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Please visit below website for latest version of User Manual / Installation Guide.

<http://business-display.benq.com/>

Important safety instructions

Your projector is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that you follow the instructions mentioned in the user manual / installation guide and marked on the product.

1. **Please read the user manual / installation guide before you operate your projector.** Save it for future reference.
2. **Do not look straight at the projector lens during operation.** The intense light beam may damage your eyes.
3. **Refer servicing to qualified service personnel.**
4. **Always open the lens shutter (if any) or remove the lens cap (if any) when the projector light source is on.**
5. The light source becomes extremely hot during operation.
6. In some countries, the line voltage is NOT stable. This projector is designed to operate safely within a mains voltage between 100 to 240 volts AC, but could fail if power cuts or surges of ± 10 volts occur. **In areas where the mains voltage may fluctuate or cut out, it is recommended that you connect your projector through a power stabilizer, surge protector or uninterruptible power supply (UPS).**
7. Do not block the projection lens with any objects when the projector is under operation as this could cause the objects to become heated and deformed or even cause a fire. To temporarily turn off the light source, use the blank function.
8. Do not operate light sources beyond the rated light source life.
9. Do not place this product on an unstable cart, stand, or table. The product may fall, sustaining serious damage.
10. Do not attempt to disassemble this projector. There are dangerous high voltages inside which may cause death if you should come into contact with live parts.
Under no circumstances should you ever undo or remove any other covers. Refer servicing only to suitably qualified professional service personnel.
11. Do not block the ventilation holes.
 - Do not place this projector on a blanket, bedding or any other soft surface.
 - Do not cover this projector with a cloth or any other item.
 - Do not place inflammables near the projector.
 If the ventilation holes are seriously obstructed, overheating inside the projector may result in a fire.
12. Do not stand the projector on end vertically. Doing so may cause the projector to fall over, causing injury or resulting in damage to the projector.
13. Do not step on the projector or place any objects upon it. Besides probable physical damage to the projector, doing so may result in accidents and possible injury.
14. When the projector is under operation, you may sense some heated air and odor from its ventilation grill. It is a normal phenomenon and not a product defect.
15. Do not place liquids near or on the projector. Liquids spilled into the projector may cause it to fail. If the projector does become wet, disconnect it from the power supply's power outlet and call BenQ to have the projector serviced.
16. This apparatus must be earthed.
17. Do not place this projector in any of the following environments.
 - Space that is poorly ventilated or confined. Allow at least 50 cm clearance from walls and free flow of air around the projector.
 - Locations where temperatures may become excessively high, such as the inside of a car with all windows rolled up.
 - Locations where excessive humidity, dust, or cigarette smoke may contaminate optical components, shorten the projector's life span and darken the image.
 - Locations near fire alarms
 - Locations with an ambient temperature above 40°C / 104°F
 - Locations where the altitudes are higher than 3000 m (10000 feet).

Notice

Laser notice



This symbol indicates that there is a potential hazard of eye exposure to laser radiation unless the instructions are closely followed.

CLASS I LASER PRODUCT



This Laser Product is designated as Class I during all procedures of operation.

LASER LIGHT - AVOID DIRECT EYE EXPOSURE.

Do not point laser or allow laser light to be directed or reflected toward other people or reflective objects.



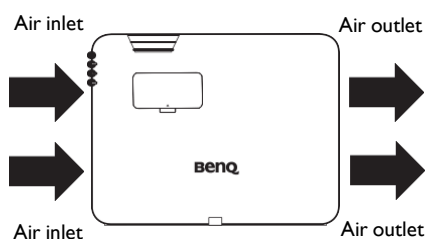
Direct or scattered light can be hazardous to eyes and skin.

There is a potential hazard of eye exposure to laser radiation if the included instructions are not followed.

Caution – use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Cooling notice

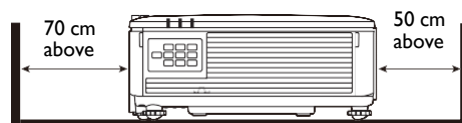
Ventilation



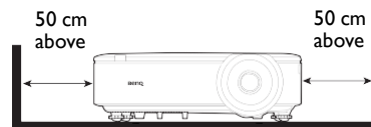
Caution for installation

For proper ventilation of the projector, make sure to leave some space around the projector as shown in the illustration below:

