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WANYEE 6005

wy3DViewer User Manual V1.3.0

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WANYEE 6005 document

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Revision History

VERSION	DATE	AUTHOR	COMMENTS
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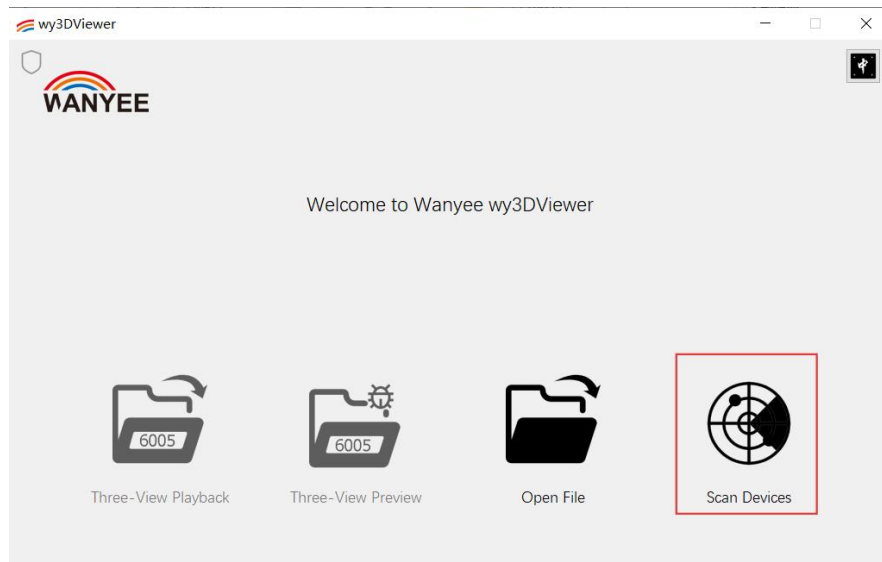
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1 Scan Devices

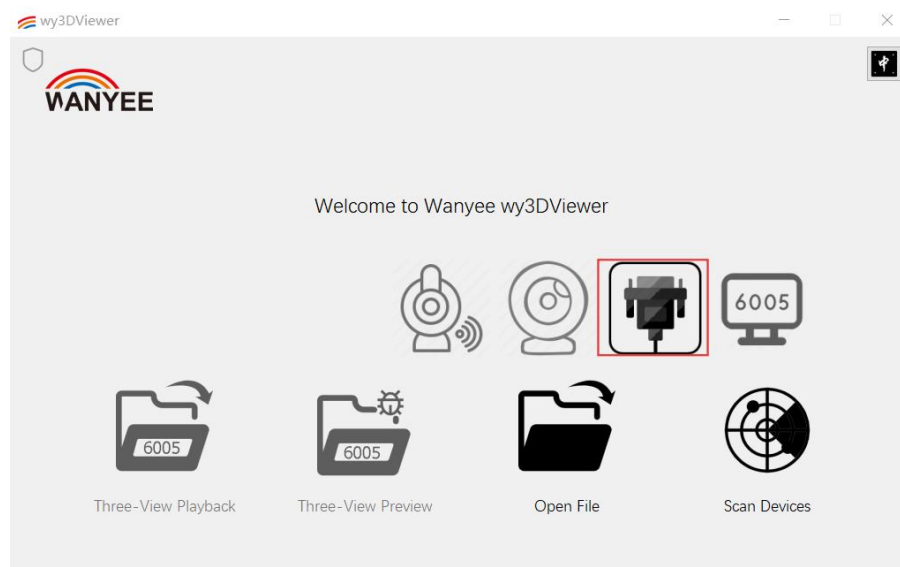
1. Connect the WY6005 to the PC via USB.
2. Open the 'wy3DViewer' PC suite.
3. Click 'Scan Device'.

Figure 1-1 Scan Devices



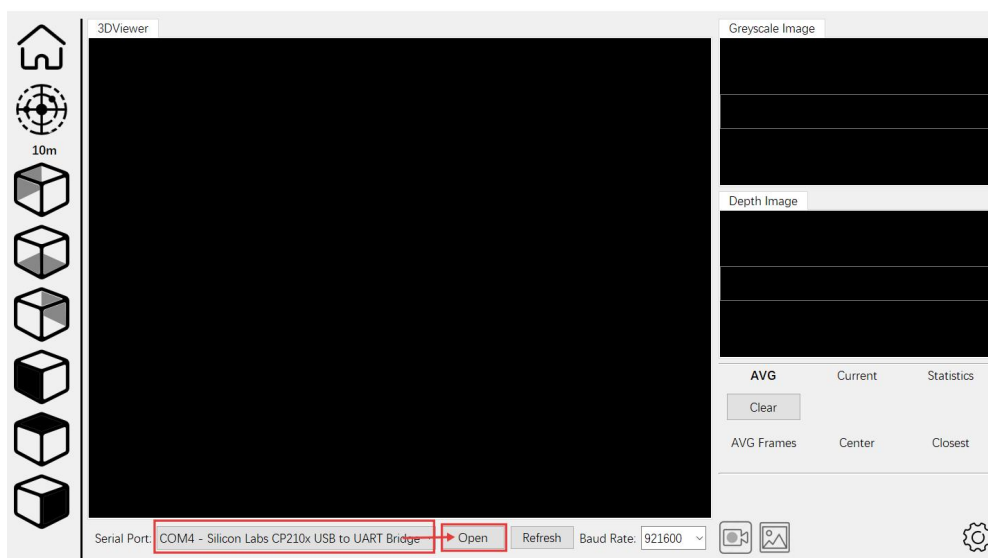
4. Click on the 'Serial Port' device icon (provided that the 'Serial Port' device icon is dark black).

