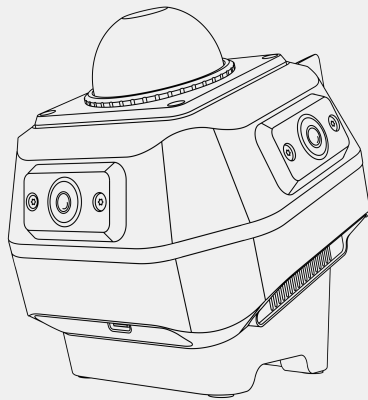


# MindPalace

Pocket 2 & Pocket 2pro

## User Manual

V0.1.0



Manifold Tech Limited  
2025.8

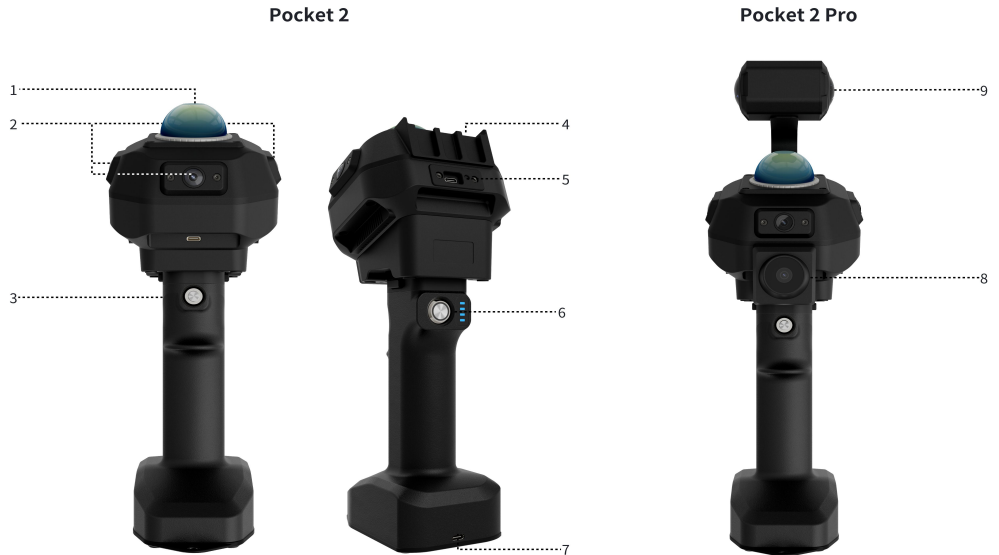
EN

# Table of Contents

1. Introduction.....	3
1.1 Physical Structure.....	3
1.2 APP Interface Diagram.....	4
2. Data Acquisition Process.....	5
2.1 Device Connection.....	5
2.2 Scanning Operation.....	5
3. Detailed Function Description.....	8
3.1 Control Point Function.....	8
3.2 Annotation Function.....	8
3.3 Offline Mapping.....	10
3.4 Camera Preview.....	11
4. Usage Q&A.....	12
5. Troubleshooting Q&A.....	12