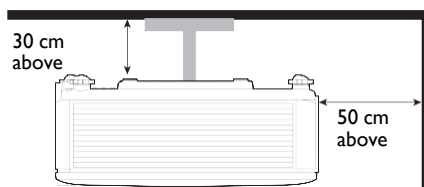
• Table



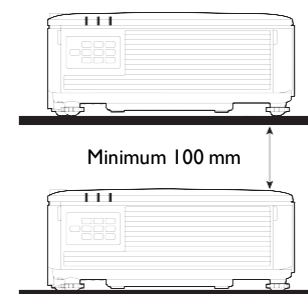
• Table



• Ceiling



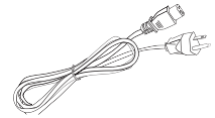
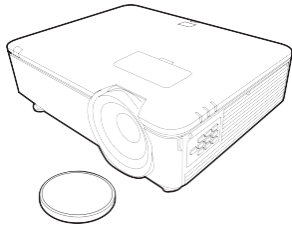
• Stacking



- Avoid using the projector in a poorly ventilated or confined space.
- The light source life may be affected if the projector is used tilted at an angle of more than ± 15 degrees.

Product information

Shipping contents



Projector

Remote control and
batteries

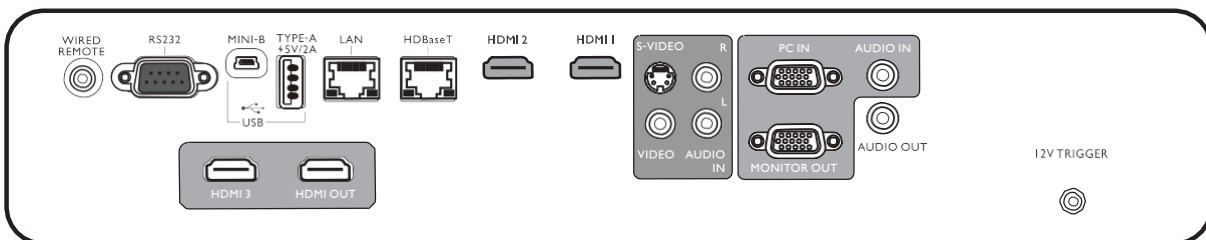
Installation guide

Power cord

Specifications

	LU950/LU951	LU951ST
Display system	1-CHIP DMD	
Resolution	1920 (H) x 1200 (V) WUXGA	
Light source	Laser diode	
Throw ratio	1.36 ~ 2.18	0.81 ~ 0.89
Power consumption	530 W (Max); < 0.5 W (Standby)	
Dimensions	490 mm (W) x 159 mm (H) x 380 mm (D)	
Weight	9.4 Kg (20.7 lbs)	

Control terminals



• WIRED REMOTE

For connection to a wired remote control.

• RS232

Standard 9-pin D-sub interface for connection to PC control system and projector maintenance.

• USB MINI-B

For firmware upgrade only.

• USB TYPE A

Support 5V/2A output.

• LAN

For connection to RJ45 Cat5/Cat6 Ethernet cable to control the projector through a network.

• HDBaseT

For connection to RJ45 Cat5/Cat6 cable to input uncompressed high-definition video (HD).

• HDMI 2

Connection to HDMI source.

• HDMI 1

Connection to HDMI source.

• VIDEO

Connection to composite video source.

• S-VIDEO

Connection to S-Video source.

• AUDIO IN L/R

Connection to an audio input source via an audio or audio L/R cable.

• PC IN

15-pin VGA port for connection to RGB source or PC.

• MONITOR OUT

Connection to other display equipment for concurrent playback display. (Used with **PC IN** port.)

• AUDIO IN

Connection to an audio input source via an audio cable. (Used with **PC IN** port.)

• **AUDIO OUT**

Connection to a speaker or headset.

• **12V TRIGGER**

Trigger external devices such as an electric screen or light control, etc.

