

# **Users Guide P139, P140, P141**

1 — Last update: 24 November 2023

# Table of Contents

<b>USERS GUIDE CORE I, CORE II AND SUPERIOR SERIES</b> .....	<b>5</b>
<b>1. ABOUT THIS GUIDE</b> .....	<b>6</b>
1.1 DESCRIPTION OF THE USER .....	6
1.2 CONVENTIONS USED IN THIS GUIDE .....	6
1.3 EXPLANATION OF SAFETY WARNINGS .....	6
1.4 RETAINING INSTRUCTIONS.....	7
1.5 OBTAINING DOCUMENTATION AND INFORMATION .....	7
1.6 DOCUMENTATION FEEDBACK .....	7
1.7 SUPPORT AND SERVICE .....	7
<b>2. PRODUCT DESCRIPTION</b> .....	<b>9</b>
2.1 FEATURES.....	9
2.2 INTENDED USE AND REASONABLY FORESEEABLE MISUSE .....	10
2.3 PRODUCT ELEMENTS.....	10
2.3.1 FRONT AND TOP .....	11
2.3.2 BASE.....	12
2.3.3 REAR.....	13
<b>3. SAFETY</b> .....	<b>14</b>
3.1 HOW TO USE THE PRODUCT SAFELY .....	14
3.1.1 VULNERABLE PEOPLE SAFETY INFORMATION .....	14
3.1.2 TECHNICAL LIFE SPAN.....	14
3.1.3 INTENDED USE SAFETY INFORMATION.....	14
3.1.4 INSTALLATION SAFETY INFORMATION .....	14
3.1.5 ELECTRICAL SAFETY INFORMATION .....	15
3.1.6 LASER SAFETY INFORMATION .....	15
3.1.7 MAINTENANCE SAFETY INFORMATION .....	16
3.1.8 SERVICE AND REPAIR SAFETY INFORMATION .....	16
3.2 SAFE DISPOSAL .....	16
3.3 GRAPHICAL SYMBOLS.....	16
<b>4. UNPACKING AND INSTALLING</b> .....	<b>18</b>
4.1 PACKAGING CONTENTS.....	18
4.2 INSTALLATION INSTRUCTIONS.....	18
4.3 PLACEMENT AND DISTANCE FROM THE SCREEN .....	18
4.3.1 PROJECTION DISTANCE AND SCREEN SIZE .....	19
4.4 CLEARANCE .....	22
4.5 CEILING MOUNT .....	24
4.6 MOUNTING HOLE DIAGRAM .....	25
<b>5. ADJUSTING</b> .....	<b>26</b>
5.1 ADJUSTING THE IMAGE HEIGHT AND TILT .....	26
5.2 ADJUSTING THE ZOOM, LENS SHIFT AND FOCUS .....	26
5.3 ADJUSTING THE VERTICAL AND HORIZONTAL KEYSTONE.....	27

<b>6. CONNECTING .....</b>	<b>29</b>
6.1 CONNECTION DIAGRAM .....	29
<b>7. USING.....</b>	<b>30</b>
7.1 LEDs.....	30
7.2 KEYPAD .....	30
7.3 REMOTE CONTROL.....	31
7.3.1 INSTALLING BATTERIES IN THE REMOTE CONTROL.....	32
7.3.2 REMOTE CONTROL IR CODES.....	33
7.4 REMOTE CONTROL EFFECTIVE RANGE.....	34
7.5 TURNING THE PROJECTOR ON .....	34
7.6 SELECTING A INPUT SOURCE .....	35
7.7 TURNING THE PROJECTOR TO STANDBY MODE .....	35
7.8 VIEWING 3D CONTENT .....	36
7.8.1 PHOTSENSITIVE SEIZURE WARNING AND OTHER HEALTH RISKS.....	36
7.8.2 ENABELING 3D MODE.....	37
7.8.3 ENABLING AUTO 3D MODE .....	37
<b>8. USING THE ON SCREEN DISPLAY (OSD) .....</b>	<b>38</b>
8.1 SELECTING THE LANGUAGE FOR THE ON SCREEN MENU.....	38
8.2 SELECTING A DISPLAY MODE.....	38
8.3 ADJUSTING THE IMAGE COLOUR AND TEMPERATURE.....	39
8.4 ADJUSTING THE SHARPNESS OF THE IMAGE.....	39
8.5 MAGNIFYING THE IMAGE .....	39
8.6 SELECTING AN ASPECT RATIO.....	39
8.7 ADJUSTING THE BRIGHTNESS .....	40
8.8 ENABELING ECO MODE.....	40
8.9 ENABLING CLOSED CAPTIONS .....	40
8.10 DISPLAYING A TEST PATTERN .....	40
8.11 PREVENTING UNAUTHORIZED USE .....	40
8.12 CHANGING THE PASSWORD.....	40
8.13 CONTROLLING THE PROJECTOR FROM A WEB BROWSER .....	41
8.14 DIRECTLY CONNECTING A COMPUTER TO THE PROJECTOR .....	42
<b>9. CLEANING.....</b>	<b>43</b>
9.1 CLEANING THE LENS.....	43
9.2 CLEANING THE CASE .....	43
9.3 CLEANING THE AIR VENTS .....	43
<b>10. SANITATION.....</b>	<b>44</b>
<b>11. DISPOSAL .....</b>	<b>45</b>
11.1 DISPOSAL OF ELECTRICAL COMPONENTS .....	45
11.2 DISPOSAL OF PACKAGING WASTE.....	45
<b>12 TROUBLESHOOTING.....</b>	<b>46</b>
12.1 LED INDICATOR LIGHTS .....	46
12.2 SOLVING ON/OFF ISSUES .....	46

12.3 SOLVING IMAGE ISSUES .....	46
12.4 SOLVING VIDEO, AUDIO AND REMOTE CONTROL ISSUES .....	48
12.5 SERVICING .....	49
<b>13. ADDITIONAL INFORMATION .....</b>	<b>50</b>
13.1 RS232 PIN ASSIGNMENTS .....	50
13.2 RS232 PROTOCOL FUNCTION LIST .....	50
13.2.1 RS232 PROJECTOR COMMAND CODES .....	51
13.2.2 SENT FROM PROJECTOR AUTOMATICALLY .....	66
13.2.3 RS232 CODES READ FROM PROJECTOR .....	67
13.3 SUPPORTED RESOLUTIONS AND REFRESH RATES .....	70
13.4 ON SCREEN DISPLAY (OSD) MENU TREE .....	72
<b>14. SPECIFICATIONS.....</b>	<b>79</b>
<b>15. PRODUCT COMPLIANCE .....</b>	<b>80</b>
<b>16. WARRANTY.....</b>	<b>83</b>

# USERS GUIDE CORE I, CORE II AND SUPERIOR SERIES

---



Model Number	Regulatory Model
INL164, INL174, INL166, INL176, INL168, INL178	P141
INL144, INL154, INL146, INL156, INL148, INL158	P140
INL2156, INL2166, INL2158, INL2168, INL2159, INL2169	P139

# 1. ABOUT THIS GUIDE

---

## 1.1 DESCRIPTION OF THE USER

---

This document is intended for anyone who will install, setup, or use the projector.

## 1.2 CONVENTIONS USED IN THIS GUIDE

---

The following style conventions are used in this document:

### **Bold**

- Names of product elements, commands, options, and programs
- Names of interface elements (such windows, dialog boxes, buttons, fields, and menus)
- Interface elements the user selects, clicks, taps, or types

### *Italic*

- Publication titles
- Emphasis (for example, a new term)

## 1.3 EXPLANATION OF SAFETY WARNINGS

---



### **WARNING**

“WARNING” indicates a hazard with a medium to high level of risk which, could result in death or serious injury.



### **ATTENTION**

“ATTENTION” indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.



### **INFORMATION**

“INFORMATION” Indicates information considered important, but not hazard-related.

## 1.4 RETAINING INSTRUCTIONS

---

Keep all safety information and instructions for future reference and pass them on to subsequent users of the product.



### WARNING

Ensure that each person who uses the product has read and understood this guide and its safety instructions before using this product. Failure to do so can result in serious injury or death.



### ATTENTION

Follow all the instructions. This will avoid fire, explosions, electric shocks or other hazards that may result in damage to property and/or severe or fatal injuries.



### INFORMATION

The manufacturer is not liable for cases of material damage or personal injury caused by incorrect handling or non-compliance with the safety instructions. In such cases, the warranty will be voided.

## 1.5 OBTAINING DOCUMENTATION AND INFORMATION

---

The latest version of the documentation is available [Here](#) under the downloads section of the page.

## 1.6 DOCUMENTATION FEEDBACK

---

If you are reading InFocus product documentation on the internet, any comments can be submitted [Here](#). We appreciate your comments.

## 1.7 SUPPORT AND SERVICE

---

Please contact the InFocus support team in your region for technical and product support. Alternatively, you may contact your local distributor if you are in Asia or Australia.

Monday – Friday  
6am – 5pm PST  
+1 877-388-8360  
support@infocus.com  
infocus.com/support/contact

Europe, Middle East & Africa  
Monday – Friday  
8am – 5pm CET  
eusupport@infocus.com  
infocus.com/support/contact

Asia Pacific  
Monday – Friday  
8am – 5pm ICT  
support@infocus.com  
infocus.com/support/contact

Australia  
Monday – Friday  
8am – 5pm AEST  
support@infocus.com  
infocus.com/support/contact

## 2. PRODUCT DESCRIPTION

---

### **The next generation of laser projection is here!**

With this multi-purpose, multi-use range of laser projectors, you get far more than an image on the wall. Content bursts to life, and viewing becomes an absolute pleasure and a next-level experience in any environment. Viewing presentations in the workplace offers much more crisp detail and readability. Engage more in the classroom and have peace of mind that you and your students or classmates are using the latest cutting-edge, environmentally friendly, energy-efficient display technology on the market.

## 2.1 FEATURES

---

The following lists the features of the projector.

### **Environmentally-friendly laser technology**

The lamp-free Quantum Laser DLP series with solid-state laser light source technology eliminates the heavy metals mercury and lead. The ultra-low energy usage and long-standing durability and performance offer outstanding value and a low cost of ownership.

### **4K support**

Simply stunning image quality with up to Full HD (1920 × 1080) native resolution and HDMI 2.0 (HDCP 2.2) 4K support. HDR compatible for lifelike texture details and improved image depth perception. Applicable to Full HD and above Superior Series models.

### **SuperSmartProject**

Our SuperSmartProject suite of power-saving, power optimisation, and utilisation features and functions combine ease of use and energy saving for your everyday use. Instant power on, signal power on, instant power-off, auto power-off, 10 step illumination reduction, and Dynamic Black optimisation all enhance your viewing experience while optimising energy usage.

### **Flexible installation**

Flexibility for almost every surface with a 1.3x or 1.1x optical zoom lens, front, rear, and ceiling placement, floor-to-ceiling and ceiling-to-floor projection, complete 360-degree flexibility across the horizontal axis, and landscape and portrait modes make Quantum Laser projectors ideal for homes, classrooms, retail displays, fixed installations, bars, clubs, and restaurants.

### **Auto keystone**

Auto keystone automatically adjusts the trapezoid effect when the projector is off-axis to create a vertically-aligned image.

### **24/7 operation**

The design of the projector allows it to operate 24 hours a day in standard orientation.

For optimum performance, InFocus recommends that your projector is turned off or placed in standby mode for 30 minutes every 24 hours to prolong the life of the projector light source. The projector has warranty coverage based on standard business usage hours.

### **Advanced security features**

A Kensington Lock Port™ keypad PIN protection with Timer Functions.

### **IP6X airtight optics**

Featuring IP6X dust resistance rating. Outstanding dust resistance ensures industry-leading durability; paramount for 24/7 maintenance-free operation in demanding environments.

XGA, WXGA and 1080p native resolutions (WUXGA on P139)

1080p resolution gives you sharp and detailed images from HD content without downscaling or compression; perfect for watching Blu-ray movies, HD broadcasting, and playing video games. WXGA resolution provides native 16:10 support for the business and commercial environment. XGA resolution provides the most competitive cost price.

#### **High-dynamic-range (HDR) Compatible**

Capable of receiving and displaying HDR metadata for support of HDR10 & Dolby Vision, HDR formats. To represent substantially brighter highlights, darker shadows, more details on both sides, and more colourful colours than what was previously possible – 1080p models only



#### **INFORMATION**

“INFORMATION” Not all features are available on all models.

## **2.2 INTENDED USE AND REASONABLY FORESEEABLE MISUSE**

---

The projector may only be used in accordance with the instructions described in this guide. Any use other than those described in this guide is considered non-intended use and will void the warranty.

The ambient operating environment should be free of airborne smoke, grease, oil, and other contaminants that can affect the operation or performance of the projector.



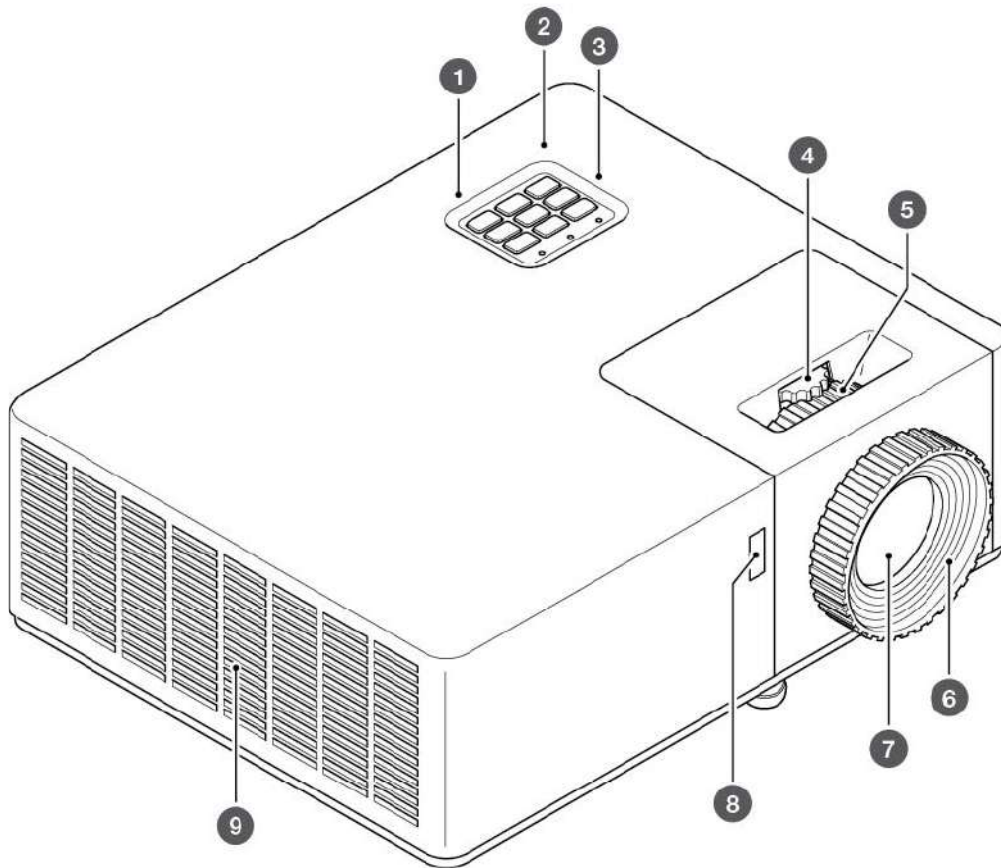
#### **WARNING**

Do not use the projector near water or moisture. Do not expose the projector to rain, steam or condensation to reduce the risk of fire or electric shock.

## **2.3 PRODUCT ELEMENTS**

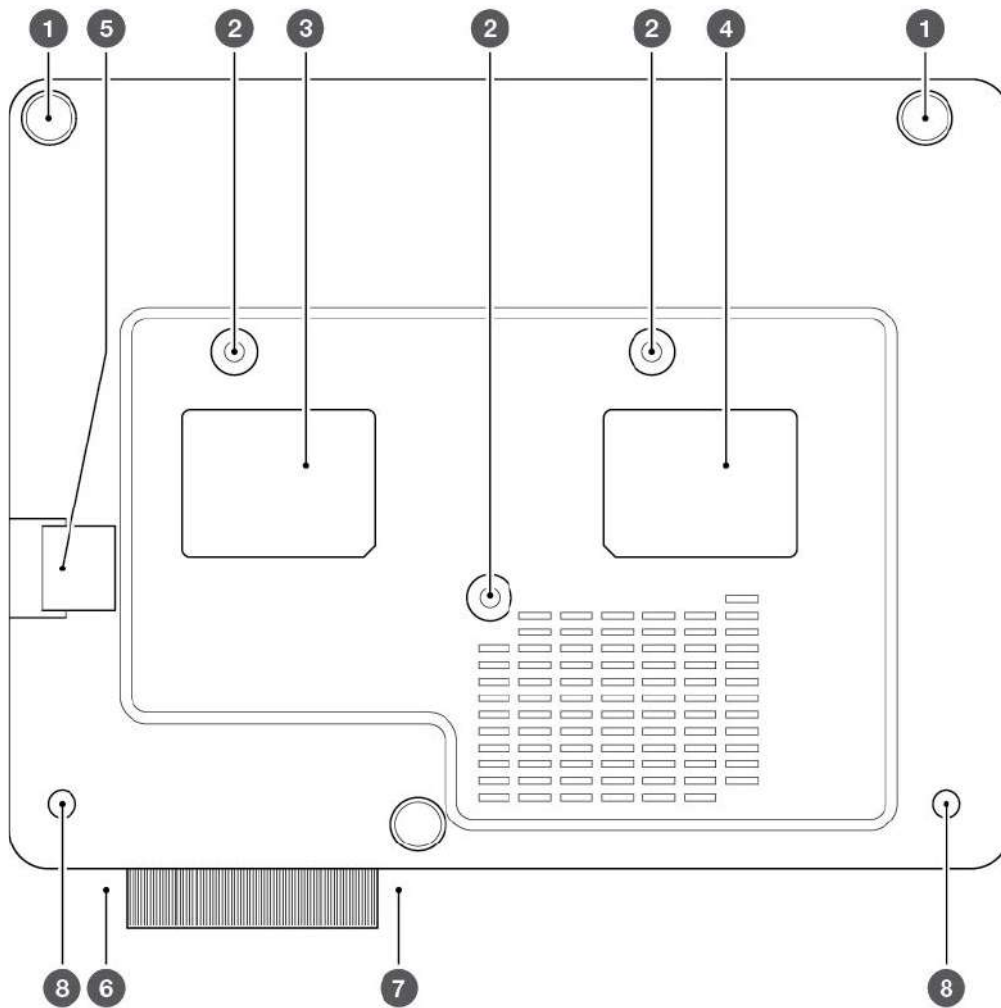
---

## 2.3.1 FRONT AND TOP



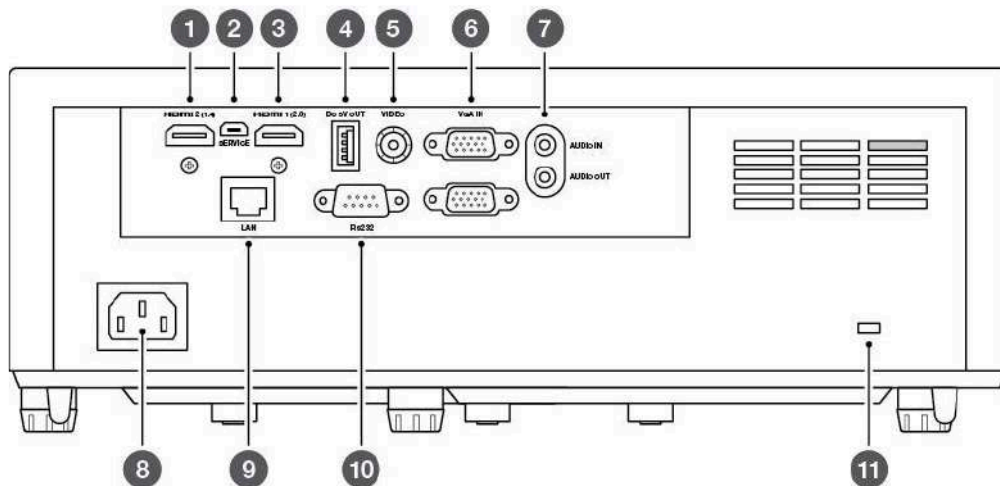
- ① Top IR sensor
- ② Keypad
- ③ LED function lights
- ④ Vertical lens-shift adjustment (not available on Core Series and selected models of the Superior Series)
- ⑤ Optical zoom ring
- ⑥ Focus ring
- ⑦ Projector lens
- ⑧ Front IR sensor
- ⑨ Air outtake vent

## 2.3.2 BASE



- ① Rear feet (2)
- ② Ceiling mount points (3)
- ③ Laser risk label (do not remove)
- ④ Regulatory label (do not remove)
- ⑤ Security cable attachment point
- ⑥ Lens cap attachment point
- ⑦ Front foot
- ⑧ Front fixed stabiliser feet (2)

## 2.3.3 REAR



- ① HDMI 2 (1.4) – HDMI 1.4 for 3D support and input signals up to 4K at 30 frames per second
- ② SERVICE – connect a USB cable to update the projector’s firmware
- ③ HDMI 1 (2.0) – HDMI 2.0 with HDCP 2.2 for up to 4K input signals at 60 frames per second
- ④ DC 5V OUT – connect a USB cable for power out
- ⑤ VIDEO – connect a composite video cable for video output
- ⑥ VGA IN & VGA OUT- connect a VGA video cable for video input or output for monitor loop through
- ⑦ AUDIO IN & OUT – connect an AUX cable for audio input or output
- ⑧ POWER – connect the power cable to a mains wall outlet
- ⑨ LAN – connect to a network using an RJ45 cable (not available on the Core series)
- ⑩ RS232 – connect an RS232 cable to control the projector from a PC
- ⑪ Kensington Security Slot



### INFORMATION

“INFORMATION”HDMI 2.0 with HDCP 2.2 is available on slected models.

