFORMATION

Main Menu:Input Settings

Level 2	Level 3	Level 4	Option / Value	Step	Write Command					Read Command				
					Command				Response	Command			Response	
					CMD	space	Set Para		Fail	Pass	CMD	space	CMD Value	Fail	Pass
Auto Source			Off		~XX563		0		F	P					
			On		~XX563		1		F	P					
Active Inputs			VGA		~XX408		5		F	P					
			HDMI1		~XX408		1		F	P					
			HDMI2		~XX408		15		F	P					
			DVI-D		~XX408		2		F	P					
			Display Port		~XX408		20		F	P					
			3G-SDI		~XX408		22		F	P					
			HDBaseT		~XX408		21		F	P					
Latency Adjustment			Normal		~XX220		0		F	P	~XX133	1		F	O k 0
			2D Ultra		~XX220		1		F	P	~XX133	1		F	O k 1
Backup Input	Auto Switch		Off		~XX264		0		F	P	~XX274	1		F	O k 0
			On		~XX264		1		F	P	~XX274	1		F	O k 1
	Current Signal		(read only)												
	First Input		HDMI1		~XX265		7		F	P	~XX275	1		F	O k 7
			HDMI2		~XX265		8		F	P	~XX275	1		F	O k 8
			HDBaseT		~XX265		16		F	P	~XX275	1		F	O k 16
			Display Port		~XX265		15		F	P	~XX275	1		F	O k 15
	Second Input		HDMI1		~XX266		7		F	P	~XX276	1		F	O k 7
			HDMI2		~XX266		8		F	P	~XX276	1		F	O k 8
			HDBaseT		~XX266		16		F	P	~XX276	1		F	O k 16
			Display Port		~XX266		15		F	P	~XX276	1		F	O k 15
	Backup Input Status		Active/Inactive (read only)								~XX277	1		F	O k 0=Inactive 1=Active
	Backup Input Change		Changed/No Change (read only)								~XX278	1		F	O k 0=No Change 1=Changed
	Backup Input Info.	Current Signal	(read only)								~XX279	1		F	O k a=0 None a=1 DVI a=2 VGA a=7 HDMI1 a=8 HDMI2 a=15 Display Port a=16 HDBaseT a=18 3G-SDI
		Backup Input Status	Active/Inactive (read only)								~XX277	1		F	O k 0=Inactive 1=Active
		Backup Input Change	Changed/No Change (read only)								~XX278	1		F	O k 0=No Change 1=Changed
		First Input	By First Input (read only)								~XX275	1		F	O k a=7 HDMI1 a=8 HDMI2 a=16 HDBaseT a=15 Display Port
		Resolution	(read only)												
		Horz Refresh	(read only)												
		Color Space	(read only)												

Level 2	Level 3	Level 4	Option / Value	Step	Write Command					Read Command				
					Command				Response	Command			Response	
					CMD	space	Set Para		Fail	Pass	CMD	space	CMD Value	Fail	Pass
		HDR	Yes/No (read only)												
		Second Input	By Second Input (read only)								~XX276	1		F	O k a=7 HDMI1 a=8 HDMI2 a=16 HDBaseT a=15 Display Port
		Resolution	(read only)												
		Horz Refresh	(read only)												
		Color Space	(read only)												
		HDR	Yes/No (read only)												
VGA	Phase		0-100	1	~XX74		0~100		F	P					
	Resolution		(read only)												
HDMI	Output		HDMI 1		~XX309		5		F	P					
			HDMI 2		~XX309		6		F	P					
	HDMI 1 EDID		1.4		~XX236		1		F	P					
			2		~XX236		2		F	P					
	HDMI 2 EDID		1.4		~XX237		1		F	P					
			2		~XX237		2		F	P					
HDBaseT	EDID		1.4		~XX238		1		F	P					
			2		~XX238		2		F	P					
Reset					~XX178		1		F	P					