# 1. Introduction

## 1.1 Physical Structure of Pocket 2 & Pocket 2pro

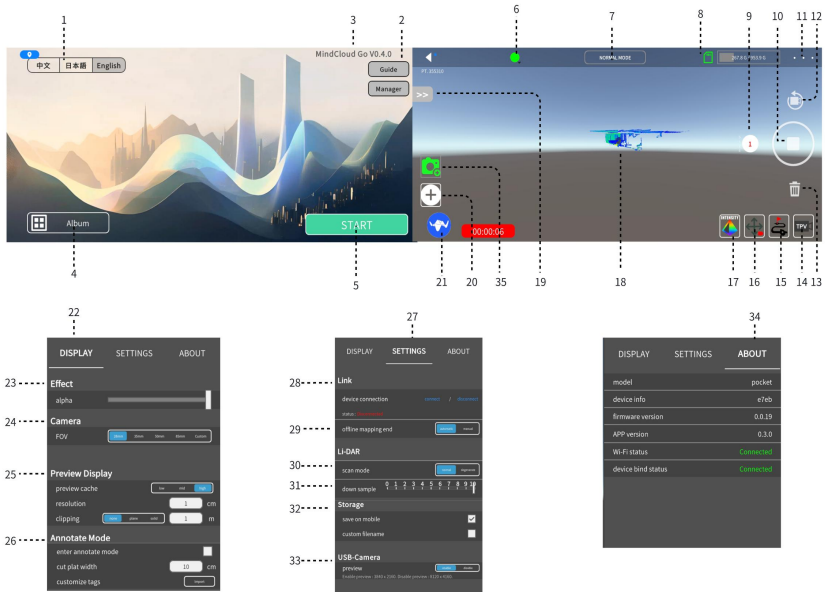


- |                                   |                                 |                                |
|-----------------------------------|---------------------------------|--------------------------------|
| 1. LiDAR                          | 5. Data Transfer Port           |                                |
| 2. SLAM Camera                    | 6. Power Button/Indicator Light | 9. Dual 50MP Panoramic Cameras |
| 3. External Camera Shutter Button | 7. Charging Port                |                                |
| 4. Expansion Hot Shoe Port        | 8. External Macro Camera        |                                |

**\*The external macro camera is an optional accessory.**

**\*The dual 50MP cameras are standard for Pocket 2 Pro; Pocket 2 does not include this component.**

## 1.2 APP Interface Diagram



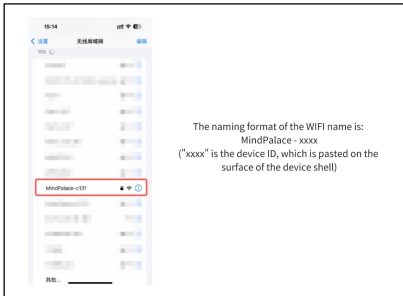
- |                                     |                             |                                      |  |
|-------------------------------------|-----------------------------|--------------------------------------|--|
| 1. Language switch                  | 7. Radar scanning mode      | 13. Clear the preview point cloud    | 19. Viewpoint movement virtual joystick      |
| 2. User manual/log                  | 8. SSD status and storage   | 14. Switch camera view               | 20. Control point acquisition                |
| 3. APP version                      | 9. Preview point cloud size | 15. Show/hide trajectory             | 21. Point cloud preview window full screen   |
| 4. Historical project set           | 10. Start/stop recording    | 16. Follow mode / Wander mode        | 22. Display Settings                         |
| 5. Enter scanning control interface | 11. Settings menu           | 17. Switch point cloud coloring mode | 23. Point cloud preview transparency         |
| 6. Device status                    | 12. Restore initial view    | 18. Point cloud preview window       | 24. Point cloud preview window viewing range |
- 
- |   |   |
|---|---|
| <p>25. <b>Preview Settings</b></p> <ul style="list-style-type: none"> <li>Preview point cloud quantity limit: This refers to the maximum number of point clouds that can be displayed in the preview window. It can be adjusted according to the performance of the mobile phone.</li> <li>Preview point cloud point spacing: The number represents the point cloud density reduction distance. The larger the number, the greater the point spacing. The range is 1 to 10.</li> <li>Preview point cloud by distance clipping: It can be clipped according to plane/solid. The number represents the distance in front of the device as the origin, in meters.</li> </ul> | <p>29. <b>Offline mapping mode</b></p> <ul style="list-style-type: none"> <li>Automatic: The scan will automatically end 15 seconds after the APP is disconnected from the device.</li> <li>Manual: After starting the scan, you can disconnect the phone from the device. You must reconnect and then click the "End Recording" button to end the scan.</li> </ul> |
| <p>26. <b>Annotation Mode</b></p> <ul style="list-style-type: none"> <li>Enable/Disable Annotation Mode</li> <li>Section Thickness: The number represents the thickness of the point cloud plane slice</li> <li>Custom Labels: Can import a label text set, which can be used to quickly select the desired label name during annotation</li> </ul>   | <p>30. <b>Scanning mode</b></p> <ul style="list-style-type: none"> <li>Degraded mode: Suitable for scenarios with highly consistent environmental characteristics such as tunnels, long corridors, and underground passages.</li> <li>Normal mode: Suitable for the vast majority of environments except for the degraded scenarios.</li> </ul>                     |
| <p>27. <b>Collection settings</b></p>   | <p>31. <b>Downsampling ratio:</b> Adjust the proportion of the number of receiving points in the mobile device. This setting is made before scanning based on the performance of the mobile device.</p>   |
| <p>28. <b>Device connection status</b></p>  | <p>32. <b>Storage</b></p> <ul style="list-style-type: none"> <li>Store to mobile phone: Once enabled, it will store the previewed point cloud locally on the mobile device and supports offline viewing in the history project list.</li> <li>Customize file name: Once enabled, it supports custom naming of the file before starting the scan.</li> </ul>         |
|   | <p>33. <b>Macro Camera Preview Video Switch</b></p> <ul style="list-style-type: none"> <li>On: Supports camera preview, but photos are captured in 4K resolution.</li> <li>Off: Disables video preview; photos are captured in 8K resolution and support photo preview.</li> </ul>  |
|   | <p>34. <b>Equipment Information</b></p>   |

