SmartFIT Installation Guide
for Fixed Frame Screen and Wall

SmartFIT

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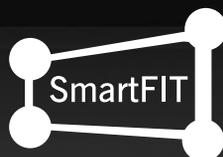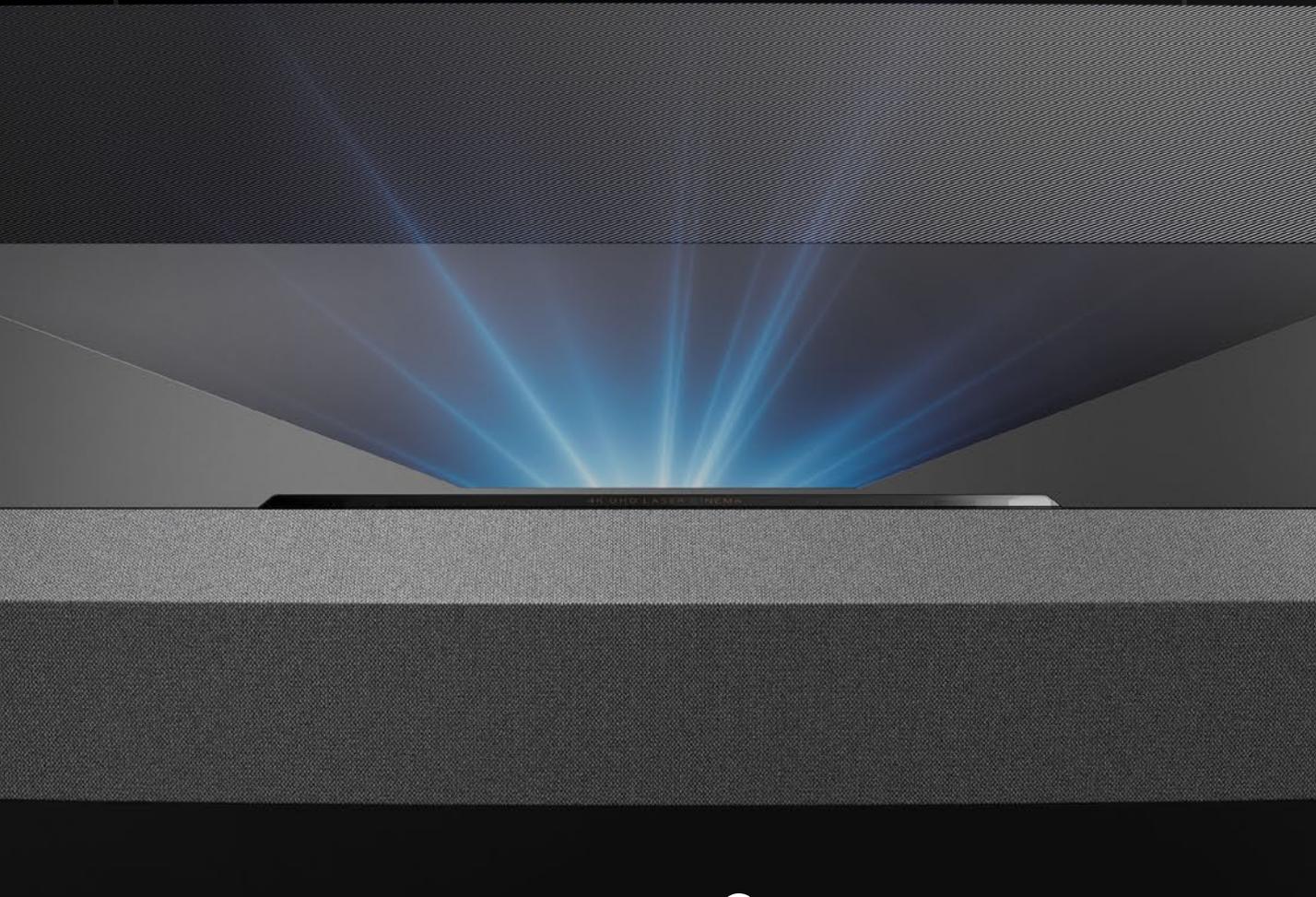
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Step F : Using SmartFIT Geometry Correction App with a Wall

Advanced Installation (Experienced Users Only)

Step G : Advanced Installation – Fixed Frame Screen and Wall Installation without SmartFIT (Experienced Users Only)

What's Required

Optoma CinemaX Series 4K Ultra Short Throw Projector.

SmartFIT Distance Cards x2 (included in the box).

Projection Surface: Fixed Frame Screen, Fixed Frame ALR Screen (Ambient Light Rejection) or "prepared" Wall surface (no Fixed Frame Screen).

Smartphone with iOS or Android / access to Apple Store or Google Play for download of Optoma SmartFIT App.

Optional: Measuring Tape (if using the Wall as a projection surface or following experienced users' path).

