QUICK START GUIDE

Multi-Modes, Versatile, Metrology-Grade 3D Scanner

for **ATLA***SCAN* Max

Apr. 21st, 2024

HEXAGON

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1. PRECAUTION

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1. PRECAUTION

Device Maintenance

- The scanner contains precision optics, so be careful to avoid damaging its internal components or calibrating the system.
- Please try to place scanner in carrying case when not using and store in a dry, dust-free, room temperature environment.
- Before starting the project, please ensure that the working environment is neat and orderly, and the cable is placed well. If the project is temporarily interrupted, the device should be placed on a stable surface.
- Scanner should always be stored in an environment that meets the following requirements:
  - Operating temperature: -10 to 40℃ (optimum operating temperature 20℃)
  - Humidity: Relative humidity 10% to 90% (non-condensing)

Daily use

- Always use equipment in a clean and dry environment
- Avoid direct sunlight on optical components
- Avoid splashing water, oil and other substances on equipment
- Do not immerse equipment in water
- Avoid falling on floor or big impact on equipment
- Avoid foreign bodies contamination of equipment

1. PRECAUTION

Device Maintenance

Scanner body

- Gently wipe the parts with a soft cotton cloth and a small amount of water or soap

Warning: Do not use solvents to clean the device.

Optical component

- Remove all particles that may scratch optical component by air blower
- Clean optical component and light source with a damp cloth such as a frictionless optical cloth or a microfiber wipe

Calibration plate

- The calibration plate should be stowed in the carrying case well. Do not place any other objects on top of the calibration plate. Do not touch positioning targets on the calibration plate, if any positioning targets are not retro-reflective, adhesive any more or damaged in shape, please contact with your local hexagon sales for service
- Use soft cloth to rub the industrial alcohol and gently clean retro-reflective positioning target
- Do not use acetone or solvents to clean retro-reflective positioning target

Note: The above suggestions also apply to the cleaning of optical reflectors.

Other materials

- Please use original power adapter, otherwise it may cause malfunction or damage to scanner.
- When folding the cable, the bending radius must not be less than 5 cm
- Do not squeeze or step on the cable

2. PRODUCT INTRODUCTION

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2. PRODUCT INTRODUCTION

Product Specification

Model	**ATLA*SCAN* Max**	
Scanning Modes	Standard Mode	Fine Mode
Measurement Rate	3,000,000 points/second	1,680,000 points/second
Scanning Area	up to 600 x 550mm	
Laser Source	26 blue laser lines for standard scanning	
	Single blue laser line for areas hard to reach	
	14 blue laser lines for fine scanning	
Light Class	Class II (Eye Safe)	
Resolution	Up to 0.01mm	
Accuracy	Up to 0.02mm	
Volumetric Accuracy	0.02+0.04mm/m	-
Volumetric Accuracy + Scale Bar	0.02+0.03mm/m	-
Hole Accuracy	Up to 0.03mm	
Hole Volumetric Accuracy	0.03mm+0.04mm/m	
Stand-off Distance	325mm	200mm
Depth of field	450mm	200mm
Depth of field @ Furthest range	550mm	
Connection Standard	USB 3.0	
Working Temperature	-10 - 40℃	
Working Humidity （Non-condensing）	10% - 90%RH	
Weight	1 KG	
Dimensions	295mmx135mmx75mm	
Export format	.stl, .ply, .obj, .txt, .xyz, .asc. etc.customizable	
Compatible Softwares	3D Systems (Geomagic Solutions), InnovMetric Software (PolyWorks), Dassault Systems (CATIA V5 and SolidWorks), PTC (Pro/ ENGINEER), Autodesk (Inventor, Alias, 3ds Max, Maya, Softimage), Siemens (NX and Solid Edge) etc.	

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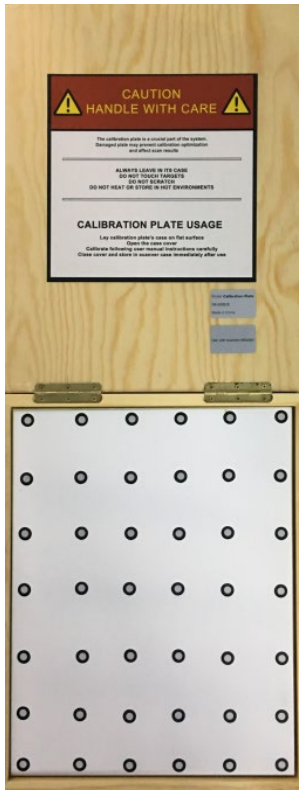
2. PRODUCT INTRODUCTION

Product Snapshot



Calibration Plate

Carrying Case

USB Key Driver & Dongle

Power Supply

USB 3.0 Cable

6mm (ID) Positioning Targets (Self-adhesive type)
3mm (ID) Positioning Targets (Self-adhesive type)

ATLA*SCAN* Max

Positioning Target Scraper

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2. PRODUCT INTRODUCTION

Workstation Configuration

Workstation Configuration Requirements	
CPU	**Intel Core i7 12800HX or Higher** Configuration
Graphics card	NVIDIA RTX A2000 **or Higher** Configuration
RAM	64GB DDR8 **or higher**
Operation system	**WIN 10 or WIN 11**
Data transmission requirements	**USB3.0 (at least 2 ports)**

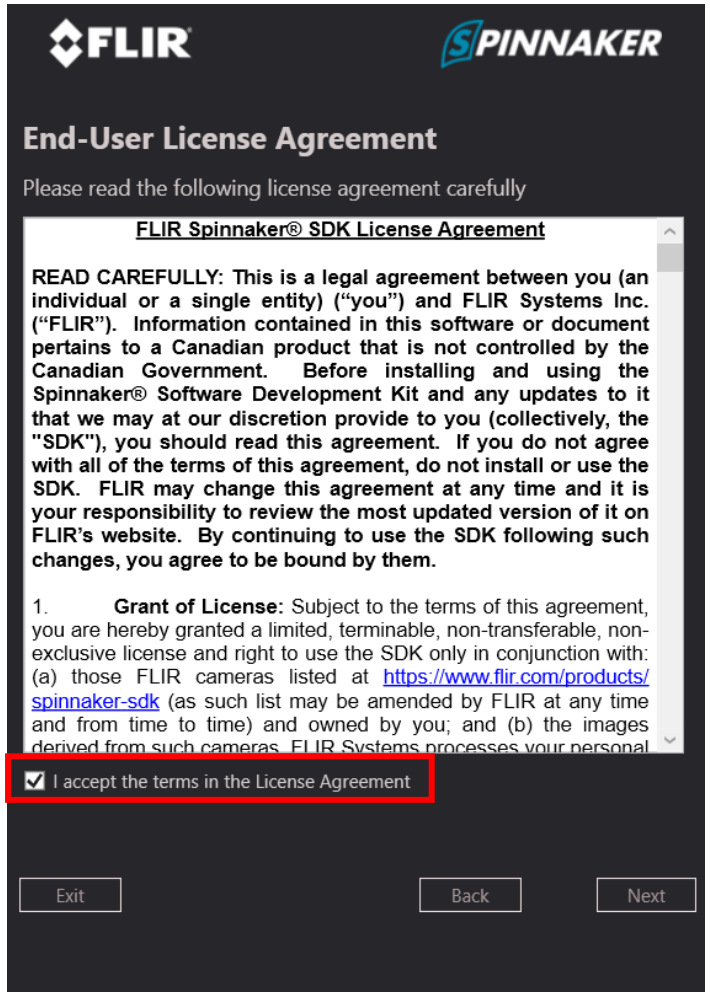
*****Notes:**

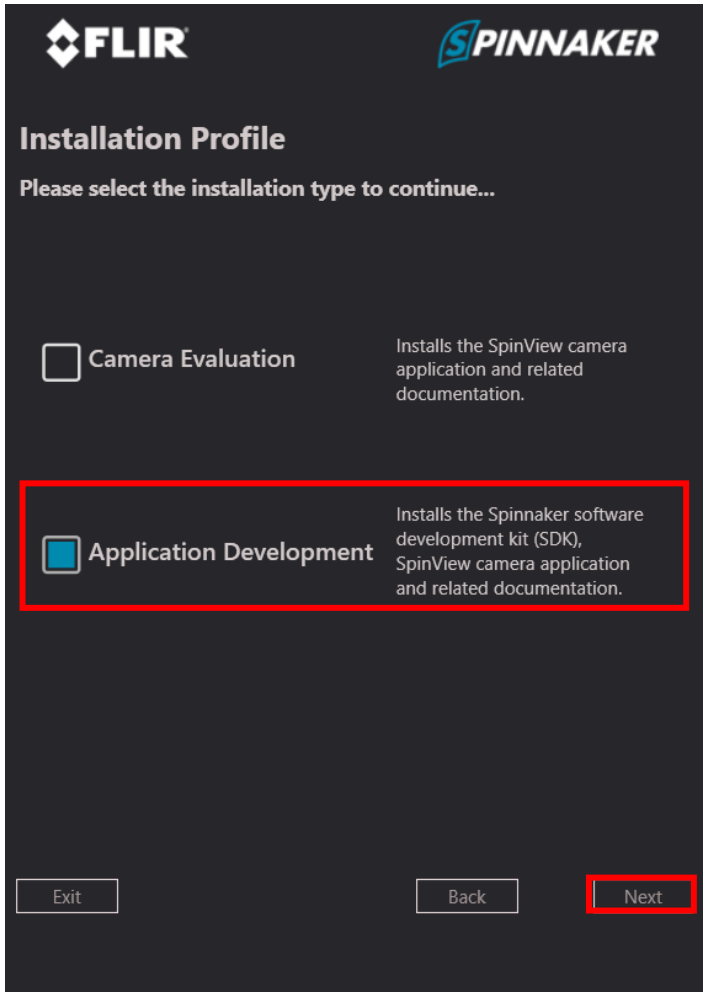
The graphics card driver must be NVIDIA official driver, you can download from NVIDIA official website, otherwise device may not work properly.

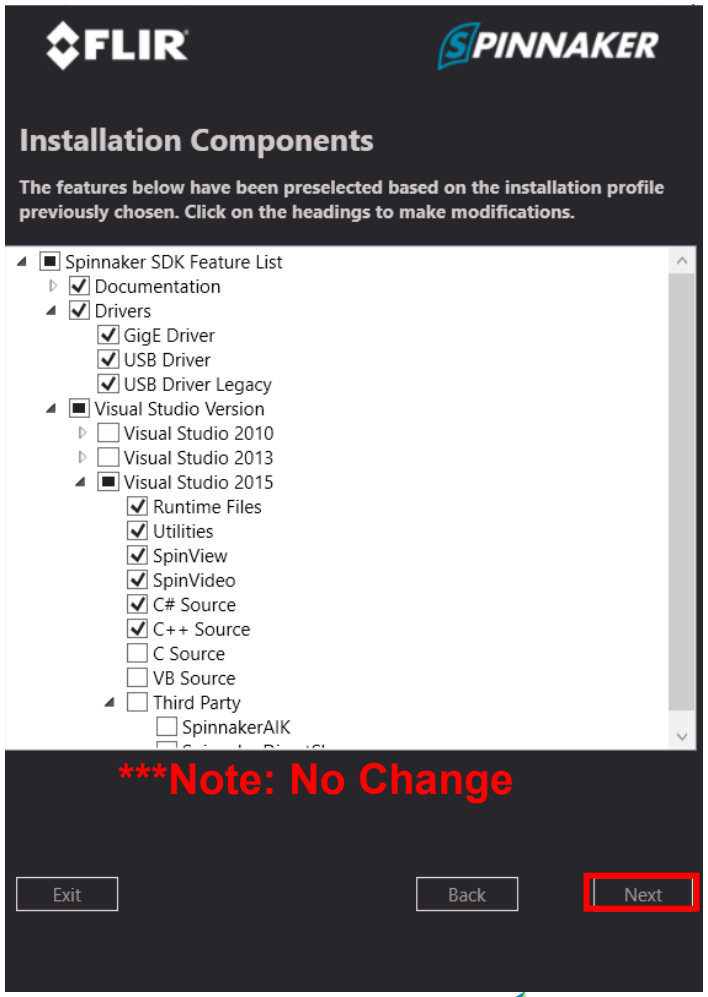
NVIDIA Driver Download Link: https://www.nvidia.com/Download/index.aspx?lang=en-us

2. PRODUCT INTRODUCTION

Camera Driver Setup







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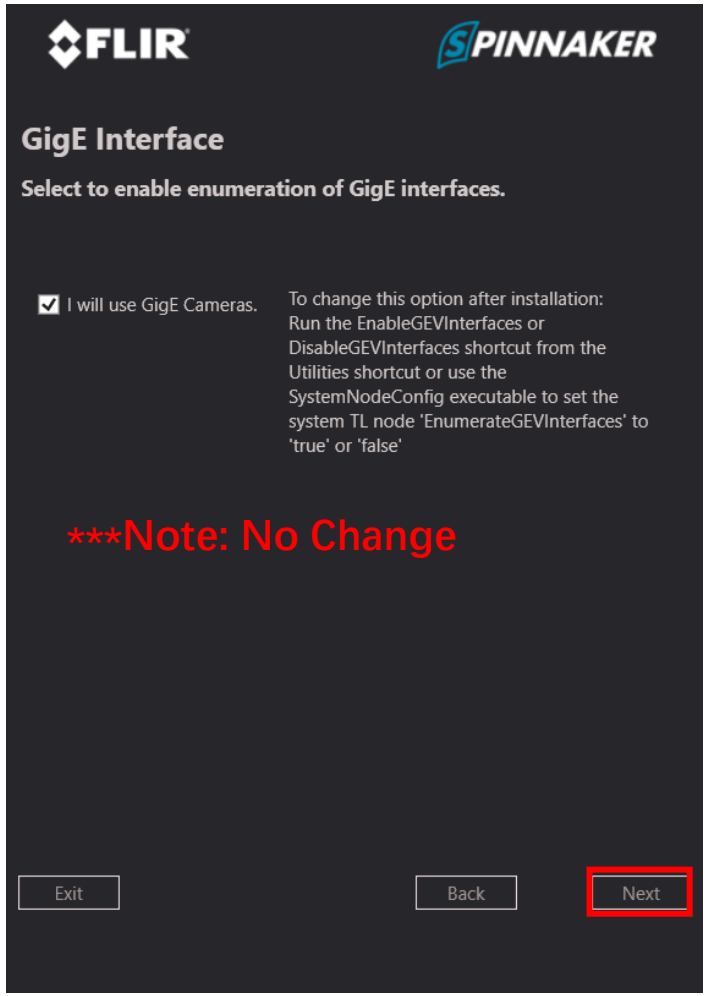
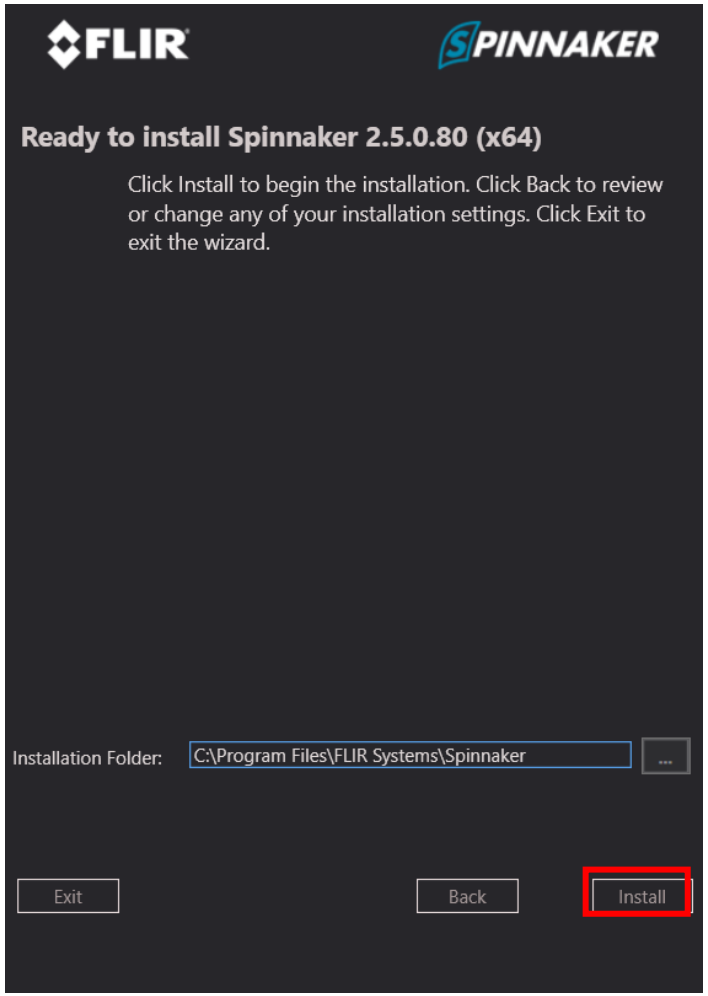
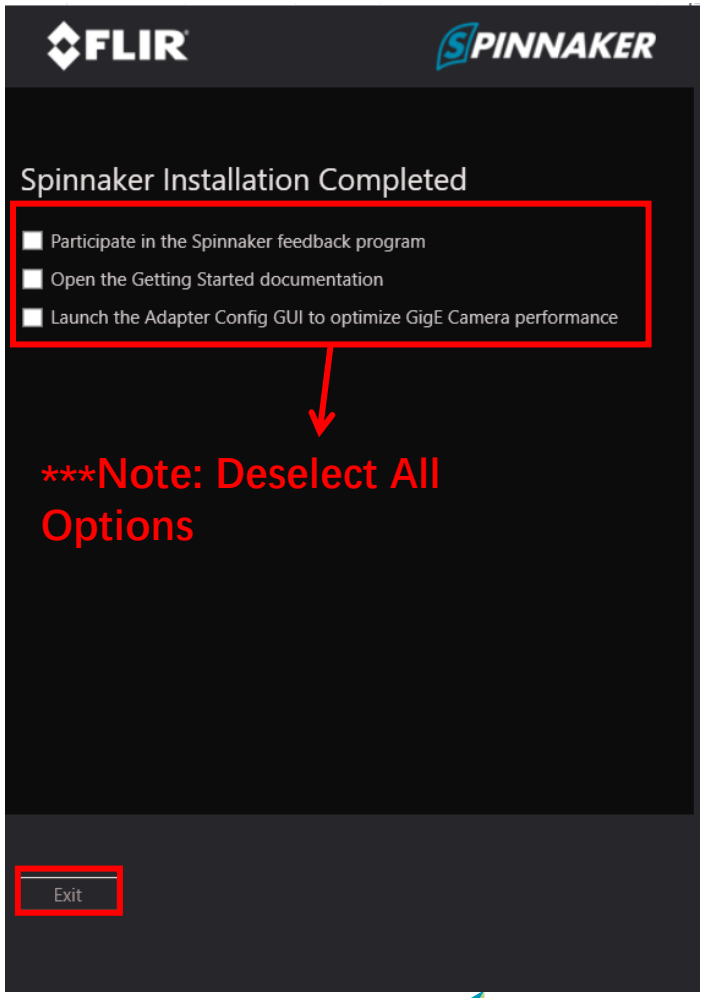
2. PRODUCT INTRODUCTION

Camera Driver Setup







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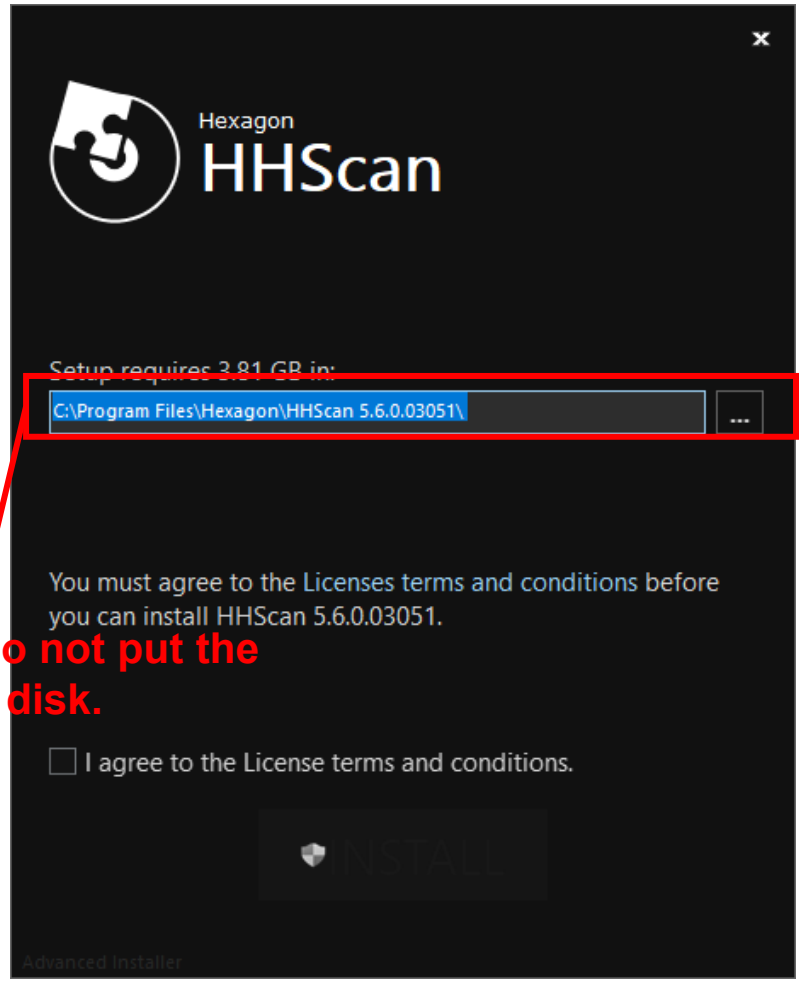
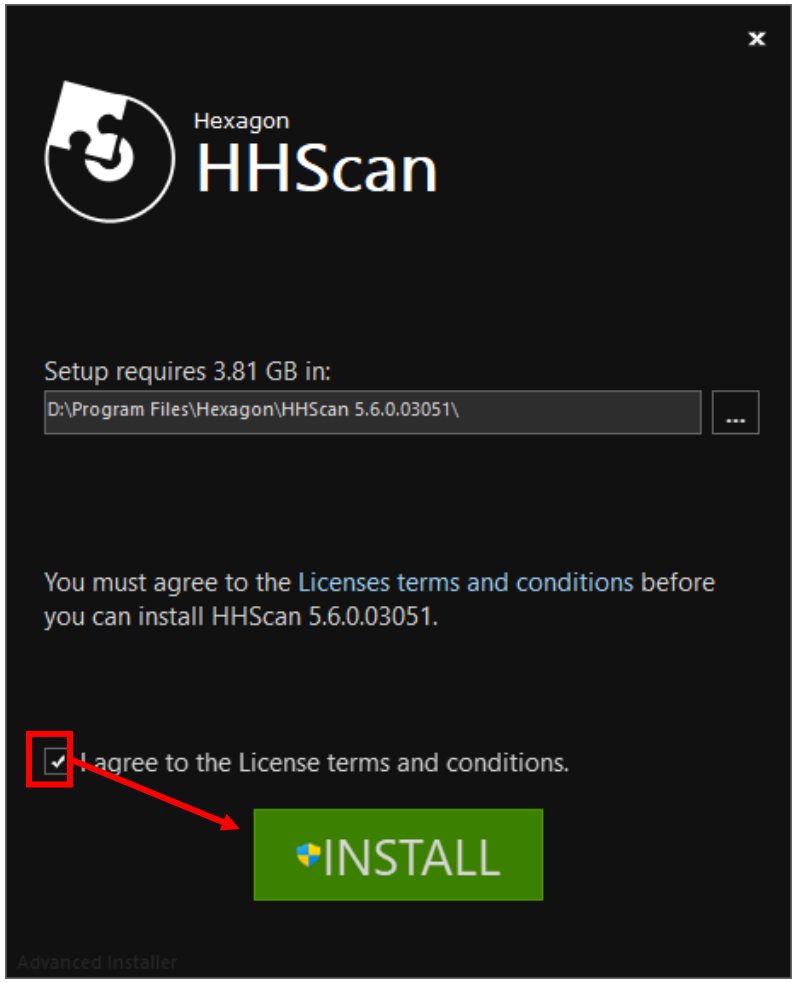
2. PRODUCT INTRODUCTION

