PhotoForge 3D Capture

User's Guide 1.0

Legal Notice

Welcome to PhotoForge 3D Capture

PhotoForge 3D Capture™ is the fastest, most secure way to capture real-world objects as images and transform them into 3D objects, with no cloud uploads and no guesswork.

Whether you're using manual, timed, or guided capture modes, Photo-Forge 3D Capture walks you through the process of creating optimal photogrammetry-ready image sets, all from your iPhone or iPad.

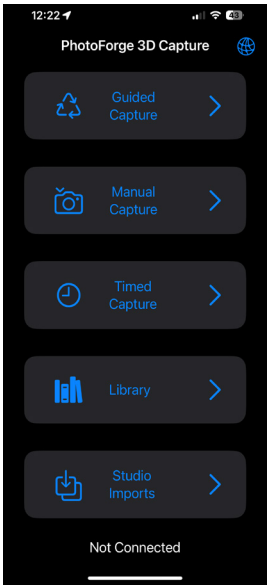
You can preview captured image sets instantly on-device or transfer them directly to your Mac with the PhotoForge 3D Studio™ companion app which adds model refinement and high-resolution export.

Getting Started

Launching the App

To open PhotoForge 3D Capture:

1. Tap the PhotoForge 3D Capture icon on your Home Screen.
2. When you first launch the app, you may be asked to grant access to the Camera and Photos.
3. If you're concurrently using the PhotoForge 3D Studio companion app, you'll be prompted to allow Local Network access for tethering. Tap ALLOW to enable a peer-to-per connection. Both apps must be connected to the same Wi-Fi network.
4. When the app opens, you'll land on the Home Screen, where you can:
    - Start a capture using one of three capture modes: guided, manual, or timed.
    - View or manage previously saved image sets in your Library
    - View previously created models
    - View models previously imported from PhotoForge 3D Studio



Home screen

Capturing Images

PhotoForge 3D Capture offers three flexible ways to shoot your object, each tailored for different environments and your preference.

1 Guided Capture

In this mode, follow on-screen instructions to create an image set with optimum spacing and alignment. Camera shutter and image captures are automated.

Guided Capture requires a LiDAR-equipped iPhone. LiDAR is a sensor that uses lasers to measure the distance to objects. It creates a depth map of the surrounding environment and uses this to enhance photography, augmented reality (AR), and 3D scanning. Newer Pro-models of the iPhone and iPad include LiDAR.

Guided Capture is ideal for:

First-time users or anyone wanting maximum 3D model construction accuracy.

Object Capture vs. Area Capture Modes

Apple's Reality Kit Object Capture framework supports two distinct modes for generating 3D models: *Object Capture* and *Area Capture*. Both use the same powerful photogrammetry engine under the hood, but each is tailored to different types of scenes.

Object Capture Mode

Designed for scanning individual items, Object Capture builds detailed 3D models by analyzing photos taken from multiple angles.

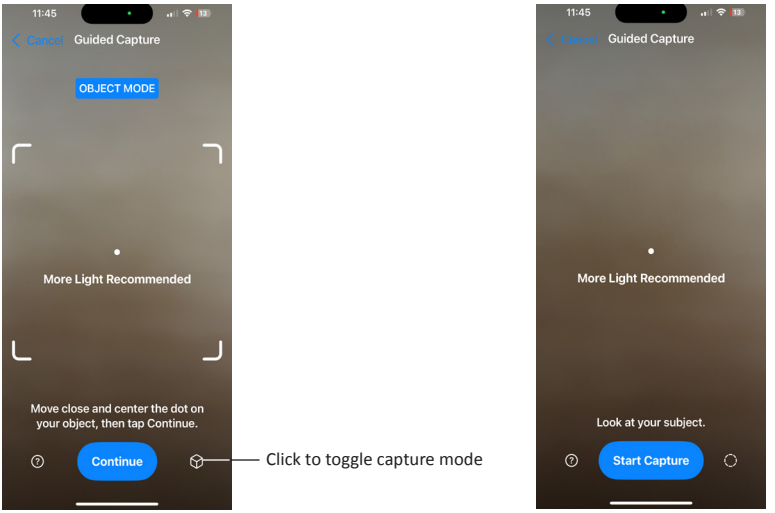
- **Best for**: Small or medium-sized objects that remain still during capture
- **How it works**: Walk around the object and take overlapping images from various viewpoints
- **Use cases**: Statues, toys, furniture, tools, and other standalone items

Area Capture Mode

Built for larger and more complex environments, Area Capture extends photogrammetry to broader spaces and surfaces, including terrain and architectural features.