Optional: Level Tool (Experienced Users only)

Optoma ALR101
Thick Fixed Frame
120" WALL

Optoma ALR101e
Thin Fixed Frame

100" WALL

85" WALL

Optoma ALR101
Thick Fixed Frame
120" WALL

Optoma ALR101e
Thin Fixed Frame

100" WALL

85" WALL
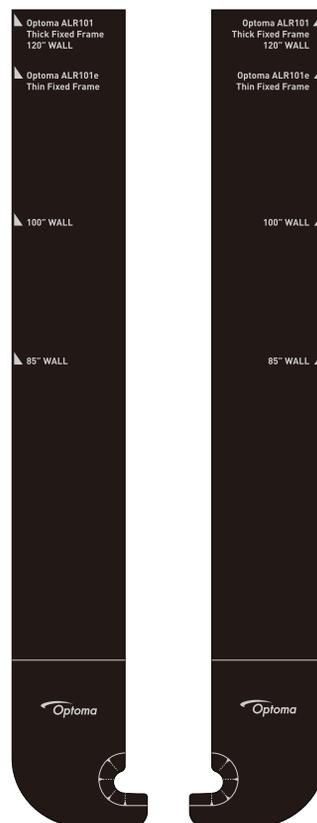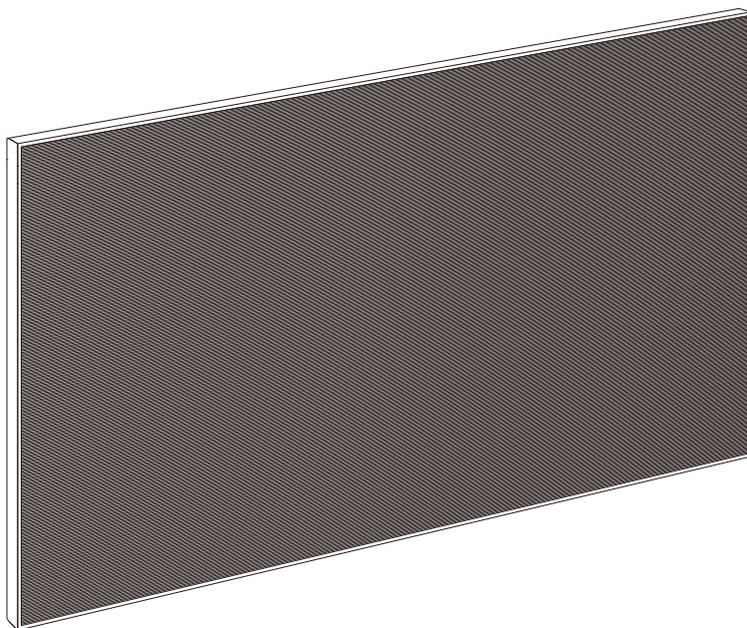
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SmartFIT Distance Cards support multiple projection methods – Fixed Frame Screen, Fixed Frame ALR Screen and Wall. The Distance Cards are marked accordingly (starting from the top):

Optoma ALR101 / Thick Fixed Frame / 120-inch Wall line is intended for the Optoma 100-inch ALR101 Fixed Frame Screen, 100-inch Fixed Frame Screens with a thick frame (back to front) and 100-inch image projected onto a Wall. Thick Fixed Frame Screens are generally 1.6-inch to 2-inch in depth (distance from front of screen to wall).

Optoma ALR101e / Thin Fixed Frame line is intended for use with the Optoma 100-inch ALR101e ALR Fixed Frame Screen and 100" Thin Fixed Frame Screen. Thin Fixed Frame Screens are generally 0.75-inch to 1.5-inch (distance from front of screen to wall).

85-inch and 100-inch Wall line is intended for those who will not use a Fixed Frame Screen with the projector. Use this line for projecting directly onto the Wall.

Proceed to Step C if you plan to use the SmartFIT App for Auto Geometry Correction, SmartFIT for Manual Geometry Correction or Step F for manual installation with no SmartFIT Auto Geometry Correction. NOTE: SmartFIT Auto Geometry Correction uses a combination of 4-Corner and Warping to FIT the image to the Fixed Frame Screen by reducing the number of active pixels. In addition, SmartFIT Auto Geometry Correction will also increase input lag therefore, if gaming is a priority, skip to step G, all others proceed to step C.