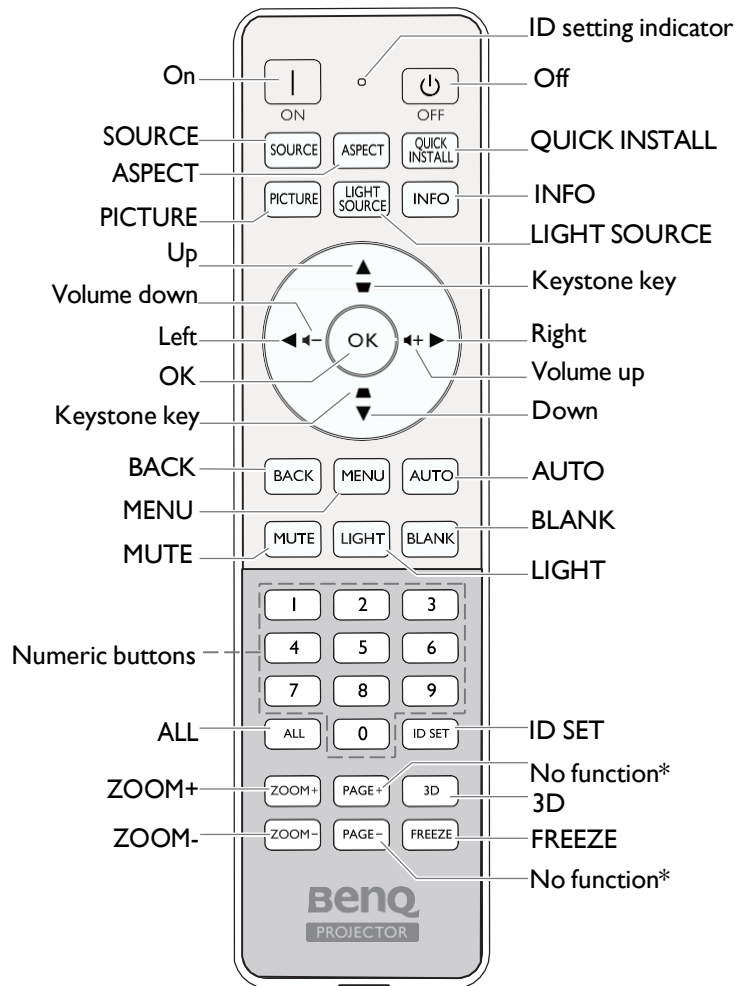
• **HDMI 3**

Connection to HDMI source.

• **HDMI OUT**

Connection to other display equipment for concurrent playback display. (Used with **HDMI 3** port.)

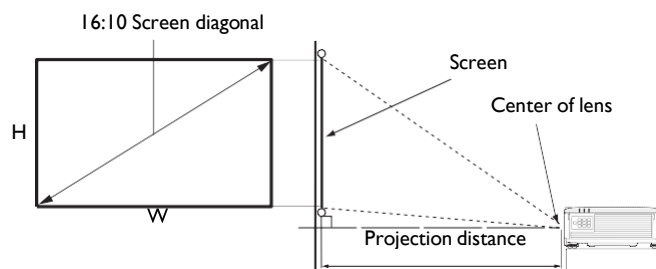
Remote control



* This button is not available for this model.

Installation

Projection dimensions



The screen aspect ratio is 16:10 and the projected picture is in a 16:10 aspect ratio

LU950/LU951

Screen size				Distance from screen (mm)		
Diagonal		W (mm)	H (mm)	Min length (max. zoom)	Average	Max length (min. zoom)
Inch	mm					
30	762	646	404	879	1144	1409
40	1016	862	538	1172	1525	1878
50	1270	1077	673	1465	1906	2348
60	1524	1292	808	1758	2287	2817
80	2032	1723	1077	2343	3050	3756
90	2286	1939	1212	2636	3431	4226
100	2540	2154	1346	2929	3812	4696
110	2794	2369	1481	3222	4194	5165
120	3048	2585	1615	3515	4575	5635
130	3302	2800	1750	3808	4956	6104
140	3556	3015	1885	4101	5337	6574
150	3810	3231	2019	4394	5719	7043
160	4064	3446	2154	4687	6100	7513
170	4318	3662	2289	4980	6481	7982
180	4572	3877	2423	5273	6862	8452
190	4826	4092	2558	5566	7244	8922
200	5080	4308	2692	5859	7625	9391
250	6350	5385	3365	7323	9531	11739
300	7620	6462	4039	8788	11437	14087

LU951ST

Screen size				Distance from screen (mm)		
Diagonal		W (mm)	H (mm)	Min length (max. zoom)	Average	Max length (min. zoom)
Inch	mm					
30	762	646	404	523	549	575
40	1016	862	538	698	732	767
50	1270	1077	673	872	915	958
60	1524	1292	808	1047	1098	1150
80	2032	1723	1077	1396	1465	1534
90	2286	1939	1212	1570	1648	1725
100	2540	2154	1346	1745	1831	1917
110	2794	2369	1481	1919	2014	2109
120	3048	2585	1615	2094	2197	2300
130	3302	2800	1750	2268	2380	2492
140	3556	3015	1885	2443	2563	2684
150	3810	3231	2019	2617	2746	2875
160	4064	3446	2154	2791	2929	3067
170	4318	3662	2289	2966	3112	3259
180	4572	3877	2423	3140	3295	3451
190	4826	4092	2558	3315	3479	3642
200	5080	4308	2692	3489	3662	3834
250	6350	5385	3365	4362	4577	4792
300	7620	6462	4039	5234	5492	5751



- To optimize your projection quality, we suggest you do the projection within non-gray area.

