**Optoma**



4K ULTRA HD™   HDMI™ HIGH DEFINITION MULTIMEDIA INTERFACE   DLP TEXAS INSTRUMENTS   4K UHD   HDR Compatible

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# SAFETY

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

Please follow all warnings, precautions and maintenance as recommended in this user's guide.

**CAUTION**

**ELECTRIC SHOCK**
Keep ground wire connected
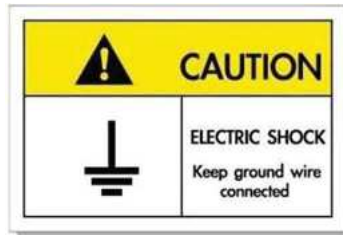
To avoid electric shock, the unit and its peripherals must be properly grounded (earthed).

## Important Safety Instruction

- Do not block any ventilation openings. To ensure reliable operation of the projector and to protect from over heating, it is recommended to install the projector in a location that does not block ventilation. As an example, do not place the projector on a crowded coffee table, sofa, bed, etc. Do not put the projector in an enclosure such as a book case or a cabinet that restricts air flow.

- To reduce the risk of fire and/or electric shock, do not expose the projector to rain or moisture. Do not install near heat sources such as radiators, heaters, stoves or any other apparatus such as amplifiers that emits heat.

- Do not let objects or liquids enter the projector. They may touch dangerous voltage points and short out parts that could result in fire or electric shock.

- Do not use under the following conditions:
    - In extremely hot, cold or humid environments.
        - (i) Ensure that the ambient room temperature is within 0°C ~ 40°C
        - (ii) Relative humidity is 10% ~ 85%
    - In areas susceptible to excessive dust and dirt.
    - Near any appliance generating a strong magnetic field.
    - In direct sunlight.

- Do not use the projector in places where flammable gases or explosives gases may be present in the atmosphere. The lamp inside the projector becomes very hot during operation and the gases may ignite and result in a fire.

- Do not use the unit if it has been physically damaged or abused. Physical damage/abuse would be (but not limited to):
    - Unit has been dropped.
    - Power supply cord or plug has been damaged.
    - Liquid has been spilled on to the projector.
    - Projector has been exposed to rain or moisture.
    - Something has fallen in the projector or something is loose inside.

- Do not place the projector on an unstable surface. The projector may fall over resulting in injury or the projector may become damaged.

- Do not block the light coming out of the projector lens when in operation. The light will heat the object and could melt, cause burns or start a fire.

- Please do not open or disassemble the projector as this may cause electric shock.

- Do not attempt to service the unit yourself. Opening or removing covers may expose you to dangerous voltages or other hazards. Please call Optoma before you send the unit for repair.

- See projector enclosure for safety related markings.

- The unit should only be repaired by appropriate service personnel.

- Only use attachments/accessories specified by the manufacturer.

- Do not look into 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 display housing. Do not use abrasive cleaners, waxes or solvents to clean the unit.

- Disconnect the power plug from AC outlet if the product is not being used for a long period of time.

- *Do not setup the projector in places where it might be subjected to vibration or shock.*

- *Do not touch the lens with bare hands.*

- *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.*

- *Use a power strip and or surge protector. As power outages and brown-outs can KILL devices*.

## Cleaning the Lens

- Before cleaning the lens, be sure to turn off the projector and unplug the power cord to allow it to completely cool down.

- Use a compressed air tank to remove the dust.

- Use a special cloth for cleaning lens and gently wipe the lens. Do not touch the lens with your fingers.

- Do not use alkaline/acid detergents or volatile solvents such as alcohol for cleaning lens. If the lens is damaged due to the cleaning process, it is not covered by the warranty.

⚠ Warning: Do not use a spray containing flammable gases to remove dust or dirt from the lens. This may cause a fire due to excessive heat inside the projector.

⚠ Warning: Do not clean the lens if the projector is warming up as this may cause the lens' surface film to peel off.

⚠ Warning: Do not wipe or tap the lens with a hard object.

## 3D Safety Information

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

**Warning**

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

# Photosensitive Seizure Warning and Other Health Risks

- Some viewers may experience an epileptic seizure or stroke when exposed to certain flashing images or lights contained in certain Projector pictures or video games. If you suffer from, or have a family history of epilepsy or strokes, please consult with a medical specialist before using the 3D function.

- Even those without a personal or family history of epilepsy or stroke may have an undiagnosed condition that can cause photosensitive epileptic seizures.

- Pregnant women, the elderly, sufferers of serious medical conditions, those who are sleep deprived or under the influence of alcohol should avoid utilizing the unit's 3D functionality.

- If you experience any of the following symptoms, stop viewing 3D pictures immediately and consult a medical specialist: (1) altered vision; (2) light-headedness; (3) dizziness; (4) involuntary movements such as eye or muscle twitching; (5) confusion; (6) nausea; (7) loss of awareness; (8) convulsions; (9) cramps; and/ or (10) disorientation. Children and teenagers may be more likely than adults to experience these symptoms. Parents should monitor their children and ask whether they are experiencing these symptoms.

- Watching 3D projection may also cause motion sickness, perceptual after effects, disorientation, eye strain and decreased postural stability. It is recommended that users take frequent breaks to lessen the potential of these effects. If your eyes show signs of fatigue or dryness or if you have any of the above symptoms, immediately discontinue use of this device and do not resume using it for at least thirty minutes after the symptoms have subsided.

- Watching 3D projection while sitting too close to the screen for an extended period of time may damage your eyesight. The ideal viewing distance should be at least three times the screen height. It is recommended that the viewer's eyes are level with the screen.

- Watching 3D projection while wearing 3D glasses for an extended period of time may cause a headache or fatigue. If you experience a headache, fatigue or dizziness, stop viewing the 3D projection and rest.

- Do not use the 3D glasses for any other purpose than for watching 3D projection.

- Wearing the 3D glasses for any other purpose (as general spectacles, sunglasses, protective goggles, etc.) may be physically harmful to you and may weaken your eyesight.

- Viewing in 3D projection may cause disorientation for some viewers. Accordingly, DO NOT place your 3D PROJECTOR near open stairwells, cables, balconies, or other objects that can be tripped over, run into, knocked down, broken or fallen over.

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## FCC

This device has been tested and found to comply with the limits for a Class B 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 B digital apparatus complies with Canadian ICES-003.

Remarque à l'intention des utilisateurs canadiens

Cet appareil numerique de la classe B est conforme a la norme NMB-003 du Canada.

# Declaration of Conformity for EU countries

- EMC Directive 2014/30/EC (including amendments)
- Low Voltage Directive 2014/35/EC
- RED 2014/53/EU (if product has RF function)

# WEEE

**Disposal instructions**

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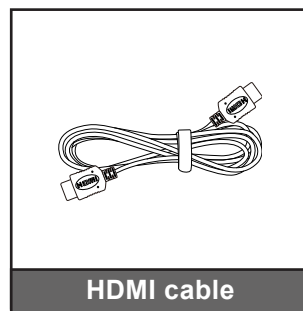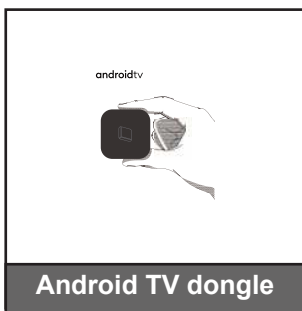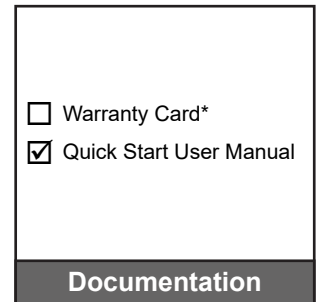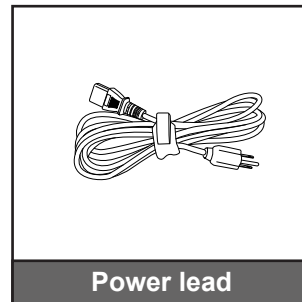
# INTRODUCTION

## Package Overview

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

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

## Accessories

| | | | |
|---|---|---|---|
| **Projector** | **Remote control** | **Power lead** | ☐ Warranty Card*<br>☑ Quick Start User Manual<br>**Documentation** |
| **Android TV dongle** | **HDMI cable** | | |
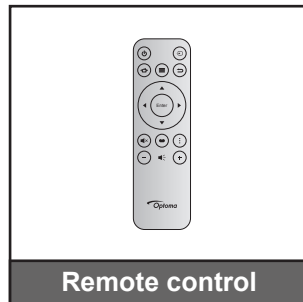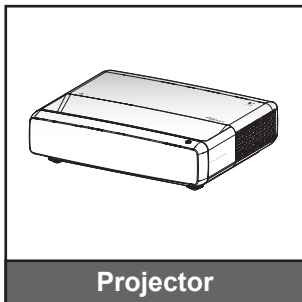
**Note:**

- *The remote control, Android TV Dongle, and HDMI cable may vary depending on the region and model.*
- *\* For warranty Information, please visit https://www.optoma.com/support/download.*

# INTRODUCTION

## Optional accessories

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

## Product Overview
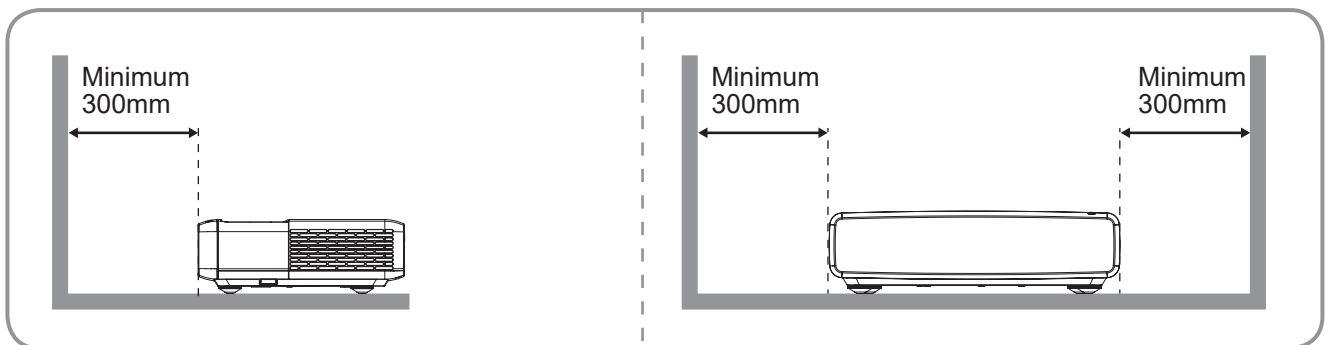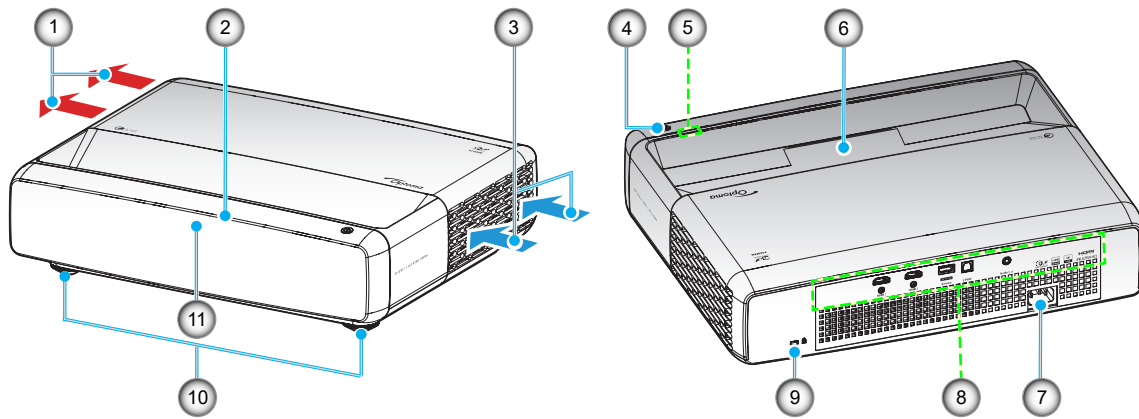




**Note:**

- *Do not block projector intake and exhaust vents.*
- *When operating the projector in an enclosed space, allow at least 30cm (12") clearance around the intake and exhaust vents.*

