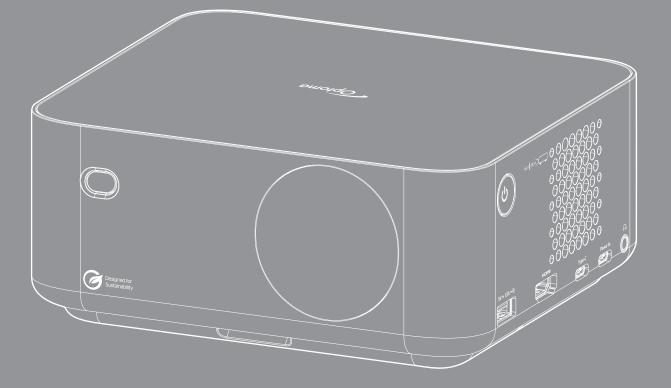


# **DLP<sup>®</sup> Projector**





User manual

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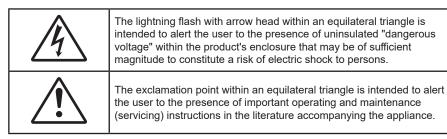
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# SAFETY



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

## **Important Safety Instruction**

- Do not block any ventilation openings. To ensure reliable operation of the projector and to protect from over heating, it is recommended to install the projector in a location that does not block ventilation. As an example, do not place the projector on a crowded coffee table, sofa, bed, etc. Do not put the projector in an enclosure such as a book case or a cabinet that restricts air flow.
- To reduce the risk of fire and/or electric shock, do not expose the projector to rain or moisture. Do not install near heat sources such as radiators, heaters, stoves or any other apparatus such as amplifiers that emits heat.
- Do not let objects or liquids enter the projector. They may touch dangerous voltage points and short out parts that could result in fire or electric shock.
- Do not use under the following conditions:
  - In extremely hot, cold or humid environments.
    - (i) Ensure that the ambient room temperature is within  $0^{\circ}C \sim 40^{\circ}C$
    - (ii) Relative humidity is 10% ~ 85%
  - In areas susceptible to excessive dust and dirt.
  - Near any appliance generating a strong magnetic field.
  - In direct sunlight.
- Do not use the unit if it has been physically damaged or abused. Physical damage/abuse would be (but not limited to):
  - Unit has been dropped.
  - Power supply cord or plug has been damaged.
  - Liquid has been spilled on to the projector.
  - Projector has been exposed to rain or moisture.
  - Something has fallen in the projector or something is loose inside.
- Do not place the projector on an unstable surface. The projector may fall over resulting in injury or the projector may become damaged.
- Do not block the light coming out of the projector lens when in operation. The light will heat the object and may 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 authorized service personnel.
- Only use attachments/accessories specified by the manufacturer.
- Do not look into straight into the projector lens during operation. The bright light may harm your eyes.
- This projector will detect the life of the light source itself.

- When switching the projector off, please ensure the cooling cycle has been completed before disconnecting power. Allow 90 seconds for the projector to cool down.
- Turn off and unplug the power plug from the AC outlet before cleaning the product.
- Use a soft dry cloth with mild detergent to clean the display housing. Do not use abrasive cleaners, waxes or solvents to clean the unit.
- Disconnect the power plug from 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.
- Please follow the correct projector orientation installation as non standard installation may affect the projector performance.
- Use a power strip and or surge protector. As power outages and brown-outs can KILL devices.

### Laser Radiation Safety Information

- IEC 60825-1:2014, EN 60825-1:2014+A11:2021, EN 50689:2021 CLASS 1 CONSUMER LASER PRODUCT - RISK GROUP 2, 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.
- The product's intended use as a consumer laser product and compliant with EN 50689: 2021.

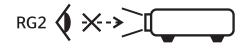
 IEC 60825-1:2014, EN 60825-1:2014+A11:2021, EN 50689:2021 CLASS 1 CONSUMER LASER PRODUCT RISK

 GROUP 2, Complies with 21 CFR 1040.10 and 1040.11 except for conformance as a Risk Group 2 LIP as defined in IEC

 62471-5:Ed.1.0. For more information see Laser Notice No. 57, dated May 8, 2019.

 IEC 60825-1:2014 等級1雷射產品RG2危險等級

 IEC 60825-1:2014 1共激光产品RG2危险等级



- Do not stare into the beam, RG2.
- As with any bright source, do not stare into the direct beam, RG2 IEC 62471-5:2015.
- This projector is class 1 laser product of IEC 60825-1:2014, EN 60825-1:2014+A11:2021 and risk group 2 with the requirements of IEC 62471-5:2015.
- Additional instructions to supervise children, no staring, and not use optical aids.
- Notice is given to supervise children and to never allow them to stare into the projector beam at any distance from the projector.
- This projector has built-in Class 4 laser module. Disassembly or modification is very dangerous and should never be attempted.
- Any operation or adjustment not specifically instructed by the user's guide creates the risk of hazardous laser radiation exposure.
- 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.
- When turning on the projector, make sure no one within projection range is looking at the lens.
- Keep any items (magnifying glass etc.) out of the light path of the projector. The light path being
  projected from the lens is extensive, therefore any kind of abnormal objects that can redirect
  lightcoming out of the lens, can cause an unpredictable outcome such as a fire or injury to the eyes.

- Any operation or adjustment not specifically instructed by the user's guide creates the risk of hazardous laser radiation exposure.
- Do not open or disassemble the projector as this may cause damage by the exposure of laser radiation.
- Do not stare into beam when the projector is on. The bright light may result in permanent eye damage.
- Without following the control, adjustment or operation procedure may cause damage by the exposure of laser radiation.

## Copyright

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

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### Disclaimer

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

### **Trademark Recognition**

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

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

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

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 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/EU (including amendments)
- Low Voltage Directive 2014/35/EU
- 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.

### **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.

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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.

Warning: Mount above the heads of childeren. The use of a ceiling mount is recommended with this product to place it above the eyes of childen.



To avoid electric shock, the unit and its peripherals must be properly grounded (earthed).

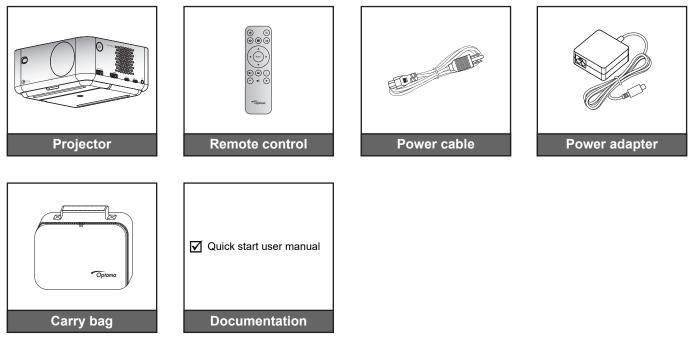
Thank you for purchasing an Optoma laser projector. For full list of features please visit the product page on our website, where you will also find additional information and documentation such as FAQs.

## **Package Overview**

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

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

### **Standard accessories**



#### Note:

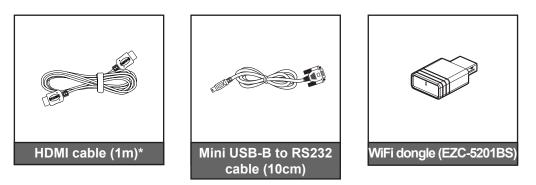
- For access to the setup information, user manual, warranty information, and product updates

   please scan the QR Code or visit the following URL:

   https://www.optoma.com/support/download

• Power cable and optional accessories may vary by country.

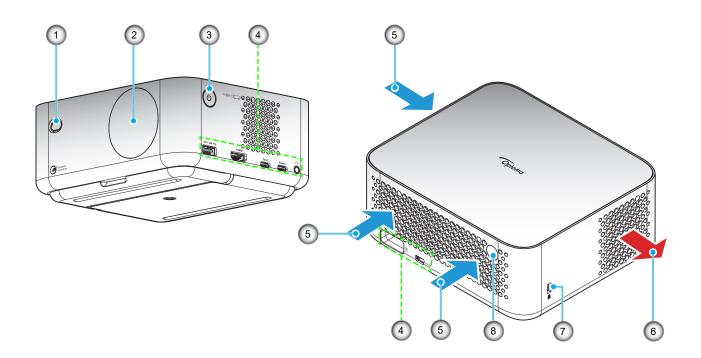
### **Optional accessories**



#### Note:

- The optional accessories may vary depending on the region and the purchased projector model.
- \*Please use "Ultra High Speed HDMI Cable" with HDMI 2.1a certification.

## **Product Overview**

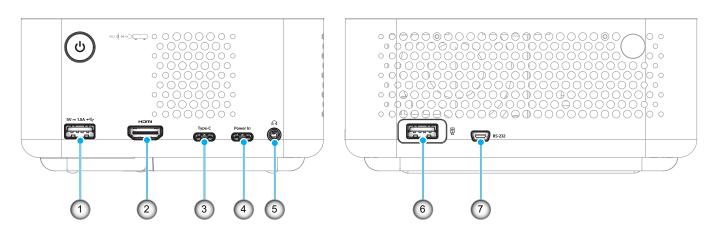


#### Note:

- Do not block projector intake and exhaust vents.
- When operating the projector in an enclosed space, allow at least 15 cm clearance around the intake and exhaust vents.

No	Item	No	Item
1.	ToF Lens	5.	Ventilation (inlet)
2.	Lens	6.	Ventilation (outlet)
3.	Power Button	7.	Kensington™ Lock Port
4.	Input / Output	8.	IR Receiver

## Connections

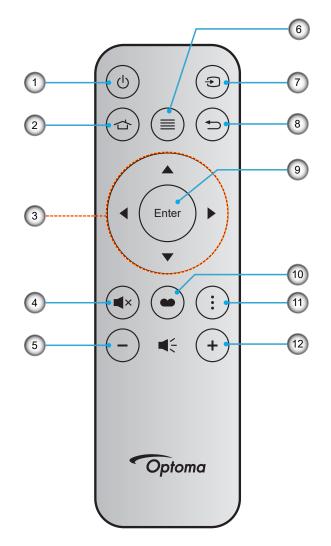


No	Item	No	Item
1.	USB Type-A Power Out (5V/1.5A) (For multi-media pen drive, 4K/60Hz; FW upgrade.)	5.	Audio Out Connector (DC Jack 3.5mm, for speaker and headphone)
2.	HDMI 2.1 Connector (4K/120Hz)	6.	USB Type-A Power Out (5V/0.5A) (For WiFi dongle / multi-media pen drive)
3.	USB Type-C Connector (For image display, 4K/60Hz) Note*2	7.	Mini USB Connector (For RS232)
4.	USB Type-C Connector (For Power input)		

#### Note:

- 1. Signal mode support varies from different model in each sales region.
- 2. USB Type-C connector (No.3): For image display only, not for power input.

## **Remote control**



No	Item	No	Item
1.	Power On / Off	7.	Source
2.	Home	8.	Return
3.	Four Directional Select Keys	9.	Enter
4.	Mute	10.	Display Mode
5.	Volume -	11.	APP menu
6.	Menu	12.	Volume +

Note:

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- Some keys may have no function for models that do not support these features.
- Before using the remote control for the first time, remove the transparent insulation tape. For more information on battery installation, refer to page 19.