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

ADDITIONAL INFORMATION

Main Menu:Device Setup

Level 2	Level 3	Level 4	Level 5	Option / Value	Step	Write Command				Read Command				
						Command			Response	Command			Response	
						CMD	space	Set Para.	Fail / Pass	CMD	space	CMD Value	Fail	Pass
Language				English		~XX70		1	F P					
				Deutsch		~XX70		2	F P					
				Français		~XX70		3	F P					
				Italiano		~XX70		4	F P					
				Español		~XX70		5	F P					
				Português		~XX70		6	F P					
				Polski		~XX70		7	F P					
				Nederlands		~XX70		8	F P					
				Norsk		~XX70		10	F P					
				繁體中文		~XX70		13	F P					
				簡体中文		~XX70		14	F P					
				日本語		~XX70		15	F P					
				한국어		~XX70		16	F P					
				Русский		~XX70		17	F P					
				Magyar		~XX70		18	F P					
				ไทย		~XX70		21	F P					
Projection	Ceiling			Auto		~XX523		3	F P					
				On		~XX523		2	F P					
				Off		~XX523		1	F P					
	Rear			Off		~XX524		0	F P					
				On		~XX524		1	F P					
Lens Settings	Focus			+ (icon)		~XX308		1	F P					
				- (icon)		~XX308		2	F P					
	Zoom			+ (icon)		~XX307		1	F P					
				- (icon)		~XX307		2	F P					
	Lens Shift			Up (icon)		~XX84		3	F P					
				Down (icon)		~XX84		4	F P					
				Left (icon)		~XX84		5	F P					
				Right (icon)		~XX84		6	F P					
	Lens Memory	Save Memory		Memory 1 - Memory 5		~XX360		1~5	F P					
		Apply Memory		Memory 1 - Memory 5		~XX359		1~5	F P					
		Clear Memory				~XX361		1	F P					
	Lens Calibration					~XX525		1	F P					
	Lens Lock			Lock		~XX349		1	F P	~XX545	4		F	O k 0
				Unlock		~XX349		2	F P	~XX545	4		F	O k 1
	Reset					~XX175		1	F P					
Active Image Setup	Active Focus					~XX308		3	F P	~XX222	1		F	O k a=0 Processing a=1 Adjustment success a=2~n Error
	Active Color Uniformity	Calibration				~XX261		1	F P	~XX225	1		F	O k a=0 Processing a=1 Adjustment success a=2~n Error
		Target Selection		Pop-up pattern										
		Reset				~XX261		9	F P					
Schedule	Date and Time			----/--/-- --:--						~XX243	1		F	O k YYYYMMDDhhmm202107051750
	Schedule Mode			Off		~XX284		0	F P	~XX244	1		F	O k 0
				On		~XX284		1	F P	~XX244	1		F	O k 1
	View Today			Monday / Tuesday / Wednesday / Thursday / Friday / Saturday / Sunday						~XX243	2		F	O k d=1=Monday d=2=Tuesday d=3=Wednesday d=4=Thursday d=5=Friday d=6=Saturday d=7=Sunday
	Monday / Tuesday /	Schedule Enable		Off		~XX284		0 ~n	F P					
				On		~XX284		1 ~n	F P					

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

ADDITIONAL INFORMATION

Level 2	Level 3	Level 4	Level 5	Option / Value	Step	Write Command				Read Command			
						Command			Response	Command		Response	
						CMD	space	Set Para.	Fail / Pass	CMD	space CMD Value	Fail	Pass
	Wednesday / Thursday / Friday / Saturday / Sunday	Event 01-16	Time	00:00 ~ 23:59		~XX471		dhhmmnnaabb	F P				
			Function	Off		~XX471		dhhmmnnaabb	F P				
				Power Settings		~XX471		dhhmmnnaabb	F P				
				Input Source		~XX471		dhhmmnnaabb	F P				
				Light Source Mode		~XX471		dhhmmnnaabb	F P				
				Shutter		~XX471		dhhmmnnaabb	F P				
			Event	Off		~XX471		dhhmmnnaabb	F P				
			(Function = Power Settings)	Power On		~XX471		dhhmmnnaabb	F P				
				Eco		~XX471		dhhmmnnaabb	F P				
				Active		~XX471		dhhmmnnaabb	F P				
				Communication		~XX471		dhhmmnnaabb	F P				
			(Function = Input Source)	VGA		~XX471		dhhmmnnaabb	F P				
				HDMI1		~XX471		dhhmmnnaabb	F P				
				HDMI2		~XX471		dhhmmnnaabb	F P				
				DVI-D		~XX471		dhhmmnnaabb	F P				
				Display Port		~XX471		dhhmmnnaabb	F P				
				3G-SDI		~XX471		dhhmmnnaabb	F P				
				HDBaseT		~XX471		dhhmmnnaabb	F P				
			(Function = Light Source Mode)	Normal Mode		~XX471		dhhmmnnaabb	F P				
				Eco Mode		~XX471		dhhmmnnaabb	F P				
				Custom Brightness		~XX471		dhhmmnnaabb	F P				
			(Function = Shutter)	Shutter On		~XX471		dhhmmnnaabb	F P				
				Shutter Off		~XX471		dhhmmnnaabb	F P				
			Reset			~XX472		n ~nn	F P				
		Copy Events To		Monday		~XX473		1 ~n	F P				
				Tuesday		~XX473		2 ~n	F P				
				Wednesday		~XX473		3 ~n	F P				
				Thursday		~XX473		4 ~n	F P				
				Friday		~XX473		5 ~n	F P				
				Saturday		~XX473		6 ~n	F P				
				Sunday		~XX473		7 ~n	F P				
		Reset the Day				~XX471		9 ~n	F P				
	Reset Schedule					~XX284		9	F P				
Date and Time	Clock Mode			Use NTP Server		~XX474		1	F P				
				Manual		~XX474		3	F P				
	Date			2000 ~ 2037 (Year)		~XX475		nnnn	F P				
				01 ~ 12 (Month)		~XX476		nn	F P				
				01 ~ 31 (Day)		~XX477		nn	F P				
	Time			00 ~ 23 (Hour)		~XX478		nn	F P				
				00 ~ 59 (Minute)		~XX479		nn	F P				
	Daylight Saving Time			Off		~XX480		0	F P				
				On		~XX480		1	F P				
	NTP Server			time.google.com		~XX481		1	F P				
				asia.pool.ntp.org		~XX481		2	F P				
				europe.pool.ntp.org		~XX481		3	F P				
				north-america.pool.ntp.org		~XX481		4	F P				
	Time Zone			UTC+14:00		~XX482		1	F P				
				UTC+13:00		~XX482		2	F P				
				UTC+12:45		~XX482		3	F P				
				UTC+12:00		~XX482		4	F P				
				UTC+11:00		~XX482		5	F P				
				UTC+10:30		~XX482		6	F P				
				UTC+10:00		~XX482		7	F P				
				UTC+09:30		~XX482		8	F P				
				UTC+09:00		~XX482		9	F P				
				UTC+08:45		~XX482		10	F P				
				UTC+08:00		~XX482		11	F P				