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

# INTRODUCTION

## Connections
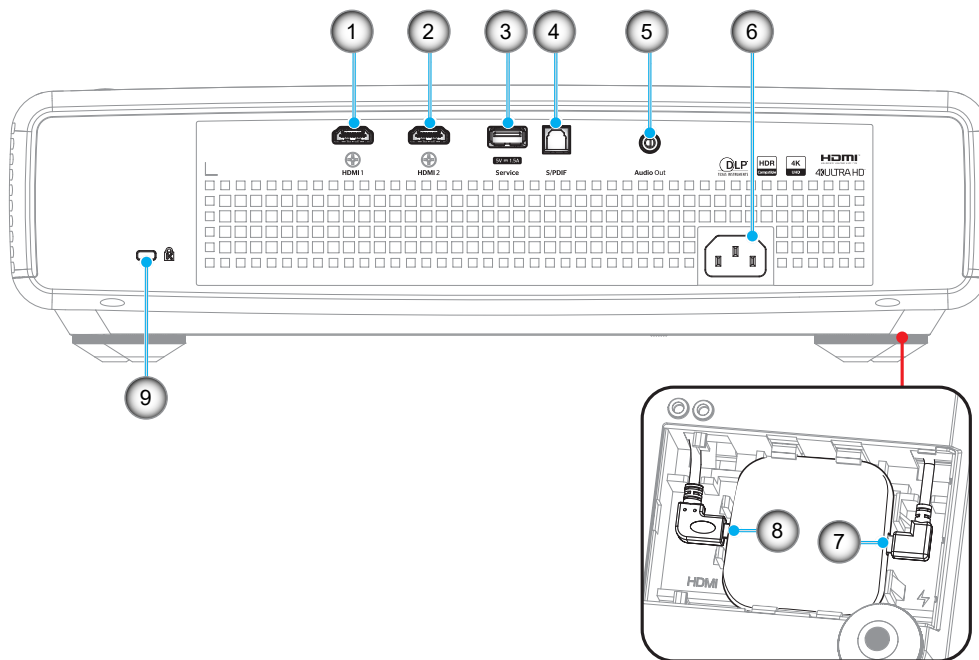


| No | Item |
|----|------|
| 1. | HDMI 1 Connector (4K 60Hz) |
| 2. | HDMI 2 Connector (4K 60Hz) |
| 3. | USB Power OUT (5V/1.5A) Connector(*) |
| 4. | S/PDIF Connector (PCM 2-channel) |
| 5. | Audio Out Connector |

| No | Item |
|----|------|
| 6. | Power Socket |
| 7. | USB Power Out (5V/1.5A) (micro USB connector for Android TV dongle) |
| 8. | HDMI 3 Connector (micro HDMI connector for ATV dongle) |
| 9 | Kensington™ Lock Port |
| | |

**Note:** *(*) Not recommended for charging a cell phone.*

## Keypad and LED indicators
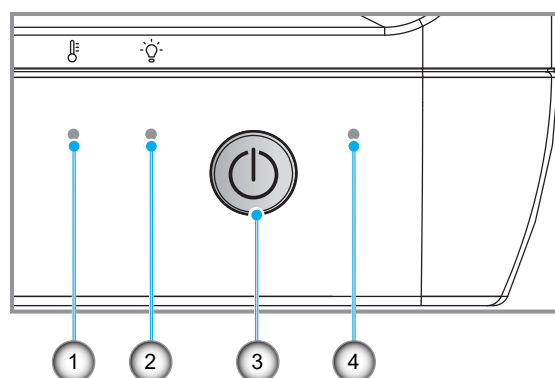


| No | Item |
|----|------|
| 1. | Temp LED |
| 2. | Light Source LED |

| No | Item |
|----|------|
| 3. | Power Button |
| 4. | Power LED |

# INTRODUCTION

## Remote control
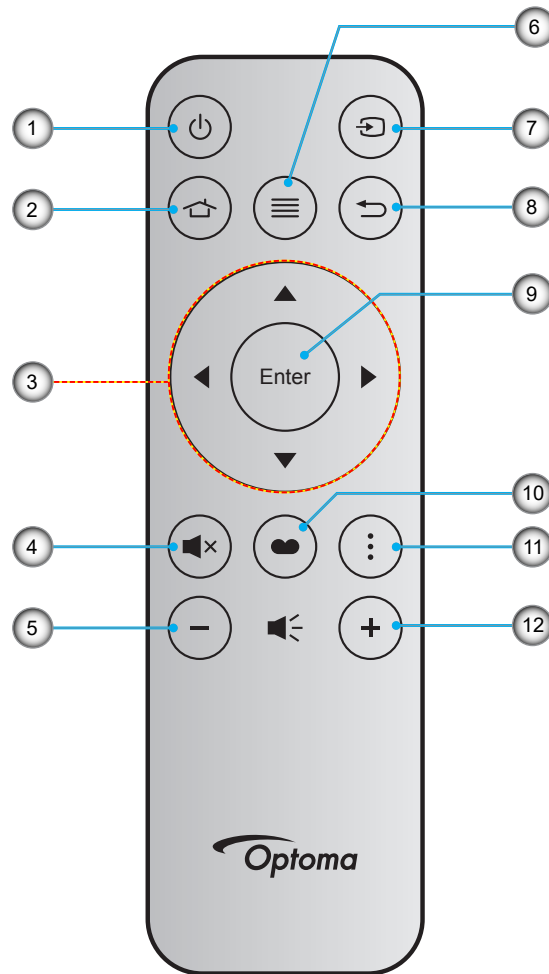


| No | Item | No | Item |
|---|---|---|---|
| 1. | Power On / Off | 7. | Source |
| 2. | HDMI3 | 8. | Return |
| 3. | Four Directional Select Keys | 9. | Enter |
| 4. | Mute | 10. | Picture Mode |
| 5. | Volume - | 11. | Focus Pattern |
| 6. | Menu | 12. | Volume + |

**Note:**

- *The actual remote control may vary depending on the region.*

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

- *Before using the remote control for the first time, press the lock button, open the battery compartment cover, and then remove the transparent insulation tape as illustrated below. See page 23 for battery installation.*
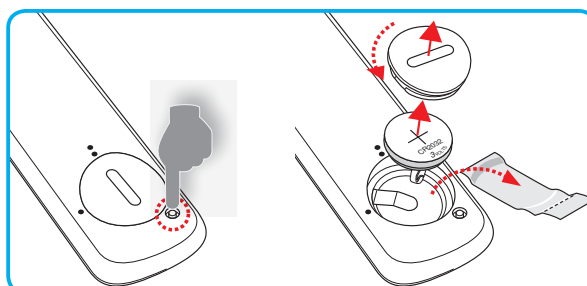
# SETUP AND INSTALLATION

## Installing the projector

Your projector is designed to be installed in one of four possible positions.

Your room layout or personal preference will dictate which installation location you select. Take into consideration the size and position of your screen, the location of a suitable power outlet, as well as the location and distance between the projector and the rest of your equipment.

| Table mount front | Ceiling mount front |
|---|---|
|  |  |

| Table mount rear | Ceiling mount rear |
|---|---|
|  |  |
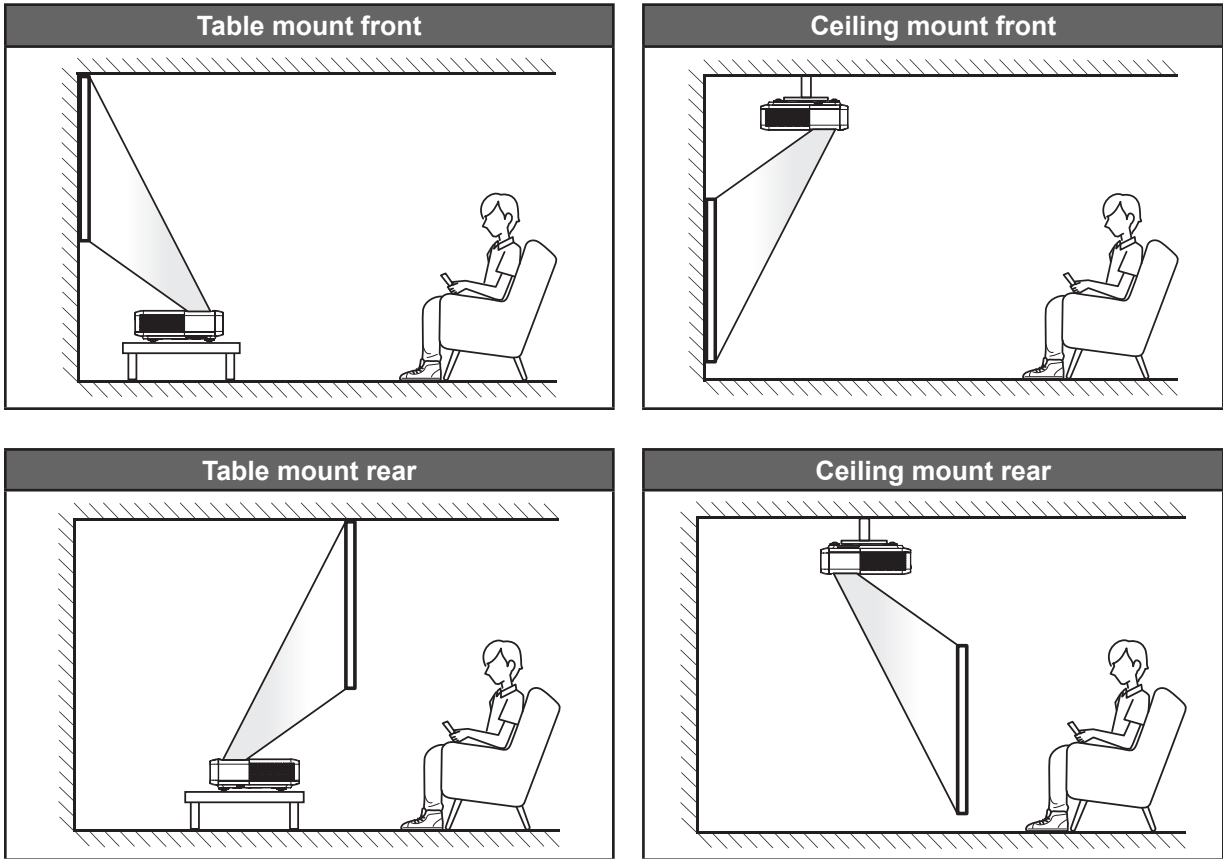
Projector should be placed flat on a surface and 90 degrees / perpendicular to the screen.

- How to determine projector location for a given screen size, please refer to distance table on page *49*.

- How to determine screen size for a given distance, please refer to distance table on page *49*.

**Note:**

- *The further away the projector is placed from the screen the projected image size increases and vertical offset also increases proportionally.*

- *The vertical offset may vary between projectors, due to the limitations of optical manufacturing. Additional adjustments may occur when switching projectors.*

# SETUP AND INSTALLATION

**Projector installation notice**

- 360 degree projection & Portrait mode
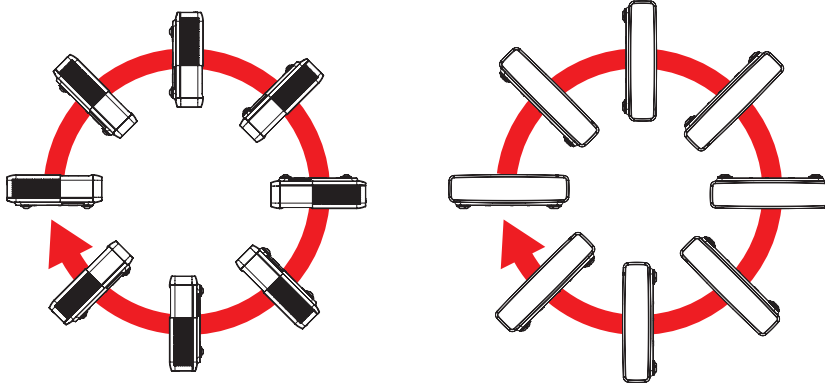
# SETUP AND INSTALLATION