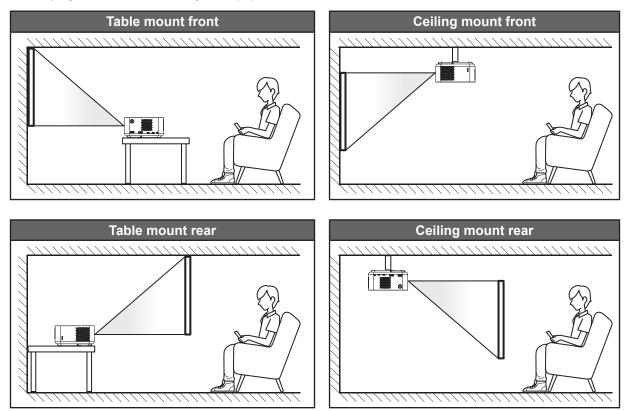


The inclusion of the battery for the remote control may vary depending on the region.

## 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.



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 pages 53 54.
- How to determine screen size for a given distance, please refer to distance table on pages 53 54.

#### Note:

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Ensure that the projector is positioned at the following specifications:

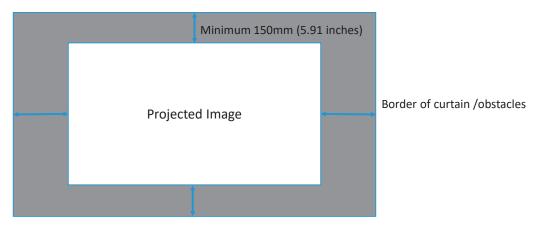
a. The projected surface is flat and perpendicular to the ground.

b. The projector is placed at 80-350 cm away from the projected surface.

c. Horizontal and vertical keystone correction and projection angle is within  $\pm$  20 - degree range.

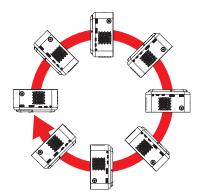
d. The further away the projector is placed from the screen the projected image size increases and vertical offset also increases proportionally.

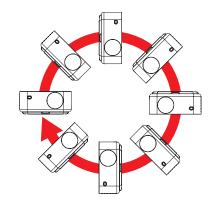
e. Keep at least 15 cm clearance of the projected image from the border of the curtain or obstacles.



#### **Projector installation notice**

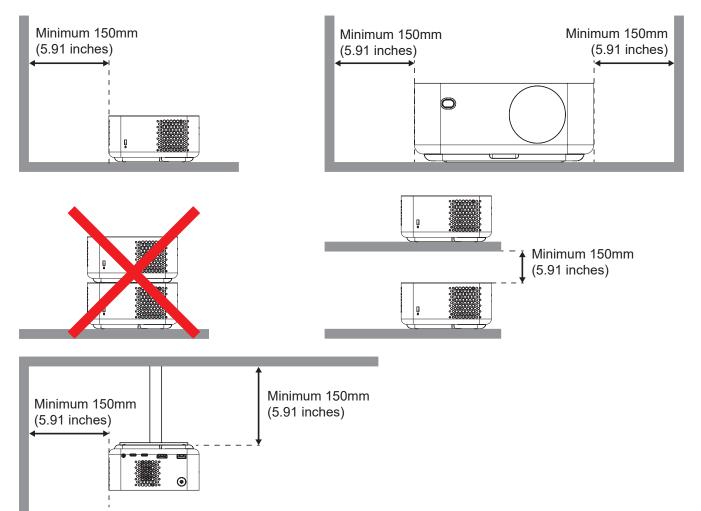
360° free orientation operation





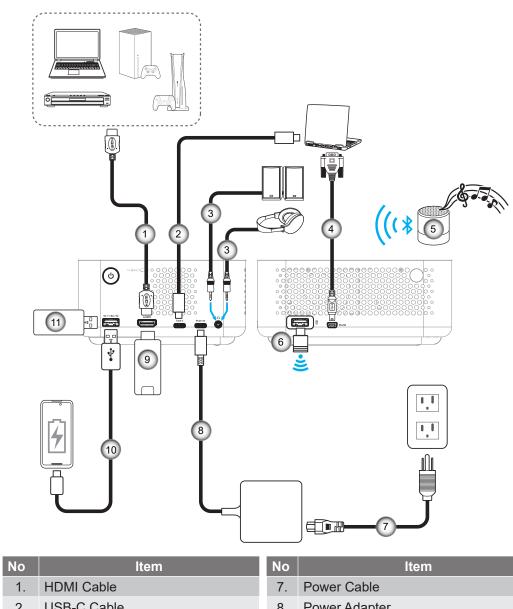
•

Allow at least 15 cm clearance around the exhaust vent.



- Ensure that the intake vents do not recycle hot air from the exhaust vent.
- When operating the projector in an enclosed space, ensure that the surrounding air temperature within the enclosure does not exceed operation temperature while the projector is running, and the air intake and exhaust vents are unobstructed.
- All enclosures should pass a certified thermal evaluation to ensure that the projector does not recycle exhaust air, as this may cause the device to shutdown even if the enclosure temperature is with the acceptable operation temperature range.

## Connecting sources to the projector



1. HDMI Cable     7. Power Cable	
2.USB-C Cable8.Power Adapter	
3.     Audio Headphone     9.     HDMI Dongle	
4. Mini USB-B to RS232 Cable 10. USB Power Cable	
5. Bluetooth Speaker 11. Flash Disk	
6. WiFi Dongle	

**Note:** To ensure the best image quality and avoid connection errors, we recommend the use of "Ultra High Speed HDMI Cable" with HDMI 2.1a certification up to 5 meters.

## Adjusting the projector image

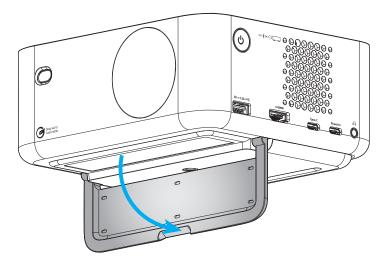
#### Install the projector

Ensure that the projector is positioned at the following specifications:

- a. The projector is placed on a flat surface and parallel to the ground.
- b. The projected surface is flat and perpendicular to the ground.

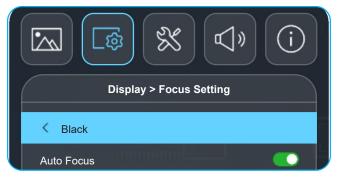
#### Image height

The projector is equipped with a kickstand. Open the kickstand to adjust the image height from 0 to 90°.



#### Auto focus and auto keystone

 Make sure the Auto Focus function is On in the Display menu to automatically adjust image distortion caused by tilting and moving the projector.



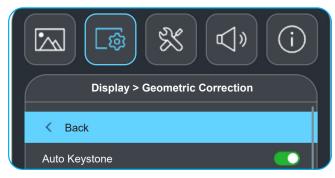
#### Note:

- Ensure that the projector is positioned at the following specifications:
  - a. The projected surface is flat and perpendicular to the ground.

b. The projector is placed at 80-350 cm away from the projected surface.

c. Horizontal and vertical keystone correction and projection angle is within  $\pm$  20 - degree range.

Make sure the Auto Keystone function is On in the Display > Geometric Correction menu to vertically adjust image distortion caused by tilting or moving the projector.



Note:

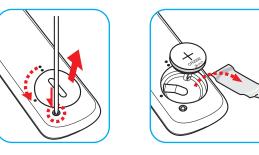
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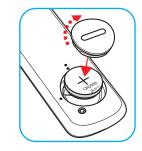
•

- Ensure that the projector is positioned at the following specifications:
  - a. The projected surface is flat and perpendicular to the ground.
  - b. The projector is placed at 80-350 cm away from the projected surface.
  - c. Horizontal and vertical keystone correction is within  $\pm$  20 degree range.

## Installing / replacing the battery

- 1. Push the button and unscrew the battery cover. Use a coin to turn the battery cover counterclockwise until the cover opens.
- Install new battery into the compartment.
   Remove the old battery and install new one (CR2032). Ensure that the side with a "+" is facing up.
- 3. 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.

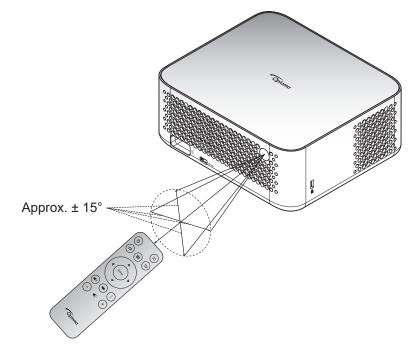


If the battery compartment does not close securely, stop using the product and keep it away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

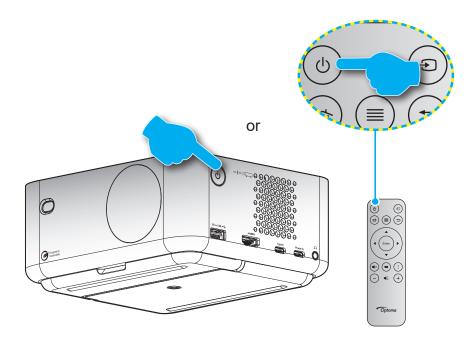
#### Effective range

Infra-Red (IR) remote control sensor is located on the rear sides of the projector. Ensure that the remote control is held at an angle 15 degrees perpendicular to the projector's IR remote control sensor to ensure correct functionality. The distance between the remote control and the sensor should not be longer than 6 meters (19.7 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.
- Make sure the IR transmitter of the remote control is not being shined on directly by sunlight or fluorescent lamps.
- Please keep the remote controller at least 2m away from fluorescent lamps or it may malfunction.
- If the remote control is close to Inverter-Type fluorescent lamps, it might become ineffective from time to time.
- If the remote control and the projector are within a very short distance of one another, the remote control might become ineffective.



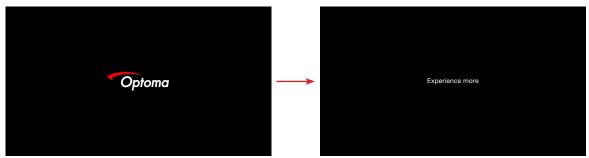
## Powering on / off the projector



#### Powering on

- 1. Securely connect the power lead and signal/source cable. When connected, the Power LED will start breathing white light.
- 2. Turn on the projector by pressing the "**U**" button on the projector or on the remote control. The Power LED will start flashing white.

The Optoma boot logo and then animation are displayed on the screen.



3. A launcher screen will display in approximately 10 seconds and the Power LED will turn steady white.



#### Powering off

- 1. Select one of the following methods to power off the projector:
- Press the "" button twice on the remote control.
- Press the "U" button on the projector or on the remote control. The Control menu will open:



Select OF Power Off to power off the projector.

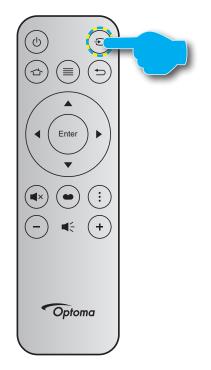
- 2. The cooling fans will continue to operate for about 3 seconds for the cooling cycle and the Power LED will be flashing red. When the Power LED starts breathing white light, this indicates the projector has entered standby mode.
- 3. Disconnect the power lead from the electrical outlet and the projector.

**Note:** It is not recommended that the projector is turned on immediately, right after a power off procedure.

### Selecting an input source

Turn on the connected source that you want to display on the screen, such as computer, notebook, video player, etc. Press the "⊕" button on the remote control to select the desired input.