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

ADDITIONAL INFORMATION

Level 2	Level 3	Level 4	Level 5	Option / Value	Step	Write Command					Read Command				
						Command			Response		Command			Response	
						CMD	space	Set Para.	Fail	Pass	CMD	space	CMD Value	Fail	Pass
				UTC+07:00		~XX482		12	F	P					
				UTC+06:30		~XX482		13	F	P					
				UTC+06:00		~XX482		14	F	P					
				UTC+05:45		~XX482		15	F	P					
				UTC+05:30		~XX482		16	F	P					
				UTC+05:00		~XX482		17	F	P					
				UTC+04:30		~XX482		18	F	P					
				UTC+04:00		~XX482		19	F	P					
				UTC+03:30		~XX482		20	F	P					
				UTC+03:00		~XX482		21	F	P					
				UTC+02:00		~XX482		22	F	P					
				UTC+01:00		~XX482		23	F	P					
				UTC+00:00		~XX482		24	F	P					
				UTC-01:00		~XX482		25	F	P					
				UTC-02:00		~XX482		26	F	P					
				UTC-03:00		~XX482		27	F	P					
				UTC-03:30		~XX482		28	F	P					
				UTC-04:00		~XX482		29	F	P					
				UTC-05:00		~XX482		30	F	P					
				UTC-06:00		~XX482		31	F	P					
				UTC-07:00		~XX482		32	F	P					
				UTC-08:00		~XX482		33	F	P					
				UTC-09:00		~XX482		34	F	P					
				UTC-09:30		~XX482		35	F	P					
				UTC-10:00		~XX482		36	F	P					
				UTC-11:00		~XX482		37	F	P					
				UTC-12:00		~XX482		38	F	P					
	Update Interval			Hourly		~XX483		1	F	P					
				Daily		~XX483		3	F	P					
	Apply					~XX484		1	F	P					
Power Settings	Power Mode (Standby)			Eco		~XX114		0	F	P	~XX150	16	F	O k	0
				Active		~XX114		1	F	P	~XX150	16	F	O k	1
				Communication		~XX114		3	F	P	~XX150	16	F	O k	3
	Signal Power On			Off		~XX113		0	F	P					
				On		~XX113		1	F	P					
	Auto Power Off			0-180 m	5m	~XX106		0~180	F	P					
	Sleep Timer			0-16 h	0.5h	~XX107		0~16	F	P					
	12V Trigger			Off		~XX192		0	F	P					
				On		~XX192		1	F	P					
	Reset					~XX177		1	F	P					
Light Source Settings	Light Source Mode			Normal		~XX110		1	F	P					
				Eco Mode		~XX110		2	F	P					
				Custom Power		~XX110		9	F	P					
	Custom Brightness	Brightness Level		30%-100%	1%	~XX326		30~100	F	P					
		Constant Brightness		Off		~XX522		0	F	P	~XX242	1	F	O k	0
				On		~XX522		1	F	P	~XX242	1	F	O k	1
Shutter	Fade-In			0.5 -5s	0.5s	~XX267		1~10	F	P					
	Fade-Out			0.5 -5s	0.5s	~XX268		1~10	F	P					
	Startup			Shutter Off		~XX269		0	F	P					
				Shutter On		~XX269		1	F	P					
Security	Security			Off		~XX78		0 ~nnnn	F	P					
				On		~XX78		1 ~nnnn	F	P					
	Security Timer	Month		0-35		~XX537		00~35	F	P	~XX544	1	F	O k	00~35
		Day		0-29		~XX538		00~29	F	P	~XX544	2	F	O k	00~29
		Hour		0-23		~XX539		00~23	F	P	~XX544	3	F	O k	00~23
						~XX77		MMDDHH	F	P					
	Change Password					~XX406		nnnn ~nnnn	F	P					
On Screen Display	Menu Location			Top Left		~XX72		1	F	P					
				Top Right		~XX72		2	F	P					

