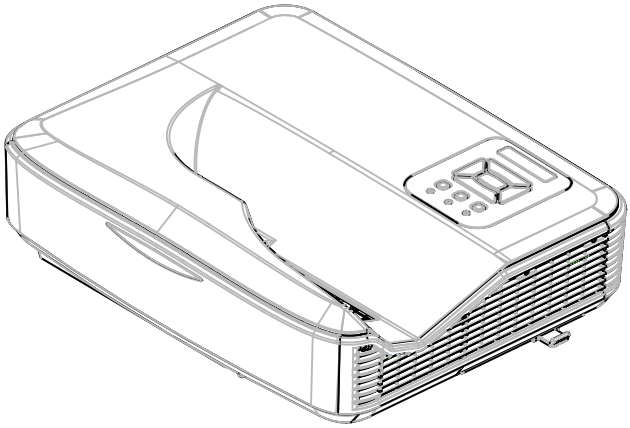
Ultra Short-Throw Laser Projector
User's Manual

(Ultra Wide/1080P/WXGA)



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Safety Information

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

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

Class B emissions limits

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Important Safety Instruction

1. Do not block any ventilation openings. To ensure reliable operation of the projector and to protect from over heating, it is recommended to install the projector in a location that does not block ventilation. As an example, do not place the projector on a crowded coffee table, sofa, bed, etc. Do not put the projector in an enclosure such as a book case or a cabinet that restricts air flow.
2. Do not use the projector near water or moisture. To reduce the risk of fire and/or electric shock, do not expose the projector to rain or moisture.
3. Do not install near heat sources such as radiators, heaters, stoves or any other apparatus such as amplifiers that emits heat.
4. Clean only with dry cloth.
5. Only use attachments/accessories specified by the manufacturer.
6. Do not use the unit if it has been physically damaged or abused. Physical damage/abuse would be (but not limited to):
   - ❒ Unit has been dropped.
   - ❒ Power supply cord or plug has been damaged.
   - ❒ Liquid has been spilled on to the projector.
   - ❒ Projector has been exposed to rain or moisture.
   - ❒ Something has fallen in the projector or something is loose inside.

   Do not attempt to service the unit yourself. Opening or removing covers may expose you to dangerous voltages or other hazards.
7. Do not let objects or liquids enter the projector. They may touch dangerous voltage points and short out parts that could result in fire or electric shock.
8. See projector enclosure for safety related markings.
9. The unit should only be repaired by appropriate service personnel.

Precautions

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

- Warning- Do not look into the projector's lens when the lamp is on. The bright light may hurt and damage your eyes.
- Warning- To reduce the risk of fire or electric shock, do not expose this projector to rain or moisture.
- Warning- Please do not open or disassemble the projector as this may cause electric shock.

Do:

- Turn off and unplug the power plug from the AC outlet before cleaning the product.
- Use a soft dry cloth with mild detergent to clean the display housing.
- Disconnect the power plug from AC outlet if the product is not being used for a long period of time.

Do not:

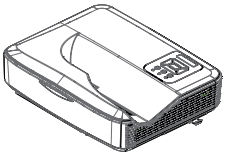
- Block the slots and openings on the unit provided for ventilation.
- Use abrasive cleaners, waxes or solvents to clean the unit.
- Use under the following conditions:
  - In extremely hot, cold or humid environments.
    - Sea level to 6000 feet
      Extremely hot: > 35°C
      Extremely cool: < 5°C
    - 6000 feet above
      Extremely hot: > 30°C
      Extremely cool: < 5°C
    - Extremely humid: > 70% R.H. (Relative Humidity)
  - In areas susceptible to excessive dust and dirt.
  - Near any appliance generating a strong magnetic field.
  - In direct sunlight.

Package Overview

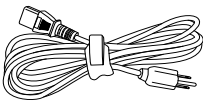
Unpack and inspect the box contents to ensure all parts listed below are in the box. If something is missing, please contact your nearest customer service center.

Note

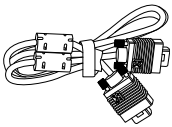
- Due to different applications in each country, some regions may have different accessories.



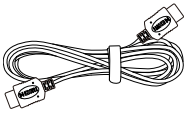
Projector



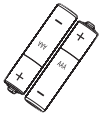
Power Cord x 2 (US/EU)



VGA Cable

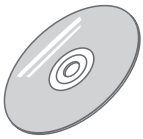


HDMI Cable



AAA Batteries x 2

IR Remote Control



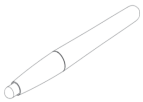
CD-ROM (User's Manual & Software)

Note

- Interactive function works with projector. (Camera embedded)

- ***Optional accessories for Interactive solution.***

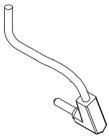
Light Curtain Touch



Passive Pen x 2

IR Pen x 2

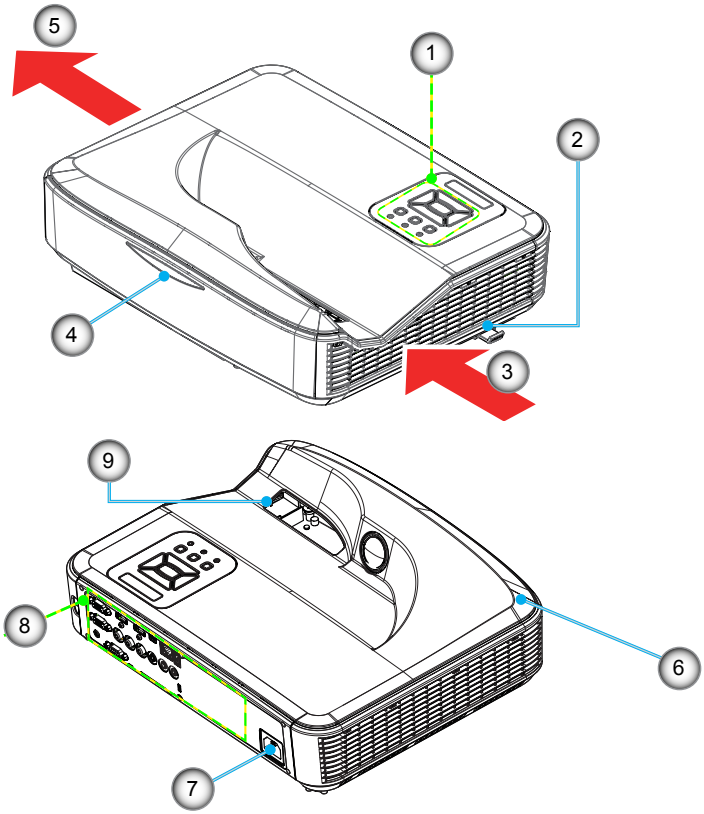
USB A to mini USB B cable



Interactive cable

Product Overview

Main Unit

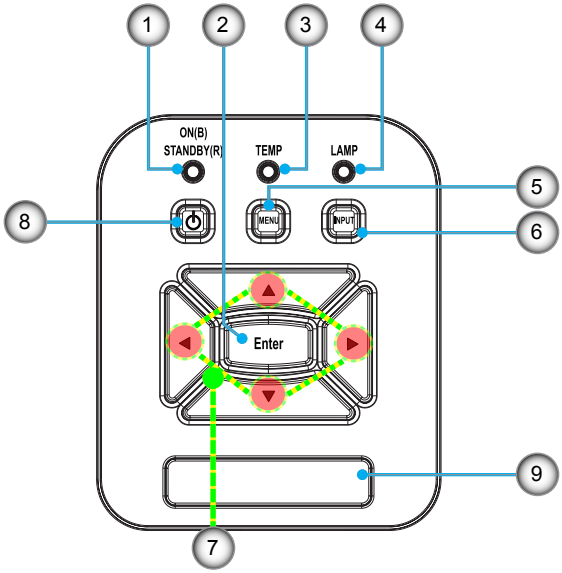


NOTE

- The interface is subject to model's specifications.

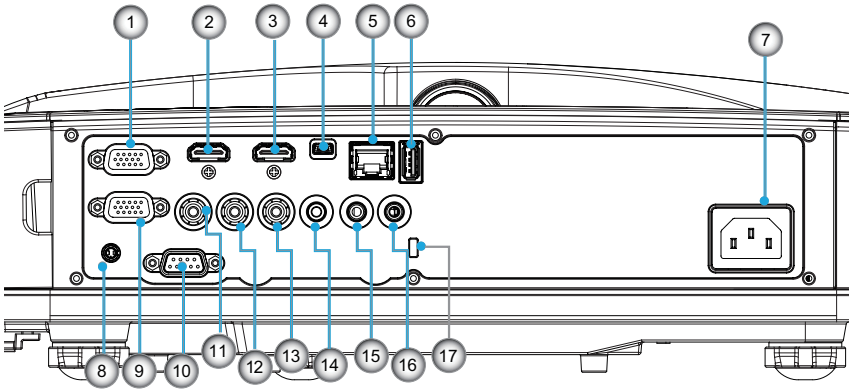
1. Control Panel
2. Focus Switch
3. Ventilation (inlet)
4. IR Receiver
5. Ventilation (outlet)
6. Speaker
7. Power Socket
8. Input / Output Connections
9. Lens

Control Panel



1. Power LED
2. Enter
3. Temp LED
4. Lamp LED
5. Menu
6. Input
7. Four Directional Select Keys
8. Power/Standby button
9. IR Receiver

Input/Output Connections



1. VGA1-In/YPbPr Connector (PC Analog Signal/Component Video Input/HDTV/YPbPr)
2. HDMI2 Input Connector
3. HDMI1 Input Connector
4. USB Connector (Connect to PC for Remote Mouse function)
5. RJ45 connector (Optional)
6. USB Type A Connector (Optional)
7. Power Socket
8. Interactive Connector (3.5 mm mini jack, Optional)
9. VGA-Out/VGA2-In Connector
10. RS-232 Connector (9-pin DIN Type)
11. Composite Video Input Connector
12. Composite Audio Input (right) Connector
13. Composite Audio Input (left) Connector
14. Audio Output Connector (3.5mm mini jack)
15. Audio Input Connector (3.5mm mini jack)
16. Audio Input Connector (microphone)
17. Kensington™ Lock Port

NOTE

- The interface is subject to model's specifications.

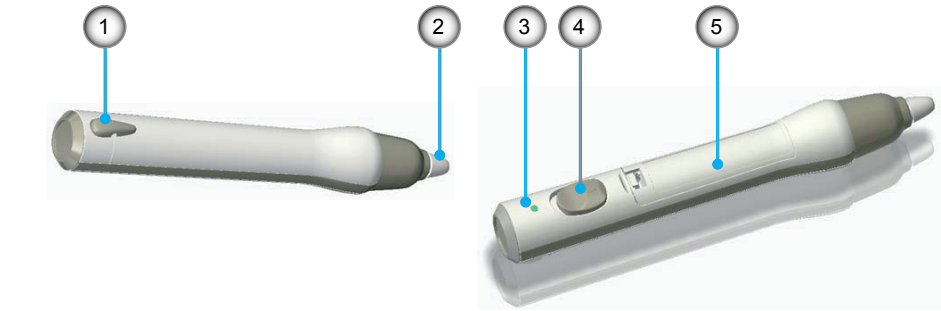
NOTE

- Monitor loop through only support in VGA1-In/YPbPr.

Remote Control

1. Infrared transmitter
2. LED Indicator
3. Power On/Off
4. OK
5. Four Directional Select Keys
6. Menu
7. Exit
8. Zoom in
9. Reset
10. Auto
11. Source
12. Zoom out
13. Volume +/-
14. Keystone +/-
15. Image
16. Black screen
17. Aspect ratio
18. VGA1
19. HDMI1
20. VGA2
21. HDMI2
22. Video
23. Screen freeze
24. Numbered keypad (for password input)

IR Pen (* Optoinal accessory)



Function	Description
Power management	On/Off switch
Power indicator	Dual color LED x1
Battery	AAA Battery (alkaline) x 1
Usage time	18 hours (continuous use)
Light source	850nm IR LED
Driving current	50mA/1.5V (Max)
Color	Pen body in white Decoration strip in grey
Dimension (L x Φ)	150.5mm (L) x 23mm (Diameter)
Pen tip	User Replaceable (two spare tips as default)
Body material	Plastic
Weight	39g (with battery)

1. Strap hole
2. Pen tip
3. LED Indicator
4. Power switch button
5. Battery cover

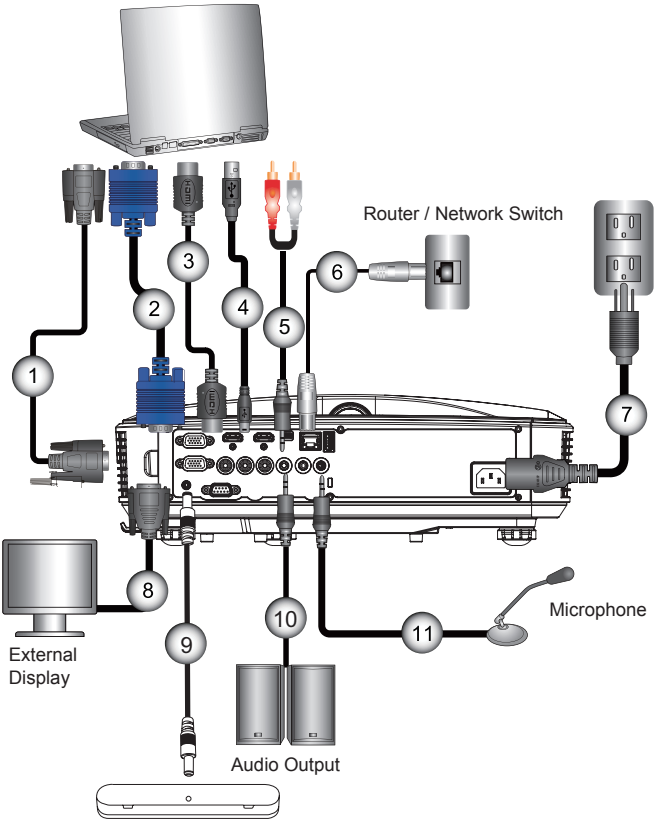
LED Indicator

State	Power Switch	LED State	Remark
Normal On	Off → On	Green led on for 2 seconds	
Low Battery Power	Off → On	Red led on for 2 seconds	When battery is low
	On	Red led blinking *(when pen tip is pressed)*	
Normal Off	Off	Off	

FOR DETAILED INSTRCTIONS ABOUT IR PEN INSTALLATION AND USAGE: PLEASE REFER TO "IR PEN & LCT USER MANUAL/SOFTWARE" VIA "HELP" OPTION OF UTILITY USER INTERFACE.