Note: If Auto Source is enabled in the OSD menu, then the projector will detect the source automatically.



### Launcher screen overview

The Launcher screen is the Home page to start the projector. It contains system date and time, system status, shortcuts to access various apps, and more.

To navigate the Launcher screen, simply use the buttons on the remote control.

You can return to the Home screen at any time by pressing " 🖒 " on the remote control, regardless of your position in the user interface.

	System D	ate and Time	Wireless display verification code from Creative Cast		
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	÷			ক্ত্যি	
	Input Source	Focus	Menu	Settings	-
		FM	<b>1</b>	:::	
	Creative Cast	File Manager	Marketplace	All Apps	
Ű					
ontrol Menu		Sho	ortcuts Flash d	lisk is connected t	o the projector

#### Note:

- The selected menu or item is highlighted in light blue color, for example "Settings" on the image above.
- New "Display Share" & "File Manager" apps will be available by 2024/1/M. To use these new apps, you need to upgrade projector's firmware.

### System date and time

Date and time is displayed on the Home screen if the projector is connected to the network. The default setting is 10:00am, 2023/01/01. AM/PM will appear only if the 24-hour format is off.

To modify date and time parameters, select the respective field on the screen. The Date and Time settings page opens automatically. Then perform the modifications.

## Control menu

Select open the Control menu. Then select any of the following:

- **BT Speaker**: Play music from your smartphone via Bluetooth. Refer to page 24.
- **Power Off**: Power off the projector. Refer to page 22.
- **Turn Off Screen**: Turn off the screen backlight. Press any button on the remote control to turn the screen backlight on again.

#### Audio mode

To play music from your smartphone or from the flash disk, do the following:

- 1. Connect the WiFi dongle to the projector. Refer to page 16.
- 2. Enable Bluetooth on your smartphone and projector.
- 3. Press the "**也**" button on the remote control or select **(**) on the Home page.
- 4. Select **BT Speaker**.



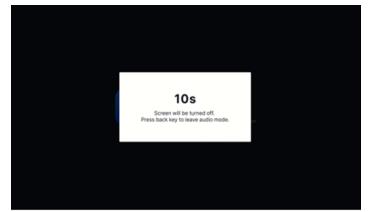
5. Select your smartphone in the list of detected Bluetooth devices to start the pairing process.



**Note:** If Bluetooth is not enabled and/or WiFi dongle is not connected to the projector, then the projector will display the below error message. Repeat steps 1 to 4 and try again to connect the projector to your smartphone.



6. Upon successful Bluetooth pairing, the projector will display a countdown message and the screen will turn off after 10 seconds.

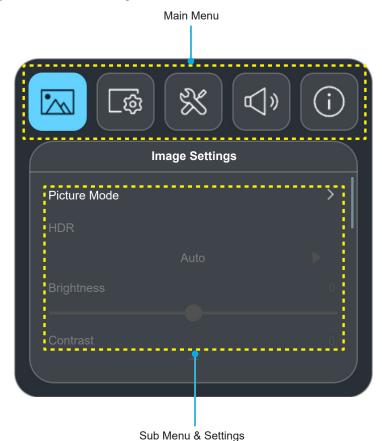


- 7. While in BT Speaker mode and the screen is turned off, press any of the following remote control buttons:
  - **"Volume +/Volume-**": Adjust the playback sound.
  - "Mute": Mute the playback.
  - "Return": Exit the BT Speaker mode.
  - "Power On / Off", "Source", "Home", "Menu", "Four directional select keys", "Display mode", "APP menu": Turn on the screen and after 3 seconds display the countdown message.

### Menu navigation and features

Press "≣" on the remote control or on the Home screen, select the OSD menu "∎" to review projector information or manage various settings related to the image, display, system, and audio.

- 1. When OSD is displayed, use the up and down navigation buttons to select any item in the main menu. While making a selection on a particular page, press "**Enter**" to enter submenu.
- 2. Press the "◀" and "▶" button to select the desired menu item. Then press "Enter" to open its sub menu.
- 3. Press the " $\blacktriangle$ " and " $\blacktriangledown$ " button to select the desired item in the sub menu.
- 4. Press the "**Enter**" button to enable or disable a setting or press the "◀" and "▶" button to adjust a value.
- 5. Select the next item to be adjusted in the sub menu and modify as described above.



#### **Floating menu**

Floating menu is displayed automatically if you select certain menu items. Press the "◀" and "▶" button to select the setting or adjust the value. Then press "∽" to return to the main OSD menu.



## **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
					Vivid
					HDR [for HDMI 2.0 models]
					HLG [for HDMI 2.0 models]
					Cinema
	Picture Mode				Game
					Bright
					WCG
					AI-PQ
					Presentation
	HDR				Auto
					Off
	Brightness				-50 ~ 50
	Contrast				-50 ~ 50
	Sharpness				0~15
	Gamma				Film
					Graphics
					1.8
Image					2.0
Settings					Standard (2.2)
					2.4
	Dynamic Contrast				Off
					On
	PureMotion				Off
					1
					2
					3
	Tint				-50 ~ 50
					Standard
	Color Temperature				Cool
					Cold
	Saturation				-50 ~ 50
					Auto
	Color Space				Full
					Limited
					No
	Reset				Yes

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
		Auto Focus			Off
		Auto Focus			On
	Focus Setting	Focus			
		Auto Focus Adjustment			
					On
		Auto Keystone			Off
		V. Keystone			-40 ~ 40
	Geometric	H. Keystone			-40 ~ 40
	Correction	Rotation			-15 ~ 15
		Four Corner Adjustment			
		Reset			No
		Reset			Yes
	Projection				Front
Display	Location				Rear
					Auto
	Projection Orientation				Desktop
	Onentation				Ceiling
	Digital Zoom				-50 ~ 0
	Gaming Mode				ALLM
					On
					Auto
					4:3
	Aspect Ratio				16:9
					16:10
					Native
	Eye protection				Off
	sensor				On
	Auto Source				Off
					On
	Direct Power On				Off
	Direct Power On				On
	Circul Down				Off
	Signal Power On				On
					Off
System					20 minutes
					30 minutes
					1 hour
	Auto Power Off				2 hours
					3 hours
					4 hours
					8 hours
					12 hours

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
		Digital Signage			Off
					On
					5 seconds
					10 seconds
					15 seconds
					20 seconds
					25 seconds
		Image Display			30 seconds
		Interval			35 seconds
	Digital Signage				40 seconds
					45 seconds
					50 seconds
					55 seconds
					60 seconds
					Off
					Fade In/Out
System		Image Display Effect			Slide Right
System		Lincot			Slide Left
					Zoom In/Out
	Light Source Mode				Bright
					Eco
					Eco Plus
	High Altitude				Off
					On
	HDMI CEC Settings	HDMI Link			Off
					On
		Power On Link			Mutual
					PJ → Device
					Device → PJ
					Mutual
		Power Off Link			PJ → Device
					Device $\rightarrow$ PJ
	Reset All				No
	Settings				Yes
	Volume				0 ~ 100
					Off
	Mute				On
Audio					Auto
					Standard
	Audio Mode				Movie
					Game
					Jame

Main Menu	Sub Menu	Sub Menu 2	Sub Menu 3	Sub Menu 4	Values
		Regulatory			
	About	Serial Number			
		FW Version			
	Source				
	Source Info.				
	Color Info.	Color Bit Depth			
Information		Color Gamut			
		Color Space			
	Projection Hours				
	Light Source Hours				
	Light Source Mode				

## Image settings menu

### Image settings 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.

Note: This option is only available for 1080p model.

- **Cinema**: Provides the best balance of detail and colors for watching movies.
- **Game**: Optimises your projector for maximum contrast and vivid colours allowing you to see shadow detail when playing video games.
- **Bright**: This mode is suitable for environments where extra-high brightness is required, such as using the projector in well-lit rooms.
- Wide color gamut (WCG): Provides a wider range of colors.
- **AI-Picture Quality (AI-PQ)**: Real-time face and scene recognition using the integrated AI processing units for the best visual experience. The AI-PQ optimizes the image quality on all screens simultaneously.
- **Presentation**: This mode is suitable for most presenting needs for business and education environments.

### Image settings dynamic range menu

#### <u>HDR</u>

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

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

### Image settings brightness menu

Adjust the brightness of the image.

### Image settings contrast menu

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

### Image settings sharpness menu

Adjust the sharpness of the image.

### Image settings 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.
- Graphics: For PC / Photo source.
- 1.8 / 2.0 / Standard (2.2) / 2.4: For specific PC / Photo source.

### Image settings dynamic contrast menu

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

### Image settings PureMotion menu

Using sophisticated frame-interpolation technology, PureMotion eliminates motion blurring or image judder, even in high-speed action sequences. Select between Off, 1, 2, 3 for the varying levels on motion smoothing.

### Image settings tint menu

Adjust the color balance of red and green.

### Image settings color temperature menu

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

### Image settings saturation menu

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

### Image settings color space menu

Select an appropriate color matrix type from Auto, Full, or Limited.

### Image settings reset menu

Return the factory default settings for image settings.

# Display menu

## **Display Focus Setting menu**

Ensure that the projector is positioned at the following specifications:

- a. The projector is placed on a flat surface and parallel to the ground.
- b. The projected surface is flat and perpendicular to the ground.

### Auto Focus

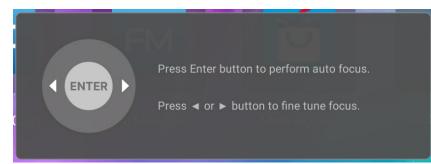
Ensure that the projector is positioned at the following specifications:

- a. The projected surface is flat and perpendicular to the ground.
- b. The projector is placed at 80-350 cm away from the projected surface.
- c. Horizontal and vertical projection angle is within  $\pm$  20 degree range.

#### Focus

Select "Focus" then pop-up power focus OSD.

- Press ◀ and ▶ to manually adjust focus.
- Press "ENTER" to execute auto focus.



#### Auto Focus Adjustment

You can adjust and utilize the auto-focus function if the projected image appears blurry due to being out of focus. **Note:** 

- Ensure that the projector is positioned at the following specifications:
  - a. The projector is placed on a flat surface and parallel to the ground.
  - b. The projected surface is flat. The projector, projected surface and ground are perpendicular to each other.
  - c The projector is placed at 80-150 cm away from the projected surface.

	• 5767
Auto Focus Adjustment	
The Current Distance 85 cm	
Press Enter to start auto focus adjustment	
Enter	

## Display geometric correction menu

#### Auto Keystone

When Auto Keystone is enabled, the image is automatically adjusted keystone correction once titling or moving the projector.

Note:

- The image size will reduce slightly when adjusting the horizontal and vertical keystone.
- When the Auto Keystone is used, the Four Corner Adjustment function will be disabled.
- Ensure that the projector is positioned at the following specifications:
  - a. The projected surface is flat.
  - b. The projector is placed at 80-350 cm away from the projected surface.
  - c Horizontal and vertical keystone correction is within a ±20 degree range.

#### 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 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 horizontally on-axis applications.

#### **Rotation**

Rotate the projected image.

#### 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.

#### <u>Reset</u>

Return the factory default setting for geometric correction settings.

### **Display projection location menu**

Select the preferred projection location between front and rear.