HHScan Software Setup



*****Note: Please do not put the program into OS disk.**



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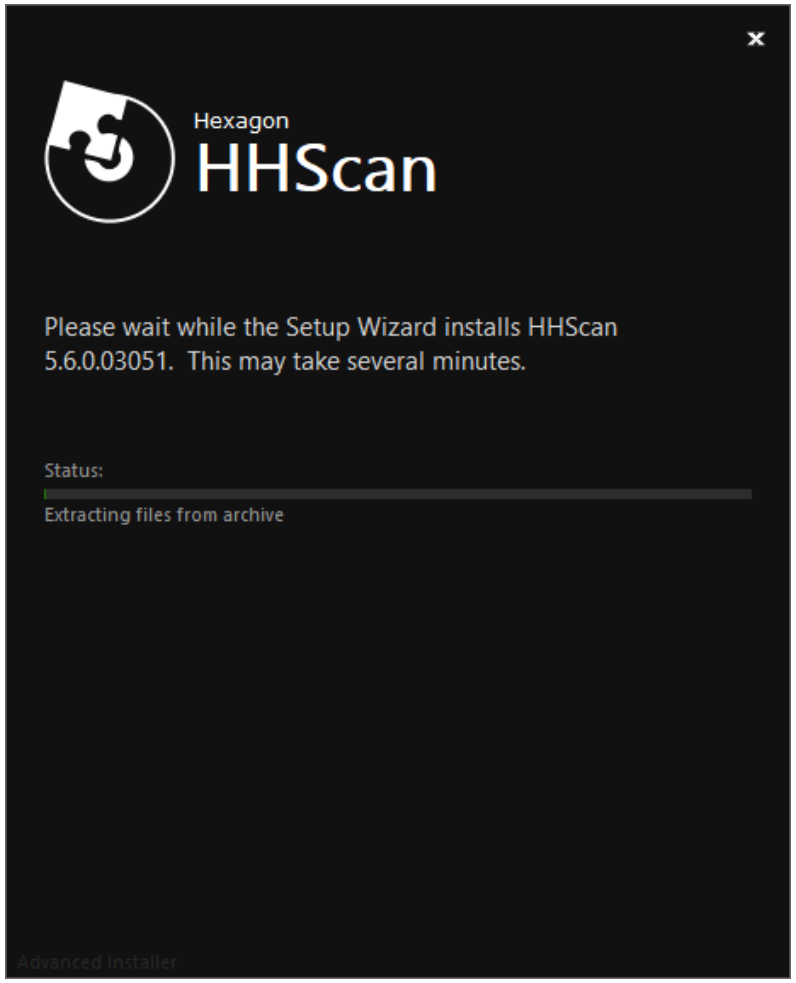
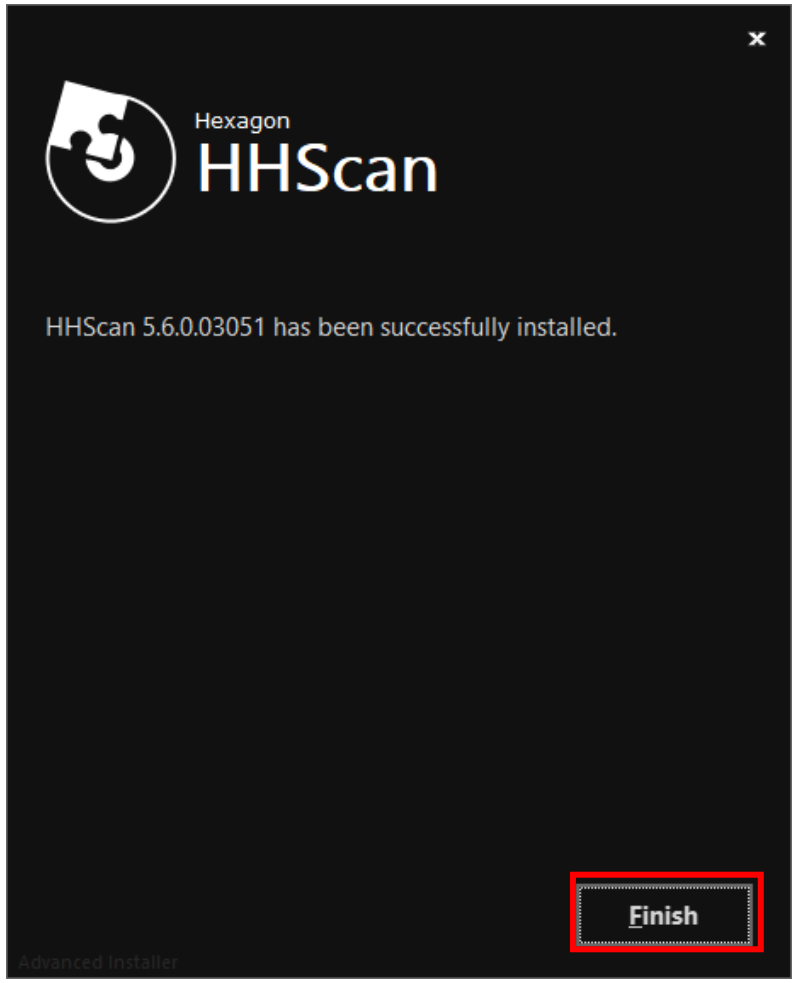
2. PRODUCT INTRODUCTION

HHScan Software Setup





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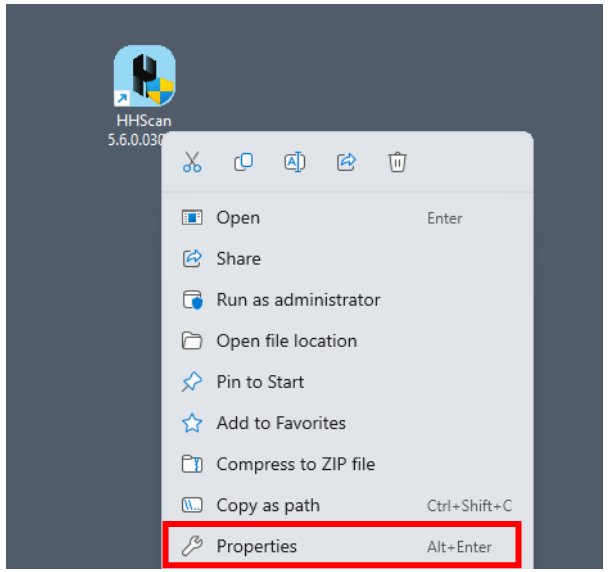
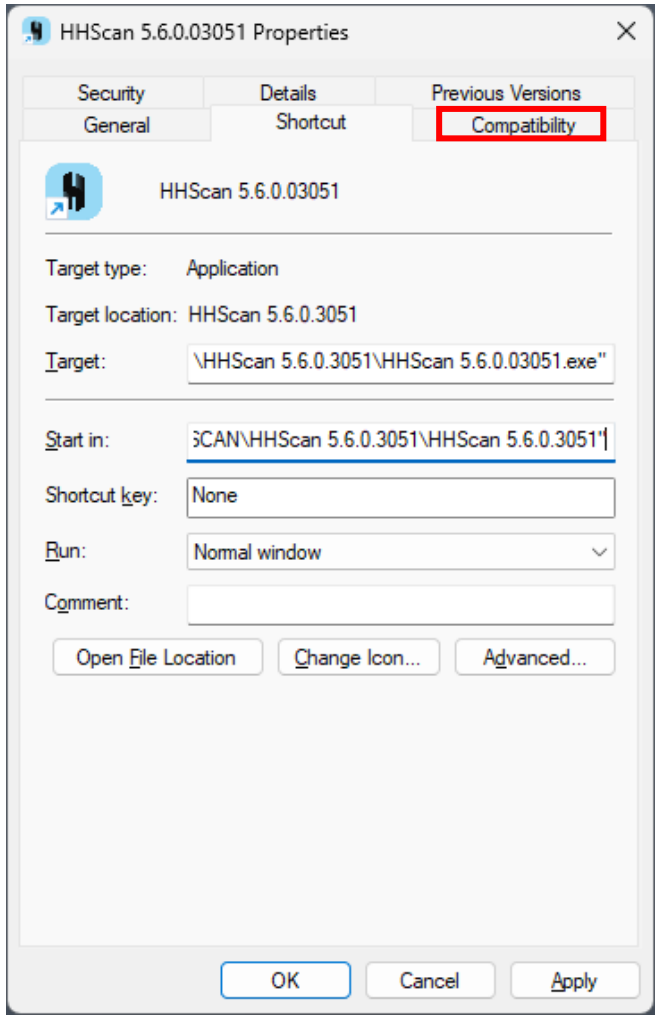
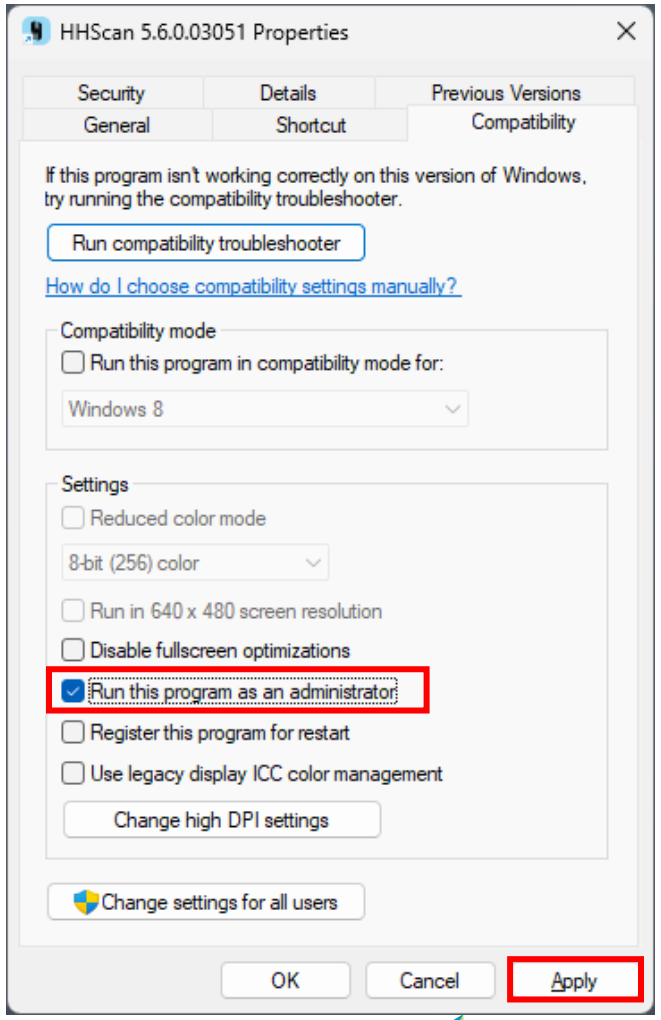
2. PRODUCT INTRODUCTION

HHScan Software Setup







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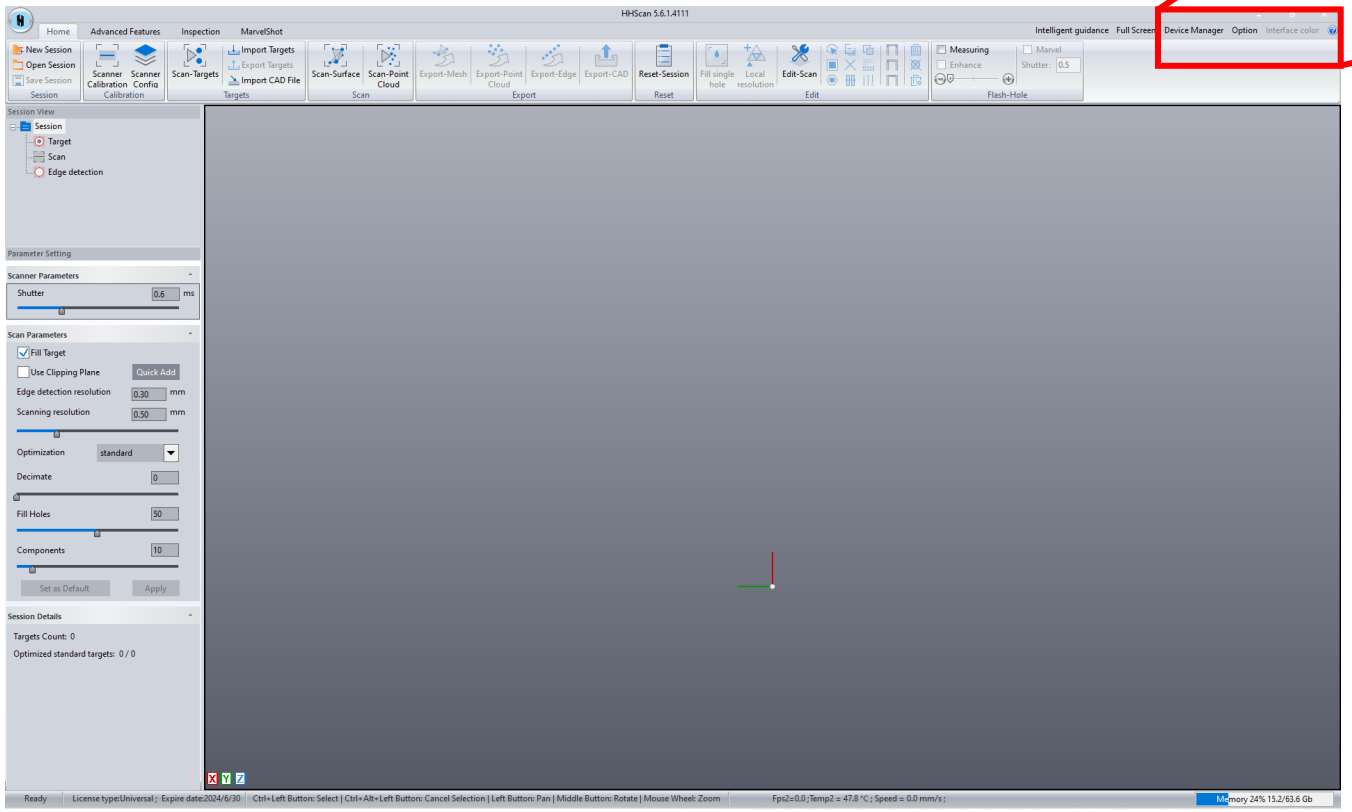
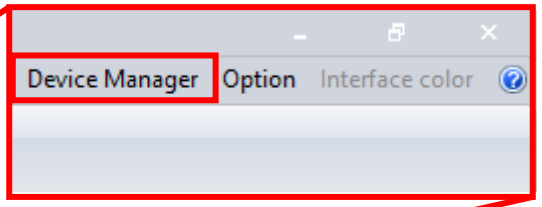
2. PRODUCT INTRODUCTION

Device Manager

DEVICE ACTIVIATION

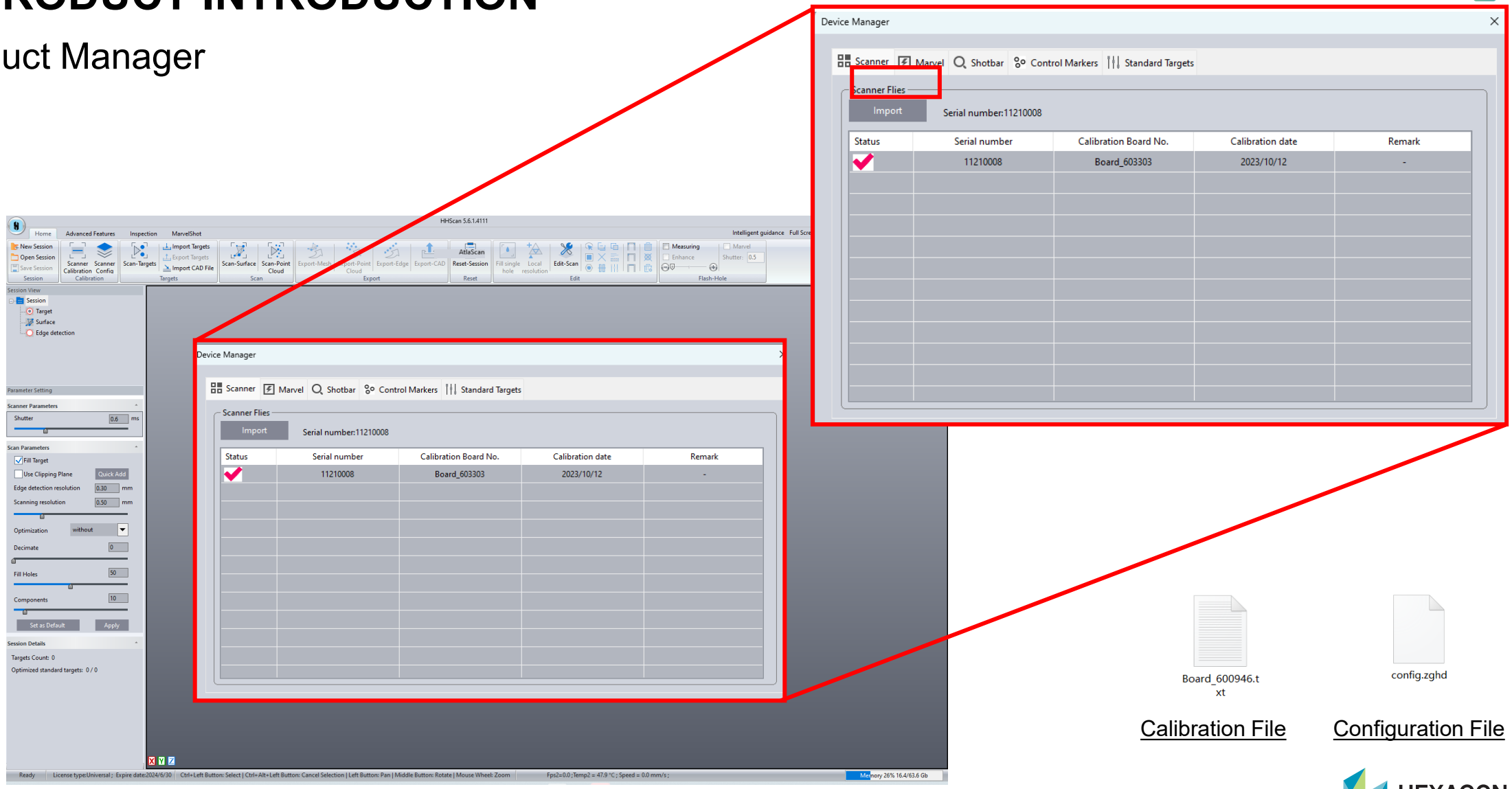
STEP ONE: Click on “Device Manager” to pop up activation windows





2. PRODUCT INTRODUCTION

Product Manager

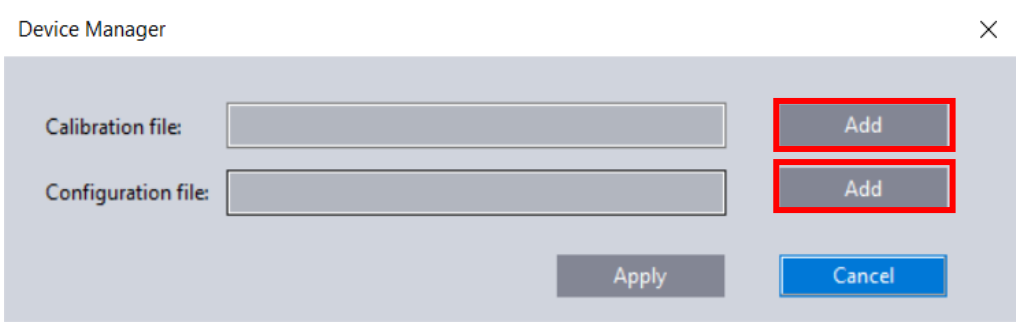


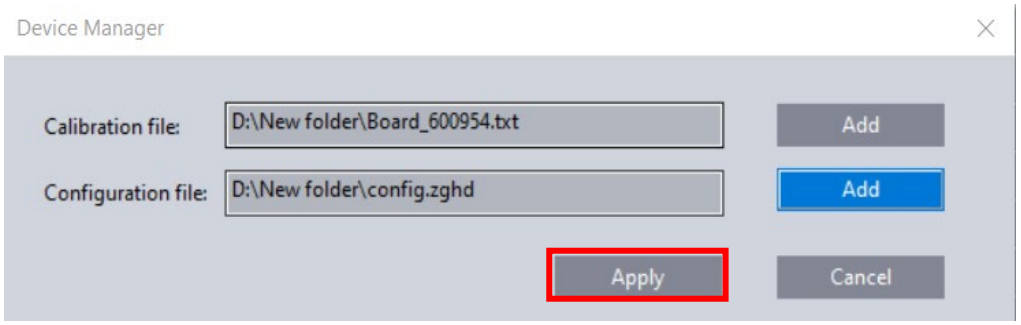
Calibration File

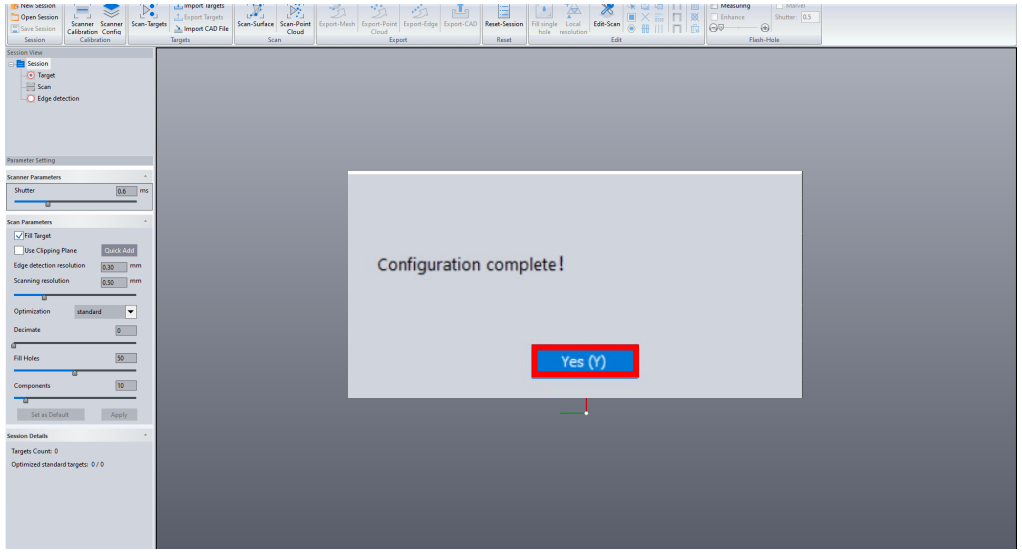
Configuration File

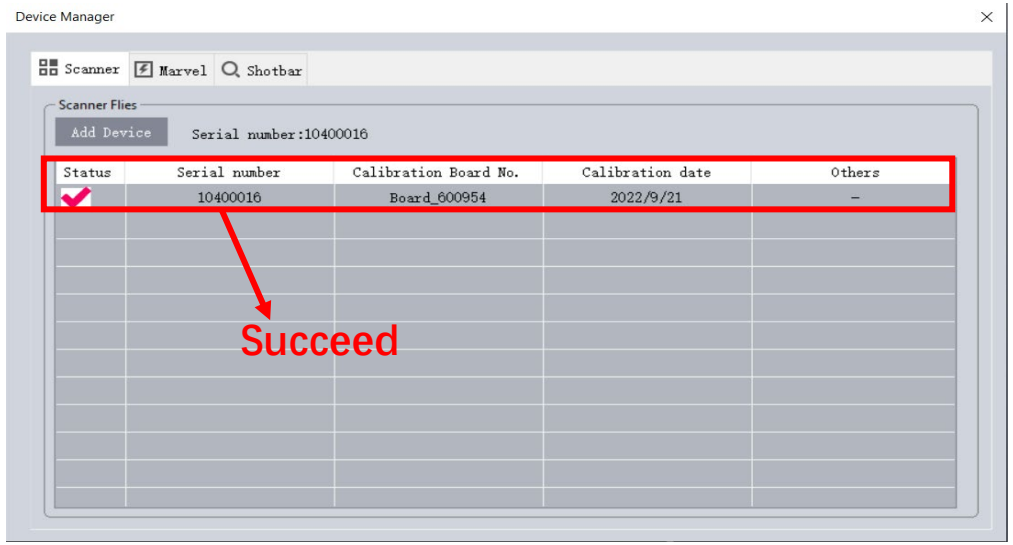
2. PRODUCT INTRODUCTION

Product Manager









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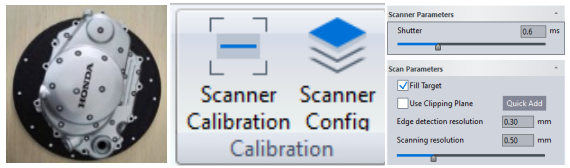
2. PRODUCT INTRODUCTION

Typical Workflow

1

Preparation

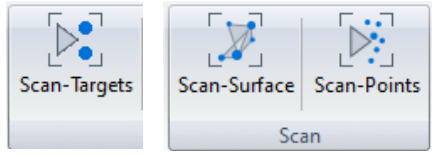
- Place targets on/around part
- Scanner calibration
- Parameter setting