- All measurements are approximate and may vary from the actual sizes.

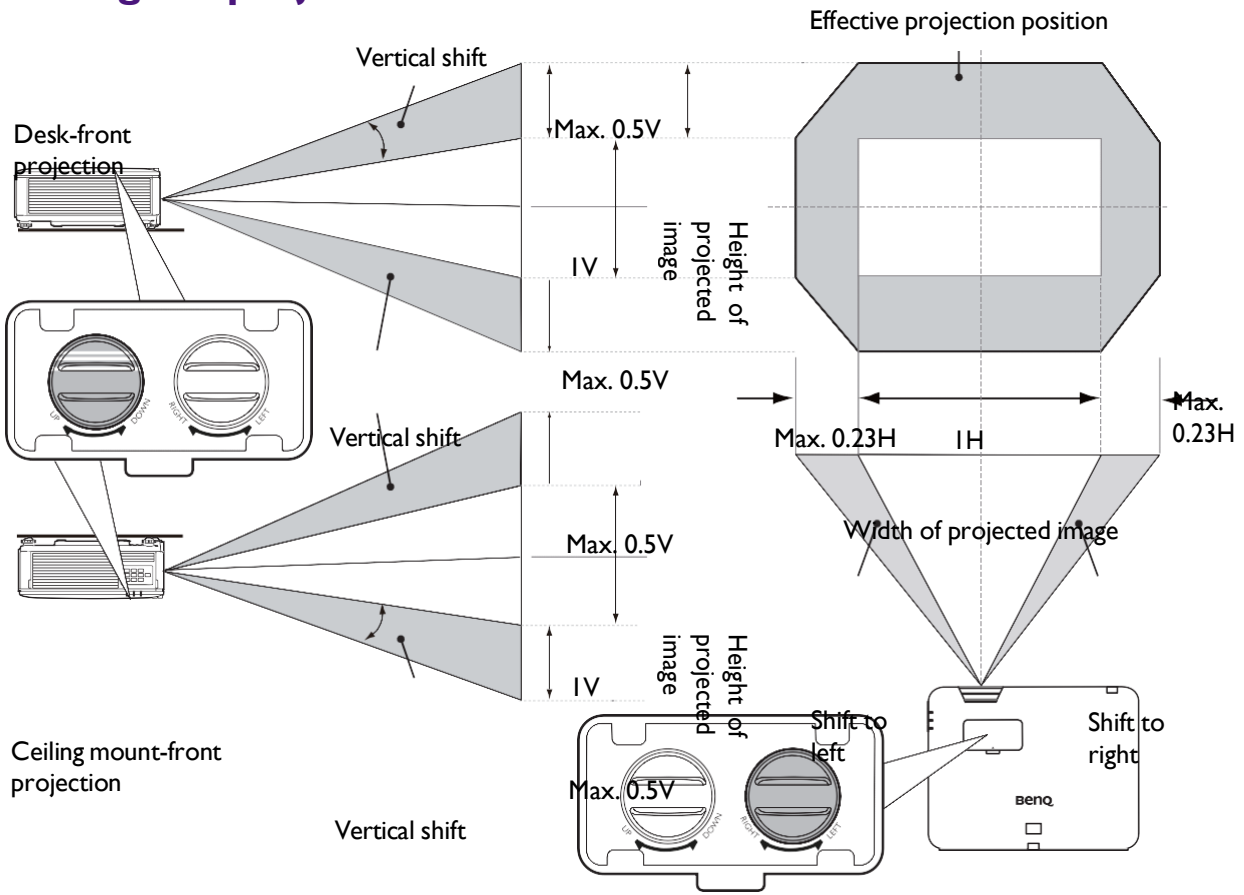
BenQ recommends that if you intend to permanently install the projector, you should physically test the projection size and distance using the actual projector in situ before you permanently install it, so as to make allowance for this projector's optical characteristics. This will help you determine the exact mounting position so that it best suits your installation location.