**\*The macro camera preview switch option only appears when the macro camera hardware is installed.**

## 2. Data Acquisition Process

### 2.1 Device Connection

**Step 1:** Connect to device Wi-Fi via mobile Wi-Fi settings.



**Step 2:** Verify device status and storage operation indicators are lit green.

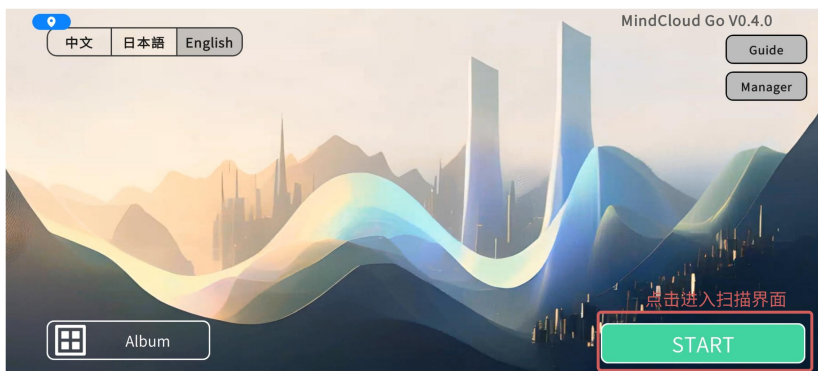


If Wi-Fi fails to connect or the APP shows "Not Connected", check and try:


- Disable mobile data on your phone 's SIM card.
- When connecting to Wi-Fi, select options like "Trust this Wi-Fi" or "Keep Connected" to maintain a stable connection.
- Disable network proxy or traffic-intercepting software like VPN (if enabled).
- Turn off advanced WLAN settings such as "Dual Wi-Fi Acceleration", "Smart Wi-Fi Selection", "Data Network Boost", or "Auto-Switch Data Network" (if enabled).

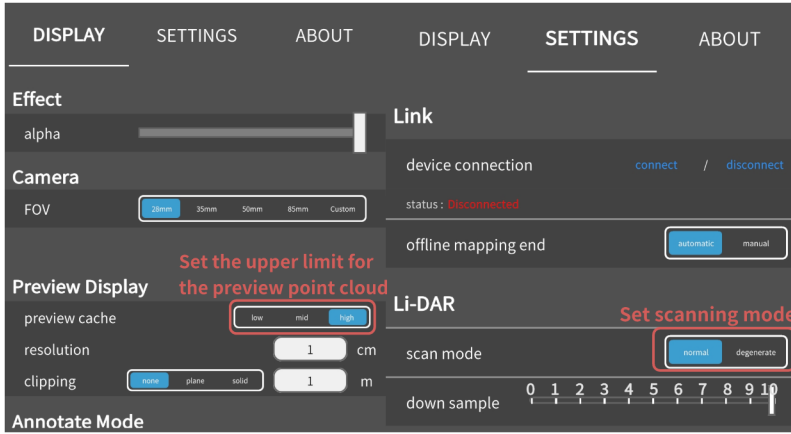
### 2.2 Scanning Operation

- On the main interface, click "Start" to enter the scanning page.



- Enter the settings page and switch the scanning mode according to the actual situation. If the phone performance is poor, please adjust the upper limit of the preview point cloud to a lower value.


 Except for the radar scanning mode, all other settings will not affect the original data.