- **Best for**: Larger-scale scenes and irregular surfaces
- **How it works**: Capture wide-angle shots of the space or surface you want to scan, moving steadily and methodically
- **Use cases**: Landscapes, building exteriors, murals, or ground textures

While both modes rely on the same technology, the main difference lies in scale and scope. Object Capture is ideal for precision on a single item, while Area Capture brings flexibility to full scenes and environments.

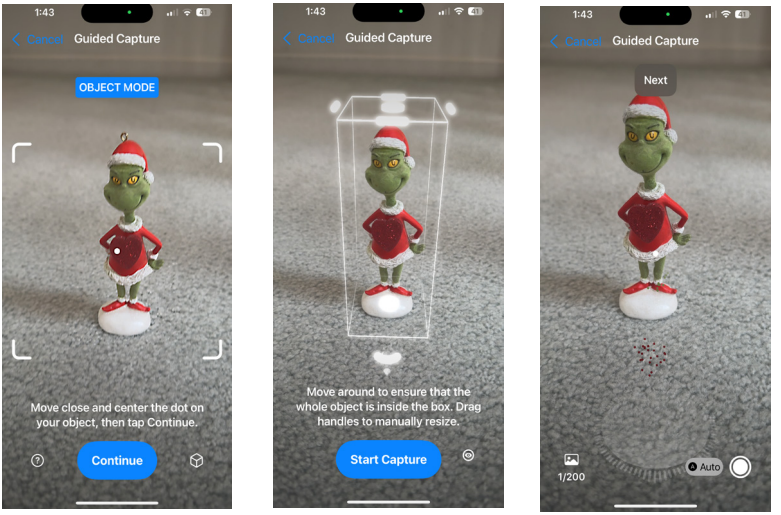


Object Capture mode and Area Capture mode

To capture images using Guided Capture:

1. From the Home screen, tap GUIDED CAPTURE.
2. Choose your capture mode by tapping the icon at the lower right corner of the screen. The “cube” icon indicates Object Capture. The “circle” icon indicates Area Capture.
3. Follow the on-screen prompts.
4. If necessary in Object Capture mode, adjust the capture area by dragging the handles of the enclosing box.
5. Press START CAPTURE and begin capturing images as you move around the object in a 360° circle.
6. Keeping the on-screen white dot centered on the subject, capture 30–50+ images covering a full 360° if possible. More images allow for greater model accuracy.
7. When using Guided Capture, your iPhone gives you a gentle haptic tap (a quick vibration) to let you know a photo has been taken. This lets you stay focused on the scan instead of watching for on-screen cues.

When finished, the images will be saved as an image set in your Library. From there you can generate a 3D model and preview it in Augmented Reality on your iPhone or send it to PhotoForge 3D Studio for refinement and high-resolution model generation. The models generated by PhotoForge 3D Studio are higher resolution due to the Mac’s processing power.



Guided Capture (Object Mode)

2. Manual Capture

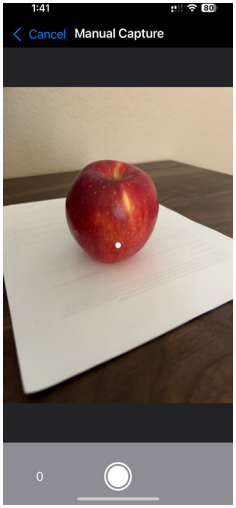
In this mode, capture images freely at your own pace while you move around your subject in a 360° circle or use a turntable to rotate the object.

Manual Capture is ideal for:

Advanced users, tripod & turntable setups, or unique angles.

To capture images using Manual Capture:

1. From the Home screen, tap MANUAL CAPTURE.
2. Center the on-screen dot on your object then tap the shutter button each time you're ready to take a photo.
3. Move around your subject smoothly in a 360° circle (or use a turntable) as you continue to take photos.
4. Capture 30–50+ images covering full a 360° if possible. More images allow for greater model accuracy. You will need to take at least 10 photos before the FINISH button is available.



Manual Capture

3. Timed Capture

In this mode, tap the shutter button once, then move freely around your subject in a 360° arc or use a turntable to rotate the object. The app will automatically capture images at regular time intervals. To adjust the time interval between captures, tap the number in the lower-right corner of the screen and select the number seconds from the pop-up menu.