Figure 1-2 "Serial Port" Device Icon



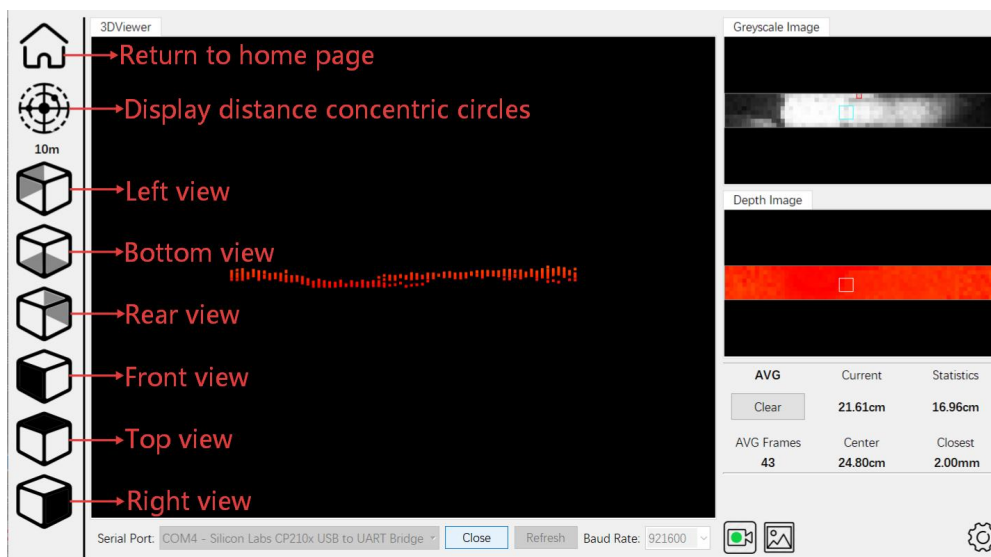
5. After the WY6005 device is successfully scanned, select the corresponding serial port to open it, and it will enter the point cloud map interface. If no serial port is recognized, please check whether the driver is installed successfully.

Figure 1-3 Serial Port Recognition



2 Function Introduction

Figure 2-1 Introduction to Some Features



Clear: Clear the accumulated frame count and calculated values.

Current: Average distance at key points of the current frame (average of the 9 central points of the current frame, excluding the maximum and minimum values, averaging the remaining 7 values).

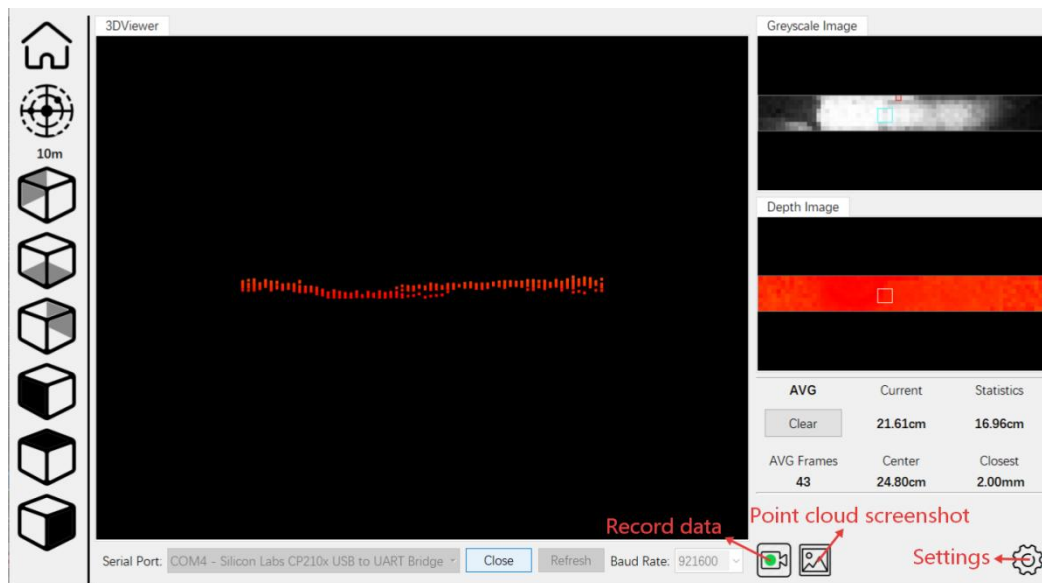
Statistics: Cumulative frame average, using the Current value to calculate the cumulative average.

AVG frames: Total number of frames.

Center: The actual distance of the current frame's center point.

Calculate: The distance calculated using attribute graph data in the current frame.