## Connecting sources to the projector
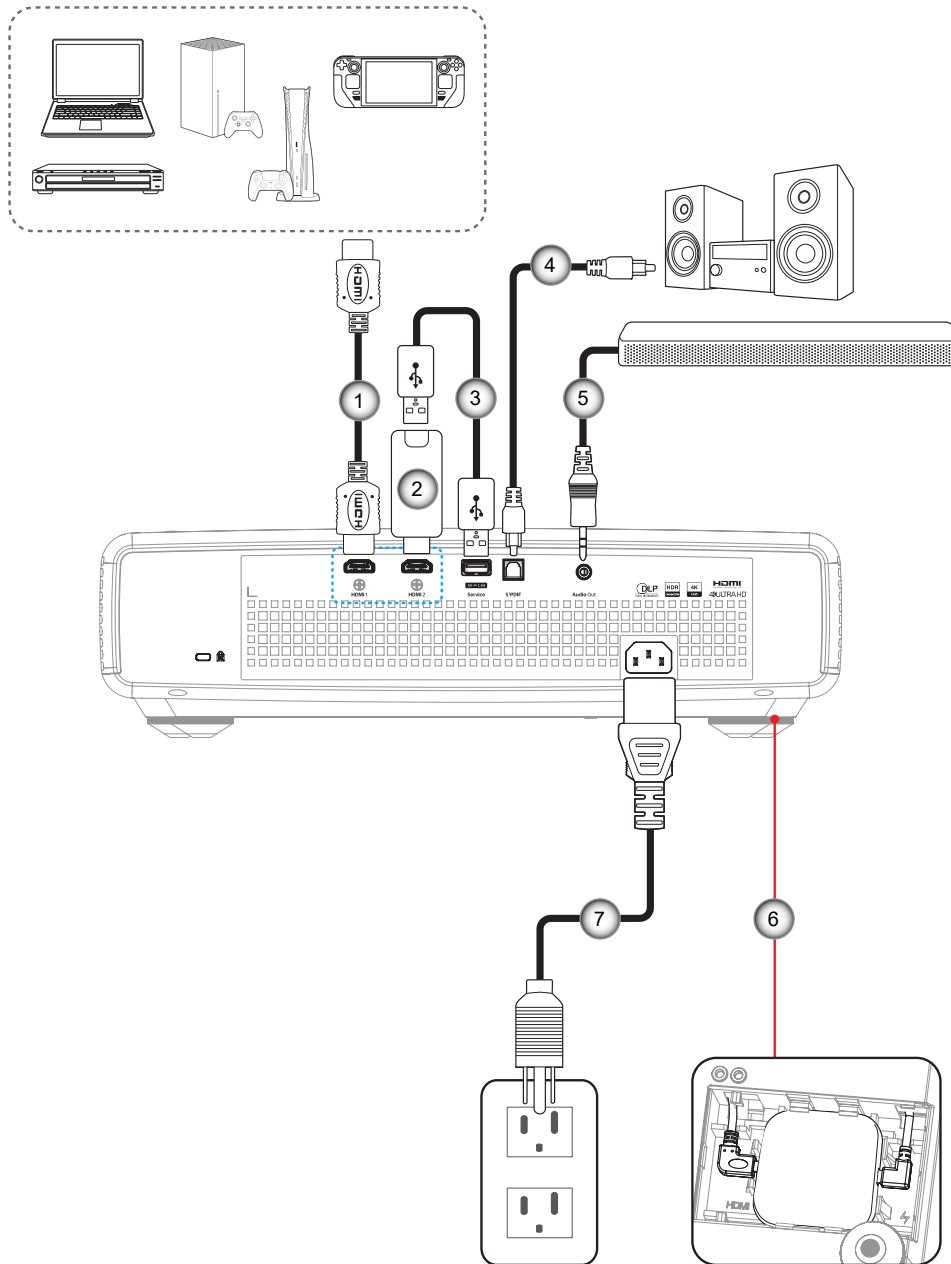


| No | Item |
|----|------|
| 1. | HDMI Cable |
| 2. | HDMI Dongle |
| 3. | USB Power Cable |
| 4. | S/PDIF Out Cable |

| No | Item |
|----|------|
| 5. | Audio Out Cable |
| 6. | Android TV Dongle (refer to page 21) |
| 7. | Power Cord |

**Note:**

- *To ensure the best image quality and avoid connection errors, we recommend the use of Premium HDMI cables. For the cable lengths longer than 20-25 feet, we strongly recommend using Active Fiber HDMI cables.*

# SETUP AND INSTALLATION

**Installing and using the Android TV dongle**

To install and start using the Android TV dongle, do the following:

1. Power off the projector. (Refer to page 25)
2. Remove the Android TV dongle compartment door on the bottom of the projector.
3. Align and install the Android TV dongle into its compartment.
4. Connect the HDMI and power cables to their respective connectors on the sides of the Android TV dongle.
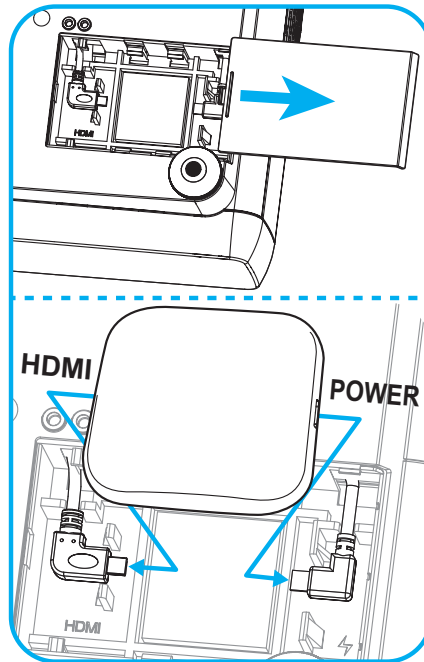


5. Power on the projector. (Refer to page 25)
6. Press either the "⌂" button or the "⧉" button > HDMI3 on the remote control to access the streaming apps.
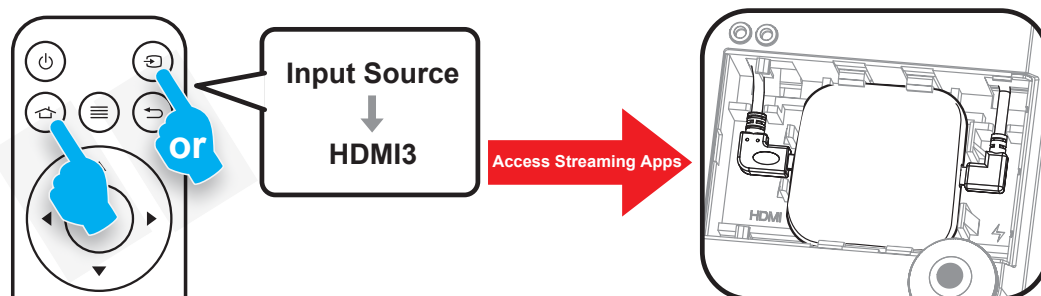
# SETUP AND INSTALLATION

## Adjusting the projector image

### Image height

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

1.  Locate the adjustable foot you wish to adjust on the underside of the projector.

2.  Rotate the adjustable foot clockwise or counterclockwise to raise or lower the projector.



Tilt-Adjustment Feet

Tilt-Adjustment Ring
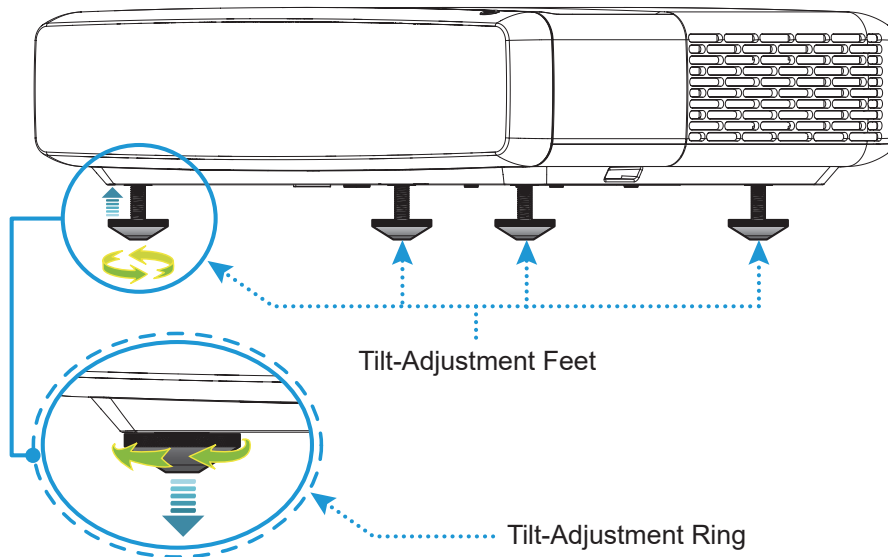
### Focus

To adjust the focus, do the following:

1.  Open either "☰" "Display-->Focus" menu or press the "⋮" button on the remote control.
2.  Press the "◀" or "▶" button on the remote control until the image is sharp and legible.
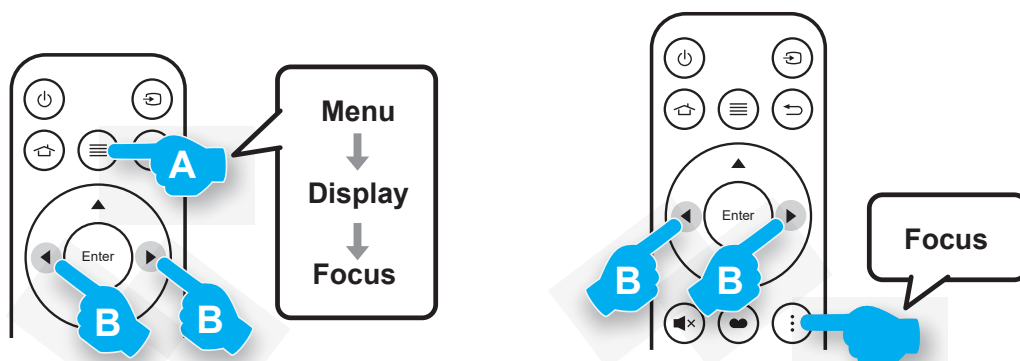
# SETUP AND INSTALLATION

## Remote setup

**Installing / replacing the battery**

1.  Press the lock button next to the battery compartment cover.
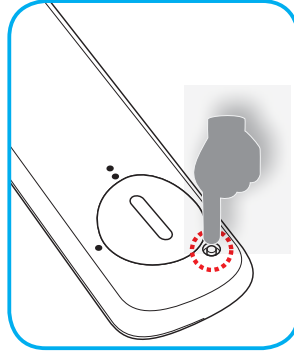


2.  Use a coin to turn the battery cover counterclockwise until the cover opens.

3.  Install new battery into the compartment.
    Remove the old battery and install new one (CR2032). Ensure that the side with a "+" is facing up.

4.  Put the cover back. Then use a coin to turn the battery cover clockwise to lock it in place.
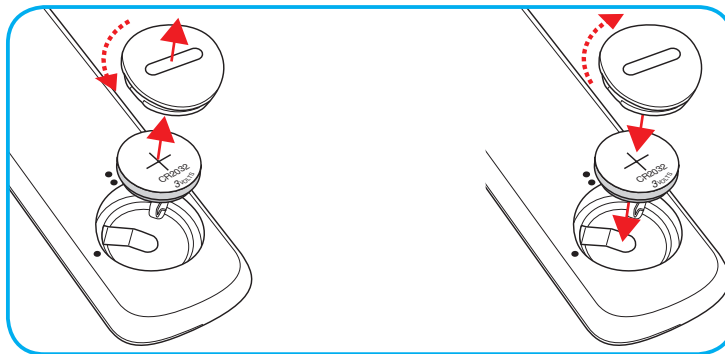


*CAUTION:*

To ensure safe operation, please observe the following precautions:

*   Use CR2032 type battery.

*   Avoid contact with water or liquid.

*   Do not expose the remote control to moisture or heat.

*   Do not drop the remote control.

*   If the battery has leaked in the remote control, carefully wipe the case clean and install new battery.

*   Risk of an explosion if battery is replaced by an incorrect type.

*   Dispose of used battery according to the instructions.

Warning: Do not ingest battery, Chemical Burn Hazard.

*   This product contains a coin / button cell battery. If the coin / button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.

Warning: Keep new and used batteries away from children.

*   If the battery compartment does not close securely, stop using the product and keep it away from children.If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

# SETUP AND INSTALLATION

## Effective range

Infra-Red (IR) remote control sensor is located on top of the projector. Ensure to hold the remote control at an angle within 30° perpendicular to the projector's IR remote control sensors to function correctly. The distance between the remote control and the sensor should not be longer than 4 meters (~13 feet).

**Note:** *When pointing the remote control directly (0 degrees angle) on the IR sensor, the distance between the remote control and the sensor should not be longer than 6 meters (~19 feet).*

- Make sure that there are no obstacles between the remote control and the IR sensor on the projector that might obstruct the infra-red beam.
- Please ensure that the IR transmitter of the remote control is not being shined on directly by sunlight or fluorescent lamps.
- Please keep the remote control more than 2 meters away from fluorescent lamps in order to avoid possible malfunction. If the remote is exposed to inverter-type fluorescent lamps it may become intermittently ineffective.
- Please be aware that if used within too close proximity of the projector, the remote control may become ineffective.