### **Display projection orientation menu**

Select the preferred projection orientation between auto (automatic detection), desktop, or ceiling.

## Display digital zoom menu

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

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

### Display aspect ratio menu

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

- **Auto**: Automatically selects the appropriate display format.
- **4:3**: This format is for 4:3 input sources.
- **16:9**: This format is for 16:9 input sources, like HDTV and DVD enhanced for Wide screen TV.
- **16:10**: This format is for 16:10 input sources.
- **Native**: This format displays the original image without any scaling.

#### 1080p scaling table:

16:9 screen	480i/p	576i/p	1080i/p	2160p	
4x3	Scale to 2880x2160.				
16x9	Scale to 3840x2160.				
21x9	Scale to 3840x1644.				
32x9	Scale to 3840x1080.				
V-Stretch	Scale to 3840x1620, then get the central 3840x2160 image to display.				
Full screen	Scale to 5068x2852 (132% enlarged), then get the central 3840x2160 image to display.				
Auto	If source is 4:3, then a	uto resize to 2880x216	0.		

#### 1080p auto mapping rule:

Auto	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 eye protection sensor menu

Enable eye protection sensor to temporarily dim the brightness when objects are too close to the projector beam.

# System menu

### System auto source menu

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

### System direct power on menu

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.

### System signal power on menu

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.

### System auto power off menu

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).

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

### System digital signage menu

Enable or disable the digital signage feature and configure its settings.

- Digital Signage: Enable or disable digital signage.
- **Image Display Interval**: Select the image display interval.
- Image Display Effect: Select the image display effect.

### System light source mode menu

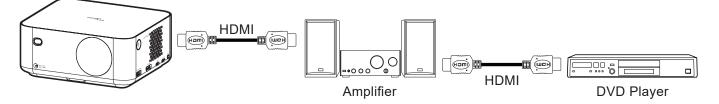
Select a light source mode depending on the installation requirements.

### System 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.

## System 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.

#### Power On Link

CEC power on command.

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

#### Power Off Link

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

### System reset all settings menu

Return the factory default settings for all settings.

## 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 mode menu

Select the appropriate audio mode.

## Information menu

## Information menu

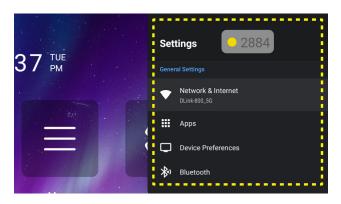
View the projector information as listed below:

- About
- Source
- Source Info.
- Color Info.
- Projection Hours
- Light Source Hours
- Light Source Mode

## Android settings menu

On the Launcher screen, select the Settings menu "@" to configure various system settings.

#### General menu navigation



- 1. When system settings menu is displayed, use the "▲" and "▼" navigation buttons to select an item in the Settings menu. While making a selection on a particular page, press the "Enter" or the "▶" button on the remote control to enter the submenu.
- 2. Press the "◀" and "▶" button to select the desired menu item. Then press "Enter" to open its sub menu.
- 3. Press the " $\blacktriangle$ " and " $\blacktriangledown$ " button to select the desired item in the sub menu.
- 4. Press the "**Enter**" or "▶" button to access the selected sub menu item settings.
- 5. Press the "▲", "▼", "◀", or "▶" button to select the setting or press the "◀" and "▶" button to adjust the value (if necessary).
- 6. Press "Enter" to confirm the setting.
- 7. Select the next item to be adjusted in the sub menu and modify as described above.
- 8. To exit, press """ (repeatedly if necessary). The settings menu will close and the projector will automatically save the new settings.

### Settings menu tree

Level 1	Level 2	Level 3	Level 4	Value
		On		
	Wi-Fi	Off		
		Internet connection		
		IP address		
		MAC address		
		Signal strength		
			None	
		Proxy settings		Proxy hostname
	Available	FTOXy Settings	Manual	Proxy port
	Networks SSID (when WiFi is			Bypass proxy for
	On)		DHCP	
Network &				IP address
Internet		IP settings		Gateway
		ir seuings	Static	Network prefix lenghth
				DNS 1
				DNS 2
		Forget network		
		Add New Network		
			On	
			Off	
	Other Options	Portable Hotepot	Hotspot Name	
		Portable Hotspot	Socurity	None
			Security	WPA2 PSK
			Hotspot password	
		Version		
		Open		
		Force stop	ОК	
			Cancel	
		Storage used		
		Clear data	ОК	
	Recently		Cancel	
	opened apps	Clear cache	ОК	
			Cancel	
		Clear defaults	ОК	
Anna			Cancel	
Apps		N = 410 = = 41 = 11	ОК	
		Notification	Cancel	
		Permissions		
			Body Sensors	
			Calender	
			Call logs	
	Dorminaira	Ann norminair-	Camera	
	Permissions	App permissions	Contacts	
			Location	
			Microphone	
			Phone	

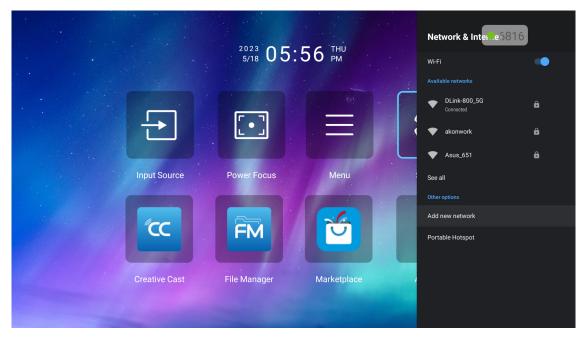
Level 1	Level 2	Level 3	Level 4	Value
			SMS	
		App permissions	Storage	
			Energy optimization	
			Usage access	
Apps	Permissions		Notification access	
		Special app access	Display over other apps	
			Modify system settings	
			Directory access	
		System update		
		Device name	Device name (Rename Dialog)	
			IP address	
			MAC address	
	About	Status	Bluetooth address	
			Device MAC address	
			Up time	
		Legal information	Open source licenses	
		Legar mormation	System WebView licenses	
Device Preferences	Date & Time	Set time zone	Midway, Honolulu, Anchorage, Los Angeles, Tijuana, Chihuahua, Denver, Phoenix, Chicago, Costa Rica, Mexico City, Regina, Bogota, New York, Barbados, Caracas, Halifax, Manaus, St. Johns, Buenos Aires, Montevideo, Nuuk, Recife, Santiago, Sao Paulo, South Georgia, Azores, Cape Verde, Casablanca, Coordinated Universal Time, London, Amsterdam, Belgrade, Brazzaville, Brussels, Madrid, Sarajevo, Amman, Athens, Beirut, Cairo, Harare, Helsinki, Jerusalem, Windhoek, Baghdad, Istanbul, Kuwait, Minsk, Moscow, Nairobi, Tehran, Baku, Dubai, Tbilisi, Yerevan, Kabul, Karachi, Oral, Yekaterinburg, Colombo, Kolkata, Kathmandu, Almaty, Yangon, Bangkok, Jakarta, Krasnoyarsk, Hong Kong, Irkutsk, Kuala Lumpur, Perth, Shanghai, Taipei, Seoul, Tokyo, Yakutsk, Darwin, Brisbane, Guam, Vladivostok, Adelaide, Hobart, Magadan, Noumea, Sydney, Majuro, Auckland, Fiji, Tongatapu	
		Use 24-hour format	On Of	
		Deutsch		
		English		
		Español		
		Français		
		Italiano		
	Language	Português		
		Русский		
		한국어		
		中文(簡体)		
		中文(繁體)		
	Keyboard	Current keyboard		
		[Keyboard name] Settings		

Level 1	Level 2	Level 3	Level 4	Value
	Keyboard	Manage keyboards	(Available virtual keyboard list)	
			Apps	
			Photos & videos	
			Audio	
Davias	Channana	Internal shared storage	Downloads	
Device Preferences	Storage		Cached data	
			Misc.	
			Available	
		USB (if any)		
	Reset to default	(Use original turkey message)		
		Bluetooth	On	
Bluetooth	Add accessory		Off	
		(Available devices)		
		Change name		
	(Paired Devices)	Unpair		

Note:

- Functions vary depending on model definition.
- All specifications are subject to change without notice.

### **Network & Internet menu**



**Note:** Please plug in the WiFi dongle before configuring the network settings and connecting to the Internet.

#### <u>Wireless</u>

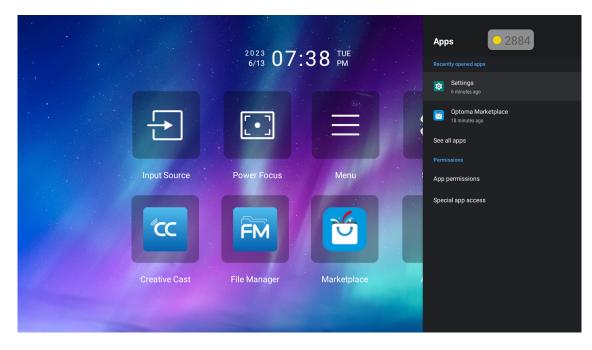
Configure wireless network settings.

- Wi-Fi: Set the Wi-Fi option to "On" to enable wireless network feature.
- **Available networks:** Select your desired wireless access point and enter or configure the necessary connection parameters (if required), for example password, proxy settings, and IP address. For information, you can review the signal strength.

**Note:** Whenever you need to input symbols, the system will automatically pop-up an onscreen keyboard.

• **Other options:** Configure advanced wireless network settings, such as "Add New Network" (manually enter network name), and "Portable Hotspot" (configure the projector to behave as a wireless access point for other devices).

### Apps menu



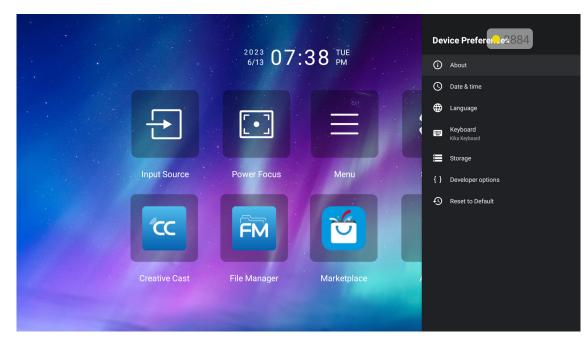
#### **Recently opened apps**

Select an app to open, view app version, force stop it, view how much storage it takes up, clear data/cache, reset to defaults, enable or disable the app to send notifications, and configure permissions.

#### **Permissions**

Configure app permissions and access.

### **Device Preferences menu**



#### <u>About</u>

Check for firmware upgrades and update the system, view and rename the device, view device status, and legal information

#### Date & Time

Set the time zone and enable or disable 24-hour format when displaying time.

#### Language

Select the system language.

#### **Keyboard**

Manage on-screen keyboard settings.

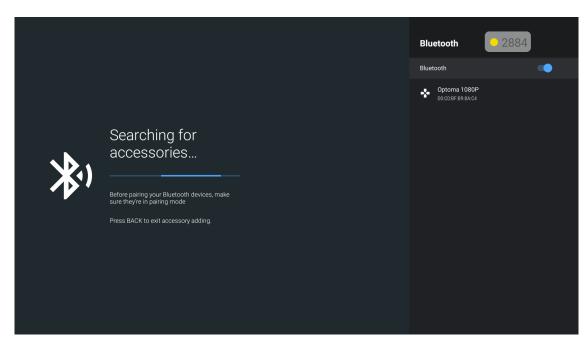
#### Storage

View and manage storage.