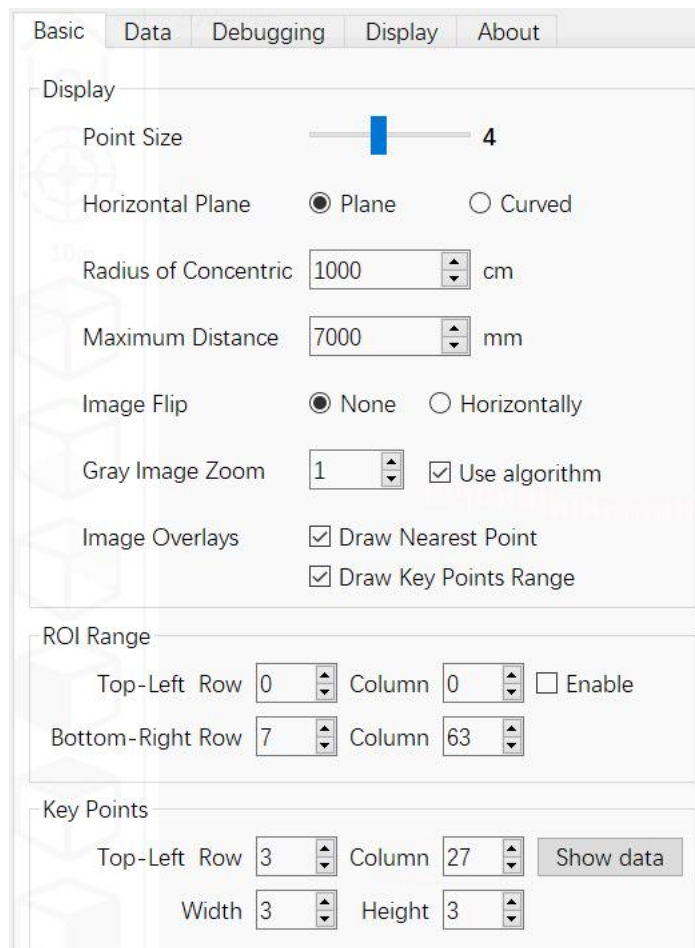
Figure 2-2 Introduction to Some Features



3 Settings Interface

3.1 Basic Interface:

Figure 3-1 Basic Interface



Point Cloud Size: Adjust the display size of each point in the point cloud.

Plane: Indicate the display perspective of the point cloud in the point cloud view.

Concentric Circles: Displays device-centered concentric circles with adjustable radius.

Maximum Distance: Not the actual range.

Image Flip: Mirror flip display effect.

Gray image Zoom: Optimize display.

Image Overlays:

Draw Nearest point: Toggle the display of red squares in the grayscale image.

Draw Key Point Range: Light blue boxes in the grayscale image and white boxes in the depth image show the toggle.

ROI Range: Selectively mask/retain partial areas within the field of view.

Key Points: Areas that output distance information in real time.

3.2 Data Interface:

Figure 3-2 Data Interface

The screenshot shows the 'Data' tab of the Wanyee software interface. It contains several sections for configuring measurement parameters:

- Camera Section:**
 - Focal Length: 0.6200 (mm)
 - Horizontal FOV: 160 (°)
 - Vertical FOV: 20 (°)
 - Optical area:**
 - Width(mm): 2.2000
 - Height(mm): 0.2700
- Calculation Section:**
 - Delta-T: 60
 - Accuracy: 0.0965
- Coefficient Tables:**
 - Short Distance Coefficient:**
 - A2: -0.0002047554
 - B2: 1.3241714741
 - C2: -21.5269371210
 - Long Distance Coefficient:**
 - A: -0.0000004514
 - B: 0.9340418644
 - C: 165.5519115478
- Issue Params Section:**
 - Buttons: Stream Off, Issue Params, Save Config, Stream On
 - Radio buttons: Long Distance, Short Distance (selected)
 - Buttons: Read Device Information, PEAK DATA, DISTANCE, DEPTH DATA, POINT DATA

Red annotations on the interface include:

- 'Can be operated after closing stream' with an arrow pointing to the 'Stream Off' button.
- 'Switch between long and short distances' with an arrow pointing to the 'Issue Params' button.
- 'Select data format' with an arrow pointing to the 'PEAK DATA', 'DISTANCE', 'DEPTH DATA', and 'POINT DATA' buttons.

The Data interface parameters are read-only, and all parameters are demo data. In the issued parameters section, you can switch the device between near and far measurement states and change the data output format by turning off the stream.

If the measurement target is within 1 meter, please use the short-distance mode. For 1 to 5 meters, please use the long-distance mode.

PEAKDATA format is processed and calculated on the host computer. Since the data is demo data, the other three types of data are calculated on the device side.

DISTANCE: Only the D value, that is, distance information.

DEPTHDATA: Depth information.

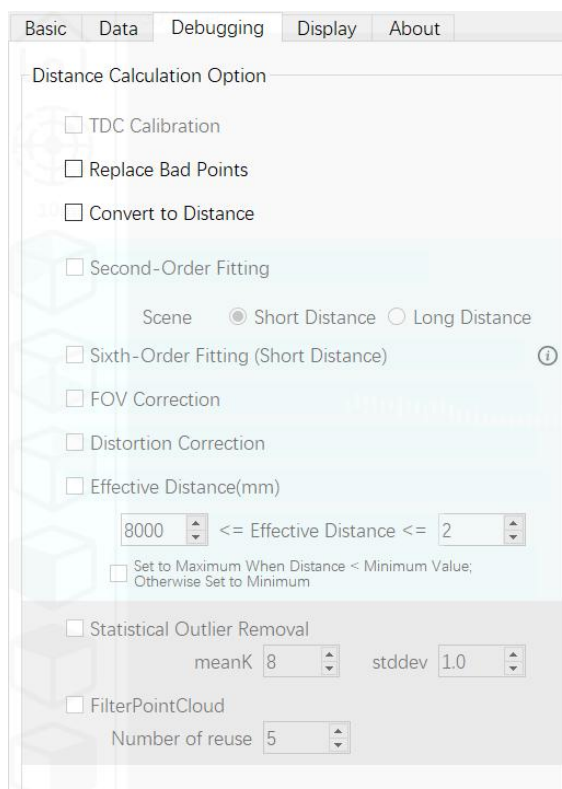
POINT DATA: x, y, z output format.