## 3. SAFETY

---

### 3.1 HOW TO USE THE PRODUCT SAFELY

---



#### WARNING

Read and understand this guide and its safety instructions before using this product. Failure to do so can result in serious injury.

#### 3.1.1 VULNERABLE PEOPLE SAFETY INFORMATION

---

This device is not intended for use by persons (including children) with restricted physical, sensory or intellectual capability or lack of experience and/or knowledge.

The projector complies with the safety standards for electromagnetic devices. Contact your physician prior to use if you have a pacemaker or other implanted device.

#### 3.1.2 TECHNICAL LIFE SPAN

---

The technical lifespan of the projector is five years or 20,000 hours of use in normal mode and 30,000 hours of use in ECO mode under normal operating conditions (whichever comes first).

#### 3.1.3 INTENDED USE SAFETY INFORMATION

---

Use the projector only for its intended use as described in this user guide.

Do not expose the projector to temperatures above 104 F / 40 C or below 32 F / 0 C.

#### 3.1.4 INSTALLATION SAFETY INFORMATION

---

Check the projector for damage before installation. If there is any visible damage, do not connect the projector and contact InFocus.

Do not install the projector:

- Near heat sources such as radiators, heat registers, stoves, or other devices that produce heat
- Near water or in direct sunlight

- In an enclosure such as a book case or a cabinet that restricts air flow

## 3.1.5 ELECTRICAL SAFETY INFORMATION

Check for damage before connecting the power cable.

Only connect the projector to a grounded socket with earth leakage protection using the provided power cable.

Immediately unplug the projector from the wall outlet:

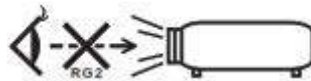
- If it has been damaged
- If water or another substance enters the projector
- If you smell smoke or other odours coming from the projector
- During lightning storms
- When unused for long periods of time

## 3.1.6 LASER SAFETY INFORMATION



### WARNING

“WARNING” Do not look straight at the projector lens during operation. The intense light beam may damage your eyes.



	<p><b>IEC/EN 60825-1:2014 CLASS 1 LASER PRODUCT RISK GROUP 2</b> 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.</p> <p><b>IEC/EN 60825-1:2014 PRODUIT LASER DE CLASSE 1 GROUPE DE RISQUE 2</b> Conforme aux normes 21 CFR 1040.10 et 1040.11, à l'exception de la conformité en tant que LIP du groupe de risque 2 définie dans la CEI 62471-5: Ed. 1,0. Pour plus d'informations, voir l'avis au laser n° 57 du 8 mai 2019.</p> <p><b>IEC/EN 60825-1:2014 1類雷射產品RG2危險等級</b> 除了IEC 62471-5:Ed.1.0中定義的RG2 LIP 危險等級以外，要符合21 CFR 1040.10和1040.11，更多相關資訊，請參閱2019年5月8日的第57號雷射公告。</p> <p><b>IEC/EN 60825-1:2014 1类激光产品RG2危险等级</b> 除了IEC 62471-5:Ed.1.0中定义的RG2 LIP 危险等级以外，要符合21 CFR 1040.10和1040.11，更多相关信息，请参阅2019年5月8日的第57号激光公告。</p>
--	---

## 3.1.7 MAINTENANCE SAFETY INFORMATION

Review the instructions in the [CLEANING](#) section before cleaning the projector.

Disconnect the power supply before cleaning the projector. Do not use abrasive cleaning cloths or chemicals.

## 3.1.8 SERVICE AND REPAIR SAFETY INFORMATION

The projector contains no user serviceable parts. Contact [InFocus](#) for service or repair.







## 3.2 SAFE DISPOSAL

Follow the instructions in the [DISPOSAL](#) section in this user guide for safe disposal of the projector.

## 3.3 GRAPHICAL SYMBOLS

The following table describes the safety and regulatory symbols and marks on the packaging and product.

SYMBOL	MEANING
	The CCC mark on the product is the manufacturer's declaration that the product complies with the essential requirements for the relevant safety legislation of China.
	The CE mark on the product is the manufacturer's declaration that the product complies with the essential requirements of the relevant European health, safety, and environmental protection legislation.
	The cTUVus seal on a product is a seal of quality that confirms that the product has been tested by the German T V testing organization for use in the US and Canada.
	The EAC mark on the product is the manufacturer's declaration that the product complies with the essential requirements of the relevant safety legislation of the Eurasian Economic Union (EAEU).

	<p>The FCC mark on the product is the manufacturer's declaration that the product's electromagnetic radiation is below the limits specified by the Federal Communication Commission (FCC).</p>
	<p>The NOM mark on the product is the manufacturer's declaration that the product complies with the essential requirements of the relevant Mexican safety legislation.</p>
	<p>The RoHS mark on the product is the manufacturer's declaration that the product complies with the essential requirements of the relevant European Union safety legislation.</p>
 	<p>The Waste Electrical and Electronic Equipment (WEEE) symbol on the product, the accessories, or packaging indicates that this device shall not be treated as unsorted municipal waste, but shall be collected separately.</p>
	<p>The certification scheme of the Bureau of Indian Standards (BIS) is mandatory for specific electronic products in India. The BIS mark on the product is the manufacturer's declaration that the product complies with the essential requirements of the relevant India safety legislation.</p>

## 4. UNPACKING AND INSTALLING

---

### 4.1 PACKAGING CONTENTS

---

The projector packaging will contain:

- Projector
- Power cable
- HDMI cable
- Remote control (batteries not included)
- Lens cap
- Simplified users guide

### 4.2 INSTALLATION INSTRUCTIONS

---

Your projector can be installed at any angle or orientation. Select an installation position based on:

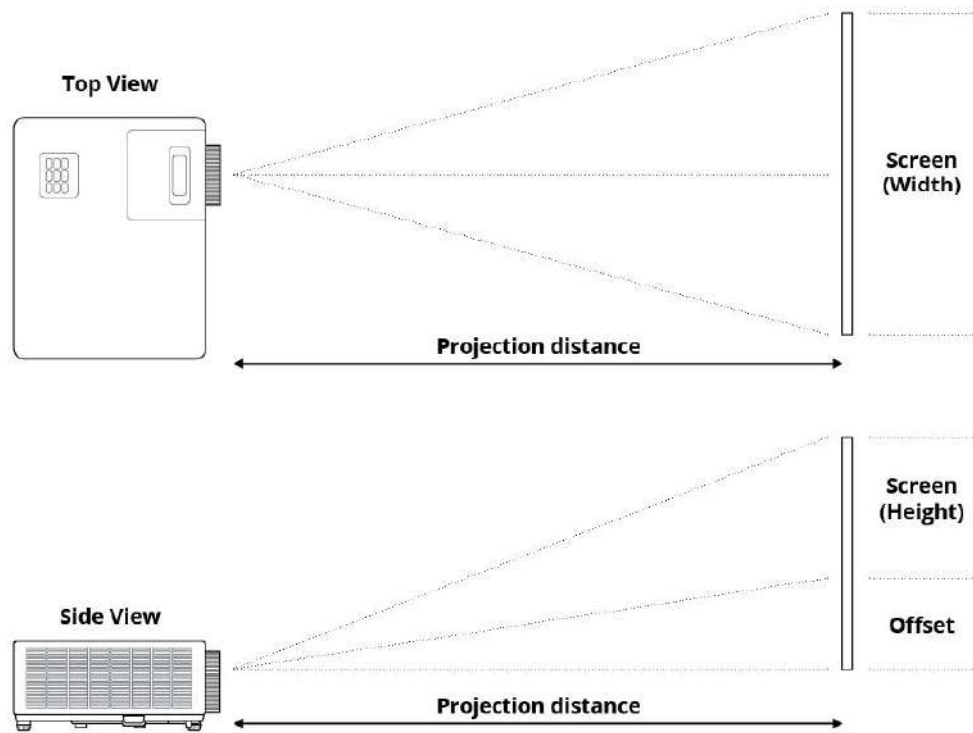
- Your room layout or orientation
- The size and position of your screen or projection surface
- The location of a suitable power outlet
- The location of the source devices you plan to use



### 4.3 PLACEMENT AND DISTANCE FROM THE SCREEN

---

The projected image size will increase based on the projector's distance from the screen or projection surface. You can use the following tables to determine the best location for the projector and screen.



## 4.3.1 PROJECTION DISTANCE AND SCREEN SIZE

INL2158, INL2168 1080p 1.3x ZOOM

SCREEN SIZE					PROJECTION DISTANCE (PD)							
INCHES	METERS		INCHES		METERS				FEET		IMAGE OFFSET (OFS)	
	Diagonal (D)	Width (W)	Height (H)	Width (W)	Height (H)	Wide	Tele	Wide	Tele	Meters	Inches	
28.3	0.63	0.35	24.67	13.87	-	1	-	3.28	0.04	1.57		
40	0.89	0.5	34.86	19.6	1.1	1.4	3.61	4.59	0.05	1.97		
50	1.11	0.62	43.58	24.5	1.3	1.8	4.27	5.91	0.06	2.36		
60	1.33	0.75	52.29	29.4	1.6	2.1	5.25	6.89	0.07	2.76		
70	1.55	0.87	61.01	34.3	1.9	2.5	6.23	8.2	0.09	3.54		
80	1.77	1	69.73	39.2	2.1	2.8	6.89	9.19	0.1	3.94		
90	1.99	1.12	78.44	44.1	2.4	3.2	7.87	10.5	0.11	4.33		
100	2.21	1.25	87.16	49	2.7	3.5	8.86	11.48	0.12	4.72		
120	2.66	1.49	104.59	58.8	3.2	4.2	10.5	13.78	0.15	5.91		
150	3.32	1.87	130.74	73.5	4	5.3	13.12	17.39	0.18	7.09		
180	3.98	2.24	156.88	88.2	4.8	6.3	15.75	20.67	0.23	9.06		
200	4.43	2.49	174.32	98.1	5.4	7	17.72	22.97	0.25	9.84		

250	5.53	3.11	217.89	122.6	6.7	8.8	21.98	28.87	0.31	12.2
300	6.64	3.74	261.47	147.1	8	-	26.25	-	0.37	14.57
374	8.28	4.66	325.97	183.4	10	-	32.81	-	0.46	18.11

\*INL2156, INL2166 WXGA 1.3x ZOOM

SCREEN SIZE					PROJECTION DISTANCE (PD)					
INCHES	METERS		INCHES		METERS		FEET		IMAGE OFFSET (OFS)	
Diagonal (D)	Width (W)	Height (H)	Width (W)	Height (H)	Wide	Tele	Wide	Tele	Meters	Inches
30.1	0.65	0.41	25.52	15.95	–	1.0	–	3.28	0.05	1.97
40	0.86	0.54	33.92	21.2	1.0	1.3	3.28	4.27	0.07	2.76
50	1.08	0.67	42.40	26.5	1.3	1.7	4.27	5.58	0.09	3.54
60	1.29	0.81	50.88	31.8	1.5	2.0	4.92	6.56	0.10	3.94
70	1.51	0.94	59.36	37.1	1.8	2.3	5.91	7.55	0.12	4.72
80	1.72	1.08	67.84	42.4	2.0	2.7	6.56	8.86	0.13	5.12
90	1.94	1.21	76.32	47.7	2.3	3.0	7.55	9.84	0.15	5.91
100	2.15	1.35	84.80	53	2.5	3.3	8.20	10.83	0.16	6.30
120	2.58	1.62	101.76	63.6	3.0	4.0	9.84	13.12	0.20	7.87
150	3.23	2.02	127.20	79.5	3.8	5.0	12.47	16.40	0.25	9.84
180	3.88	2.42	152.64	95.4	4.6	6.0	15.09	19.69	0.30	11.81
200	4.31	2.69	169.60	106	5.1	6.6	16.73	21.65	0.34	13.39
250	5.38	3.37	212.00	132.5	6.4	–	21.00	–	0.41	16.14
300	6.46	4.04	254.40	159	7.6	–	24.93	–	0.50	19.69

\*INL2159, INL2169 WUXGA 1.3x ZOOM

SCREEN SIZE					PROJECTION DISTANCE (PD)					
INCHES	METERS		INCHES		METERS		FEET		IMAGE OFFSET (OFS)	
Diagonal (D)	Width (W)	Height (H)	Width (W)	Height (H)	Wide	Tele	Wide	Tele	Meters	Inches
29.2	0.63	0.39	24.76	15.48	–	1.0	–	3.28	0.04	1.57
40	0.86	0.54	33.92	21.2	1.0	1.4	3.28	4.59	0.05	1.97
50	1.08	0.67	42.40	26.5	1.3	1.7	4.27	5.58	0.07	2.76
60	1.29	0.81	50.88	31.8	1.6	2.1	5.25	6.89	0.08	3.15
70	1.51	0.94	59.36	37.1	1.8	2.4	5.91	7.87	0.10	3.94

80	1.72	1.08	67.84	42.4	2.1	2.7	6.89	8.86	0.10	3.94
90	1.94	1.21	76.32	47.7	2.3	3.1	7.55	10.17	0.12	4.72
100	2.15	1.35	84.80	53	2.6	3.4	8.53	11.15	0.13	5.12
120	2.58	1.62	101.76	63.6	3.1	4.1	10.17	13.45	0.16	6.30
150	3.23	2.02	127.20	79.5	3.9	5.1	12.80	16.73	0.20	7.87
180	3.88	2.42	152.64	95.4	4.7	6.2	15.42	20.34	0.25	9.84
200	4.31	2.69	169.60	106	5.2	6.8	17.06	22.31	0.27	10.63
250	5.38	3.37	212.00	132.5	6.5	8.6	21.33	28.22	0.33	12.99
300	6.46	4.04	254.40	159	7.8	–	25.59	–	0.40	15.75
383.7	8.26	5.17	325.38	203.4	10.0	–	32.81	–	0.51	20.08

\*INL146, INL156 WXGA 1.1x ZOOM

SCREEN SIZE					PROJECTION DISTANCE (PD)					
INCHES	METERS		INCHES		METERS		FEET		IMAGE OFFSET (OFS)	
Diagonal (D)	Width (W)	Height (H)	Width (W)	Height (H)	Wide	Tele	Wide	Tele	Meters	Inches
30.1	0.65	0.41	25.52	15.95	–	1.0	–	3.28	0.05	1.97
40	0.86	0.54	33.92	21.2	1.0	1.3	3.28	4.27	0.07	2.76
50	1.08	0.67	42.40	26.5	1.3	1.7	4.27	5.58	0.09	3.54
60	1.29	0.81	50.88	31.8	1.5	2.0	4.92	6.56	0.10	3.94
70	1.51	0.94	59.36	37.1	1.8	2.3	5.91	7.55	0.12	4.72
80	1.72	1.08	67.84	42.4	2.0	2.7	6.56	8.86	0.13	5.12
90	1.94	1.21	76.32	47.7	2.3	3.0	7.55	9.84	0.15	5.91
100	2.15	1.35	84.80	53	2.5	3.3	8.20	10.83	0.16	6.30
120	2.58	1.62	101.76	63.6	3.0	4.0	9.84	13.12	0.20	7.87
150	3.23	2.02	127.20	79.5	3.8	5.0	12.47	16.40	0.25	9.84
180	3.88	2.42	152.64	95.4	4.6	6.0	15.09	19.69	0.30	11.81
200	4.31	2.69	169.60	106	5.1	6.6	16.73	21.65	0.34	13.39
250	5.38	3.37	212.00	132.5	6.4	–	21.00	–	0.41	16.14
300	6.46	4.04	254.40	159	7.6	–	24.93	–	0.50	19.69