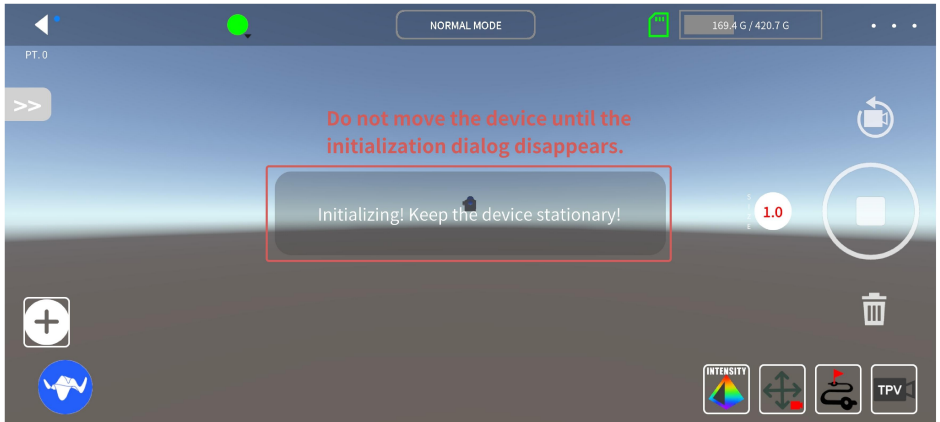


- Place the device on a relatively level surface and click "Start Recording"

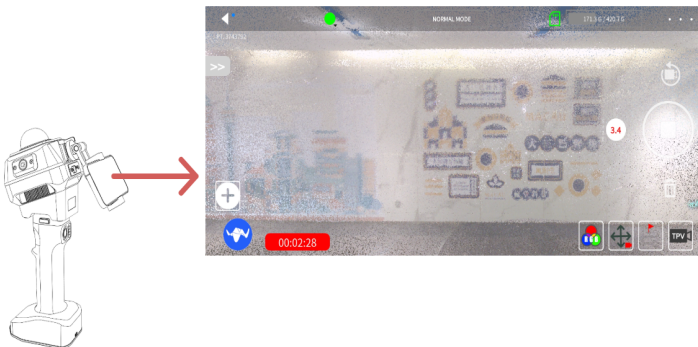


- Once the initialization prompt disappears, you can pick up and move the device for scanning.

 Do not move the device before the initialization prompt window disappears.



- During scanning, hold the device vertically to the ground, keeping it in front of your body. Monitor point cloud completeness via the APP preview interface and rescan any missing areas promptly.



- After scanning, click "Stop Recording" to end the scan.

📌 The device is prohibited from being powered off or disconnected from the power supply until the file save prompt window disappears.

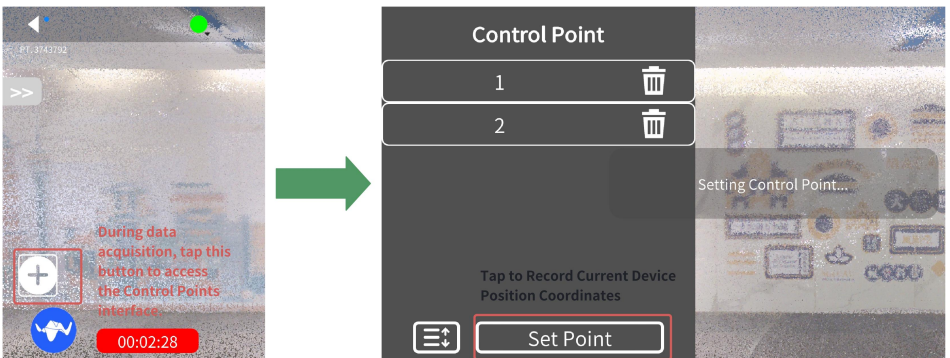


### 3. Detailed Function Description

#### 3.1 Control Point Function

During scanning, you can collect coordinates of known ground points for post-processing point cloud coordinate transformation.

📌 Before collecting the control points, please align the observation hole at the bottom of the equipment with the center of the ground target.

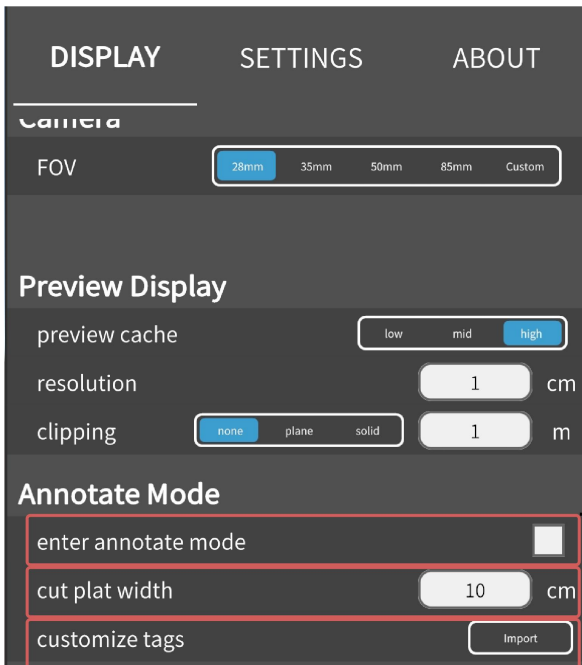


### 3.2 Annotation Function

This function is useful for forest scenarios or when recording spatial coordinates of specific objects.