- Ceiling installation must be done by a qualified professional. Contact your dealer for more information. It is not recommended you install the projector yourself.
- Only use the projector on a solid, level surface. Serious injury and damage can occur if the projector is dropped.
- Do not use the projector in an environment where extreme temperature occurs. The projector must be used at temperatures between 32 degrees Fahrenheit (0 degrees Celsius) and 104 degrees Fahrenheit (40 degrees Celsius).
- Screen damage will occur if the projector is exposed to moisture, dust or smoke.
- Do not cover the vents on the projector. Proper ventilation is required to dissipate heat. Damage to the projector will occur if the vents are covered.









































































Adjusting the projector position









Shifting the projection lens



V: Height of projected image
 H: Width of projected image

LED Indicators

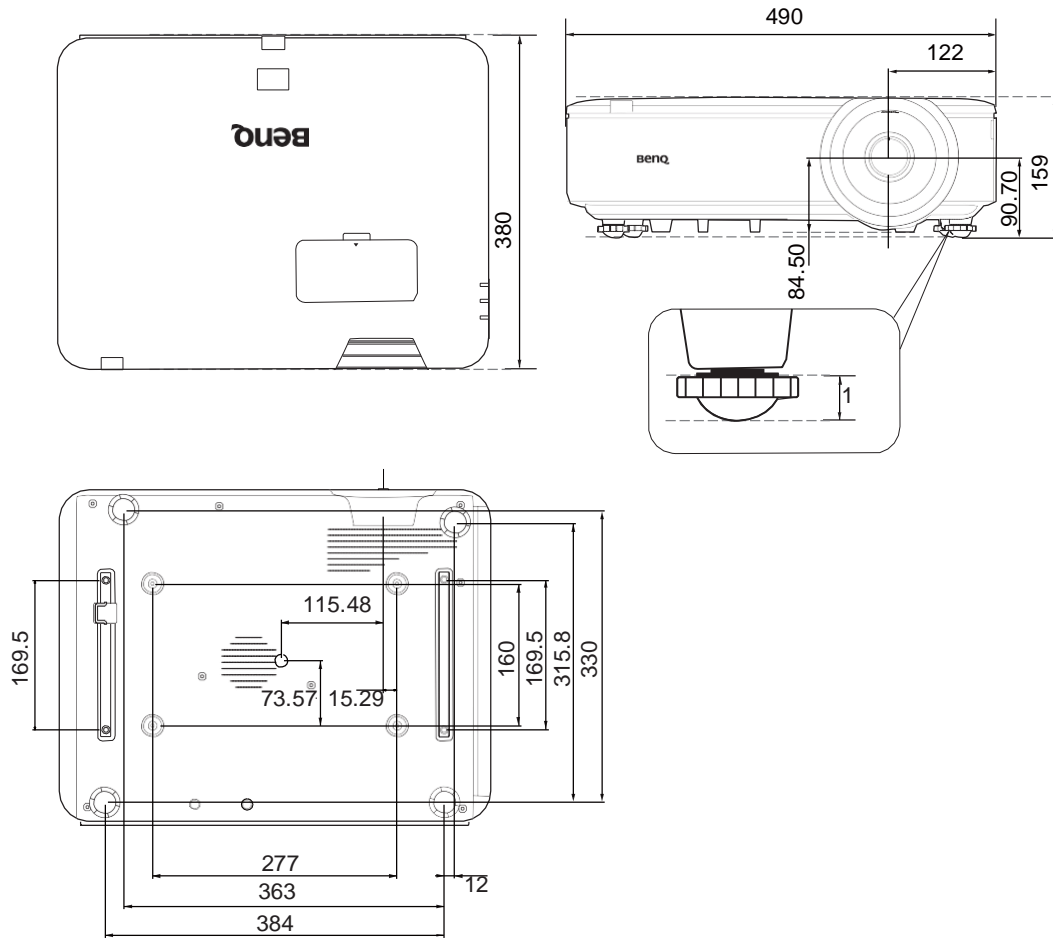
Light			Status & Description
POWER	TEMP	LIGHT	
Power events			
			Stand-by mode
			Powering up
			Normal operation
			Normal power-down cooling
			Downloading
			Color wheel start fail
			Phosphor Wheel start fail
			Burn-in ON
			Burn-in OFF
Light source events			
			Light source life exhausted
			Light source error in normal operation
			Light source is not lit up
Thermal events			
			Fan 1 error (the actual fan speed is outside the desired speed)
			Fan 2 error (the actual fan speed is outside the desired speed)
			Fan 3 error (the actual fan speed is outside the desired speed)
			Fan 4 error (the actual fan speed is outside the desired speed)
			Fan 5 error (the actual fan speed is outside the desired speed)
			Fan 6 error (the actual fan speed is outside the desired speed)
			Fan 7 error (the actual fan speed is outside the desired speed)
			Fan 8 error (the actual fan speed is outside the desired speed)
			Temperature I error (over limited temperature)
			Thermal Sensor I open error
			Thermal Sensor I short error
			Thermal IC #1 I2C Connection error