#### Reset to default

Reset system settings to their default values.

### **Bluetooth menu**



#### Add accessory

Enable or disable the Bluetooth function. If enabled, connect to other Bluetooth devices.

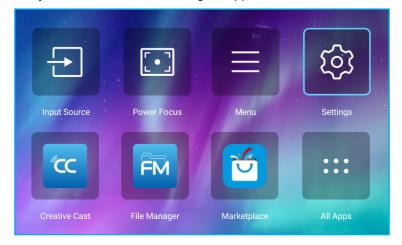
### Selecting an input source manually

If the Auto Source function is off, select **Input Source** on the Home screen or press the 🕀 button on the remote control and then select your preferred input source.



## Selecting an app

You can select any app directly on the Home screen using an app shortcut.



**Note:** If the desired app is not visible on the Home screen, select **All Apps** "…" to view all installed apps. Then select your desired app.

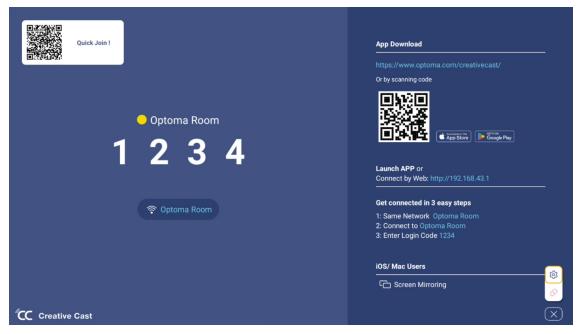
### **Creative Cast**

To get the App, you can do either of the following:

- if you are using the mobile device, scan the QR code on the screen.
- if you are using the computer, simply go to the link.

Then install the Creative Cast app in your computer or mobile device.

Before you get started, make sure to connect your computer or mobile device to the same Wi-Fi as the projector. Then follow the on-screen instructions to operate the App.



#### Note:

- For initial activation of the iOS screen mirroring function, please ensure the projector is connected to the internet, then launch the Creative Cast app. You are only required to perform this initial step once and after the initial connection is established, the Creative Cast app does not need to be open for future use of the iOS screen mirroring function.
- New "Display Share" & "File Manager" apps will be available by 2024/1/M. To use these new apps, you need to upgrade projector's firmware.

### **Optoma Marketplace**

With the Optoma Marketplace app, you can search and install any App.

### File Manager

With the File Manager app, you can manage the files stored in the internal storage, external storage, and cloud storage.

Optoma						र क्षे
Storage	< Internal Storage /					
Internal Storage 52.9% 7.5 GB free from 16 GB						
Cloud Storage						
$\downarrow$ Download	Alarms Dec 31 1969	Android Dec 31 1969	CollaVision Jun 11 2021	DCIM Dec 31 1969	Download Dec 31 1969	
Collections						
images						
▶ Videos	Movies	Music	Notifications	Pictures	Podcasts	
Document	Dec 31 1969	Dec 31 1969	Dec 31 1909	D60311909	D8C311303	,
G Music						
	qcache Dec 31 1969	Ringtones Dec 31 1969	ZeasnDownload Jun 17 2021			

## **Compatible solutions**

HDMI 1.4 (2K) Audio Date / Format LPCM(IEC 60958 PCM[30,31]

#### EDID (Digital)

		HDMI 1.4 (2K)		
B0 / Established Timing	B0 / Standard Timing	B0 / Detail Timing	B1 / Video Mode	B1 / Detail Timing
Resolution; V/H Hz	Resolution; V Hz; Aspect Ratio	Resolution; V Hz	Resolution; Aspect Ratio; V Hz	Resolution; V Hz
720 x 400 @70/31.5Hz	1280 x 1024 @60Hz 5:4	1920 x 1080 @60Hz	640 x 480p 4:3 @60Hz	N/A
640 x 480 @60/31.5Hz	1280 x720 @120Hz 16:9		720(1440) x 576i 4:3 @50Hz	
640 x 480 @67/34.9Hz	1600 x 1200 @60Hz 4:3		720(1440) x 576i 16:9 @50Hz	
640 x 480 @72/37.9Hz	1280 x 720 @60Hz 16:9		720(1440) x 480i 4:3 @60Hz	
640 x 480 @75/37.5Hz	1024 x 768 @120Hz 4:3		720(1440) x 480i 16:9 @60Hz	
800 x 600 @56/35.1Hz	1280 x 800 @60Hz 16:10		720 x 576p 4:3 @50Hz	
800 x 600 @60/37.9Hz			720 x 576p 16:9 @50Hz	
800 x 600 @72/48.1Hz			720 x 480p 4:3 @60Hz	
800 x 600 @75/46.9Hz			720 x 480p 16:9 @60Hz	
1024 x 768 @60/48.4Hz			1280 x 720p 16:9 @50Hz	
1024 x 768 @70/56.5Hz			1280 x 720p 16:9 @60Hz	
1024 x 768 @75/60Hz			1920 x 1080i 16:9 @60Hz	
1280 x 1024 @75/80Hz			1920 x 1080i 16:9 @50Hz	
1152 x 870 @75/67.6Hz			1920 x 1080p 16:9 @24Hz	
			1920 x 1080p 16:9 @30Hz	
			1920 x 1080p 16:9 @50Hz	
			1920 x 1080p 16:9 @60Hz	
			3840 x 2160p 16:9 @24Hz	
			3840 x 2160p 16:9 @25Hz	
			3840 x 2160p 16:9 @30Hz	
			4096 x 2160p 256:135 @24Hz	
			4096 x 2160p 256:135 @30Hz	
			1920 x 1080p 16:9 @25Hz	
			1920 x 1080p 16:9 @120Hz	

HDMI 2.1 (4K)

Audio Date / Format

LPCM(IEC 60958 PCM[30,31]