SmartFIT Distance Cards Overview

Optoma ALR101
Thick Fixed Frame
120" WALL

Optoma ALR101 Fixed Frame Screen / 120"
Fixed Frame Screen (Thick Frame) / 120" Wall

Optoma ALR101
Thick Fixed Frame
120" WALL

Optoma ALR101e
Thin Fixed Frame

Optoma ALR101e Fixed Frame Screen / 100"
Fixed Frame Screen (Thin Frame)

Optoma ALR101e
Thin Fixed Frame

100" WALL

100" Wall

100" WALL

85" WALL

85" Wall

85" WALL

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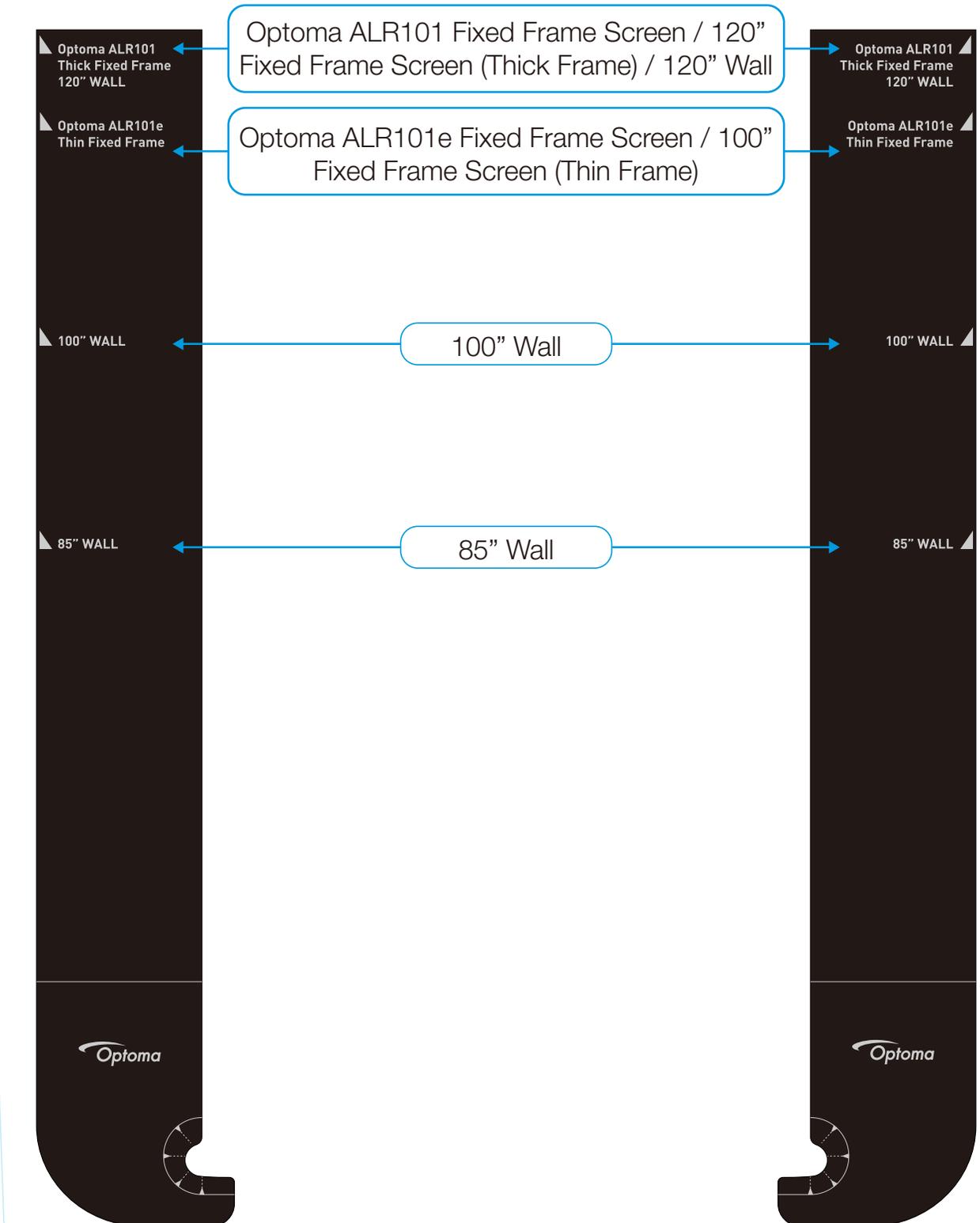
1. Assemble Fixed Frame Screen (non-ALR or ALR) – do not mount the Fixed Frame Screen until instructed later in this Installation Guide.