	 : Off	 : Orange On  : Orange Flashing	 : Green On  : Green Flashing	 : Red On  : Red Flashing
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Dimensions

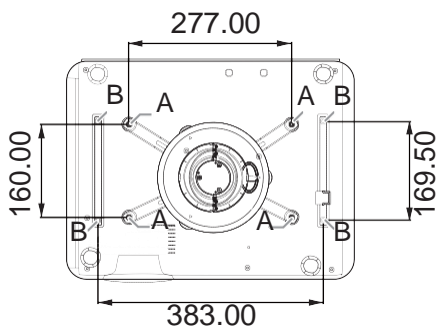
Projector dimensions

490 mm (W) x 159 mm (H) x 380 mm (D)



Unit: mm

Ceiling mount installation diagram



A: BenQ ceiling mount CMG3 (5J.JAM10.001)

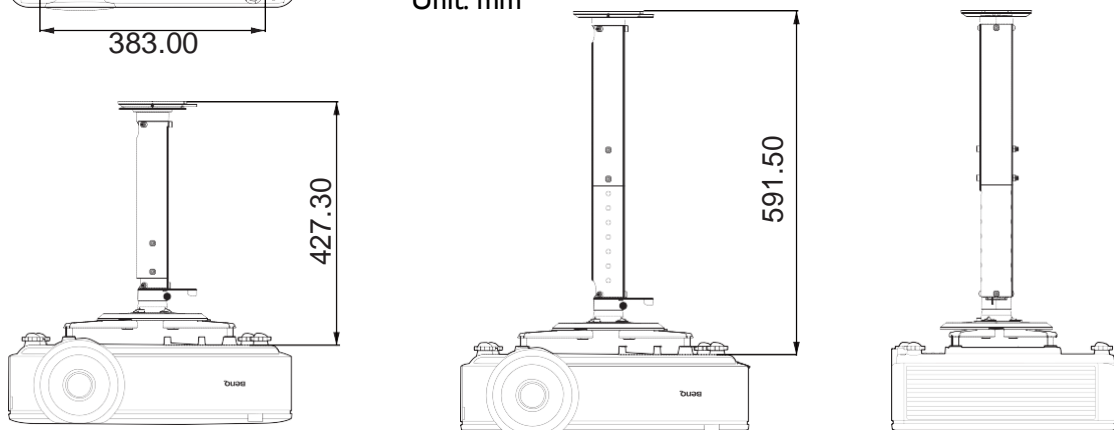
Ceiling mount screw: M4

(Max. L = 25 mm; Min. L = 20 mm)

B: Third party mounting holes

Screw: M6 (Max. L = 8 mm)