Connecting the Projector

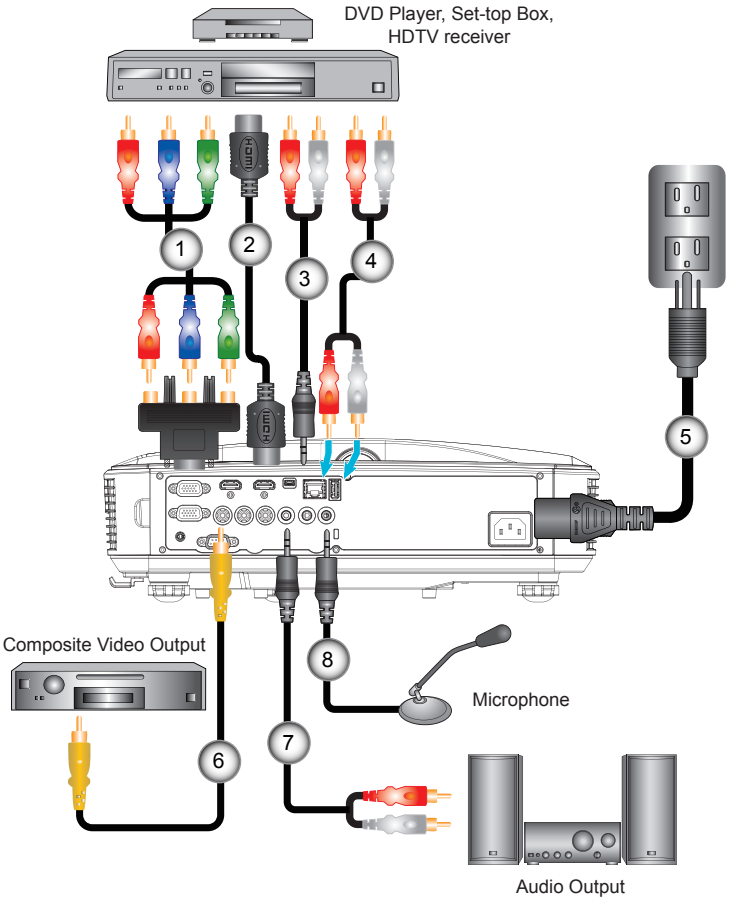
Connect to Computer/Notebook



- Due to the difference in applications for each country, some regions may have different accessories.
- (*) Optional accessory

1	*RS232 Cable
2	VGA Cable
3	*HDMI Cable
4	*USB Cable
5	*Audio Cable/RCA
6	*RJ45 Cable
7	Power Cord
8	*VGA Output Cable
9	DC to DC Cable
10	*Audio Output Cable
11	*Audio Input Cable

Connect to Video Sources



- Due to the difference in applications for each country, some regions may have different accessories.
- (*) Optional accessory

1.....*15-Pin to 3 RCA Component/HDTV Adaptor
2.....*HDMI Cable
3.....*Audio Cable/RCA
4.....*Audio Cable
5.....Power Cord
6.....*Composite Video Cable
7.....*Audio Cable/RCA
8.....*Audio Input Cable

Powering the Projector On / Off

Powering On the Projector

1. Securely connect the power cord and signal cable. When connected, the POWER/STANDBY LED will turn Orange.
2. Turn on the lamp by pressing "⏻" button either on the projector or on the remote. At this moment, the POWER/STANDBY LED will now turn Blue.❶

   The startup screen will display in approximately 10 seconds. The first time you use the projector, you will be asked to select the preferred language and power saving mode.
3. Turn on and connect the source that you want to display on the screen (computer, notebook, video player, etc). The projector will detect the source automatically. If not, push menu button and go to "OPTIONS".
   Make sure that the "Source Lock" has been set to "Off".

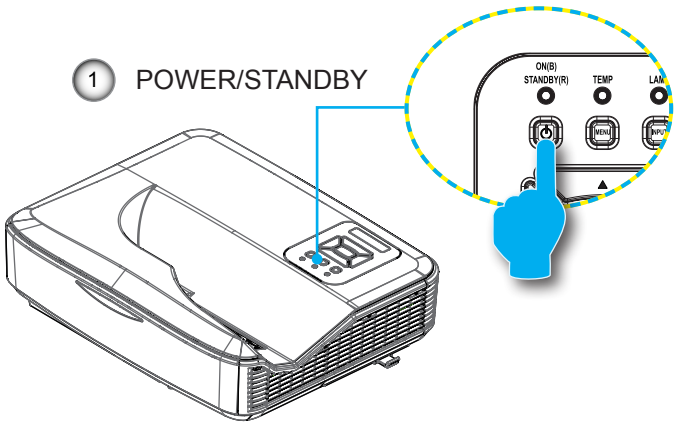
❖ If you connect multiple sources at the same time, press the "INPUT" button on the control panel or direct source keys on the remote control to switch between inputs.

NOTE

❖ When the power mode is in standby mode (power consumption < 0.5W), the VGA output/ input and audio will be deactivated when the projector is in standby.

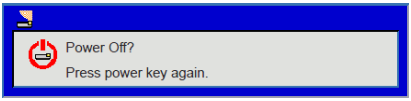
NOTE

❖ Turn on the projector first and then select the signal sources.



Powering Off the Projector

1. Press the "⏻" button on the remote control or on the control panel to turn off the projector. The following message will be displayed on the screen.



   Press the "⏻" button again to confirm otherwise the message will disappear after 10 seconds. When you press the "⏻" button for the second time, the fan will start cooling the system and will shut down.
2. The cooling fans continue to operate for about 4 seconds for cooling cycle and the POWER/STANDBY LED will flash Orange. When the POWER/STANDBY LED lights solid Orange, the projector has entered standby mode.

   If you wish to turn the projector back on, you must wait until the projector has completed the cooling cycle and has entered standby mode. Once in standby mode, simply press "⏻" button to restart the projector.
3. Disconnect the power cord from the electrical outlet and the projector.

Warning Indicator

When the warning indicators (see below) come on, the projector will automatically shutdown:

- "LAMP" LED indicator is lit red and if "POWER/STANDBY" indicator flashes amber.
- "TEMP" LED indicator is lit red, this indicates the projector has overheated. Under normal conditions, the projector can be switched back on.
- "TEMP" LED indicator flashes red and if "POWER/STANDBY" indicator flashes amber.

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

NOTE

- Contact the nearest service center if the projector displays these symptoms.

LED Lighting Message

Message	Power LED		Temp_LED	Lamp_LED
	Red	Blue	Red	Red
Standby State (Input Power cord)	✳	--	--	--
Power on	--	✳	--	--
Warning Up	Flashing	--	--	--
State	Flashing	Flashing	--	--
Burn-in ON	Flashing	Flashing	--	--
Burn-in OFF	--	--	--	--
Power NG	--	--	✳	✳
Fan Lock			Flashing slow:3s	--
CW breakdown			Flashing fast:500ms	
Overheat	--	--	✳	--
LD Overheat	--	--	✳	--
LD Voltage Error	--	--	--	✳

NOTE

No Light: "--",

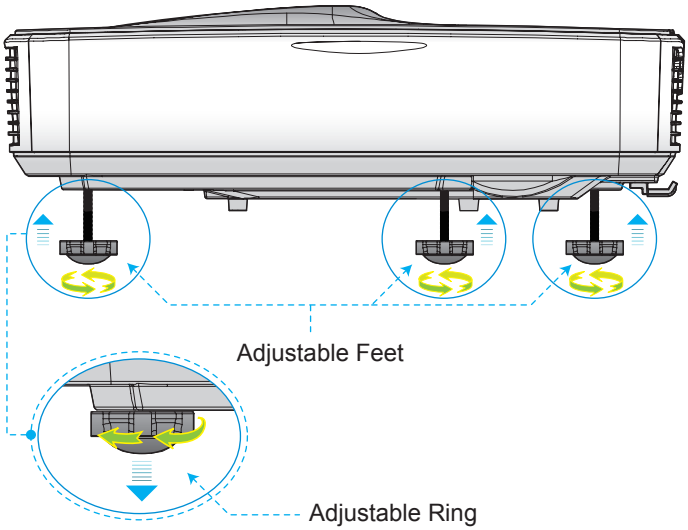
✳ Steady light

Adjusting the Projected Image

Adjusting the Projector's Height

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

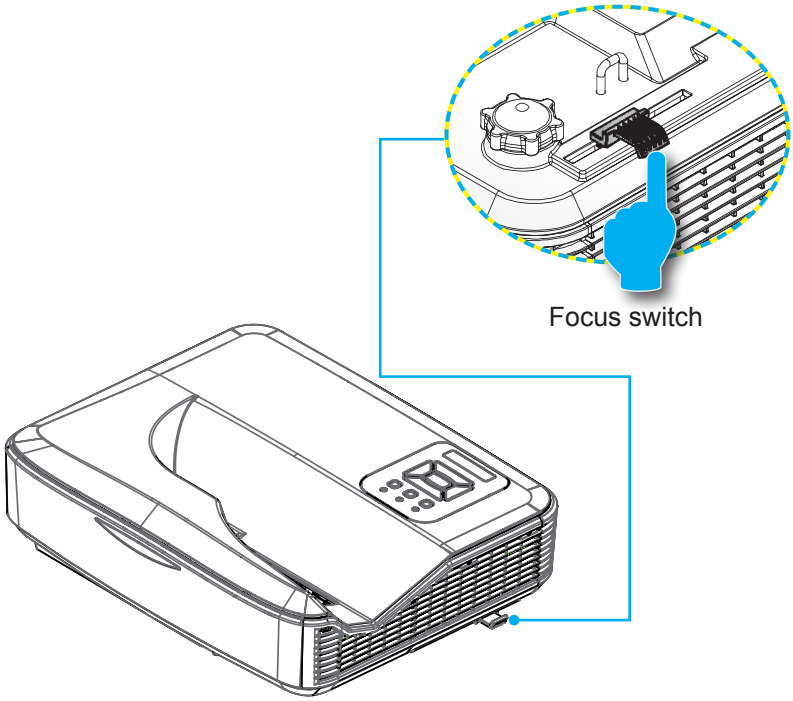
1. Locate the foot you want to adjust on the underside of the projector.
2. Turn the adjustable foot counter-clockwise to move it outwards or clockwise to move it inwards. Repeat with the remaining feet as needed.



Adjusting the Projector's Focus

To focus the image, slide the focus switch to left/right until the image is clear.

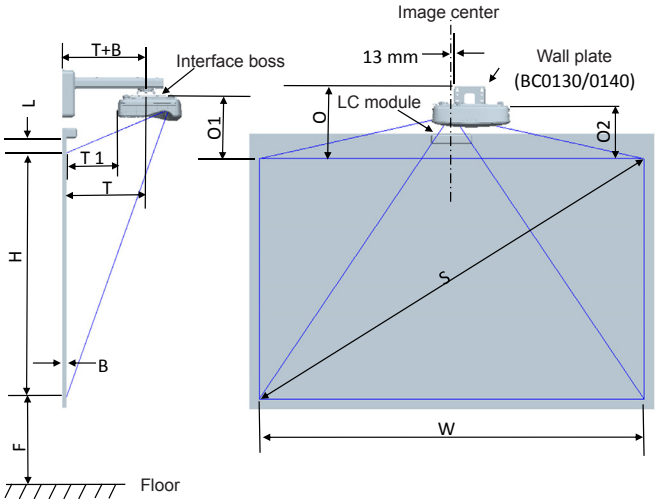
- 1080p series: The projector will focus at distances (lens to wall) from 1.59~1.87 feet (0.49~0.57 meters)
- Ultra Wide series: The projector will focus at distances (lens to wall) from 2.36~2.75 feet (0.72~0.84 meters)
- WXGA series: The projector will focus at distances (lens to wall) from 1.59~2.16 feet (0.49~0.66 meters)



Adjusting Projection Image Size (Diagonal)

- 1080p series: Projection Image Size from 87” to 102” (2.21 to 2.59 meters).
- Ultra Wide series: Projection Image Size from 120” to 140” (3.05 to 3.56 meters).
- WXGA series: Projection Image Size from 85” to 115” (2.16 to 2.92 meters).

Projector installation measurement chart Wall Mount



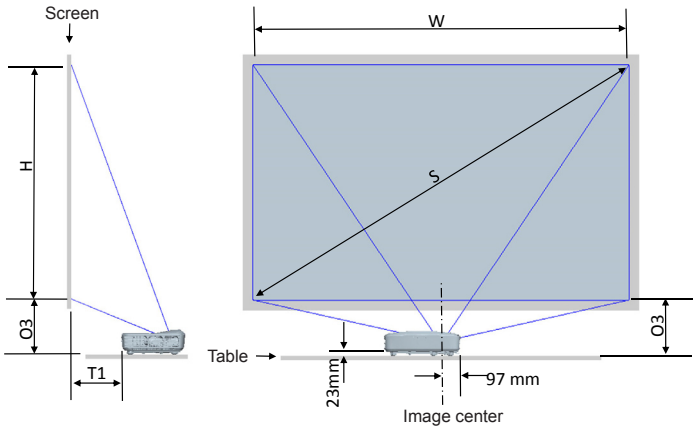
❖ This table is for user's reference only.