2

Scanning Process

- Part scanning
- Data edit



3

Data Save

- Save as session
- Save as mesh/point cloud

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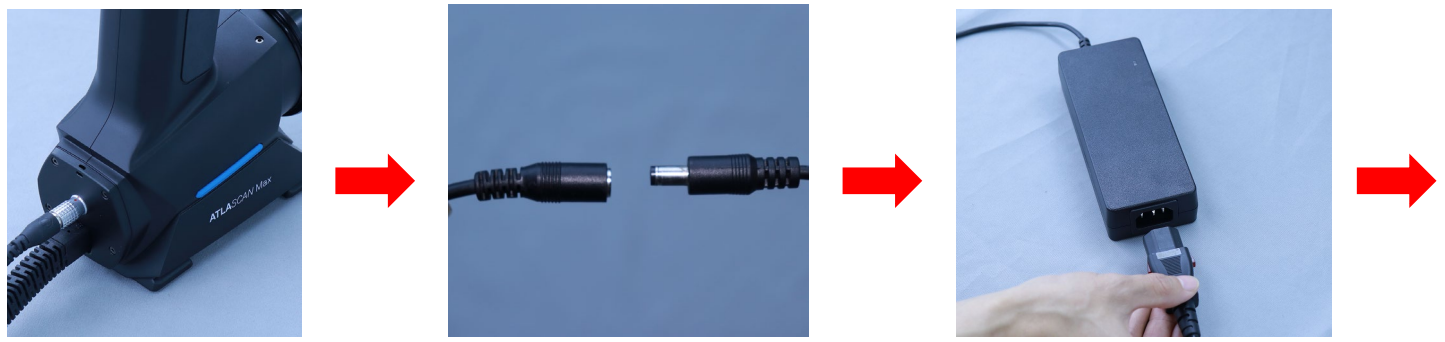
2. PRODUCT INTRODUCTION

Device Connection

1. Connect USB & Power cable to Scanner
2. Connect power cable to USB cable
3. Connect power cable to power adaptor
4. Connect to main power
5. Connect USB cable to computer
6. Start HHScan



*****Note: Plug out the power cable before disconnecting scanner.**

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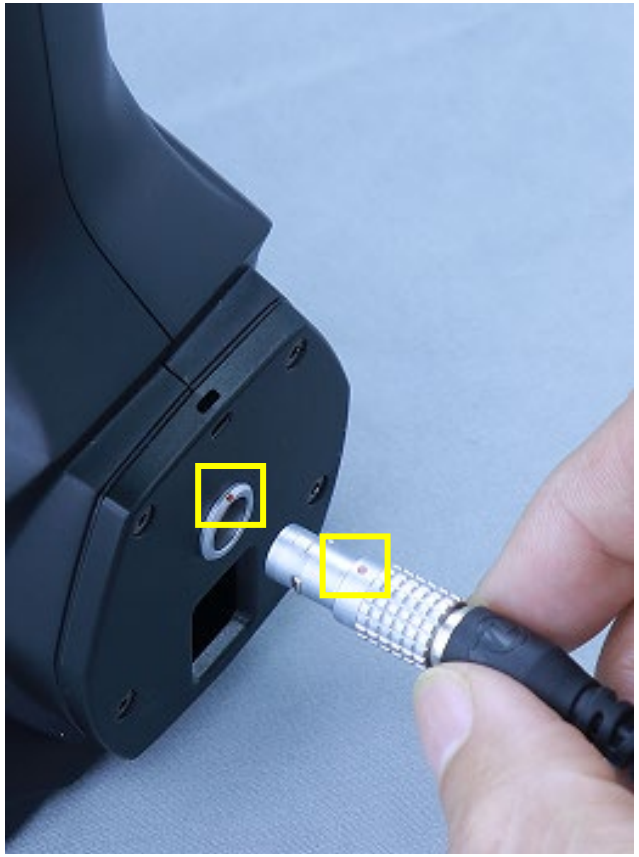
2. PRODUCT INTRODUCTION

Device Connection

- Connect power cable as below



- Pull out the metal sleeve and then disconnect the cable

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2. PRODUCT INTRODUCTION

Push Buttons

1. Central Button
- Single press: Start/Pause Scanning
- Double press: Scanning mode switch

2. Left/Right Button
- Click Left Button: Zoom in or Increase shutter
- Click Right Button: Zoom out or Decrease shutter

3. Up Button
- Single press: Zoom or Shutter
- Double press: Hole Flash Capture or New group Scanning

4. Down Button
- Single press: Long-range scanning→Edge Detection→Standard Scanning and recycle in the sequence.
- Double press: Intelligent Interactive System

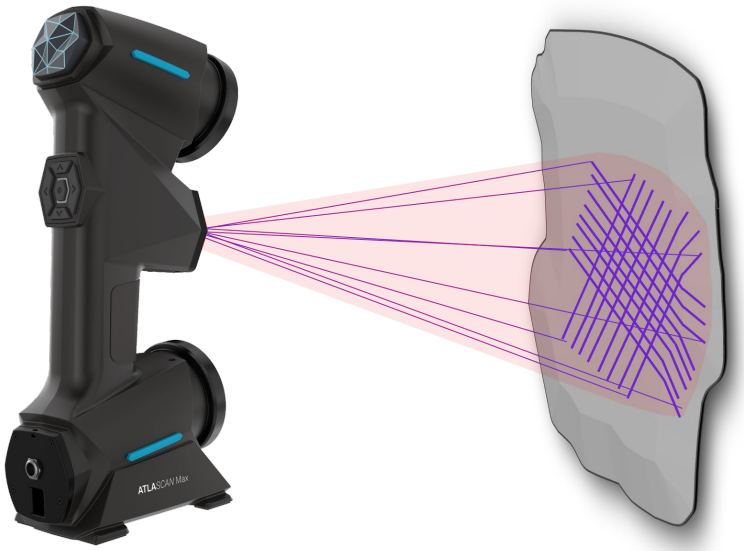
2. PRODUCT INTRODUCTION

Working Principle

1. Automatic surface generation;
2. Laser lines projected onto the object deforms with the shape of the object. When scanning, the camera takes the specific shape and calculates it;

Tips:

- ✓ The visibility of laser lines projected on the part is a key to the success of data acquisition.
- ✓ The visibility of laser lines is affected by color and material type.
  - High reflectivity part will have mirror effect, which makes it difficult to catch laser lines;
  - Black color absorbs light and makes laser lines difficult to detect;
- ✓ The effects of black, reflective and transparent objects can be offset by adjusting shutter parameters.
- ✓ Good preparation in advance will lead to satisfying scanning results.



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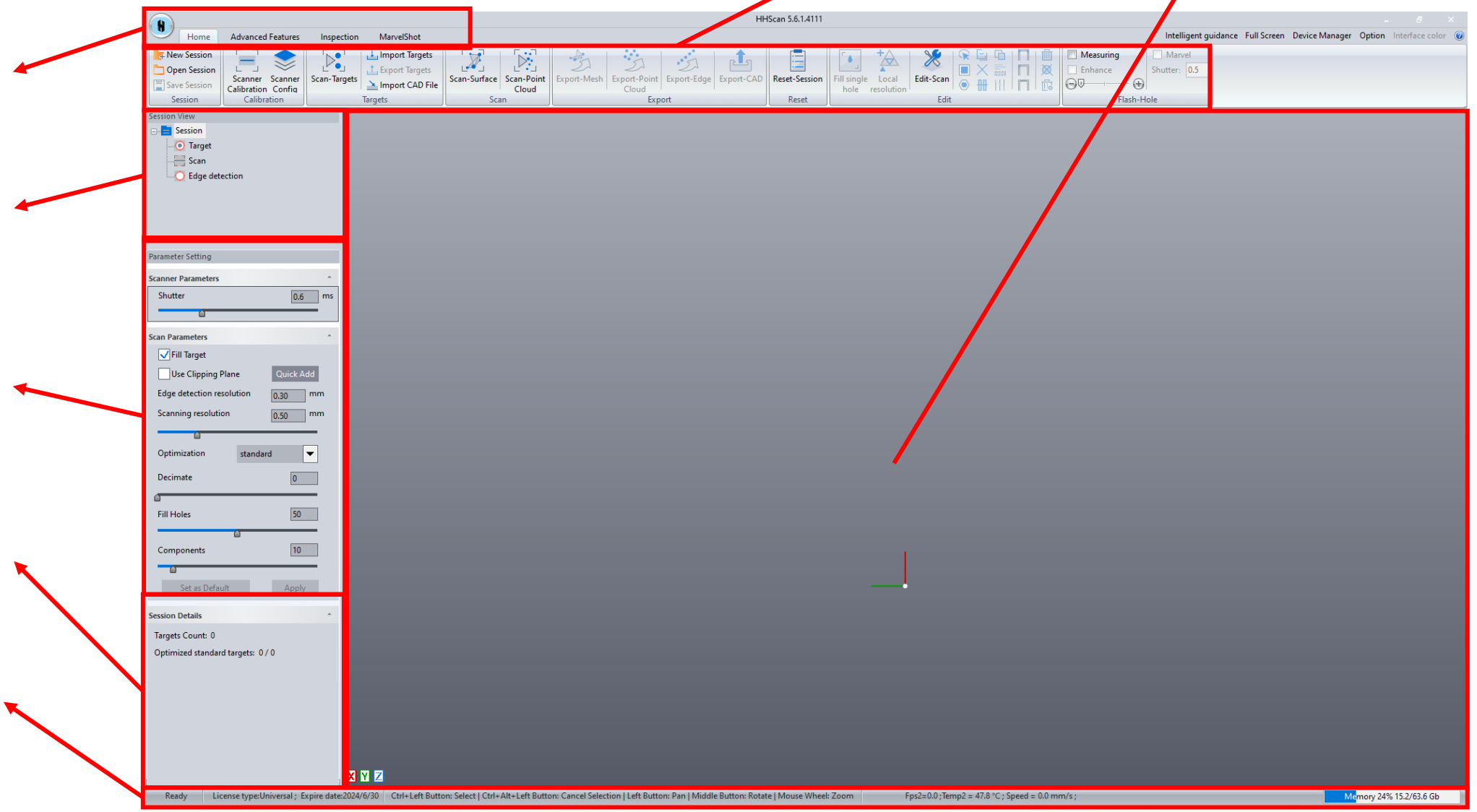
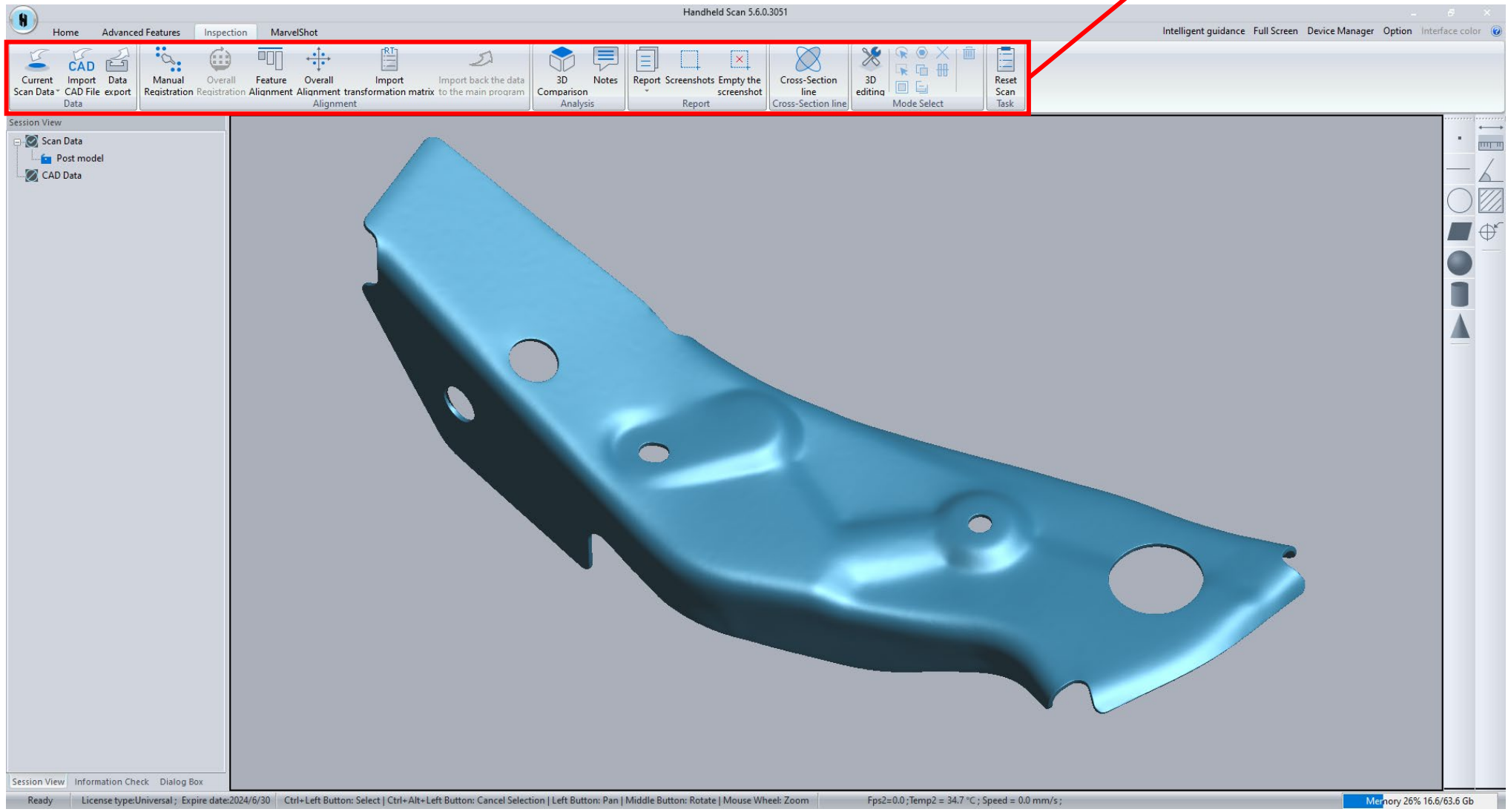
2. PRODUCT INTRODUCTION

Scanning Software UI



2. PRODUCT INTRODUCTION

Scanning Software UI



3. CALIBRATION

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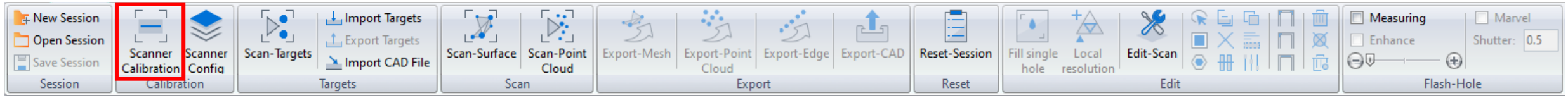
3. CALIBRATION

Scanner Calibration



Tips:

To get good quality data, it is recommended to calibrate the scanner before each scanning job.

While if initial scanning quality is very poor or environment temperature keeps changing, please warm scanner up for 5-10 mins and then calibrate scanner again.

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3. CALIBRATION

Scanner Calibration

- Make sure there are no extra targets near the calibration plate
- Make sure there are no reflectors near the calibration plate
- If possible, store the calibration plate in a carrying case
- Please relax when performing scanner calibration and make sure whole process runs as smoothly as possible
- The calibration process may fail if an incorrect, damaged or displaced targets are detected.

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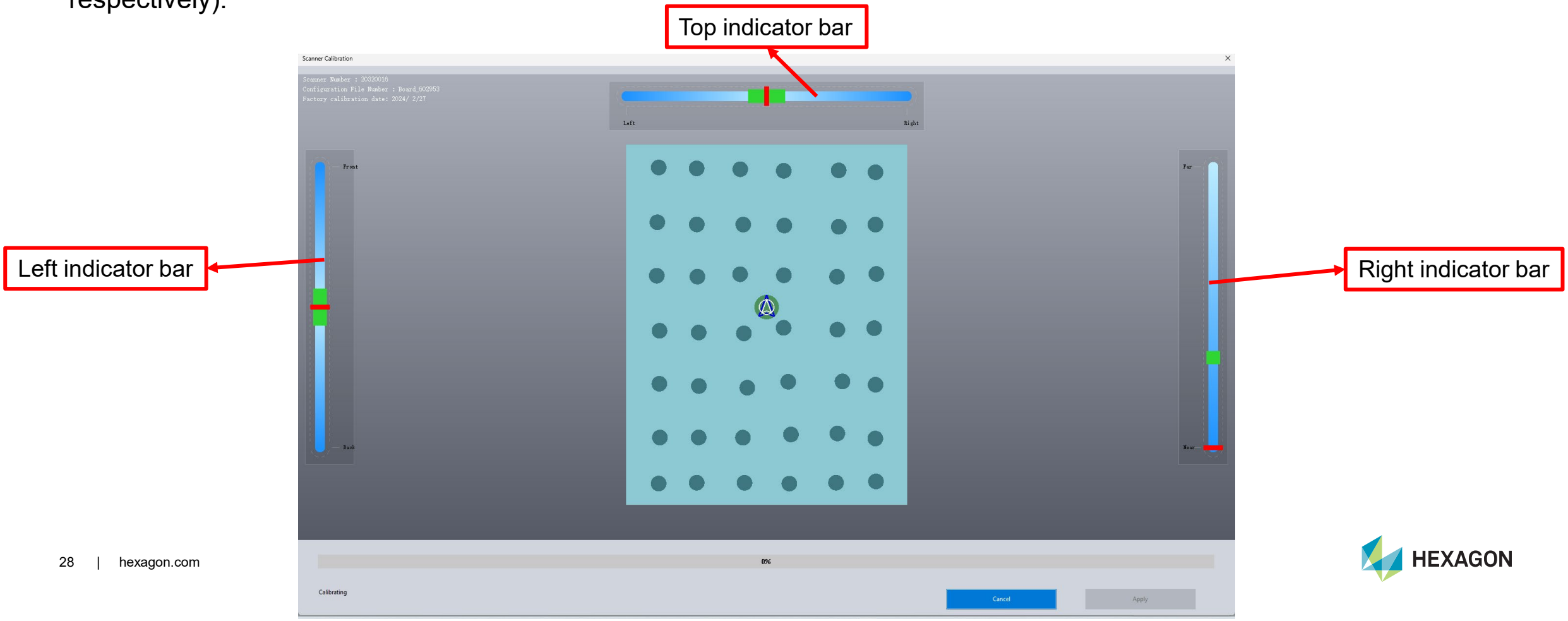
3. CALIBRATION

Scanner Calibration

In calibration process, the position and attitude of scanner should be aligned with the corresponding position of each indicator bar (cross circle is aligned with solid circle, three red indicators are aligned with three green ones respectively).



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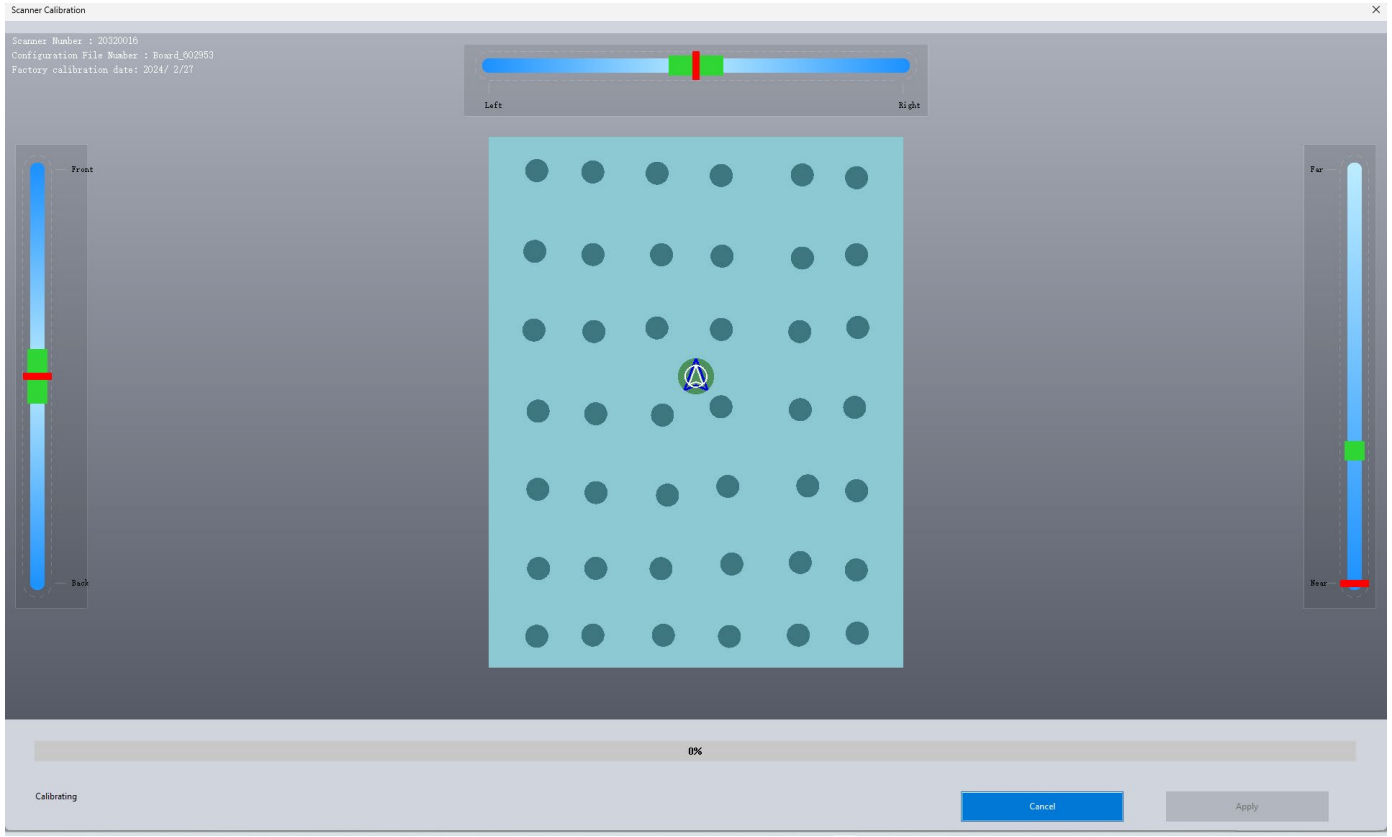
3. CALIBRATION

Scanner Calibration

- There are 24 prescribed postures in whole calibration process.

  When the current posture is aligned, it automatically jumps to the next prescribed posture.

- Application: Apply calibration result to cover previous scanner configuration file.



3. CALIBRATION

Scanner Calibration

The scanner must point to the center of the calibration plate, as indicated by the circle, and the red line (the height and direction of the scanner) should be always in the green area.

1. **Right indicator bar:** The height of the scanner from the calibration plate, adjusting the height in the direction perpendicular to the calibration plate
2. **Top indicator bar:** The horizontal tilt angle of the scanner, tilted left and right
3. **Left indicator bar:** The vertical tilt angle of the scanner, tilted front and back
4. **Arrow:** indicates the rotation angle of the scanner around the coordinate axis of the vertical calibration plate. When scanning, try to ensure that the crosshair does not rotate. The left and upper green indicator bar indicates the specified tilt angle, and the right green bar indicates the height
5. **The Arrow Circle:** Indicates the current position of the scanner; the size of the circle indicates current height of the scanner from the calibration plate
6. **The Green Solid Circle:** Indicates the specified position where the scanner needs to be aligned

“ TRY IT BY YOURSELF

4. PREPARATION

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4. PREPARATION

Target Placement

- Put targets to cover entire surface of workpiece evenly & randomly
- Distance between two targets: around 60-100mm (2.5-4 inch)
- Flat area: less targets required
- Curved/complex area with features: more targets needed
- Place appropriate quantity of targets on workpiece based on above rules, keep in mind that it's easy to place while hard to remove later.

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4. PREPARATION

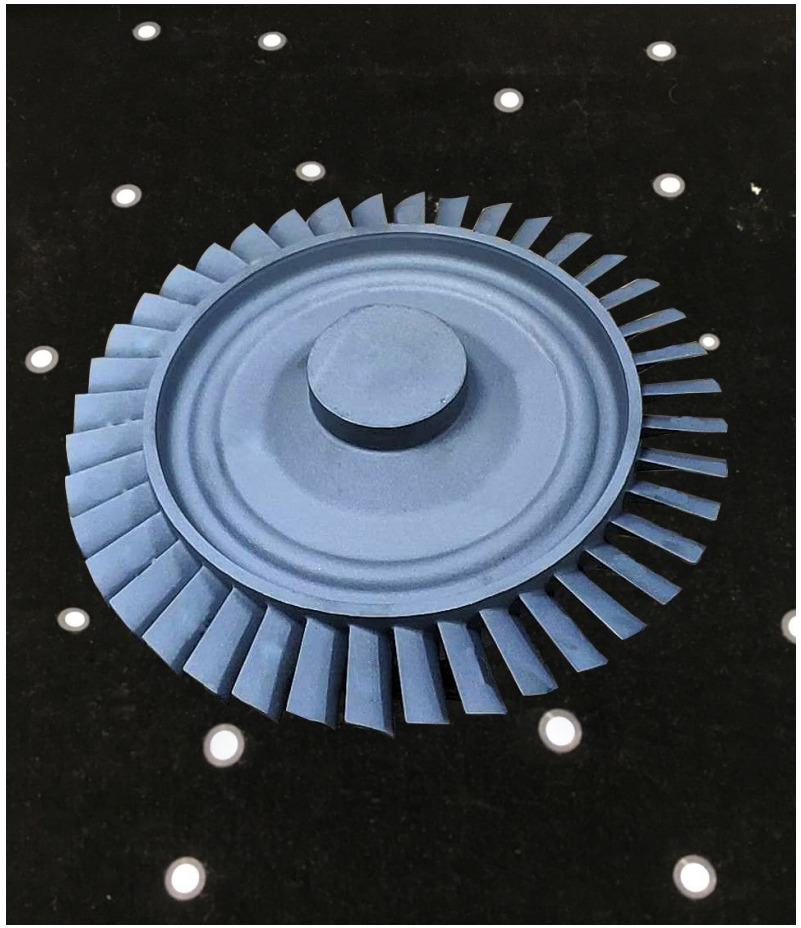
Target Placement

Please place targets around workpiece in following cases:

- When workpiece is too small to place
- When targets are not allowed to place on workpiece

Tips:

During the scanning, DO NOT move workpiece or targets nearby.