Unit: mm

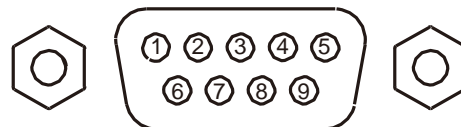


RS232 command

RS232 pin assignment

No.	Serial
1	NC
2	RX
3	TX
4	NC
5	GND

No.	Serial
6	NC
7	RTSZ
8	CTSZ
9	NC



Function	Type	Operation	ASCII
Power	Write	Power On	<CR>*pow=on#<CR>
	Write	Power off	<CR>*pow=off#<CR>
	Read	Power Status	<CR>*pow=?#<CR>
Source Selection	Write	COMPUTER/YPbPr	<CR>*sour=RGB#<CR>
	Write	HDMI	<CR>*sour=hdmi#<CR>
	Write	HDMI 2	<CR>*sour=hdmi2#<CR>
	Write	HDMI 3	<CR>*sour=hdmi3#<CR>
	Write	Composite	<CR>*sour=vid#<CR>
	Write	S-Video	<CR>*sour=svid#<CR>
	Write	HDbaseT	<CR>*sour=hdbaset#<CR>
	Read	Current source	<CR>*sour=?#<CR>
Audio Control	Write	Mute On	<CR>*mute=on#<CR>
	Write	Mute Off	<CR>*mute=off#<CR>
	Read	Mute Status	<CR>*mute=?#<CR>
	Write	Volume +	<CR>*vol=+#<CR>
	Write	Volume -	<CR>*vol=-#<CR>
	Write	Volume level for customer	<CR>*vol=value#<CR>
	Read	Volume Status	<CR>*vol=?#<CR>
Audio source select	Write	Audio pass Through off	<CR>*audiosour=off#<CR>
	Write	Audio-Computer1	<CR>*audiosour=RGB#<CR>
	Write	Audio-Video/S-Video	<CR>*audiosour=vid#<CR>
	Write	Audio-HDMI	<CR>*audiosour=hdmi#<CR>
	Write	Audio-HDMI2	<CR>*audiosour=hdmi2#<CR>
	Write	Audio-HDMI3	<CR>*audiosour=hdmi3#<CR>
	Read	Audio pass Status	<CR>*audiosour=?#<CR>
Picture Mode	Write	Presentation	<CR>*appmod=preset#<CR>
	Write	sRGB	<CR>*appmod=srgb#<CR>
	Write	Bright	<CR>*appmod=bright#<CR>
	Write	DICOM	<CR>*appmod=dicom#<CR>
	Write	Vivid	<CR>*appmod=vivid#<CR>
	Write	User1	<CR>*appmod=user1#<CR>
	Write	User2	<CR>*appmod=user2#<CR>
	Write	3D	<CR>*appmod=threed#<CR>
	Read	Picture Mode	<CR>*appmod=?#<CR>

Function	Type	Operation	ASCII
Picture Setting	Write	Contrast +	<CR>*con=+#<CR>
	Write	Contrast -	<CR>*con=-#<CR>
	Read	Contrast value	<CR>*con=?#<CR>
	Write	Brightness +	<CR>*bri=+#<CR>
	Write	Brightness -	<CR>*bri=-#<CR>
	Read	Brightness value	<CR>*bri=?#<CR>
	Write	Color +	<CR>*color=+#<CR>
	Write	Color -	<CR>*color=-#<CR>
	Read	Color value	<CR>*color=?#<CR>
	Write	Sharpness +	<CR>*sharp=+#<CR>
	Write	Sharpness -	<CR>*sharp=-#<CR>
	Read	Sharpness value	<CR>*sharp=?#<CR>
	Write	Color Temperature-Warm	<CR>*ct=warm#<CR>
	Write	Color Temperature-Normal	<CR>*ct=normal#<CR>
	Write	Color Temperature-Cool	<CR>*ct=cool#<CR>
	Read	Color Temperature Status	<CR>*ct=?#<CR>
	Write	Aspect 4:3	<CR>*asp=4:3#<CR>
	Write	Aspect 16:9	<CR>*asp=16:9#<CR>
	Write	Aspect 16:10	<CR>*asp=16:10#<CR>
	Write	Aspect Auto	<CR>*asp=AUTO#<CR>
	Write	Aspect Real	<CR>*asp=REAL#<CR>
	Read	Aspect Status	<CR>*asp=?#<CR>
	Write	Digital Zoom In	<CR>*zoomI#<CR>
Write	Digital Zoom out	<CR>*zoomO#<CR>	
Write	Auto	<CR>*auto#<CR>	
Brilliant Color	Write	Brilliant color on	<CR>*BC=on#<CR>
	Write	Brilliant color off	<CR>*BC=off#<CR>
	Read	Brilliant color status	<CR>*BC=?#<CR>
Operation Settings	Write	Projector Position-Front Table	<CR>*pp=FT#<CR>
	Write	Projector Position-Rear Table	<CR>*pp=RE#<CR>
	Write	Projector Position-Rear Ceiling	<CR>*pp=RC#<CR>
	Write	Projector Position-Front Ceiling	<CR>*pp=FC#<CR>
	Write	Quick auto search	<CR>*QAS=on#<CR>
	Write	Quick auto search	<CR>*QAS=off#<CR>
	Read	Quick auto search status	<CR>*QAS=?#<CR>
	Read	Projector Position Status	<CR>*pp=?#<CR>
	Write	Direct Power On-on	<CR>*directpower=on#<CR>
	Write	Direct Power On-off	<CR>*directpower=off#<CR>
	Read	Direct Power On-Status	<CR>*directpower=?#<CR>
	Write	Signal Power On-on	<CR>*autopower=on#<CR>
	Write	Signal Power On-off	<CR>*autopower=off#<CR>
	Read	Signal Power On-Status	<CR>*autopower=?#<CR>
	Write	Standby Settings-Network on	<CR>*standbynet=on#<CR>
	Write	Standby Settings-Network off	<CR>*standbynet=off#<CR>
	Read	Standby Settings-Network Status	<CR>*standbynet=?#<CR>
	Write	Standby Settings-Monitor Out on	<CR>*standbymnt=on#<CR>
	Write	Standby Settings-Monitor Out off	<CR>*standbymnt=off#<CR>
	Read	Standby Settings-Monitor Out	<CR>*standbymnt=?#<CR>