Before scanning, enable annotation mode via "Settings" "Display" "Annotate Mode".

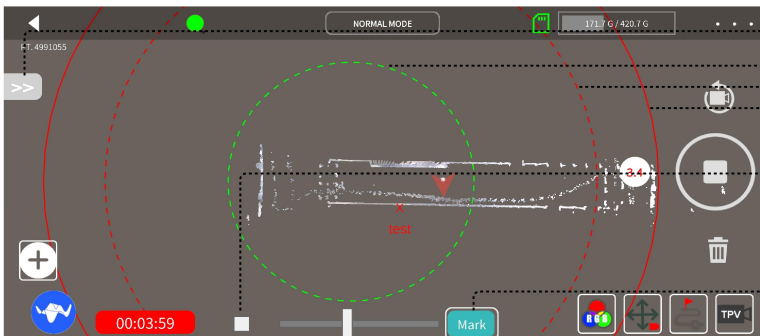
After enabling this function, the point cloud preview will default to the top-down view, and the point cloud will be sectioned according to the preset thickness. After the scan is completed, a.csv text file containing the recorded annotation information will be generated in the result folder.



Tick this option to activate Annotation Mode

Set Profile Thickness

Import Label Library File



Enable Virtual Navigation Controller

Three concentric circles indicate distances of 10m, 20m, and 25m from the scan start point.

After activation, the profile height can be manually adjusted via the sliding rail. When turned off, it will default to dynamically changing according to the height of the equipment.


Annotation mode: During the scanning process, if you click this button, the point cloud view will be locked and you can annotate the point cloud by clicking on the screen. Once the annotation is completed, it will automatically exit.

### 3.3 Offline Mapping

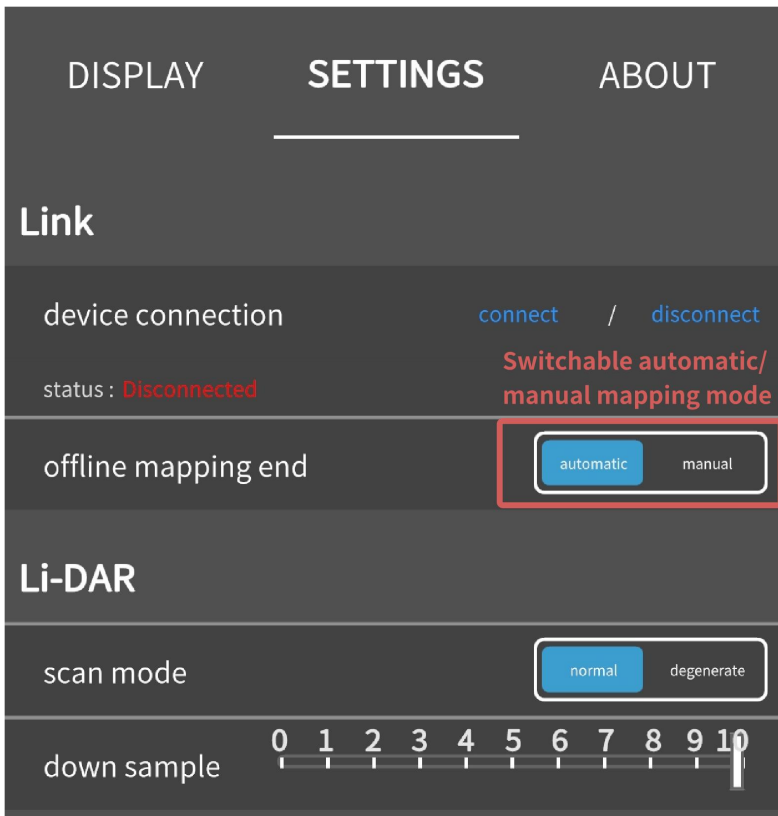
This function is for scenarios requiring scanning without a phone connection.

**Automatic Mode:** After scanning starts, disconnecting the phone for 15 seconds ends the scan automatically.

**Manual Mode:** Disconnecting the phone does not end the scan; you must reconnect and end it via the APP.

 Please switch this mode before the scanning begins.