Approx. ±15°
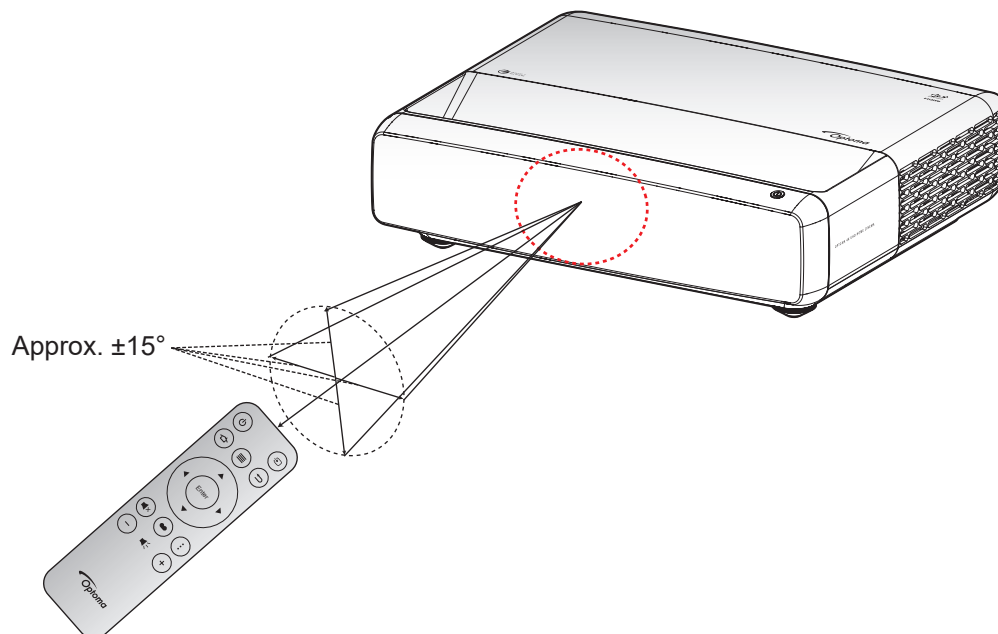
# USING THE PROJECTOR

## Powering on / off the projector



or
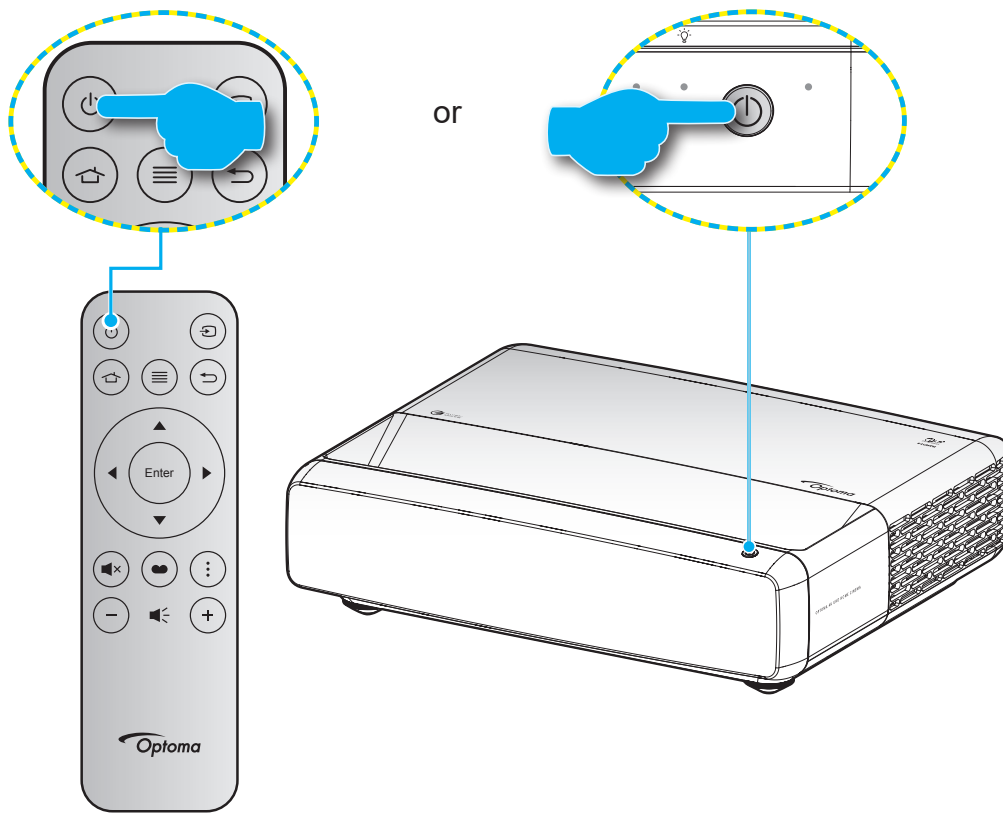
## Powering on

1. Securely connect the power lead and signal/source cable. When connected, the On/Standby LED will turn red.
2. Turn on the projector by pressing the "⏻" button on the projector keypad or the remote control.
3. A start up screen will display in approximately 1 second and the On/Standby LED will be flashing white.

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

## Powering off

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



Power Off

Power Off?
Press power key again.
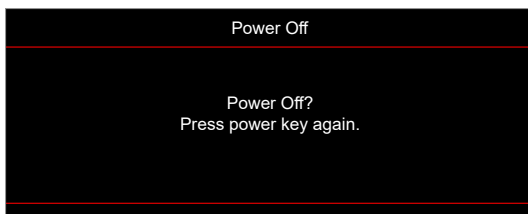
# USING THE PROJECTOR

3. Press the "⏻" button again to confirm, otherwise the message will disappear after 15 seconds. When you press the "⏻" button for the second time, the projector will shut down.

4. The cooling fans will continue to operate for about 1 second. When the On/Standby LED turns solid red, this indicates the projector has entered standby mode. If you wish to turn the projector back on, simply press the "⏻" button.

5. Disconnect the power lead from the electrical outlet and the projector.

## Selecting an input source

Turn on the connected source that you want to display on the screen, such as computer, notebook, video player, etc. The projector will automatically detect the source. If multiple sources are connected, press the "⊡" button on the remote control to select the desired input.

# USING THE PROJECTOR

## Menu navigation and features

The projector has multilingual on-screen display menus that allow you to make image adjustments and change a variety of settings. The projector will automatically detect the source.

1. To open the OSD menu, press ▤ on the remote control.

2. When OSD is displayed, use ▲▼ keys to select any item in the main menu. While making a selection on a particular page, press ↵ on the remote control or the projector keypad to enter sub menu.

3. Use ▲▼ keys to select the desired item in the sub menu and then press ↵ to view further settings. Adjust the settings by using ◄► keys.

4. Select the next item to be adjusted in the sub menu and adjust as described above.

5. Press ↵ to confirm, and the screen will return to the main menu.

6. To exit, press ▤ again. The OSD menu will close and the projector will automatically save the new settings.
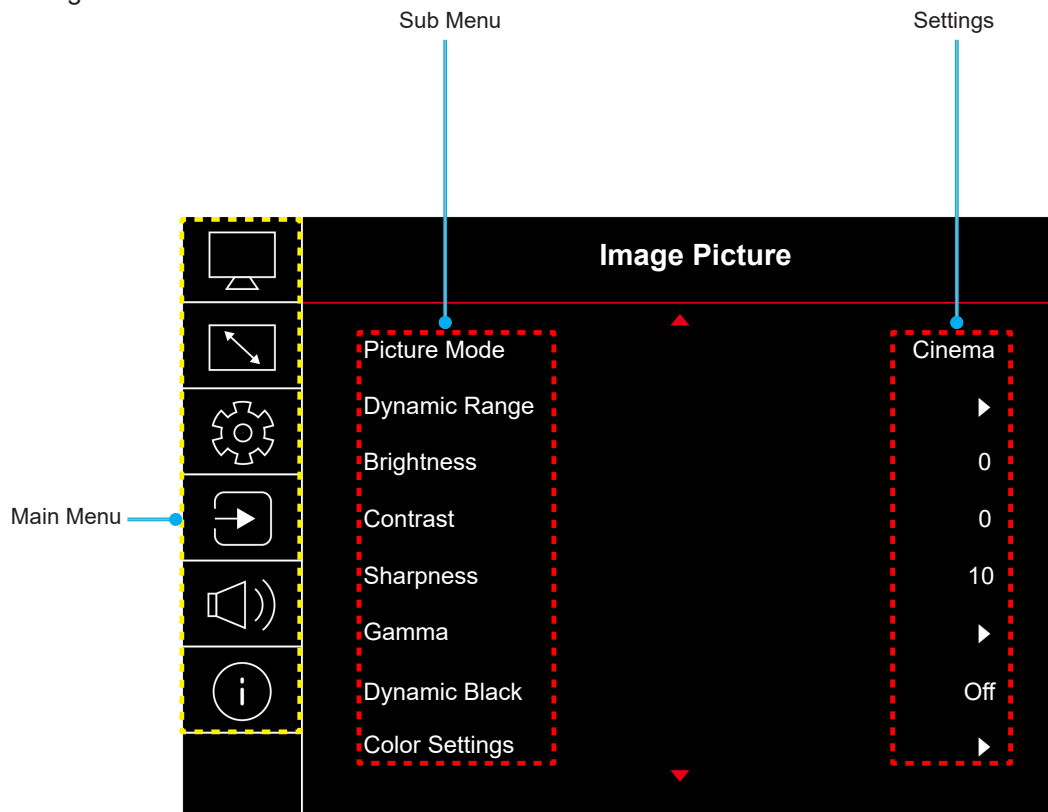
# USING THE PROJECTOR

## OSD Menu tree

**Note:** The OSD menu tree items and features are subject to models and region. Optoma reserve the right to add or remove items to improve product performance without notice.

| Main Menu | Sub Menu | Sub Menu 2 | Sub Menu 3 | Sub Menu 4 | Values |
|---|---|---|---|---|---|
| Image | Picture Mode | | | | Vivid |
| | | | | | HDR |
| | | | | | HLG |
| | | | | | HDR SIM. |
| | | | | | Cinema |
| | | | | | Game |
| | | | | | Reference |
| | | | | | Bright |
| | | | | | 3D |
| | | | | | Reset |
| | Dynamic Range | HDR / HLG | | | Auto |
| | | | | | Off |
| | | HDR Brightness | | | 0 ~ 10 |
| | Brightness | | | | -50 ~ 50 |
| | Contrast | | | | -50 ~ 50 |
| | Sharpness | | | | 1 ~ 15 |
| | Gamma | | | | Film |
| | | | | | Video |
| | | | | | Graphics |
| | | | | | 1.8 |
| | | | | | 2.0 |
| | | | | | 2.2 |
| | | | | | 2.4 |
| | | | | | 3D |
| | Dynamic Black | | | | Off |
| | | | | | On |
| | Color Settings | Color | | | -50 ~ 50 |
| | | Tint | | | -50 ~ 50 |
| | | Color Temperature | | | Warm |
| | | | | | Standard |
| | | | | | Cool |
| | | | | | Cold |
| | | CMS / Colour Adjustment | Color | | White / Red / Green / Blue / Cyan / Magenta / Yellow |
| | | | Hue | | -50 ~ 50 |
| | | | Saturation | | -50 ~ 50 |
| | | | Value (Luminance) | | -50 ~ 50 |
| | | | Reset | | No |
| | | | | | Yes |
| | | Color Space | | | HDMI Input: Auto / RGB(0~255) / RGB(16~235) / YUV |

# USING THE PROJECTOR

| Main Menu | Sub Menu | Sub Menu 2 | Sub Menu 3 | Sub Menu 4 | Values |
|---|---|---|---|---|---|
| Image | Wall Color | | | | Off |
| | | | | | Blackboard |
| | | | | | Light Yellow |
| | | | | | Light Green |
| | | | | | Light Blue |
| | | | | | Pink |
| | | | | | Grey |
| | 3D | 3D Mode | | | Off |
| | | | | | On |
| | | 3D Sync Type | | | DLP-Link |
| | | | | | 3D Sync |
| | | 3D Format | | | Auto |
| | | | | | SBS (Side by Side) |
| | | | | | Top and Bottom |
| | | | | | Frame Sequential |
| | | 3D Sync Invert | | | Off |
| | | | | | On |
| | | Reset | | | No |
| | | | | | Yes |
| | Reset | | | | |
| Display | Focus | | | | Press the "◀" or "▶" button on the remote control to adjust focus. |
| | Geometric Correction | V Keystone | | | -10 ~ 10 |
| | | H Keystone | | | -10 ~ 10 |
| | | Four Corner Adjustment | | | |
| | | Warping | | | |
| | | Reset | | | |
| | Digital Zoom | Zoom | | | -5 ~ 25 |
| | Gaming Mode | | | | Off |
| | | | | | On |
| | Advanced Gaming | Smooth Motion | | | Off |
| | | | | | On |
| | | Display FPS | | | Off |
| | | | | | White/Red/Green |
| | | Target Master | | | Off |
| | | | | | White/Red/Green |