Ultra Wide (16:6) Wall mount installation measurement chart								
Diagonal image size (S) in inch	Diagonal image size (S) in mm	Image width (W) in mm	Image height (H) in mm	Distance from surface of whiteboard to center of projector mount (T) in mm	Distance from surface of whiteboard to back of projector (T1) in mm	Distance from top of image to top of wall plate (O) in mm	Distance from top of image to top of interface boss (O1) in mm	Distance from top of image to top of projector (O2) in mm
120	3048	2854	1070	604	467	462	386	366
121	3073	2878	1079	610	473	465	389	369
122	3099	2901	1088	616	479	467	391	371
123	3124	2925	1097	622	485	470	394	374
124	3150	2949	1106	628	491	473	397	377
125	3175	2973	1115	634	497	476	400	380
126	3200	2997	1124	640	503	478	402	382
127	3226	3020	1133	646	509	481	405	385
128	3251	3044	1141	652	515	484	408	388
129	3277	3068	1150	658	521	486	410	390
130	3302	3092	1159	664	527	489	413	393
131	3327	3115	1168	670	533	492	416	396
132	3353	3139	1177	676	539	494	418	398
133	3378	3163	1186	682	545	497	421	401
134	3404	3187	1195	688	551	500	424	404
135	3429	3211	1204	694	557	502	426	406
136	3454	3234	1213	700	563	505	429	409
137	3480	3258	1222	706	569	508	432	412
138	3505	3282	1231	712	575	511	435	415
139	3531	3306	1240	718	581	513	437	417
140	3556	3329	1249	724	587	516	440	420

1080P (16:9) Wall mount installation measurement chart								
Diagonal image size (S) in inch	Diagonal image size (S) in mm	Image width (W) in mm	Image height (H) in mm	Distance from surface of whiteboard to center of projector mount (T) in mm	Distance from surface of whiteboard to back of projector (T1) in mm	Distance from top of image to top of wall plate (O) in mm	Distance from top of image to top of interface boss (O1) in mm	Distance from top of image to top of projector (O2) in mm
87	2210	1926	1083	370	233	364	288	268
88	2235	1948	1096	376	239	367	291	271
89	2261	1970	1108	382	245	370	294	274
90	2286	1992	1121	387	250	372	296	276
91	2311	2015	1133	393	256	375	299	279
92	2337	2037	1146	398	261	377	301	281
93	2362	2059	1158	404	267	380	304	284
94	2388	2081	1171	409	272	383	307	287
95	2413	2103	1183	415	278	385	309	289
96	2438	2125	1196	421	284	388	312	292
97	2464	2147	1208	426	289	390	314	294
98	2489	2170	1220	432	295	393	317	297
99	2515	2192	1233	437	300	396	320	300
100	2540	2214	1245	443	306	398	322	302
101	2565	2236	1258	448	311	401	325	305
102	2591	2258	1270	454	317	403	327	307

WXGA (16:10) Wall mount installation measurement chart								
Diagonal image size (S) in inch	Diagonal image size (S) in mm	Image width (W) in mm	Image height (H) in mm	Distance from surface of whiteboard to center of projector mount (T) in mm	Distance from surface of whiteboard to back of projector (T1) in mm	Distance from top of image to top of wall plate (O) in mm	Distance from top of image to top of interface boss (O1) in mm	Distance from top of image to top of projector (O2) in mm
85	2159	1831	1144	370	233	342	266	246
86	2184	1852	1158	376	239	344	268	248
87	2210	1874	1171	382	245	346	270	250
88	2235	1895	1185	387	250	349	273	253
89	2261	1917	1198	393	256	351	275	255
90	2286	1939	1212	399	262	353	277	257
91	2311	1960	1225	404	267	356	280	260
92	2337	1982	1239	410	273	358	282	262
93	2362	2003	1252	416	279	361	285	265
94	2388	2025	1265	422	285	363	287	267
95	2413	2046	1279	427	290	365	289	269
96	2438	2068	1292	433	296	368	292	272
97	2464	2089	1306	439	302	370	294	274
98	2489	2111	1319	444	307	373	297	277
99	2515	2132	1333	450	313	375	299	279
100	2540	2154	1346	456	319	377	301	281
101	2565	2175	1360	461	324	380	304	284
102	2591	2197	1373	467	330	382	306	286
103	2616	2219	1387	473	336	384	308	288
104	2642	2240	1400	479	342	387	311	291
105	2667	2262	1414	484	347	389	313	293
106	2692	2283	1427	490	353	392	316	296
107	2718	2305	1440	496	359	394	318	298
108	2743	2326	1454	501	364	396	320	300
109	2769	2348	1467	507	370	399	323	303
110	2794	2369	1481	513	376	401	325	305
111	2819	2391	1494	519	382	403	327	307
112	2845	2412	1508	524	387	406	330	310
113	2870	2434	1521	530	393	408	332	312
114	2896	2455	1535	536	399	411	335	315
115	2921	2477	1548	541	404	413	337	317

Projector installation measurement chart Table Mount



❖ This table is for user's reference only.

Ultra Wide (16:6) Table mount installation measurement chart					
Diagonal image size (S) in inch	Diagonal image size (S) in mm	Image width (W) in mm	Image height (H) in mm	Distance from surface of whiteboard to back of projector (T1) in mm	Distance from bottom of image to top of table (O3) in mm
120	3048	2854	1070	467	389
121	3073	2878	1079	473	392
122	3099	2901	1088	479	394
123	3124	2925	1097	485	397
124	3150	2949	1106	491	400
125	3175	2973	1115	497	403
126	3200	2997	1124	503	405
127	3226	3020	1133	509	408
128	3251	3044	1141	515	411
129	3277	3068	1150	521	413
130	3302	3092	1159	527	416
131	3327	3115	1168	533	419
132	3353	3139	1177	539	421
133	3378	3163	1186	545	424
134	3404	3187	1195	551	427
135	3429	3211	1204	557	429
136	3454	3234	1213	563	432
137	3480	3258	1222	569	435
138	3505	3282	1231	575	438
139	3531	3306	1240	581	440
140	3556	3329	1249	587	443

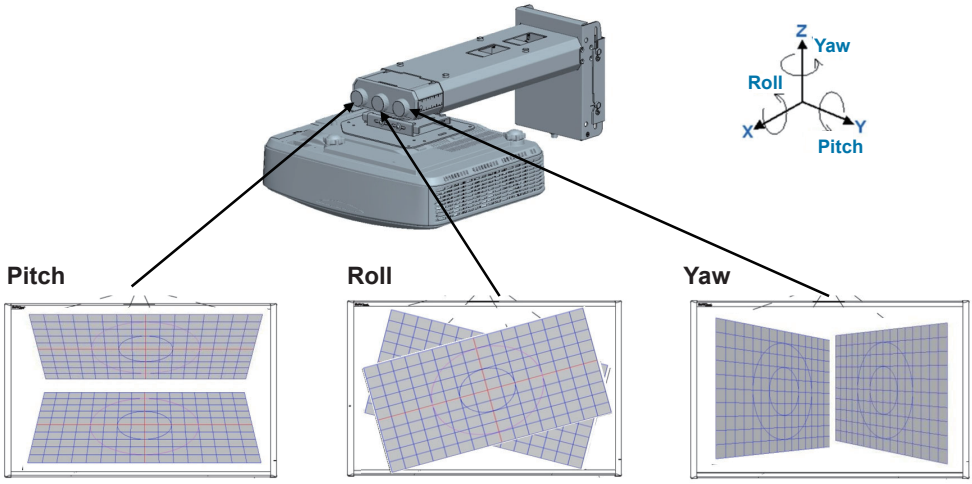
1080P (16:9) Table mount installation measurement chart					
Diagonal image size (S) in inch	Diagonal image size (S) in mm	Image width (W) in mm	Image height (H) in mm	Distance from surface of whiteboard to back of projector (T1) in mm	Distance from bottom of image to top of table (O3) in mm
87	2210	1926	1083	233	291
88	2235	1948	1096	239	294
89	2261	1970	1108	245	297
90	2286	1992	1121	250	299
91	2311	2015	1133	256	302
92	2337	2037	1146	261	304
93	2362	2059	1158	267	307
94	2388	2081	1171	272	310
95	2413	2103	1183	278	312
96	2438	2125	1196	284	315
97	2464	2147	1208	289	317
98	2489	2170	1220	295	320
99	2515	2192	1233	300	323
100	2540	2214	1245	306	325
101	2565	2236	1258	311	328
102	2591	2258	1270	317	330

WXGA (16:10) Table mount installation measurement chart					
Diagonal image size (S) in inch	Diagonal image size (S) in mm	Image width (W) in mm	Image height (H) in mm	Distance from surface of whiteboard to back of projector (T1) in mm	Distance from bottom of image to top of table (O3) in mm
85	2159	1831	1144	233	269
86	2184	1852	1158	239	271
87	2210	1874	1171	245	273
88	2235	1895	1185	250	276
89	2261	1917	1198	256	278
90	2286	1939	1212	262	280
91	2311	1960	1225	267	283
92	2337	1982	1239	273	285
93	2362	2003	1252	279	288
94	2388	2025	1265	285	290
95	2413	2046	1279	290	292
96	2438	2068	1292	296	295
97	2464	2089	1306	302	297
98	2489	2111	1319	307	300
99	2515	2132	1333	313	302
100	2540	2154	1346	319	304
101	2565	2175	1360	324	307
102	2591	2197	1373	330	309
103	2616	2219	1387	336	311
104	2642	2240	1400	342	314
105	2667	2262	1414	347	316
106	2692	2283	1427	353	319
107	2718	2305	1440	359	321
108	2743	2326	1454	364	323
109	2769	2348	1467	370	326
110	2794	2369	1481	376	328
111	2819	2391	1494	382	330
112	2845	2412	1508	387	333
113	2870	2434	1521	393	335
114	2896	2455	1535	399	338
115	2921	2477	1548	404	340

Image alignment process

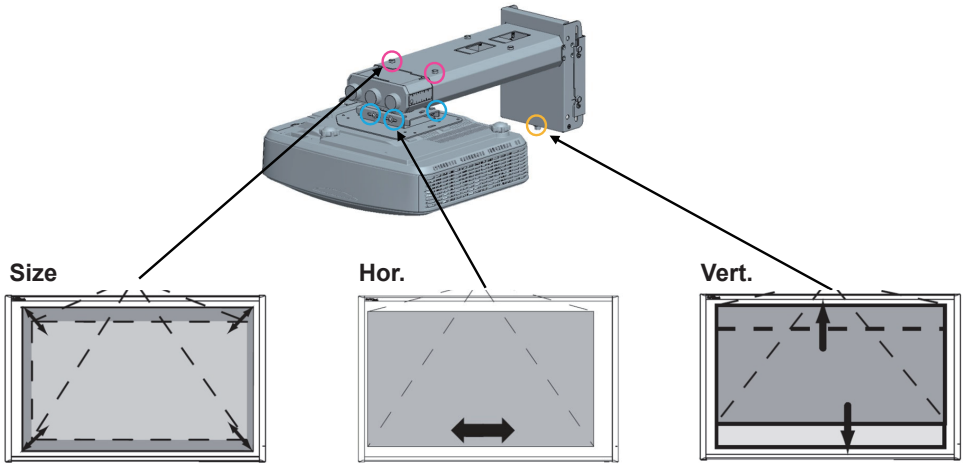
Step 1: Pitch, Roll and Yaw adjustment

- Adjust the knobs of pitch, roll and yaw adjustment to make the image to be rectangle as shown below.



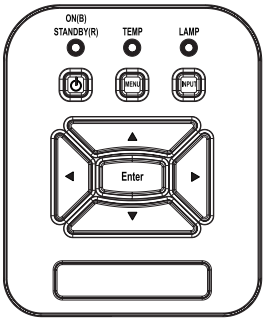
Step 2: Vertical, horizontal and size adjustment

- Adjust the image vertically by turning the hexagon screw head.
- Adjust the image horizontally by loosing the screws and moving the projector.
- Adjust the image size by loosing the screws and moving the projector.
- If the rectangle image can not align with the white board, it is necessary to move the white board to match the image.



Control Panel & Remote Control

Control Panel



Using the Control Panel		
POWER	⏻	Refer to the “Power On/Off the Projector” section.
Enter		Press “Enter” to confirm your item selection.
INPUT		Press “INPUT” to select an input signal.
MENU		Press “MENU” to launch the on-screen display (OSD) menu. To exit OSD, press “MENU” again.
Four Directional Select Keys		Use ▲ ▼ ◀ ▶ to select items or make adjustments to your selection.
LAMP LED		Refer to the LED indicator of the projector light source status.
TEMP LED		Refer to the LED indicator of the projector temperature status.
ON/STANDBY LED		Refer to the LED indicator of the projector power status.

Remote Control

Using the Remote Control	
Infrared transmitter	Sends signals to the projector.
LED	LED Indicator.
Power	Refer to the “Power On/Off the Projector” section.
Exit	Press “Exit” to close the OSD menu.
Zoom in	Zoom in the projector display.
Reset	Return the adjustments and settings to the factory default values. (except for laser counter)
Zoom out	Zoom out the projector display.
OK	Confirm your item selection.
Source	Press “Source” to select an input signal.
Auto	Automatically synchronizes the projector to the input source.
Four Directional Select Keys	Use ▲ ▼ ◀ ▶ to select items or make adjustments to your selection.
Keystone +/-	Adjust image distortion caused by tilting the projector.
Volume +/-	Adjust to increase / decrease the volume.
Menu	Press “Menu” to launch the on-screen display (OSD) menu. To exit OSD, press “Menu” again.

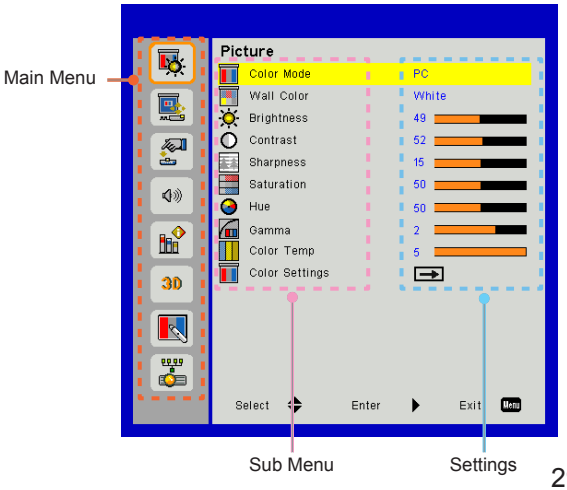
Using the Remote Control	
Blank	Momentarily turns off/on audio and video (black screen on/off).
Image	Select the display mode from Bright, PC, Movie, Game, and User.
Aspect	Use this function to choose your desired aspect ratio.
VGA1	Press “VGA1” to choose VGA IN 1 connector.
Freeze	Pause the screen image. Press again to resume the screen image.
HDMI1	Press “HDMI1” to choose HDMI IN 1 connector.
VGA2	Press “VGA2” to choose VGA IN 2 connector.
Video	Press “Video” to choose Composite video source.
HDMI2	Press “HDMI2” to choose HDMI IN 2 connector.

On-screen Display Menus

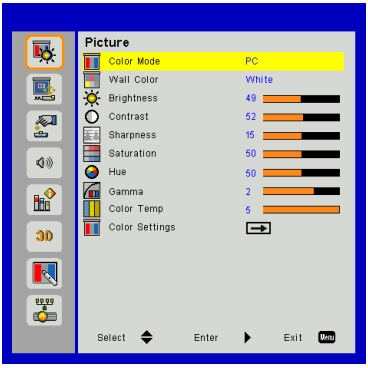
The Projector has multilingual On-screen Display menus that allow you to make image adjustments and change a variety of settings.

How to operate

1. To open the OSD menu, press “Menu” on the Remote Control or Projector Keypad.
2. When OSD is displayed, use the ▲ ▼ keys to select any item in the main menu. While making a selection on a particular page, press the ▶ or “Enter” key to enter sub menu.
3. Use the ▲ ▼ keys to select the desired item and adjust the settings using the ◀ ▶ key.
4. Select the next item to be adjusted in the sub menu and adjust as described above.
5. Press “Enter” to confirm, and the screen will return to the main menu.
6. To exit, press “Menu” again. The OSD menu will close and the projector will automatically save the new settings.



Picture



Color Mode

There are many factory presets optimized for various types of images. Use the ◄ or ► button to select the item.

- Bright: For brightness optimization.
- PC: For meeting presentation.
- Movie: For playing video content.
- Game: For game content.
- User: Memorize user's settings.