Function	Type	Operation	ASCII
Baud Rate	Write	9600	<CR>*baud=9600#<CR>
	Write	14400	<CR>*baud=14400#<CR>
	Write	19200	<CR>*baud=19200#<CR>
	Write	38400	<CR>*baud=38400#<CR>
	Write	57600	<CR>*baud=57600#<CR>
	Write	115200	<CR>*baud=115200#<CR>
	Read	Current Baud Rate	<CR>*baud=?#<CR>
Lamp Control	Read	Lamp hour	<CR>*ltim=?#<CR>
	Write	Normal mode	<CR>*lampm=lnor#<CR>
	Write	Eco mode	<CR>*lampm=eco#<CR>
	Write	Dimming mode	<CR>*lampm=dimming#<CR>
	Write	Custom mode	<CR>*lampm=custom#<CR>
	Write	Light level for custom mode	<CR>*lampcustom=value#<CR>
	Read	Light level status for custom mode	<CR>*lampcustom=?#<CR>
Miscellaneous	Read	Lamp Mode Status	<CR>*lampm=?#<CR>
	Read	Model Name	<CR>*modelname=?#<CR>
	Write	Blank On	<CR>*blank=on#<CR>
	Write	Blank Off	<CR>*blank=off#<CR>
	Read	Blank Status	<CR>*blank=?#<CR>
	Write	Freeze On	<CR>*freeze=on#<CR>
	Write	Freeze Off	<CR>*freeze=off#<CR>
	Read	Freeze Status	<CR>*freeze=?#<CR>
	Write	Menu On	<CR>*menu=on#<CR>
	Write	Menu Off	<CR>*menu=off#<CR>
	Write	Up	<CR>*up#<CR>
	Write	Down	<CR>*down#<CR>
	Write	Right	<CR>*right#<CR>
	Write	Left	<CR>*left#<CR>
	Write	Enter	<CR>*enter#<CR>
	Write	3D Sync Off	<CR>*3d=off#<CR>
	Write	3D Auto	<CR>*3d=auto#<CR>
	Write	3D Sync Top Bottom	<CR>*3d=tb#<CR>
	Write	3D Sync Frame Sequential	<CR>*3d=fs#<CR>
	Write	3D Frame packing	<CR>*3d=fp#<CR>
	Write	3D Side by side	<CR>*3d=sbs#<CR>
	Write	3D inverter disable	<CR>*3d=da#<CR>
	Write	3D inverter	<CR>*3d=iv#<CR>
	Read	3D Sync Status	<CR>*3d=?#<CR>
	Write	Remote Receiver-front+rear	<CR>*rr=fr#<CR>
	Write	Remote Receiver-front	<CR>*rr=f#<CR>
	Write	Remote Receiver-rear	<CR>*rr=r#<CR>
	Read	Remote Receiver Status	<CR>*rr=?#<CR>
	Write	AMX Device Discovery-on	<CR>*amxdd=on#<CR>
	Write	AMX Device Discovery-off	<CR>*amxdd=off#<CR>
	Read	AMX Device Discovery Status	<CR>*amxdd=?#<CR>
	Read	Mac Address	<CR>*macaddr=?#<CR>
	Write	High Altitude mode on	<CR>*Highaltitude=on#<CR>
	Write	High Altitude mode off	<CR>*Highaltitude=off#<CR>
Read	High Altitude mode status	<CR>*Highaltitude=?#<CR>	