2. If you plan to use the "Wall" as a projection surface – please proceed to STEP E.

3. To determine the proper position for installation of the Fixed Frame Screen on the wall, use the projector test pattern (see next page).
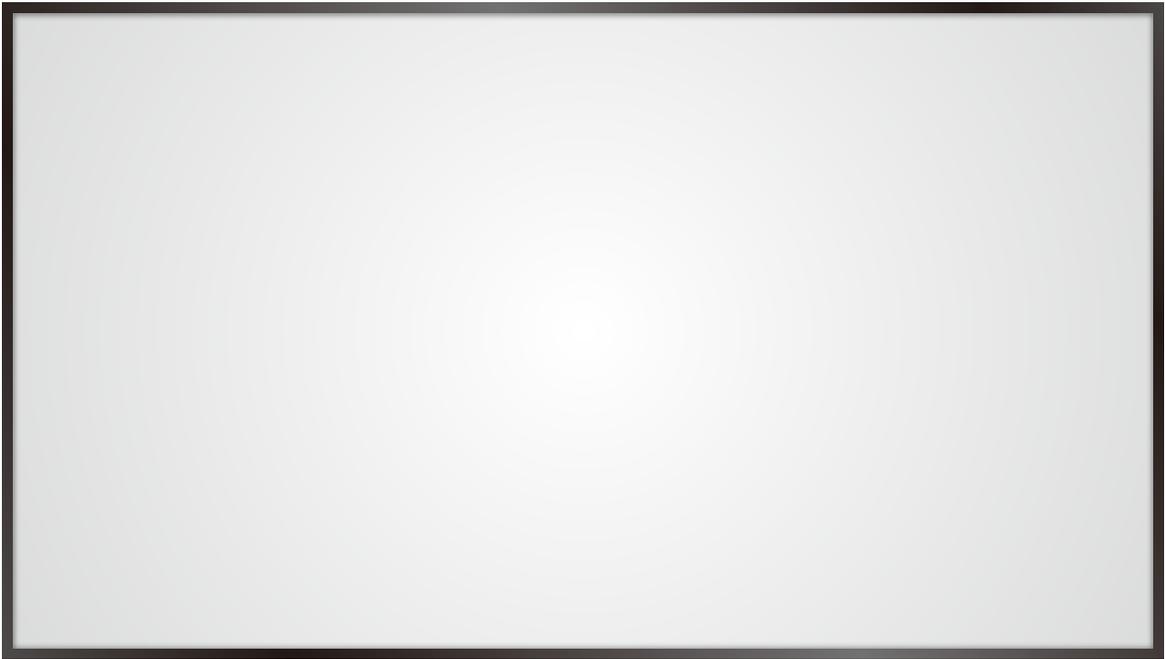
Fixed Frame Screen

4. Turn on projector and follow the out-of-box first-time setup wizard

5. Press ⊜ menu key on the remote control.
   Select "Setup" ⟶ Test Pattern ⟶ choose "Yellow Border" Pattern

6. Attach the SmartFIT Distance Cards to the bottom of the projector by sliding the distance card in from the side (left and right) until you feel the Distance Card hook the rear feet (closest to the wall or projection surface).

7. Fold the card up or down at a 90-degree angle for the "desired projection distance and method" (see page 4 – SmartFIT Distance Card Info). Move the projector and or entertainment center/table until the Distance Card touches the wall.

8. Mount the Fixed Frame Screen to the Wall using the yellow screen pattern as a guide.

   IMPORTANT : Yellow test pattern MUST be outside of the Fixed Frame Screen. After using Distance Cards, it may be necessary to adjust the projector.

1. Please download SmartFIT App [SmartFIT Optoma] for Android or iOS to your Smartphone.

2. Ensure that the Smartphone and projector are on the same wireless (Wi-Fi network) network.

3. Open the SmartFIT app, follow the onscreen instructions and then select "auto" (recommended). Once the SmartFIT Auto Geometry Correction is complete, saved the result by select "Finished" or select "Fine Tune" to commit some minor adjustments.

   NOTE: In some instances, "auto" may not work as intended due to placement of the screen or lighting in the room. In this case we recommend using the "manual" feature in SmartFIT instead of "auto".

4. When using manual feature, there are 3 increment choices: 1, 4, and 16. For small adjustments use 1 or 4. For large adjustments use 16.

Tips on using SmartFIT App:

1. Ensure the room has proper lighting and that no direct light is on the screen. The frame of the fixed frame screen should be clearly visible to the human eye.

2. Crosshair must over the star in the center calibration page. Ensure the photo is "square" before taking the photo.

3. No Wi-Fi? CinemaX P1 includes a hotspot. To connect Smartphone directly to CinemaX P1, go to Settings > Network > Wireless > Other Options / Portable Hotspot. Then launch the SmartFIT app.