B0 / Established Timing         B0 / Standard Timing         B0 / Dotail Timing         B1 / Video Mode         B1 / Video Mode           Resolution; V/Hz         Ston X 480 pt/3 @ GOHz         Ston X 480 pt/3 @ G			HDMI 2.1 (4K)		
Resolution: VI: Hz         Aspect Ratio         Resolution: VI: Hz         V Hz         V Hz         Resolution: VI: VI           720 x 400 @70/31.5Hz         1280 x 7102 @60Hz 5.4         1920 x 1080 @60Hz         640 x 480 @60Hz         1280 x 720 @10Hz 16.9         720(1440) x 576i 16.9 @60Hz         1280 x 102 @60Hz 4.3         720(1440) x 576i 16.9 @60Hz         1280 x 102 @60Hz 4.3         720(1440) x 576i 16.9 @60Hz         1280 x 102 @60Hz 4.3         720(1440) x 576i 16.9 @60Hz         1280 x 102 @60Hz 4.3         720(1440) x 576i 16.9 @60Hz         1280 x 100 @75/37.5Hz         1024 x 768 @120Hz 4.3         720(1440) x 480i 16.9 @60Hz         1280 x 800 @60Hz 16.10         720 x 576 16.9 @60Hz         1280 x 800 @60Hz 16.10         720 x 576 16.9 @60Hz         1280 x 800 @72/48.1Hz         1280 x 800 @60Hz 16.10         720 x 576 16.9 @60Hz         1280 x 720 f6.9 Hz         1					
640 x 480 @60/31.5Hz       1280 x720 @120Hz 16:9       720(1440) x 576i 4:3 @50Hz       2560 x 1440 @120Hz         640 x 480 @67/34.9Hz       1600 x 1200 @60Hz 4:3       720(1440) x 576i 16:9 @50Hz          640 x 480 @75/37.5Hz       1280 x 720 @60Hz 16:9       720(1440) x 480i 4:3 @60Hz          640 x 480 @75/37.5Hz       1024 x 768 @120Hz 4:3       720(1440) x 480i 4:3 @60Hz          800 x 600 @56035.1Hz       1280 x 800 @60Hz 16:10       720 x 576p 16:9 @50Hz          800 x 600 @75/46.9Hz       720 x 480p 16:9 @60Hz           800 x 600 @75/65.5Hz       1280 x 720 [16:9 @50Hz           800 x 600 @75/65.9Hz       1280 x 720 16:9 @50Hz           800 x 600 @75/66.9Hz       1280 x 720 16:9 @50Hz           1024 x 768 @01/56.5Hz       1280 x 720 16:9 @50Hz           1024 x 768 @75/60Hz       1920 x 10801 16:9 @50Hz           1152 x 870 @75/67.6Hz       1920 x 10801 16:9 @50Hz           1152 x 870 @75/67.6Hz       1920 x 10801 16:9 @50Hz           1152 x 870 @75/67.6Hz       1920 x 10801 16:9 @50Hz           1152 x 870 @75/67.6Hz       1920 x 10801 16:9 @50Hz	Resolution; V/H Hz		Resolution; V Hz		Resolution; V Hz
640 x 480 @67/34.9Hz       1600 x 1200 @60Hz 4:3       720(1440) x 576i 16.9 @50Hz         640 x 480 @72/37.9Hz       1280 x 720 @60Hz 16:9       720(1440) x 480i 4:3 @60Hz         640 x 480 @75/37.5Hz       1024 x 768 @120Hz 4:3       720(1440) x 480i 4:3 @60Hz         800 x 600 @66/37.9Hz       1280 x 800 @60Hz 16:10       720 x 576p 4:3 @50Hz         800 x 600 @60/37.9Hz       720 x 480p 4:3 @60Hz       720 x 576p 16.9 @50Hz         800 x 600 @72/48.1Hz       720 x 480p 16:9 @60Hz       720 x 480p 16:9 @60Hz         1024 x 768 @75/65.5Hz       1280 x 720p 16:9 @60Hz       720 x 180p 16:9 @60Hz         1024 x 768 @75/60Hz       1920 x 1080i 16:9 @60Hz       720 x 180p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080i 16:9 @60Hz       720 x 180p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz       720 x 180p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz       720 x 180p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz       720 x 180p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz       720 x 180p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz       720 x 180p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz       720 x 180p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920	720 x 400 @70/31.5Hz	1280 x 1024 @60Hz 5:4	1920 x 1080 @60Hz	640 x 480p 4:3 @60Hz	1920 x 1080 @240Hz
640 x 480 @ 72/37.9Hz       1280 x 720 @60Hz 16:9       720(1440) x 480i 4:3 @60Hz         640 x 480 @ 75/37.5Hz       1024 x 768 @120Hz 4:3       720(1440) x 480i 16:9 @60Hz         800 x 600 @60/37.9Hz       1280 x 800 @60Hz 16:10       720 x 576p 16:9 @50Hz         800 x 600 @72/48.1Hz       720 x 480p 4:3 @60Hz         800 x 600 @75/46.9Hz       720 x 480p 16:9 @60Hz         800 x 600 @75/66.9Hz       1280 x 720p 16:9 @60Hz         1024 x 768 @0766.5Hz       1280 x 720p 16:9 @60Hz         1024 x 768 @75/60Hz       1280 x 720p 16:9 @60Hz         1024 x 768 @75/60Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/	640 x 480 @60/31.5Hz	1280 x720 @120Hz 16:9		720(1440) x 576i 4:3 @50Hz	2560 x 1440 @120Hz
640 x 480 @ 75/37.5Hz         1024 x 768 @ 120Hz 4:3         720(1440) x 480i 16:9 @60Hz           800 x 600 @ 60/37.9Hz         1280 x 800 @ 60Hz 16:10         720 x 576p 4:3 @ 50Hz           800 x 600 @ 72/48.1Hz         720 x 480p 4:3 @ 60Hz         800 x 600 @ 75/40.9Hz           800 x 600 @ 75/40.9Hz         720 x 480p 16:9 @ 60Hz         1280 x 720p 16:9 @ 60Hz           1024 x 768 @ 60/48.4Hz         1280 x 720p 16:9 @ 60Hz         1280 x 720p 16:9 @ 60Hz           1024 x 768 @ 70/56.5Hz         1920 x 1080i 16:9 @ 60Hz         1920 x 1080i 16:9 @ 60Hz           1280 x 1024 @ 75/60.Hz         1920 x 1080i 16:9 @ 60Hz         1920 x 1080i 16:9 @ 60Hz           1280 x 1024 @ 75/60.Hz         1920 x 1080i 16:9 @ 60Hz         1920 x 1080p 16:9 @ 60Hz           1152 x 870 @ 75/67.6Hz         1920 x 1080p 16:9 @ 60Hz         1920 x 1080p 16:9 @ 60Hz           1152 x 870 @ 75/67.6Hz         1920 x 1080p 16:9 @ 60Hz         1920 x 1080p 16:9 @ 60Hz           1152 x 870 @ 75/67.6Hz         1920 x 1080p 16:9 @ 60Hz         1920 x 1080p 16:9 @ 60Hz           1152 x 870 @ 75/67.6Hz         1920 x 1080p 16:9 @ 60Hz         1920 x 1080p 16:9 @ 60Hz           1152 x 870 @ 75/67.6Hz         1920 x 1080p 16:9 @ 60Hz         1920 x 1080p 16:9 @ 60Hz           1152 x 870 @ 75/67.6Hz         1920 x 1080p 16:9 @ 60Hz         1920 x 1080p 16:9 @ 60Hz           1162 HS 100 HS 100 HS 100 HS 100 HS 100	640 x 480 @67/34.9Hz	1600 x 1200 @60Hz 4:3		720(1440) x 576i 16:9 @50Hz	
800 x 600 @56/35.1Hz         1280 x 800 @60Hz 16:10         720 x 576p 4:3 @50Hz           800 x 600 @60/37.9Hz         720 x 576p 16:9 @50Hz           800 x 600 @72/48.1Hz         720 x 480p 4:3 @60Hz           800 x 600 @75/46.9Hz         720 x 480p 16:9 @60Hz           1024 x 768 @70/56.5Hz         1280 x 720p 16:9 @60Hz           1024 x 768 @70/56.5Hz         1280 x 720p 16:9 @60Hz           1024 x 768 @75/60Hz         1920 x 1080i 16:9 @60Hz           11280 x 1280 x 1280 x 720p 16:9 @60Hz         1920 x 1080p 16:9 @50Hz           11280 x 1280 x 720p 16:9 @00Hz         1920 x 1080p 16:9 @50Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @50Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @50Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @24Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         3840 x 2160p 16:9 @30Hz	640 x 480 @72/37.9Hz	1280 x 720 @60Hz 16:9		720(1440) x 480i 4:3 @60Hz	
800 x 600 @60/37.9Hz         720 x 576p 16:9 @50Hz           800 x 600 @72/48.1Hz         720 x 480p 4:3 @60Hz           800 x 600 @75/46.9Hz         720 x 480p 16:9 @60Hz           1024 x 768 @60/48.4Hz         1280 x 720p 16:9 @60Hz           1024 x 768 @70/56.5Hz         1280 x 720p 16:9 @60Hz           1024 x 768 @75/60Hz         1920 x 1080i 16:9 @60Hz           1128 x 1024 @75/80Hz         1920 x 1080i 16:9 @60Hz           1128 x 1024 @75/80Hz         1920 x 1080i 16:9 @50Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @60Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @60Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @60Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @60Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @60Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @60Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @20Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @2	640 x 480 @75/37.5Hz	1024 x 768 @120Hz 4:3		720(1440) x 480i 16:9 @60Hz	
800 x 600 @72/48.1Hz         720 x 480p 4.3 @60Hz           800 x 600 @75/46.9Hz         720 x 480p 16.9 @60Hz           1024 x 768 @60/48.4Hz         1280 x 720p 16.9 @50Hz           1024 x 768 @70/56.5Hz         1280 x 720p 16.9 @60Hz           1024 x 768 @75/60Hz         1280 x 720p 16.9 @60Hz           1024 x 768 @75/60Hz         1920 x 1080i 16.9 @60Hz           1280 x 1024 @75/80Hz         1920 x 1080i 16.9 @60Hz           1280 x 1024 @75/80Hz         1920 x 1080i 16.9 @60Hz           1280 x 1024 @75/80Hz         1920 x 1080p 16.9 @00Hz           1280 x 1024 @75/80Hz         1920 x 1080p 16.9 @00Hz           1280 x 1024 @75/80Hz         1920 x 1080p 16.9 @00Hz           1280 x 1024 @75/80Hz         1920 x 1080p 16.9 @00Hz           1280 x 1024 @75/80Hz         1920 x 1080p 16.9 @00Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16.9 @00Hz           1920 x 1080p 16.9 @00Hz         1920 x 1080p 16.9 @00Hz           1920 x 1080p 16.9 @00Hz         3840 x 2160p 16.9 @02Hz           1920 x 1080p 16.9 @00Hz         3840 x 2160p 16.9 @00Hz           1920 x 1080p 16.9 @00Hz         3840 x 2160p 16.9 @00Hz           1920 x 1080p 16.9 @00Hz         4096 x 2160p 256:135 @02Hz           1920 x 1080p 16.9 @01Hz         4096 x 2160p 256:135 @02Hz           1920 x 1080p 16.9 @120Hz         4096	800 x 600 @56/35.1Hz	1280 x 800 @60Hz 16:10		720 x 576p 4:3 @50Hz	
800 x 600 @75/46.9Hz         720 x 480p 16:9 @60Hz           1024 x 768 @60/48.4Hz         1280 x 720p 16:9 @60Hz           1024 x 768 @70/56.5Hz         1280 x 720p 16:9 @60Hz           1024 x 768 @75/60Hz         1920 x 1080i 16:9 @60Hz           1024 x 768 @75/60Hz         1920 x 1080i 16:9 @60Hz           1280 x 1024 @75/80Hz         1920 x 1080i 16:9 @50Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @30Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @30Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @00Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @30Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @00Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @00Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @00Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @00Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @00Hz           1152 x 870 @75/67.6Hz         3840 x 2160p 16:9 @00Hz           1152 x 870 @75/67.6Hz         3840 x 2160p 16:9 @00Hz           1152 x 870 @75/67.6Hz         3840 x 2160p 16:9 @00Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @01Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 16:9 @01Hz           1152 x 870 @75/67.6Hz         1920 x 1080p 1	800 x 600 @60/37.9Hz			720 x 576p 16:9 @50Hz	
1024 x 768 @60/48.4Hz       1280 x 720p 16:9 @60Hz         1024 x 768 @70/56.5Hz       1280 x 720p 16:9 @60Hz         1024 x 768 @75/60Hz       1920 x 1080i 16:9 @60Hz         1280 x 1024 @75/80Hz       1920 x 1080p 16:9 @50Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @30Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @30Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @60Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @25Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @25Hz         1152 x 870 @75/67.6Hz       3840 x 2160p 16:9 @25Hz         1152 x 870 @75/67.6Hz       3840 x 2160p 16:9 @25Hz         1152 x 870 @75/67.6Hz       3840 x 2160p 16:9 @25Hz         1152 x 870 @75/67.6Hz       3840 x 2160p 16:9 @25Hz         1152 x 870 @75/67.6Hz       3840 x 2160p 16:9 @25Hz         1162 x 800 @75/60 #z       3840 x 2160p 16:9 @26Hz         1162 x 800 #z       4096 x 2160p 256:135 @30Hz         1162 x 800 #z       4096 x 2160p 256:135 @05Hz         1162 x 800 #z       1920 x 1080p 16:9 @120Hz         1162 x 800 #z       1920 x 1080p 1	800 x 600 @72/48.1Hz			720 x 480p 4:3 @60Hz	
1024 x 768 @70/56.5Hz       1280 x 720p 16.9 @60Hz         1024 x 768 @75/60Hz       1920 x 1080i 16.9 @60Hz         1280 x 1024 @75/80Hz       1920 x 1080i 16.9 @50Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16.9 @30Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16.9 @30Hz         1920 x 1080p 16.9 @60Hz       1920 x 1080p 16.9 @60Hz         1920 x 1080p 16.9 @60Hz       1920 x 1080p 16.9 @60Hz         1920 x 1080p 16.9 @60Hz       1920 x 1080p 16.9 @60Hz         1920 x 1080p 16.9 @60Hz       3840 x 2160p 16.9 @25Hz         1840 x 2160p 16.9 @25Hz       3840 x 2160p 16.9 @30Hz         1920 x 1080p 16.9 @60Hz       3840 x 2160p 16.9 @30Hz         1920 x 1080p 16.9 @25Hz       3840 x 2160p 16.9 @30Hz         1920 x 1080p 16.9 @25Hz       3840 x 2160p 16.9 @30Hz         1920 x 1080p 16.9 @50Hz       3840 x 2160p 16.9 @50Hz         1920 x 1080p 16.9 @25Hz       3840 x 2160p 16.9 @30Hz         1920 x 1080p 16.9 @25Hz       3840 x 2160p 16.9 @30Hz         1920 x 1080p 16.9 @50Hz       3840 x 2160p 16.9 @50Hz         1920 x 1080p 16.9 @25Hz       3840 x 2160p 256:135 @3Hz         1920 x 1080p 16.9 @120Hz       4096 x 2160p 256:135 @0Hz         1920 x 1080p 16.9 @120Hz       3840 x 2160p 16.9 @120Hz         1920 x 1080p 16.9 @120Hz       3840 x 2160 16.9 @120Hz	800 x 600 @75/46.9Hz			720 x 480p 16:9 @60Hz	
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1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @24Hz         1152 x 870 @75/67.6Hz       1920 x 1080p 16:9 @30Hz         1920 x 1080p 16:9 @30Hz       1920 x 1080p 16:9 @50Hz         1920 x 1080p 16:9 @60Hz       1920 x 1080p 16:9 @60Hz         1920 x 1080p 16:9 @60Hz       3840 x 2160p 16:9 @24Hz         1920 x 1080p 16:9 @25Hz       3840 x 2160p 16:9 @30Hz         1920 x 1080p 16:9 @30Hz       3840 x 2160p 16:9 @30Hz         1920 x 1080p 16:9 @50Hz       3840 x 2160p 16:9 @30Hz         1920 x 1080p 16:9 @50Hz       3840 x 2160p 16:9 @50Hz         1920 x 1080p 16:9 @50Hz       3840 x 2160p 16:9 @60Hz         1920 x 1080p 16:9 @50Hz       3840 x 2160p 16:9 @60Hz         1920 x 1080p 16:9 @50Hz       3840 x 2160p 16:9 @60Hz         1920 x 1080p 16:9 @60Hz       4096 x 2160p 256:135 @30Hz         1920 x 1080p 16:9 @10Hz       4096 x 2160p 256:135 @50Hz         1920 x 1080p 16:9 @120Hz       1920 x 1080p 16:9 @120Hz         1920 x 1080p 16:9 @120Hz       3840 x 2160 16:9 @120Hz         1920 x 1080p 16:9 @120Hz       3840 x 2160 16:9 @120Hz         1920 x 1080p 16:9 @120Hz       3840 x 2160 16:9 @120Hz	1024 x 768 @75/60Hz			1920 x 1080i 16:9 @60Hz	
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1920 x 1080p 16:9 @50Hz         1920 x 1080p 16:9 @60Hz         1920 x 1080p 16:9 @60Hz         3840 x 2160p 16:9 @24Hz         3840 x 2160p 16:9 @25Hz         3840 x 2160p 16:9 @30Hz         3840 x 2160p 16:9 @30Hz         3840 x 2160p 16:9 @50Hz         3840 x 2160p 16:9 @60Hz         3840 x 2160p 16:9 @60Hz         3840 x 2160p 16:9 @60Hz         4096 x 2160p 256:135 @24Hz         4096 x 2160p 256:135 @30Hz         4096 x 2160p 256:135 @30Hz         4096 x 2160p 256:135 @60Hz         4096 x 2160p 256:135 @60Hz         4096 x 2160p 256:135 @60Hz         4096 x 2160p 256:135 @01Dz	1152 x 870 @75/67.6Hz			1920 x 1080p 16:9 @24Hz	
1920 x 1080p 16:9 @60Hz         3840 x 2160p 16:9 @24Hz         3840 x 2160p 16:9 @25Hz         3840 x 2160p 16:9 @30Hz         3840 x 2160p 16:9 @30Hz         3840 x 2160p 16:9 @50Hz         3840 x 2160p 16:9 @60Hz         4096 x 2160p 256:135 @24Hz         4096 x 2160p 256:135 @30Hz         4096 x 2160p 256:135 @50Hz         4096 x 2160p 256:135 @60Hz				1920 x 1080p 16:9 @30Hz	
image: state in the state				1920 x 1080p 16:9 @50Hz	
Image: State of the state				1920 x 1080p 16:9 @60Hz	
Image: State of the state				3840 x 2160p 16:9 @24Hz	
Image: Sector				3840 x 2160p 16:9 @25Hz	
Image: Sector				3840 x 2160p 16:9 @30Hz	
Image: Section of the section of th				3840 x 2160p 16:9 @50Hz	
4096 x 2160p 256:135 @30Hz         4096 x 2160p 256:135 @50Hz         4096 x 2160p 256:135 @60Hz         4096 x 2160p 256:135 @60Hz         1920 x 1080p 16:9 @120Hz         3840 x 2160 16:9 @120Hz         4096 x 2160 256:135 @120Hz					
4096 x 2160p 256:135 @50Hz         4096 x 2160p 256:135 @60Hz         4096 x 2160p 256:135 @60Hz         1920 x 1080p 16:9 @120Hz         3840 x 2160 16:9 @120Hz         4096 x 2160 256:135 @120Hz				4096 x 2160p 256:135 @24Hz	
4096 x 2160p 256:135 @60Hz         4096 x 2160p 256:135 @60Hz         1920 x 1080p 16:9 @120Hz         3840 x 2160 16:9 @120Hz         4096 x 2160 256:135 @120Hz				4096 x 2160p 256:135 @30Hz	
1920 x 1080p 16:9 @120Hz         3840 x 2160 16:9 @120Hz         4096 x 2160 256:135 @120Hz				4096 x 2160p 256:135 @50Hz	
3840 x 2160 16:9 @120Hz         4096 x 2160 256:135 @120Hz				4096 x 2160p 256:135 @60Hz	
4096 x 2160 256:135 @120Hz				1920 x 1080p 16:9 @120Hz	
Ŭ				3840 x 2160 16:9 @120Hz	
1920 x 1080p 16:9 @25Hz				4096 x 2160 256:135 @120Hz	
				1920 x 1080p 16:9 @25Hz	