Wall Color

Use this function to obtain an optimized screen image according to the wall color. You can select from "White", "Light Yellow", "Light Blue", "Pink", and "Dark Green".

Brightness

Adjust the brightness of the image.

- Press the ◄ button to darken image.
- Press the ► button to darken image.

Contrast

The Contrast controls the difference between the lightest and darkest parts of the picture. Adjusting the contrast changes the amount of black and white in the image.

- Press the ◄ button to decrease the contrast.
- Press the ► button to increase the contrast.

❖ "Sharpness", "Saturation" and "Hue" functions are only supported under video mode.

Sharpness

Adjust the sharpness of the image.

- Press the ◄ button to decrease the sharpness.
- Press the ► button to increase the sharpness.

Saturation

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

- Press the ◄ button to decrease the amount of saturation in the image.
- Press the ► button to increase the amount of saturation in the image.

Hue

Adjust the color balance of red and green.

- Press the ◄ button to increase the amount of green in the image.
- Press the ► button to increase the amount of red in the image.

Gamma

This allows you to adjust the gamma value to obtain the better image contrast for the input.

Color Temp

This allows you to adjust the color temperature. At higher temperature, the screen looks colder; at lower temperature, the screen looks warmer.

Color Settings

Use these settings for advanced adjustment of the individual Red,Green,Blue,Cyan,Magenta and Yellow Colors.

Screen

Aspect Ratio

- Auto: Keep the image with original width-height ratio and maximize the image to fit native horizontal or vertical pixels.
- 4:3: The image will be scaled to fit the screen and displayed using a 4:3 ratio.
- 16:9: The image will be scaled to fit the height of the screen and the width adjusted to display the image using a 16:9 ratio.
- 16:10: The image will be scaled to fit the height of the screen and the width adjusted to display the image using a 16:10 ratio. (only for SSI WXGA).
- UWHD: The image will be scaled to fit the height of the screen and the width adjusted to display the image using a 16:6 ratio (only for Ultrawide).

NOTE

- "H. Position" and "V. Position" ranges will depend on input source.

Phase

Synchronize the signal timing of the display with the graphic card. If the image appears to be unstable or flickers, use this function to correct it.

Clock

Adjust to achieve an optimal image when there is a vertical flicker in the image.

H. Position

- Press the ◄ button to move the image left.
- Press the ► button to move the image right.

V. Position

- Press the ◄ button to move the image down.
- Press the ► button to move the image up.

Digital Zoom

- Press the ◄ button to reduce the size of an image.
- Press the ► button to magnify an image on the projection screen.

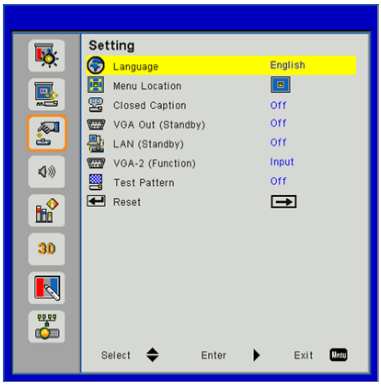
V Keystone

Press the ◄ or ► button to adjust image distortion vertically. If the image looks trapezoidal, this option can help make the image rectangular.

Orientation

- Front: The image is projected straight on the screen.
- Front Ceiling: This is the default selection. When selected, the image will turn upside down.
- Rear: When selected, the image will appear reversed.
- Rear Ceiling: When selected, the image will appear reversed in upside down position.

Settings



Language

Choose the multilingual OSD menu. Press the ◄ or ► button into the sub menu and then use the ▲ or ▼ button to select your preferred language. Press ► on the remote control to finalize the selection.

Menu Location

Choose the menu location on the display screen.

Closed Caption

Use this function to enable close caption menu. Select an appropriate closed captions option: Off, CC1, CC2, CC3, and CC4.

VGA Out (Standby)

Choose “On” to enable VGA OUT connection.

LAN (Standby)

Choose “On” to enable LAN connection. Choose “Off” to disable LAN connection.

VGA-2 (Function)

- Input: Choose “Input” to let the VGA port works as a VGA input function.
- Output: Choose “Output” to enable the VGA Out function once the projector is powered on.

Test Pattern

Display a test pattern.

Reset

Choose “Yes” to return the parameters on all menus to the factory default settings.

Volume

Speaker

- Choose “On” to enable the speaker.
- Choose “Off” to disable the speaker.

Line Out

- Choose “On” to enable the line out function.
- Choose “Off” to disable the line out function.

Microphone

- Choose “On” to enable the microphone.
- Choose “Off” to disable the microphone.

Mute

- Choose “On” to turn mute on.
- Choose “Off” to turn mute off.

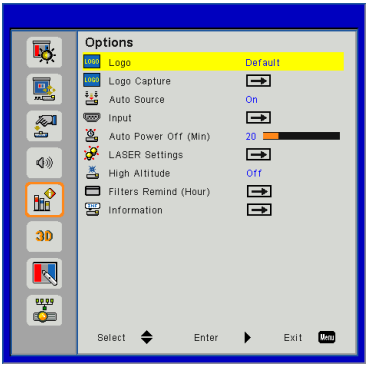
Volume

- Press the ◄ button to decrease the volume.
- Press the ► button to increase the volume.

Microphone Volume

- Press the ◄ button to decrease the microphone volume.
- Press the ► button to increase the microphone volume.

Options



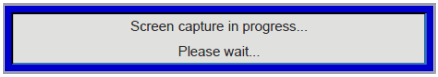
Logo

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

- Default: The default startup screen.
- User: Use stored picture from “Logo Capture” function.

Logo Capture

Press ► button to capture an image of the picture currently displayed on screen.



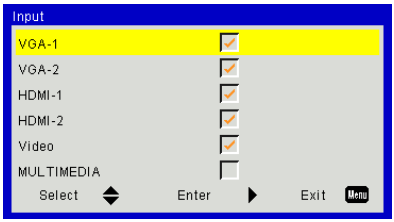
- For successful logo capture, please ensure that the on-screen image does not exceed the projector’s native resolution. (WXGA:1280x800).
- “Logo Capture” is not available when 3D is enabled.
- Before active this function, it is recommended that “Aspect Ratio” is set to the “Auto”.

Auto Source

- On: The projector will search for other signals if the current input signal is lost.
- Off: The projector will only search current input connection.

Input

Press ► button to enable/disable input sources. The projector will not search for inputs that are not selected.



Auto Power Off (Min)

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

Laser Settings

Refer to “Options / Laser settings” section.

High Altitude

- On: The built-in fans run at high speed. Select this option when using the projector at altitudes above 2500 feet/762 meters or higher.
- Off: The built-in fans automatically run at a variable speed according to the internal temperature.

Filters Remind (Hour)

- Filters Remind (Hour): Set the filter reminder time.
- Cleaning Up Remind: Select “Yes” to reset the dust filter hour counter after replacing or cleaning the dust filter.

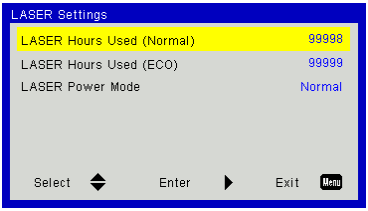
Information

Display the projector information for model name, SNID, source, resolution, software version, and aspect ratio on the screen.

NOTE

- “Dynamic Black” is available when “Color Mode” is set to “Movie”.
- “Dynamic Black” is not available when “3D” or “Interactive” is enabled.
- When “Dynamic Black” is available, “Laser Power Mode” selection is not available.

Options | Laser Settings



Laser Hours Used (Normal)

Display the projection time of normal mode.

Laser Hours Used (ECO)

Display the projection time of ECO mode.

Laser Power Mode

- Normal: Normal mode.
- ECO: Use this function to dim the projector laser diode which will lower power consumption and extend the laser diode life.

3D

- “Frame Sequential” is supported the DLP Link 3D input signals from VGA / HDMI connector.
- “Frame Sequential” / “Field Sequential” are supported the HQFS 3D input signals from Composite/ S-Video connector connector.
- “Frame Packing” / “Side-by-Side(Half)” / “Top and Bottom” are supported from HDMI 1.4a 3D input signals.

3D

- Auto: When a HDMI 1.4a 3D timing identification signal is detected, the 3D image is selected automatically.
- Choose “On” to enable 3D function.
- Choose “Off” to disable 3D function.

3D Invert

If you see a discrete or overlapping image while wearing DLP 3D glasses, you may need to execute “Invert” to get best match of left/ right image sequence to get the correct image.

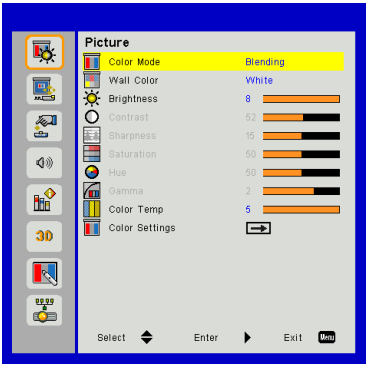
3D Format

Use this feature to select the 3D format. Options are: “Frame Packing”, “Side-by-Side (Half)”, “Top and Bottom”, “Frame Sequential”, and “Field Sequential”.

1080p@24

Use this feature to select 96 or 144Hz refresh rate as using 3D glasses in the1080p @ 24 frame packing.

Blending mode



Brightness

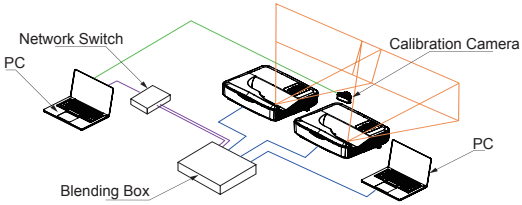
For user to manually adjust the brightness of projectors used in blending mode.

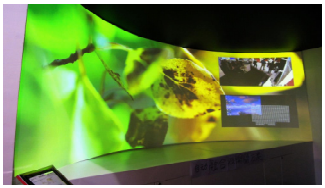
Color Temp

For user to manually map the color temperature of projectors used in blending mode.

Blending application

Example of system architecture

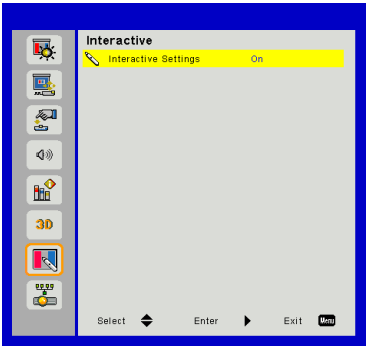




Meeting Room

- Laptop, Switch and Camera is for image calibration only
- Laptop Source: Image source
- Blending Box
- Multiple projectors (here two)
- For more details, please check the blending HW/SW specifications

Interactive



NOTE

- The Interactive function is available when displaying graphic source from HDMI/VGA input. Other sources are not supported.
- If “3D” or “Dynamic Black” function is enabling, “Interactive” feature is disabling.
- Interaction function: Please specify that the Interaction function is only for interactive model. The Interaction function is not available in the Non-interactive model.

Interactive Settings

- Choose “On” to enable Interactive function.
- Choose “Off” to disable Interactive function.

Use the Mini USB cable to connect PC/laptop and projector. Connect before using the interactive function. After you complete the Interactive Settings in OSD, use the Mini USB cable to connect a NB/desktop to the projector.

IR Pen

Usage Notice

Please follow all warnings, precautions and maintenance as recommended in this user’s manual.

Precautions

IR camera on the projector receives infrared signal illuminated from IR pen. To operate normally:

- IR camera should face the projected image on the wall.
- Remove any obstacle between the IR camera and the projected image.
- Do not place other infrared communication devices, lighting equipments, residential heating equipments, etc. nearby.
- Use the enclosed USB cable (maximum length: 5m).
- To extend the USB cable length over 5m, a certified active extension USB cable is required.

Step 1: Install Utility Software

A. System requirements

To ensure normal operation of the interactive function, follow below requirements:

System requirement	
Operating system	Windows 8/ Windows 8.1/Windows 10 (.NET Framework 4.0 must be installed) Mac OS X (10.7~10.11)
CPU	Intel® Core™ i3 or above
Memory	2GB or more

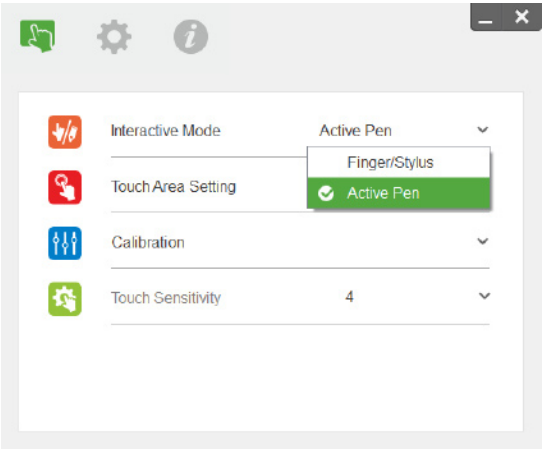
Install software utility from CDROM. Utility icon indicator as below:

	Finger/Stylus
	Active Pen
	Disconnected

Step 2: Interactive Mode

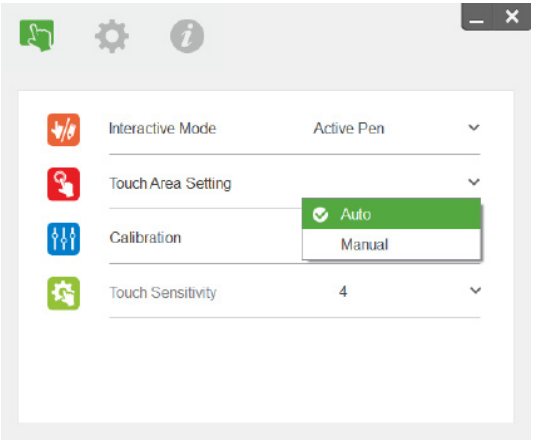
Windows 7 and Windows 8 operating system support multi-point touch control. Users can select default Touch Mode( ) for multi-point touch if using the LCT (optional accessory). Select Active Pen Mode ( ) when using the IR pen.

Note: Only single-point touch is available for Mac OSX.