1. Turn on projector and follow the on-screen first-time setup instructions.

2. Press ⊜ menu key on the remote control.

3. Select "Setup" ⟶ Test Pattern ⟶ choose "Yellow Border" Pattern.

4. Ensure the test pattern is level on the top and sides – we strongly recommend the use of a "level tool".

5. Use black painters' tape with a width no larger than 0.50-inch to create a temporary frame of 100-inch diagonal (87-inch wide) or 120-inch diagonal (105-inch wide) image around the yellow test pattern. Stay as close to the INSIDE border of the yellow test pattern as possible. **Yellow frame MUST be outside of the frame created with the painters' tape.**
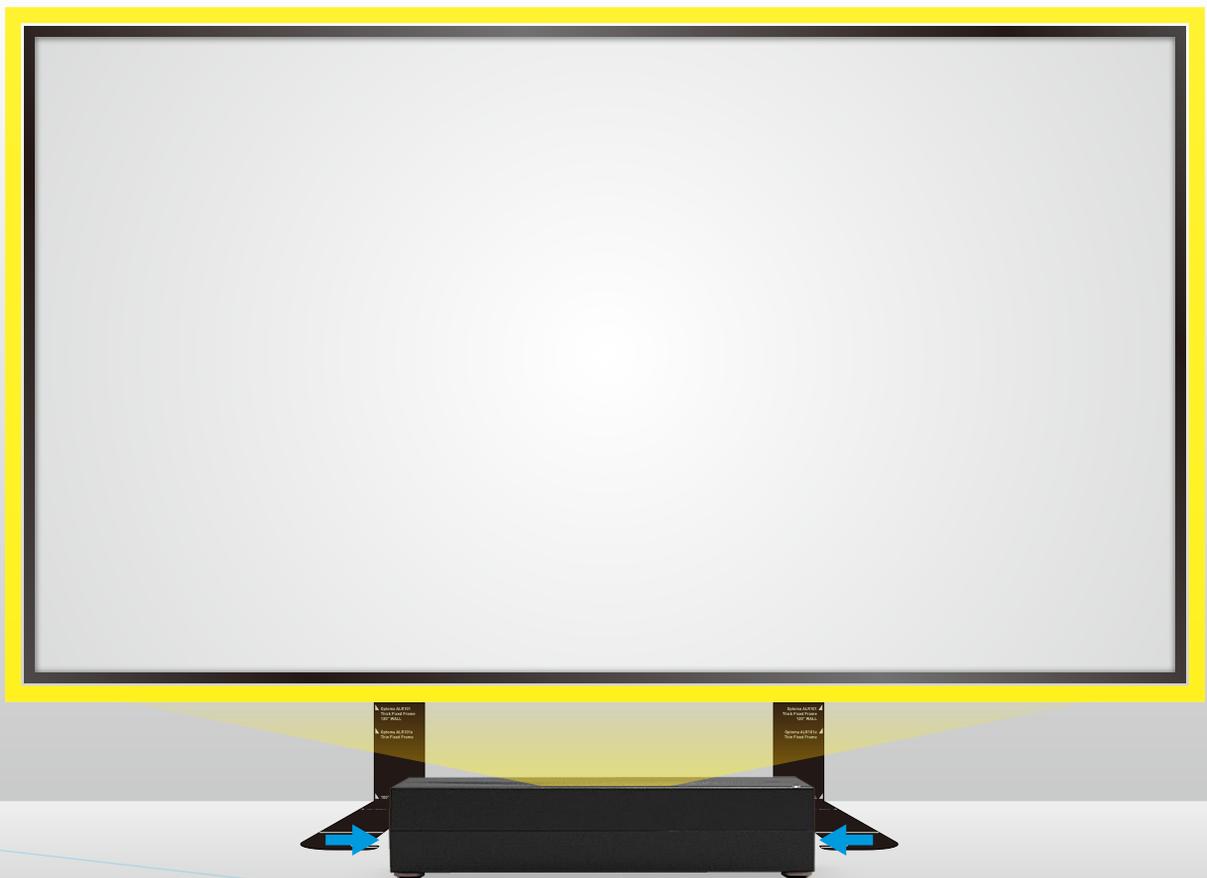
1. Please download SmartFIT App for Android or iOS to your Smartphone.

2. Ensure that the Smartphone and projector are on the same wireless (Wi-Fi network) network.

3. Open the SmartFIT app, follow the onscreen instructions and then select "auto" (recommended). Once the SmartFIT Auto Geometry Correction is complete, saved the result by select "Finished" or select "Fine Tune" to commit some minor adjustments.

   NOTE: In some instances, "auto" may not work as intended due to placement of the screen or lighting in the room. In this case we recommend using the "manual" feature in SmartFIT instead of "auto".

4. When using manual feature, there are 3 increment choices: 1, 4, and 16. For small adjustments use 1 or 4. For large adjustments use 16.

Tips on using SmartFIT App:

1. Ensure the room has proper lighting and that no direct light is on the screen.

2. Please ensure that frame created on the wall is the only object in the camera display before taking a photo.

3. Crosshair must over the star in the center calibration page and the photo must be as "square" (straight) as possible.

4. If you do not have internet connection, Wi-Fi or a router - CinemaX P1 includes a hotspot feature. To connect Smartphone directly to CinemaX P1, go to Settings > Network > Wireless > Other Options / Portable Hotspot. Then launch the SmartFIT app.

Tips on using SmartFIT App with a Wall:

1. When using a walx— texture or pattern may interfere with the calibration, resulting in a failure. Ensure chosen surface is relatively smooth and if the "auto" feature continues to fail, please use the "manual" feature.