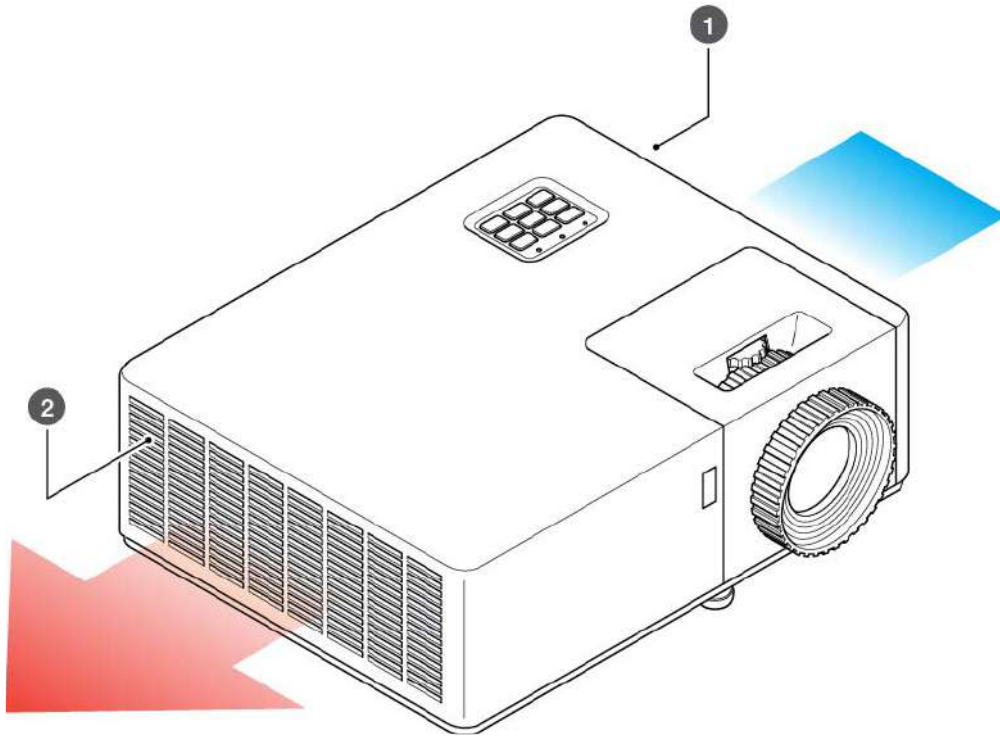
\*INL158, INL168 1080p 1.1x ZOOM

SCREEN SIZE					PROJECTION DISTANCE (PD)		
INCHES	METERS		INCHES	METERS	FEET	IMAGE OFFSET	

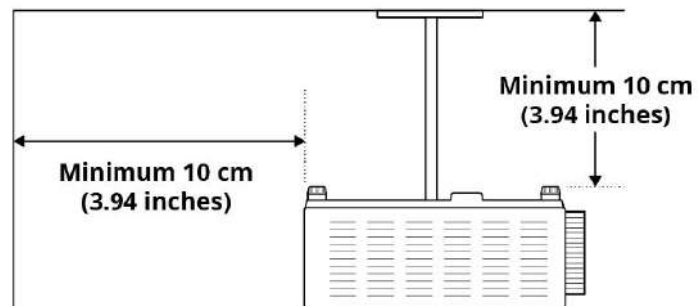
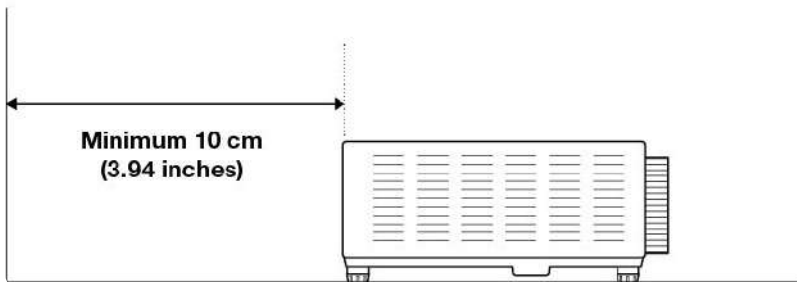
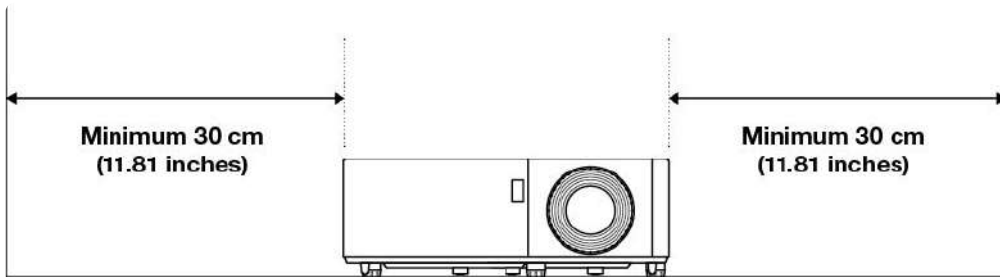
Diagonal (D)	Width (W)	Height (H)	Width (W)	Height (H)	Wide	Tele	Wide	Tele	(OFS)	
									Meters	Inches
28.3	0.63	0.35	24.67	13.87	-	1	-	3.28	0.04	1.57
40	0.89	0.5	34.86	19.6	1.1	1.4	3.61	4.59	0.05	1.97
50	1.11	0.62	43.58	24.5	1.3	1.8	4.27	5.91	0.06	2.36
60	1.33	0.75	52.29	29.4	1.6	2.1	5.25	6.89	0.07	2.76
70	1.55	0.87	61.01	34.3	1.9	2.5	6.23	8.2	0.09	3.54
80	1.77	1	69.73	39.2	2.1	2.8	6.89	9.19	0.1	3.94
90	1.99	1.12	78.44	44.1	2.4	3.2	7.87	10.5	0.11	4.33
100	2.21	1.25	87.16	49	2.7	3.5	8.86	11.48	0.12	4.72
120	2.66	1.49	104.59	58.8	3.2	4.2	10.5	13.78	0.15	5.91
150	3.32	1.87	130.74	73.5	4	5.3	13.12	17.39	0.18	7.09
180	3.98	2.24	156.88	88.2	4.8	6.3	15.75	20.67	0.23	9.06
200	4.43	2.49	174.32	98.1	5.4	7	17.72	22.97	0.25	9.84
250	5.53	3.11	217.89	122.6	6.7	8.8	21.98	28.87	0.31	12.2
300	6.64	3.74	261.47	147.1	8	-	26.25	-	0.37	14.57
374	8.28	4.66	325.97	183.4	10	-	32.81	-	0.46	18.11

## 4.4 CLEARANCE

Allow at least 30cm clearance around the intake and exhaust vent and ensure that the intake vents do not recycle hot air from the exhaust vent.



- ① Air intake vent
- ② Air intake vent



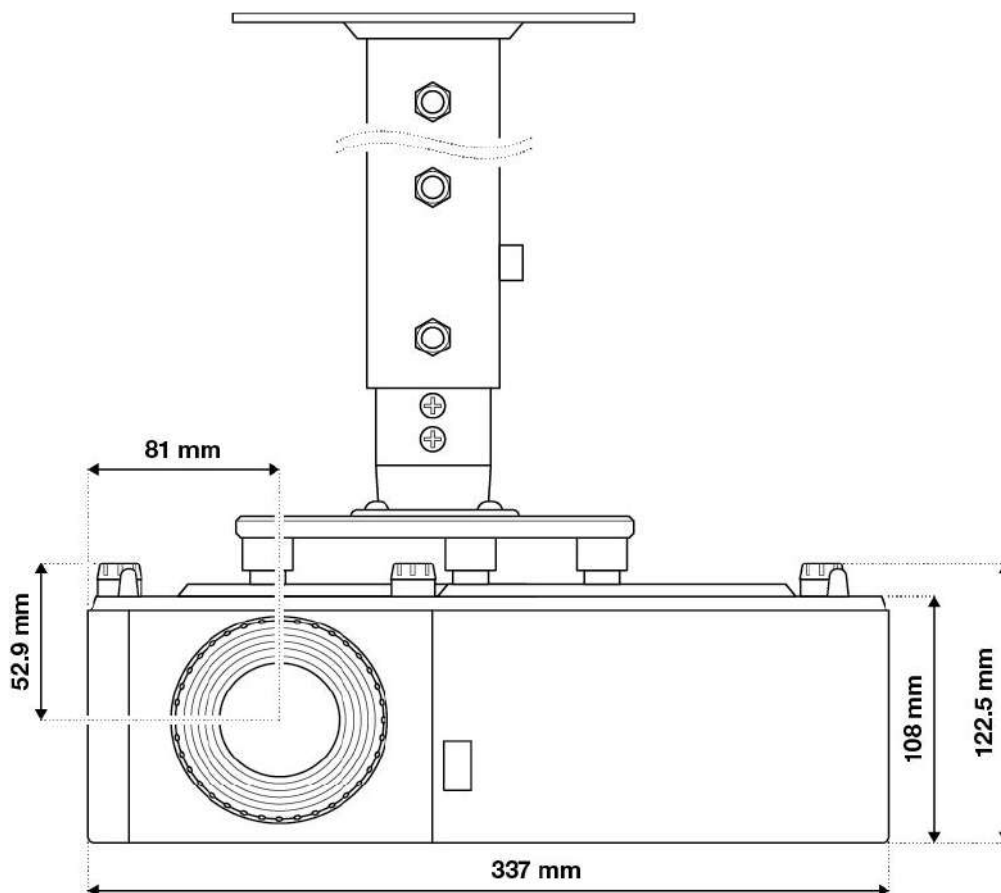
When operating the projector in an enclosed space:

- The surrounding air temperature within the enclosure should not exceed operation temperature while the projector is running
- The air intake and exhaust vents should be unobstructed
- The enclosure should pass a certified thermal evaluation to ensure that the projector does not recycle exhaust air

## 4.5 CEILING MOUNT

To prevent damage to your projector, please use InFocus ceiling mounts: [www.infocus.com/accessories](http://www.infocus.com/accessories)

- Screw type: M4\*10
- Minimum screw length: 10mm

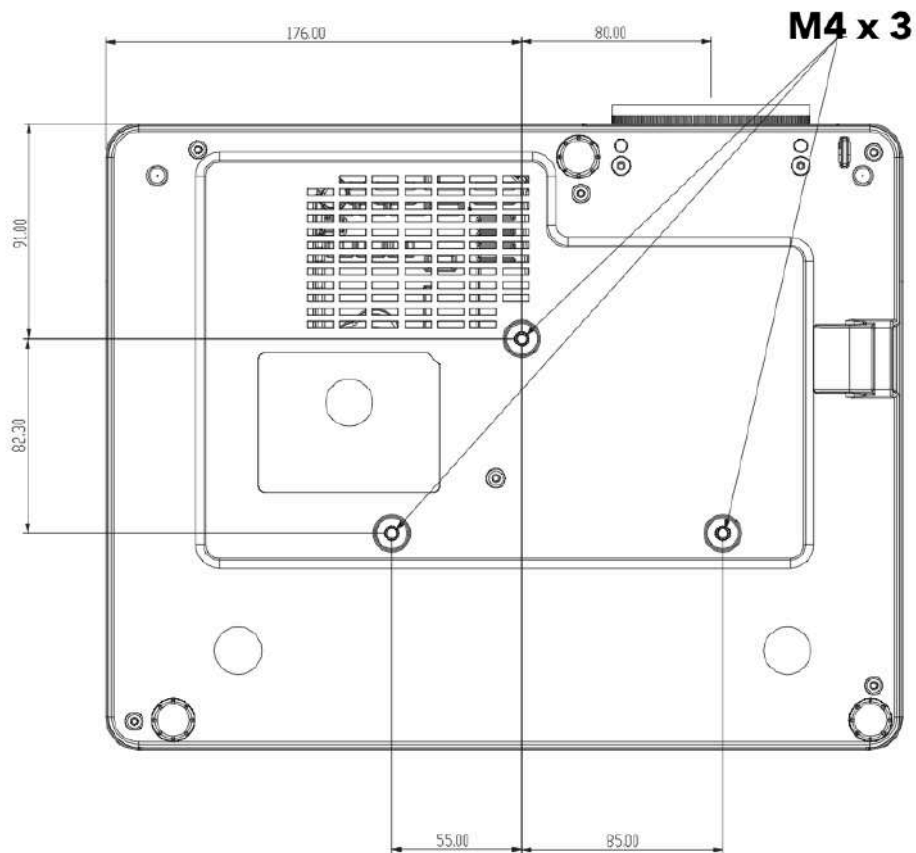


### INFORMATION

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

## 4.6 MOUNTING HOLE DIAGRAM



When using a ceiling mount, 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.

## 5. ADJUSTING

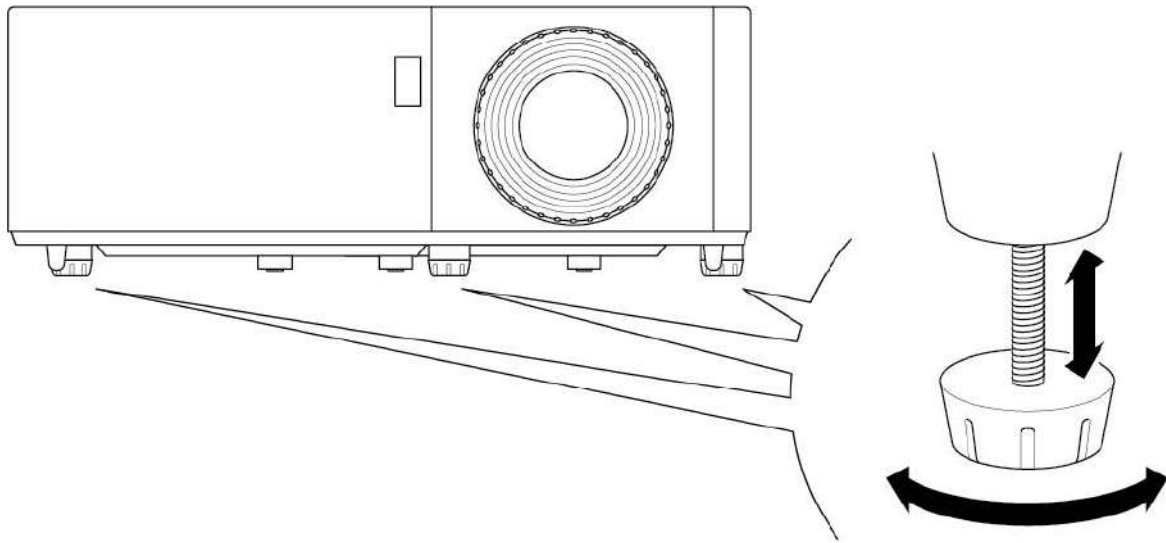
---

### 5.1 ADJUSTING THE IMAGE HEIGHT AND TILT

---

The projector's height and tilt can be adjusted with the tilt adjustment feet and ring.

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



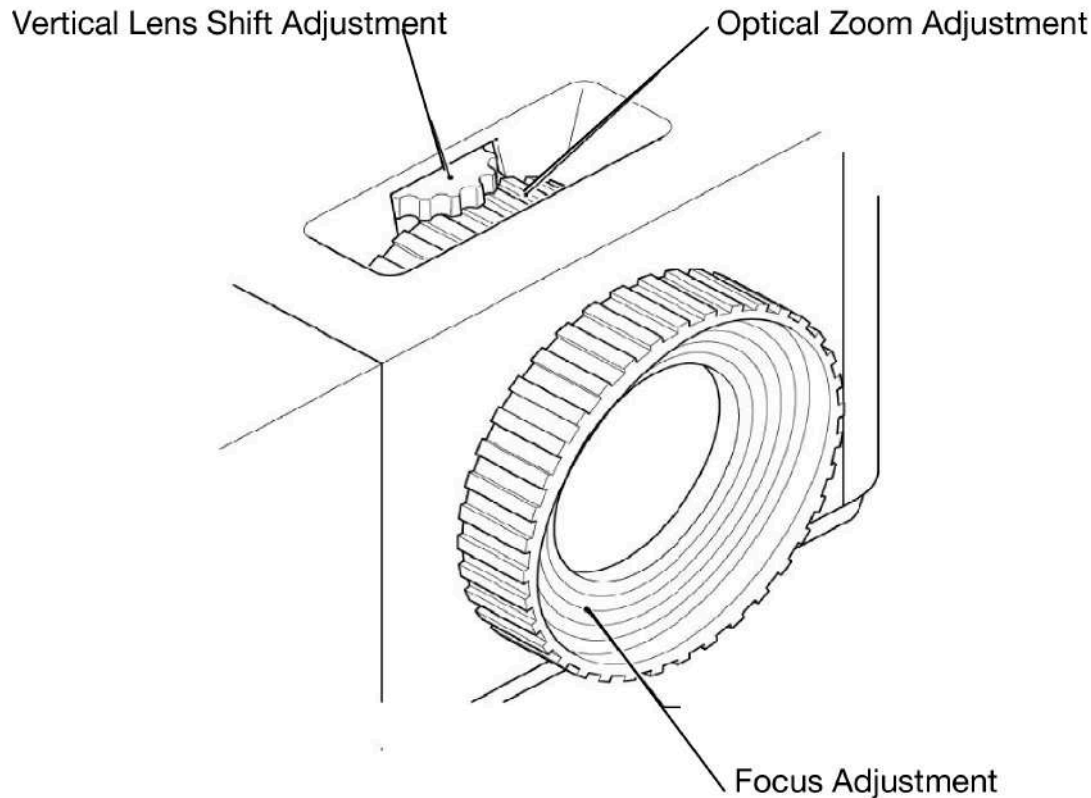
### 5.2 ADJUSTING THE ZOOM, LENS SHIFT AND FOCUS

---

To adjust the image size, turn the zoom ring clockwise or counterclockwise to increase or decrease the projected image size.

To adjust the image position, turn the lens shift dial clockwise or counterclockwise to adjust the position of the projected image vertically. (Not available on all models.)

To adjust the focus, turn the focus ring clockwise or counterclockwise until the image is sharp and legible.



## 5.3 ADJUSTING THE VERTICAL AND HORIZONTAL KEYSTONE

If one side of the image is shorter than the other, for example the top is shorter than the bottom, you can either reposition the projector or use keystone correction.

To adjust the top or bottom of the picture (the pitch), angle the projector lower or higher. If that is not possible, adjust the vertical keystone:

Press the **Menu** button on the projector keypad or the **Menu** button on the remote control to open the OSD menu.

Select **Image > V Keystone**

Adjust the settings by using the arrow keys

Press the **Return** symbol or **Enter** button to select a setting.

Press the **Menu** symbol or \*Menu \*button to close the OSD menu. The menu will close and the projector will automatically save the new settings.

To adjust the left or right side of the picture (the yaw), turn the projector slightly left or right. If that is not possible, adjust the horizontal keystone:

Press the **Menu** button on the projector keypad or the **Menu** button on the remote control to open the OSD menu.

Select \*Image > H Keystone \*

Note: horizontal keystone correction is not available on all models

Adjust the settings by using the \*Arrow \*keys.

Press press the **Return** symbol or \*Enter \*button to select a setting.

Press the **Menu** button to close the OSD menu. The menu will close and the projector will automatically save the new settings.

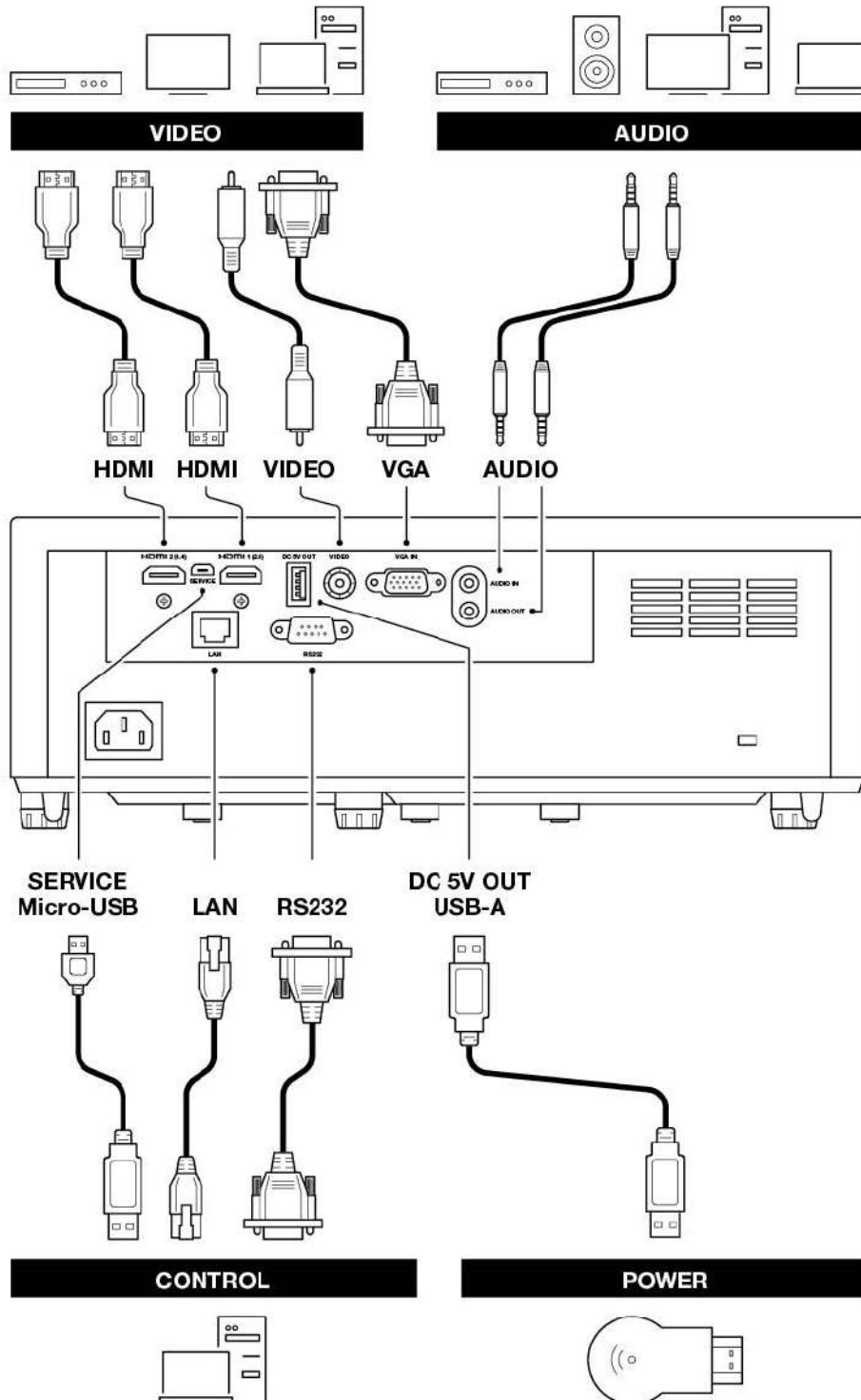


## INFORMATION

“Ensure that the projection screen or projection surface is within the required distance from the projector. Refer to “4.3 Placement distance from screen” for more information.