Step 3: Touch Area Setting

A. Select Auto Touch Area Setting:

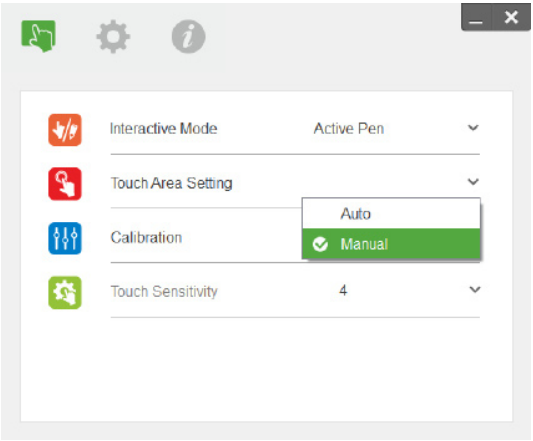


Note:

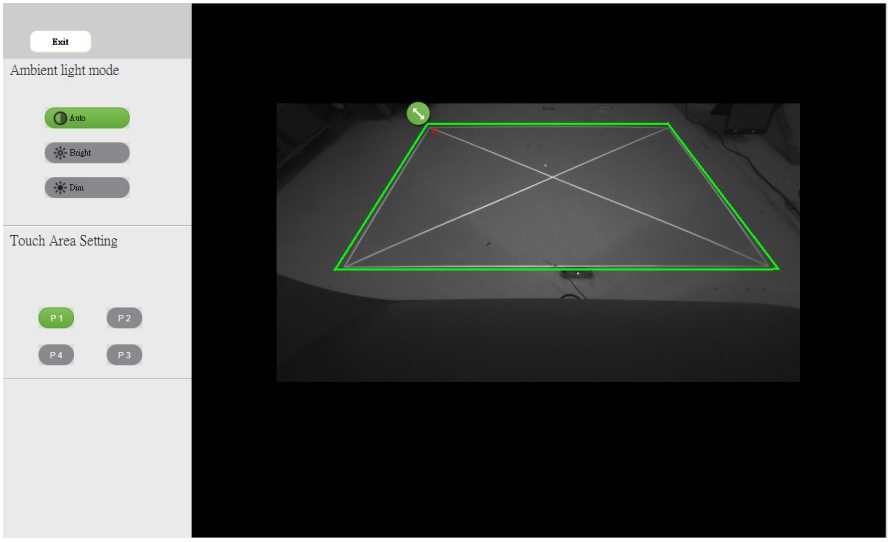
- Quit all software application
- Reduce ambient light
- Do not obstruct or shake lens during Touch Area Setting
- Check if projection image is clear. If not, adjust focus to sharpen the image

If fail message pops up, switch to Manual Touch Area Setting.

B. Select Manual Touch Area Setting:



B-1. After the camera captures the projection image, a Touch Area window will pop up. If the captured image is not clear enough, please re-select “Ambient light mode selection” from “Auto” to “Bright” or “Dim” according to actual ambient light condition.
Remark: Captured image shows the actual camera view, which is reversed from projection image. For example: P1 is lower right corner, P2 is lower left corner and so on.



B-2. Touch Area Boundary Fine-tuning

Step 1: Click on P1, use mouse to drag P1 to upper left corner. Align adjustable green zone with projected white frame.

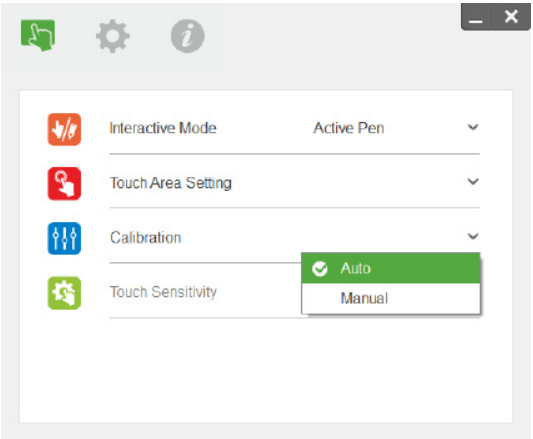
Step 2: Adjust P2 to P4 accordingly; adjustable green zone should completely overlaps the projected white frame.

Step 3: Finally, check again if the green frame completely overlaps the projected white frame. If not, fine-adjust again.

B-3. When the Touch Area is correctly located click to exit.

Step 4: Calibration

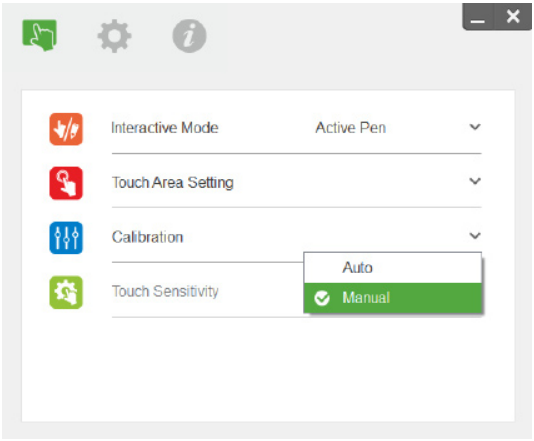
A. Select Auto Calibration



Note:
If the fail message pops up, follow below steps to trouble-shoot and do Auto Calibration again.
Close all software application

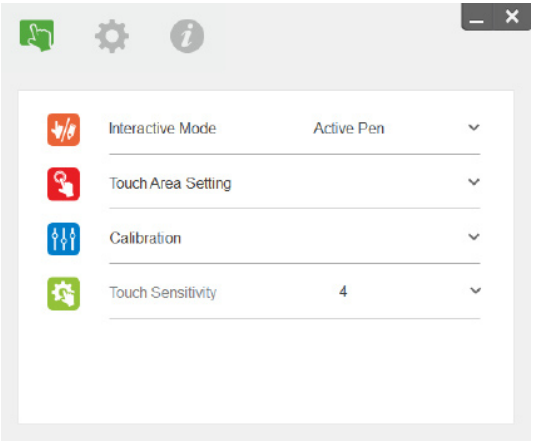
- Reduce ambient light
- Do not obstruct or shake lens during calibration
- Check if projection image is clear. If not, adjust focus to sharpen the image
- If the Auto Calibration fail message still pops up on screen, switch to Manual Calibration.

B. Select Manual Calibration:
Note: Manual Calibration is suggested for better accuracy.


Interactive Mode
Active Pen
Touch Area Setting
Calibration
Touch Sensitivity
Auto
Manual

Step 5: Touch Sensitivity

When touch function is unresponsive or writing is intermittent. You can adjust the sensitivity by adjusting Touch Sensitivity level:
Note: Touch Sensitivity is not adjustable under Active Pen Mode.

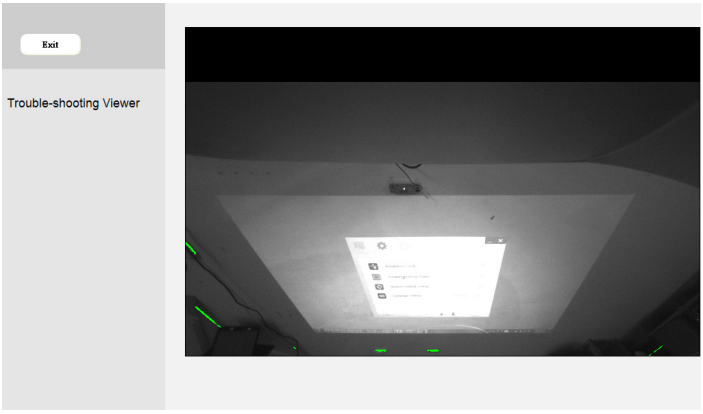


- Default: 4
- Max.: 10 (most sensitive)
- Min.: 0 (least sensitive)

Step 6: Trouble-shooting Viewer

Sometimes infrared red light (IR light) from ambient light sources may interfere with touch performance. The troubleshooting viewer shows real time images for debugging purposes. Any light interference is marked in green. If green obstacles appear within image area, remove to secure proper interactivity.

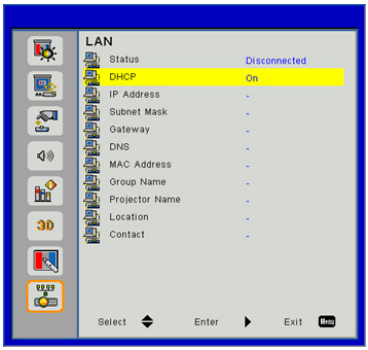
Note: Interactive function is disabled under trouble-shooting viewer, click to exit.



Appendix: Specification

I. General Specifications		
Calibration	Auto Calibration Manual Calibration	
Multi-touch	10-touch points (Win 7 and Win8 compliant)	
Multi-touch Min. Distance	≥40mm	
Hover (Z-depth)	Default hover height is 5.5mm.	
Working Projection Image Size	70”~100” @XGA(co-operate with TR0.25 UST projector) 80”~100” @WXGA(co-operate with TR0.25 UST projector) 80”~100” @1080P(co-operate with TR0.25 UST projector) 120”~140” @16:6 ultra-wide (co-operate with TR0.25 UST projector)	
Display mode	Support Ceiling mode only	
II. Installation Software		
System Requirements	OS Required:	● Windows 8, Windows 8.1, Windows 10: Touch mode-10 touch points supported and Mouse mode supported (Windows: .NET Framework 4.0 installation is required) ● Mac OS X (10.7~10.11)
	Processor Type	Intel® Core™ i3 or above
	RAM	2GB or More

LAN



Status

Display the network connection status.

DHCP

Configure the DHCP settings.

- On: Choose “On” to let the projector to obtain an IP address automatically from your network.
- Off: Choose “Off” to assign IP, Subnet Mask, Gateway, and DNS configuration manually.

IP Address

Display an IP address.

Subnet Mask

Display the subnet mask number.

Gateway

Display the default gateway of the network connected to the projector.

DNS

Display the DNS number.

MAC Address

Display the MAC address.

Group Name

Display the group name.

Projector Name

Display the projector name.

Location

Display the projector location.

Contact

Display the contact information.

How to use a web browser to control your projector

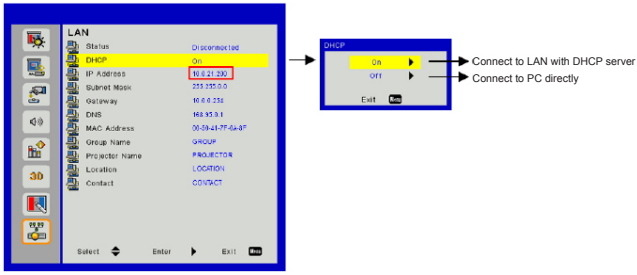
You can control the projector remotely via a web browser on your controlling device. You can connect directly or via a network.

1. When making LAN connection from your computer to the projector:

Step 1: Turn on DHCP to allow a DHCP server to automatically assign an IP, or manually enter the required network information.

Step 2: Then choose apply and press OK button to complete the configuration process.

Step 3: Find the IP Address from the LAN function of the projector as below.



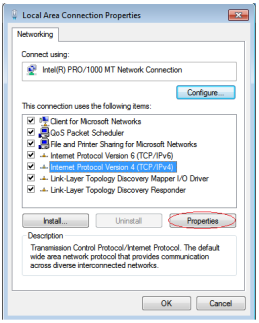
1) Connect to LAN with DHCP server, please select DHCP ON and go to Step 10

2) Connect to PC directly, please select DHCP OFF

Step 4: Select apply and press “Enter” button to submit function or press “menu” key to exit.

Step 5: To open Network Connections, click **Start**, click **Control Panel**, click **Network and Internet Connections**, and then click **Network Connections**. Click the connection you want to configure, and then, under **Network Tasks**, click **Change settings of this connection**.

Step 6: On the **General** tab, under **This connection uses the following items**, click **Internet Protocol (TCP/IP)**, and then click “Properties.”

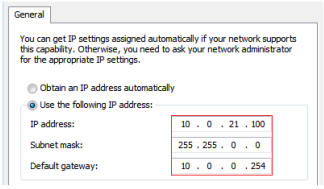


Step 7: Click **Use the following IP address**, and type in as below: (example)

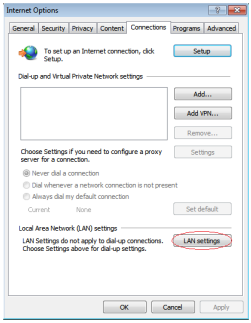
1) IP address: 10.0.21.100

2) Subnet mask: 255.255.0.0

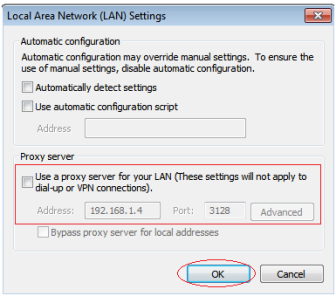
3) Default gateway: 10.0.0.254



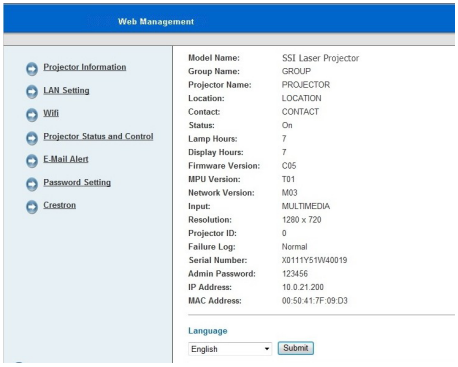
Step 8: To open Internet Options, in IE web browser, click Internet Options, click the **Connections** tab and click “LAN Settings...”.



Step 9: The **Local Area Network (LAN) Setting** dialog box appears. In the **Proxy Server area**, uncheck **Use a proxy server for your LAN**, then click “OK” button twice.



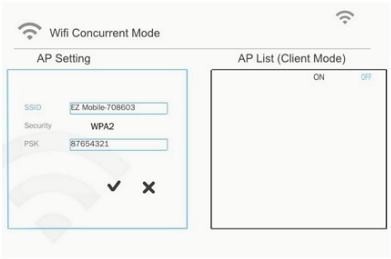
Step 10: Open your web browser and type in the IP address in the URL and press “Enter”.