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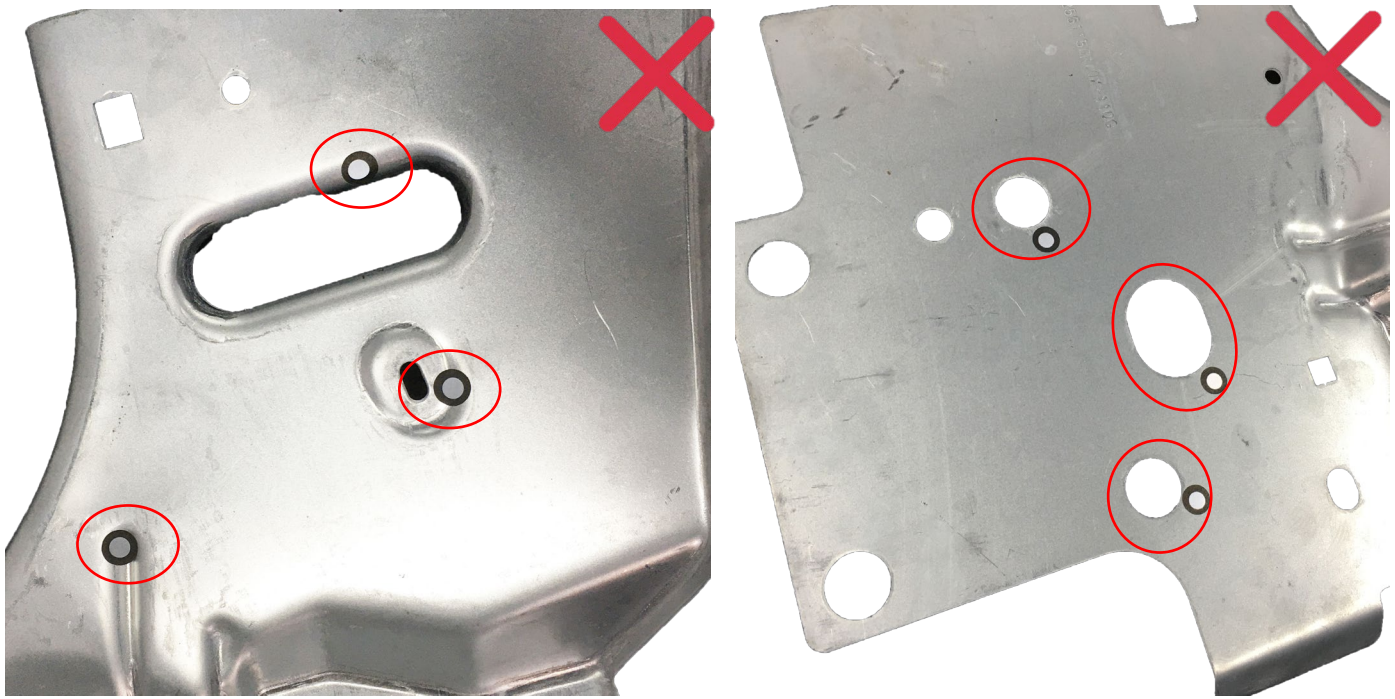
4. PREPARATION

Target Placement

PLEASE DO NOT

- Place targets on a surface with high curving rate
- Place targets on obvious features of the part
- Place targets near the edge/detail (< 4 mm)
- Use damaged or incomplete targets
- Use greasy, ashy or dirty targets



Wrong Example

Tips

- make sure that at least 4 targets can be seen in same vision of scanner from different angles at all time.

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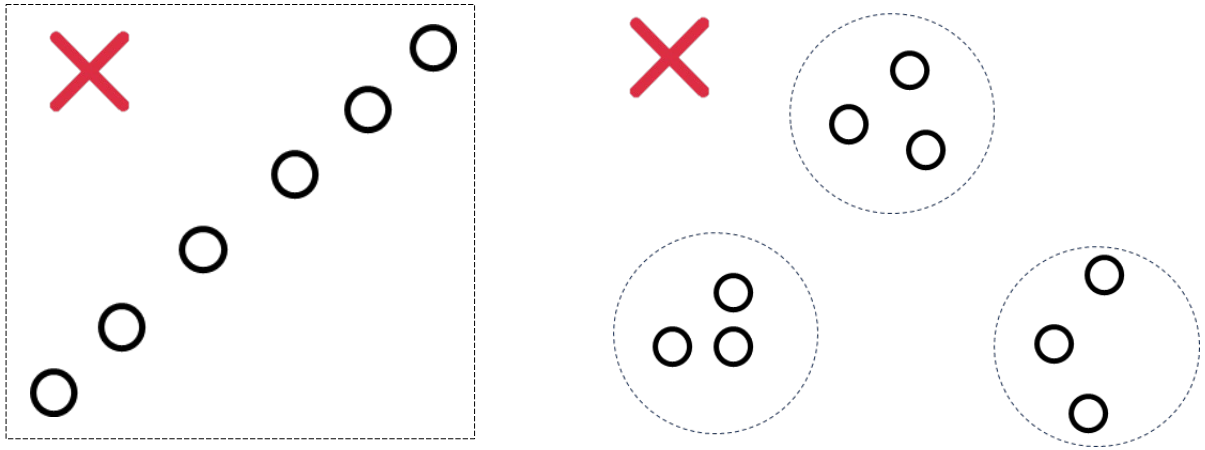
4. PREPARATION

Target Placement

PLEASE DO NOT

- Place targets in crowded groups
- Place targets neatly in one line (unable to make accurate triangulation)



Wrong Example

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4. PREPARATION

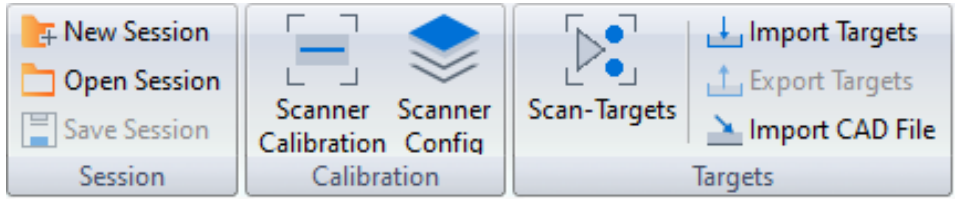
Parts Preparation

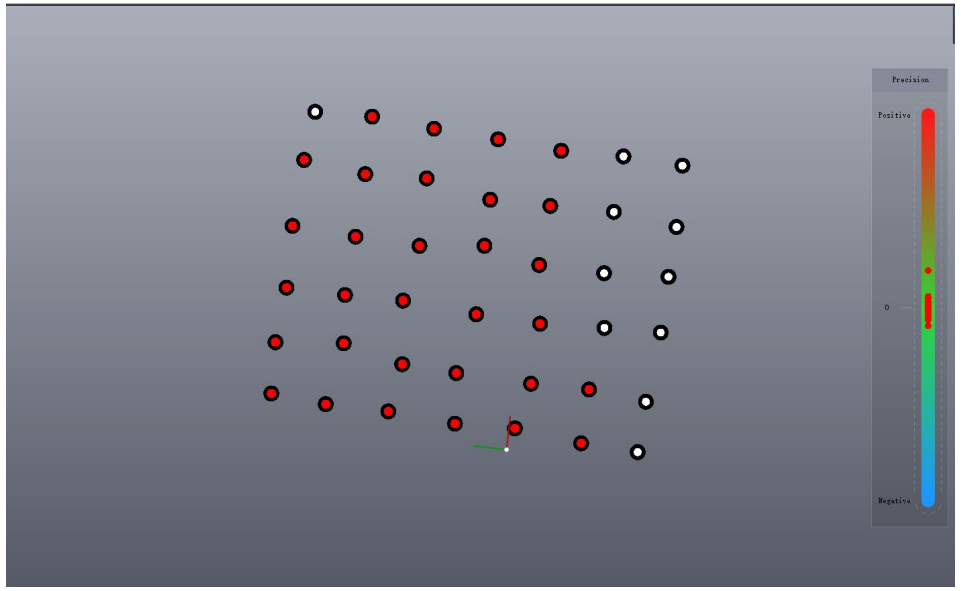
- To improve the data acquisition of black, reflective or transparent parts.

- Use following products when necessary:
  - Matting agent
  - Spray powder

4. PREPARATION

Target Scanning





- Scan-targets: to scan targets
- Import targets: to import targets data into scanning software (this function is for big object scanning or assembling part)
- Export targets: to export targets data

Tips:

When scanning big part, we suggest to start from the middle part towards two sides with the goal of reducing splice error and improving accuracy.

During the scanning, to achieve steady scan, make sure to hold scanner at the horizontal and vertical direction.

- The red target is the point that the scanner can recognize
- Other color targets such as blue and white are unrelated points

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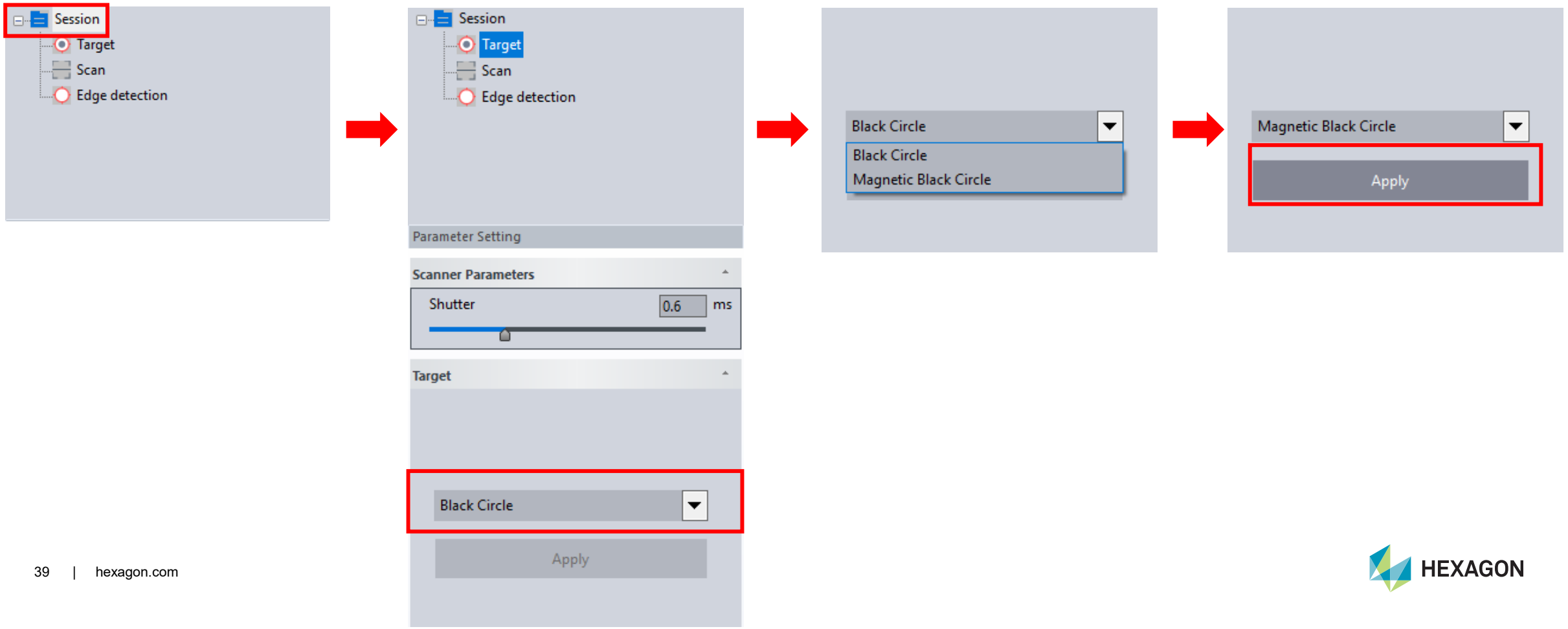
4. PREPARATION

Extra Tips

When using magnetic targets, we need to optimize magnetic targets in our scanning software for better scanning results because of thickness.



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“ TRY IT BY YOURSELF

5. SCANNING PROCESS

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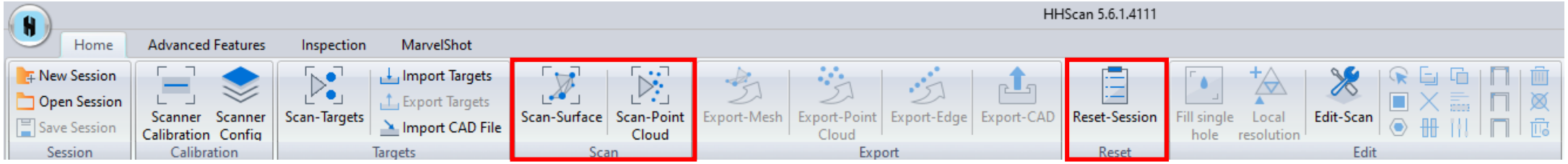
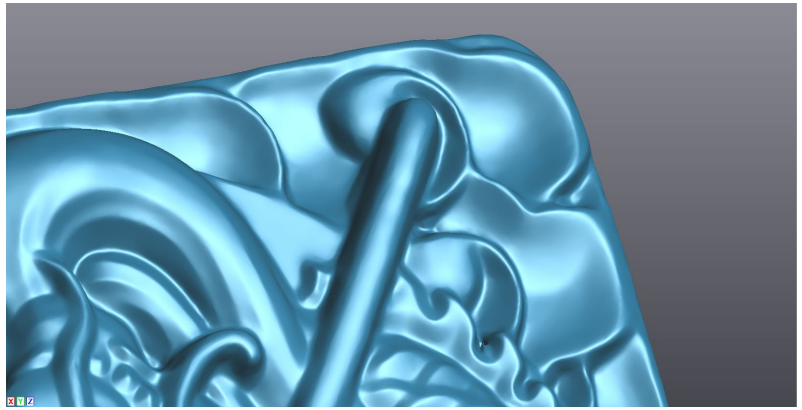
5. SCANNING PROCESS

Scanning Mode

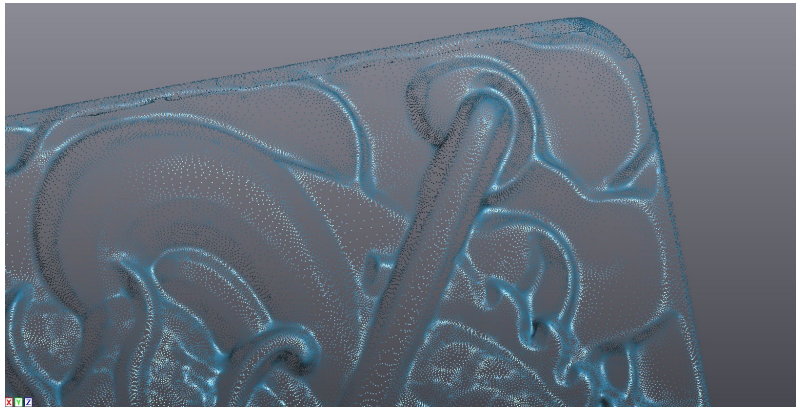


- **Scan-Surface**: to scan surface and export mesh or point cloud
- **Scan-Points**: to scan point cloud and export point cloud
- **Reset-Session**: to reset current project (save project if you need original data)

Mesh Presentation



Point Cloud Presentation



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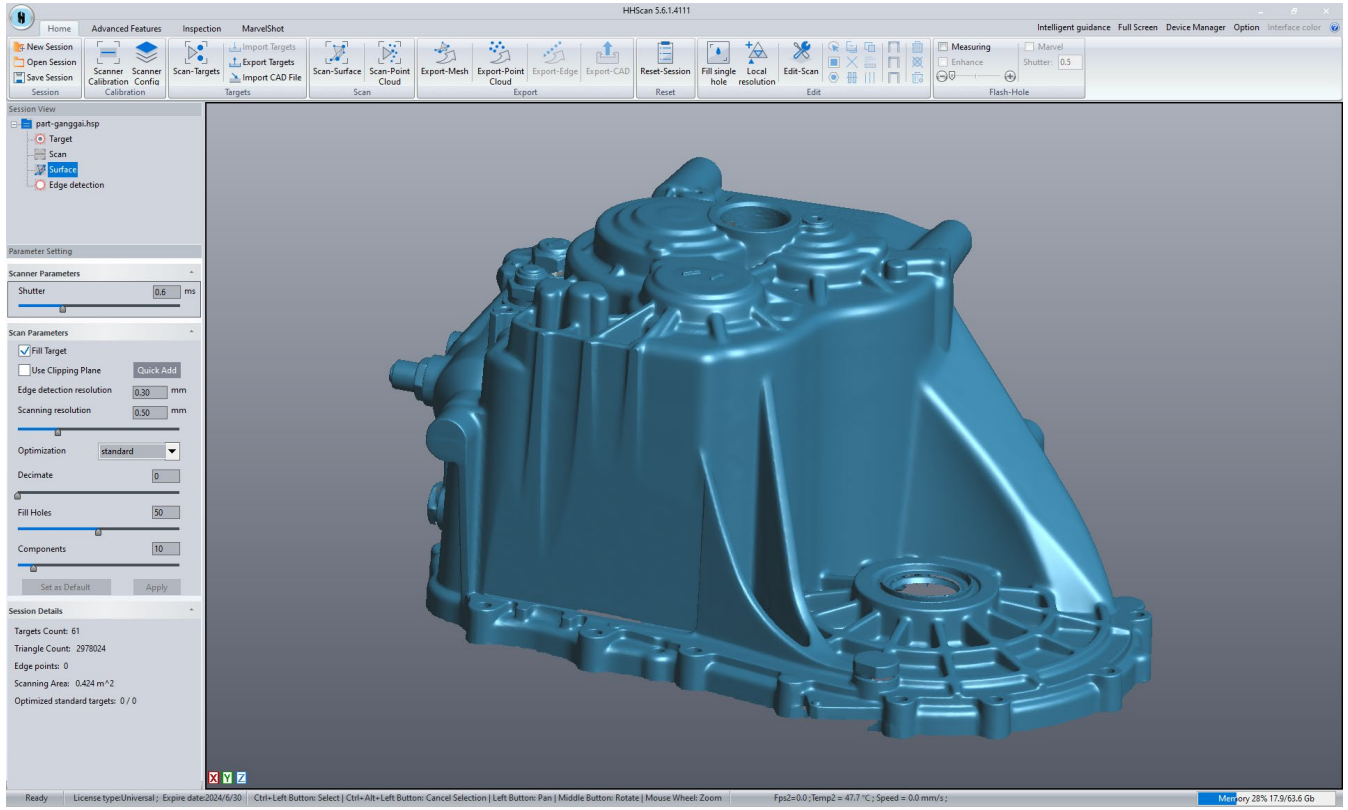
5. SCANNING PROCESS

Scanning Mode



- When we scan parts, normally we choose the scanning mode of either scanning surface or scanning point cloud, both of scanning modes are to collect surface data.
- The difference between two scanning mode is type of export data. To scan surface is to collect surface data and export as mesh; To scan point cloud is collect surface data and export point cloud.

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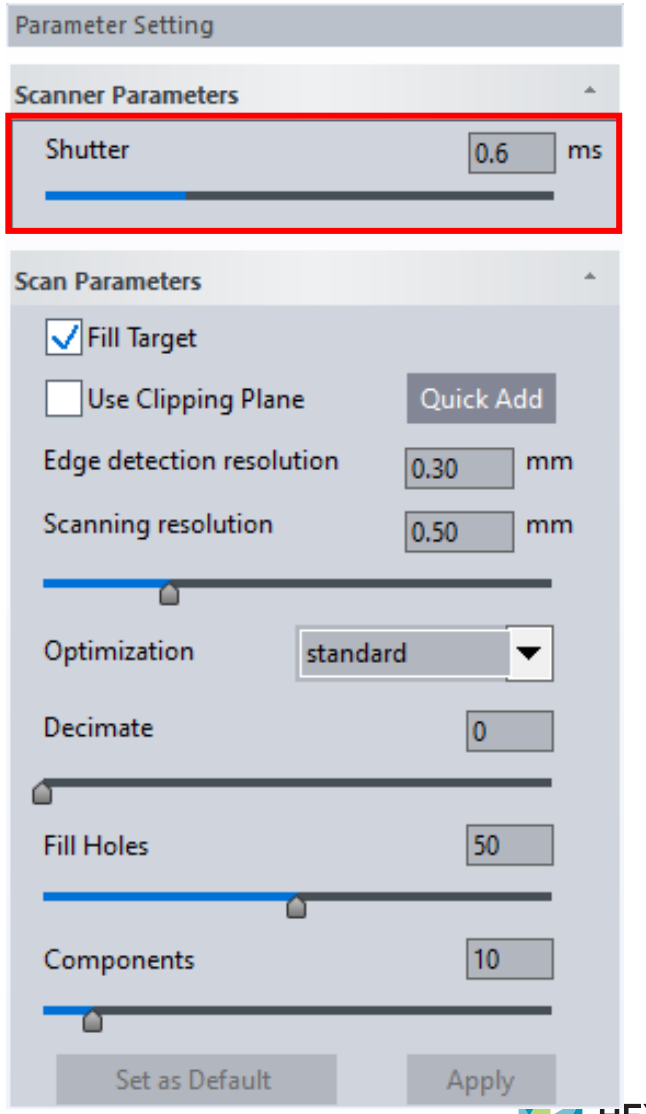
5. SCANNING PROCESS

Shutter Setting

- Shutter setting:
  - 1. Set the value directly with keyboard
  - 2. Press"-" or "+" on the scanner itself to adjust
- Shutter setting range: 0.1ms-10ms
- The general scan setting shutter is from 0.4ms to 3ms.
- The shutter adjusts the camera exposure time, the exposure time is adjusted according to different scanning objects. Light color objects use a low-value shutter, and dark color/shiny objects use a high-value shutter.



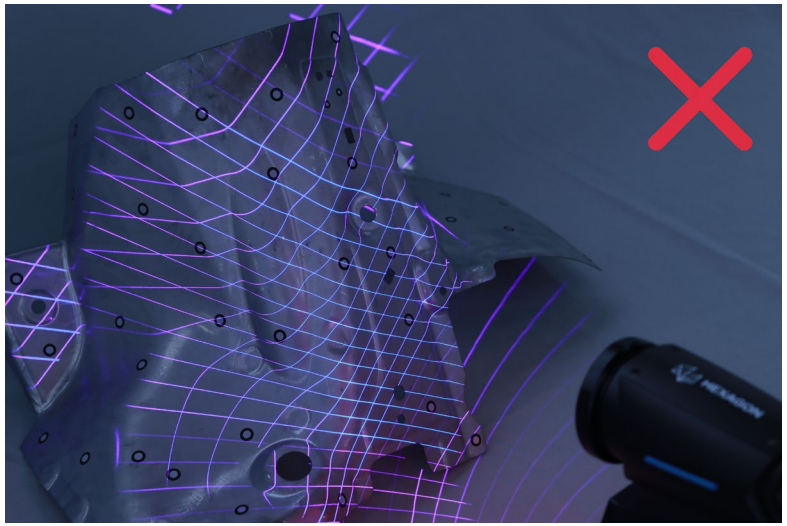
Tips:

The use of high shutter for light objects can result in poor data surface quality, and the use of low shutter for dark objects will lose laser lines.