# USING THE PROJECTOR

| Main Menu | Sub Menu | Sub Menu 2 | Sub Menu 3 | Sub Menu 4 | Values |
|---|---|---|---|---|---|
| Display | Aspect Ratio | | | | 4:3 |
| | | | | | 16:9 |
| | | | | | V-Stretch |
| | | | | | Full Screen |
| | | | | | 21:9 |
| | | | | | 32:9 |
| | | | | | Native |
| | | | | | Auto |
| | Light Source Mode | | | | Bright |
| | | | | | Eco |
| | Reset | | | | |
| Setup | Test Pattern | | | | Green Grid |
| | | | | | Magenta Grid |
| | | | | | White Grid |
| | | | | | White |
| | | | | | Off |
| | Projection Orientation | | | | Front |
| | | | | | Rear |
| | | | | | Ceiling-Top |
| | | | | | Rear-Top |
| | Language | | | | English |
| | | | | | Deutsch |
| | | | | | Français |
| | | | | | Italiano |
| | | | | | Español |
| | | | | | Português |
| | | | | | 繁體中文 |
| | | | | | 簡体中文 |
| | | | | | 日本語 |
| | | | | | 한국어 |
| | | | | | Русский |
| | Menu Settings | Menu Location | | | Top left |
| | | | | | Top right |
| | | | | | Center |
| | | | | | Bottom left |
| | | | | | Bottom right |
| | | Menu Timer | | | Off |
| | | | | | 5s |
| | | | | | 10s |
| | | | | | 20s |
| | | | | | 30s |
| | | Information Hide | | | Off |
| | | | | | On |
| | High Altitude | | | | Off |
| | | | | | On |

# USING THE PROJECTOR

| Main Menu | Sub Menu | Sub Menu 2 | Sub Menu 3 | Sub Menu 4 | Values |
|---|---|---|---|---|---|
| Setup | Power Settings | Direct Power On | | | Off |
| | | | | | On |
| | | Signal Power On | | | Off |
| | | | | | On |
| | | Auto Power Off (min.) | | | 0, 2 ~ 180 (1 min increments) |
| | | Sleep Timer (min.) | | | 0 ~ 990 (30 min increments) |
| | Security | Security | | | Off |
| | | | | | On |
| | | Security Timer | Month | | |
| | | | Day | | |
| | | | Hour | | |
| | | Change Password | | | |
| | Eye Protection Sensor | | | | Off |
| | | | | | On |
| | Startup Logo | Logo | | | Default |
| | | | | | Neutral |
| | Background Color | | | | None |
| | | | | | Blue |
| | | | | | Red |
| | | | | | Green |
| | | | | | Grey |
| | | | | | Logo |
| | Device Reset | Reset OSD | | | No |
| | | | | | Yes |
| | | Reset All Settings | | | No |
| | | | | | Yes |
| Input | Auto Source | | | | Off |
| | | | | | On |
| | Remember Last Source | | | | Off |
| | | | | | On |
| | Auto Input Switch | | | | Off |
| | | | | | On |
| | HDMI CEC Settings | HDMI Link | | | Off |
| | | | | | On |
| | | Inclusive of TV | | | No |
| | | | | | Yes |
| | | Power On Link | | | Mutual |
| | | | | | PJ → Device |
| | | | | | Device → PJ |
| | | Power Off Link | | | Off |
| | | | | | On |
| | Reset | | | | No |
| | | | | | Yes |

# USING THE PROJECTOR

| Main Menu | Sub Menu | Sub Menu 2 | Sub Menu 3 | Sub Menu 4 | Values |
|---|---|---|---|---|---|
| Audio | Volume | | | | 0 ~ 10 |
| | Mute | | | | Off |
| | | | | | On |
| | Audio Mode | | | | Auto |
| | | | | | Standard |
| | | | | | Movie |
| | | | | | Game |
| | Audio Output | | | | Internal Speaker |
| | | | | | SPDIF |
| | Reset | | | | |
| Information | Regulatory | | | | |
| | Serial Number | | | | |
| | Source Info. | | | | Source, Resolution, Refresh Rate |
| | Color Info | | | | Color Bit Depth |
| | | | | | Color Gamut |
| | | | | | Color Space |
| | Light Source Hours | | | | |
| | Light Source Mode | | | | Bright |
| | | | | | Eco |
| | FW Version | | | | DDP |
| | | | | | MCU |
| | | | | | MST |

# USING THE PROJECTOR

## *Image menu*

### Image picture mode menu

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

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

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

- **HDR SIM.**: Enhances non-HDR content with simulated High Dynamic Range (HDR). Choose this mode to enhance gamma, contrast, and color saturation for non-HDR content (720p and 1080p Broadcast/Cable TV, 1080p Blu-ray, non-HDR Games, etc).
  **Note:** *This mode can ONLY be used with non-HDR content.*

- **Cinema**: Provides the best balance of detail and colors for watching movies.

- **Game**: Optimises your projector for maximum contrast and vivid colors allowing you to see shadow detail when playing video games.

- **Reference**: This mode reproduces colors as close as possible the image the way the movie director intended. Color, color temperature, brightness, contrast and gamma settings are all configured to Rec.709 color gamut. Select this mode for the most accurate colour reproduction when watching movies.

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

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

- **Reset**: Return the factory default settings for picture mode settings.

### Image dynamic range menu

**HDR / HLG**

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

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

**HDR Brightness**

Adjust the brightness level of HDR.

### Image brightness menu

Adjust the brightness of the image.

# USING THE PROJECTOR

## Image contrast menu

The contrast controls the degree of difference between the lightest and darkest parts of the picture.

## Image sharpness menu

Adjust the sharpness of the image.

## Image gamma menu

Set up gamma curve type. After the initial setup and fine tuning is completed, utilize the Gamma Adjustment steps to optimize your image output.

- **Film**: For home theater.
- **Video**: For video or TV source.
- **Graphics**: For PC / Photo source.
- **1.8 / 2.0 / 2.2 / 2.4**: For specific PC / Photo source.
- **3D**: To experience the 3D effect, you need to have 3D glasses. Make sure your PC/portable device has a 120 Hz signal output quad buffered graphics card and a 3D Player installed.
  **Note:** *In 3D mode, only "3D" option is available for Gamma.*

## Image dynamic black menu

Use to automatically adjust the picture brightness in order to give optimum contrast performance.

## Image color settings menu

**Color**

Adjust a video image from black and white to fully saturated color.

**Tint**

Adjust the color balance of red and green.

**Color Temperature**

Select a color temperature from Warm, Standard, Cool, or Cold.

**CMS / Colour Adjustment**

Select the following options:

- Color: Adjust the red, green, blue, cyan, yellow, magenta, and white level of the image.
- Hue: Adjust the color balance of red and green.
- Saturation: Adjust a video image from black and white to fully saturated color.
- Value (Luminance): Adjust the luminance of the selected color.
- Reset: Return the factory default settings for color adjustment.

**Color Space**

Select an appropriate color matrix type from the following: Auto, RGB(0-255), RGB(16-235), and YUV.

# USING THE PROJECTOR

## Image wall color menu

Designed to adjust the colors of the projected image when projecting on to a wall without a screen. Each mode has been fine-tuned by our expert colour team to ensure superior color performance.

There are several predefined modes that you can choose from to suit the colour of your wall. Select between off, blackboard, light yellow, light green, light blue, pink, and grey.

 **Note:** *For accurate color reproduction, we recommend using a screen.*

## Image 3D menu

 **Note:**

- *This projector is a 3D ready projector with DLP-Link 3D solution.*
- *Please make sure your 3D glasses are use for DLP-Link 3D before enjoy your video.*
- *This projector supports frame sequential (page-flip) 3D via HDMI1/HDMI2 ports.*
- *To enable 3D mode, the input frame rate should be set to 60Hz only, lower or higher frame rate is not supported.*
- *To reach the best performance, resolution 1920x1080 is recommended, please be noted that 4K (3840x2160) resolution is not supported in 3D mode.*

### 3D Mode

Use this option to disable or enable the 3D function.

- **Off**: Select "Off" to turn off 3D mode.
- **On**: Select "On" to turn on 3D mode.

### 3D Sync Type

Use this option to select 3D technology.

- **DLP-Link**: Select to use optimized settings for DLP 3D Glasses.
- **3D Sync**: Select to use optimized settings for IR, RF or polarized 3D Glasses.

### 3D Format

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

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

### 3D Sync Invert

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

### Reset

Return the factory default setting for 3D settings.

- **No**: Select to cancel Reset.
- **Yes**: Select to return the factory default settings for 3D.

## Image reset menu

Return the factory default settings for image settings.

# USING THE PROJECTOR

## *Display menu*

### Display focus menu

Adjust the image focus. For more information, refer to "Focus" on page 22.

### Display geometric correction menu

#### V Keystone

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

#### H Keystone

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

#### Four Corner Adjustment

This setting allows the projected image to be adjusted from each corner to make a square image when the projection surface is not level.

#### Warping

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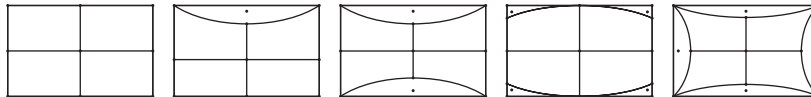


#### Reset

Return the factory default setting for geometric correction settings.

### Display digital zoom menu

#### Zoom

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

**Note:**

- *Zoom settings are retained on power cycle of the projector.*
- *Digital Zoom is not supported in 3D mode.*

# USING THE PROJECTOR

## Display gaming mode menu

Enable this feature to reduce response times (input latency) during gaming.

## Display advanced gaming menu

### Smooth Motion

Enable this feature to play the content with less motion artifacts, motion blur, and stuttered movement on the screen.

 **Note:** *Advanced gaming supports Variable Refresh Rate (VRR) from 48Hz to 144Hz @1080p.*

### Display FPS

During Smooth Motion is enabled to display the FPS number on the screen in white, red, or green where the color reflects the current frame rate.

### Target Master

During Smooth Motion is enabled to display the Target Master on the screen for shooting games in white, red, or green.

## Display aspect ratio menu

Select the aspect ratio of the displayed image between the following options:

- **4:3**: This format is for 4:3 input sources.

- **16:9/ 21:9/32:9**: This format is for 16:9/ 21:9/32:9 input sources, like HDTV and DVD enhanced for Wide screen TV.

- **V-Stretch**: This mode stretches a 2.35:1/2.4:1 image vertically removing the black bars.

- **Full Screen**: Use this special 2.0:1 aspect ratio to display both 2.35:1/2/4:1 aspect ratio movies without black bars at the top and bottom of the screen.

- **Native**: This format displays the original image without any scaling.

- **Auto**: Automatically selects the appropriate display format.