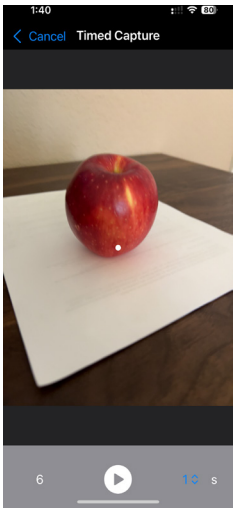
Timed Capture is ideal for:

Semi-automated capture with or without a tripod & turntable.

To capture images using Timed Capture:

1. From the Home screen, tap TIMED CAPTURE.
2. Center the on-screen dot on your object then tap the shutter button once and the app will take photos automatically at the specified time intervals (e.g., every 3 seconds).
3. Move around your subject smoothly in a 360° circle (or use a turntable) while the app captures continuously. You'll hear a shutter click at each capture.
4. To pause or stop Timed image capture, tap the shutter button.

5. Capture 30–50+ images covering full a 360° if possible. More images allow for greater model accuracy. You will need to take at least 10 photos before the FINISH button is available.



Timed Capture

Tips for Better Captures

Capturing high-quality images is essential for successful photogrammetry and 3D modeling. Whether you're photographing an object for AR, 3D printing, other other uses, following a few key practices can significantly improve your results. Below are some practical tips to help you take better captures, ensuring optimal input for 3D model construction.

- Use consistent, diffuse lighting. Avoid harsh shadows and reflections.
- Capture in 360°. Try to move around your subject evenly.
- Include overlap. Ensure each new photo shares at least 60–70% overlap with the previous one.
- Avoid transparent or shiny objects. These confuse the photogrammetry process.
- Stabilize your phone. Use both hands or a tripod for sharp images.
- To accurately capture all aspects of an object, you may need to flip it upside down to capture its underside in addition to the standard front and side angle shots. Similarly, you may need to shoot it directly from above.

Generating a 3D Model

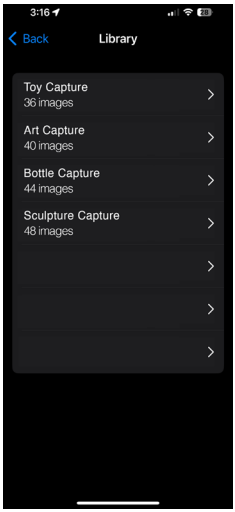
Once you've finished capturing your subject, whether using Guided, Manual, or Timed Capture, your images are automatically saved as a set in your PhotoForge 3D Capture Library. From there, you can generate a 3D model, preview it in Augmented Reality on your iPhone, or send it to PhotoForge 3D Studio for advanced editing and high-resolution export.

To generate a model directly from your image set:

1. Open Your Library

Return to the Home Screen and tap the Library button. This displays all of the image sets you've captured.

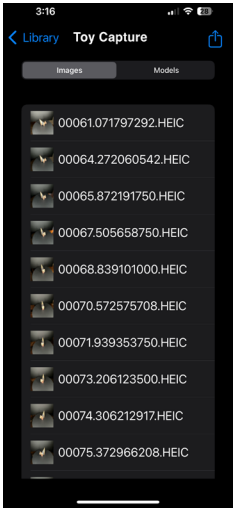
You can rename an image set in Photoforge 3D Capture by double-tapping the name of the set and typing.



Library of image sets

2. Select an Image Set

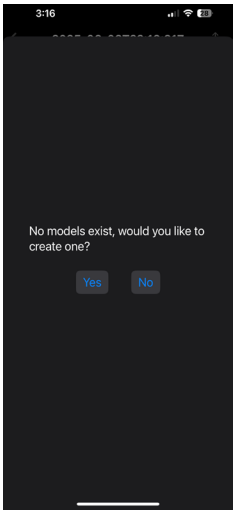
Tap the image set you want to turn into a model. You'll see a list of the captured images.



Captured images within a set

3. Tap the Model Button

This opens the model generation options for the selected image set. When prompted, tap Yes to begin creating a 3D model from the set.



Generating a 3D model

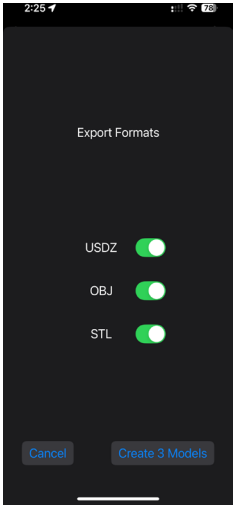
4. Choose an Export Format

You'll be asked to select a file format for the model. You can choose any or all available formats. Each one serves different purposes. Select the format that best fits your intended use.