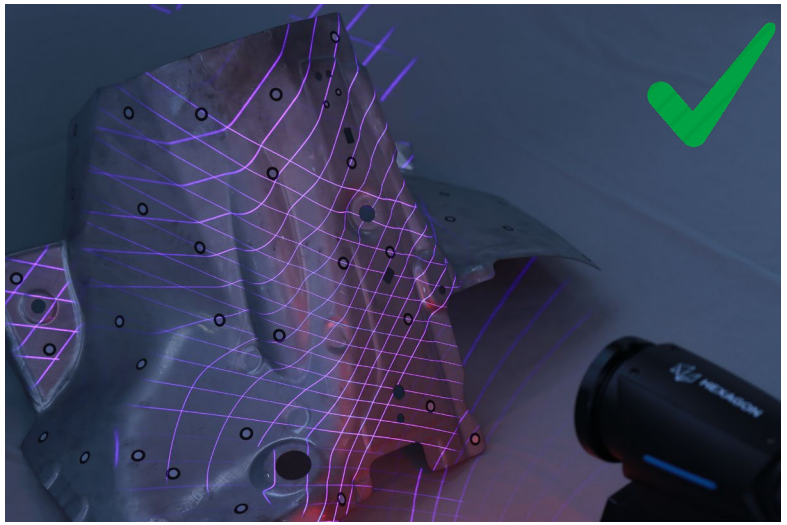
5. SCANNING PROCESS

Shutter Setting

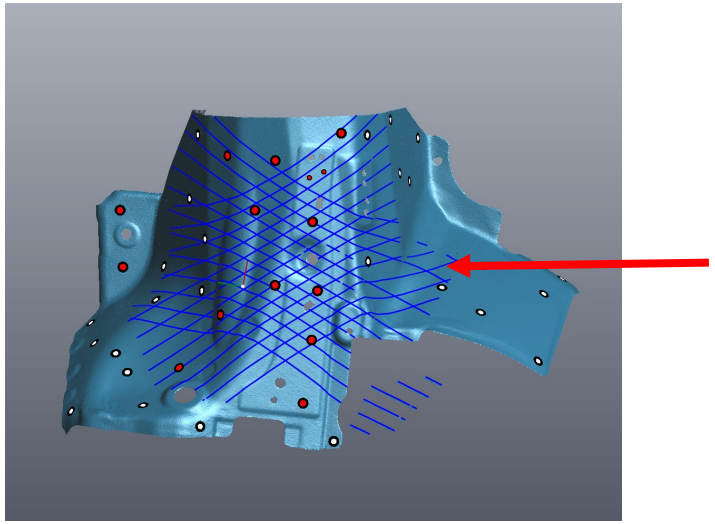
Wrong shutter setting—too shine



Correct shutter setting



Tips: It is better to have a continuous blue laser line in scanning software under the scanning mode (as shown below).



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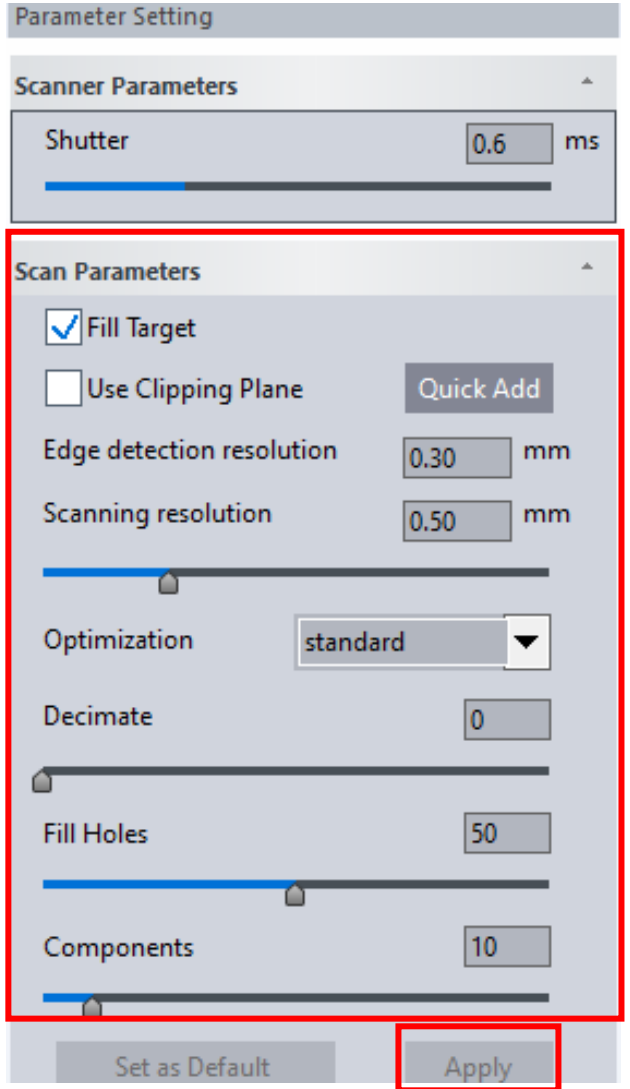
5. SCANNING PROCESS

Parameters Setting

1. **Fill target:** To fill target hole according to the surrounding curvature
2. **Use Clipping Plane:** To save the data above the clipping plane and delete the data below the clipping plane
3. **Optimization:** To improve the surface quality of the curvature section and smooth the surface data- (Without, Standard, Middle, High & High-enhance).
4. **Resolution:** Set the value in column and then apply to execute (value varies from 0.02mm to 10mm)
5. **Decimate:** To simplify the amount of model data that is ultimately generated
6. **Fill Holes:** To fill the small holes that are not scanned completely (value varies from 0 to 100, the bigger the value sets, the larger the hole fills)
7. **Components:** Automatically eliminate noisy data (value varies from 0 to 100, the bigger the value sets, the larger data will be eliminated).



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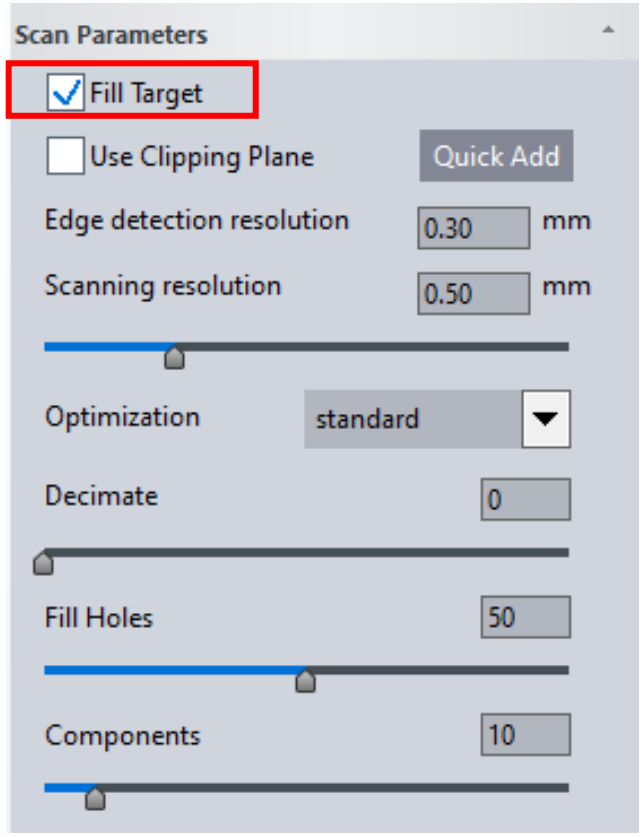
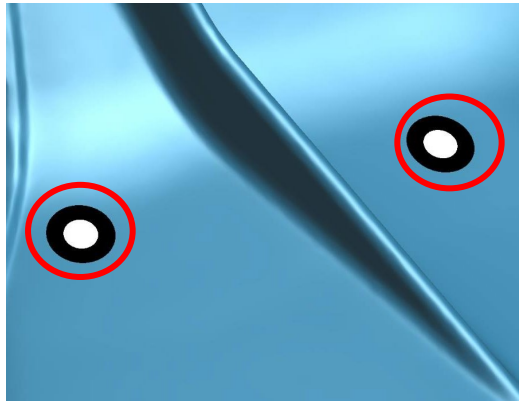
5. SCANNING PROCESS

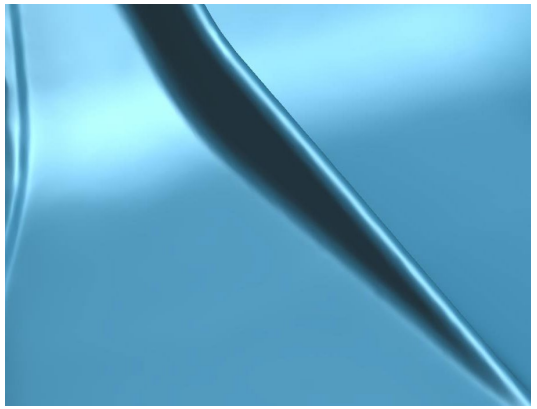
Fill target Setting

Fill target—To fill the target hole according to the surrounding curvature

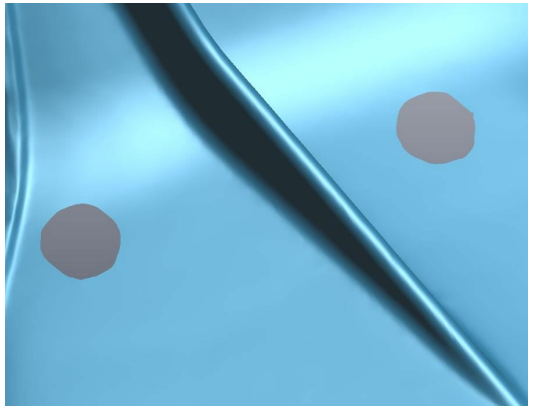




Scanning With targets



Select Fill target Option



Deselect Fill target Option

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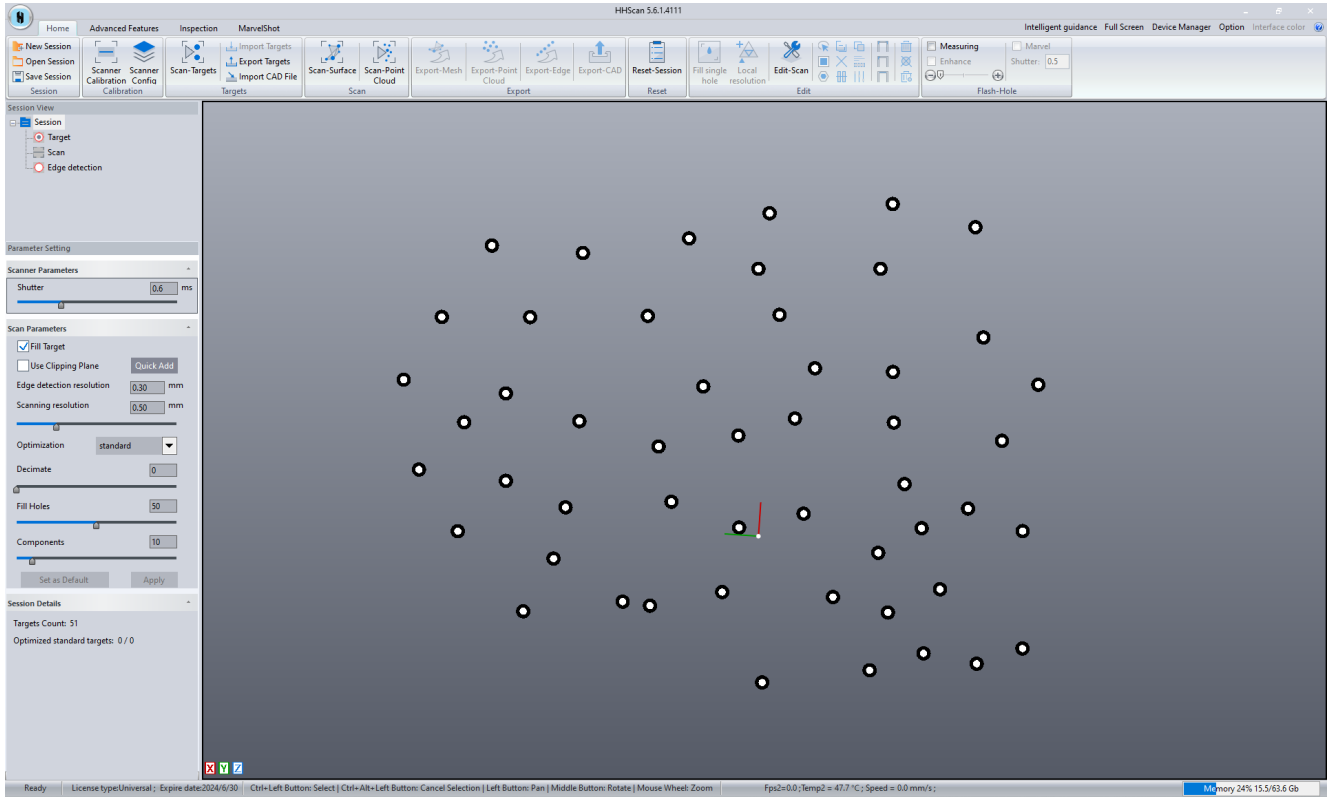
5. SCANNING PROCESS

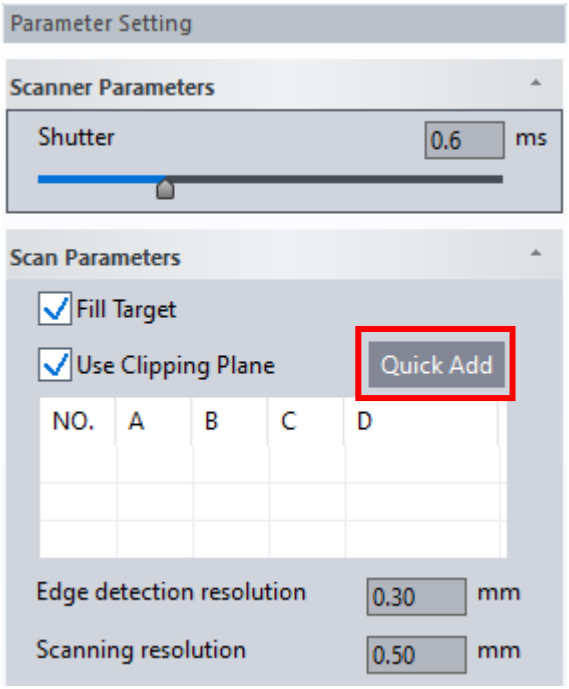
Clipping Plane Setting

Use Clipping Plane—To delete the data below the clipping plane.

STEP ONE: Scan targets to capture the targets data.



STEP TWO: Click “Quick Add”



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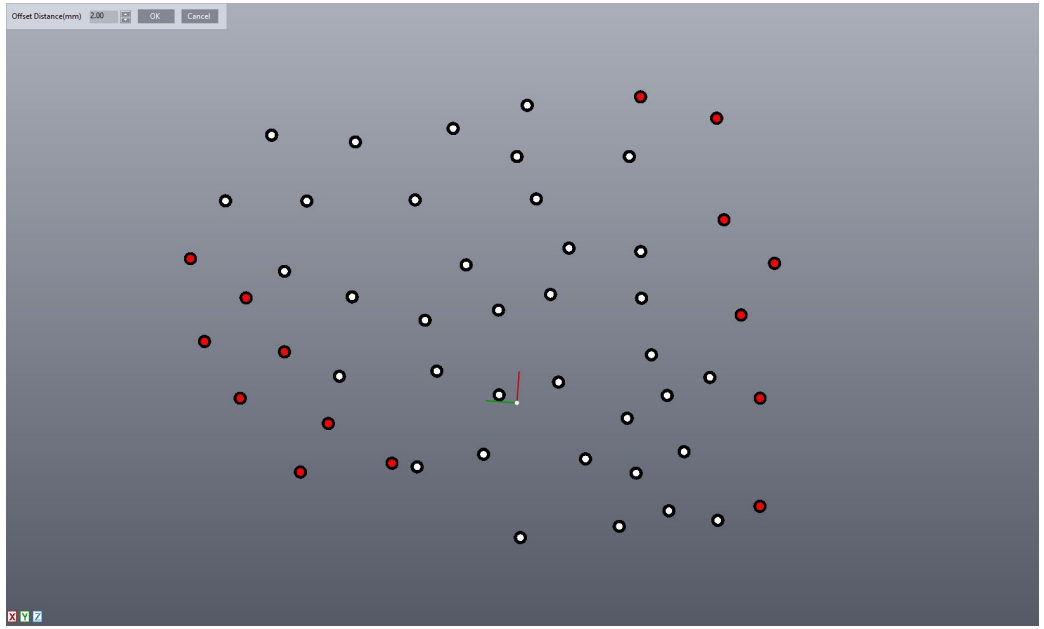
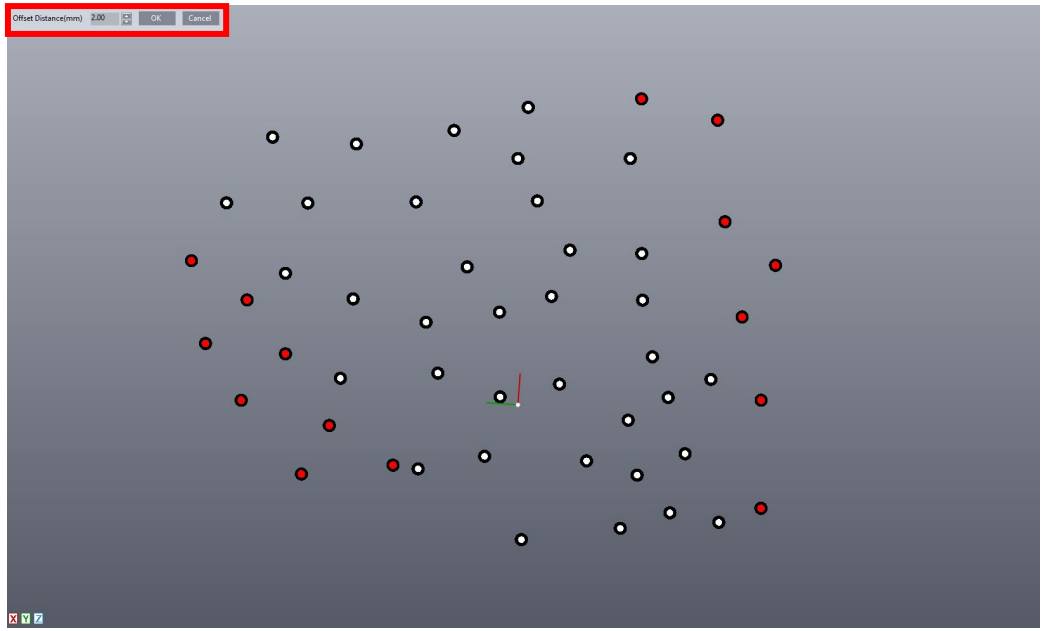
5. SCANNING PROCESS

Clipping Plane Setting

STEP THREE: Press the “ctrl” key on the keyboard and click the left mouse button to select the targets.



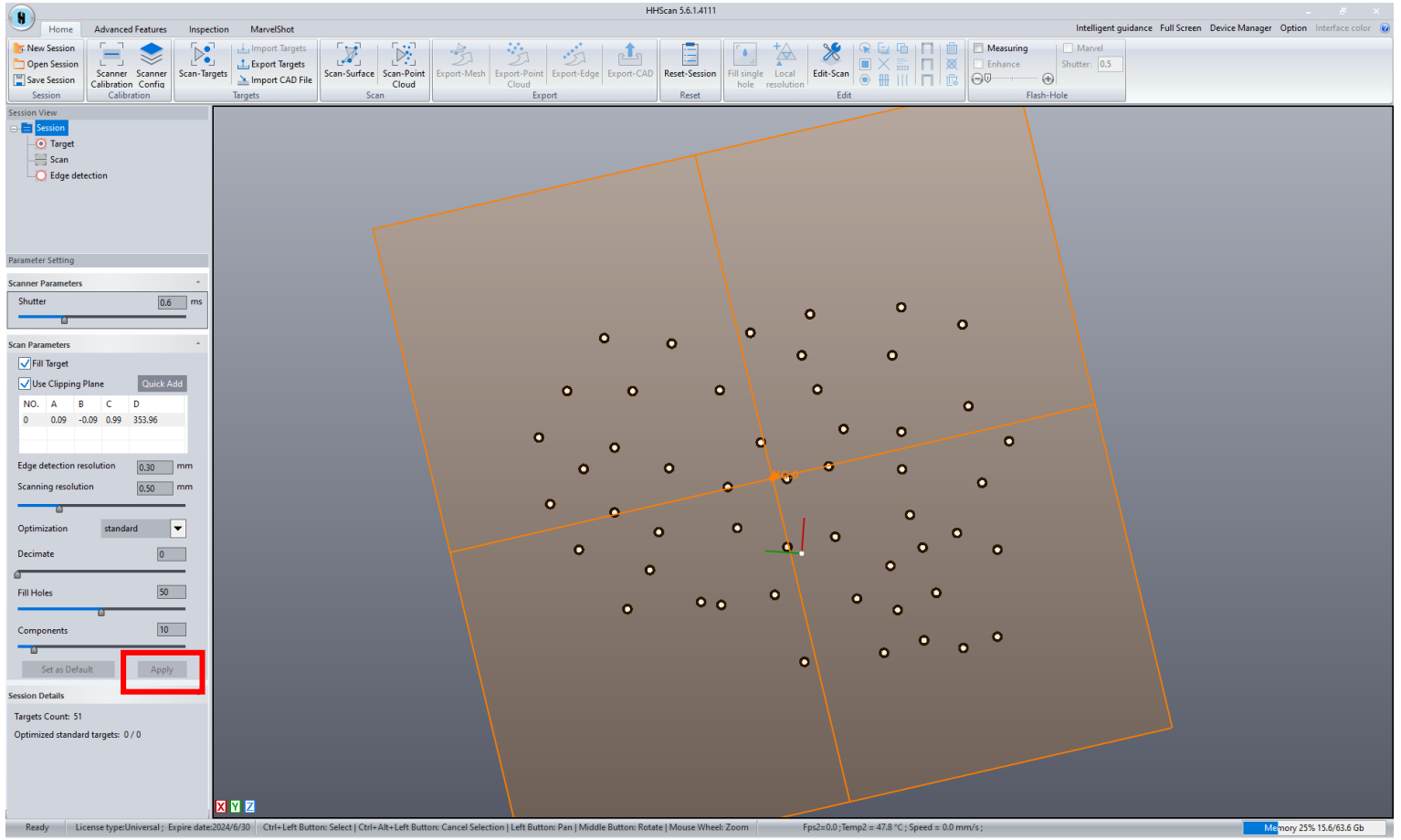
STEP Four: Set the offset distance (the distance between the clipping plane and the original plane created by the selected targets).



5. SCANNING PROCESS

Clipping Plane Setting

STEP FIVE: Click “Apply”.



5. SCANNING PROCESS

Resolution Setting

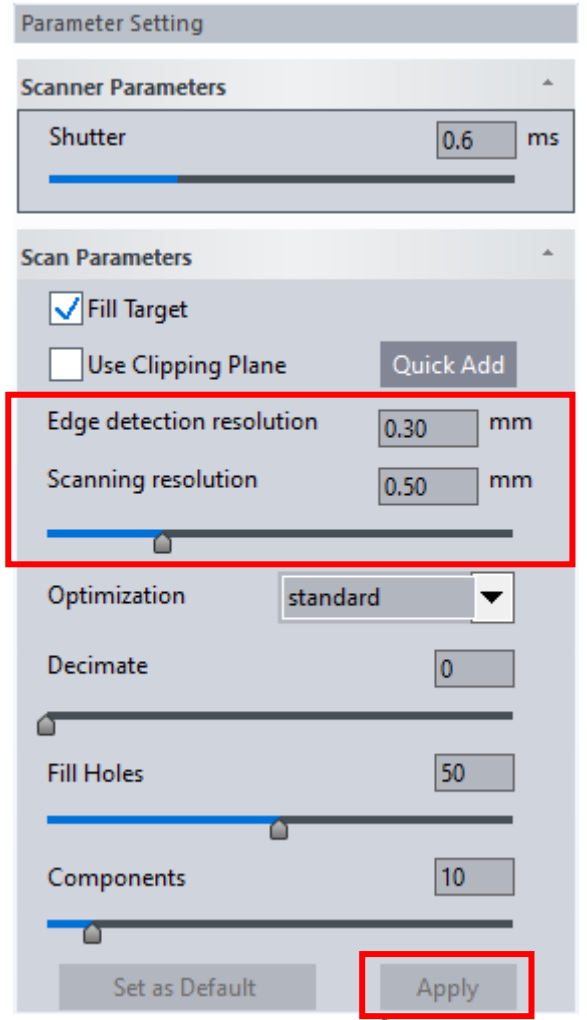
- Resolution—Set the value in column and then apply to execute
- Resolution range: 0.02mm~10mm
- For most scanning job, the resolution can be set between 0.2mm~2.0mm.

Tips:

It's not the higher resolution the better. We should set the reasonable resolution according to the complexity and details of the parts.