 **Note:**

- *Detailed informations about V-Stretch mode:*
    - *Some Letter-Box Format DVDs are not enhanced for 16x9 TVs. In this situation, the image will not look right when displaying image in 16:9 mode. In this situation, please try to use the 4:3 mode to view the DVD. If the content is not 4:3, there will be black bars around the image in 16:9 display. For this type of content, you can use V-Stretch mode to fill the image on the 16:9 display*
    - *If you use an external anamorphic lens, this V-Stretch mode also allows you to watch a 2.35:1 content (include Anamorphic DVD and HDTV film source) that supports anamorphic wide is enhanced for 16x9 Display in a wide 2.35:1 image. In this case, there are no black bars. Light source power and vertical resolution are fully utilized*

- *To use the Full Screen format, do the following:*
    - *a)   Set the screen aspect ratio to 2.0:1.*
    - *b)   Select "Full Screen" format.*
    - *c)   Align the projector image correctly on the screen.*

# USING THE PROJECTOR

**The Mapping rule for 4K UHD DMD:**

| 16:9 screen | 480i/p | 576i/p | 720p | 1080i/p | 2160p |
|---|---|---|---|---|---|
| 4x3 | Scale to 2880x2160. | | | | |
| 16x9 | Scale to 3840x2160. | | | | |
| 21x9 | Scale to 3840x1644. | | | | |
| 32x9 | Scale to 3840x1080. | | | | |
| V-stretch | Get the central 3840x1620 image, and then scale it to 3840x2160 for display. | | | | |
| Full screen | Scale to 5068x2852 (132% Enlarge), then get the central 3840x2160 image for display. | | | | |
| Auto | If source is 4:3, auto resize to 2880x2160. | | | | |

**Auto mapping rule**:

| | Input resolution | | Auto/Scale | |
|---|---|---|---|---|
| | **H-resolution** | **V-resolution** | **3840** | **2160** |
| 4:3 | 800 | 600 | 2880 | 2160 |
| | 1024 | 768 | 2880 | 2160 |
| | 1280 | 1024 | 2880 | 2160 |
| | 1400 | 1050 | 2880 | 2160 |
| | 1600 | 1200 | 2880 | 2160 |
| Wide Laptop | 1280 | 720 | 3840 | 2160 |
| | 1280 | 768 | 3600 | 2160 |
| | 1280 | 800 | 3456 | 2160 |
| SDTV | 720 | 576 | 2700 | 2160 |
| | 720 | 480 | 3240 | 2160 |
| HDTV | 1280 | 720 | 3840 | 2160 |
| | 1920 | 1080 | 3840 | 2160 |

## Display light source mode menu

Select a light source mode depending on the installation requirements.

## Display reset menu

Return the factory default settings for display settings.

# USING THE PROJECTOR

## *Setup menu*

### Setup test pattern menu

Select the test pattern from green grid, magenta grid, white grid, white, or disable this function (off).

### Setup projection orientation menu

Select the preferred projection between front, rear, ceiling-top, and rear-top.

### Setup language menu

Select the multilingual OSD menu between English, German, French, Italian, Spanish, Portuguese, Traditional Chinese, Japanese, Korean, and Russian.

### Setup menu settings menu

#### Menu Location

Select the menu location on the display screen.

#### Menu Timer

Set the duration where the OSD menu stays visible on the screen.

#### Information Hide

Enable this function to hide the information message.

### Setup high altitude menu

When "On" is selected, the fans will spin faster. This feature is useful in high altitude areas where the air is thin.

### Setup power settings menu

#### Direct Power On

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

#### Signal Power On

Choose "On" to activate Signal Power mode. The projector will automatically power on when a signal is detected, without pressing the "Power" key on the projector Keypad or on the remote control.

 **Note:**

- *If the "Signal Power On" option is turned "On", the power consumption of the projector in standby mode will be over 3W.*
- *This function is applicable with HDMI source.*

#### Auto Power Off (min.)

Sets the countdown timer interval. The countdown timer will start, when there is no signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).

#### Sleep Timer (min.)

Sets the countdown timer interval. The countdown timer will start, with or without a signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).

# USING THE PROJECTOR

**Note:** *The Sleep Timer is reset every time when the projector is powered off.*

## Setup security menu

### Security

Enable this function to prompt for a password before using the projector.

- **On:** Choose "On" to use security verification when the turning on the projector.
- **Off:** Choose "Off" to be able to switch on the projector without password verification.

**Note:** *The default password is 1234.*

### Security Timer

Can be select the time (Month/Day/Hour) function to set the number of hours the projector can be used. Once this time has elapsed you will be requested to enter your password again.

### Change Password

Use to set or modify the password that is prompted when turning the projector on.

## Setup eye protection sensor menu

Enable eye protection sensor to temporarily switch off the lights when objects are too close to the projector beam.

## Setup startup logo menu

Use this function to set the desired startup screen. If changes are made, they will take effect the next time the projector is powered on.

- **Default:** The default startup screen.
- **Neutral:** Logo is not displayed on startup screen.

## Setup background color menu

Use this function to display a blue, red, green, grey color, none, or logo screen when no signal is available.

**Note:** *If the background color is set to "None", then the background color is black.*

## Setup device reset menu

### Reset OSD

Return the factory default settings for OSD menu settings.

### Reset All Settings

Return the factory default settings for all settings.

# USING THE PROJECTOR

## *Input menu*

### Input auto source menu

Choose this option to let the projector automatically find an available input source.

### Input remember last source menu

Choose this option to always start the projector with the last input source.

### Input auto input switch menu

When HDMI input signal is detected, the projector will automatically switch the input source.

### Input HDMI CEC settings menu

**Note:** *When you connect HDMI CEC-compatible devices to the projector with HDMI cables, you can control them on the same power on or power off status using the HDMI Link control feature in the projector's OSD. This lets one device or multiple devices in a group power on or power off via HDMI Link Feature in a typical configuration, your DVD player may be connected to the projector through an amplifier or home theater system.*
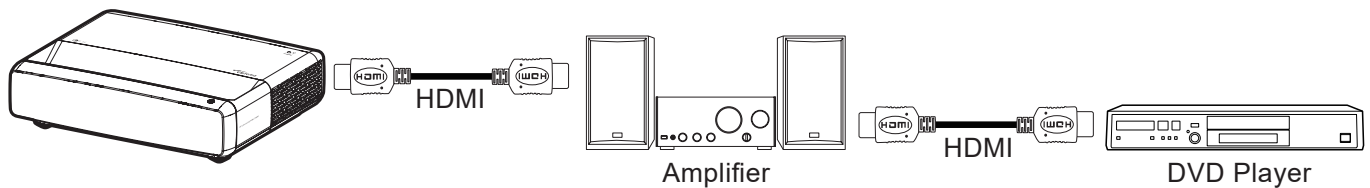


**HDMI Link**

Enable/disable the HDMI Link function.

**Inclusive of TV**

If the settings is set to "Yes" then the power on and power off link options are available.

**Power On Link**

CEC power on command.

- **Mutual:** Both projector and CEC device will be turned on simultaneously.
- **PJ → Device:** The CEC device will be turned on only after the projector is switched on.
- **Device → PJ:** The projector will be switched on only after the CEC device is turned on.

**Power Off Link**

Enable this function to let both HDMI Link and projector to be automatically turned off at the same time.

### Input reset menu

Return the factory default settings for input settings.

# USING THE PROJECTOR

## *Audio menu*

### Audio volume menu

Adjust the volume level.

### Audio mute menu

Use this option to temporarily turn off the sound.

- **On:** Choose "On" to turn mute on.
- **Off:** Choose "Off" to turn mute off.

**Note:** *"Mute" function affects both internal and external speaker volume.*

### Audio audio mode menu

Select the appropriate audio mode from standard, movie, game, or allow the projector to detect the audio mode automatically.

### Audio audio output menu

Select the appropriate audio output from internal speaker or SPDIF.

### Audio reset menu

Return the factory default settings for audio settings.

## *Information menu*

### Information menu

View the projector information as listed below:

- Regulatory
- Serial Number
- Source Info.
- Color Info.
- Light Source Hours
- Light Source Mode
- FW Version

# ADDITIONAL INFORMATION

## Compatible resolutions

### Timing table with smooth motion enabled

| Modes | Resolution | V. Frequency [Hz] |
|---|---|---|
| **(1) HDMI - PC Signal** | | |
| VGA | 640 x 480 | 67 |
| VGA | 640 x 480 | 60 |
| VGA | 640 x 480 | 72 |
| VGA | 640 x 480 | 75 |
| VGA | 720 x 400 | 70 |
| SVGA | 800 x 600 | 56 |
| SVGA | 800 x 600 | 60 |
| SVGA | 800 x 600 | 72 |
| SVGA | 800 x 600 | 75 |
| XGA | 1024 x 768 | 60 |
| XGA | 1024 x 768 | 70 |
| XGA | 1024 x 768 | 75 |
| XGA | 1024 x 768 | 120 |
| SXGA | 1280 x 1024 | 75 |
| SXGA | 1280 x 1024 | 60 |
| UXGA | 1600 x 1200 | 60 |
| 4K | 3840 x 2160 | 60 |
| **(2) HDMI - Extended Wide timing** | | |
| WXGA | 1280 x 720 | 60 |
| WXGA | 1280 x 720 | 120 |
| WXGA | 1280 x 800 | 60 |
| WXGA | 1280 x 800 | 120 |
| **(3) HDMI - Video Signal** | | |
| 640 x 480p | 640 x 480 | 60 |
| 480i | 720 x 480 | 60 |
| 576i | 720 x 576 | 50 |
| 480p | 720 x 480 | 60 |
| 576p | 720 x 576 (4:3) | 50 |
| 480p | 720 x 480 | 60 |
| 576p | 720 x 576 (16:9) | 50 |
| 720p | 1280 x 720 | 60 |
| 720p | 1280 x 720 | 50 |
| 1080i | 1920 x 1080 | 60 |
| 1080i | 1920 x 1080 | 50 |
| 1080p | 1920 x 1080 | 24 |
| 1080p | 1920 x 1080 | 60 |
| 1080p | 1920 x 1080 | 50 |
| 1080p | 1920 x 1080 | 120 |
| 1080p | 1920 x 1080 | 144 |
| 1080p | 3840 x 1080 | 60 |

# ADDITIONAL INFORMATION

| Modes | Resolution | V. Frequency [Hz] |
|---|---|---|
| 2160p | 3840 x 2160 | 60 |
| 2160p | 3840 x 2160 | 50 |
| 2160p | 3840 x 2160 | 25 |
| 2160p | 3840 x 2160 | 24 |
| 2160p | 3840 x 2160 | 30 |
| 2160p | 4096 x 2160 | 24 |
| 2160p | 4096 x 2160 | 25 |
| 2160p | 4096 x 2160 | 30 |
| 2160p | 4096 x 2160 | 50 |
| 2160p | 4096 x 2160 | 60 |

*Timing table with smooth motion disabled*

| Modes | Resolution | V. Frequency [Hz] |
|---|---|---|
| **(1) HDMI - PC Signal** | | |
| VGA | 640 x 480 | 67 |
| VGA | 640 x 480 | 60 |
| VGA | 640 x 480 | 72 |
| VGA | 640 x 480 | 75 |
| VGA | 720 x 400 | 70 |
| SVGA | 800 x 600 | 56 |
| SVGA | 800 x 600 | 60 |
| SVGA | 800 x 600 | 72 |
| SVGA | 800 x 600 | 75 |
| XGA | 1024 x 768 | 60 |
| XGA | 1024 x 768 | 70 |
| XGA | 1024 x 768 | 75 |
| XGA | 1024 x 768 | 120 |
| SXGA | 1280 x 1024 | 75 |
| SXGA | 1280 x 1024 | 60 |
| UXGA | 1600 x 1200 | 60 |
| 4K | 3840 x 2160 | 60 |
| **(2) HDMI - Extended Wide timing** | | |
| WXGA | 1280 x 720 | 60 |
| WXGA | 1280 x 720 | 120 |
| WXGA | 1280 x 800 | 60 |
| WXGA | 1280 x 800 | 120 |
| **(3) HDMI - Video Signal** | | |
| 640x480p | 640 x 480 | 60 |
| 576p | 720 x 576 (16:9) | 50 |
| 480p | 720 x 480 | 60 |
| 720p | 1280 x 720 | 60 |
| 720p | 1280 x 720 | 50 |
| 1080i | 1920 x 1080 | 60 |
| 1080i | 1920 x 1080 | 50 |

# ADDITIONAL INFORMATION

| Modes | Resolution | V. Frequency [Hz] |
|---|---|---|
| 1080p | 1920 x 1080 | 24 |
| 1080p | 1920 x 1080 | 60 |
| 1080p | 1920 x 1080 | 50 |
| 1080p | 1920 x 1080 | 120 |
| 1080p | 1920 x 1080 | 144 |
| 1080p | 1920 x 1080 | 240 |
| 1080p | 3840 x 1080 | 60 |
| 2160p | 3840 x 2160 | 60 |
| 2160p | 3840 x 2160 | 50 |
| 2160p | 3840 x 2160 | 24 |
| 2160p | 3840 x 2160 | 30 |
| 2160p | 4096 x 2160 | 24 |
| 2160p | 4096 x 2160 | 25 |
| 2160p | 4096 x 2160 | 30 |
| 2160p | 4096 x 2160 | 50 |
| 2160p | 4096 x 2160 | 60 |
| 576p | 720 x 576 | 50 |
| 720p | 1280 x 720 | 60 |
| 720p | 1280 x 720 | 50 |
| 1080i | 1920 x 1080 | 60 |
| 1080i | 1920 x 1080 | 50 |
| 1080p | 1920 x 1080 | 24 |
| 1080p | 1920 x 1080 | 60 |
| 1080p | 1920 x 1080 | 50 |
| 1080p | 1920 x 1080 | 120 |
| 1080p -144 (CVT-RB) | 1920 x 1080 | 144 |
| 1080p | 1920 x 1080 | 240 |
| 1080p | 3840 x 1080 | 60 |
| 2160p | 3840 x 2160 | 60 |
| 2160p | 3840 x 2160 | 50 |
| 2160p | 3840 x 2160 | 25 |
| 2160p | 3840 x 2160 | 24 |
| 2160p | 3840 x 2160 | 30 |
| 2160p | 4096 x 2160 | 24 |
| 2160p | 4096 x 2160 | 25 |
| 2160p | 4096 x 2160 | 30 |
| 2160p | 4096 x 2160 | 50 |
| 2160p | 4096 x 2160 | 60 |