# 6. CONNECTING

## 6.1 CONNECTION DIAGRAM

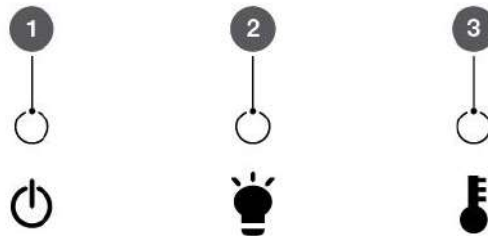


### INFORMATION

“INFORMATION” Not all inputs are available on all models.

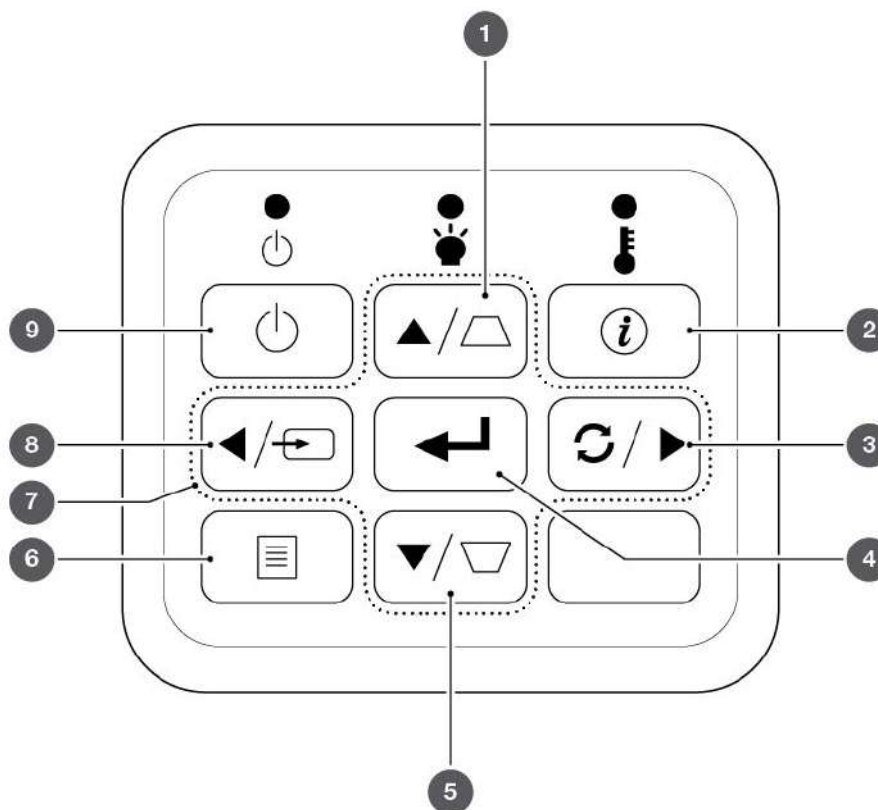
## 7. USING

### 7.1 LEDs



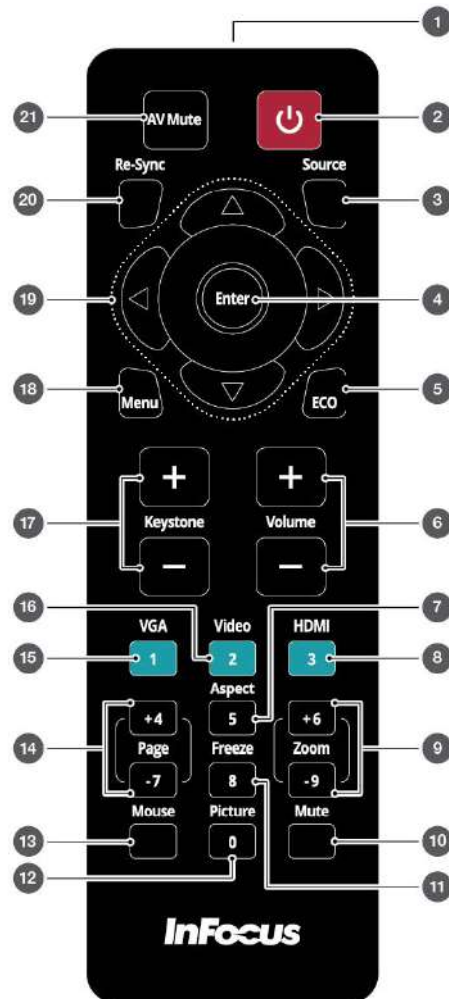
- ① Power
- ② Laser
- ③ Temperature

### 7.2 KEYPAD



- ① Up / Keystone correction +
- ② Information
- ③ Right / Re-sync
- ④ Enter
- ⑤ PowerDown / Keystone correction -
- ⑥ Menu
- ⑦ Directional arrows
- ⑧ Left / Source
- ⑨ Power

## 7.3 REMOTE CONTROL



- ① IR LED
- ② Power
- ③ Source
- ④ Enter
- ⑤ ECO
- ⑥ Volume
- ⑦ Aspect
- ⑧ HDMI – Press once for HDMI 1 and twice for HDMI 2
- ⑨ Zoom
- ⑩ Mute
- ⑪ Freeze
- ⑫ Picture
- ⑬ Mouse
- ⑭ Page
- ⑮ VGA
- ⑯ Video
- ⑰ Keystone correction
- ⑱ Menu
- ⑲ Directional keys
- ⑳ Re-sync
- ㉑ AV Mute



## INFORMATION

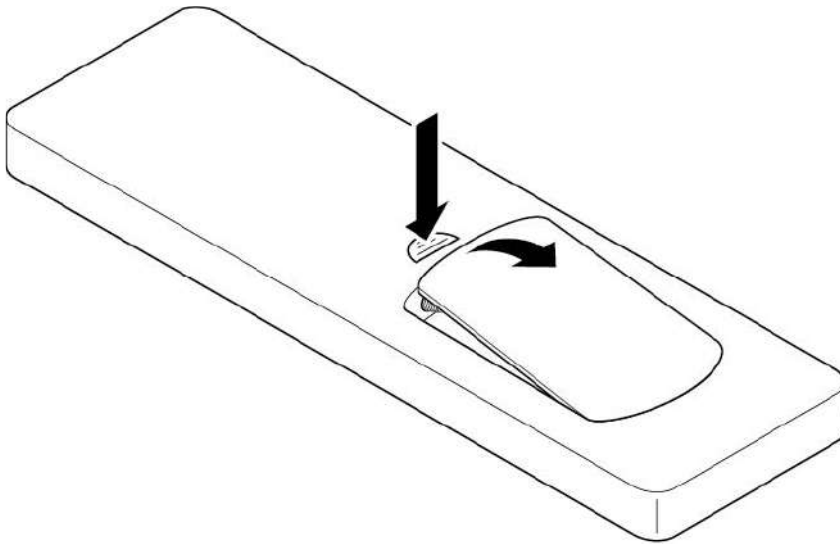
Some keys may have no function for models that do not support the key's feature.

# 7.3.1 INSTALLING BATTERIES IN THE REMOTE CONTROL

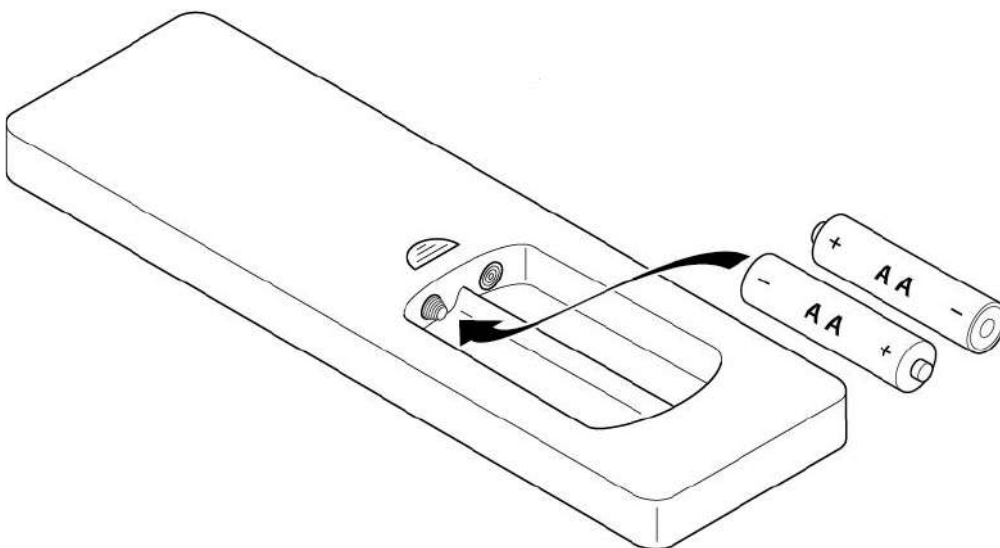
---

The remote requires two AAA batteries (not included).

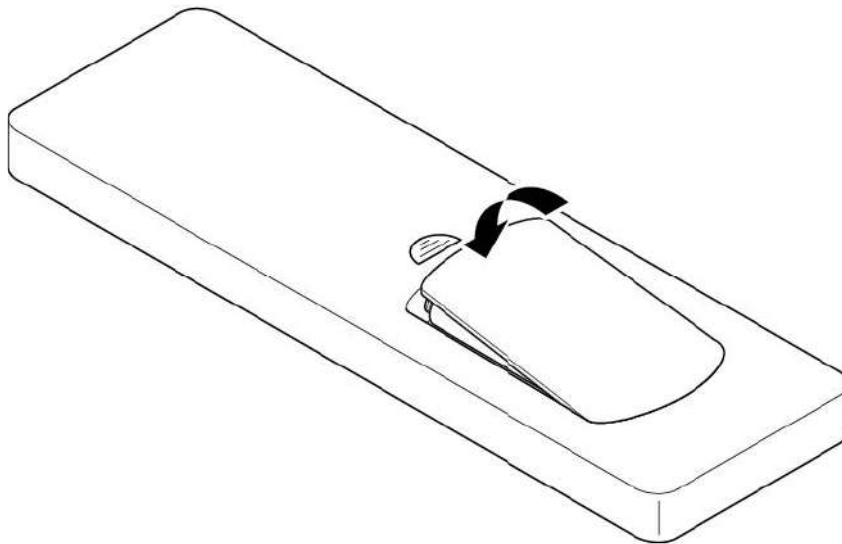
1. Remove the battery cover on the back of the remote control.



2. Insert AAA batteries in the battery compartment. Ensure each battery's polarity ± is aligned correctly.



3. Replace back cover on the remote control and press down until it clicks in to place.



## ATTENTION

The remote control may fail to operate if the infrared remote sensor is exposed to bright sunlight or fluorescent lighting. Incorrect battery usage may cause leakage of battery fluid and battery rupture, which could result in fire, injury or corrosion of the remote. When replacing batteries, take the following precautions.

Do not use batteries of different types or mix old and new batteries.

Remove the batteries if you will not be using the projector for a long period of time.

Do not expose batteries to heat or flame and do not put them in water.

Dispose of used batteries according to local regulations.

Keep batteries out of the reach of children. Batteries are choking hazards and are very dangerous if swallowed.

## 7.3.2 REMOTE CONTROL IR CODES

NUMBER	FUNCTION	REPEAT FORMAT	BYTE 1	BYTE 2	BYTE 3	BYTE 4	COMMENTS
1	AV mute	F1	87	4E	51	AE	
2	Power On/Off	F1	87	4E	17	E8	
3	Re-Sync	F1	87	4E	33	CC	
4	Up	F2	87	4E	13	EC	Do Volume+ when no OSD
5	Source	F1	87	4E	10	EF	
6	Left	F2	87	4E	11	EE	Do Source when no OSD
7	Enter	F1	87	4E	32	CD	
8	Right	F2	87	4E	12	ED	Do Re-Sync when no OSD
9	Menu	F1	87	4E	02	FD	

10	Down	F2	87	4E	14	EB	Do Volume- when no OSD
11	Eco	F1	87	4E	77	88	Open Brightness Mode menu
12	Keystone+	F2	87	4E	20	DF	
13	Volume+	F2	87	4E	08	F7	
14	Keystone-	F2	87	4E	21	DE	
15	Volume-	F2	87	4E	04	FB	
16	VGA (1)	F1	87	4E	19	E6	
17	Video (2)	F1	87	4E	1A	E5	
18	HDMI (3)	F1	87	4E	71	8E	Toggle HDMI 1 and HDMI 2
19	Page+ (4)	F1	87	4E	7D	82	Page+ not supported
20	Aspect (5)	F1	87	4E	34	CB	
21	Zoom+	F1	87	4E	52	AD	
22	page- (7)	F1	87	4E	7E	81	Page- not supported
23	Freeze	F1	87	4E	0E	F1	
24	Zoom-	F1	87	4E	53	AC	
25	Mouse	F1	87	4E	3E	C1	Mouse not supported
26	Picture	F1	87	4E	2C	D3	Open Display Mode menu
27	Mute	F1	87	4E	29	D6	


## 7.4 REMOTE CONTROL EFFECTIVE RANGE

You can locate the infrared (IR) remote control sensors on the top of the projector next to the keypad and on the front to the left of the lens. Hold the remote control at an angle within 60 degrees perpendicular of the projector's IR remote control sensor. Ensure that there are no obstacles between the remote control and the IR sensor on the projector.

The distance between the remote control and the IR sensor should be less than 12 meters (39.4 feet). If the remote control is less than 20cm (8 inches) from the IR sensor, the remote control might become ineffective. The effective range is approximately 5 meters (16.4 feet) when reflecting the IR beam using a screen. The range will depend on the screen's surface and reflectivity. Direct sunlight or florescent lamps can reduce the range of the remote control.

## 7.5 TURNING THE PROJECTOR ON

1. Securely connect the mains cable to the projector and to a mains outlet. When connected, the Power LED will turn red.
2. Connect a signal/source cable to a source device and the projector.
3. Remove the lens cap.

4. Press the **Power** button on the keypad or the  the symbol on the remote control.

The InFocus startup screen will appear after approximately 10 seconds. The Power LED will flash blue and then steady blue.



## ATTENTION

Make sure that people cannot step on any electrical cables or trip over the cables. Do not put objects on the cables.

# 7.6 SELECTING A INPUT SOURCE

---

1. Turn on the connected source, such as a computer or DVD player, or connect a digital media player, such as a Google Chromecast.
2. Press the Source button on the keypad or remote control to select the input source.
3. Play the content on the source device.



## INFORMATION

You can set up the projector to automatically detect an active source and turn itself on and project the source content automatically. To turn on this feature, press the Menu button on the remote control or keypad, navigate to **Settings > Power Settings > Signal Power**, and select **On**.



## INFORMATION

Your projector has a Direct Power On setting. This setting will automatically turn on the projector when a power source is connected. To turn on this feature, press the Menu button on the remote control or keypad, navigate to **Settings>Power Settings>Direct Power On**, and select on.

# 7.7 TURNING THE PROJECTOR TO STANDBY MODE

---

1. Press the Power button on the keypad or remote control.  
The following message will appear: Power Off?
2. Press the Power button again to confirm turning off your projector.  
If the Power button is not pressed a second time, the message will disappear after 10 seconds and the projector will not turn off.  
The cooling fans will operate for about 10 seconds and the Power LED will flash blue. When the Power LED

changes to solid red, the projector has entered standby mode.

3. Replace the lens cap.



## INFORMATION

If you want to turn the projector on again, wait 100 seconds.

Always allow the projector fan to turn off after you power down and before you unplug the projector power cable from the electrical outlet.

## 7.8 VIEWING 3D CONTENT

---

Please follow all warnings and precautions as recommended before you or your child use the 3D function of this projector and view 3D projected content.



## ATTENTION

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

### 7.8.1 PHOTSENSITIVE SEIZURE WARNING AND OTHER HEALTH RISKS

---



## ATTENTION

- Some viewers may experience an epileptic seizure or stroke when exposed to specific 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 3Dfunction.
- Even those without a personal or family history of epilepsy or stroke may have an undiagnosed condition that can cause photosensitive epileptic seizures.

We recommend that the projectors 3D functionality not be used by pregnant women, sufferers of serious medical conditions, persons who are sleep-deprived or under the influence of alcohol.

- If you experience any of the following symptoms, stop viewing 3D content immediately and consult a medical specialist: (1) altered vision; (2) lightheadedness; (3) dizziness; (4) involuntary movements such as eye or muscle twitching; (5) confusion; (6) nausea; (7) loss of awareness; (8) convulsions; (9) cramps; 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 projected content may also cause motion sickness, perceptual aftereffects, disorientation, eye strain, and decreased postural stability. Users should take frequent breaks to lessen the potential of these effects. If you have any of the above symptoms, immediately discontinue using this device and do not resume using it for at least thirty minutes after the symptoms have subsided.
- Watching 3D projected content while sitting too close to the screen for an extended period may damage your eyesight. The ideal viewing distance should be at least three times the screen height. We recommend that the viewer's eyes are level with the screen.
- Watching 3D projected content while wearing 3D glasses for an extended period may cause headaches or fatigue. If you experience a headache, tiredness or dizziness, stop viewing the 3D projection and rest.
- Do not use 3D glasses for any other purpose than for watching 3D projected content.
- Wearing the 3D glasses for any other purpose (such as spectacles, sunglasses, protective goggles, etc.) may be physically harmful to you and weaken your eyesight.
- Viewing 3D projected content 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.

## 7.8.2 ENABELING 3D MODE

---

To enable 3D mode, the input frame rate should be set to 60Hz. Other frame rate are not supported. For the best 3D performance, use a resolution of 1920×1080. 4K (3840×2160) resolution is not supported in 3D mode.

1. Select **Display > Display Mode > 3D > 3D Mode**.
2. Select **\* On\***.  
If the 3D Mode is set to Off, the 2D-3D and 3D sync Invert functions will not be selectable. These functions can only be selected if the 3D mode is set to On.
3. Press **Enter**.
4. If you only want to view the left or right frame: \* Select **Display > Display Mode > 3D > 3D-2D**. \* Select **L** (left) or **R** (right). \* Press **Enter**.
5. If you want to turn off the 3D sync invert function:
  - Select **Display > Display Mode > 3D > 3D Sync Invert**.
  - Select **Off**.
  - Press **Enter**.