USDZ – Ideal for Augmented Reality previews on iOS devices. Lightweight, fast to load, and compatible with Apple's AR Quick Look.

OBJ – A common format used in 3D design software, including Blender, Maya, and Unity. Great for editing, scene building, or integration into other projects.

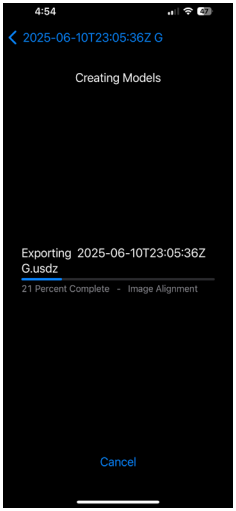
STL – The preferred format for 3D printing. It describes only the surface geometry, making it ideal for fabrication workflows.



Choosing a 3D format

5. Tap “Create Model”

The app will begin processing. When complete, the model will appear in the Models tab in your Library.



Generating a model

Viewing Your Model in AR

Once you have generated a USDZ-format 3D model of your object, you can preview it in Augmented Reality on your iPhone.

To preview your newly created model in Augmented Reality:

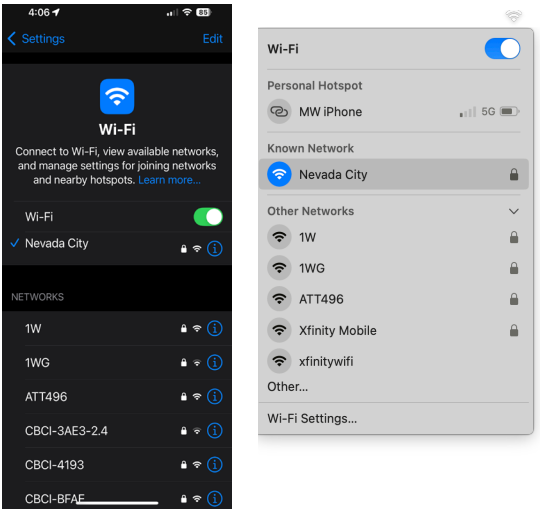
1. Open the Library and tap the image set containing your USDZ-format 3D model.
2. Tap the Model button.
3. The 3D model will load and appear within your physical environment, viewed through your iPhone’s screen.
4. Drag the object to reposition it, pinch to scale it larger or smaller, or use two fingers to rotate it in space.

AR preview of a 3D model

Using PhotoForge 3D Capture with PhotoForge 3D Studio

You can use PhotoForge 3D Capture and PhotoForge 3D Studio together to create a powerful, streamlined workflow that blends fast image capture with high-resolution model construction and refinement. This direct connection between your iPhone and your Mac is designed for speed and security, with no cloud uploads needed.

Before launching the two apps, make sure your iPhone and Mac are on the same local Wi-Fi network. Peer-to-peer tethering requires this.



Choosing the same WiFi network

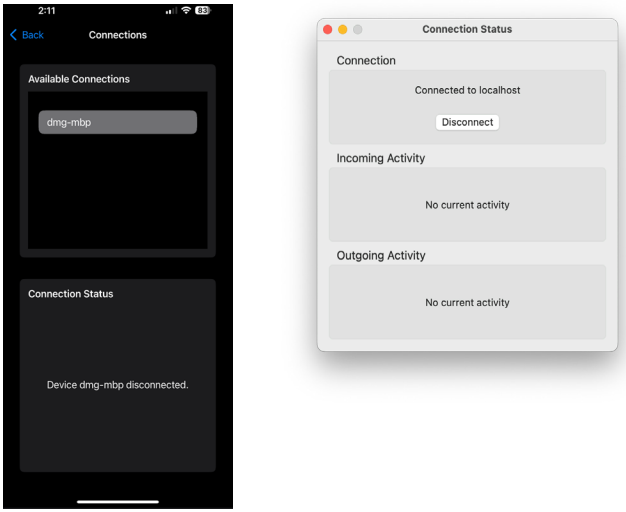
To Connect 3D Capture and 3D Studio:

1. Go to Settings on both devices and connect them to the same Wi-Fi network.
2. Open PhotoForge 3D Capture on your iPhone.
3. Open PhotoForge 3D Studio on your Mac.
4. On your iPhone you'll see a list of available devices. Tap to select your Mac when it appears to initiate the connection.
5. On your Mac, a Connection Request will appear in PhotoForge 3D Studio. Click ACCEPT to complete the connection.