Level 2	Level 3	Level 4	Level 5	Option / Value	Step	Write Command					Read Command				
						Command			Response		Command			Response	
						CMD	space	Set Para.	Fail	Pass	CMD	space	CMD Value	Fail	Pass
				Center		~XX72		3	F	P					
				Bottom Left		~XX72		4	F	P					
				Bottom Right		~XX72		5	F	P					
	Menu Transparency			0-9		~XX526		0~9	F	P					
	Menu Timer			Off		~XX515		0	F	P					
				5s		~XX515		1	F	P					
				10s		~XX515		3	F	P					
				15s		~XX515		4	F	P					
				30s		~XX515		5	F	P					
				60s		~XX515		6	F	P					
	Information Hide			Off		~XX102		0	F	P					
				On		~XX102		1	F	P					
	Background			Blue		~XX104		1	F	P					
				Black		~XX104		0	F	P					
				White		~XX104		5	F	P					
				Logo		~XX104		7	F	P					
Logo Setup	Change Logo			Default Logo		~XX82		1	F	P					
				Neutral		~XX82		3	F	P					
				User Logo		~XX82		4	F	P					
				Captured Logo		~XX82		2	F	P					
	Logo Capture					~XX83		1	F	P					
	Delete Logo	Captured Logo				~XX407		1	F	P					
		User Logo				~XX407		2	F	P					
Backlight	Keypad			Off		~XX362		0	F	P					
				On		~XX362		1	F	P					
	Power Key			Off		~XX362		3	F	P					
				On		~XX362		4	F	P					
High Altitude				Off		~XX101		0	F	P	~XX150	22	F	O k	0
				On		~XX101		1	F	P	~XX150	22	F	O k	1
User Data	Save All Settings			Memory 1 - Memory 5		~XX258		1~5	F	P					
	Load All Settings			Memory 1 - Memory 5		~XX259		1~5	F	P					
System Update (FOTA)	Auto			Off		~XX168		0	F	P					
				On		~XX168		1	F	P					
	Auto Download			Off		~XX168		3	F	P					
				On		~XX168		4	F	P					
	Update					~XX168		9	F	P					
Reset	Reset OSD					~XX546		1	F	P					
	Reset to Default					~XX112		1	F	P					
	Reset Selective	Image				~XX509		1	F	P					
		Display				~XX173		1	F	P					
		Input				~XX178		1	F	P					
		Communication				~XX176		1	F	P					
		Setup				~XX179		1	F	P					