2. If the wall is concave or seriously bowed – we recommend using the manual 81-point manual warping tool.

3. To access the warping tool: Press the menu button the remote > Geometric Correction > Warp Calibration.

4. For more information please see the Geometric Correction Guide at https://www.optoma.com/support/download

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(Experienced Users Only)

This installation method is for those who preferred to manually align the projector image to a Fixed Frame Screen or the Wall without the use of SmartFIT (Auto Geometry Correction). Manually aligning an Ultra Short Throw Projector will take considerable time and energy – please plan accordingly.

NOTE: If you plan to play games, especially First-Person Shooters and Fighting, we strongly recommend disabling the MEMC (PureMotion) in the OSD: Image Settings > PureMotion. Set PureMotion to OFF. PureMotion is source dependent meaning if you change from Xbox One X to PS4 Pro – you will need to disable PureMotion again.

1. Assemble Fixed Frame Screen (non-ALR or ALR) – do not mount the Fixed Frame Screen.

2. To determine the proper position for installation of the Fixed Frame Screen on the wall, use the projector test pattern (see next page).

3. NOTE: If using the "Wall" as a projection surface – please follow steps 4 through 7 – skip step 8.

Fixed Frame Screen

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4. Turn on projector and follow the out-of-box first-time setup wizard

5. Press ⊜ menu key on the remote control.
   Select "Setup" ⟶ Test Pattern ⟶ choose "Yellow Border" Pattern
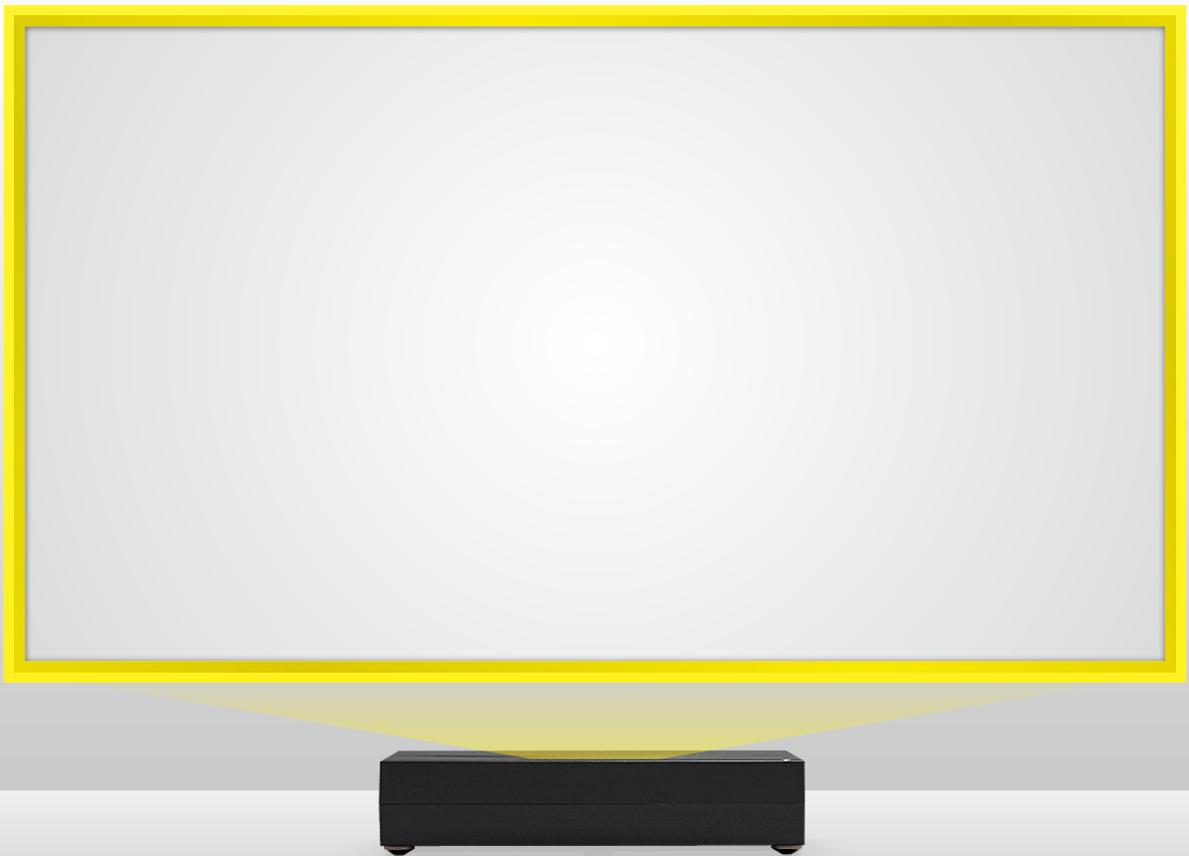
6. Attached the SmartFIT Distance Cards to the bottom of the projector by sliding the Distance Card in from the side (left and right) until you feel the Distance Card hook the rear foot.