## 7.8.3 ENABLING AUTO 3D MODE

---

1. Select **Display > Display Mode > 3D > 3D Format**.
2. Select **Auto**.
3. Press **Enter**.

Other options:

- 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.

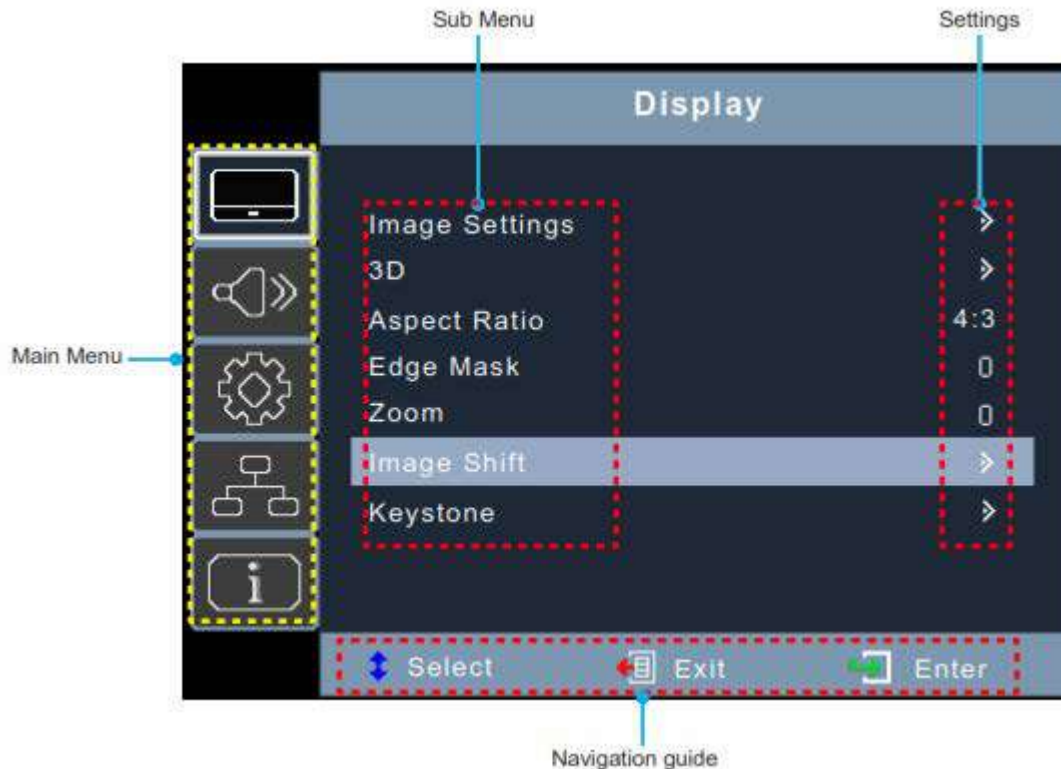


### INFORMATION

3D Auto mode can be enabled for HDMI 2 connections only.

## 8. USING THE ON SCREEN DISPLAY (OSD)

The multilingual On Screen Display (OSD) menus can be used to setup and adjust the projector.



### 8.1 SELECTING THE LANGUAGE FOR THE ON SCREEN MENU

1. Select **Setup** > **Options** > **Language**
2. Select a language.
3. Press **Enter**.

### 8.2 SELECTING A DISPLAY MODE

1. Select **Display** > **Image Settings** > **Display Mode**.
2. Select a display mode:

- **Presentation:** Suitable for giving presentations using a PC.
- **Bright:** The brightest possible setting when using a PC.
- **HDR SIM.:** Decodes and displays High Dynamic Range (HDR) content for the deepest blacks, brightest whites, and vivid cinematic colour using the REC.2020 colour gamut. This mode will be automatically enabled if HDR content is sent to the projector (4K UHD Blu-ray, 1080p/4K UHD HDR/HLG games, or 4K UHD streaming video). While HDR mode is active, other displays cannot be selected as HDR delivers colour that is highly accurate and exceeds the colour performance of the other display modes. HDR mode can also be manually selected for use with non HLG content for simulation effect.
- **HLG SIM.:** Decodes and displays Hybrid Log Gamma (HLG) content for the deepest blacks, brightest whites, and vivid cinematic colour using the REC.2020 colour gamut. This mode will be automatically enabled if HLG content is sent to the projector (4K UHD Blu-ray, 1080p/4K UHD HDR/HLG games, or 4K UHD streaming video). HLG

mode can also be manually selected for use with non HLG content for simulation effect.

- Cinema: Provides the best colour reproduction for watching movies.
- Game: Increases the brightness and decreases the response time for playing video games with minimal lag.
- sRGB: Standardized accurate colour reproduction.
- DICOM SIM.: Simulation mode for viewing monochrome images such as X-rays.
- User: Saved user settings.
- 3D: To experience 3D, you will need 3D glasses and a video source that is capable of sending 3D content.

3. Press **Enter**.



## INFORMATION

The display settings are only visible when an active source is connected to the projector.

# 8.3 ADJUSTING THE IMAGE COLOUR AND TEMPERATURE

---

1. Select **Display > Image Settings > Color Settings > Color Temperature**.
2. Select a value.
3. Press **Enter**.



## INFORMATION

The Display settings are only visible when an active source is connected to the projector.

# 8.4 ADJUSTING THE SHARPNESS OF THE IMAGE

---

1. Select **Display > Image Settings > Color**.
2. Press **Enter**.

# 8.5 MAGNIFYING THE IMAGE

---

1. Select **Display > Zoom**.
2. Press **Enter**.

# 8.6 SELECTING AN ASPECT RATIO

---

1. Select **Display > Aspect Ratio**.

2. Select the desired aspect ratio.
3. Press **Enter**.

## 8.7 ADJUSTING THE BRIGHTNESS

---

1. Select **Display > Image Settings > Brightness Mode**.
2. Select a brightness mode.
3. Press **Enter**.

## 8.8 ENABELING ECO MODE

---

1. Select **Display > Image Settings > Brightness Mode**.
2. Select **Eco**.
3. Press **Enter**.

## 8.9 ENABLING CLOSED CAPTIONS

---

1. Select **Setup > Options > Closed Caption**.
2. Select **CC1 \*or \*CC2**.
3. Press **Enter**.

## 8.10 DISPLAYING A TEST PATTERN

---

1. Select **Setup > Test Pattern**.
2. Select a test pattern.
3. Press **Enter**.

## 8.11 PREVENTING UNAUTHORIZED USE

---

1. Select **Setup \* > \*Security > Security**.
2. Select **\* On\***. The default password is 1234.
3. Press **Enter**.

## 8.12 CHANGING THE PASSWORD

---

1. Select **Setup > Security > Change Password**.
2. Type the new password.
3. Press **Enter**.



### INFORMATION

Do not lose the password. The password can only be reset at an authorized InFocus repair facility.

## 8.13 CONTROLLING THE PROJECTOR FROM A WEB BROWSER

1. Connect the projector to an active network port using the RJ45 port on the back of the projector.
2. Select **Network** > **LAN** > **DHCP**.
3. Select **On**.
4. Press **Enter**.
5. Select **Network** > **LAN** > **IP Address** to view the projector's IP address.
6. Open a web browser.
7. Type the projector's IP address type the user name and password. The default user name and password is admin.
8. Click **Login**. The projector's configuration page appears.

9.



### INFORMATION

“INFORMATION” Only applicable to Superior Series

## 8.14 DIRECTLY CONNECTING A COMPUTER TO THE PROJECTOR

---

1. Select **Network > LAN > DHCP**.
2. Select **Off**.
3. Press **Enter**.
4. Select **Network > LAN**.
5. Configure the IP address, Subnet Mask, Gateway, and DNS settings.
6. Set the computer to use the same IP address, subnet mask, gateway, and DNS settings.
7. Open a web browser.
8. Type the projector's IP address type the user name and password. The default user name and password is **admin**.



### INFORMATION

“INFORMATION” Only applicable to Superior Series

## 9. CLEANING

---

**!** Do not use canned air or any type of abrasive pad, paper towel, scouring powder, glass cleaner, or solvent (such as alcohol, paint thinner or benzene).

Unplug the projector before cleaning.

### 9.1 CLEANING THE LENS

---

Clean the projector's lens with a lightly damp cloth. Do not spray liquid directly onto the lens.

### 9.2 CLEANING THE CASE

---

Clean the projector's case using a lightly damp cloth.

### 9.3 CLEANING THE AIR VENTS

---

Clean the air intake vents with a soft and dry cloth, a soft brush, or a small vacuum cleaner designed for cleaning electrical devices.

# 10. SANITATION

---

- Using only lightly dampened microfibre cloth to avoid malfunction and possible permanent damage to electronic parts, lightly clean the surface of the product, avoiding any connection points, ventilation holes or the lens.
- After the application, dry the product with a clean and dry microfibre cloth.

Please follow all safety and handling instructions listed with the cleaning solution and keep out of reach of children. For schools conducting an overall deep clean of their facilities, here are steps to appropriately protect your InFocus product in advance of chemicals being sprayed or fogging devices being employed:

- Disconnect the product from its power source.
- Cover the product to prevent damage to internal electronic components.
- Remember to remove any covering before use.
- Please ensure that those with access to your InFocus products are aware of the cleaning procedure.



## ATTENTION

Ensure your InFocus product is fully covered on all sides before facilities deep cleaning. Chemicals must not be allowed to enter or be sprayed on to the surface of the product, this will avoid any damage to the internal electronic components and outer casing parts.



## INFORMATION

Good personal hygiene practices of washing and drying hands should be employed before and after use of InFocus products.

Should you have any questions relating to these procedures please contact InFocus Technical Support. Contact details can be found [Here](#).

# 11. DISPOSAL

---

## 11.1 DISPOSAL OF ELECTRICAL COMPONENTS

---



The symbol on the product, the accessories or packaging indicates that this device shall not be treated as unsorted municipal waste, but shall be collected separately. Dispose of the device via a collection point for the recycling of waste electrical and electronic equipment if you live within the EU and in other European countries that operate separate collection systems for waste electrical and electronic equipment. By disposing of the device in the proper manner, you help to avoid possible hazards for the environment and public health that may otherwise be caused by improper treatment of waste equipment. The recycling of materials contributes to the conservation of natural resources.

## 11.2 DISPOSAL OF PACKAGING WASTE

---

The packaging is made of environmentally friendly materials, which may be disposed of through your local recycling facilities. By disposing of the packaging and packaging waste in the proper manner, you help to avoid possible hazards for the environment and public health.

# 12 TROUBLESHOOTING

## 12.1 LED INDICATOR LIGHTS

The following table describes the LED indicator light colours and their meaning.

LED	INDICATOR	MEANING
Power	Blue solid	Normal operation
Power	Blue flashing	The projector is warming up, shutting down, or cooling down. The remote control may be disabled while the indicator is flashing blue.
Power	Red solid	Standby mode
Power	Off	Off or Sleep mode
Laser	Red flashing	laser failure
Temperature	Red flashing	Fan failure
Temperature	Red solid	Over temperature

The projector will automatically shutdown if there is a laser failure, a fan failure or if the projector has overheated. Unplug the power cable from the projector, wait 30 seconds, and try again. If the warning indicators light up or flash, contact your nearest service center for assistance.

## 12.2 SOLVING ON/OFF ISSUES

The following table provides solutions for potential issues that may occur when the projector is turned on or off.

ISSUE	CAUSE	SOLUTION
Projector will not turn on.	No power	Check that the power cable is connected. Check that the power indicator is on.
Projector will not turn on.	The projector has overheated	Make sure there is at least 30cm of clearance around the intake and exhaust vents. Wait five minutes and try turning the projector on again. If the projector is being used above 5500 ft/1600 m, use the On Screen Display (OSD) menu to set High Altitude to on.
Projector turns off by itself.	The Auto Power Off timer is set	Use the On Screen Display (OSD) menu to adjust the auto power of setting.

## 12.3 SOLVING IMAGE ISSUES

The following table provides solutions for potential image issues.

ISSUE	CAUSE	SOLUTION
No image	Incorrect source is selected.	Press the SOURCE button or one of the source buttons again.
No image	Source cable is not connected.	Ensure the source cable is securely connected to the projector and source device
No image	Source is not playing	Make sure the source has not stopped or paused the video. If the source is a computer, make sure the PC is not in a screen saving or power saving mode and resend the video to the projector.
No image	AV-Mute is on	Ensure the AV-MUTE (video off) buttons has not been pressed.
No image	Brightness and/or contrast setting is too low	Use the On Screen Display (OSD) menu to adjust the brightness and contrast
Image is reversed	Orientation is set incorrectly.	Use the On Screen Display (OSD) menu to adjust the orientation.
Image has slanted sides	Projector is not positioned perpendicularly to the screen.	Ensure the projector is centered on the screen and below the bottom of the screen
Image has slanted sides	Keystone is not set correctly.	Press the keystone + or – buttons to adjust the image alignment.
Image is too small or too large.	Projector is too far from or too close to the screen.	Move the projector
Image is too small or too large.	The zoom is not set correctly.	Press the Zoom + or – buttons to adjust the zoom.
Image is too dark	ECO mode is enabled	Check if the projector is in the Forced ECO mode because the ambient temperature is too high.
Image is blurry	Focus is not set correctly.	Use the On Screen Display (OSD) menu to adjust the focus. INL2156 or INL2166: Use the focus ring to adjust the focus.
Image is blurry	Projector is too close or too far from the screen.	Ensure that the distance between the projector and screen is within the adjustment range of the lens.
Image is blurry	Smudge or condensation on the lens.	Clean the lens. Condensation may form on the lens if the projector is cold, brought into a warm place, and turned on.
Image is scrolling or flickering.	Source resolution and/or frequency is not supported.	Make sure that the source's resolution and frequency are supported by the projector.

# 12.4 SOLVING VIDEO, AUDIO AND REMOTE CONTROL ISSUES

The following table provides solutions for potential video, audio, and remote control issues.

ISSUE	CAUSE	SOLUTION
Video is frozen	the Freeze button has been pressed.	Press the Freeze button on the remote to unfreeze the video.
Video is stretched	16:9 (wide) source is setup incorrectly.	Ensure the source is set to use the 16:9 (wide) display format.
Video is stretched	Letterbox (LBX) source is setup incorrectly.	Use the On Screen Display (OSD) menu to set the aspect ratio to LBX.
Video is stretched	4:3 source is setup incorrectly.	Use the On Screen Display (OSD) menu to set the aspect ratio to 4:3.
No audio	Projector is muted.	Press the Mute button to unmute the projector.
No audio	Volume setting is too low.	Press the volume + button to increase the volume.
No audio	Source cable is not connected.	Ensure the source cable is securely connected to the projector and source device.
No audio	Source is muted.	Ensure the source has not been muted.
Remote does not work.	Batteries expired.	Install new batteries.
Remote does not work.	Batteries installed incorrectly.	Remove and reinstall the batteries.
Remote does not work.	Remote is too far from projector.	The remote should be within 16.4 feet (5m) of the projector.
Remote does not work.	IR receiver cannot detect remote.	Ensure there are no obstructions between the remote and the projector's IR receiver. Ensure the operating angle of the remote control is within $\pm 20^\circ$ to the projector's IR receiver. Ensure there are no fluorescent light sources shining on the projector's IR receiver.

If you are still experiencing technical issues with your projector, please contact InFocus Customer Support [Here](#)

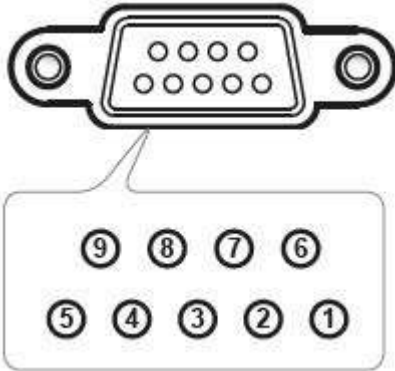
## 12.5 SERVICING

---

Servicing is required when the projector has been damaged, exposed to rain or moisture, does not operate normally, or has been dropped. All servicing and repairs should be performed by an authorized InFocus representative.

## 13. ADDITIONAL INFORMATION

### 13.1 RS232 PIN ASSIGNMENTS



PIN NUMBER	B0 DETAILED TIMING
1	–
2	RDX
3	TXD
4	–
5	GND
6	–
7	–
8	–
9	–

### 13.2 RS232 PROTOCOL FUNCTION LIST

FUNCTION	VALUE
BAUD RATE	FIVE
PARITY BIT	NONE
DATA BIT	8
STOP BIT	1
LASER ON DELAY	20 SECONDS
POWER DOWN DELAY	20 SECONDS
SOURCE CHANGE DELAY	8 SECONDS
INTERCOMMAND DELAY MINIMUM	500 MILLISECONDS

INTERCHARACTER DELAY MINIMUM 2 MILLISECONDS

## 13.2.1 RS232 PROJECTOR COMMAND CODES

INDEX	ASCII CODE	HEX CODE	FUNCTION	VALUE/RANGE	INL2156	INL2158	INL2159
S001	~XX00 1	7E 30 30 30 30 20 31 0D	Power	On	Yes	Yes	Yes
S001	~XX00 0	7E 30 30 30 30 20 30 0D	Power	Off (0/2 for backward compatible)	Yes	Yes	Yes
S002	~XX00 1 ~nnnn	7E 30 30 30 30 20 31 20 a 0D	Power ON with Password ~nnnn	"nnnn = Password ~0000 (a=7E 30 30 30 30) ~9999 (a=7E 39 39 39 39)"	Yes	Yes	Yes
S003	~XX01 1	7E 30 30 30 31 20 31 0D	Resync		Yes	Yes	Yes
S004	~XX02 1	7E 30 30 30 32 20 31 0D	AV Mute	On	Yes	Yes	Yes
S004	~XX02 0	7E 30 30 30 32 20 30 0D	AV Mute	Off (0/2 for backward compatible)	Yes	Yes	Yes
S005	~XX03 1	7E 30 30 30 33 20 31 0D	Mute	On	Yes	Yes	Yes
S005	~XX03 0	7E 30 30 30 33 20 30 0D	Mute	Off (0/2 for backward compatible)	Yes	Yes	Yes
S006	~XX04 1	7E 30 30 30 34 20 31 0D	Freeze		Yes	Yes	Yes
S006	~XX04 0	7E 30 30 30 34 20 30 0D	Unfreeze	(0/2 for backward compatible)	Yes	Yes	Yes
S007	~XX05 1	7E 30 30 30 35 20 31 0D	Zoom Plus		Yes	Yes	Yes
S008	~XX06 1	7E 30 30 30 36 20 31 0D	Zoom Minus		Yes	Yes	Yes
S009	~XX11 0	7E 30 30 31 31 20 30 0D	IR Function	Off	No	No	No
S009	~XX11 1	7E 30 30 31 31 20 31 0D	IR Function	On	No	No	No
S010	~XX12 5	7E 30 30 31 32 20 35 0D	Direct Source Commands	VGA	Yes	Yes	Yes