For your reference:

1. Metal Sheet Part: 0.2mm-1mm
2. Carved, Cultural Relics: 0.2mm-0.5mm
3. General Mechanical Parts 0.2mm-0.8mm



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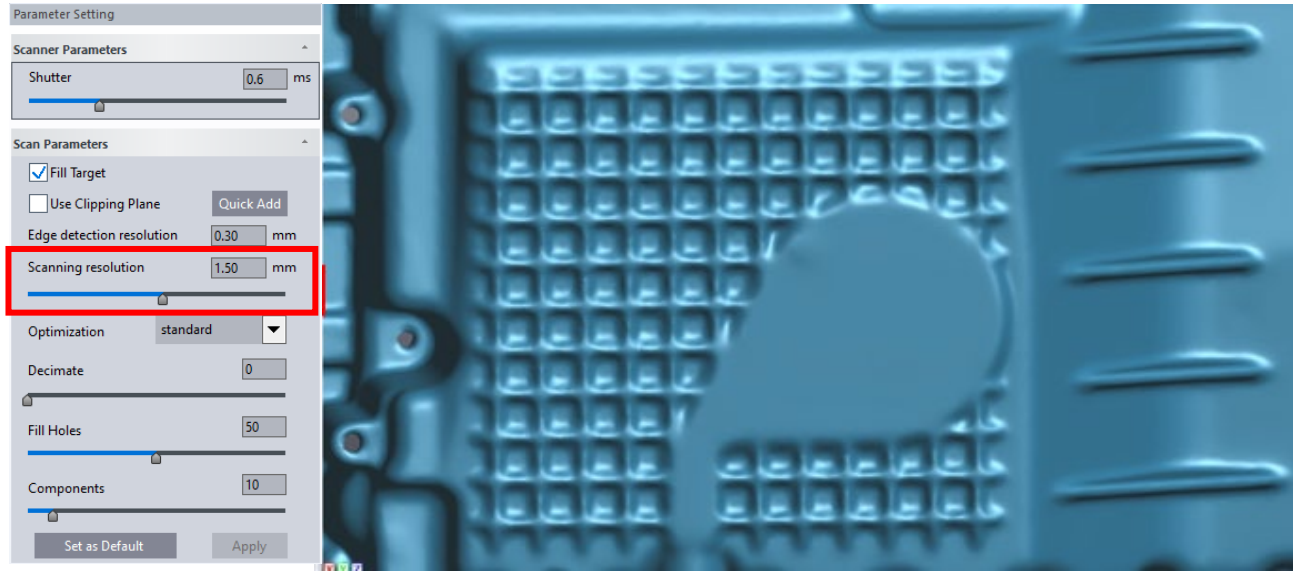
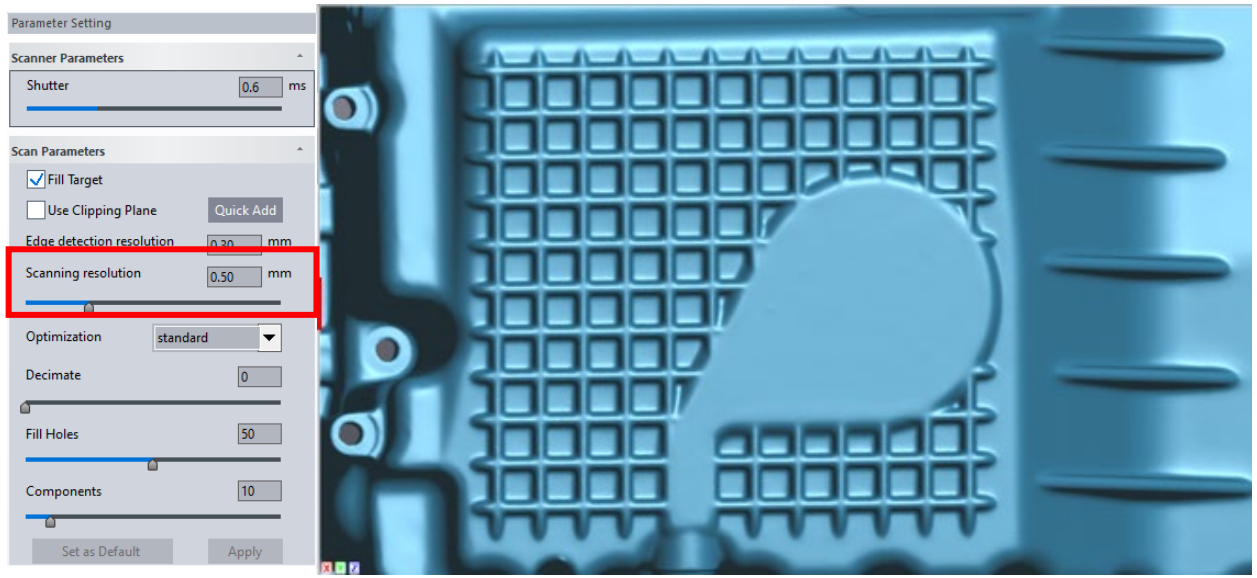
5. SCANNING PROCESS

Scanning Resolution

- Scanning resolution represents scan data-collecting details class and shows optical scanning ability.



Resolution: 1.5mm



Resolution: 0.5mm

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5. SCANNING PROCESS

Mesh Resolution

- Mesh resolution refers to size of the triangle edges which build scanned surface. Point cloud refers to the distance between each point
- Mesh resolution is directly related to digital capacity or detail remeshing
- For our scanner, it is best to set the mesh resolution to a value greater than or equal to 0.2 mm

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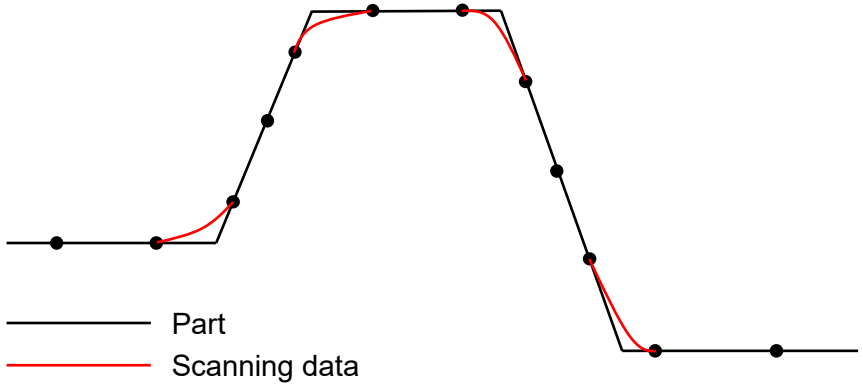
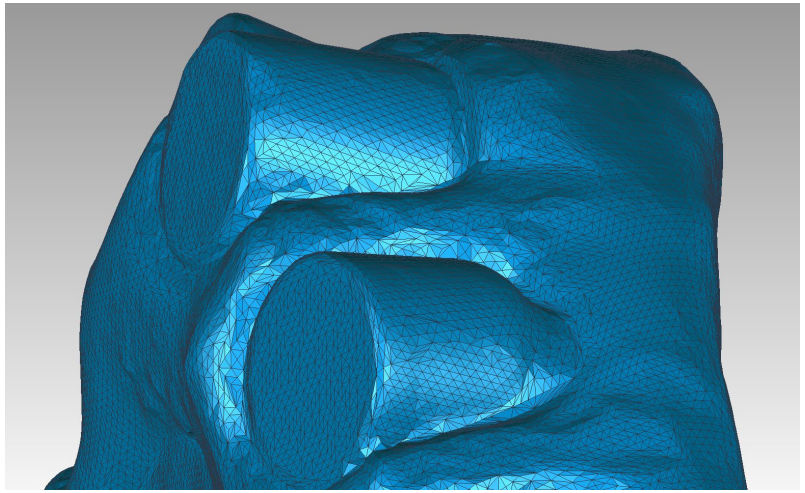
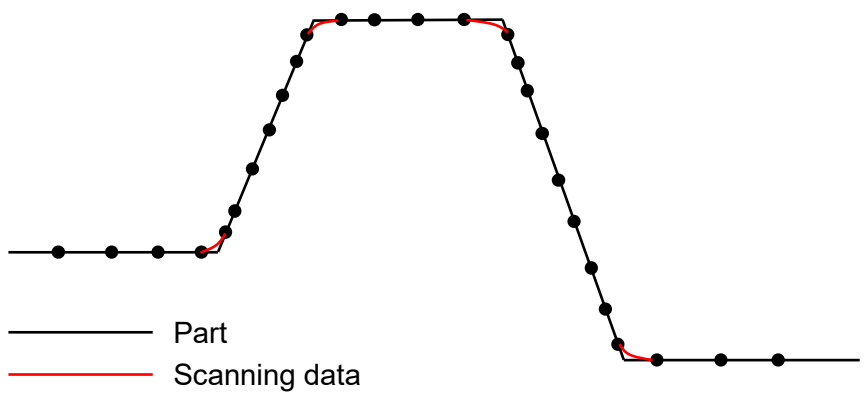
5. SCANNING PROCESS

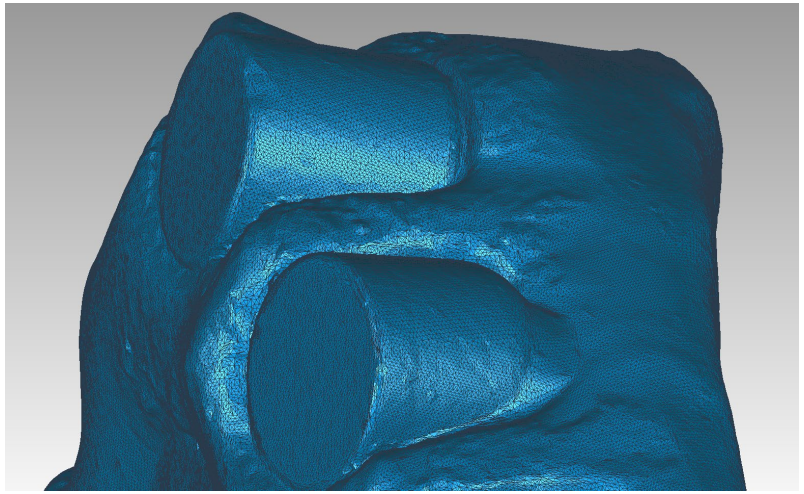
Resolution & Accuracy

- Resolution refers to the level of detail that scanner can collect.









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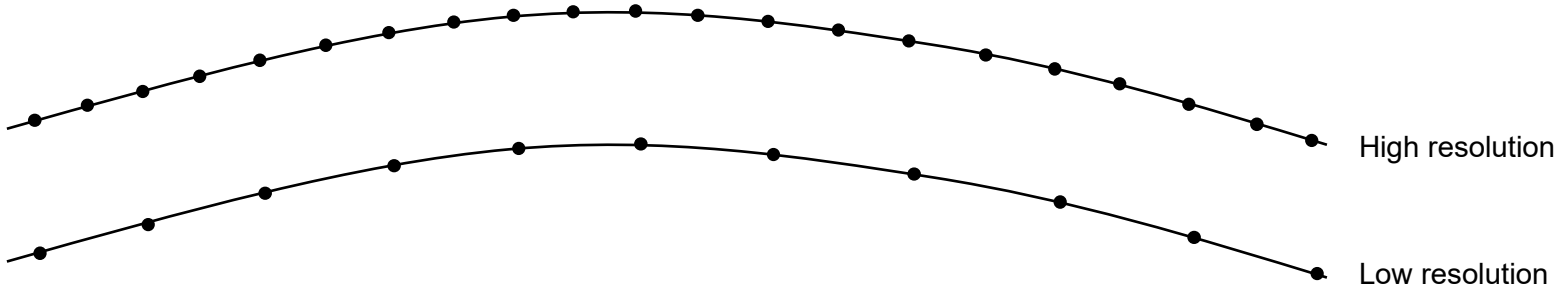
5. SCANNING PROCESS

Resolution & Accuracy

- Low resolution does not necessarily mean low accuracy.



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5. SCANNING PROCESS

Optimization Setting

- **Optimization**— To improve the surface quality of the curvature section and smooth the surface data.

Optimization value “without”	Optimization value “standard”	Optimization value “middle”	Optimization value “high”	Optimization value “high-enhance”

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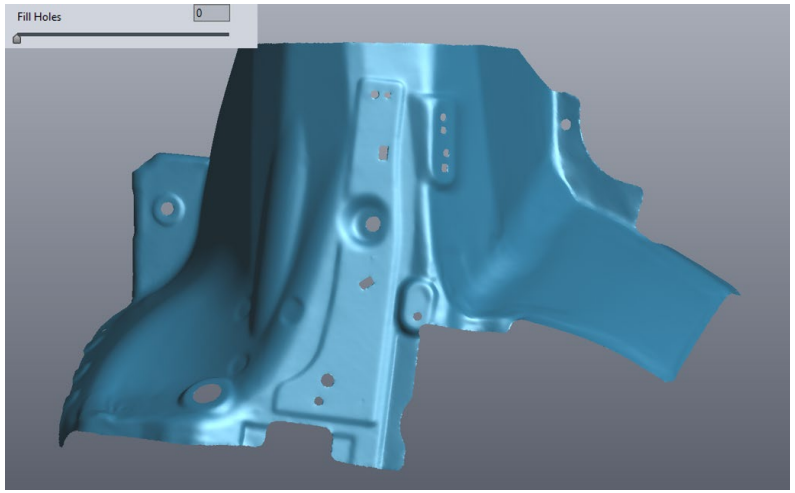
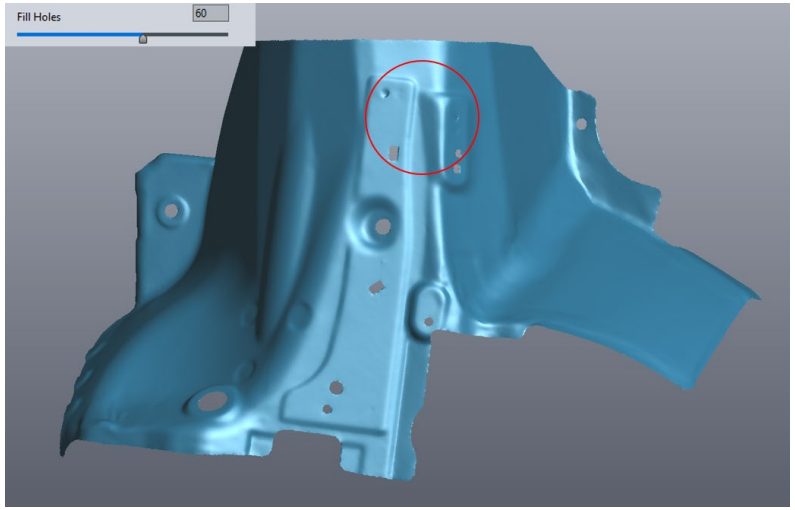
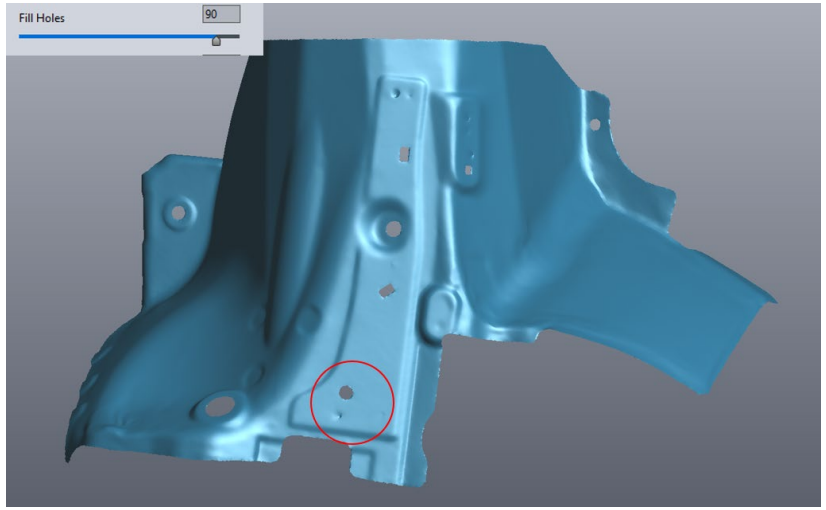
5. SCANNING PROCESS

File Holes







- **Fill Holes**—To fill the small holes that are not scanned completely.

Tips:

Setting range: 0 to 100. The value represents the hole size that will be filled. The default value is "50", which will fill Ø5mm holes.

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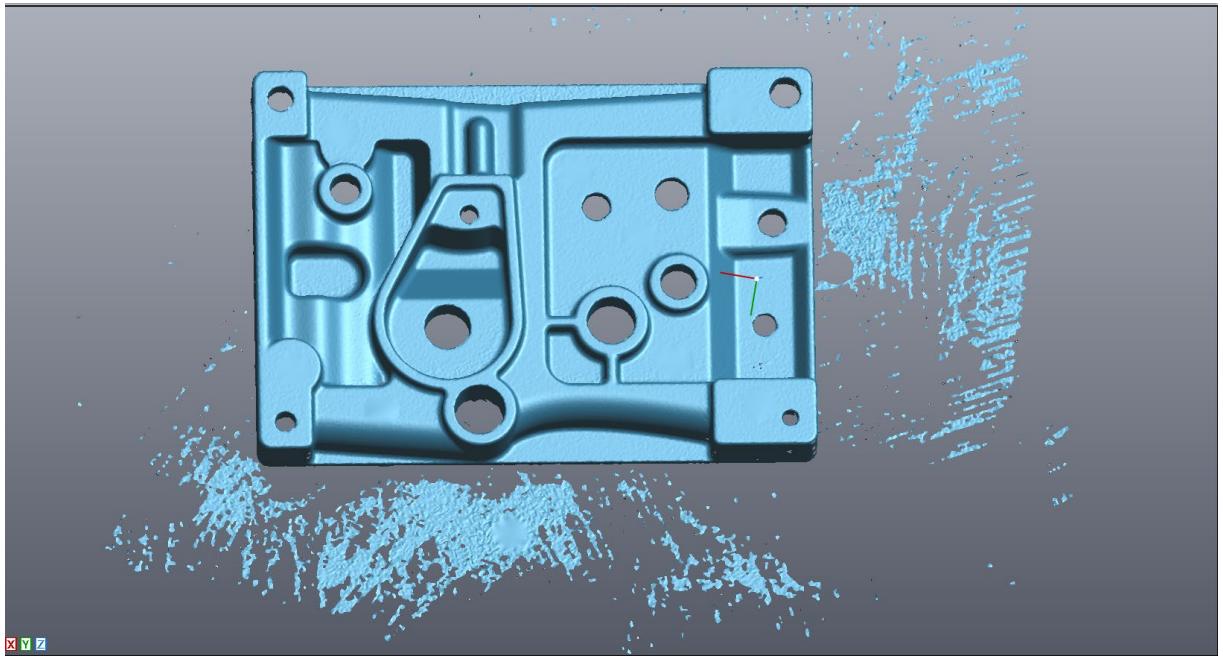
5. SCANNING PROCESS

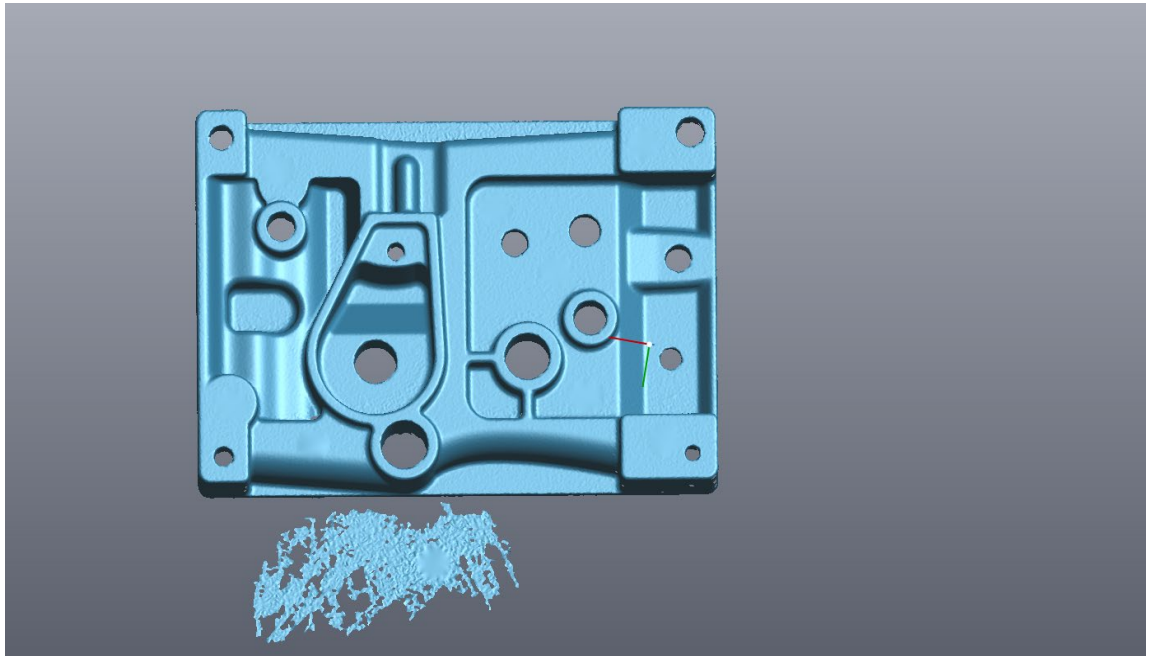
Components

- **Components**—filter noisy data automatically

Tips:

Setting range: 0 to 100. The value represents the size of the component to be deleted. The default value is "10".





5. SCANNING PROCESS

Orientation

- The direction of scanner is as perpendicular as possible to the surface
- The scanner can be tilted but the angle of inclination should not be too large

5. SCANNING PROCESS

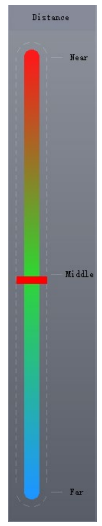
Scanner Indicator

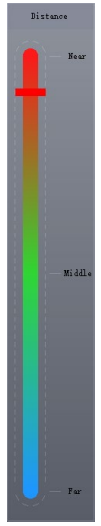
- The scanner is too close or too far away from the part to collect data well and get poor data
- The LED on the top of the scanner can also indicate the distance by three different colors
- Make sure that both cameras can capture at least 4 targets at the same time

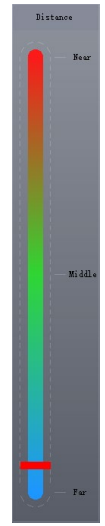
Tips:

In the process of scanning, sometimes we get too close or too far from part which will cause some targets can not be recognized. You need to change the angle or scan again, at the same time make sure the indicator bar in the green area.

GOOD	TOO CLOSE	TOO FAR







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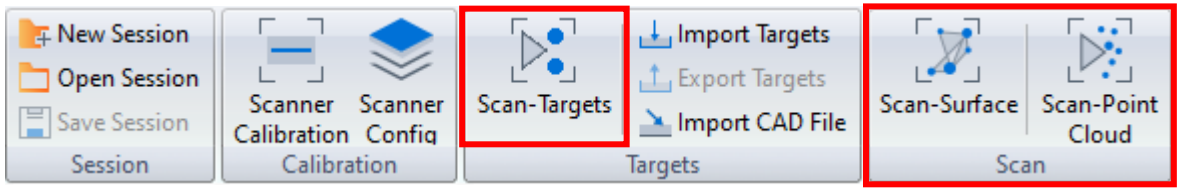
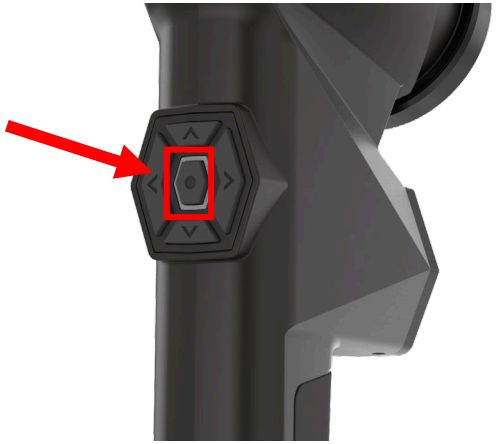
5. SCANNING PROCESS

Data Acquisition

- First “Scan-targets” to collect the targets
- Second “Scan-Surface” or “Scan-Points”



- Press scan button to scan



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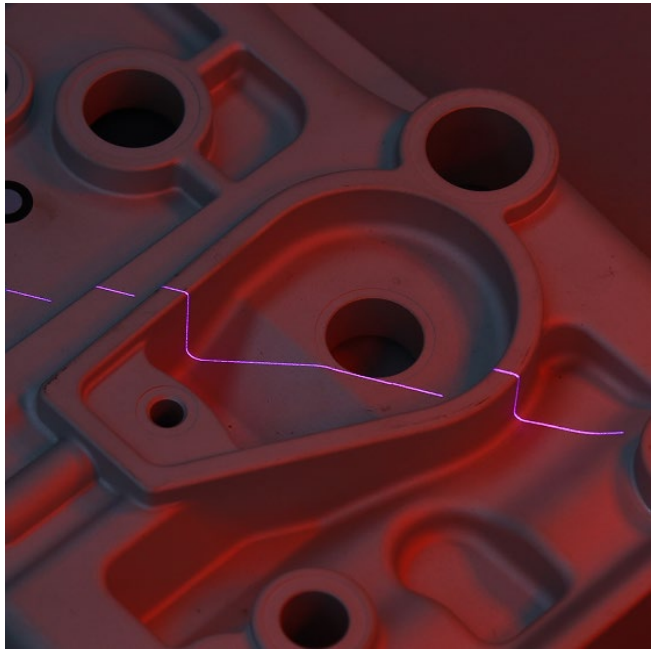
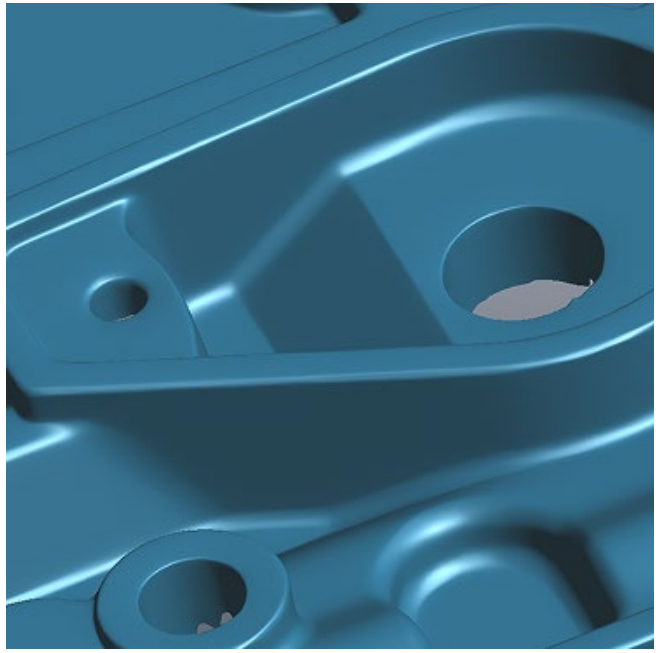
5. SCANNING PROCESS

Data Acquisition

Tips:

During the process of scanning, if you find some places which is hard to reach or scan by standard laser line, you can switch to extra single laser line to rescan.