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

ADDITIONAL INFORMATION

Main Menu: Communication

Level 2	Level 3	Level 4	Option / Value	Step	Write Command				Read Command			
					Command		Response		Command		Response	
					CMD	Set Para.	Fail	Pass	CMD	Fail	Pass	
Projector ID			0-99		~XX79	00~99	F	P	~XX558	1	F	O k 00~99
Remote Setup	Remote Code		0-99		~XX350	00~99	F	P	~XX138	1	F	O k 0~9
	Quick Switch Code		Off		~XX314	0	F	P	~XX138	3	F	O k 0
			1~9		~XX314	0~9	F	P	~XX138	3	F	O k 0~9
	IR Function	Front	Off		~XX11	4	F	P	~XX542	1	F	O k 0
			On		~XX11	5	F	P	~XX542	1	F	O k 1
		Top	Off		~XX11	6	F	P	~XX542	2	F	O k 0
			On		~XX11	7	F	P	~XX542	2	F	O k 1
		HDBaseT	Off		~XX11	10	F	P	~XX542	3	F	O k 0
			On		~XX11	9	F	P	~XX542	3	F	O k 1
	User 1		Freeze Screen		~XX117	1	F	P				
			Blank Screen		~XX117	2	F	P				
			PIP/PBP		~XX117	3	F	P				
			Aspect Ratio		~XX117	4	F	P				
			Information Hide		~XX117	5	F	P				
			Network setup		~XX117	6	F	P				
			Projector ID		~XX117	7	F	P				
			Color Matching		~XX117	8	F	P				
			Reset Selective		~XX117	9	F	P				
	User 2		Freeze Screen		~XX118	1	F	P				
			Blank Screen		~XX118	2	F	P				
			PIP/PBP		~XX118	3	F	P				
			Aspect Ratio		~XX118	4	F	P				
			Information Hide		~XX118	5	F	P				
			Network setup		~XX118	6	F	P				
			Projector ID		~XX118	7	F	P				
			Color Matching		~XX118	8	F	P				
			Reset Selective		~XX118	9	F	P				
Network Setup	LAN Interface		RJ-45		~XX460	1	F	P				
			HDBaseT		~XX460	2	F	P				
	MAC Address		(read only)						~XX555	1	F	O k nn:nn:nn:nn:nn:nn
	Network Status		(read only) Connected						~XX87	1	F	O k 1
			(read only) Disconnected						~XX87	1	F	O k 0
	DHCP		Off		~XX461	0	F	P	~XX150	17	F	O k 0
			On		~XX461	1	F	P	~XX150	17	F	O k 1
	IP Address		---.---.---.---						~XX87	3	F	O k nn:nn:nn:nn:nn:nn
	Subnet Mask		---.---.---.---									
	Gateway		---.---.---.---									
	DNS		---.---.---.---									
	Apply				~XX462	9	F	P				
	Network Reset				~XX462	1	F	P				
Email Notification	Email 1											
			Email 1 Address (read only)						~XX443	1	F	O k n@nnnn.nnnn.nnnn
	Email 2											

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

ADDITIONAL INFORMATION

Level 2	Level 3	Level 4	Option / Value	Step	Write Command				Read Command				
					Command			Response	Command			Response	
					CMD	space	Set Para.	Fail / Pass	CMD	space	CMD Value	Fail	Pass
			Email 1 Address (read only)						~XX443	2		F	O k n@nnnn.nnnn.nnnn
	Event												
	Fan Error		Off/Email		~XX463		2/1	F P					
	Power On/Off		Off/Email		~XX463		4/3	F P					
	Video Loss		Off/Email		~XX463		6/5	F P					
	Laser		Off/Email		~XX463		8/7	F P					
	Reset				~XX464		1	F P					
Control	Crestron		Off		~XX454		0	F P					
			On		~XX454		1	F P					
	IP Address		---.---.---.---		~XX465		1 ~nnn.nnn.nnn.nnn	F P					
	IPID		2-255		~XX466		1 ~nnn	F P					
	Port		0~65535		~XX467		1 ~nnnnn	F P					
	Crestron Setup Apply				~XX454		9	F P					
	PJ Link		Off		~XX456		0	F P					
			On		~XX456		1	F P					
	Authentication		Off		~XX468		0	F P					
			On		~XX468		1	F P					
	Password		(read only)		~XX470		nn...n (20 charactors)	F P	~XX440	1		F	O k nn...n (20 charactors)
	Service		---.---.---.---		~XX469		1 ~nnn.nnn.nnn.nnn	F P					
	PJ Link Setup Apply				~XX456		9	F P					
	Extron		Off		~XX455		0	F P					
			On		~XX455		1	F P					
	AMX		Off		~XX457		0	F P					
			On		~XX457		1	F P					
	Telnet		Off		~XX458		0	F P					
			On		~XX458		1	F P					
	HTTP		Off		~XX459		0	F P					
			On		~XX459		1	F P					
	Reset				~XX181		1	F P					
Baud Rate	Serial Port In		1200						~XX153	1		F	O k 1200
			2400						~XX153	1		F	O k 2400
			4800						~XX153	1		F	O k 4800
			9600						~XX153	1		F	O k 9600
			19200						~XX153	1		F	O k 19200
			38400						~XX153	1		F	O k 38400
			57600						~XX153	1		F	O k 57600
			115200						~XX153	1		F	O k 115200
	Serial Port Out		1200						~XX153	3		F	O k 1200
			2400						~XX153	3		F	O k 2400
			4800						~XX153	3		F	O k 4800
			9600						~XX153	3		F	O k 9600
			19200						~XX153	3		F	O k 19200
			38400						~XX153	3		F	O k 38400
			57600						~XX153	3		F	O k 57600
			115200						~XX153	3		F	O k 115200
Reset					~XX176		1	F P					