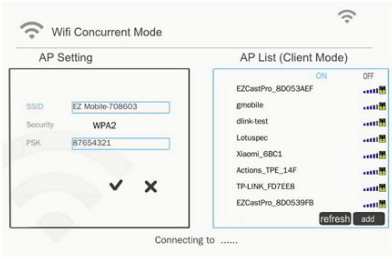


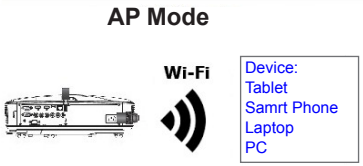
2. *When making Wi-Fi connection between your computer and the projector*

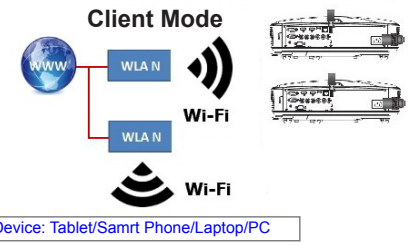
Step 1: Setup the WiFi connection

- Insert a WiFi dongle (optional/accessory) in the USB socket in the projector.
- Go to Input → Multimedia → Settings → WiFi.
- Define SSID/AP name and password in the AP settings menu. Note! The password must be minimum 8 characters. Press exit on the remote control to exit the virtual keyboard to be able to save the settings.
- You are now ready to connect your wireless device directly to the projector (AP mode).
- If you want to connect via a WiFi network (client mode) you must connect the projector and the wireless device to a common WiFi network and ensure that the network allows connected units to see each other.
- Turn ON the AP list to see available wireless networks (Client mode only).
- Connect the projector to the desired wireless network (Client mode only).
- Exit Settings



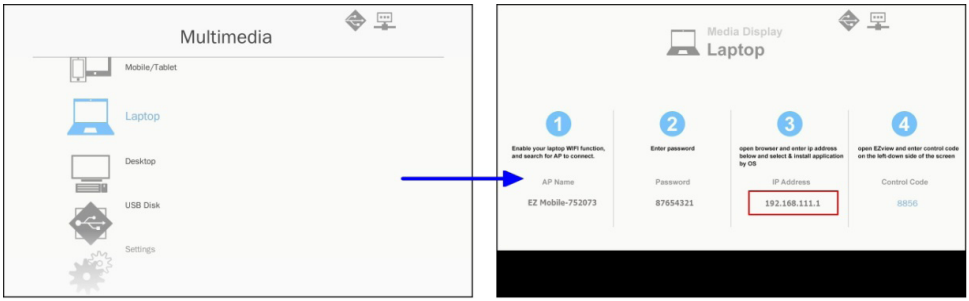






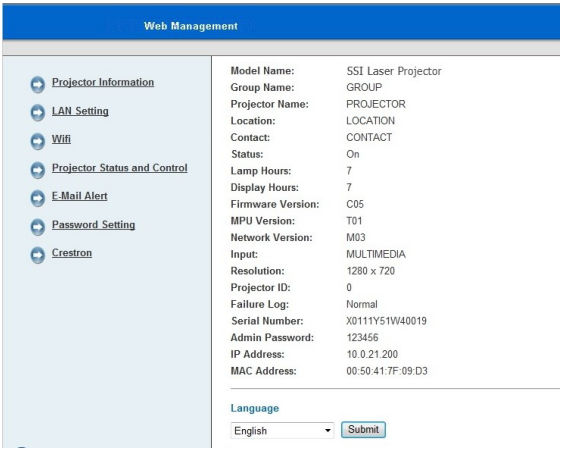
Step 2: Connect to the projector (AP Mode only)

- Go to Input → Multimedia → Mobile/Tablet or Laptop (depending on device)
- On your mobile/tablet or laptop: Open the list of available wireless networks and connect to the listed AP using the displayed password



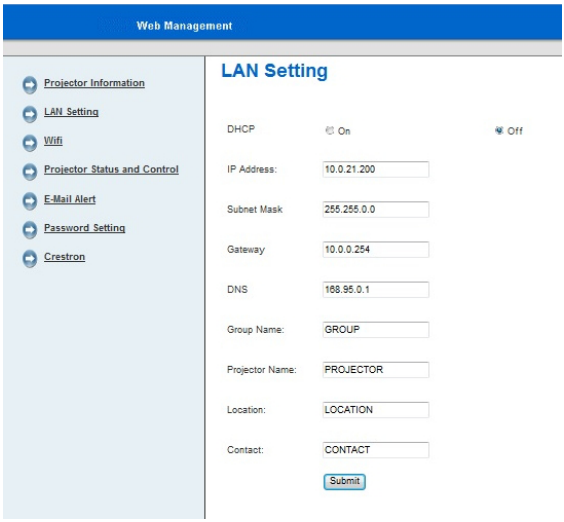
Step 3: Access to the Web Management Page in AP mode.
Open your web browser and type in the IP address 192.168.111.1 in the URL then press “Enter”.

Projector Information
User can retrieve the Projector Information in this page and select the content display in different languages.



LAN Setting

User can configure LAN parameters and edit the projector information in this page.

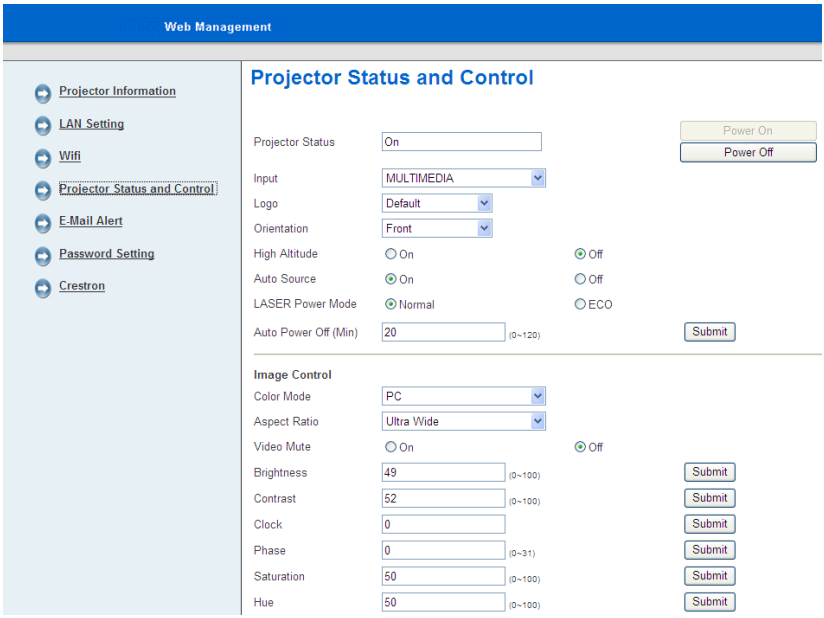


Wi-Fi

User can install EZView for different platforms and operating systems.

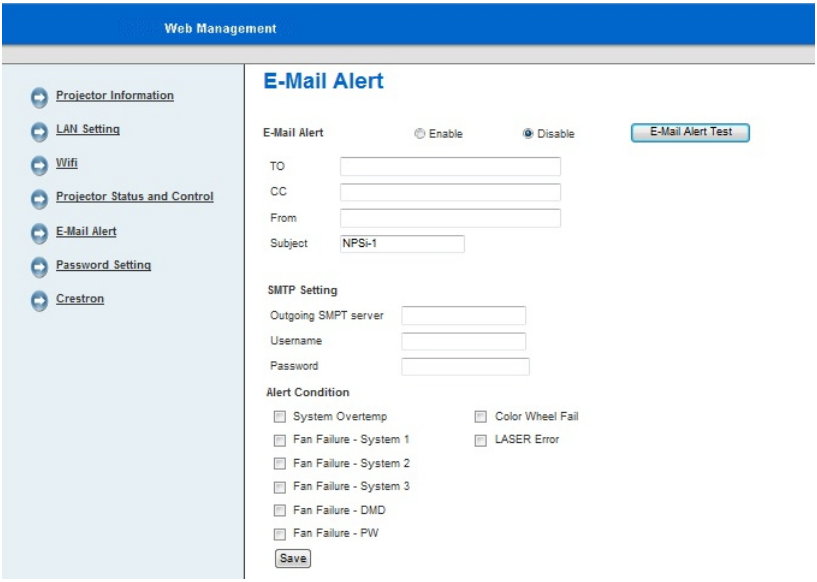
Projector Status and Control

User can control the projector in this page.



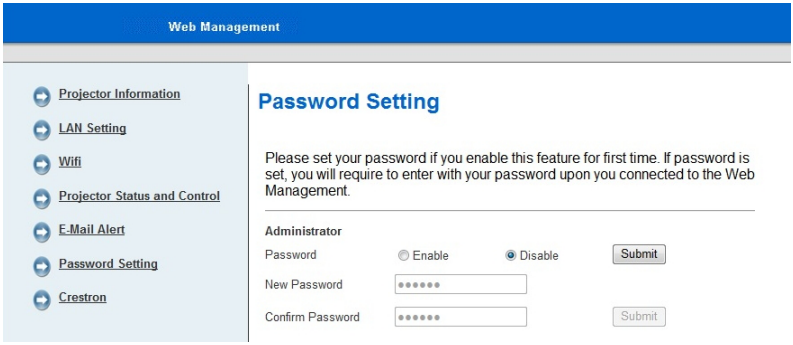
E-mail Alert

User can assign the email address and categorize alert notice.



Password Setting

User can set the password to get access to web management.



Crestron control: See “Crestron“ section on how to control the projector via Crestron flash UI.

EZView

EZView is an APP and software that can wirelessly transfer content from a smart phone, tablet, laptop, desktop, etc. and have it displayed on a LaserPanel projector. There is a limitation to what you can do via the APP whilst using the software has no other limitation than a maximum resolution of 720p.

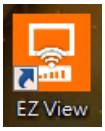
EZView APP features:

- Support local photo, document(PDF and Office files) gallery and do sketch
- Support local video
- Display Web pages and support sketch function as well
- Streaming image data from camera
- Support Web Video like Youtube
- Support Dropbox

Screen Display via EZView APP or software

Step 1: Install the EZView tool on your device according to the device operating system.

Step 2: Start EZView on the device by clicking below icon.



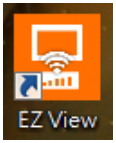
on PC or Laptop,

on tablet or smart phone.

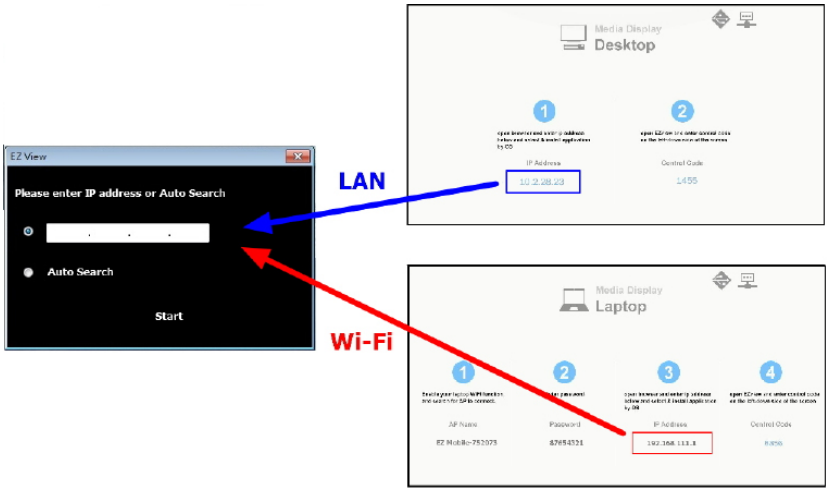
EZView on PC or Laptop

Step 1: Connect your PC/Laptop to the projector (AP mode) or connect both the PC/Laptop and the projector to a common WiFi or LAN network (Client mode)

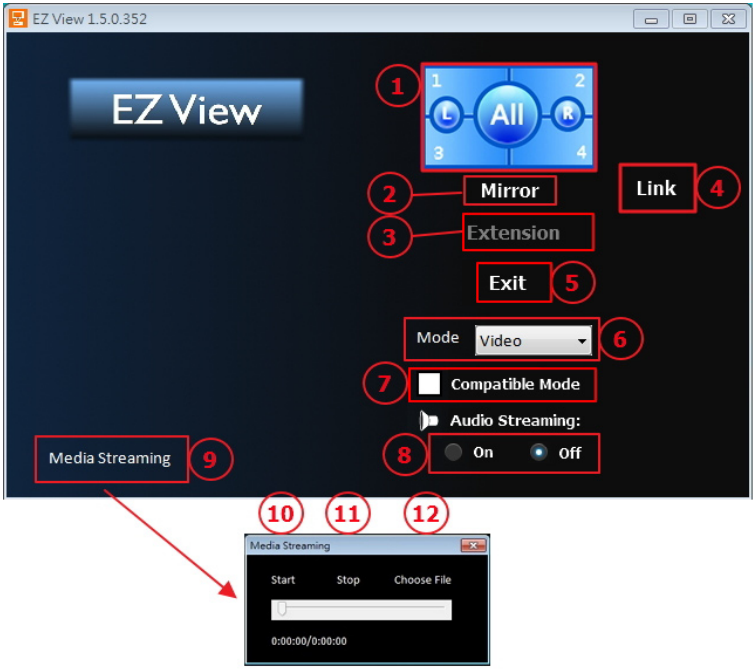
Step 2: Start EZView on the device by clicking below icon on PC or Laptop and access Multimedia mode on the projector.



Step 3: Enter the IP address. (choose either from Wi-Fi or LAN connection)



Step 4: For screen display function, select mirror mode or extension mode to project the image from the device.



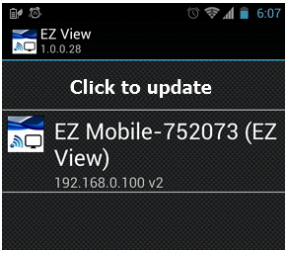
1. **The selection of image position (1/4, 1/2 or 1/1 of screen)**
2. **Mirror Mode Display**
3. **Extension Mode Display**
4. **Link to Web management page (AP mode and client mode via LAN network only)**
5. **Exit**
6. **Display Mode : Video or Graphic**
7. **Compatible Mode**
8. **Audio On/Off**
9. **Media Streaming mode for playing video application**
10. **Start playing video**
11. **Stop playing video**
12. **Choosing video streaming file**

EZView on Tablet or Smart phone

Step 1: Connect your mobile/tablet to the projector (AP mode) or connect both the mobile/ tablet and the projector to a common WiFi or LAN network (Client mode).

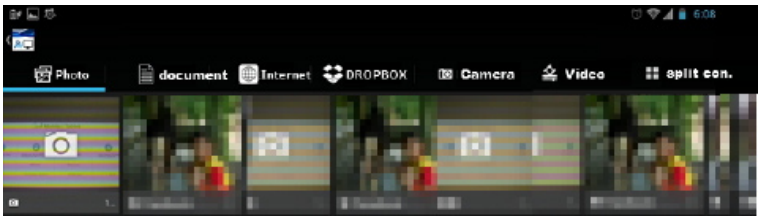
Step 2: Start EZView on the device by clicking below icon on tablet or smart phone

Step 3: Start EZView APP and go to multimedia → mobile/tablet on the projector



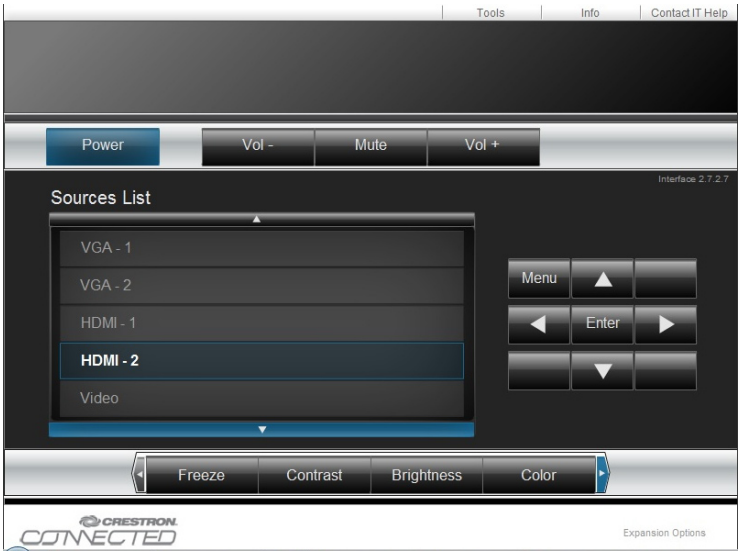
Step 4: Enter the connection password shown on the screen.