Once connected, the apps are linked.

Images captured by in PhotoForge 3D Capture or transferred from PhotoForge 3D Capture's image set Library are sent instantly to Photo-Forge 3D Studio.

Once transferred (aim for at least 36 images if possible), PhotoForge 3D Studio begins building a 3D model.



Tethering 3D Capture and 3D Studio

Transferring Image sets from the PhotoForge 3D Capture Library

In addition to live capture and transfer of images to PhotoForge 3D Studio, you can also send an image set saved to your PhotoForge 3D Capture Library to the 3D Studio app. This is useful in cases where you originally captured the images when not tethered to the PhotoForge 3D Studio app.

To send a Library image set to PhotoForge 3D Studio:

1. Make sure the two apps are tethered by connecting them to the same Wi-Fi network and following the instructions on page 15.
2. On the home screen Tap LIBRARY.
3. In the Library, tap the image set you want to transfer.
4. Tap the Share icon on the upper right corner of the screen.

PhotoForge 3D Capture begins transferred the image set to PhotoForge 3D Studio where you can:

- Refine your model (scale, rotate, crop, or clean up unwanted artifacts)
- Export a high-resolution STL, OBJ, or USDZ-format 3D object for 3D printing, virtual prototyping, or immersive creative work

If you're still tethered during export, the USDZ preview is sent back to your iPhone for instant AR inspection.

 For more information about PhotoForge 3D Studio, download it from the App Store and refer to its documentation.

Using Image Sets with other Applications

Image sets captured with PhotoForge 3D Capture aren't limited to use within the PhotoForge ecosystem. Because the app stores high-resolution HEIC-format images suitable for photogrammetry, you can import them into other 3D reconstruction tools that support this format, including those available on Windows.

Popular applications like Agisoft Metashape, RealityCapture, Meshroom, and 3DF Zephyr all support model creation from standard image sets, giving you the flexibility to process and refine your scans using the software and platform that best fit your workflow

Transferring Image Sets from PhotoForge 3D Capture

To use your captured images in third-party photogrammetry software, simply export the image set and transfer it to your computer or preferred device.

There are several ways to do this:

1. Files App + AirDrop or iCloud Drive

PhotoForge 3D Capture saves your image sets in a standard HEIC format, accessible via the Files app.

1. Open the Files app on your iPhone.
2. Navigate to the PhotoForge 3D Capture folder (usually under On My iPhone or iCloud Drive).
3. Select the folder containing your image set.
4. Use AirDrop, iCloud Drive, or another supported sharing option to transfer the folder to your Mac or Windows PC.

2. Connect via USB + Finder (Mac) or iTunes (Windows)

1. Connect your iPhone to your computer using a USB cable.
2. On Mac, open Finder; on Windows, use iTunes.
3. Locate your device, then browse app files under File Sharing.
4. Select PhotoForge 3D Capture, then drag the image set folder to your desktop.

3. Third-Party File Transfer Apps

You can also use file transfer tools like Documents by Readdle, FE File Explorer, or cloud services (Dropbox, Google Drive, OneDrive) to move the image set to any device.

Once transferred, the HEIC-format images can be loaded directly into compatible photogrammetry software like Agisoft Metashape, RealityCapture, Meshroom, or 3DF Zephyr for further processing.

Importing a Model from 3D Studio

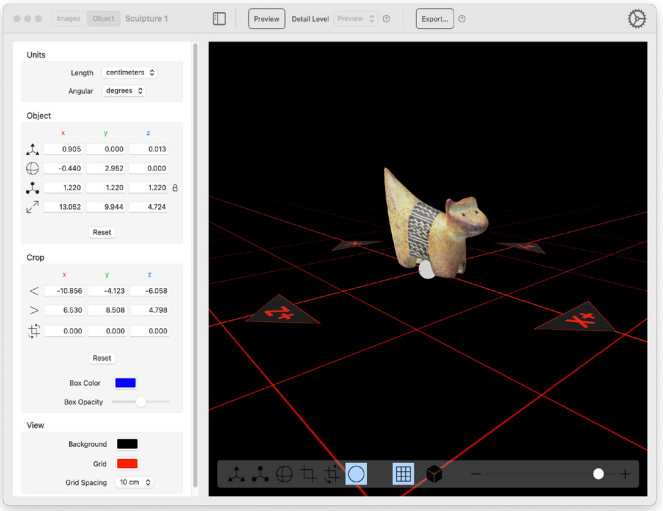
If you want to take advantage of PhotoForge 3D Studio's enhanced resolution 3D model creation, you can do so by generating a model in 3D Studio, then exporting it to PhotoForge 3D Capture while the two apps are tethered.