   NOTE: Instead of using the Distance Cards, the Installation Reference Guide (page 17) can be used to determine Projector distance from projection surface and offset.

7. Fold the card up or down at a 90-degree angle for the "desired projection method" (see page 4 – SmartFIT Distance Card Info). Move the projector and or entertainment center/table until the Distance Card touches the wall. The entertainment center/table and the projector must be perfectly aligned with the wall. Use the level to ensure the top and sides of the yellow frame is 100% horizontal and the side of the frame is 100% vertical BEFORE proceeding to the next step. **Wall users STOP HERE** – projector is ready for use.
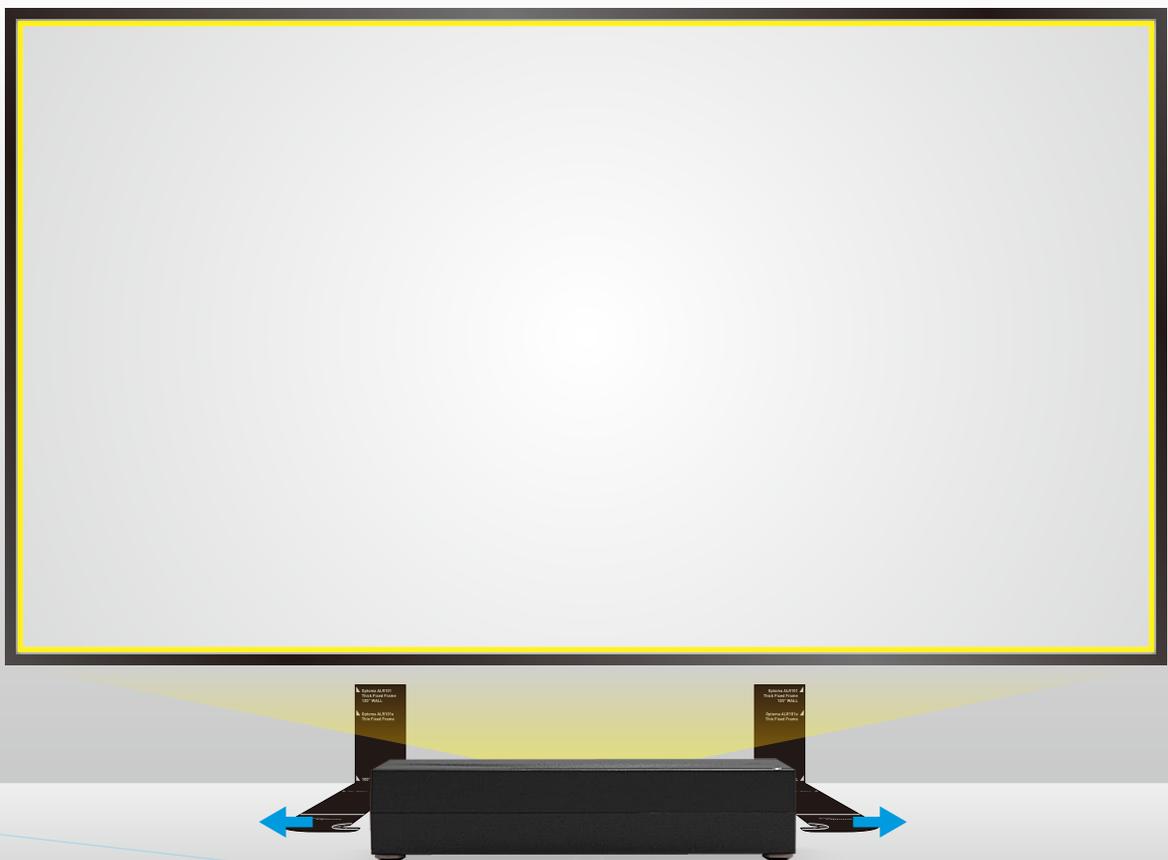
8. Mount the Fixed Frame Screen to the Wall using the yellow screen pattern as a guide.

   NOTE: Yellow frame MUST be inside of the Fixed Frame Screen. Due to the depth of some screens it may be necessary to move the Projector back an inch or two.

9. Fixed Frame Screen Installation Tip:
   Most Fixed Frame Screens, including Optoma ALR-101 and ALR-101e include 4 mounting brackets. To ensure the Fixed Frame Screen is flat against the wall and even – use all 4 mounting brackets.