Main Menu: Information

Level 2	Level 3	Level 4	Level 5	Option / Value	Step	Write Command				Read Command				
						Command			Response	Command			Response	
						CMD	space	Set Para.	Fail / Pass	CMD	space	CMD Value	Fail	Pass
Device	Regulatory									~XX151	3		F	O k nnnnnnnn
	Serial Number									~XX353	1		F	O k nnnnnnnnnnnnnnn
	Projection Hours									~XX150	21		F	O k nnnnn (nnnnn= hour digits)
System Status	Standby Mode													
	Light Source Mode													
	Light Source Hours									~XX108	1		F	O k nnnnn (nnnnn= hour digits)
	Total Hours									~XX108	1		F	O k nnnnn (nnnnn= hour digits)
	Normal									~XX108	3		F	O k nnnnn (nnnnn= hour digits)
	Eco Mode									~XX108	4		F	O k nnnnn (nnnnn= hour digits)
	Custom Power									~XX108	7		F	O k nnnnn (nnnnn= hour digits)
	Temperature									~XX150	18		F	O k nnn..nn (e.g. Ok48)
	AC Voltage													
Communication	Projector ID					~XX79		00~99	F P	~XX558	1		F	O k 00~99
	Remote Code					~XX350		00~99	F P	~XX138	1		F	O k 0~9
Firmware Version	Main Version									~XX122	1		F	O k nnnnnnn (FW)+

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ADDITIONAL INFORMATION

Other RS232

Level 1	Level 2	Level 3		Write Command					Read Command				
				Command			Response		Command			Response	
				CMD	space	Set Para.	Fail		CMD	space	CMD Value	Fail	Pass
Other Items													
Power Off				~XX00	0		F		~XX124	1		F	O k 0
Power On				~XX00	1		F		~XX124	1		F	O k 1
Re-Sync				~XX01	1		F						
AV Mute	Off			~XX02	0		F		~XX355	1		F	O k 0
	On			~XX02	1		F		~XX355	1		F	O k 1
Freeze	Unfreeze			~XX04	0		F						
	Freeze			~XX04	1		F						
3D Sync Out	To Emitter			~XX232	0		F						
	To Next Projector			~XX232	1		F						
3D Frame Delay	1~200			~XX233	1~nnn		F						
Output 3D state	2D								~XX130	1		F	O k 0
	3D								~XX130	1		F	O k 1
System Auto Send	Standby Mode												I N F O 0
	Warming up												I N F O 1
	Cooling Down												I N F O 2
	Out of Range												I N F O 3
	lightsource Fail (LED Fail)												I N F O 4
	Thermal Switch Error												I N F O 5
	Fan Lock												I N F O 6
	Over Temperature												I N F O 7
	LightSource Hours Running Out												I N F O 8
	Cover Open												I N F O 9
	lightsource Ignite Fail												I N F O 10
	Format Board Power On Fail												I N F O 11
	Color Wheel Unexpected Stop												I N F O 12
	Over Temperature												I N F O 13
	FAN 1 Lock												I N F O 14
	FAN 2 Lock												I N F O 15
	FAN 3 Lock												I N F O 16
	FAN 4 Lock												I N F O 17
	FAN 5 Lock												I N F O 18
	LAN fail then restart												I N F O 19
	LD lower than 60%												I N F O 20
	LD NTC (1) Over Temperature												I N F O 21
	LD NTC (2) Over Temperature												I N F O 22
	High Ambient Temperature												I N F O 23
	System Ready												I N F O 24
													I N F O 25
	FAN 6 Lock												I N F O 26
	FAN 7 Lock												I N F O 27
	FAN 8 Lock												I N F O 28
	FAN 9 Lock												I N F O 29
	FAN 10 Lock												I N F O 30
	FAN 11 Lock												I N F O 31
	FAN 12 Lock												I N F O 32
	FAN 13 Lock												I N F O 33
	FAN 14 Lock												I N F O 34
System Temperature Level	Green/Normal								~XX155	1		F	O k 1
	Orange/Notice								~XX155	1		F	O k 2
	Red/Warning. About to trigger shutdown								~XX155	1		F	O k 3
Fan Status Level	Green/Normal								~XX159	1		F	O k 1
	Orange/Notice								~XX159	1		F	O k 2