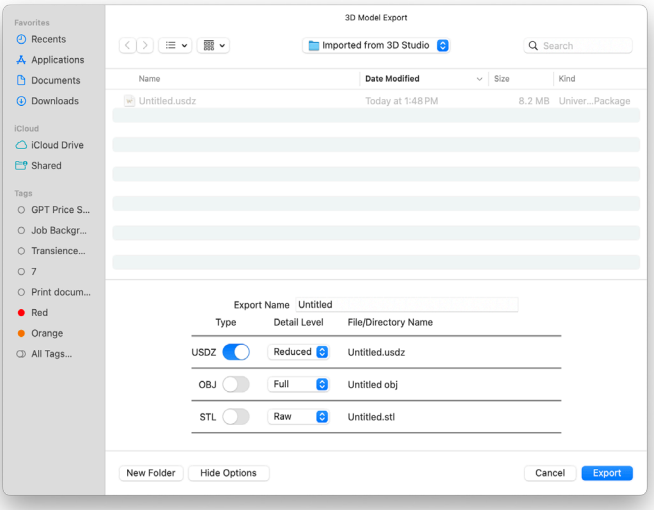
Importing a 3D model from PhotoForge 3D Studio

1. Launch both Photoforge 3D Studio and 3D Capture and follow the instructions on page 15 to tether them for peer-to-peer file transfers.
2. In Photoforge 3D Studio, open the project with the 3D model you want to send to 3D Capture.
3. In Photoforge 3D Studio click Export and create a destination folder on your Mac.
4. Once you have created the folder, choose a 3D format and click Export again. The 3D model is saved to the folder and simultaneously sent to Photoforge3D Capture where it appears within your physical environment, viewed through your iPhone's screen.

5. Drag the object to reposition it, pinch to scale it larger or smaller, or use two fingers to rotate it in space.

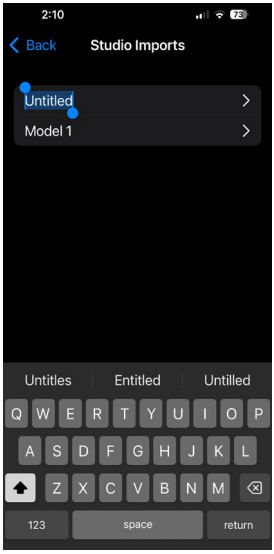
6. You can rename the 3D model in Photoforge 3D Capture by going to the Studio Imports screen, double-tapping model's name, and typing.





Choosing a 3D format

Viewing an imported 3D model



Renaming an imported 3D model

Troubleshooting & FAQ

Here are a few common questions and quick fixes.

Q: My photos aren't transferring to my Mac.

Ensure both devices are on the same Wi-Fi network.

- Relaunch both apps.
- Check that permissions for local network access are enabled on your iPhone.
- When prompted by PhotoForge 3D Capture to connect to the Photo-Forge 3D Studio app on your local network, enable the connection.

Q: When I send my images to PhotoForge 3D Studio, it says: "A model could not be created from this set of images."

PhotoForge 3D may need more images to accurately create a 3D model.

- Continue the session in PhotoForge 3D Capture and capture more images using manual or timed capture mode. Typically 30-50 images are needed for best results.
- Resend the expanded image set to PhotoForge 3D Studio.

Q: My model looks warped.

- Make sure your photos are evenly spaced and cover all angles.
- Re-capture using Guided Mode for more reliable results.

Q: Can I pause mid-capture?

- Yes. All modes allow you to stop and resume as needed. Your session is saved locally until you delete or transfer it.

Q: How do I clear old sessions?

- Swipe left on a capture set in the Library view and tap Delete.

If All Else Fails

Quit and restart the app.

Still stuck? Contact our support team at *www.eidria.com.* Include a screenshot of your screen and your macOS version. This helps us diagnose potential issues faster.

Separately, check for app updates that may resolve rare issues.