There is no need to click save when the device is powered on continuously; once the setup is complete, you can start streaming to save them.

3.3 Debug Interface:

The Debug interface is a non-configurable interface, and there is no need to configure this interface when not outputting peakdata.

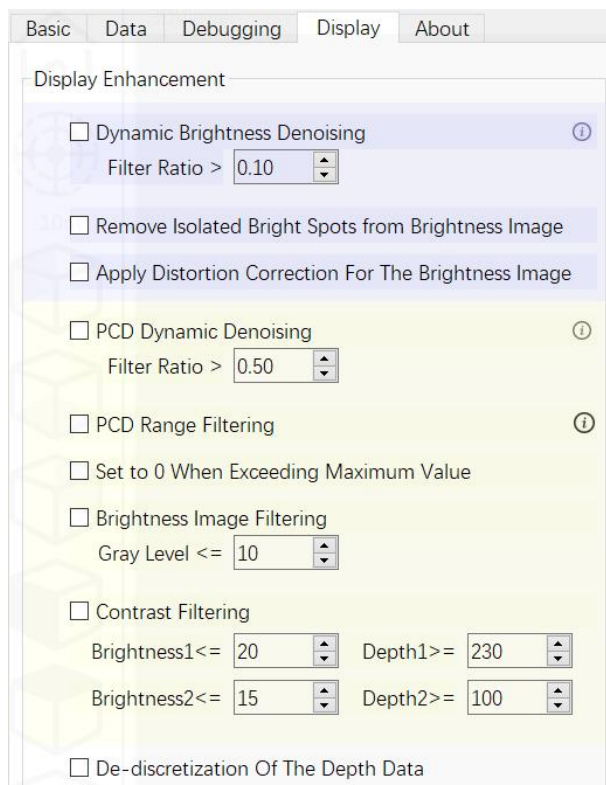
Figure 3-3 Debug Interface



3.4 Display Interface:

The Display interface allows each functional item to adjust the visual effects of the application interface, filter noise and clutter, highlight the main target object, and can be freely controlled and adjusted.

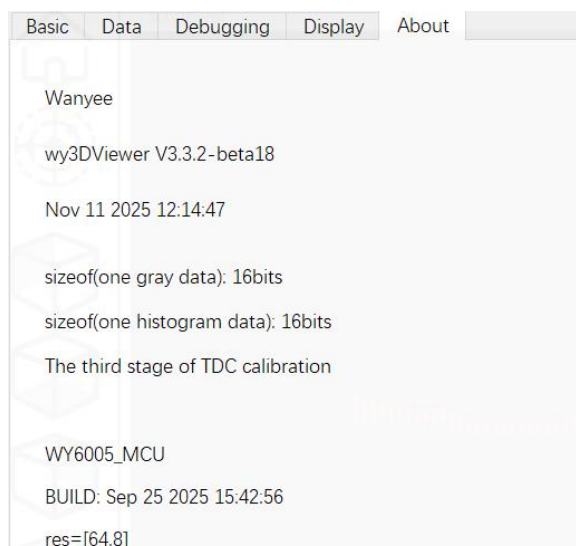
Figure 3-4 Display Interface



3.5 About Interface:

The About interface displays basic version information

Figure 3-5 About Interface



4 Other Operating Instructions

4.1 Clear

Clicking 'Clear' will reset and refresh the values of Current, Statistics, AVG Frames, Center, and Calculated.

4.2 Video Recording

4.2.1 Record Video:

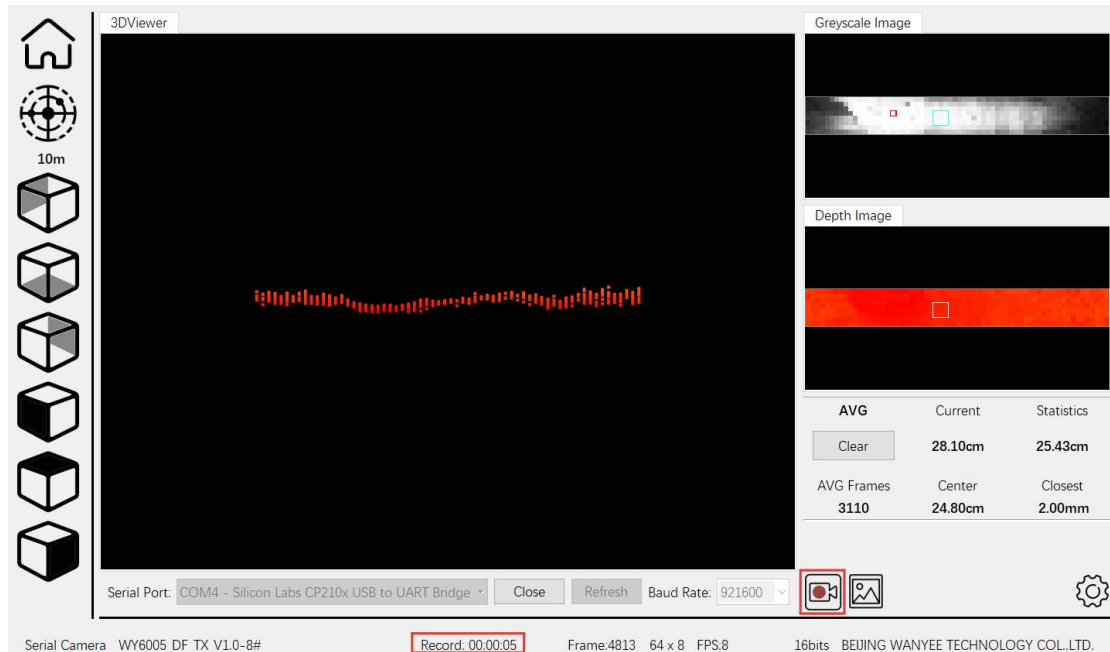
1. Click the 'Record' icon in the point cloud interface of the PC suite.