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

ADDITIONAL INFORMATION

Level 1	Level 2	Level 3		Write Command				Read Command				
				Command			Response	Command			Response	
				CMD	space	Set Para.	Fail	CMD	space	CMD Value	Fail	Pass
	Red/Warning. About to trigger shutdown							~XX159	1		F	O k 3
Device Type	Projector							~XX149	1		F	O k 1
Model Name	Optoma SVGA							~XX151	1		F	O k 1
	Optoma XGA							~XX151	1		F	O k 2
	Optoma WXGA							~XX151	1		F	O k 3
	Optoma 1080P							~XX151	1		F	O k 4
	Optoma WUXGA							~XX151	1		F	O k 5
	Optoma UHD							~XX151	1		F	O k 6
Camera Status								~XX221	1		F	O k a=0 Camera disconnect
												a=1 Camera supported
OSD Lock	On			~XX239		1 ~nnnnnnnn	F	~XX229	1		F	O k 1
	Off			~XX239		2 ~nnnnnnnn	F	~XX229	1		F	O k 0
Regulatory Model								~XX151	3		F	O k
RS232 Version No								~XX152	1		F	O k nnnnnnn (RS232 Version No)
Software Version								~XX122	1		F	O k nnnnnnn (Software Version)
LAN FW version								~XX357	1		F	O k nnnnnnn (LAN FW version)
Fan Speed	Fan 1 Speed	0000~9999						~XX351	1		F	O k 0000~9999
	Fan 2 Speed	0000~9999						~XX351	2		F	O k 0000~9999
	Fan 3 Speed	0000~9999						~XX351	3		F	O k 0000~9999
	Fan 4 Speed	0000~9999						~XX351	4		F	O k 0000~9999
	Fan 5 Speed	0000~9999						~XX351	5		F	O k 0000~9999
	Fan 6 Speed	0000~9999						~XX351	6		F	O k 0000~9999
	Fan 7 Speed	0000~9999						~XX351	7		F	O k 0000~9999
	Fan 8 Speed	0000~9999						~XX351	8		F	O k 0000~9999
	Fan 9 Speed	0000~9999						~XX351	9		F	O k 0000~9999
	Fan 10 Speed	0000~9999						~XX351	10		F	O k 0000~9999
	Fan 11 Speed	0000~9999						~XX351	11		F	O k 0000~9999
	Fan 12 Speed	0000~9999						~XX351	12		F	O k 0000~9999
	Fan 13 Speed	0000~9999						~XX351	13		F	O k 0000~9999
	Fan 14 Speed	0000~9999						~XX351	10		F	O k 0000~9999
System Temperature								~XX352	1		F	O k 0000~9999
Information	Info String							~XX150	1		F	O k abbbbbccddddee (Note*1)
	Native Resolution							~XX150	2		F	O k nnn..nn (e.g. Ok1920x1080)
	Main Source							~XX150	3		F	O k nnn..nn (e.g. OkHDMI)
	- Resolution							~XX150	4		F	O k nnn..nn (e.g.Ok1920x1080)
	- Signal Format							~XX150	5		F	O k nnn..nn
	- Pixel Clock							~XX150	6		F	O k nnn..nn
	- Horz Refresh							~XX150	7		F	O k nnn..nn
	- Vert Refresh							~XX150	8		F	O k nnn..nn
	Sub Source							~XX150	9		F	O k nnn..nn
	- Resolution							~XX150	10		F	O k nnn..nn (e.g. Ok1920x1080)
	- Signal Format							~XX150	11		F	O k nnn..nn (e.g. OkHDMI)
	- Pixel Clock							~XX150	12		F	O k nnn..nn
	- Horz Refresh							~XX150	13		F	O k nnn..nn
	- Vert Refresh							~XX150	14		F	O k nnn..nn
	Light Source Mode							~XX150	15		F	O k nnn..nn
	Standby Power Mode	Active						~XX150	16		F	O k 1
		Eco.						~XX150	16		F	O k 0
		Communication						~XX150	16		F	O k 3
	DHCP	Off						~XX150	17		F	O k 0
		On						~XX150	17		F	O k 1
	System Temperature							~XX150	18		F	O k nnn..nn (e.g. Ok48)
	Refresh rate							~XX150	19		F	O k nnn..nn (e.g. Ok60Hz)
Source Lock	On			~XX100		0	F					
	Off			~XX100		1	F					
Display message on the OSD				~XX210		nn...n (50 charactors)	F					
Filter Wheel Index				~XX528		0000~9999	F	~XX530	1		F	O k 0000~9999