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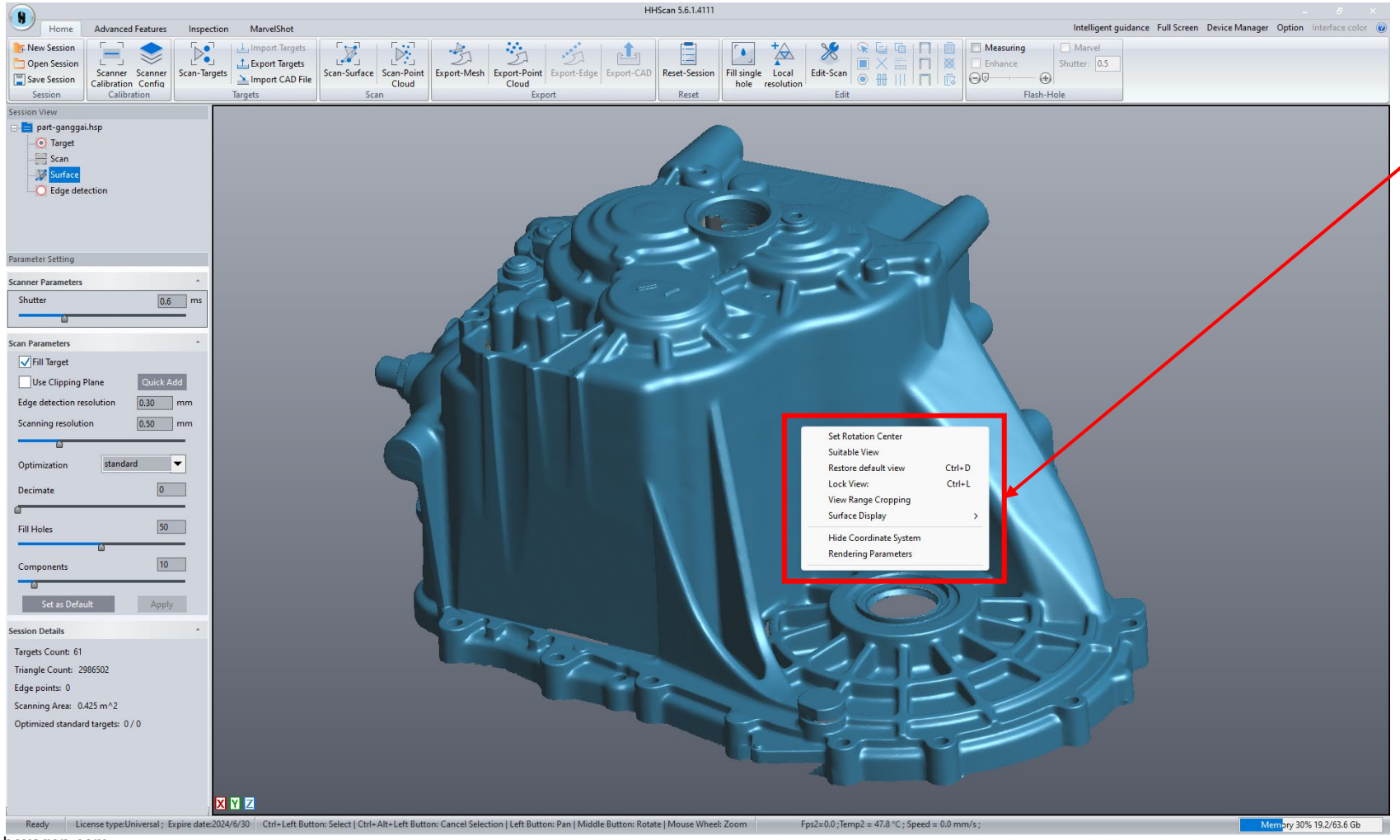
5. SCANNING PROCESS

Data Acquisition



Tips:
Right click to show the sub-menu

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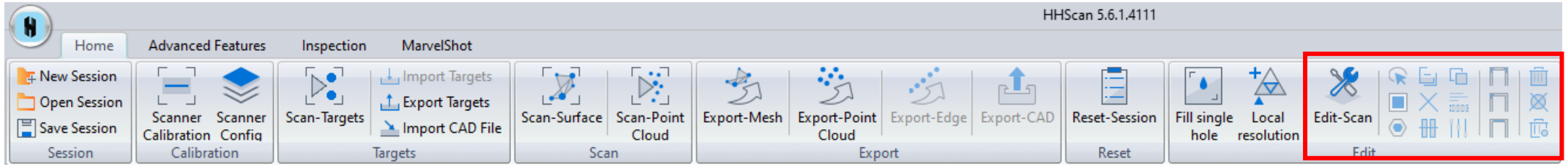
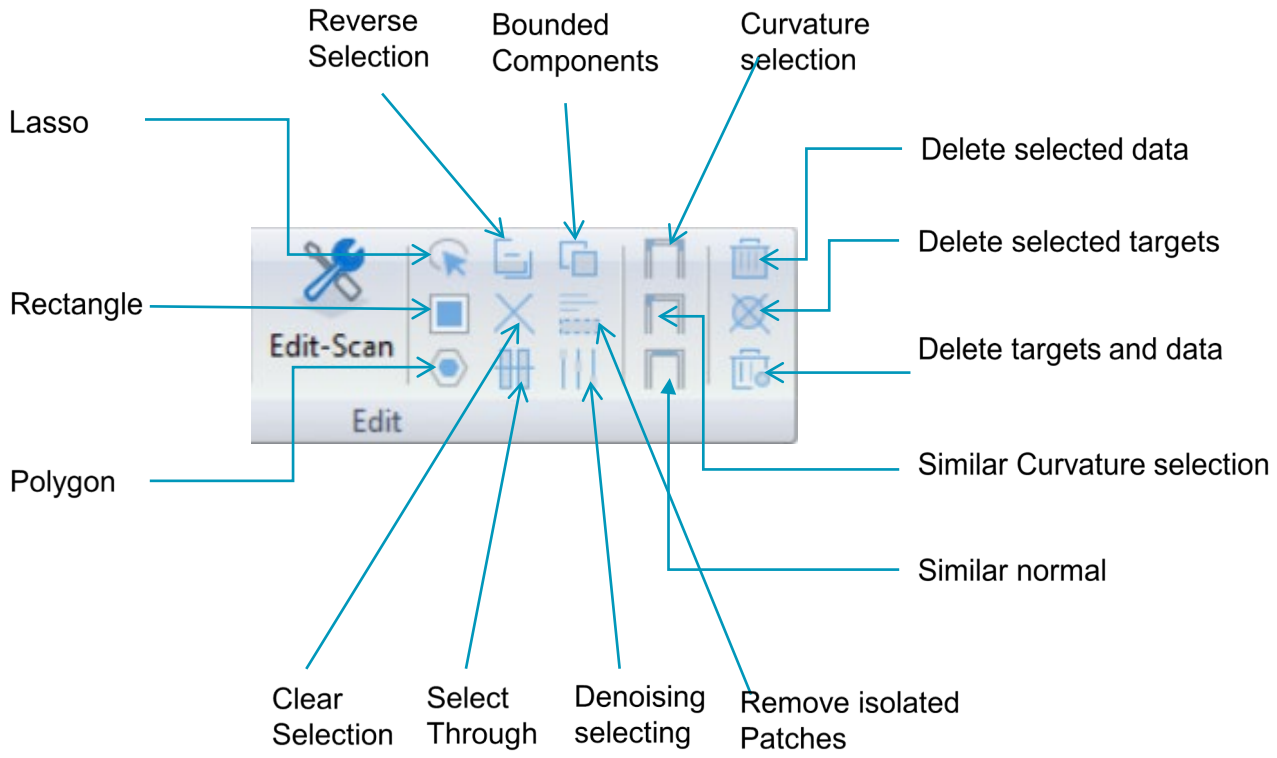
5. SCANNING PROCESS

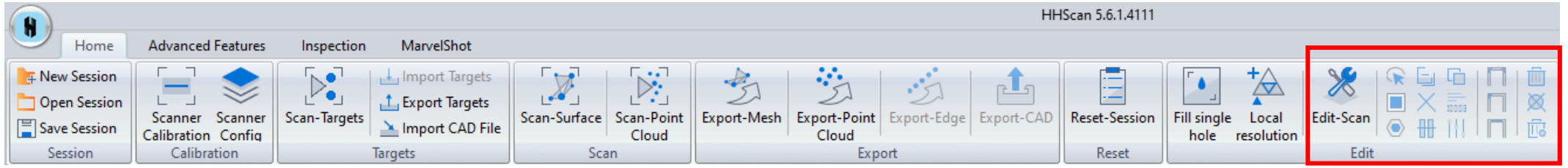
Data Edit



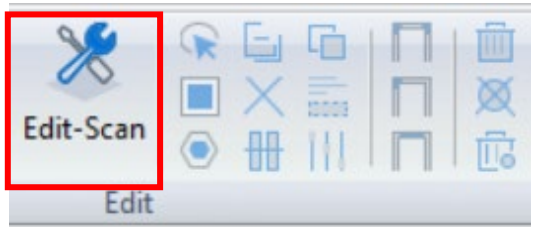


5. SCANNING PROCESS

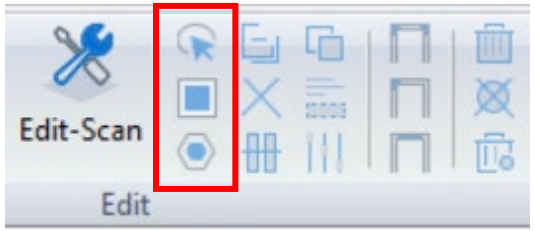
Data Edit Operation



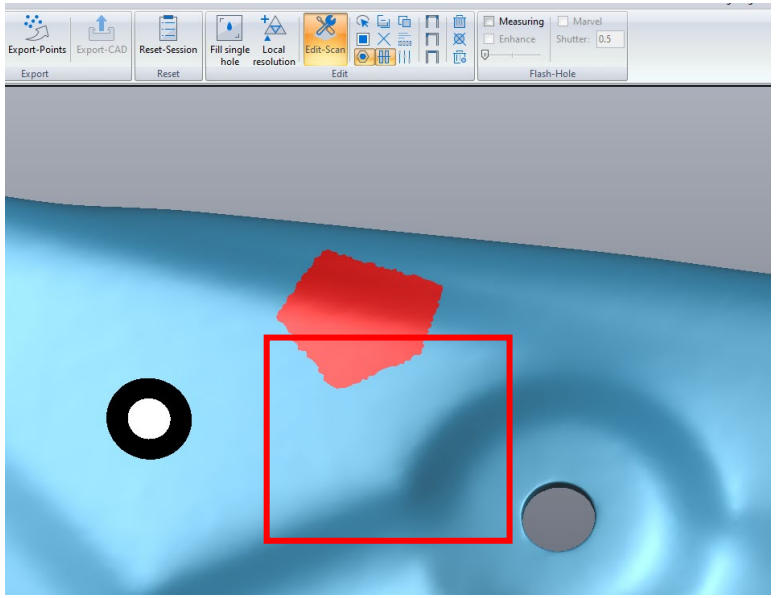
STEP ONE: Click “Edit-Scan”



STEP TWO: Choose “Lasso”, “Rectangle” or “Polygon”.



STEP THREE: Press “ctrl” in keyboard and click left mouse to select an area.

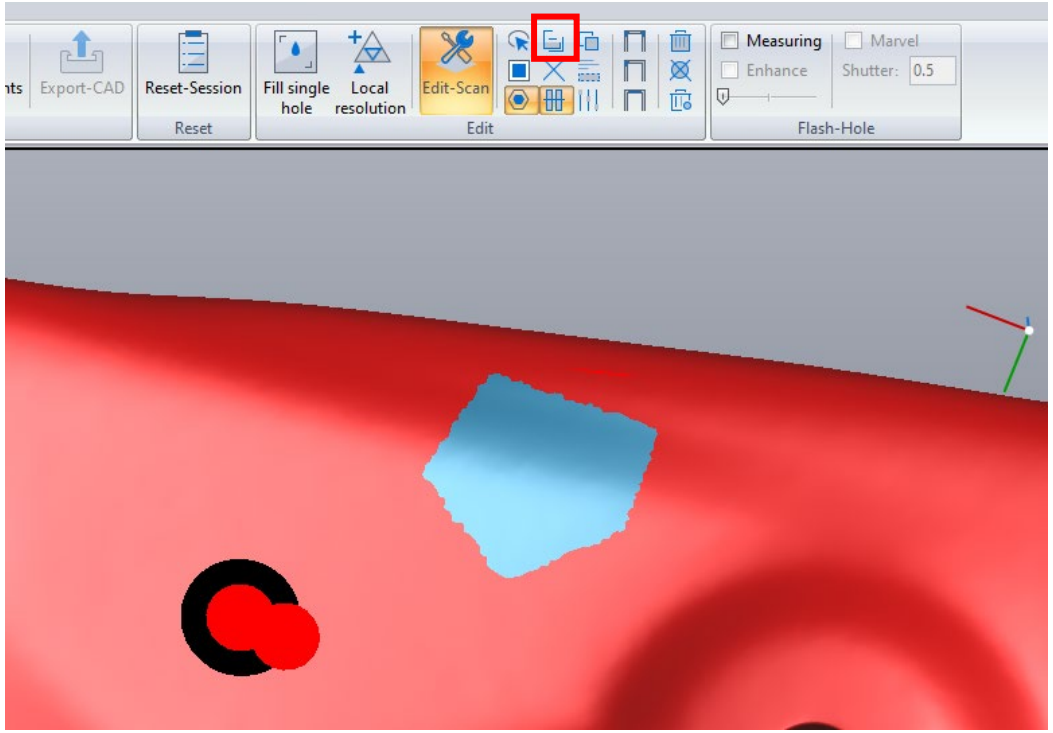


HEXAGON

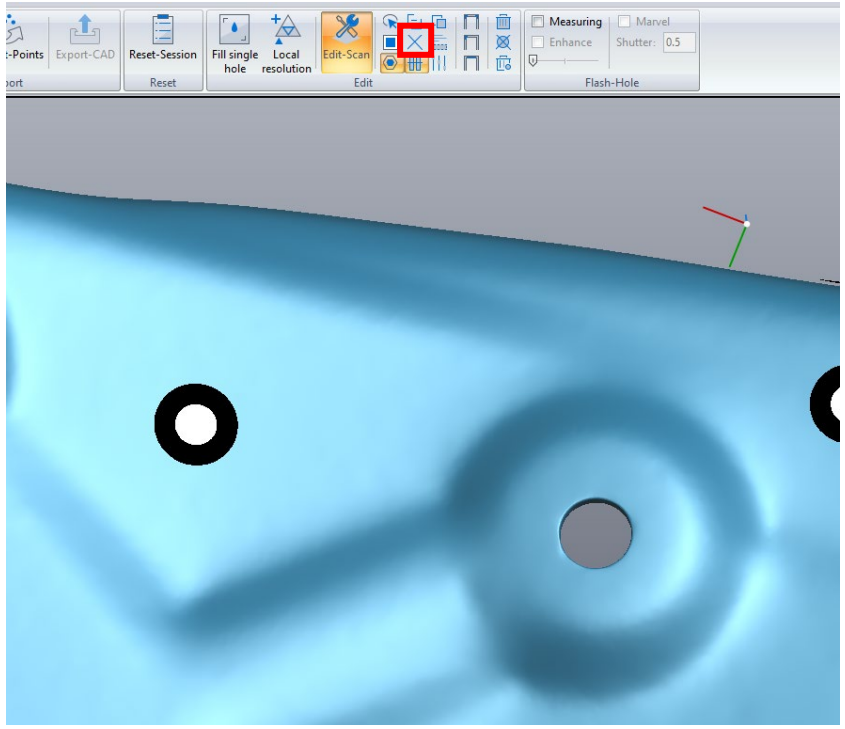
5. SCANNING PROCESS

Data Edit Operation

STEP FOUR: Click “reverse” to reverse select the rest of area.



STEP FIVE: Click “Clear Selection” to reverse select the rest of area.



Tips：

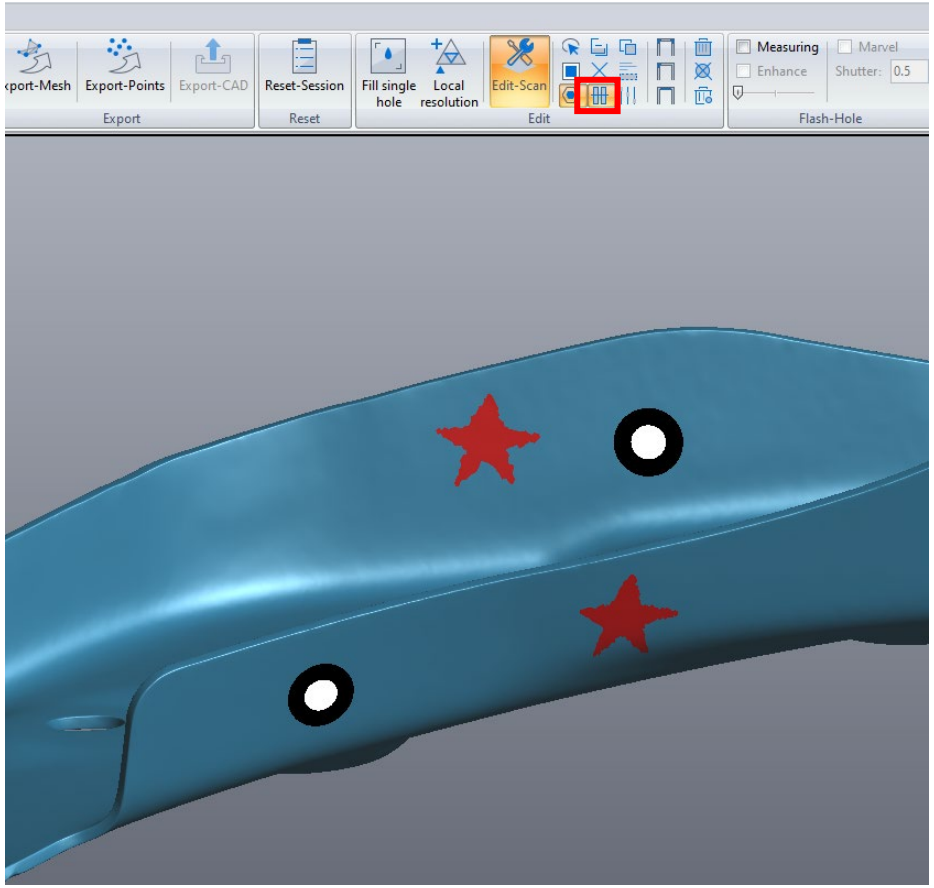
In the process of selecting data, the computer has a calculation time. During this time, please do not click on the computer, wait until it's been selected and deleted.

HEXAGON

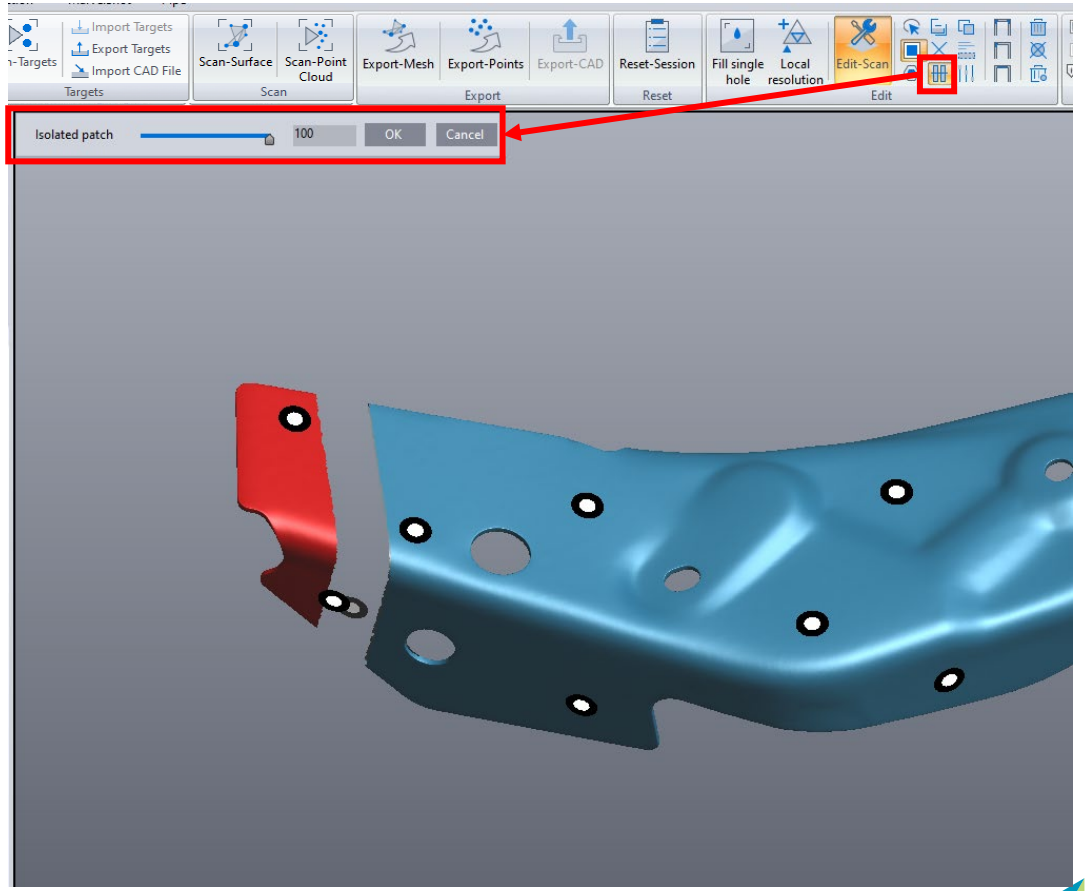
5. SCANNING PROCESS

Data Edit Operation

STEP SIX : Click “go through” and then select an area.



STEP SEVEN : Click “Remove Isolated Patches” and then setup the value to select isolated patches.