Figure 4-1 Video Icon



2. After clicking the 'Record' icon, the green dot inside the record icon will turn red, and the recording duration will be displayed below.

Figure 4-2 Prompt During Recording



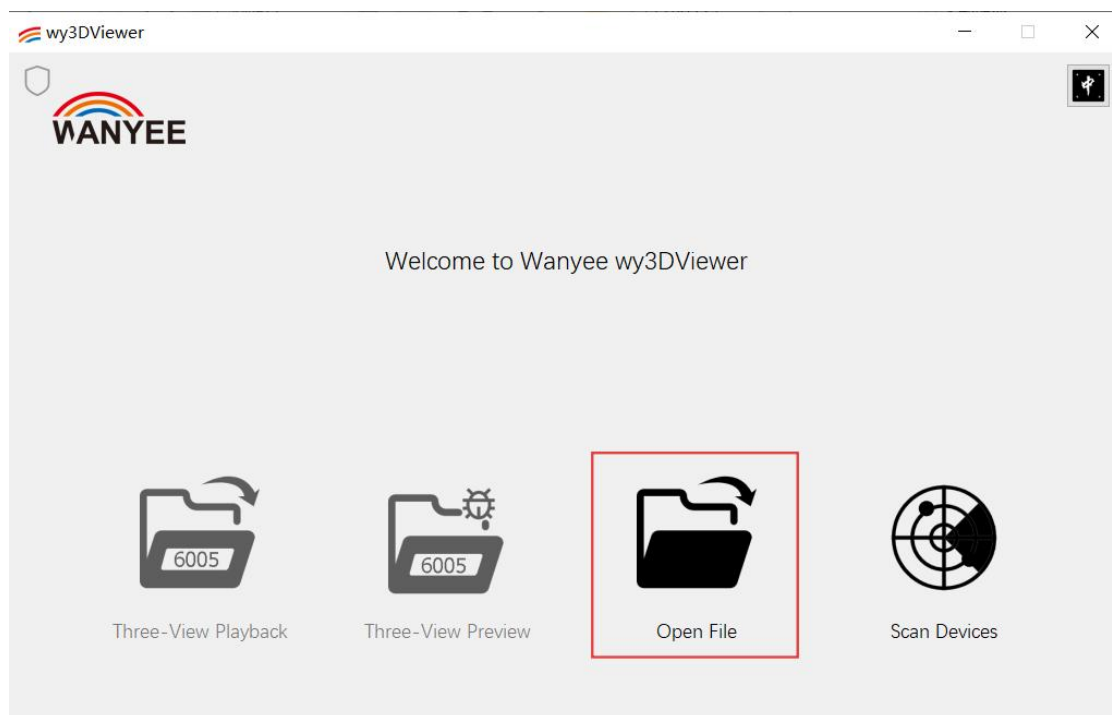
4.2.2 Watch Video:

1. After the recording is complete, click the 'Home' icon on the point cloud interface in the PC suite to go to the homepage.

Figure 4-3 Return to Home

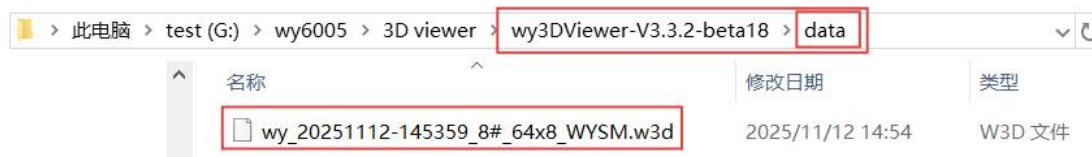


Figure 4-4 Open File



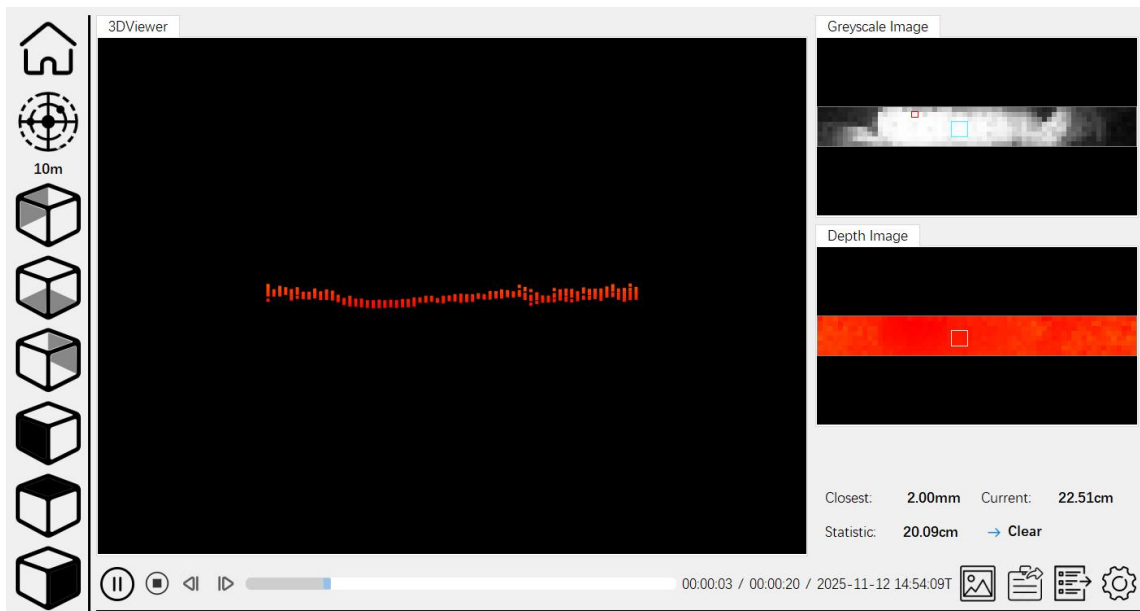
2. Depending on different needs, you can click on different ways to view recorded videos, which are saved by default in the data directory.