S010	~XX12 9	7E 30 30 31 32 20 39 0D	Direct Source Commands	S-Video	No	No	No
S010	~XX12 10	7E 30 30 31 32 20 31 30 0D	Direct Source Commands	Video	Yes	Yes	Yes
S010	~XX12 1	7E 30 30 31 32 20 31 0D	Direct Source Commands	HDMI (HDMI 1)	Yes	Yes	Yes
S010	~XX12 15	7E 30 30 31 32 20 31 35 0D	Direct Source Commands	HDMI 2	Yes	Yes	Yes
S011	~XX20 1	7E 30 30 32 30 20 31 0D	Picture Mode	Presentation	Yes	Yes	Yes
S011	~XX20 2	7E 30 30 32 30 20 32 0D	Picture Mode	Bright	Yes	Yes	Yes
S011	~XX20 3	7E 30 30 32 30 20 33 0D	Picture Mode	Movie (Cinema)	Yes	Yes	Yes
S011	~XX20 4	7E 30 30 32 30 20 34 0D	Picture Mode	sRGB	Yes	Yes	Yes
S011	~XX20 13	7E 30 30 32 30 20 31 33 0D	Picture Mode	DICOM SIM.	Yes	Yes	Yes
S011	~XX20 5	7E 30 30 32 30 20 35 0D	Picture Mode	User	Yes	Yes	Yes
S011	~XX20 9	7E 30 30 32 30 20 39 0D	Picture Mode	3D	Yes	Yes	Yes
S011	~XX20 12	7E 30 30 32 30 20 31 32 0D	Picture Mode	Game	Yes	Yes	Yes
S011	~XX20 22	7E 30 30 32 30 20 32 32 0D	Picture Mode	HDR SIM.	Yes	Yes	Yes
S011	~XX20 26	7E 30 30 32 30 20 32 36 0D	Picture Mode	HLG SIM.	Yes	Yes	Yes
S012	~XX21 n	7E 30 30 32 31 20 a 0D	Brightness	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S013	~XX22 n	7E 30 30 32 32 20 a 0D	Contrast	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S014	~XX23 n	7E 30 30 32 33 20 a 0D	Sharpness	n = 1 (a=31) ~ 15 (a=31 35)	Yes	Yes	Yes
S015	~XX24 n	7E 30 30 32 34 20 a 0D	RGB Gain/Bias Red Gain	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S016	~XX25 n	7E 30 30 32 35 20 a 0D	RGB Gain/Bias Green Gain	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes

S017	~XX26 n	7E 30 30 32 36 20 a 0D	RGB Gain/Bias Blue Gain	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S018	~XX27 n	7E 30 30 32 37 20 a 0D	RGB Gain/Bias Red Bias	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S019	~XX28 n	7E 30 30 32 38 20 a 0D	RGB Gain/Bias Green Bias	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S020	~XX29 n	7E 30 30 32 39 20 a 0D	RGB Gain/Bias Blue Bias	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S021	~XX34 n	7E 30 30 33 34 20 a 0D	BrilliantColorTM	n = 1 (a=30) ~ 10 (a=31 30)	Yes	Yes	Yes
S022	~XX35 1	7E 30 30 33 35 20 31 0D	Gamma	Film	Yes	Yes	Yes
S022	~XX35 2	7E 30 30 33 35 20 32 0D	Gamma	Video	Yes	Yes	Yes
S022	~XX35 3	7E 30 30 33 35 20 33 0D	Gamma	Graphics	Yes	Yes	Yes
S022	~XX35 4	7E 30 30 33 35 20 34 0D	Gamma	Standard (2.2)	Yes	Yes	Yes
S022	~XX35 5	7E 30 30 33 35 20 35 0D	Gamma	1.8	Yes	Yes	Yes
S022	~XX35 6	7E 30 30 33 35 20 36 0D	Gamma	2.0	Yes	Yes	Yes
S022	~XX35 12	7E 30 30 33 35 20 31 31 0D	Gamma	2.4	Yes	Yes	Yes
S022	~XX35 8	7E 30 30 33 35 20 38 0D	Gamma	2.6	Yes	Yes	Yes
S023	~XX36 4	7E 30 30 33 36 20 34 0D	Colour Temp.	Warm	Yes	Yes	Yes
S023	~XX36 1	7E 30 30 33 36 20 31 0D	Colour Temp.	Standard	Yes	Yes	Yes
S023	~XX36 2	7E 30 30 33 36 20 32 0D	Colour Temp.	Cool	Yes	Yes	Yes
S023	~XX36 3	7E 30 30 33 36 20 33 0D	Colour Temp.	Cold	Yes	Yes	Yes
S024	~XX37 1	7E 30 30 33 37 20 31 0D	Colour Space	Auto	Yes	Yes	Yes
S024	~XX37 2	7E 30 30 33 37 20 32 0D	Colour Space	RGB\ <u>RGB</u>	Yes	Yes	Yes
S024	~XX37 3	7E 30 30 33 37 20 33 0D	Colour Space	YUV	Yes	Yes	Yes
S024	~XX37 4	7E 30 30 33 37 20 34 0D	Colour Space	<u>RGB</u>	Yes	Yes	Yes

S025	~XX44 n	7E 30 30 34 35 20 a 0D	Tint	n = -50 (a=2D 35 30) ~ 50 (a=35 30))	Yes	Yes	Yes
S026	~XX45 n	7E 30 30 34 34 20 a 0D	Colour (Saturation)	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S027	~XX46 1	7E 30 30 34 36 20 31 0D	Brightness	Brightness -	Yes	Yes	Yes
S027	~XX46 2	7E 30 30 34 36 20 32 0D	Brightness	Brightness +	Yes	Yes	Yes
S028	~XX47 1	7E 30 30 34 37 20 31 0D	Contrast	Contrast -	Yes	Yes	Yes
S028	~XX47 2	7E 30 30 34 37 20 32 0D	Contrast	Contrast +	Yes	Yes	Yes
S029	~XX59 1	7E 30 30 35 39 20 31 0D	Four corners	top-left (right+)	Yes	Yes	Yes
S029	~XX59 2	7E 30 30 35 39 20 32 0D	Four corners	top-left (left+)	Yes	Yes	Yes
S029	~XX59 3	7E 30 30 35 39 20 33 0D	Four corners	top-left (up +)	Yes	Yes	Yes
S029	~XX59 4	7E 30 30 35 39 20 34 0D	Four corners	top-left (down +)	Yes	Yes	Yes
S029	~XX59 5	7E 30 30 35 39 20 35 0D	Four corners	top right (right +)	Yes	Yes	Yes
S029	~XX59 6	7E 30 30 35 39 20 36 0D	Four corners	top right (left +)	Yes	Yes	Yes
S029	~XX59 7	7E 30 30 35 39 20 37 0D	Four corners	top right (up +)	Yes	Yes	Yes
S029	~XX59 8	7E 30 30 35 39 20 38 0D	Four corners	top right (down +)	Yes	Yes	Yes
S029	~XX59 9	7E 30 30 35 39 20 39 0D	Four corners	Bottom-left (right+)	Yes	Yes	Yes
S029	~XX59 10	7E 30 30 35 39 20 31 30 0D	Four corners	Bottom-left(left+)	Yes	Yes	Yes
S029	~XX59 11	7E 30 30 35 39 20 31 31 0D	Four corners	Bottom-left(Up+)	Yes	Yes	Yes
S029	~XX59 12	7E 30 30 35 39 20 31 32 0D	Four corners	Bottom-left(down+)	Yes	Yes	Yes
S029	~XX59 13	7E 30 30 35 39 20 31 33 0D	Four corners	Bottom-right (right+)	Yes	Yes	Yes
S029	~XX59	7E 30 30 35	Four corners	Bottom-right(left+)	Yes	Yes	Yes

	14	39 20 31 34 0D					
S029	~XX59 15	7E 30 30 35 39 20 31 35 0D	Four corners	Bottom-right(Up+)	Yes	Yes	Yes
S029	~XX59 16	7E 30 30 35 39 20 31 36 0D	Four corners	Bottom- right(down+)	Yes	Yes	Yes
S030	~XX60 1	7E 30 30 36 30 20 31 0D	Format (Aspect Ratio)	4:3	Yes	Yes	Yes
S030	~XX60 2	7E 30 30 36 30 20 32 0D	Format (Aspect Ratio)	16:9	Yes	Yes	Yes
S030	~XX60 3	7E 30 30 36 30 20 33 0D	Format (Aspect Ratio)	16:10	Yes	No	Yes
S030	~XX60 5	7E 30 30 36 30 20 35 0D	Format (Aspect Ratio)	LBX	Yes	Yes	Yes
S030	~XX60 6	7E 30 30 36 30 20 36 0D	Format (Aspect Ratio)	Native	Yes	Yes	Yes
S030	~XX60 7	7E 30 30 36 30 20 37 0D	Format (Aspect Ratio)	Auto	Yes	Yes	Yes
S031	~XX61 n	7E 30 30 36 31 20 a 0D	Edge mask	n = 0 (a=30) ~ 10 (a=31 30)	Yes	Yes	Yes
S032	~XX62 n	7E 30 30 36 32 20 a 0D	Zoom	n = -5 (a=2D 35) ~ 25 (a=32 35)	Yes	Yes	Yes
S033	~XX63 n	7E 30 30 36 33 20 a 0D	H Image Shift	n = -100 (a=2D 31 30 30) ~ 100 (a= 31 30 30)	Yes	Yes	Yes
S034	~XX64 n	7E 30 30 36 34 20 a 0D	V Image Shift	n = -100 (a=2D 31 30 30) ~ 100 (a= 31 30 30)	Yes	Yes	Yes
S035	~XX65 n	7E 30 30 36 35 20 a 0D	H Keystone	n = -30 (a=2D 33 30) ~ 30 (a=33 30)	Yes	Yes	Yes
S036	~XX66 n	7E 30 30 36 36 20 a 0D	V Keystone	n = -30 (a=2D 33 30) ~ 30 (a=33 30)	Yes	Yes	Yes
S037	~XX69 1	7E 30 30 36 39 20 31 0D	Auto Keystone	On	Yes	Yes	Yes
S037	~XX69 0	7E 30 30 36 39 20 30 0D	Auto Keystone	Off (0/2 for backward compatible)	Yes	Yes	Yes
S037	~XX70 1	7E 30 30 37 30 20 31 0D	Language	English	Yes	Yes	Yes
S037	~XX70 2	7E 30 30 37 30 20 32 0D	Language	Deutsch	Yes	Yes	Yes

S037	~XX70 3	7E 30 30 37 30 20 33 0D	Language	Français	Yes	Yes	Yes
S037	~XX70 4	7E 30 30 37 30 20 34 0D	Language	Italiana	Yes	Yes	Yes
S037	~XX70 5	7E 30 30 37 30 20 35 0D	Language	Español	Yes	Yes	Yes
S037	~XX70 6	7E 30 30 37 30 20 36 0D	Language	Português	Yes	Yes	Yes
S037	~XX70 7	7E 30 30 37 30 20 37 0D	Language	Polski	Yes	Yes	Yes
S037	~XX70 8	7E 30 30 37 30 20 38 0D	Language	Nederlands	Yes	Yes	Yes
S037	~XX70 9	7E 30 30 37 30 20 39 0D	Language	Svenska	Yes	Yes	Yes
S037	~XX70 10	7E 30 30 37 30 20 31 30 0D	Language	Norsk/Dansk	Yes	Yes	Yes
S037	~XX70 11	7E 30 30 37 30 20 31 31 0D	Language	Suomi	Yes	Yes	Yes
S037	~XX70 12	7E 30 30 37 30 20 31 32 0D	Language	ελληνικά	Yes	Yes	Yes
S037	~XX70 13	7E 30 30 37 30 20 31 33 0D	Language	繁體中文	Yes	Yes	Yes
S037	~XX70 14	7E 30 30 37 30 20 31 34 0D	Language	簡體中文	Yes	Yes	Yes
S037	~XX70 15	7E 30 30 37 30 20 31 35 0D	Language	日本語	Yes	Yes	Yes
S037	~XX70 16	7E 30 30 37 30 20 31 36 0D	Language	한국어	Yes	Yes	Yes
S037	~XX70 17	7E 30 30 37 30 20 31 37 0D	Language	Русский	Yes	Yes	Yes
S037	~XX70 18	7E 30 30 37 30 20 31 38 0D	Language	Magyar	Yes	Yes	Yes
S037	~XX70 19	7E 30 30 37 30 20 31 39 0D	Language	Čeština	Yes	Yes	Yes
S037	~XX70	7E 30 30 37	Language	عربي	Yes	Yes	Yes

	20	30 20 32 30 0D					
S037	~XX70 21	7E 30 30 37 30 20 32 31 0D	Language	ไทย	Yes	Yes	Yes
S037	~XX70 22	7E 30 30 37 30 20 32 32 0D	Language	Türkçe	Yes	Yes	Yes
S037	~XX70 23	7E 30 30 37 30 20 32 33 0D	Language	فارسی	Yes	Yes	Yes
S037	~XX70 24	7E 30 30 37 30 20 32 34 0D	Language	?????	No	No	No
S037	~XX70 25	7E 30 30 37 30 20 32 35 0D	Language	Tiếng Việt	Yes	Yes	Yes
S037	~XX70 26	7E 30 30 37 30 20 32 36 0D	Language	Bahasa Indonesia	Yes	Yes	Yes
S037	~XX70 27	7E 30 30 37 30 20 32 37 0D	Language	Română	Yes	Yes	Yes
S037	~XX70 28	7E 30 30 37 30 20 32 38 0D	Language	Slovenčina	Yes	Yes	Yes
S037	~XX70 29	7E 30 30 37 30 20 32 39 0D	Language	Pilipino	No	No	No
S037	~XX70 30	7E 30 30 37 30 20 33 30 0D	Language	Melayu	No	No	No
S037	~XX70 31	7E 30 30 37 30 20 33 31 0D	Language	বাংলা	No	No	No
S039	~XX71 1	7E 30 30 37 31 20 31 0D	Projection	Front	Yes	Yes	Yes
S039	~XX71 2	7E 30 30 37 31 20 32 0D	Projection	Rear	Yes	Yes	Yes
S039	~XX71 3	7E 30 30 37 31 20 33 0D	Projection	Front-Ceiling	Yes	Yes	Yes
S039	~XX71 4	7E 30 30 37 31 20 34 0D	Projection	Rear-Ceiling	Yes	Yes	Yes
S040	~XX72 1	7E 30 30 37 32 20 31 0D	Menu Location	Top Left	Yes	Yes	Yes

S040	~XX72 2	7E 30 30 37 32 20 32 0D	Menu Location	Top Right	Yes	Yes	Yes
S040	~XX72 3	7E 30 30 37 32 20 33 0D	Menu Location	Centre	Yes	Yes	Yes
S040	~XX72 4	7E 30 30 37 32 20 34 0D	Menu Location	Bottom Left	Yes	Yes	Yes
S040	~XX72 5	7E 30 30 37 32 20 35 0D	Menu Location	Bottom Right	Yes	Yes	Yes
S041	~XX73 n	7E 30 30 37 33 20 a 0D	Signal Frequency	n = -10 (a=2D 31 30) ~ 10 (a=31 30) By signal	Yes	Yes	Yes
S042	~XX74 n	7E 30 30 37 34 20 a 0D	Signal Phase	n = 0 (a=30) ~ 31 (a=33 31) By signal	Yes	Yes	Yes
S043	~XX75 n	7E 30 30 37 35 20 a 0D	Signal H. Position	n = -5 (a=2D 35) ~ 5 (a=35) By timing	Yes	Yes	Yes
S044	~XX76 n	7E 30 30 37 36 20 a 0D	Signal V. Position	n = -5 (a=2D 35) ~ 5 (a=35) By timing	Yes	Yes	Yes
S045	~XX77 n	7E 30 30 37 37 20 aabbcc 0D	Security Security Timer Month/Day/ Hour	“n = mm/dd/hh mm= 00 (aa=30 30) ~ 12 (aa=31 32) dd = 00 (bb=30 30) ~ 30 (bb=33 30) hh= 00 (cc=30 30) ~ 24 (cc=32 34)”	Yes	Yes	Yes
S046	~XX78 1 ~nnnn	7E 30 30 37 38 20 31 0D	Security	“On with password ~nnnn = ~0000 (a= 7E 30 30 30 30) ~9999 (a=7E 39 39 39 39)”	Yes	Yes	Yes
S046	~XX78 0 ~nnnn	7E 30 30 37 38 20 32 20 a 0D	Security	“Off (0/2 for backward compatible) with password ~nnnn = ~0000 (a= 7E 30 30 30 30) ~9999 (a=7E 39 39 39 39)”	Yes	Yes	Yes
S047	~XX79 n	7E 30 30 37 39 20 a 0D	Projector ID	n = 00 (a=30 30) ~ 99 (a=39 39)	No	No	No
S048	~XX80 1	7E 30 30 38 30 20 31 0D	Mute	On	Yes	Yes	Yes
S048	~XX80 0	7E 30 30 38 30 20 30 0D	Mute	Off (0/2 for backward compatible)	Yes	Yes	Yes
S049	~XX81 n	7E 30 30 38 31 20 a 0D	Volume (Audio)	n = 0 (a=30) ~ 10 (a=31 30)	Yes	Yes	Yes

S050	~XX82 1	7E 30 30 38 32 20 31 0D	Logo	Default	Yes	Yes	Yes
S050	~XX82 2	7E 30 30 38 32 20 32 0D	Logo	User	No	No	No
S050	~XX82 3	7E 30 30 38 32 20 33 0D	Logo	Neutral	Yes	Yes	Yes
S051	~XX88 0	7E 30 30 38 38 20 30 0D	Closed Captioning	Off	Yes	Yes	Yes
S051	~XX88 1	7E 30 30 38 38 20 31 0D	Closed Captioning	CC1	Yes	Yes	Yes
S051	~XX88 2	7E 30 30 38 38 20 32 0D	Closed Captioning	CC2	Yes	Yes	Yes
S052	~XX90 1	7E 30 30 39 31 20 31 0D	“Screen Type (Only for WXGA/WUXGA)”	16:10	Yes	No	Yes
S052	~XX90 0	7E 30 30 39 31 20 30 0D	-	16:9	Yes	No	Yes
S053	~XX91 1	7E 30 30 39 31 20 31 0D	Signal Automatic	On	Yes	Yes	Yes
S053	~XX91 0	7E 30 30 39 31 20 30 0D	Signal Automatic	Off	Yes	Yes	Yes
S054	~XX101 1	7E 30 30 31 30 31 20 31 0D	High Altitude	On	Yes	Yes	Yes
S054	~XX101 0	7E 30 30 31 30 31 20 30 0D	High Altitude	Off (0/2 for backward compatible)	Yes	Yes	Yes
S055	~XX102 1	7E 30 30 31 30 32 20 31 0D	Information Hide	On	No	No	No
S055	~XX102 0	7E 30 30 31 30 32 20 30 0D	Information Hide	Off (0/2 for backward compatible)	No	No	No
S056	~XX103 1	7E 30 30 31 30 33 20 31 0D	Keypad Lock	On	No	No	No
S056	~XX103 0	7E 30 30 31 30 33 20 30 0D	Keypad Lock	Off (0/2 for backward compatible)	No	No	No
S057	~XX104 0	7E 30 30 31 30 34 20 30 0D	Background Color	None	Yes	Yes	Yes
S057	~XX104 1	7E 30 30 31 30 34 20 31 0D	Background Color	Blue	Yes	Yes	Yes