Step 5: Select the way to stream to the projector via the EZView APP.



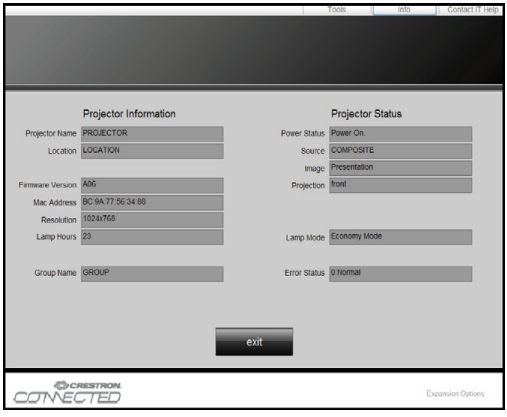
Crestron

User can control the projector via Crestron flash UI.



Based on Crestron flash UI for the input-string in [tools] tab, the limitation for Input-Length is in the below list (“space” and the other punctuation key included):

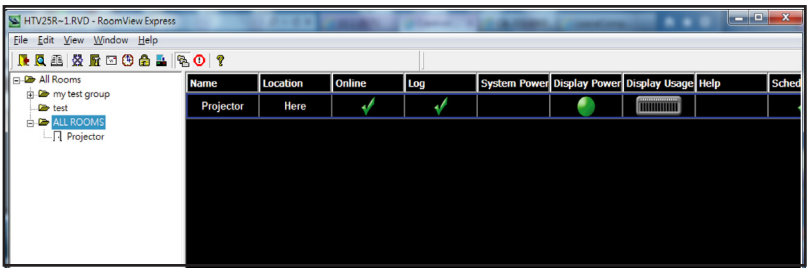
Category	Item	Input-Length (characters)
Crestron Control	IP Address	15
	IP ID	2
	Port	5
Projector	Projector Name	10
	Location	9
	Assigned To	9
Network Configuration	DHCP (Enabled)	(N/A)
	IP Address	15
	Subnet Mask	15
	Default Gateway	15
	DNS Server	15
User Password	Enabled	(N/A)
	New Password	15
	Confirm	15
Admin Password	Enabled	(N/A)
	New Password	15
	Confirm	15



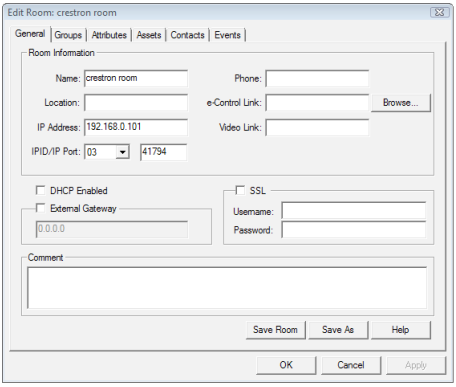
Crestron RoomView Control Tool

Crestron RoomView™ provides a central monitoring station for 250+ control systems on a single Ethernet network (more are possible, the number depends on the combination of IP ID and IP address). Crestron RoomView monitors each projector, including projector's online status, system power, lamp life, network setting and hardware faults, plus any custom attribute as defined by the Administrator. The Administrator can add, delete, or edit room information, contact information and events, which are logged automatically by the software for all users. (Operation UI as following image)

1. Main Screen



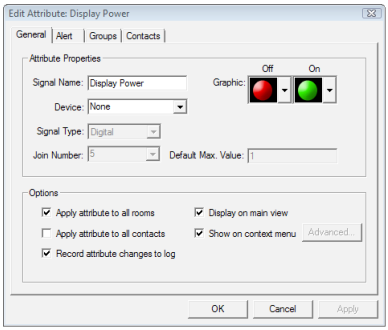
2. Edit Room



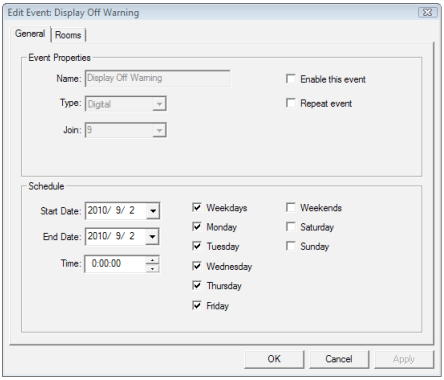
NOTE

- Crestron Room-View's function is set according to the products' models and specifications.

3. Edit Attribute



4. Edit Event



For further information, please visit:
http://www.crestron.com & www.crestron.com/getroomview.

Accessing Multimedia Files

This projector supports two methods to project media files (photos, videos, music, documents) stored on following devices:

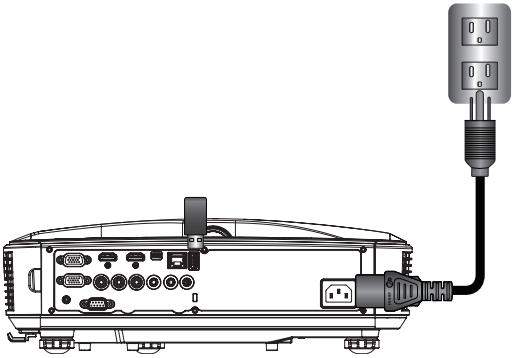
a. via Wireless dongle (see above) - wirelessly access the media files stored on your mobile phone, tablet PC, notebook, or desktop.

b. via USB flash drive - directly access the media files stored on the device.

How to access Multimedia mode

1. Plug a wireless dongle or a USB flash drive into the USB connector at the back of the projector.

2. Turn on the projector.

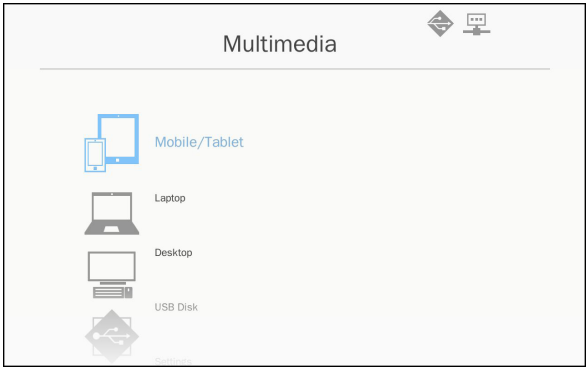


3. Press “INPUT” on the remote control or on the control panel and press the ▲ ▼ keys to select “Multimedia” and the “Enter” key to confirm.

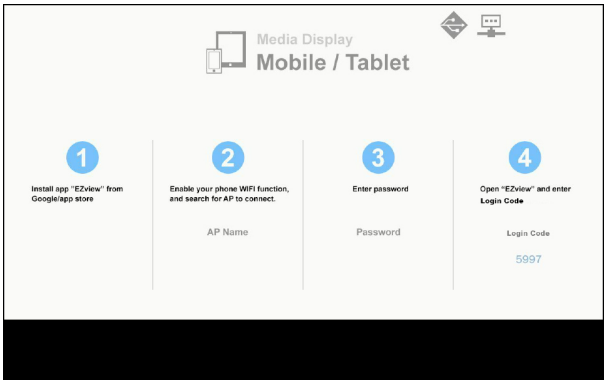
Mobile Display

To access the media files stored on your mobile device or tablet PC, do the following:

1. In the ***Multimedia*** menu, select **Mobile/Tablet**.



2. On your mobile device or tablet PC: Install the “EZview” application for your operating system.

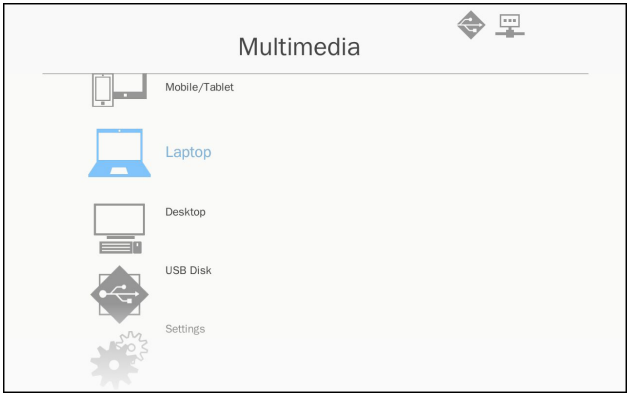


3. Enable your mobile device or tablet PC WiFi function, and search the AP name listed in the Wi-Fi network list.
4. On the initial connection, you will be prompted to enter a password. Enter the password.
5. Launch the “EZview” application (see above) and enter the login code.
6. Wait until the connection is established. The media files on your mobile device or tablet PC can now be streamed to the projector.

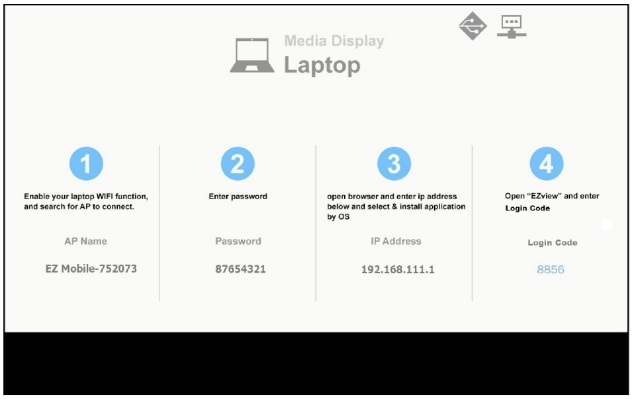
Laptop Display

To access the media files stored on your laptop/notebook, do the following:

1. In the ***Multimedia*** menu, select **Laptop**.



2. Enable your laptop/notebook WiFi function, and search the AP name listed in the Wi-Fi network list.



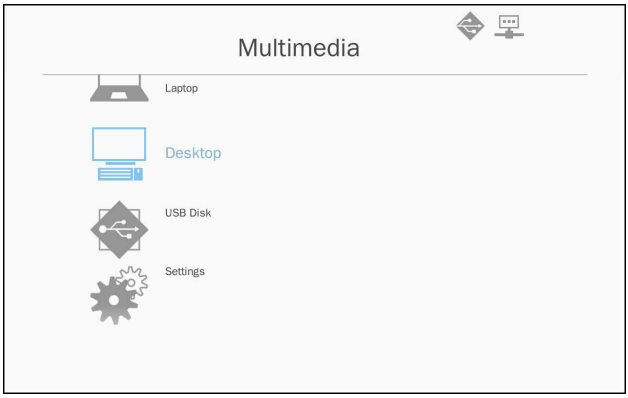
3. At initial connection, you will be prompted to enter a password. Enter the password.
4. Open your web browser and enter the IP address. Then select “Wifi” on the left side of the screen and install the EZView application for your operation system.
5. Launch the “EZview” application (see above) and enter the login code.

6. Wait until the connection is established. The media files on your laptop/notebook can now be streamed to the projector.

Desktop Display

To access the media files stored on your desktop, do the following:

1. In the ***Multimedia*** menu, select **Desktop**.



2. Open your web browser and enter the IP address displayed on the screen. Then select “Wifi” on the left side of the screen and install the EZView application for your operation system.

3. Launch the “EZview” application (see above) and enter the login code.
4. Wait until the connection is established. The media files on your desktop can now be streamed to the projector.

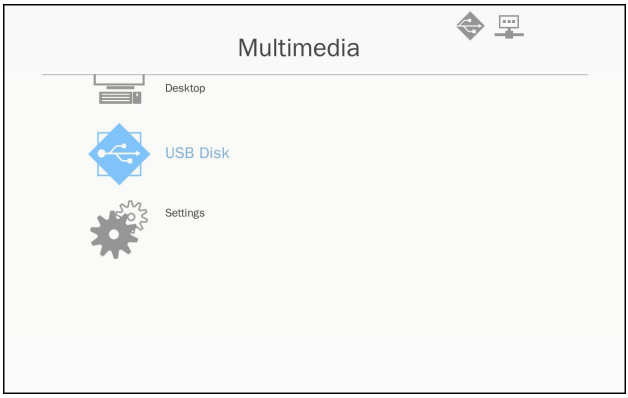
USB Storage Display

To access the media files stored on your USB flash drive, do the following:

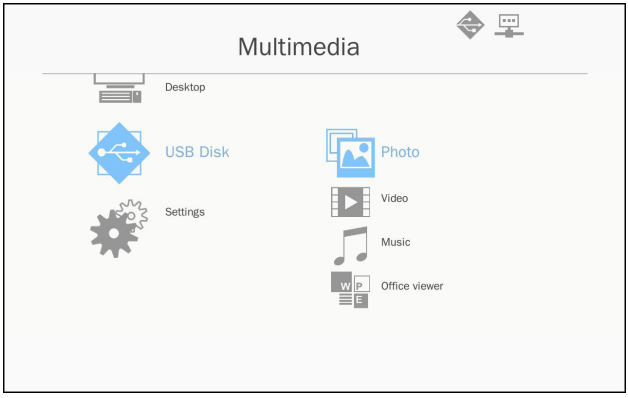
Supported File Formats

Multimedia Category	File Formats
Photo	*BMP, JPG*
Music	*MP3, WMA*
Video	*AVI, MOV, MP4, RM, RMVB, DAT, MPG, ISO, TS, MKV, VOB, and WMV*
Document	*WORD, EXCEL, PPT, PDF*

1. In the ***Multimedia*** menu, select **USB Disk**.



2. Use the ▲ ▼ keys to select the file category and press the “Enter” key.

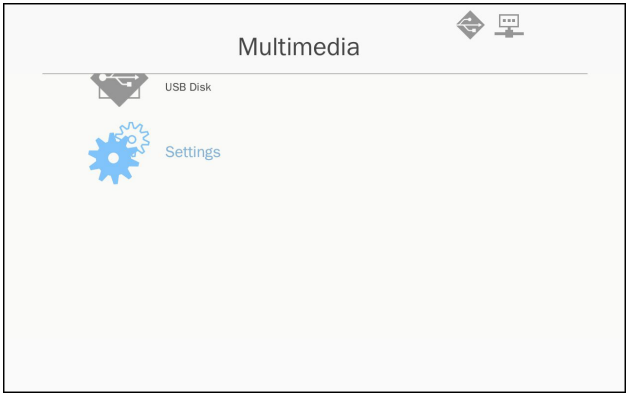


3. Use the ▲ ▼ keys to select the file to view/play and press the "Enter" key to confirm.

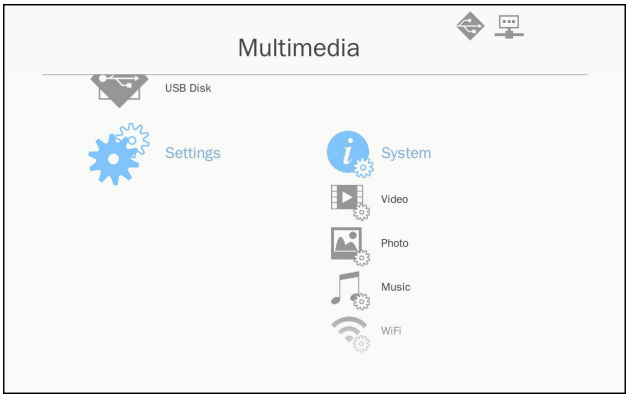
Configuring Multimedia Settings

To change the settings, do the following:

1. In the ***Multimedia*** menu, select **Settings**.



2. Use the ▲ ▼ keys to select the desired menu option and press the “Enter” key to enter the submenu.



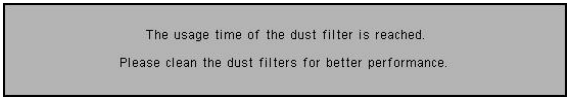
- System: Select this option to view the firmware version and update firmware.
- Video: Select this option to change the display ratio and set the repeat mode.
- Photo: Select this option to change the display ratio, slide-show pattern, and slideshow duration.
- Music: Select this option to set the repeat mode.
- WiFi: Select this option to configure the Wi-Fi connection.