Figure 4-5 Video File Format



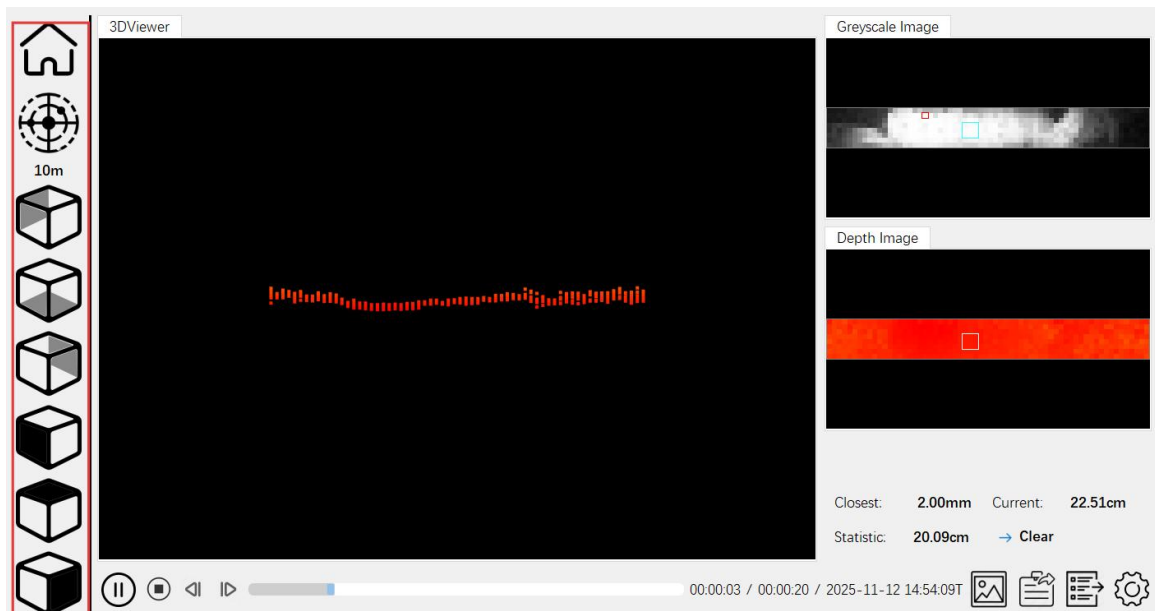
3. Double-click the video file you want to view to go to the playback interface.

Figure 4-6 Playback Interface



4.The functions and settings on the left side of the playback interface — Point Size, Field of View, and Concentric Circles on the basic interface — can be used during the point cloud playback process.

Figure 4-7 Playback Interface Features



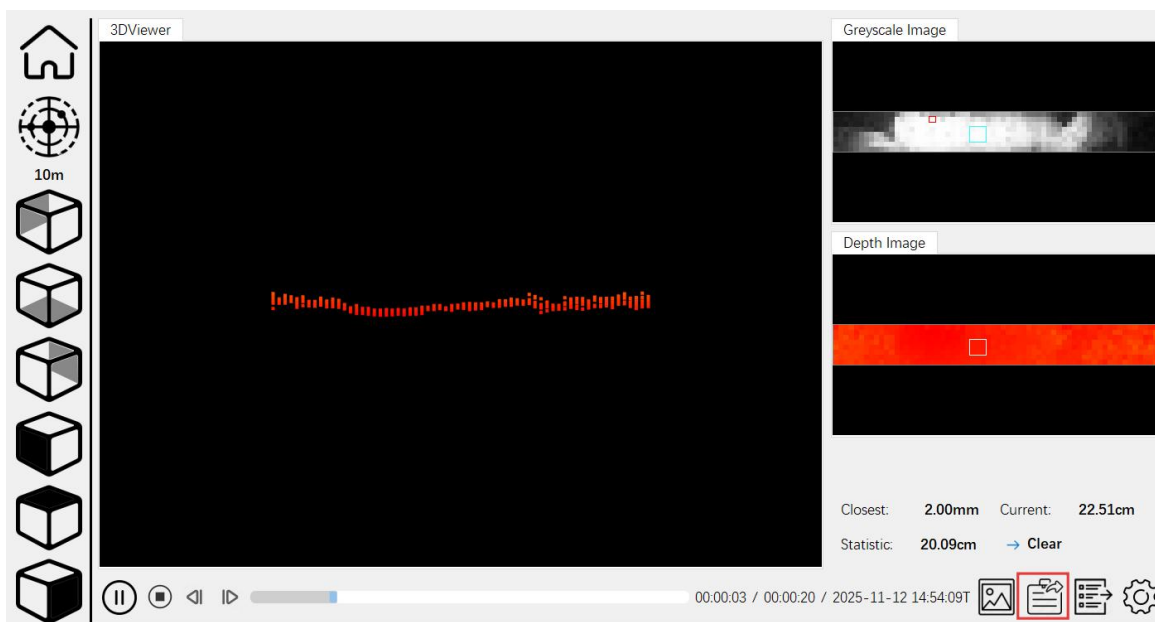
5.After pausing, the fast forward and rewind buttons can be used as follows: a single tap steps one frame forward or backward; holding the button continuously steps through frames.