S057	~XX104 3	7E 30 30 31 30 34 20 33 0D	Background Color	Red	Yes	Yes	Yes
S057	~XX104 4	7E 30 30 31 30 34 20 34 0D	Background Color	Green	Yes	Yes	Yes
S057	~XX104 6	7E 30 30 31 30 34 20 36 0D	Background Color	Gray	Yes	Yes	Yes
S057	~XX104 7	7E 30 30 31 30 34 20 37 0D	Background Color	Logo	Yes	Yes	Yes
S058	~XX105 1	7E 30 30 31 30 35 20 31 0D	Direct Power On	On	Yes	Yes	Yes
S058	~XX105 0	7E 30 30 31 30 35 20 30 0D	Direct Power On	Off (0/2 for backward compatible)	Yes	Yes	Yes
S059	~XX106 n	7E 30 30 31 30 36 20 a 0D	“Auto Power Off (min) “ (5 minutes for each step).”	n = 0 (a=30) ~ 180 (a=31 38 30)	Yes	Yes	Yes
S060	~XX107 n	7E 30 30 31 30 37 20 a 0D	“Sleep Timer (min) “ (30 minutes for each step).”	n = 0 (a=30) ~ 990 (a=39 39 30)	No	No	No
S061	~XX109 1	7E 30 30 31 30 39 20 31 0D	Lamp Reminder	On	No	No	No
	~XX109 0	7E 30 30 31 30 39 20 30 0D	Lamp Reminder	Off (0/2 for backward compatible)	No	No	No
S062	~XX110 1	7E 30 30 31 31 30 20 31 0D	Brightness Mode	Bright	No	No	No
	~XX110 2	7E 30 30 31 31 30 20 32 0D	Brightness Mode	Eco	Yes	Yes	Yes
	~XX110 4	7E 30 30 31 31 30 20 34 0D	Brightness Mode	Dynamic	Yes	Yes	Yes
	~XX110 6	7E 30 30 31 31 30 20 36 0D	Brightness Mode	Power	Yes	Yes	Yes
S063	~XX111 1	7E 30 30 31 31 31 20 31 0D	Lamp Reset	Yes	No	No	No

S064	~XX112 1	7E 30 30 31 31 32 20 31 0D	Reset to Default Yes (P.S When security is off)	“Yes with no password (Security is Off)”	Yes	Yes	Yes
S065	~XX112 1 ~nnnn	7E 30 30 31 31 32 20 31 0D	Reset to Default Yes (P.S When security is On/ Off)	“Yes with no password (Security is Off)”	Yes	Yes	Yes
S066	~XX113 1	7E 30 30 31 31 33 20 31 0D	Signal Power On	On	Yes	Yes	Yes
	~XX113 0	7E 30 30 31 31 33 20 30 0D	Signal Power On	Off (0/2 for backward compatible)	Yes	Yes	Yes
S067	~XX114 1	7E 30 30 31 31 34 20 31 0D	Power Mode (Standby)	Active	Yes	Yes	Yes
	~XX114 0	7E 30 30 31 31 34 20 30 0D	Power Mode (Standby)	Eco. (<0.5W)	Yes	Yes	Yes
S068	~XX115 1	7E 30 30 31 31 35 20 31 0D	Quick Resume	On	No	No	No
	~XX115 0	7E 30 30 31 31 35 20 30 0D	Quick Resume	Off (0/2 for backward compatible)	No	No	No
S069	~XX140 10	7E 30 30 31 34 30 20 31 30 0D	IR Function	Up	Yes	Yes	Yes
	~XX140 11	7E 30 30 31 34 30 20 31 31 0D	IR Function	Left	Yes	Yes	Yes
	~XX140 12	7E 30 30 31 34 30 20 31 32 0D	IR Function	Enter (for Projection MENU)	Yes	Yes	Yes
	~XX140 13	7E 30 30 31 34 30 20 31 33 0D	IR Function	Right	Yes	Yes	Yes
	~XX140 14	7E 30 30 31 34 30 20 31 34 0D	IR Function	Down	Yes	Yes	Yes
	~XX140 15	7E 30 30 31 34 30 20 31 35 0D	IR Function	Keystone +	Yes	Yes	Yes
	~XX140 16	7E 30 30 31 34 30 20 31 36 0D	IR Function	Keystone –	Yes	Yes	Yes
	~XX140	7E 30 30 31	IR Function	Volume –	Yes	Yes	Yes

	17	34 30 20 31 37 0D					
	~XX140 18	7E 30 30 31 34 30 20 31 38 0D	IR Function	Volume +	Yes	Yes	Yes
	~XX140 19	7E 30 30 31 34 30 20 31 39 0D	IR Function	Brightness	Yes	Yes	Yes
	~XX140 20	7E 30 30 31 34 30 20 32 30 0D	IR Function	Menu	Yes	Yes	Yes
	~XX140 21	7E 30 30 31 34 30 20 32 31 0D	IR Function	Zoom	Yes	Yes	Yes
	~XX140 28	7E 30 30 31 34 30 20 32 38 0D	IR Function	Contrast	Yes	Yes	Yes
	~XX140 47	7E 30 30 31 34 30 20 34 37 0D	IR Function	Source	Yes	Yes	Yes
S070	~XX195 0	7E 30 30 31 39 35 20 30 0D	Test Pattern	Off	Yes	Yes	Yes
	~XX195 1	7E 30 30 31 39 35 20 31 0D	Test Pattern	Grid (White)	Yes	Yes	Yes
	~XX195 2	7E 30 30 31 39 35 20 32 0D	Test Pattern	White	Yes	Yes	Yes
	~XX195 3	7E 30 30 31 39 35 20 33 0D	Test Pattern	Grid (Green)	Yes	Yes	Yes
	~XX195 4	7E 30 30 31 39 35 20 34 0D	Test Pattern	Grid (Magenta)	Yes	Yes	Yes
S071	~XX200 n	7E 30 30 32 30 30 20 a 0D	White level	n = 0 (a=30) ~ 31 (a=33 31)	No	No	No
S072	~XX201 n	7E 30 30 32 30 31 20 a 0D	Black level	n = -5 (a=2D 35) ~ 5 (a=35)	No	No	No
S073	~XX204 1	7E 30 30 32 30 34 20 31 0D	IRE	0	No	No	No
	~XX204 0	7E 30 30 32 30 34 20 30	IRE	7.5	No	No	No

		0D					
S074	~XX210 n	7E 30 30 32 30 30 20 n 0D	Display message on the OSD	n: 1-30 characters	Yes	Yes	Yes
S075	~XX215 1	7E 30 30 32 31 35 20 31 0D	Colour Setting	Reset	Yes	Yes	Yes
S076	~XX230 0	7E 30 30 32 33 30 20 30 0D	3D Mode	Off	Yes	Yes	Yes
	~XX230 1	7E 30 30 32 33 30 20 31 0D	3D Mode	DLP-Link	Yes	Yes	Yes
S077	~XX231 0	7E 30 30 32 33 31 20 30 0D	3D Sync Invert	Off	Yes	Yes	Yes
	~XX231 1	7E 30 30 32 33 31 20 31 0D	3D Sync Invert	On	Yes	Yes	Yes
S078	~XX313 1	7E 30 30 33 31 33 20 31 0D	Information Menu	On	Yes	Yes	Yes
	~XX313 0	7E 30 30 33 31 33 20 30 0D	Information Menu	Off (0/2 for backward compatible)	Yes	Yes	Yes
S079	~XX320 1	7E 30 30 33 32 30 20 31 0D	Optional Filter Installed	Yes	No	No	No
	~XX320 0	7E 30 30 33 32 30 20 30 0D	Optional Filter Installed	No (0/2 for backward compatible)	No	No	No
S080	~XX322 0	7E 30 30 33 32 32 20 30 0D	Filter Reminder	Off	No	No	No
	~XX322 1	7E 30 30 33 32 32 20 31 0D	Filter Reminder	300hr	No	No	No
	~XX322 2	7E 30 30 33 32 32 20 32 0D	Filter Reminder	500hr	No	No	No
	~XX322 3	7E 30 30 33 32 32 20 33 0D	Filter Reminder	800hr	No	No	No
	~XX322 4	7E 30 30 33 32 32 20 34 0D	Filter Reminder	1000hr	No	No	No

S081	~XX323 1	7E 30 30 33 32 33 20 31 0D	Filter Reset	Yes	No	No	No
S082	~XX327 n	7E 30 30 33 32 37 20 a 0D	Colour Setting Red Hue	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S083	~XX328 n	7E 30 30 33 32 38 20 a 0D	Colour Setting Green Hue	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S084	~XX329 n	7E 30 30 33 32 39 20 a 0D	Colour Setting Blue Hue	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S085	~XX330 n	7E 30 30 33 33 30 20 a 0D	Colour Setting Cyan Hue	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S086	~XX331 n	7E 30 30 33 33 31 20 a 0D	Colour Setting Yellow Hue	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S087	~XX332 n	7E 30 30 33 33 32 20 a 0D	Colour Setting Magenta Hue	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S088	~XX333 n	7E 30 30 33 33 33 20 a 0D	Colour Setting Red Stutation	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S089	~XX334 n	7E 30 30 33 33 34 20 a 0D	Colour Setting Green Stutation	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S090	~XX335 n	7E 30 30 33 33 35 20 a 0D	Colour Setting Blue Stutation	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S091	~XX336 n	7E 30 30 33 33 36 20 a 0D	Colour Setting Cyan Stutation	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S092	~XX337 n	7E 30 30 33 33 37 20 a 0D	Colour Setting Yellow Stutation	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S093	~XX338 n	7E 30 30 33 33 38 20 a 0D	Colour Setting Magenta Stutation	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S094	~XX339 n	7E 30 30 33 33 39 20 a 0D	Colour Setting Red Gain	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S095	~XX340 n	7E 30 30 33 34 30 20 a 0D	Colour Setting Green Gain	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S096	~XX341	7E 30 30 33	Colour Setting Blue	n = -50 (a=2D 35	Yes	Yes	Yes

	n	34 31 20 a 0D	Gain	30) ~ 50 (a=35 30)			
S097	~XX342 n	7E 30 30 33 34 32 20 a 0D	Colour Setting Cyan Gain	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S098	~XX343 n	7E 30 30 33 34 33 20 a 0D	Colour Setting Yellow Gain	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S099	~XX344 n	7E 30 30 33 34 34 20 a 0D	Colour Setting Magenta Gain	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S100	~XX345 n	7E 30 30 33 34 35 20 a 0D	Colour Setting White Red	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S101	~XX346 n	7E 30 30 33 34 36 20 a 0D	Colour Setting White Green	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S102	~XX347 n	7E 30 30 33 34 37 20 a 0D	Colour Setting White Blue	n = -50 (a=2D 35 30) ~ 50 (a=35 30)	Yes	Yes	Yes
S103	~XX348 1	7E 30 30 33 34 38 20 31 0D	Display Mode Lock	On	No	No	No
S103	~XX348 0	7E 30 30 33 34 38 20 30 0D	Display Mode Lock	Off	No	No	No
S104	~XX400 0	7E 30 30 34 30 30 20 30 0D	3D→2D	3D	Yes	Yes	Yes
S104	~XX400 1	7E 30 30 34 30 30 20 31 0D	3D→2D	L	Yes	Yes	Yes
S104	~XX400 2	7E 30 30 34 30 30 20 32 0D	3D→2D	R	Yes	Yes	Yes
S105	~XX405 0	7E 30 30 34 30 35 20 30 0D	3D Format	Auto	Yes	Yes	Yes
S105	~XX405 1	7E 30 30 34 30 35 20 31 0D	3D Format	SBS	Yes	Yes	Yes
S105	~XX405 2	7E 30 30 34 30 35 20 32 0D	3D Format	Top and Bottom	Yes	Yes	Yes
S105	~XX405 3	7E 30 30 34 30 35 20 33	3D Format	Frame Sequential	Yes	Yes	Yes

		0D					
S106	~XX506 0	7E 30 30 35 30 36 20 30 0D	Wall Colour	OFF (Whiteboard)	Yes	Yes	Yes
S106	~XX506 1	7E 30 30 35 30 36 20 31 0D	Wall Colour	Blackboard	Yes	Yes	Yes
S106	~XX506 7	7E 30 30 35 30 36 20 37 0D	Wall Colour	Light Yellow	Yes	Yes	Yes
S106	~XX506 3	7E 30 30 35 30 36 20 33 0D	Wall Colour	Light Green	Yes	Yes	Yes
S106	~XX506 4	7E 30 30 35 30 36 20 34 0D	Wall Colour	Light Blue	Yes	Yes	Yes
S106	~XX506 5	7E 30 30 35 30 36 20 35 0D	Wall Colour	Pink	Yes	Yes	Yes
S106	~XX506 6	7E 30 30 35 30 36 20 36 0D	Wall Colour	Gray	Yes	Yes	Yes
S107	~XX511 0	7E 30 30 35 31 31 20 30 0D	HDMI Link(CEC)	Off (0/2 for backward compatible)	Yes	Yes	Yes
S107	~XX511 1	7E 30 30 35 31 31 20 31 0D	HDMI Link(CEC)	On	Yes	Yes	Yes
S108	~XX563 0	7E 30 30 35 36 33 20 30 0D	Auto Source	Off (0/2 for backward compatible)	Yes	Yes	Yes
S108	~XX563 1	7E 30 30 35 36 33 20 31 0D	Auto Source	On	Yes	Yes	Yes

## 13.2.2 SENT FROM PROJECTOR AUTOMATICALLY

INDEX	ASCII CODE	HEX CODE	FUNCTION	PROJECTOR RETURN	INL2156	INL2158	INL2159
A001	N/A	N/A	“Projector Information a=0, Standby a=1, Warming a=2, Cooling	INFOa	Yes	Yes	Yes

			a=3, Out of Range a=6, Fan Lock a=7, Over Temperature a=8, Lamp(SSI) Hours Running Out”				
--	--	--	---	--	--	--	--

## 13.2.3 RS232 CODES READ FROM PROJECTOR

INDEX	ASCII CODE	HEX CODE	FUNCTION	PROJECTOR RETURN	INL2156	INL2158	INL2159
R001	~XX87 1	7E 30 30 38 37 20 31 0D	LAN Settings /Network State	Oka (a=0 Disconnected a=1 Connected)	Yes	Yes	Yes
R002	~XX87 3	7E 30 30 38 37 20 33 0D	LAN Settings /IP Address	Okaaa_bbb_ccc_ddd	Yes	Yes	Yes
R003	~XX108 1	7E 30 30 31 30 38 20 31 0D	“Lamp Hours aaaaa=(5 digits) Total Lamp Hours”	Okaaaaa	Yes	Yes	Yes
R004	~XX121 1	7E 30 30 31 32 31 20 31 0D	“Input Source Commands a=0, None a=7, HDMI (HDMI 1) a=2, VGA a=4, S-Video a=5, Video a=8, HDMI 2”	Oka	Yes	Yes	Yes
R005	~XX122 1	7E 30 30 31 32 32 20 31 0D	“Software Version aaaa=Software Version”	Okaaaa	Yes	Yes	Yes
R006	~XX123 1	7E 30 30 31 32 33 20 31 0D	“Display Mode a=0, None a=1, Presentation a=2, Bright a=3, Movie (Cinema) a=4, sRGB a=5, User a=9, 3D a=12, Game a=13, DICOM SIM. a=22, HDR SIM. a=26, HLG SIM.”	Oka	Yes	Yes	Yes
R007	~XX124 1	7E 30 30 31 32 34 20 31 0D	“Power State a=0, Off a=1, On “	Oka	Yes	Yes	Yes
R008	~XX125	7E 30 30	“Brightness	Okaaa	Yes	Yes	Yes

	1	31 32 35 20 31 0D	aaa=-50~+50"				
R009	~XX126 1	7E 30 30 31 32 36 20 31 0D	"Contrast aaa=-50~+50"	Okaaa	Yes	Yes	Yes
R010	~XX127 1	7E 30 30 31 32 37 20 31 0D	"Aspect Ratio aa=0, None aa=1, 4:3 aa=2, 16:9 aa=3, 16:10 aa=5, LBX aa=6, Native aa=7, Auto"	Okaa	Yes	Yes	Yes
R011	~XX128 1	7E 30 30 31 32 38 20 31 0D	"Color Temperature a=0, Standard a=1, Cool a=2, Cold a=3, Warm"	Oka	Yes	Yes	Yes
R012	~XX129 1	7E 30 30 31 32 39 20 31 0D	"Projection Mode a=0, Front a=1, Rear a=2, Front-Ceiling a=3, Rear-Ceiling"	Oka	Yes	Yes	Yes
R013	~XX150 1	7E 30 30 31 35 30 20 31 1D	"Information a=Power Status a=0, Power Off a=1, Power On bbbb=Lamp Hours cc=Input Source cc=00, None cc=02, VGA cc=05, Video cc=07, HDMI 1 cc=08, HDMI 2 dddd=Software Version ee=Display Mode ee=00, None ee=01, Presentation ee=02, Bright ee=03, Movie (Cinema) ee=04, sRGB ee=05, User ee=09, 3D ee=10, DICOM SIM. ee=12, Game ee=22, HDR SIM. ee=26, HLG SIM."	Okabbbbccddddee	Yes	Yes	Yes
R014	~XX150 4	7E 30 30 31 35 30	"Resolution a=string (e.g.	Oka	Yes	Yes	Yes

		20 34 0D	Ok1920×1080)”				
R020	~XX150 16	7E 30 30 31 35 30 20 31 36 0D	“Standby Power Mode a=0, Eco. a=1, Active”	Oka	Yes	Yes	Yes
R015	~XX150 19	7E 30 30 31 35 30 20 31 39 0D	“Refresh rate a=string (e.g. Ok60Hz)”	Oka	Yes	Yes	Yes
R016	~XX151 1	7E 30 30 31 35 31 20 31 0D	“Model Name a=1, SVGA a=2, XGA a=3, WXGA a=4, 1080p a=5, WUXGA”	Oka	Yes	Yes	Yes
R017	~XX321 1	7E 30 30 33 32 31 20 31 0D	“Filter Usage Hours aaaaa=00000~99999”	Okaaaaa	No	No	No
R018	~XX352 1	7E 30 30 33 35 32 20 31 0D	“System Temperature aaa=000~999”	Okaaa	Yes	Yes	Yes
R019	~XX353 1	7E 30 30 33 35 33 20 31 0D	“Serial Number a=string”	Oka	Yes	Yes	Yes
R020	~XX355 1	7E 30 30 33 35 35 20 31 0D	“AV Mute a=0, Off a=1, On”	Oka	Yes	Yes	Yes
R021	~XX356 1	7E 30 30 33 35 36 20 31 0D	“Mute a=0, Off a=1, On”	Oka	Yes	Yes	Yes
R022	~XX543 1	7E 30 30 35 34 33 20 31 0D	“H Image Shift aaaa=-100~+100”	Okaaaa	Yes	Yes	Yes
R023	~XX543 2	7E 30 30 35 34 33 20 32 0D	“V Image Shift aaaa=-100~+100”	Okaaaa	Yes	Yes	Yes
R024	~XX543 3	7E 30 30 35 34 33 20 33 0D	“V Keystone aaa=-40~+40”	Okaaa	Yes	Yes	Yes
R025	~XX543 4	7E 30 30 35 34 33 20 34 0D	“H Keystone aaa=-40~+40”	Okaaa	Yes	Yes	Yes
R026	~XX555 1	7E 30 30 35 35 35 20 31 0D	LAN MAC Address	Ok###:###:###:###:###:###	Yes	Yes	Yes
R027	~XX558	7E 30 30	“Projector ID	Okaa	Yes	Yes	Yes

	1	35 35 38 20 31 0D	aa=00~99”				
--	---	----------------------	-----------	--	--	--	--

## 13.3 SUPPORTED RESOLUTIONS AND REFRESH RATES

### Computer

SIGNAL	RESOLUTION	REFRESH RATES Hz	Mac OS Refresh Rates Hz
VGA	640×480	60 / 67 / 72 / 85 / 120**	60/72/85
SVGA	800 × 600	56 / 60** / 72 / 85 / 120**	60 / 72 / 85
XGA	1024 × 768	60** / 70 / 75 / 85 / 120**	60 / 70 / 75 / 85
HDTV (720P)	1280 × 720	50 / 60**	60
WXGA	1280 × 768	60 / 75 / 85	60 / 75 / 85
WXGA	1280 × 800	60 / 120**	60
WXGA	1366 × 768	60	–
SXGA	1280 × 1024	60 / 75 / 85	60 / 75
SXGA+	1400 × 1050	60	–
UXGA	1600 × 1200	60	–
HDTV (1080p)	1920 × 1080	24 / 50 / 60	60
WUXGA	1920 × 1200	60	60
WUXGA	720 × 400	70	–
WUXGA	832 × 624	75	75
WUXGA	1152 × 870	75	75