In manual mode, the scanning process will not be terminated except by clicking the "End Scan" button in the APP. In any other situation, the scanning will continue. If the device runs out of battery and is shut down before clicking the "End" button in the APP, the current scanning data will not be saved.



### 3.4 Camera Preview

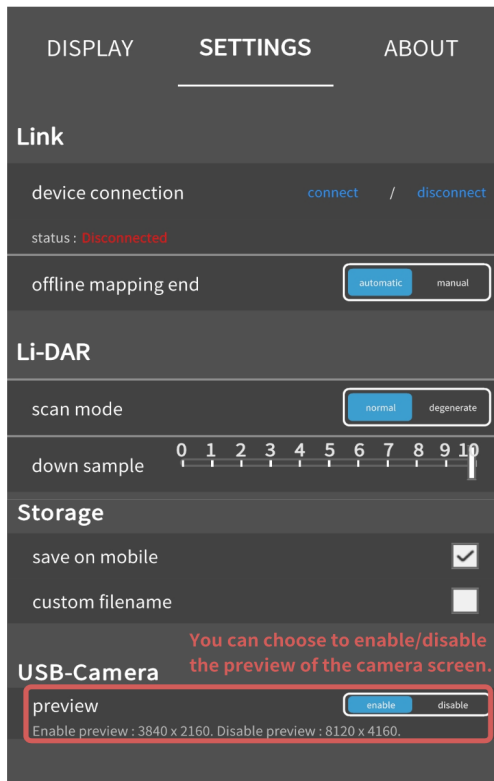
This function controls whether to enable the macro camera's image preview.

Note: This option only appears when the macro camera hardware is installed.

On: Enables camera preview, but photos are captured in 4K resolution.

Off: Disables video preview; photos are captured in 8K resolution and support photo preview.

**⚠** When using the macro camera, the focus time is over 0.5 seconds —hold the device steady before taking photos.



## 4. Usage Q&A

**Q.** How to choose the scanning radar mode?

**A.** Currently, there are Normal and Degraded modes. Use Degraded mode in environments with high feature similarity or low light; use Normal mode otherwise. The mapping algorithms differ in logic between modes.

**Q.** How far can the device be from the phone?

**A.** The device and phone communicate via Wi-Fi. Considering potential environmental interference and data volume fluctuations, mount the phone on the device using a holder and avoid separation.

**Q.** Can point clouds stored on the phone be exported?

**A.** If "Store on Mobile Device" is enabled in APP settings, you can view historical project point clouds when disconnected. Click "Upload" in the menu to generate a downloadable web link. (Note: Uploaded data is stored on our servers; ensure it is non-confidential.)

**Q.** What's the difference between the downsampling ratio in radar settings and the preview point limit in display settings?

**A.** Both reduce mobile performance load for smoother point cloud previews. The downsampling ratio controls points received by the APP ; the preview point limit caps displayed points. They can be set separately or together.

## 5. Troubleshooting Q&A

**Q.** Unable to find the device Wi-Fi.

**A.** Restart the device or try with another phone. Check if the environment has many Wi-Fi signals and retry in a different location.

**Q.** After connecting to the device Wi-Fi, the APP cannot establish a connection.

**A.** Check if another phone is already connected to the device.

**Q.Blank Screen After Launching APP**

**A.**Check if the app has location permission on your phone. Restart the app after granting location access.

**Q.Gradual Lagging or Crashes During Scanning**

**A.**Reduce the "Preview Point Limit" and increase the "Accuracy Value" in the app ' s display settings.

**Q. Delayed Device Icon/Point Cloud Updates in Preview**

**A.** If unrelated to phone performance:

-Restart the device and retest.

-If unresolved, contact after-sales support.

**Q. "Connection Interrupted" Prompt During Scanning**

**A.** Please turn off your mobile network and ensure that Wifi remains connected all the time. If the automatic reconnection fails in the APP interface, please change your phone for testing and report this phone model to the after-sales service. (For iPhone, please keep the APP always on the front screen and the screen always lit up.)

**Q.** After the scanning begins or during the scanning process, there is point cloud drift.

**A.** Make sure the device remains stationary until the initialization pop-up window disappears after clicking the start scanning button. Please restart the device and try again. If the problem persists, please contact the after-sales service.

**Q.Yellow Status Indicator in APP**

**A.** Tap the status indicator to identify the faulty module. If overheating is detected, allow the device to cool before reuse. For other issues, restart the device and test with a different phone. If unresolved, contact after-sales support.