4.3 Export Keyframe Data

Keyframe data only exports the preset key point position data for each frame.

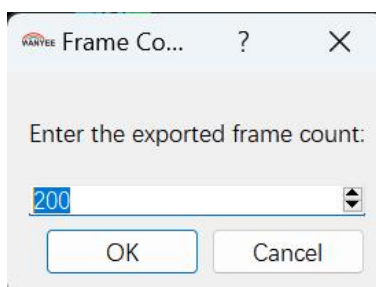
1. Click the 'Export Keyframe Data' icon on the video playback interface.

Figure 4-8 Export Keyframe Data Icon



2. Enter the number of frames you want to export in the keyframe export interface and click "OK" (Note: When exporting data, the playback video must be in the playing state).

Figure 4-9 Inquiry Prompt



3. After the keyframe data is exported, a prompt will appear on the playback interface, and the exported keyframe data document can be viewed under "data".

Figure 4-10 Complete Prompt

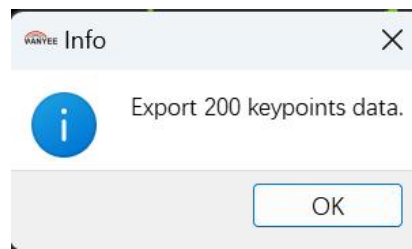
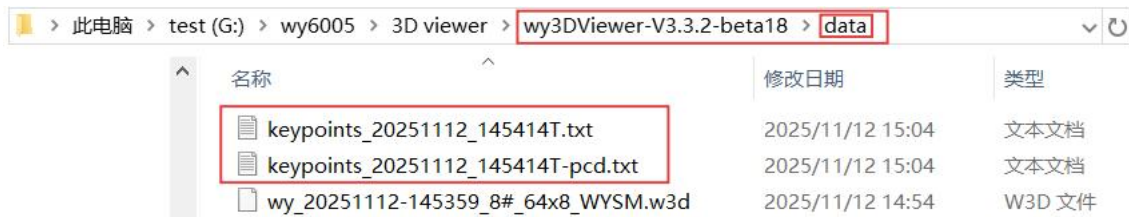


Figure 4-11 Data Documentation

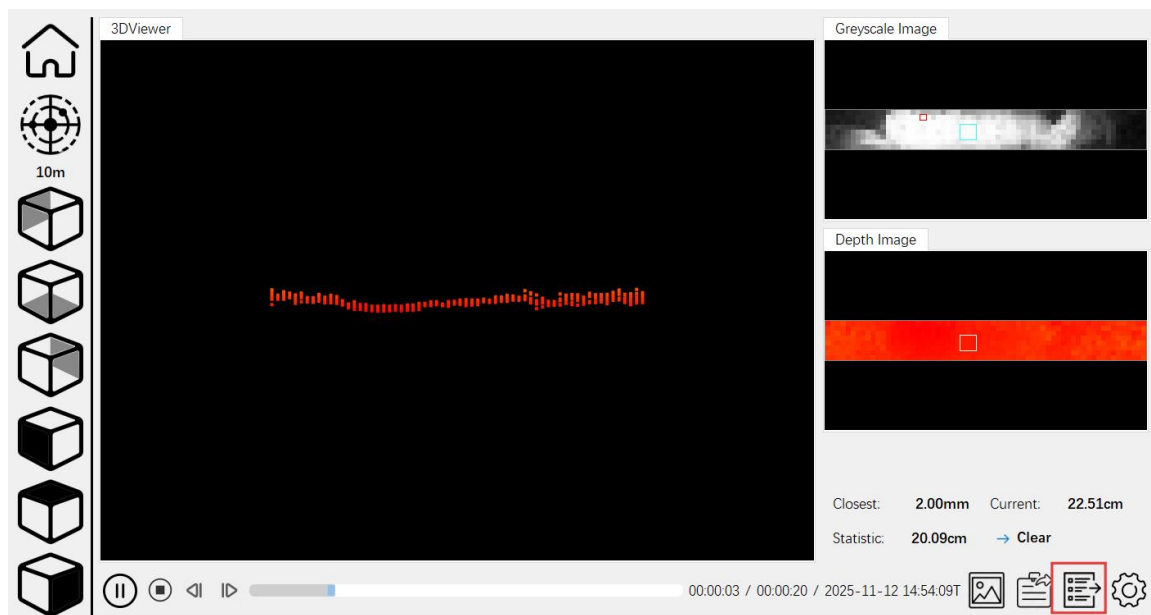


4.4 Export Full Frame Data

The full frame data only exports the 512 points of each frame.