### HDMI

SIGNAL	RESOLUTION	REFRESH RATES Hz	Mac OS Refresh Rates Hz
VGA	640×480	60 / 120**	60/72/85
SVGA	800 × 600	60** / 72 / 85 / 120**	60 / 72 / 85
XGA	1024 × 768	50/60** / 70 / 75 / 85 / 120**	60 / 70 / 75 / 85
SDTV (480I)	720 × 480	60	–
SDTV (480P)	720 × 480	60	–
SDTV (576I)	720 × 576	50	–
SDTV (576P)5	720 × 576	50	–
WSVGA (1024×600)	1024 × 600	60	–

HDTV (720p)	1280 × 720	50** / 60**	60
WXGA	1280 × 768	60 / 75 / 85	75
WXGA	1280 × 800	60 / 120**	60
WXGA	1366 × 768	60	–
WXGA+	1440 × 900	60	–
SXGA	1280 × 1024	60 / 75 / 85	60 / 75
SXGA+	1400 × 1050	60	–
UXGA	1600 × 1200	60	–
HDTV (1080i)	1920 × 1080	50 / 60	–
HDTV (1080p)	1920 × 1080	24 / 30 / 50 / 60	60
WUXGA	1920 × 1200*	60	60
UHD (2160p)	3840 × 2160	24*** / 25*** / 30*** / 50 / 60	–
4K2K (2160p)	4096 × 2160	24*** / 25 / 30 / 50 / 60	–

### HDMI 1.4a 3D Input

3D TIMING	3D FORMAT
1280 × 720P 50Hz	Top-and Bottom
1280 × 720P 60Hz	Top-and Bottom
1280 × 720P 50Hz	Frame packing
1280 × 720P 60Hz	Frame packing
1920 × 1080i 50 Hz	Side-by-Side (Half)
1920 × 1080i 60 Hz	Side-by-Side (Half)
1920 × 1080P 24 Hz	Top-and Bottom
1920 × 1080P 24 Hz	Frame packing

### HDMI 1.3 3D Input

3D TIMING	3D FORMAT	FORMAT SETTING
1920×1080i 50Hz	Side-by-Side(Half)	SBS mode is on
1920×080i 60Hz	Side-by-Side(Half)	SBS mode is on
1280×720P 50Hz	Side-by-Side(Half)	SBS mode is on
1280×720P 60Hz	Side-by-Side(Half)	SBS mode is on
1920×1080i 50Hz	Top-and-Bottom	TAB mode is on
19201080i 60Hz	Top-and-Bottom	TAB mode is on
1280×720p 50Hz	Top-and-Bottom	TAB mode is on

1280×720p 60Hz	Top-and-Bottom	TAB mode is on
480i	HQFS	3D format is Frame sequential

## 13.4 ON SCREEN DISPLAY (OSD) MENU TREE

### Display



#### INFORMATION

Zoom has a total of 30 step adjustment, each step representing 0.04x adjustment from -0.8 to 2.0x  
 Brightness Power, each step represents 5% power adjustment from 100% to 50%

SETTING 1	SETTING 2	SETTING 3	VALUES	COMMENTS
Display Mode	–	–	Presentation	–
	–	–	Bright	–
	–	–	HDR SIM.	–
	–	–	HLG SIM.	–
	–	–	Cinema	–
	–	–	Game	–
	–	–	sRGB	–
	–	–	DICOM SIM.	–
	–	–	User	–
	–	–	3D	–
Wall Color	–	–	Off	–
	–	–	Blackboard	–
	–	–	Light Yellow	–
	–	–	Light Green	–
	–	–	Light Blue	–
	–	–	Pink	–
	–	–	Gray	–
Brightness	–	–	-50 ~ 50	–
Contrast	–	–	-50 ~ 50	–

Sharpness	–	–	1 ~ 15	–
Color	–	–	-50 ~ 50	Gray out in RGB signal
Tint	–	–	-50 ~ 50	Gray out in RGB signal
Gamma	–	–	Film	Film: for home theater and gamma curve like 2.2
	–	–	Video	Video: for video or TV source and gamma curve like 1.8
	–	–	Graphics	Graphics: for PC / Photo source and gamma curve like 1.0
	–	–	Standard (2.2)	–
	–	–	1.8	–
	–	–	2.0	–
	–	–	2.4	–
3D	3D Mode	–	Off	Gray out 3D – 2D, 3D Format and 3D Sync Invert while 3D Mode is Off
		–	On	Support auto 3D On and hide 3D Format while signal is HDMI 1.4a 3D
	3D – 2D	–	3D	–
		–	L	Left Frame
		–	R	Right Frame
	3D Format	–	Auto	–
		–	SBS	Side by Side
		–	Top and Bottom	–
		–	Frame Sequential	–
	3D Sync Invert	Off	Off / On	–
Aspect Ratio	–	–	4:3	–
	–	–	16:9	–
	–	–	16:10	Not supported in 1080p
	–	–	LBX	–
	–	–	Native	Original image without any scaling
	–	–	Auto	–
Edge Mask	–	–	0 ~ 10	–
Zoom	–	–	-5 ~ 25	–

Image Shift	H.	–	-100 ~ 100	–
	V.	–	-100 ~ 100	–
Keystone	Four Corners	–	–	–
	H Keystone	–	-30 ~ 30	–
	V Keystone	–	-30 ~ 30	–
	Auto Keystone	On	Off / On	–
	Reset	–	D	

## Audio

SETTING 1	SETTING 2	SETTING 3	VALUES
Mute	–	–	Off / On (ICON)
Volume	–	–	0 – 10

## Setup



## INFORMATION

Power Mode, Eco/Active – Eco disables LAN and puts USB in to standby mode, Active leaves LAN active and USB in to standby

SETTING 1	SETTING 2	SETTING 3	VALUES	COMMENTS
Projection	–	–	Front / Rear / Ceiling-Top / Rear-Top	–
Screen Type	–	–	16:9 / 16:10	Not supported in 1080p
Power Settings	Direct Power On	–	Off / On	–
	Signal Power On	–	Off / On	–
	Auto Power Off (min.)	–	0 ~ 180	+/- 5 step adjustment
	Power Mode	–	Eco. / Active	–

	(Standby)			
	USB Power (Standby)	–	Off / On (ICON)	Gray out this while Power Mode (Standby) is Eco.
Security	Security	–	Off / On (ICON)	–
	Security Timer	Month	0 ~ 12	–
		Day	0 ~ 30	–
		Hour	0 ~ 24	–
	Change Password	–		–
HDMI CEC	HDMI CEC	–	Off / On (ICON)	–
Test Pattern	–	–	Green Grid / Magenta Grid / White Grid / White / Off	–
Options	Language	English	English	
		–	Deutsch	German
		–	Français	French
		–	Italiano	Italian
		–	Español	Spanish
		–	Português	Portuguese
		–	Polski	Polish
		–	Nederlands	Dutch
		–	Svenska	Swedish
		–	Norsk/Dansk	Norwegian/Danish
		–	Suomi	Finnish
		–	ελληνικά	Greek
		–	繁體中文	Traditional Chinese
		–	簡體中文	Simplified Chinese
		–	日本語	Japanese
		–	한국어	Korean
		–	Русский	Russian
		–	Magyar	Hungarian
		–	Čeština	Czechoslovak
		–	عربي	Arabic
		–	ไทย	Thai
		–	Türkçe	Turkish

		–	فارسی	Farsi
		–	Tiếng Việt	Vietnam
		–	Bahasa Indonesia	Indonesian
		–	Română	Romania
		–	Slovenčina	Slovakian
Options	Closed Caption	–	Off / CC1 / CC2	Hide this while input source is not VIDEO
	Menu Settings	Menu Location	Top-Left (ICON)	–
		Menu Location	Top-Right (ICON)	–
			Center (ICON)	–
			Bottom-Left (ICON)	–
			Bottom-Right (ICON)	–
		Menu Timer	Off	–
			5 sec	–
			10 sec	–
Options	Auto Source	–	Off / On (ICON)	–
	Input Source	–	HDMI 1	–
		–	HDMI 2	–
		–	VGA	–
		–	VIDEO	–
	High Altitude	–	Off / On (ICON)	–
	Logo	–	Default / Neutral	Default: customer logo / Neutral: same as below Background Color setting
	Background Color	–	Black (ICON)	–
		–	Blue (ICON)	–
		–	Red (ICON)	–
		–	Green (ICON)	–
		–	Gray (ICON)	–
		–	Logo (ICON)	Same as above Logo setting
Reset	Reset to Default	–	–	–

## Network



## INFORMATION

Network information only applicable to Superior Series.

SETTING 1	SETTING 2	SETTING 3	VALUES	COMMENTS
LAN	Network Status	–	Disconnect / Connected	–
	MAC Address	–	AA : BB : CC : DD : EE : FF	–
	DHCP	–	Off / On (ICON)	–
	IP Address	–	xxx.xxx.xxx.xxx	1. Gray out these while DHCP is On 2. When DHCP is Off, default IP configure setting: IP Address: 192.168.0.100 Subnet Mask: 255.255.255.0 Gateway: 192.168.0.254 DNS: 192.168.0.51
	Subnet Mask	–	xxx.xxx.xxx.xxx	1. Gray out these while DHCP is On 2. When DHCP is Off, default IP configure setting: IP Address: 192.168.0.100 Subnet Mask: 255.255.255.0 Gateway: 192.168.0.254 DNS: 192.168.0.51
	Gateway	–	xxx.xxx.xxx.xxx	1. Gray out these while DHCP is On 2. When DHCP is Off, default IP configure setting: IP Address: 192.168.0.100 Subnet Mask: 255.255.255.0 Gateway: 192.168.0.254 DNS: 192.168.0.51
	DNS	–	xxx.xxx.xxx.xxx	1. Gray out these while DHCP is On 2. When DHCP is Off, default IP configure setting: IP Address: 192.168.0.100 Subnet Mask: 255.255.255.0 Gateway: 192.168.0.254 DNS: 192.168.0.51
	Reset	–	–	Include LAN and Control
Control	Crestron	–	Off / On (ICON)	Port 41794

## Information



### INFORMATION

The information menu provides information on the active source and other details of the projector, there are no adjustable settings in this section of the menu.

SETTING 1	SETTING 2	SETTING 3	INFORMATION
Serial Number	–	–	–
Source	–	–	–
Resolution	–	–	–
Refresh Rate	–	–	–
Display Mode	–	–	–
Power Mode (Standby)	–	–	–
Light Source Hours	–	–	–
Network Status	–	–	–
IP Address	–	–	–
Brightness Mode	–	–	–
Firmware Version	System	–	–
Firmware Version	LAN	–	–
Firmware Version	MCU	–	–

# 14. SPECIFICATIONS

---



## INFORMATION

All specifications are subject to change without notice.

Specifications for the Core Series can be found [here](#)

Specifications for the Superior Series can be found [here](#)

# 15. PRODUCT COMPLIANCE

## FCC COMPLIANCE STATEMENT – CLASS B

This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual may cause interference to radio communications. It has been tested and found to comply with the limits for a Class “B” computing device pursuant to Subpart B of Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference when operated in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, or any other form of communication, the user 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 product and receiver.
- Connect the product to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the party responsible for compliance may void the user’s authority to operate the product. Where shielded interface cables have been provided with the product, specified additional components or accessories elsewhere defined to be used with the installation of the product, they shall be used in order to ensure compliance with FCC regulations.



## INFORMATION

This Class B digital apparatus complies with Canadian ICES-003.  
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## INDUSTRY CANADA REGULATORY INFORMATION

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

The user is cautioned that this device should be used only as specified within this manual to meet RF exposure requirements. Use of this device in a manner inconsistent with this manual could lead to excessive RF exposure conditions.

**INSTRUCTIONS TO USERS:** This equipment complies with the requirements of FCC equipment provided that the following conditions are met. If the cables include a EMI ferrite core, attach the ferrite core end of the cable to the projector. Use the cables which are included with the projector or specified.

\*\*Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

Complies with IDA Standards DA103121

## EU COMPLIANCE

Our Superior Series CE declaration of conformity can be found [Here](#), under the SUPPORT section of the page.

Our Core Series CE declaration of conformity can be found [Here](#), under the SUPPORT section of the page.



## INFORMATION

### CE COMPLIANCE STATEMENT

Electromagnetic Compatibility Statement: Meets 2014/30/EU Directive

Low Voltage Directive: Meets 2014/35/EU Directive

## UK COMPLIANCE

Our Superior Series UKCA declaration of conformity can be found [Here](#), under the SUPPORT section of the page.

Our Core Series UKCA declaration of conformity can be found [Here](#), under the SUPPORT section of the page.



## INFORMATION

### UKCA COMPLIANCE STATEMENT

Electromagnetic Compatibility Regulations 2016

Electrical Equipment (Safety) Regulations 2016

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

## Manufacturer, Importer and Authorised Representative in accordance with national directives

### Manufacturer

Maxnerva Technology Services Limited

Room 1001, 10/F, Houston Centre, 63 Mody Road, Tsim Sha Tsui East, Kowloon, Hong Kong.

### EU Importer

Grand Field Technology Limited

Room 1001, 10/F, Houston Centre, 63 Mody Road, Tsim Sha Tsui East, Kowloon, Hong Kong.

### EU Authorised Representative

24Hour-AR

Storgatan 51, 903 26 Umeå, Sweden

+46 (0)10-424 00 20

info@24hour-ar.com

www.24hour-ar.com

## **UK Authorised Representative in accordance with UK regulations**

Independent Quality Solutions Ltd  
Enterprise House, Wrest Park, Silsoe, Bedfordshire, MK45 4HR  
+44 (0)1462 713322  
enquiries@i-q-s.co.uk  
www.i-q-s.co.uk

## **Russian Authorised Representative**

InFocus has appointed AUVIX LLC, 129085, с. Moscow, Zvezdny Boulevard, 21, bldg. 1. as the authorised representative in Russia and this product is compliant with TR TC 004/2011, TR TC 020/2011 and TR CU 020/2011 local conformity testing and approvals.

InFocus назначил ООО « АУВИКС », 129085, г. Москва, Звездный бульвар, д. 21, стр. 1., в качестве официального представителя в России, и этот продукт соответствует требованиям TR TC 004/2011, TR TC 020/2011 и TR CU 020 / 2011г. местные испытания на соответствие и согласования  
ООО « АУВИКС  
129085, г. Москва, Звездный бульвар, д. 21, стр. 1  
+7 (495) 797-57-75  
info@auvix.ru

## **US Importer and Local Representative in accordance with FCC regulations**

Maxnerva Technology Services USA LLC  
13190 SW 68th Parkway, Suite 120  
Portland, Oregon 97223,

# 16. WARRANTY

## INFOCUS LIMITED WARRANTY

For product purchases effective 1st January 2021

### WARRANTY STATEMENT

InFocus warrants its products to be free from defects in material and workmanship during the warranty period. If a product proves to be defective in material or workmanship during the warranty period, InFocus will, at its sole option, repair or replace the product with a similar product. Replacement Products or parts may include remanufactured or refurbished parts or components. The replacement unit will be covered by the balance of time remaining on the customer's original limited warranty. InFocus provides no warranty for any third-party software whether included with the product or installed by the customer, installation of any unauthorized or third-party hardware parts or components (e.g. Projector Lamps).

### DEAD ON ARRIVAL (DOA)

All brand new InFocus products carry a thirty (30) day Dead on Arrival ( DOA ) warranty policy for the first consumer purchaser. A new replacement unit will be provided if the Product is found to be non-operational within thirty (30) days of purchase and freight shall be covered both ways by InFocus.

### WHO THE WARRANTY PROTECTS

This warranty is valid only for the first consumer purchaser, it is nontransferable.

### WARRANTY PERIOD

PRODUCT	WARRANTY PERIOD
Laser Illumination Projectors	5 years or 20,000 hours whichever comes first
Lamp Illumination and LED Illumination Projectors	2 years
Interactive Touch Displays	3 years
OPS and Slotable PC's	1 year
Original Lamp Contained Within Projector	1 year or 1,000 hours whichever comes first
Replacement lamps and Other Accessories	3 Months

### WHAT THE WARRANTY DOES NOT COVER

1. Any product on which the serial number has been defaced, modified, or removed.
2. Damage, deterioration, or malfunction resulting from:
  - a. Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - b. Repair or attempted repair by anyone not authorized by InFocus.
  - c. Damage to or loss of any programs, data, or removable storage media.
  - d. Software or data loss occurring during repair or replacement.
  - e. Any damage to the product due to shipment.
  - f. Removal or installation of the product.
  - g. Causes external to the product, such as electric power fluctuations or failure.
  - h. Use of supplies or parts not meeting InFocus specifications.
  - i. Normal wear and tear.
  - j. Failure of owner to perform periodic product maintenance as stated in User Guide.
  - k. Any other cause which does not relate to a product defect.
  - l. Damage caused by static (non-moving) images displayed for lengthy periods of time (image burn-in)

- m. Any third-party software included with the product or installed by the customer.
- n. Installation of any unauthorized hardware, accessories, consumable parts, or components
- o. Damage to, or abuse of, the coating on the surface of the display through inappropriate cleaning as described in product User Guide.

### **OBTAINING WARRANTY SERVICE**

Submit your request to us online: [Here](#) or contact your local InFocus support which can be found [Here](#)

Be sure to read our RMA instructions closely to ensure a smooth and timely process of your report, these will be sent to you with the RMA confirmation.



### **INFORMATION**

Products presented for delivery at InFocus repair or logistics center without an assigned RMA will be refused and returned to the sender. Products delivered to InFocus repair or logistics center damaged will be held and customers will be notified. It is the responsibility of the sender to file claims directly with their freight carrier company.

### **LIMITATION OF IMPLIED WARRANTIES**

To the extent allowed by local law, this product is provided to you “as is” without warranties or conditions of any kind, whether oral or written, express or implied. InFocus specifically disclaims any implied warranties or conditions of merchantability, satisfactory quality, noninfringement and fitness for a particular purpose.

### **EXCLUSION OF DAMAGES**

InFocus’s liability is limited to the cost of repair or replacement of the product. InFocus shall not be liable for;

- 1} Damage to other property caused by any defects in the product.
- 2} Damages based upon inconvenience, lost profit, lost data or downtime costs, loss of use of the product, loss of time, loss of profits, loss of business opportunity, loss of goodwill, interference with business relationships, or other commercial loss, even if advised of the possibility of such damages.
- 3} Any other damages, whether direct, special, incidental, consequential, or otherwise.
- 4} Any claim against the customer by any other party.

### **LOCAL LAW**

This warranty gives you specific legal rights, and you may also have other rights which vary from locality to locality. Some localities do not allow limitations on implied warranties and/or do not allow the exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

### **TRADEMARKS**

InFocus and the InFocus wordmark are registered trademarks of InFocus Corporation. used under license. InFocus branded projectors and interactive touch displays are brought to the market by Maxnerva Technology Services Limited a Foxconn affiliated company and its subsidiaries Maxnerva Technology Services US LLC, Maxnerva (Shenzhen) Technology Services Co., Limited, and Grand Field Technology Limited.

All other trademarks or registered trademarks are property of their respective companies.

Copyright 2022 by Maxnerva Technology Services Limited.

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without prior written permission.