3. Use the ▲ ▼ keys to select the adjust/select the setting and press the “Enter” key to confirm.

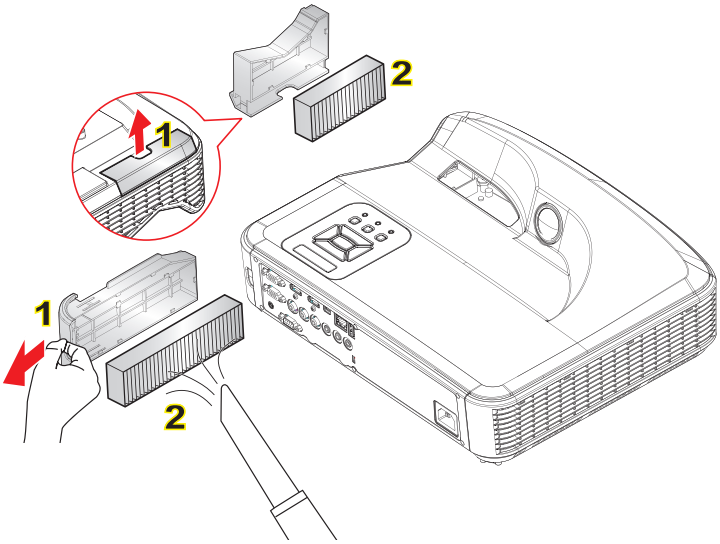
Installing and Cleaning the Dust Filters

We recommend you clean the dust filters every 500 hours of operation, or more often if you are using the projector in a dusty environment.

When the warning message appears on the screen, do the following to clean the air filters:



- The dust filters must always be fitted.
- A proper maintenance will prevent overheating and projector malfunction.
- The specific interfaces are selected in terms of the specifications of types.



Air Filters Cleaning Procedure:

1. Switch off the power to the projector by pressing the "⏻" button.
2. Disconnect the power cord.
3. Pull out the dust filters, as shown in the illustration. 1
4. Carefully remove the dust filters. Then clean or change the filters. 2

To install the filters, reverse the previous steps.

5. Turn on the projector and reset the filter usage counter after the dust filters are replaced.

Compatibility Modes

VGA Analog

a. PC signal			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [KHz]
VGA	640x480	60	31.5
	640x480	67	35.0
	640x480	72	37.9
	640x480	75	37.5
	640x480	85	43.3
IBM	720x400	70	31.5
SVGA	800x600	56	35.1
	800x600	60	37.9
	800x600	72	48.1
	800x600	75	46.9
	800x600	85	53.7
Apple, MAC II	832x624	75	49.1
XGA	1024x768	60	48.4
	1024x768	70	56.5
	1024x768	75	60.0
	1024x768	85	68.7
	1024x768	120	99.0
Apple, MAC II	1152x870	75	68.7
SXGA	1280x1024	60	64.0
	1280x1024	72	77.0
	1280x1024	75	80.0
QuadVGA	1280x960	60	60.0
	1280x960	75	75.2
SXGA+	1400x1050	60	65.3
UXGA	1600x1200	60	75.0

b. Extended wide timing			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [KHz]
WXGA	1280x720	60	44.8
	1280x800	60	49.6
	1366x768	60	47.7
	1440x900	60	59.9
WSXGA+	1680x1050	60	65.3
UWHD	1920x720	60	44.4
c. Component signal			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [KHz]
480i	720x480 (1440x480)	59.94(29.97)	15.7
576i	720x576 (1440x576)	50(25)	15.6
480p	720x480	59.94	31.5
576p	720x576	50	31.3
720p	1280x720	60	45.0
	1280x720	50	37.5
1080i	1920x1080	60(30)	33.8
	1920x1080	50(25)	28.1
1080p	1920x1080	23.98/24	27.0
	1920x1080	60	67.5
	1920x1080	50	56.3

HDMI Digital

a. PC signal			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [KHz]
VGA	640x480	60	31.5
	640x480	67	35.0
	640x480	72	37.9
	640x480	75	37.5
	640x480	85	43.3
IBM	720x400	70	31.5
SVGA	800x600	56	35.1
	800x600	60	37.9
	800x600	72	48.1
	800x600	75	46.9
	800x600	85	53.7
Apple, MAC II	832x624	75	49.1
XGA	1024x768	60	48.4
	1024x768	70	56.5
	1024x768	75	60.0
	1024x768	85	68.7
	1024x768	120	99.0
Apple, MAC II	1152x870	75	68.7
SXGA	1280x1024	60	64.0
	1280x1024	72	77.0
	1280x1024	75	80.0
QuadVGA	1280x960	60	60.0
	1280x960	75	75.2
SXGA+	1400x1050	60	65.3
UXGA	1600x1200	60	75.0

b. Extended wide timing			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [KHz]
WXGA	1280x720	60	44.8
	1280x800	60	49.6
	1366x768	60	47.7
	1440x900	60	59.9
WSXGA+	1680x1050	60	65.3
UWHD	1920x720	60	44.4
c. Video signal			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [KHz]
480p	640x480	59.94/60	31.5
480i	720x480 (1440x480)	59.94(29.97)	15.7
576i	720x576 (1440x576)	50(25)	15.6
480p	720x480	59.94	31.5
576p	720x576	50	31.3
720p	1280x720	60	45.0
	1280x720	50	37.5
1080i	1920x1080	60(30)	33.8
	1920x1080	50(25)	28.1
1080p	1920x1080	23.98/24	27.0
	1920x1080	60	67.5
	1920x1080	50	56.3
d. HDMI 1.4a mandatory 3D timing- Video Signal			
Modes	Resolution	V. Frequency [Hz]	H. Frequency [KHz]
Frame Packing	720p	50	31.5
	720p	59.94/60	15.7
	1080p	23.98/24	15.6
Side-by-Side(Half)	1080i	50	31.5
	1080i	59.94/60	31.3
Top and Bottom	720p	50	45.0
	720p	59.94/60	37.5
	1080p	23.98/24	33.8

RS232 Commands and Protocol Function List

RS232 Port Settings

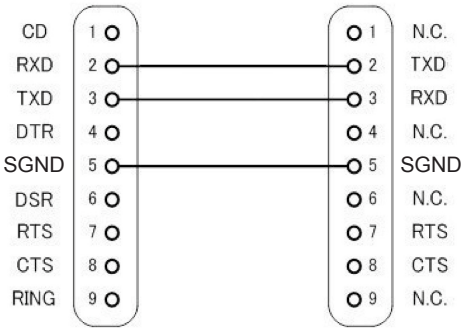
Items	Method
Communication Method	Asynchronous Communication
Bits per seconds	19200
Data bits	8 bits
Parity	None
Stop bits	1
Flow control	None

RS232 Signals Connection

❖ RS232 shell is grounded.

Computer COM Port
(D-Sub 9pin connector)

Projector COM Port
(D-Sub 9pin connector)



Commands Set List

Command Description	ASCII Code	Projector Return	n value	Note
Power	#0000 n		0 : Off 1 : On	
Emulate Remote	#0001 n		1 : Up 2 : Left 3 : Right 4 : Down 5 : Menu 6 : Source 7 : Keystone+ 8 : Keystone- 9 : Volume+ 10 : Volume-	
Resync	#0002 1			VGA only
AV Mute (Blank)	#0003 n		0 : Off 1 : On	
Freeze	#0004 n		0 : Unfreeze 1 : Freeze	
Input Source	#0005 n		1 : VGA 1 2 : VGA 2 3 : HDMI 1 4 : HDMI 2 5 : Video 6 : Multimedia	
Color Mode	#0010 n		1 : Bright 2 : PC 3 : Movie 4 : Game 5 : User	
Brightness	#0011 n		0~100	
Contrast	#0012 n		0~100	
Sharpness	#0013 n		0~31	Video only

Aspect Ratio	#0020 n		1 : Auto 2 : 4:3 3 : 16:9 4 : 16:10 / Ultra Wide	
Zoom	#0021 n		0 : Zoom- 1 : Zoom+	
Keystone	#0022 n		-40~40	
Orientation	#0023 n		1 : Front 2 : Rear 3 : Front Ceiling 4 : Rear Ceiling	
Language	#0030 n		1 : English 2 : German 3 : Swedish 4 : French 5 : Arabic 6 : Dutch 7 : Norwegian 8 : Danish 9 : Simplified Chinese 10 : Polish 11 : Korean 12 : Russian 13 : Spanish 14 : Traditional Chinese 15 : Italian 16 : Portuguese 17 : Turkish 18 : Japanese	
Menu Location	#0031 n		1 : Top Left 2 : Top Right 3 : Center 4 : Bottom Left 5 : Bottom Right	
Reset	#0032 1			
Mute	#0040 n		0 : Off 1 : On	
Volume	#0041 n		0~30	

Microphone Volume	#0042 n		0~30	
Auto Power Off (min)	#0050 n		0~120	Step = 5
High Altitude	#0051 n		0 : Off 1 : On	
Color Mode Read	#00110 1	Okn	n : 1/2/3/4/5 = Bright / PC / Movie / Game / User	
Aspect Ratio Read	#00120 1	Okn	n : 1/2/3/4 = Auto / 4:3 / 16:9 / 16:10 (Ultra Wide)	
Input Source (curr. src)	#00160 1	Okn	n : 0/1/2/3/4/5/6 = None / VGA1 / VGA2 / HDMI1 / HDMI2 / Video / Multimedia	
Sofware Version	#00161 1	Okddd	ddd : FW version	
Information	#00162 1	Okabbbbccdddee	a : Power Status / b : LD Hour / c : Input Source / d : Firmware Version / e : Color mode	

Ceiling Mount Installation

1. To prevent damage to your projector, please use the Coretronic ceiling mount.
2. If you wish to use a third party ceiling mount kit, please ensure the screws used to attach a mount to the projector meet the following specifications:
   - Screw type: M4*4
   - Minimum screw length: 10mm

NOTE

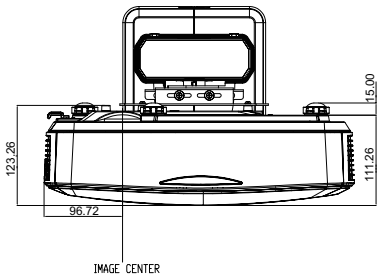
❖ Please note that damage resulting from incorrect installation will void the warranty.

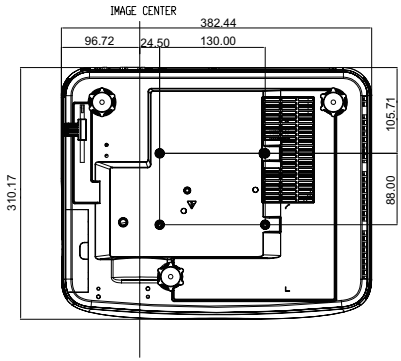
NOTE

⚠ Warning:

1. 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.
2. Be sure to keep at least 10 cm gap between the ceiling and the bottom of the projector.
3. Avoid installing the projector near a heat source.

• BC0130/BC0140





Regulation & Safety Notices

This appendix lists the general notices of your projector.

FCC notice

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, 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 device and receiver.
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Notice: Shielded cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this projector.

Operation conditions

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesired operation.

Notice: Canadian users

This Class B digital apparatus complies with Canadian ICES-003.

Remarque à l'intention des utilisateurs canadiens

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

Declaration of Conformity for EU countries

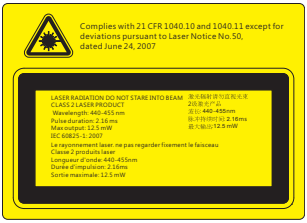
- EMC Directive 2004/108/EC (including amendments)
- Low Voltage Directive 2006/95/EC
- R & TTE Directive 1999/5/EC (if product has RF function)

Disposal instructions

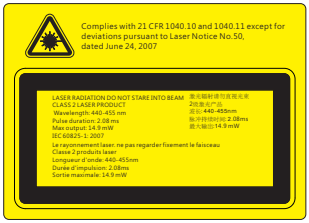
Do not throw this electronic device into the trash when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle it.

Safety notice

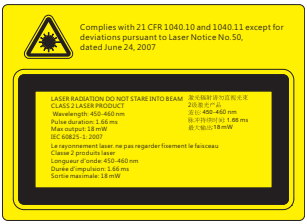
Ultra Wide / 1080P



WXGA



Ultra Wide / 1080P / WXGA



WARNING

- This projector is a Class 2 laser device that conforms with IEC 60825-1:2007 and CFR 1040.10 and 1040.11.
- Class 2 laser product, Do Not Stare Into Beam.
- This projector has built-in Class 4 laser module. Disassembly or modification is very dangerous and should never be attempted.
- Any operation or adjustment not specifically instructed by the user's guide creates the risk of hazardous laser radiation exposure.
- Do not open or disassemble the projector as this may cause damage by the exposure of laser radiation.
- Do not stare into beam when the projector is on. The bright light may result in permanent eye damage.
- Without following the control, adjustment or operation procedure may cause damage by the exposure of laser radiation.
- Adequate instructions for assembly, operation, and maintenance, including clear warnings concerning precautions to avoid possible exposure to laser and collateral radiation in excess of the accessible emission limits in Class 2.