# ADDITIONAL INFORMATION

## True 3D video compatibility

| Modes | Resolution | V. Frequency [Hz] |
|---|---|---|
| **(4) HDMI – 1.4a 3D Timing** | | |
| 720p50 (Frame Packing) | 1280 x 720 | 50 |
| 720p60 (Frame Packing ) | 1280 x 720 | 60 |
| 1080p (Frame Packing ) | 1920 x 1080 | 24 |
| 720p50 (Top and Bottom ) | 1280 x 720 | 50 |
| 720p60 (Top and Bottom ) | 1280 x 720 | 60 |
| 1080p (Top and Bottom) | 1920 x 1080 | 24 |
| 1080p (Top and Bottom) | 1920 x 1080 | 50 |
| 1080p (Top and Bottom) | 1920 x 1080 | 60 |
| 720p (Side by Side (Half)) | 1280 x 720 | 60 |
| 1080i (Side by Side (Half)) | 1920 x 1080 | 50(25) |
| 1080i (Side by Side (Half)) | 1920 x 1080 | 60(30) |
| 1080p (Side by Side (Half)) | 1920 x 1080 | 50 |
| 1080p (Side by Side (Half)) | 1920 x 1080 | 60 |

# ADDITIONAL INFORMATION

## Extended Display Identification Data (EDID) tables

Digital signal with VRR enabled (4K):

| B0/Established Timing | B0/Standard Timing | B0/Detail Timing | B1/Video Mode | B1/Detail Timing |
|---|---|---|---|---|
| 720 x 400 @ 70 (V) Hz x 31.5 (H) Hz | 1280 x 720 @ 60Hz 16:9 | 3840 x 2160 @ 60Hz | 640 x 480p @ 60Hz 4:3 | 1920 x 1080 @ 144Hz |
| 640 x 480 @ 60 (V) Hz x 31.5 (H) Hz | 1280 x 800 @ 60Hz 16:10 | | 720(1440) x 576i @ 50Hz 4:3 | 3840 x 1080 @ 60Hz |
| 640 x 480 @ 67 (V) Hz x 34.9 (H) Hz | 1280 x 1024 @ 60Hz 5:4 | | 720(1440) x 480i @ 60Hz 4:3 | |
| 640 x 480 @ 72 (V) Hz x 37.9 (H) Hz | 1600 x 1200 @ 60Hz 4:3 | | 720(1440) x 480i @ 60Hz 16:9 | |
| 640 x 480 @ 75 (V) Hz x 37.5 (H) Hz | 1920 x 1200 @ 60Hz 16:10 | | 720 x 576p @ 50Hz 4:3 | |
| 800 x 600 @ 56 (V) Hz x 35.1 (H) Hz | 1024 x 768 @ 120Hz 4:3 | | 720 x 576p @ 50Hz 16:9 | |
| 800 x 600 @ 60 (V) Hz x 37.9 (H) Hz | 1280 x 720 @ 120Hz 16:9 | | 720 x 480p @ 60Hz 4:3 | |
| 800 x 600 @ 72 (V) Hz x 48.1 (H) Hz | 1280 x 800 @ 120Hz 16:9 | | 720 x 480p @ 60Hz 16:9 | |
| 800 x 600 @ 75 (V) Hz x 46.9 (H) Hz | | | 1280 x 720p @ 50Hz 16:9 | |
| 1024 x 768 @ 60 (V) Hz x 48.4 (H) Hz | | | 1280 x 720p @ 60Hz 16:9 | |
| 1024 x 768 @ 70 (V) Hz x 56.5 (H) Hz | | | 1920 x 1080i @ 60Hz 16:9 | |
| 1024 x 768 @ 75 (V) Hz x 60 (H) Hz | | | 1920 x 1080i @ 50Hz 16:9 | |
| 1280 x 1024 @ 75 (V) Hz x 80 (H) Hz | | | 1920 x 1080p @ 24Hz 16:9 | |
| | | | 1920 x 1080p @ 50Hz 16:9 | |
| | | | 1920 x 1080p @ 60Hz 16:9 | |
| | | | 3840 x 2160p @ 24Hz 16:9 | |
| | | | 3840 x 2160p @ 25Hz 16:9 | |
| | | | 3840 x 2160p @ 30Hz 16:9 | |
| | | | 3840 x 2160p @ 50Hz 16:9 | |
| | | | 3840 x 2160p @ 60Hz 16:9 | |
| | | | 4096 x 2160p @ 24Hz 256:135 | |
| | | | 4096 x 2160p @ 25Hz 256:135 | |
| | | | 4096 x 2160p @ 30Hz 256:135 | |
| | | | 4096 x 2160p @ 50Hz 256:135 | |
| | | | 4096 x 2160p @ 60Hz 256:135 | |
| | | | 1920 x 1080p @ 120Hz 16:9 | |

# ADDITIONAL INFORMATION

Digital signal for gaming (4K):

| B0/Established Timing | B0/Standard Timing | B0/Detail Timing | B1/Video Mode | B1/Detail Timing |
|---|---|---|---|---|
| 720 x 400 @ 70 (V) Hz x 31.5 (H) Hz | 1280 x 720 @ 60Hz 16:9 | 3840 x 2160 @ 60Hz | 640 x 480p @ 60Hz 4:3 | 1920 x 1080 @ 144Hz |
| 640 x 480 @ 60 (V) Hz x 31.5 (H) Hz | 1280 x 800 @ 60Hz 16:10 | | 720 x 576p @ 50Hz 16:9 | 3840 x 1080 @ 60Hz |
| 640 x 480 @ 67 (V) Hz x 34.9 (H) Hz | 1280 x 1024 @ 60Hz 5:4 | | 720 x 480p @ 60Hz 16:9 | 1920 x 1080 @ 240Hz |
| 640 x 480 @ 72 (V) Hz x 37.9 (H) Hz | 1600 x 1200 @ 60Hz 4:3 | | 1280 x 720p @ 50Hz 16:9 | |
| 640 x 480 @ 75 (V) Hz x 37.5 (H) Hz | 1920 x 1200 @ 60Hz 16:10 | | 1280 x 720p @ 60Hz 16:9 | |
| 800 x 600 @ 56 (V) Hz x 35.1 (H) Hz | 1024 x 768 @ 120Hz 4:3 | | 1920 x 1080i @ 60Hz 16:9 | |
| 800 x 600 @ 60 (V) Hz x 37.9 (H) Hz | 1280 x 720 @ 120Hz 16:9 | | 1920 x 1080i @ 50Hz 16:9 | |
| 800 x 600 @ 72 (V) Hz x 48.1 (H) Hz | 1280 x 800 @ 120Hz 16:9 | | 1920 x 1080p @ 24Hz 16:9 | |
| 800 x 600 @ 75 (V) Hz x 46.9 (H) Hz | | | 1920 x 1080p @ 50Hz 16:9 | |
| 1024 x 768 @ 60 (V) Hz x 48.4 (H) Hz | | | 1920 x 1080p @ 60Hz 16:9 | |
| 1024 x 768 @ 70 (V) Hz x 56.5 (H) Hz | | | 3840 x 2160p @ 24Hz 16:9 | |
| 1024 x 768 @ 75 (V) Hz x 60 (H) Hz | | | 3840 x 2160p @ 30Hz 16:9 | |
| 1280 x 1024 @ 75 (V) Hz x 80 (H) Hz | | | 3840 x 2160p @ 50Hz 16:9 | |
| | | | 3840 x 2160p @ 60Hz 16:9 | |
| | | | 4096 x 2160p @ 24Hz 256:135 | |
| | | | 4096 x 2160p @ 25Hz 256:135 | |
| | | | 4096 x 2160p @ 30Hz 256:135 | |
| | | | 4096 x 2160p @ 50Hz 256:135 | |
| | | | 4096 x 2160p @ 60Hz 256:135 | |
| | | | 1920 x 1080p @ 120Hz 16:9 | |

# ADDITIONAL INFORMATION

## Image size and projection distance

| Image Size (inch) | DF Tolerance: 0~-7% | | DR | | H Offset: 121% ~ 131% | |
|---|---|---|---|---|---|---|
| | m | inch | m | inch | m | inch |
| 75" | 0.479 | 18.867 | 0.163 | 6.427 | 0.147 ~ 0.241 | 5.798 ~ 9.475 |
| 85" | 0.538 | 21.177 | 0.222 | 8.736 | 0.173 ~ 0.279 | 6.827 ~ 10.994 |
| 90" | 0.567 | 22.332 | 0.251 | 9.891 | 0.186 ~ 0.299 | 7.342 ~ 11.754 |
| 100" | 0.626 | 24.642 | 0.310 | 12.201 | 0.213 ~ 0.337 | 8.371 ~ 13.274 |
| 110" | 0.685 | 26.951 | 0.369 | 14.510 | 0.239 ~ 0.425 | 9.401 ~ 16.718 |
| 120" | 0.743 | 29.261 | 0.427 | 16.820 | 0.265 ~ 0.463 | 10.431 ~ 18.238 |

**Note:** *All projectors have tolerance range. For the most accurate value, please measure the device directly.*
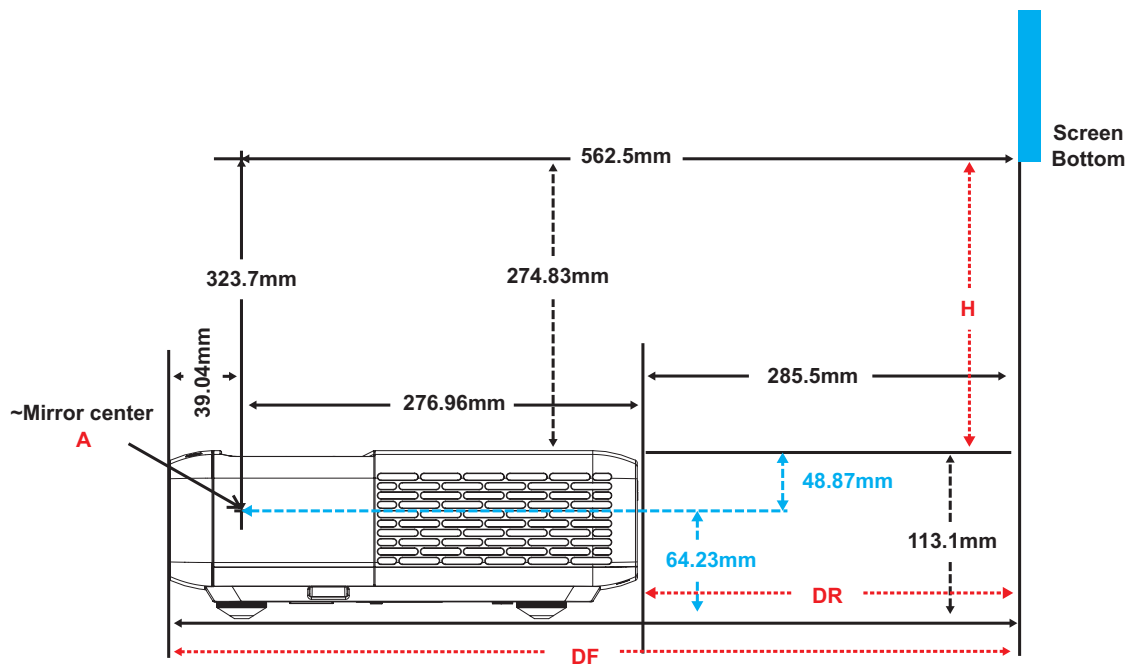
# ADDITIONAL INFORMATION

## Projector dimensions and ceiling mount installation

1. To prevent damage to your projector, please use the Optoma ceiling mount.
2. If you wish to use a third party ceiling mount kit, please ensure the screws used to attach a mount to the projector meet the following specifications:

- Screw type: M4 for six points mounting
- Minimum screw length: 10mm

Lens

Unit: mm
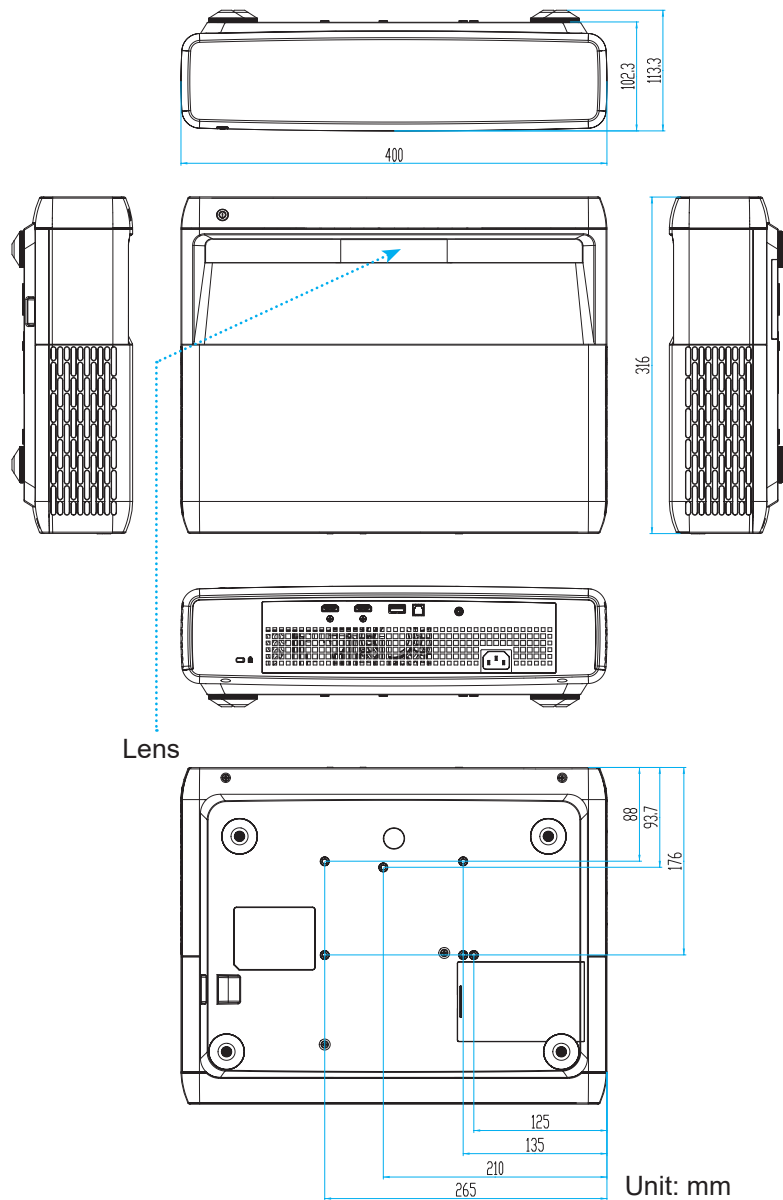
**Note:** *Please note that damage resulting from incorrect installation will void the warranty.*

Warning:

- If you buy a ceiling mount from another company, please be sure to use the correct screw size. Screw size will vary depending on the thickness of the mounting plate.
- Be sure to keep at least 10 cm gap between the ceiling and the bottom of the projector.
- Avoid installing the projector near a heat source.

# ADDITIONAL INFORMATION

## IR remote codes



| Key | | Key num | MTX. | Format | Data0 | Data1 | Data2 | Data3 | Description |
|---|---|---|---|---|---|---|---|---|---|
| Power on / off | ⏻ | K12 | 04 | F1 | 32 | CD | 71 | 8E | Refer to the "Powering on / off the projector" on page 20. |
| Source | ⊡ | K3 | 11 | F1 | 32 | CD | 18 | E7 | Press ⊡ to select an input signal. |
| HDMI3 | ⌂ | K13 | 03 | F1 | 32 | CD | 92 | 6D | Press ⌂ to open the HDMI3 source. |
| Menu | ☰ | K8 | 17 | F1 | 32 | CD | 0E | F1 | Press ☰ to launch the on-screen display (OSD) menu. To exit OSD, press ☰ again. |
| Return | ↩ | K4 | 10 | F1 | 32 | CD | 86 | 79 | Press ↩ to return to the previous page. |
| Up | ▲ | K7 | 18 | F2 | 32 | CD | 11 | EE | |
| Left | ◀ | K14 | 02 | F2 | 32 | CD | 10 | EF | Use ▲ ▼ ◀▶ to select items or make adjustments to your selection. |
| Right | ▶ | K5 | 09 | F2 | 32 | CD | 12 | ED | |
| Down | ▼ | K2 | 19 | F2 | 32 | CD | 14 | EB | |
| Enter | Enter | K9 | 16 | F1 | 32 | CD | 0F | F0 | Confirm your item selection. |
| Mute | ◀× | K15 | 01 | F1 | 32 | CD | 52 | AD | Press ◀× to turn off/on the projector built-in speaker. |
| Picture Mode | ● | K10 | 15 | F1 | 32 | CD | 91 | 6E | Press ● to display the Picture Mode menu. To exit the Picture Mode menu, press ● again. |
| Focus Pattern | ⋮ | K6 | 08 | F1 | 32 | CD | 25 | DA | Press ⋮ to open Focus pattern. |
| Volume - | ▬ | K11 | 12 | F2 | 32 | CD | 0C | F3 | Press ▬ to decrease the volume. |
| Volume + | + | K1 | 05 | F2 | 32 | CD | 09 | F6 | Press + to increase the volume. |

# 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 "Mute" feature is not turned on.

? *Image is out of focus*

- Please refer to "Focus" on page 22.
- Make sure the projection screen is between the required distance from the projector. (Please refer to page *49*).

? *The image is stretched when displaying 16:9 DVD title*

- When you play anamorphic DVD or 16:9 DVD, the projector will show the best image in 16: 9 format on projector side.
- If you play the LBX format DVD title, please change the format as V-Stretch in projector OSD.
- If you play 4:3 format DVD title, please change the format as 4:3 in projector OSD.
- Please setup the display format as 16:9 (wide) aspect ratio type on your DVD player.

? *Image is too small or too large*

- Move the projector closer to or further from the screen.
- Press "Menu" on the projector panel, go to "Display-->Aspect Ratio". Try the different settings.

? *Image has slanted sides:*

- If possible, reposition the projector so that it is centered on the screen and below the bottom of the screen.

? *Image is reversed*

- Select "Setup-->Projection Orientation" from the OSD and adjust the projection direction.

? *Blurry double image*

- Make sure "Picture Mode" is not 3D to avoid normal 2D image appear blurry double image.

# ADDITIONAL INFORMATION

## Other problems

  ⧆    *The projector stops responding to all controls*

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

## Remote control problems

  ⧆    *If the remote control does not work*

- Check the operating angle of the remote control is pointed within ±15° to the IR receiver on the projector.
- Make sure there are not any obstructions between the remote control and the projector.
  Move to within 4 m (~13 ft) of the projector.
- Make sure batteries are inserted correctly.
- Replace batteries if they are exhausted.

## Warning indicators

When the warning indicators (see below) light up or flash, the projector will automatically shutdown:

- "LAMP" LED indicator is lit red and if "On/Standby" indicator flashes red.
- "TEMP" LED indicator is lit red and if "On/Standby" indicator flashes red. This indicates the projector has overheated. Under normal conditions, the project can be switched back on.
- "TEMP" LED indicator flashes red and if "On/Standby" indicator flashes red.

Unplug the power cord from the projector, wait for 30 seconds and try again. If the warning indicator light up or flash, please contact your nearest service center for assistance.

# ADDITIONAL INFORMATION

## LED lightning messages

| Message | On/Standby LED | | Temp LED | Lamp LED |
|---|---|---|---|---|
| | (Red) | (White) | (Red) | (Red) |
| Standby state (Input power cord) | Steady light | | | |
| Power on (Warming) | | Flashing (0.5 sec off / 0.5 sec on) | | |
| Power on and Lamp | | Steady light | | |
| Power off (Cooling) | | Flashing (0.5 sec off / 0.5 sec on). Back to red steady light when cooling fan turns off. | | |
| Quick resume (100ms) | | Flashing (0.25 sec off / 0.25 sec on) | | |
| Error (Lamp failure) | Flashing | | | Steady light |
| Error (Fan failure) | Flashing | | Flashing | |
| Error (Over temp.) | Flashing | | Steady light | |

- Power off:


```
Power Off


Press power key again.
```

- Temperature warning:


```
Warning

TEMPERATURE TOO HIGH

Please:
1. Make sure air in and outlets are not blocked.
2. Make sure the environment temperature is under 45 degree C.

If the problem persists in spite of the above.

Please contact a service center for repair.
```
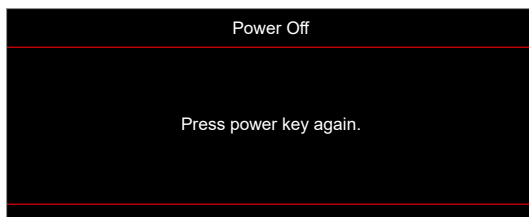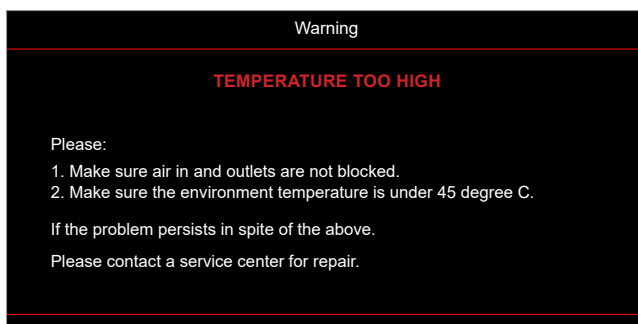
# ADDITIONAL INFORMATION

## Specifications

| Optical | Description |
|---|---|
| Technology | Texas Instrument DMD, 0.47" 4K UHD DMD x1 with 4-Way XPR actuator |
| Output resolution | 4K UHD 3840 x 2160 |
| Maximum input resolution | Graphic up to 3840 x 2160 @60Hz<br>Maximum Bandwidth:<br>• HDMI 2.0: 600MHz |
| Lens | • Throw ratio: 0.254<br>• F-stop: 2.04<br>• Focal length: 2.63mm |
| Offset | 126% ±5% |
| Image size | 75" ~ 120" |
| Projection distance | 14.5cm ±2cm at 75" to 39.8cm ± 3cm at 120" (28.6cm ±2.5cm at 100") |
| I/Os | • HDMI 2.0 x3 (outside x2 ; inside x1 for Android TV dongle)<br>• USB x2 (outside x1, type-A connector for power delivery 5V/1.5A and service; inside x1, micro USB connector as a power supply 5V/1.5A for Android TV dongle)<br>• Audio Out 3.5mm<br>• S/PDIF |
| Colour | 1073.4 Million color |
| Scan rate | • Horizontal scan rate: 15 ~ 140 KHz<br>• Vertical scan rate: 24 ~ 120Hz and 240Hz for 1080P |
| Speaker | 10W x2 |
| Power consumption | • Maximum: (Bright mode)<br>  • 165W (typical), 190W(max) @110VAC<br>  • 160W (typical), 184W(max) @220VAC<br>• Minimum: (ECO mode)<br>  • 145W (typical), 167W(max) @110VAC<br>  • 143W (typical), 164W(max) @220VAC |
| Power requirement | 100~240V ±10%, AC 50/60Hz |
| Input current | 2.2A |
| Installation orientations | Front, Rear, Ceiling-top, Rear-top |
| Dimensions (W x D x H) | • Without feet: 400 x 316 x 102.3 mm (15.7 x 12.4 x 4.0 inches)<br>• With feet: 400 x 316 x 113.3 mm (15.7 x 12.4 x 4.5 inches) |
| Weight | 5.1 kg (11.24 lbs) |
| Environmental | Operating in 0~40°C, 10%~85% humidity (non-condensing) |

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

# ADDITIONAL INFORMATION

## Optoma global offices

For service or support, please contact your local office.

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

☎ 888-289-6786
📠 510-897-8601
✉ 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
https://www.optoma.com/kr/

### Japan
https://www.optoma.com/jp/

### Taiwan
https://www.optoma.com/tw/

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

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

### Australia
https://www.optoma.com/au/