USB-C (HDMI 2.0) (4K)

Audio Date / Format

LPCM(IEC 60958 PCM[30,31]

		USB-C (HDMI 2.0) (4	K)	
B0 / Established Timing	B0 / Standard Timing	B0 / Detail Timing	B1 / Video Mode	B1 / Detail Timing
Resolution; V/H Hz	Resolution; V Hz; Aspect Ratio	Resolution; V Hz	Resolution; Aspect Ratio; V Hz	Resolution; V Hz
720 x 400 @70/31.5Hz	1280 x 1024 @60Hz 5:4	1920 x 1080 @60Hz	640 x 480p 4:3 @60Hz	N/A
640 x 480 @60/31.5Hz	1280 x720 @120Hz 16:9		720(1440) x 576i 4:3 @50Hz	
640 x 480 @67/34.9Hz	1600 x 1200 @60Hz 4:3		720(1440) x 576i 16:9 @50Hz	
640 x 480 @72/37.9Hz	1280 x 720 @60Hz 16:9		720(1440) x 480i 4:3 @60Hz	
640 x 480 @75/37.5Hz	1024 x 768 @120Hz 4:3		720(1440) x 480i 16:9 @60Hz	
800 x 600 @56/35.1Hz	1280 x 800 @60Hz 16:10		720 x 576p 4:3 @50Hz	
800 x 600 @60/37.9Hz			720 x 576p 16:9 @50Hz	
800 x 600 @72/48.1Hz			720 x 480p 4:3 @60Hz	
800 x 600 @75/46.9Hz			720 x 480p 16:9 @60Hz	
1024 x 768 @60/48.4Hz			1280 x 720p 16:9 @50Hz	
1024 x 768 @70/56.5Hz			1280 x 720p 16:9 @60Hz	
1024 x 768 @75/60Hz			1920 x 1080i 16:9 @60Hz	
1280 x 1024 @75/80Hz			1920 x 1080i 16:9 @50Hz	
1152 x 870 @75/67.6Hz			1920 x 1080p 16:9 @24Hz	
			1920 x 1080p 16:9 @30Hz	
			1920 x 1080p 16:9 @50Hz	
			1920 x 1080p 16:9 @60Hz	
			3840 x 2160p 16:9 @24Hz	
			3840 x 2160p 16:9 @25Hz	
			3840 x 2160p 16:9 @30Hz	
			3840 x 2160p 16:9 @50Hz	
			3840 x 2160p 16:9 @60Hz	
			4096 x 2160p 256:135 @24Hz	
			4096 x 2160p 256:135 @30Hz	
			4096 x 2160p 256:135 @50Hz	
			4096 x 2160p 256:135 @60Hz	
			1920 x 1080p 16:9 @120Hz	
			1920 x 1080p 16:9 @25Hz	
			1020 X 1000P 10.0 @20112	

MAC				
Resolution	V [Hz]			
640 x 480	60			
720 x 576	50			
800 x 600	60			
1024 x 768	60/120			
1280 x 720p	60/120			
1920 x 1080p	24/25/30/50/60/120			
3840 x 2160	24/25/30			
4096 x 2160	24/30			

## Supported formats for multi-media

#### Video formats

Decoder	Container format
H.263	FLV, MP4, MOV, 3GPP, 3GP, AVI, MKV
H.264	FLV, MP4, MOV, 3GPP, 3GP, MPEG transport stream (.ts / .trp /.tp ), ASF, WMV, AVI, MKV
HEVC/H.265	MP4, MOV, 3GPP, 3GP, MPEG transport stream (.ts / .trp /.tp ), MKV
MPEG1/2	MPEG program stream (.DAT /.VOB / .MPG / .MPEG ), MPEG transport stream (.ts / .trp /.tp ), MP4, MOV (MPEG1), 3GPP, 3GP, AVIMKV
MPEG4	MP4, MOV, 3GPP, 3GP, AVI, MKV
Motion JPEG	AVI, 3GPP, 3GP, MP4, MOV, MKV
Sorenson H.263	AVI, FLV
VP8	MKV, WebM, MP4
VP9	MKV, WebM, MP4
AVS	3GPP, 3GP, MP4, MOV, MPEG transport stream (.ts / .trp /.tp )
AVS+	3GPP, 3GP, MP4, MOV, MPEG transport stream (.ts / .trp /.tp )
AVS2	3GPP, 3GP, MP4, MOV, MPEG transport stream (.ts / .trp /.tp )
VC1	MPEG transport stream (.ts / .trp /.tp ), ASF, WMV, AVI, MKV
AV1	MP4 (.mp4), MOV (.mov), 3GPP (.3gpp, .3gp) , MKV (.mkv)

#### Audio formats

Decoder	Container format
MPEG1/2 Layer1	MP3, AVI, ASF, Matroska (MKV, MKA), 3GPP, 3GP, MP4, MOV, M4A, MPEG transport stream (.ts / .trp /.tp ), MPEG program stream (.DAT /.VOB / .MPG / .MPEG ), FLV, WAV
MPEG1/2 Layer2	MP2, MPA, AVI, ASF, Matroska (MKV, MKA), 3GPP, 3GP, MP4, MOV, M4A, MPEG transport stream (.ts / .trp /.tp ), MPEG program stream (.DAT /.VOB / .MPG / .MPEG ), FLV, WAV
MPEG1/2/2.5 Layer3	MP3, AVI, ASF, Matroska (MKV, MKA), 3GPP, 3GP, MP4, MOV, M4A, MPEG transport stream (.ts / .trp /.tp ), MPEG program stream (.DAT /.VOB / .MPG / .MPEG ), FLV, WAV
AAC, HEAAC, AAC-LC	AAC, AVI, Matroska (MKV, MKA), DivX, 3GPP, 3GP, MP4, MOV, M4A, MPEG transport stream (.ts / .trp /.tp ), MPEG program stream (.DAT /.VOB / .MPG / .MPEG ), FLV, WAV
VORBIS	Matroska (MKV, MKA), WebM, 3GPP, 3GP, MP4, MOV, M4A, OGG
LPCM	WAV, AVI, Matroska (MKV, MKA), 3GPP, 3GP, MP4, MOV, M4A, MPEG transport stream (.ts / .trp /.tp ), MPEG program stream (.DAT /.VOB / .MPG / .MPEG )
IMA-ADPCM MS-ADPM	WAV, AVI, Matroska (MKV, MKA), 3GPP, 3GP, MP4, MOV, M4A
G711 A/mu-law	WAV, AVI, Matroska (MKV, MKA), 3GPP, 3GP, MP4, MOV, M4A
FLAC	Matroska (MKV, MKA)
DRA	MPEG transport stream (.ts / .trp )
OPUS	Matroska (MKV, MKA)

#### Image formats

Decoder	Container format
JPEG	Base-line (1920x 1080 ), Progressive (1024 x 768 )
PNG	non-interlace (1920 x 1080 ), interlace ( 1920 x 1080 )
BMP	15360 X 8640 (The limitaion of max resolution depends on DRAM size)

## Supported formats for digital signage

Туре	Format
Image	jpg/.jpeg, .png, .bmp
Audio	m4a, .mp3, .wav, .aac
Video	mkv, .webm, .mp4, .mov, .3gpp, .3gp, .ts, .trp, .tp, .mkv, .DAT, .VOB, .MPG, .MPEG, .avi, .flv, .asf, .wmv