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

ADDITIONAL INFORMATION

Level 1	Level 2	Level 3		Write Command				Read Command				
				Command			Response	Command			Response	
				CMD	space	Set Para.	Fail	CMD	space	CMD Value	Fail	Pass
Phosphor Wheel Index				~XX529		0000~9999	F	~XX531		1	F	O k 0000~9999
Remote Control Simulation												
Power				~XX140		1	F					
Power Off				~XX140		2	F					
Up				~XX140		10	F					
Left				~XX140		11	F					
Enter (for projection MENU)				~XX140		12	F					
Right				~XX140		13	F					
Down				~XX140		14	F					
V Keystone +				~XX140		15	F					
V Keystone -				~XX140		16	F					
Brightness				~XX140		19	F					
Menu				~XX140		20	F					
DVI-D				~XX140		22	F					
VGA-1				~XX140		23	F					
AV Mute				~XX140		24	F					
Contrast				~XX140		28	F					
Zoom +				~XX140		32	F					
Zoom -				~XX140		33	F					
Focus +				~XX140		34	F					
Focus -				~XX140		35	F					
Mode				~XX140		36	F					
info				~XX140		40	F					
Re-sync				~XX140		41	F					
HDMI 1				~XX140		42	F					
HDMI 2				~XX140		43	F					
Source				~XX140		47	F					
1				~XX140		51	F					
2				~XX140		52	F					
3				~XX140		53	F					
4				~XX140		54	F					
5				~XX140		55	F					
6				~XX140		56	F					
7				~XX140		57	F					
8				~XX140		58	F					
9				~XX140		59	F					
0				~XX140		60	F					
Gamma				~XX140		61	F					
PIP				~XX140		63	F					
Lens H(left)				~XX140		64	F					
Lens H(Right)				~XX140		65	F					
Lens V(left)				~XX140		66	F					
Lens V(Right)				~XX140		67	F					
H Keystone +				~XX140		68	F					
H Keystone -				~XX140		69	F					
Hot Key (user1)(F1)				~XX140		70	F					
Hot Key (user2)(F2)				~XX140		71	F					
Pattern				~XX140		73	F					
Exit				~XX140		74	F					
Display Port				~XX140		76	F					
Mute				~XX140		77	F					
Return				~XX140		82	F					

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

Optoma global offices

For service or support, please contact your local office.

USA

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

888-289-6786
510-897-8601
services@optoma.com

Canada

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

888-289-6786
510-897-8601
services@optoma.com

Latin America

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

888-289-6786
510-897-8601
services@optoma.com

Europe

Unit 1, Network 41, Bourne End Mills
Hemel Hempstead, Herts,
HP1 2UJ, United Kingdom
www.optoma.eu
Service Tel : +44 (0)1923 691865

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

Benelux BV

Randstad 22-123
1316 BW Almere
The Netherlands
www.optoma.nl

+31 (0) 36 820 0252
+31 (0) 36 548 9052

France

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

+33 1 41 46 12 20
+33 1 41 46 94 35
savoptoma@optoma.fr

Spain

C/ José Hierro,36 Of. 1C
28522 Rivas VaciaMadrid,
Spain

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

Deutschland

Am Nordpark 3
41069 Mönchengladbach
Germany

+49 (0) 2161 68643 0
+49 (0) 2161 68643 99
info@optoma.de

Scandinavia

Lerpeveien 25
3040 Drammen
Norway

+47 32 98 89 90
+47 32 98 89 99
info@optoma.no

PO.BOX 9515
3038 Drammen
Norway

Korea

WOOMI TECH.CO.,LTD.
4F, Minu Bldg.33-14, Kangnam-Ku,
Seoul,135-815, KOREA
korea.optoma.com

+82+2+34430004
+82+2+34430005

Japan

東京都足立区綾瀬 3-25-18
株式会社オーエス
コンタクトセンター: 0120-380-495

info@os-worldwide.com
www.os-worldwide.com

Taiwan

12F., No.213, Sec. 3, Beixin Rd.,
Xindian Dist., New Taipei City 231,
Taiwan, R.O.C.
www.optoma.com.tw

+886-2-8911-8600
+886-2-8911-6550
services@optoma.com.tw
asia.optoma.com

Hong Kong

Unit A, 27/F Dragon Centre,
79 Wing Hong Street,
Cheung Sha Wan,
Kowloon, Hong Kong

+852-2396-8968
+852-2370-1222
www.optoma.com.hk

China

5F, No. 1205, Kaixuan Rd.,
Changning District
Shanghai, 200052, China

+86-21-62947376
+86-21-62947375
www.optoma.com.cn