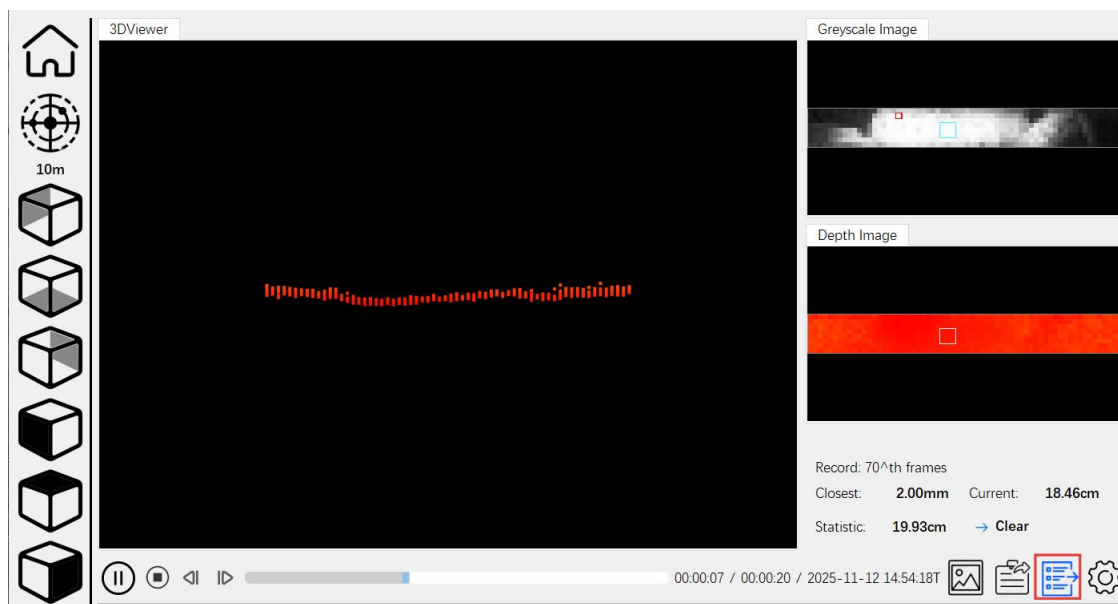
1.Click the 'Export Full Frame Data' icon on the playback interface.

Figure 4-12 Export full frame data icon



2.When exporting data, the interface is shown as in the figure below. The 'Export Entire Frame Data' icon is highlighted, and the interface displays the number of frames being exported (Note: During data export, the playback video must be in a playing state).

Figure 4-13 Prompt When Exporting Full Frame Data



3. After exporting the full-frame data, the playback interface will pop up a prompt showing the total number of full-frame data exported, and you can view the exported keyframe data documents under 'data\points'.

Figure 4-14 Complete Prompt

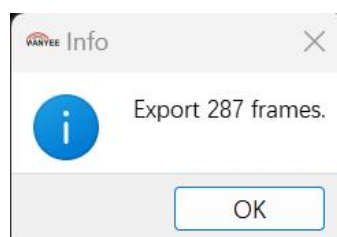
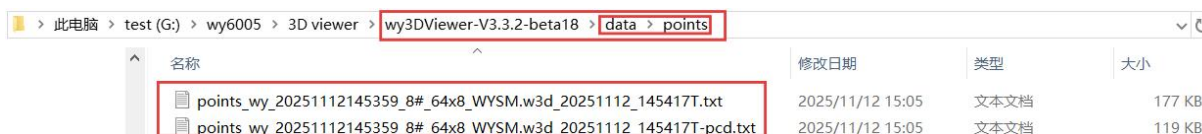
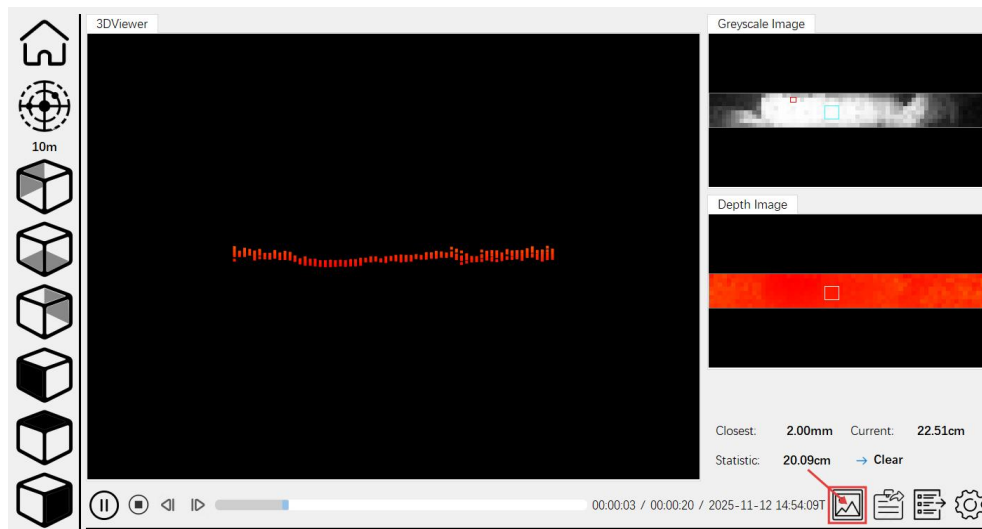


Figure 4-15 Data Documentation



4.5 Point Cloud Screenshot:

Figure 4-16 Camera Icon



Refers to taking photos or screenshots of a point cloud video that is currently being played back.

1.Click the 'Point Cloud Screenshot' icon on the file playback interface.

2.Take a photo of the currently playing point cloud video and save it under 'data\capture'

Figure 4-17 Image File Format