## Image size and projection distance

#### **Standard Throw**

		Screen Siz	ze (W x H)		Projection	Diotonoo (D)	Offset (Hd)	
Diagonal Length Size of (16:9) Screen	(r	n)	(ind	ch)	Projection	Distance (D)		
	Width	Height	Width	Height	(m)	(inch)	(m)	(inch)
60	1.33	0.75	52.29	29.42	1.60	63.12	-0.037~0.037	-1.46~1.46
70	1.55	0.87	61.01	34.32	1.87	73.57	-0.044~0.044	-1.73~1.73
80	1.77	1.00	69.73	39.22	2.13	84.04	-0.050~0.050	-1.97~1.97
90	1.99	1.12	78.44	44.12	2.40	94.50	-0.056~0.056	-2.20~2.20
100	2.21	1.25	87.16	49.03	2.67	104.95	-0.062~0.062	-2.44~2.44
120	2.66	1.49	104.59	58.83	3.20	125.87	-0.075~0.075	-2.95~2.95
150	3.32	1.87	130.74	73.54	3.99	157.25	-0.093~0.093	-3.66~3.66

#### **Short Throw**

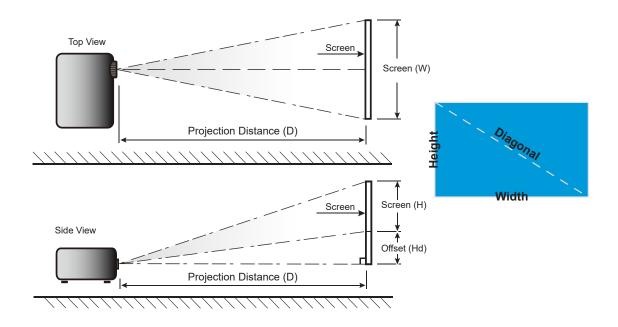
		Screen Siz	ze (W x H)		Projection	Distance (D)	Offset (Hd)	
Diagonal Length Size of (16:9) Screen	(r	n)	(in	ch)	Frojection	Distance (D)		
	Width	Height	Width	Height	(m)	(inch)	(m)	(inch)
60	1.33	0.75	52.29	29.42	1.04	40.91	-0.037~0.037	-1.46~1.46
70	1.55	0.87	61.01	34.32	1.21	47.70	-0.044~0.044	-1.73~1.73
80	1.77	1.00	69.73	39.22	1.38	54.50	-0.050~0.050	-1.97~1.97
90	1.99	1.12	78.44	44.12	1.56	61.30	-0.056~0.056	-2.20~2.20
100	2.21	1.25	87.16	49.03	1.73	68.10	-0.062~0.062	-2.44~2.44
120	2.66	1.49	104.59	58.83	2.08	81.94	-0.075~0.075	-2.95~2.95
150	3.32	1.87	130.74	73.54	2.60	102.34	-0.093~0.093	-3.66~3.66

Note:

•

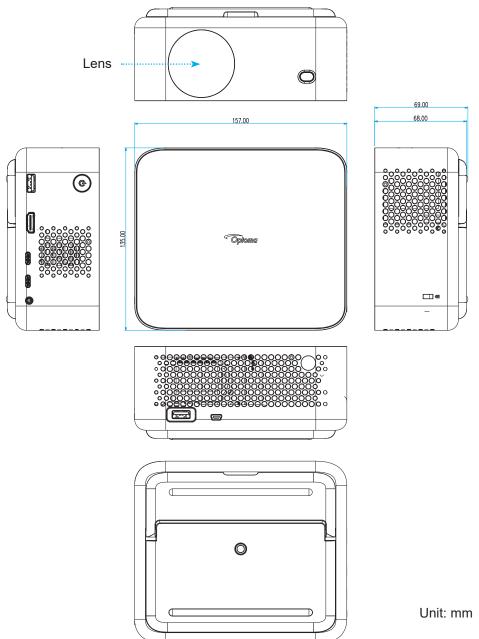
- The projection distance (D) is the distance from the lens to the wall.
- (Hd) is the vertical distance from the bottom of the screen to the center of the lens.
  - Auto focus, auto keystone, and eye protection functions depend on the screen size. Please refer to the below table for more details:

Model Feature	Standard Throw	Short Throw
Optimized	70"	70"
Power focus	30"~150"	30"~150"
Auto Focus	60"~100"	60"~100"
Auto Keystone	60"~100"	60"~100"
Eye protection	30"~70"	30"~100"



## Projector dimensions and ceiling mount installation

- Screw type: 1/4"-20
- Minimum screw length: 1/4"



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

# Warning:

- Be sure to keep at least 15 cm gap between the ceiling and the bottom of the projector.
- Avoid installing the projector near a heat source.

## **IR remote codes**



Ke	у	Key num	МТХ.	Format	Data0	Data1	Data2	Data3	Description
Power on / off	С С	K12	04	F1	32	CD	71	8E	Refer to the "Powering on / off the projector" on page 21".
Source	Ð	K3	11	F1	32	CD	18	E7	Press € to select an input signal.
Home		K13	03	F1	32	CD	92	6D	Press $rightarrow$ to return to the Home screen.
Menu	≡	K8	17	F1	32	CD	0E	F1	Press $\equiv$ to launch the on-screen display (OSD) menu. To exit OSD, press $\equiv$ again.
Return		K4	10	F1	32	CD	86	79	Press $rightarrow$ to return to the previous page.
Up		K7	18	F2	32	CD	11	EE	
Left	•	K14	02	F2	32	CD	10	EF	Use $\blacktriangle \blacksquare \blacksquare \blacksquare$ to select items or make
Right		K5	09	F2	32	CD	12	ED	adjustments to your selection.
Down	$\mathbf{\nabla}$	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 <b>◀</b> × to turn off/on the projector built- in speaker.
Display Mode	••	K10	15	F1	32	CD	91	6E	Press 🍽 to display the Display Mode menu. To exit the Display Mode menu, press 🍽 again.
APP menu	• • •	K6	08	F1	32	CD	25	DA	Press to open the APP menu.
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.

## 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 "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

- Make sure the auto focus function is enabled. (Please see page 17).
- If the projected image appears blurry after performing auto focus function, you can adjust it by manual focus.
- Ensure that the projector is positioned at the following specifications:
  - a. The projector is placed on a flat surface and parallel to the ground.
    - b. The projected surface is flat and perpendicular to the ground.
    - c. The projector is placed at 80-350 cm away from the projected surface.
  - d. Horizontal and vertical projection angle is within  $\pm$  20 degree range.
- 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 V-Stretch 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

- Make sure the digital zoom function is enabled. (Please see page 35).
- Move the projector closer to or further from the screen.
- Press "Menu" on the projector panel, go to "Display  $\rightarrow$  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 "Display  $\rightarrow$  Projection Orientation" from the OSD and adjust the projection direction.

### Image / keystone is distorted

- Ensure that the projector is positioned at the following specifications:
  - a. The projector is placed on a flat surface and parallel to the ground.
  - b. The projected surface is flat.
  - c. The projector is placed at 80-350 cm away from the projected surface.
  - d. Horizontal and vertical keystone correction is within a ±20 degree range.

#### 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 6 m (19.7 ft) of the projector.
  - Make sure batteries are inserted correctly.
  - Replace batteries if they are exhausted.

## Warning indicators

If an error occurs, unplug the power cord from the projector, wait for 30 seconds and try again. If the warning indicator lights up or flashes, please contact your nearest service center for assistance.

#### LED lightning messages

Maaaaa	Power LED						
Message	(White)	(Red)					
Standby state (Input power cord)	Breathing light						
Power on (Warming)	Flashing (0.5 sec off / 0.5 sec on)						
Power on and Lamp lighting	Steady light						
Power off (Cooling)		Flashing (0.5 sec off / 0.5 sec on)					
Error (Over temp.)	Flashing (0.5 sec off / 0.5 sec on)	Flashing (1 sec off / 3 sec on)					
Error (Fan failure)	Flashing (0.5 sec off / 0.5 sec on)	Flashing (0.5 sec off / 2 sec on)					
Error (CW fialure)	Steady light	Flashing (0.5 sec off / 0.5 sec on)					
Error (LD fialure)	Flashing (0.5 sec off / 0.5 sec on)	Steady light					

#### • Power off:



• Fan warning:



• System warning:



## **Specifications**

Item		Description					
Technology		Texas Instrument DMD, 0.23" 1080p DMD					
Native Resolutio	n	1920 x 1080 (W/i actuator)					
Throw ratio		<ul> <li>Regular throw: TR1.2 (tolerance ±3%)</li> <li>Short throw: TR0.78 (tolerance ±3%)</li> </ul>					
Lens	F-stop	<ul><li>Regular throw: 2.1</li><li>Short throw: 1.9</li></ul>					
	Focal length	N/A					
	Zoom range	Fixed Zoom					
Offset		100% ±5%					
Image size		<ul> <li>30"~ 150" (Optimized @70", by manual power focus)</li> <li>60" ~ 100" (Optimized @70", by auto focus)</li> </ul>					
Projection distar	ice	<ul> <li>Regular throw: 1594 mm ~ 2657 mm</li> <li>Short throw: 1036 mm ~ 1727 mm</li> </ul>					
		• HDMI 2.1 x1 (4K/120Hz);					
		• USB C x2;					
		<ul> <li>#1: dedicated for Power input from Adapter/Power Bank (65W/20V/3.25A)</li> <li>#2: dedicated for image display (4K/60Hz)</li> </ul>					
I/Os		USB Type-A x2;     #4. 5V(4.5A, dedicated for neuron Out (5)(4.5A), multi-modio nen drive					
		<ul> <li>#1: 5V/1.5A, dedicated for power Out (5V/1.5A), multi-media pen drive</li> <li>(4K/60Hz) and FW upgrade.</li> <li>#2: 5V/0.5A, dedicated for USB Wi-Fi dongle (EZC-5201BS)</li> </ul>					
		<ul> <li>Audio Out x1; ø3.5mm phone Jack</li> </ul>					
		RS232 x1; use a mini USB connector					
Colour		1073.4 Million color					
		<ul> <li>Horizontal scan rate: 15 KHz ~ 140 KHz</li> </ul>					
Scan rate		<ul> <li>Vertical scan rate: 24~240 Hz, 240 Hz for 1080P</li> </ul>					
		3Wx1					
Speaker		Monophonic, speakers with sound box.					
		Maximum Driver output 2W at FULL/ECO mode; 1W at ECO+ mode.					
		Maximum (Bright mode):					
		• 57W (typical) @110VAC					
		• 56W (typical)@220VAC					
5	··	Maximum (ECO mode):					
Power consump	tion	• 45W (typical) @110VAC					
		• 44W (typical) @220VAC					
		Maximum (ECO+ mode):					
		<ul> <li>31.5W (typical)@110VAC</li> <li>31.4W (typical)@220)/AC</li> </ul>					
Input current		<ul> <li>31.4W (typical)@220VAC</li> <li>AC ≤1.7A@100Vac, 240Vac / max. load</li> </ul>					
Installation orien	tations	360° projection + portrait					
		<ul> <li>Without feet: 157(W) x 135(D) x 68(H) mm (6.18 x 5.31 x 2.72 inches)</li> </ul>					
Dimensions (W x	x D x H)	<ul> <li>With feet: 157(W) x 135(D) x 69(H) mm (6.18 x 5.31 x 2.68 inches)</li> </ul>					
Weight		0.9 kg ±0.05 kg					
Environmental		Operating in 0°~40°C, 10% to 85% humidity (non-condensing)					

Note: All specifications are subject to change without notice.

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