10. Once the Fixed Frame screen has been mounted and secured with all 4 mounting brackets – the projector is ready for viewing.
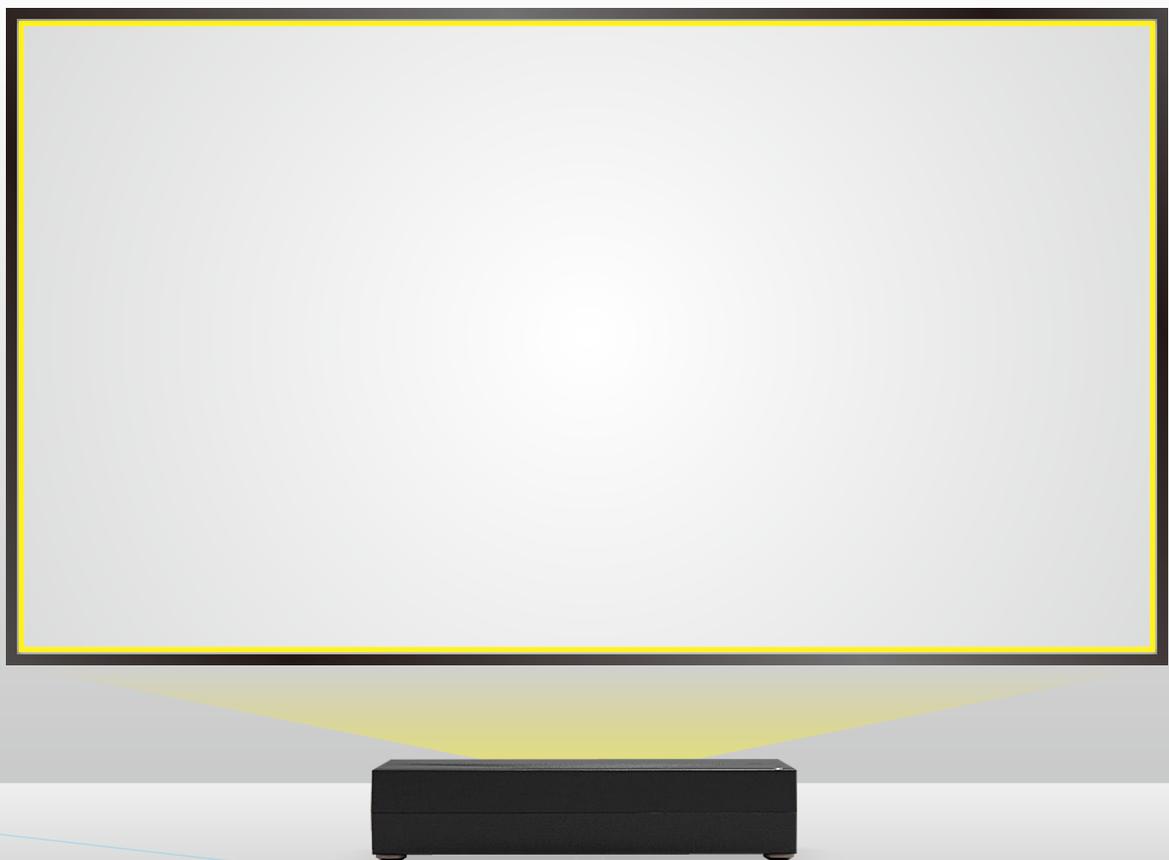
Installation Reference Chart

Image Size (inch)	DF		DR		DT		H Offset=121.5%~130%		L Offset=121.5%~130%	
	m	inch	m	inch	m	inch	m	inch	m	inch
85"	0.530	20.876	0.147	5.774	0.166	6.518	0.176~0.266	6.92~10.462	0.241~0.313	9.507~12.327
90"	0.558	21.983	0.175	6.881	0.194	7.625	0.189~0.284	7.447~11.198	0.271~0.344	10.658~13.547
100"	0.615	24.197	0.231	9.095	0.250	9.839	0.216~0.322	8.501~12.668	0.33~0.407	13.003~16.04
110"	0.671	26.411	0.287	11.309	0.306	12.053	0.243~0.359	9.555~14.139	0.391~0.472	15.381~18.579
120"	0.727	28.625	0.343	13.522	0.362	14.266	0.269~0.396	10.609~15.61	0.452~0.537	17.779~21.147

Image Plan

Image Bottom

H

L

DT

DR

134.7mm

20mm

15-36mm

A

(unit:mm)

DF

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The mount hole pattern and screw size

530

256

135

235

300

(unit:mm)
Screw Size: M6 screws x 4

NOTE : Ceiling Mount Orientation is NOT available during the out of box setup. It is only available in the OSD. Optoma does not sell a Ceiling Mount. Any use of a Ceiling Mount is at the user's discretion. Optoma Customer Service will not assist with issues related directly to the mount as ceiling mounting Ultra Short Throw can be very difficult. Ceiling Orientation will not work with many UST ALR Screens and improper use of a mount can result in serious injury. Optoma recommends that a professional install the projector in the Ceiling Mount Orientation.