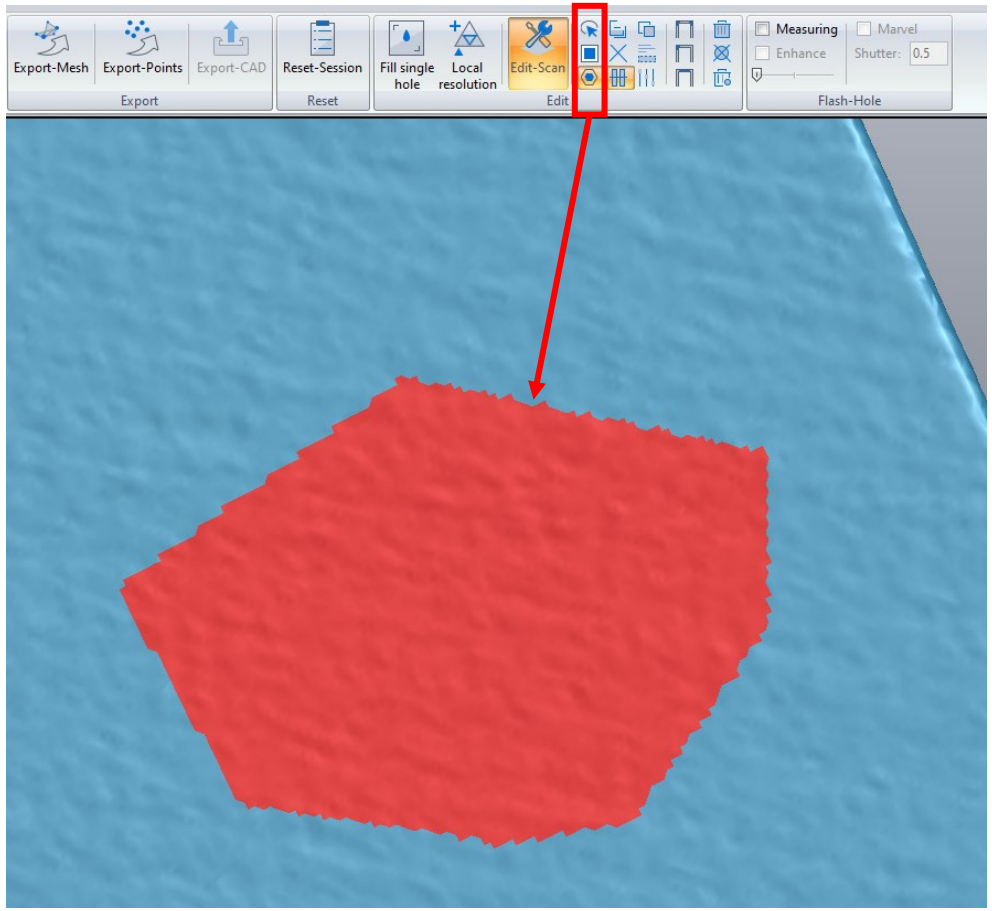


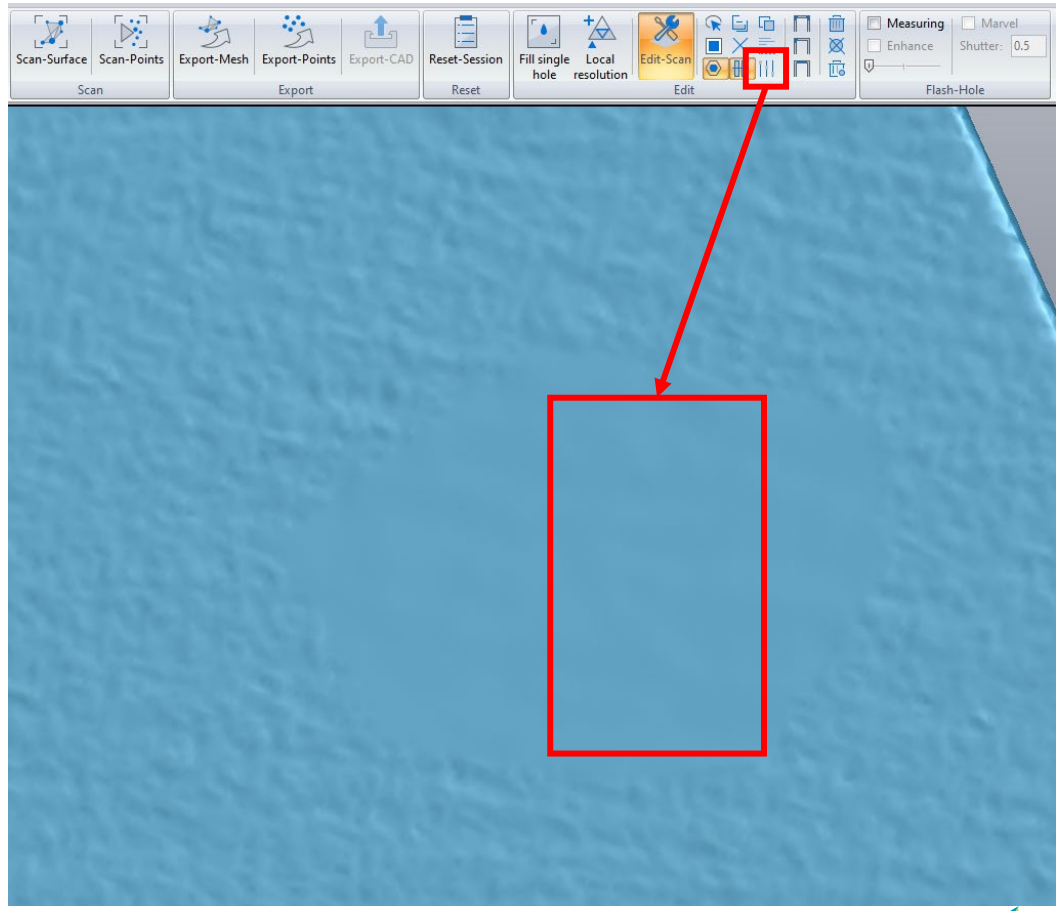
HEXAGON

5. SCANNING PROCESS

Data Edit Operation

STEP EIGHT: Select targeted area and click ”denoising selecting” to targeted area.



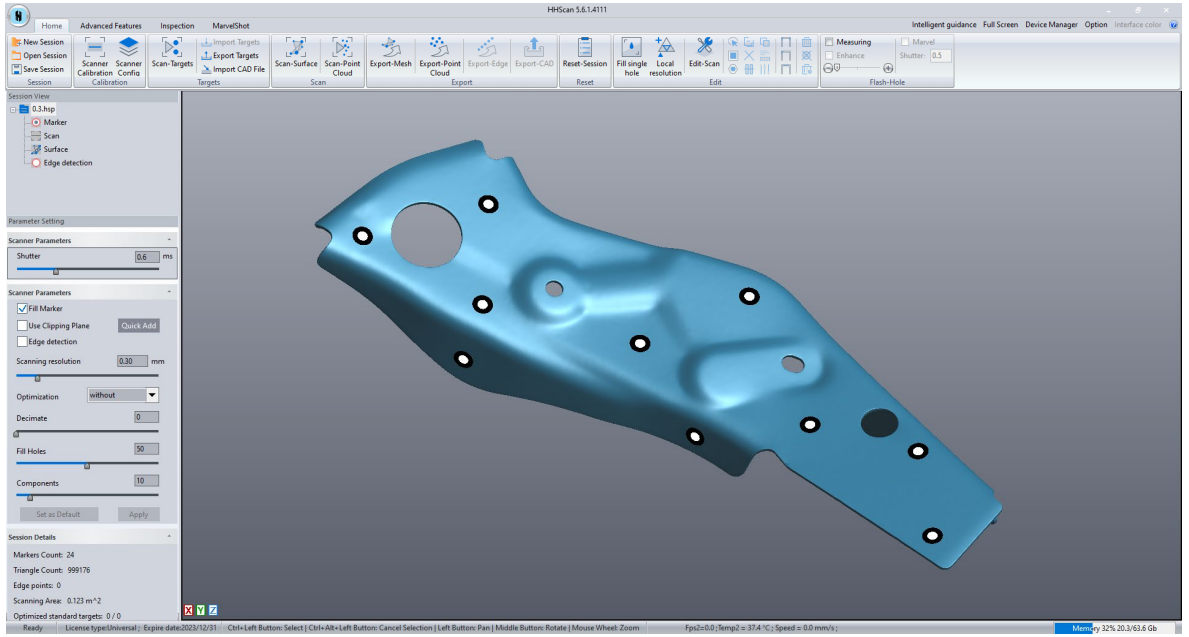


5. SCANNING PROCESS

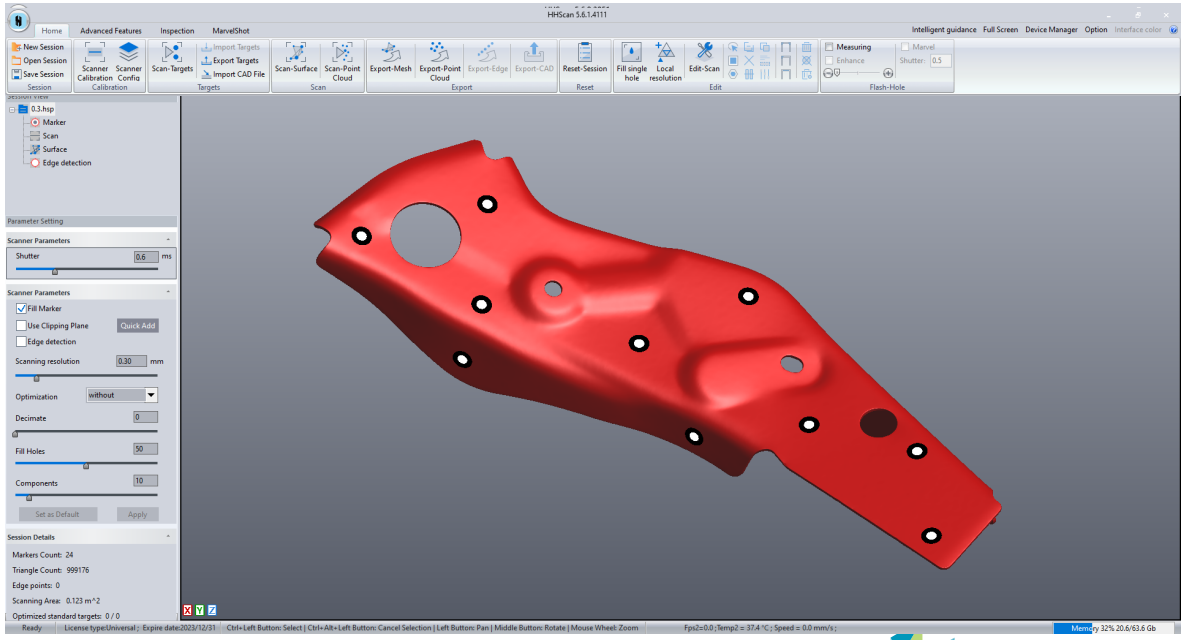
Data Edit Operation

STEP NINE: To click “bounded component” and then select the target object.

Before Selection



After Selection

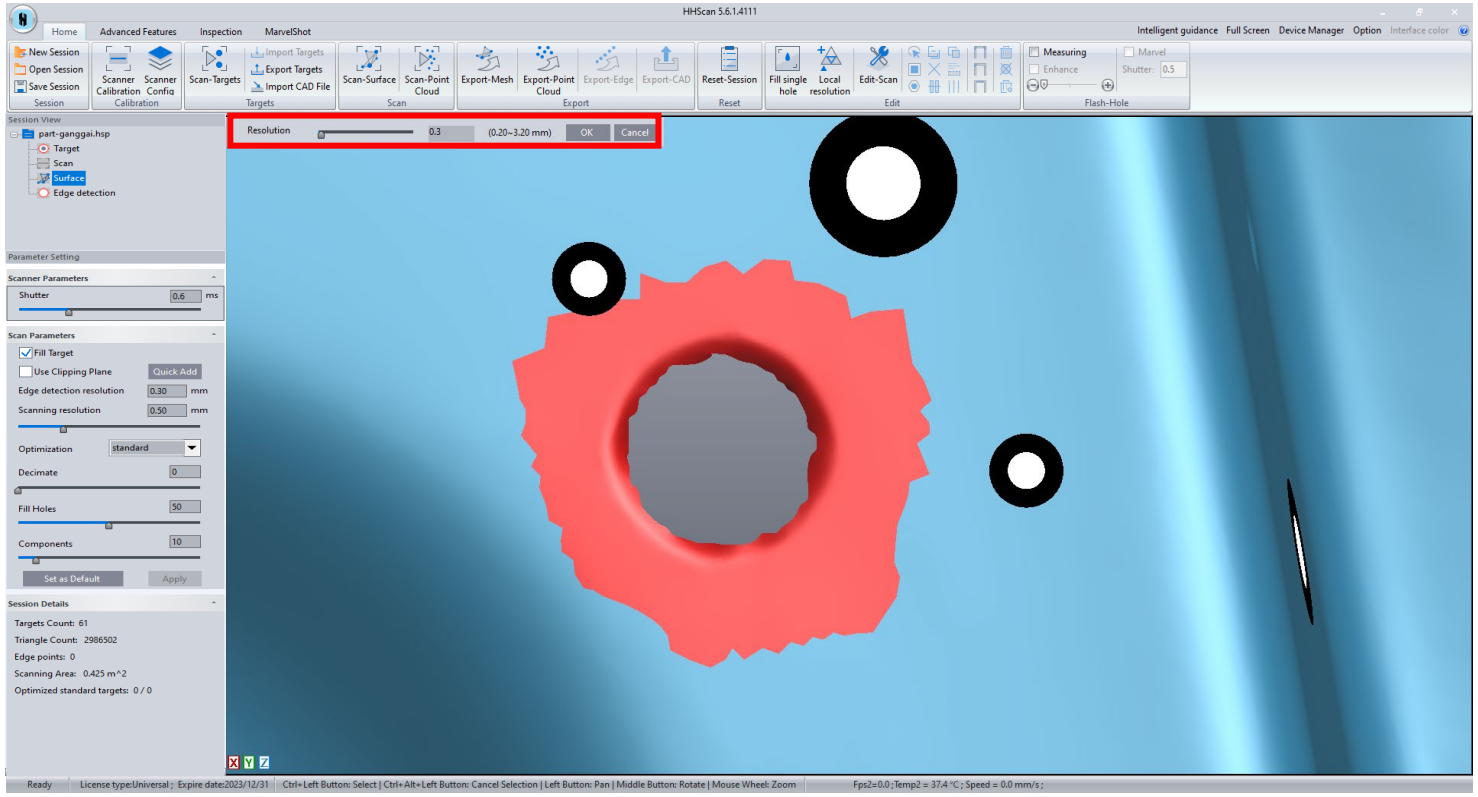


HEXAGON

5. SCANNING PROCESS

Data Edit Operation

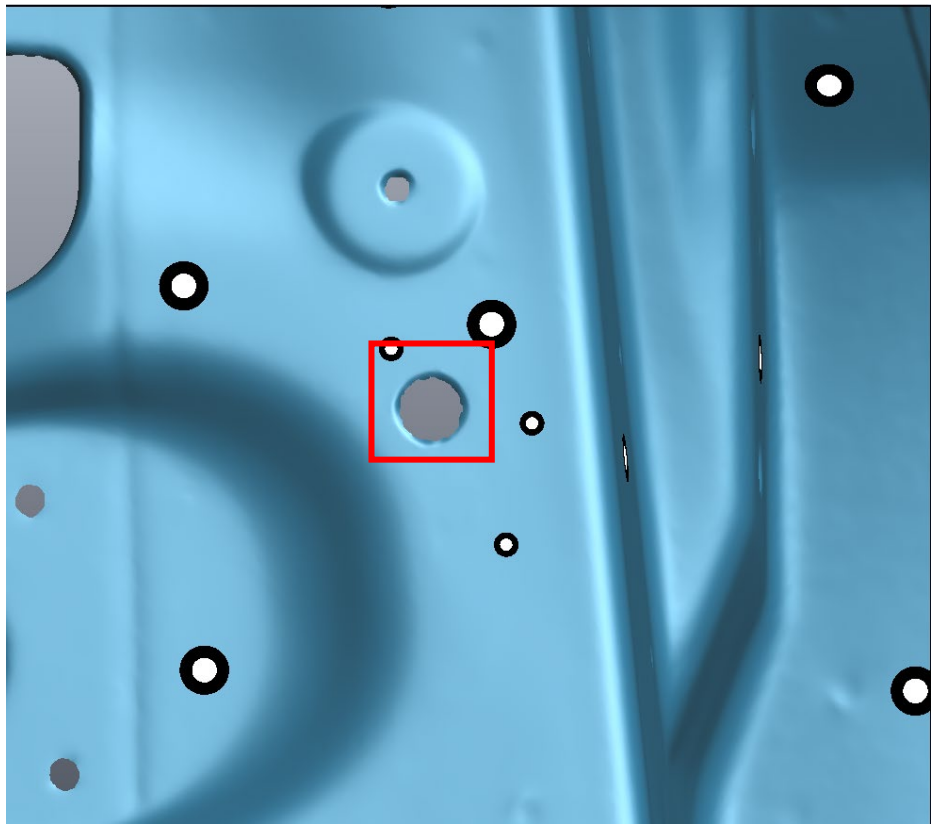
STEP TEN: Click “local resolution” to adjust the local resolution of some part;
Click “local resolution” firstly, and then mark the target area, set the different resolution to complete the adjustment



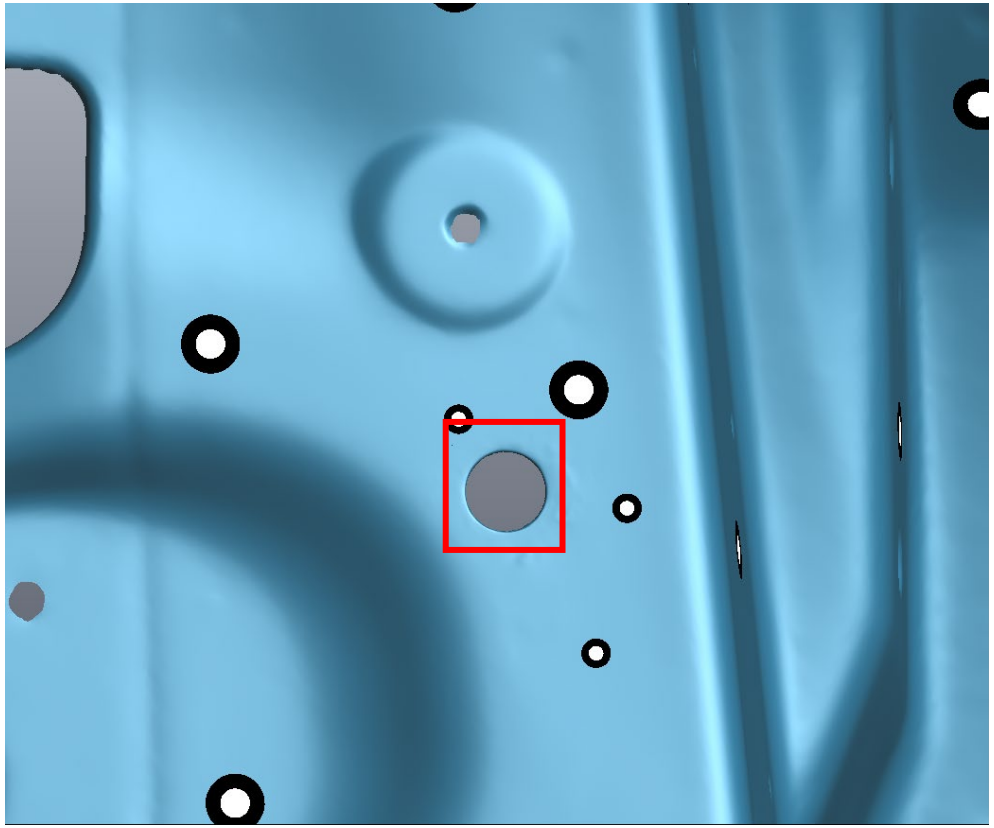
5. SCANNING PROCESS

Data Edit Operation

Before Selection



After Selection



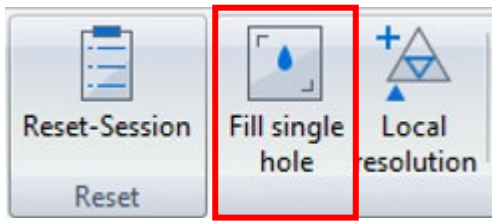
HEXAGON

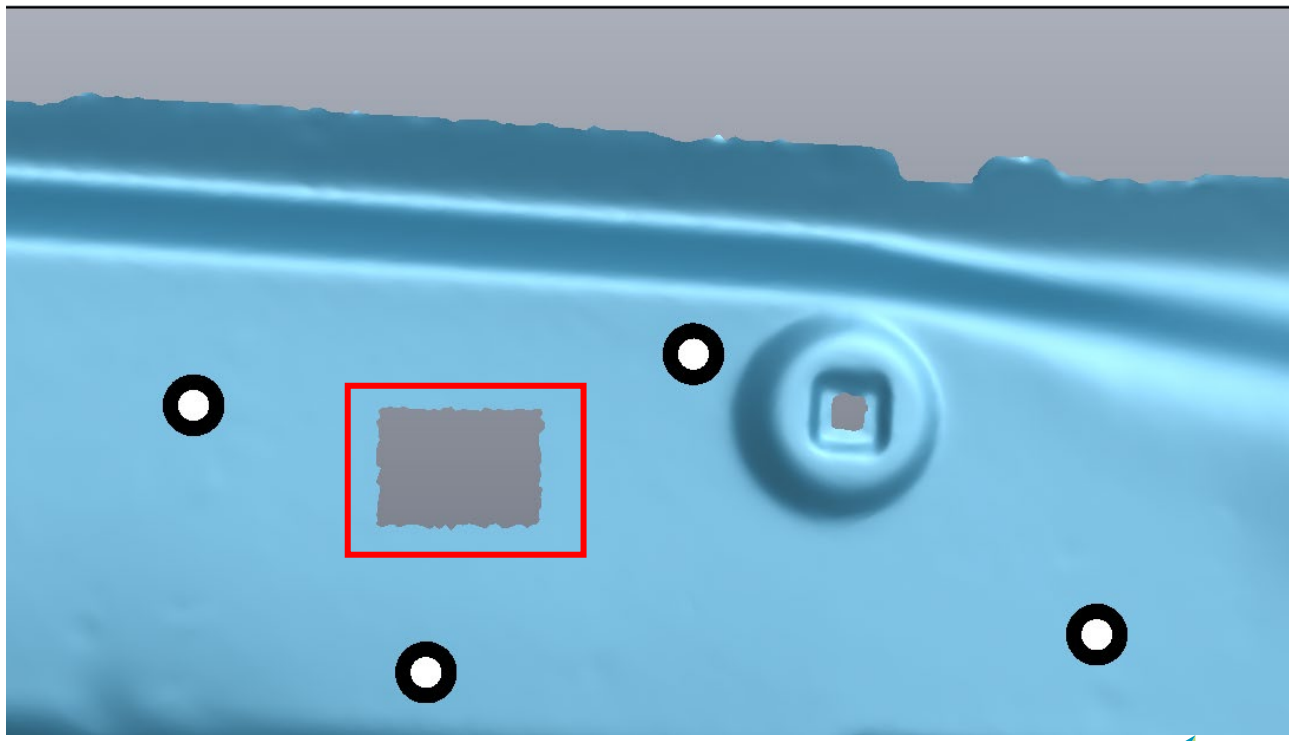
5. SCANNING PROCESS

Data Edit Operation

STEP ELEVEN:

- Click “Fill single hole” to fill the single hole automatically.
- Click “Fill single hole” firstly, and then select the hole and left click to complete filling the hole.

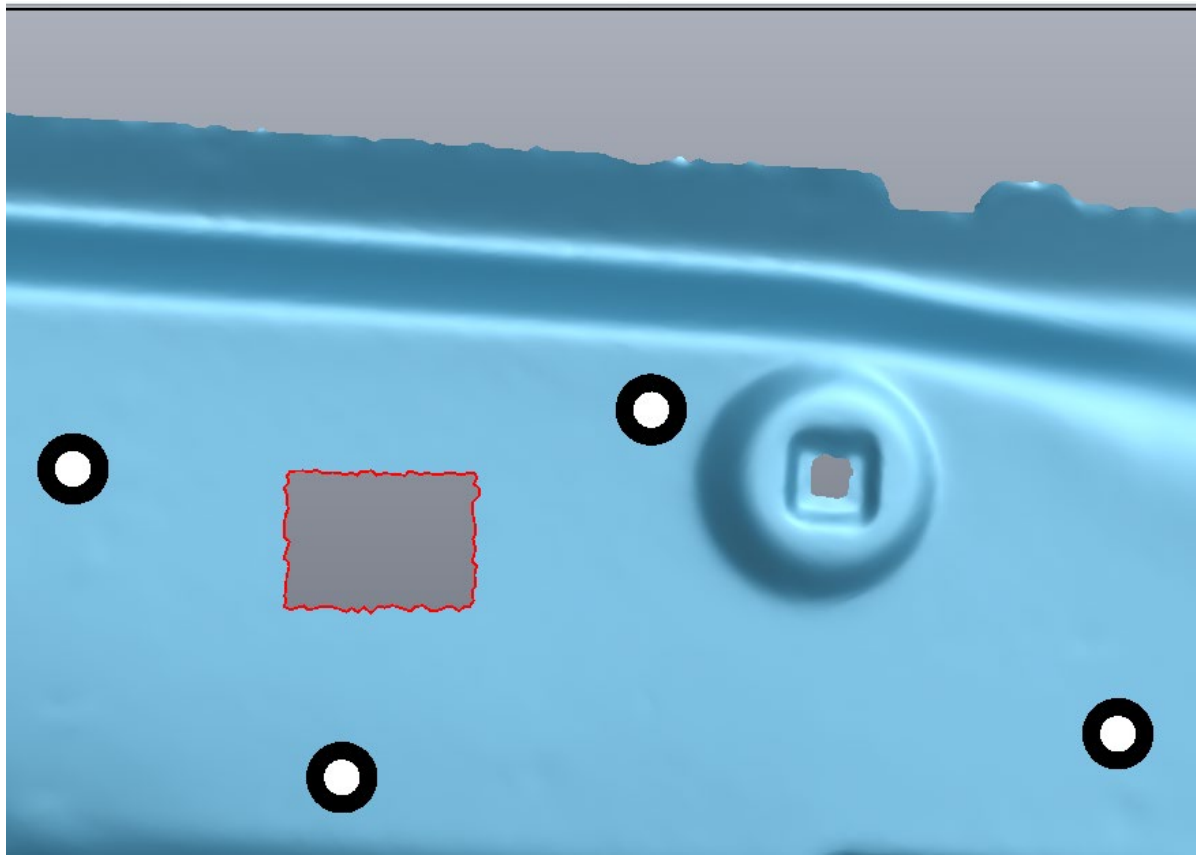




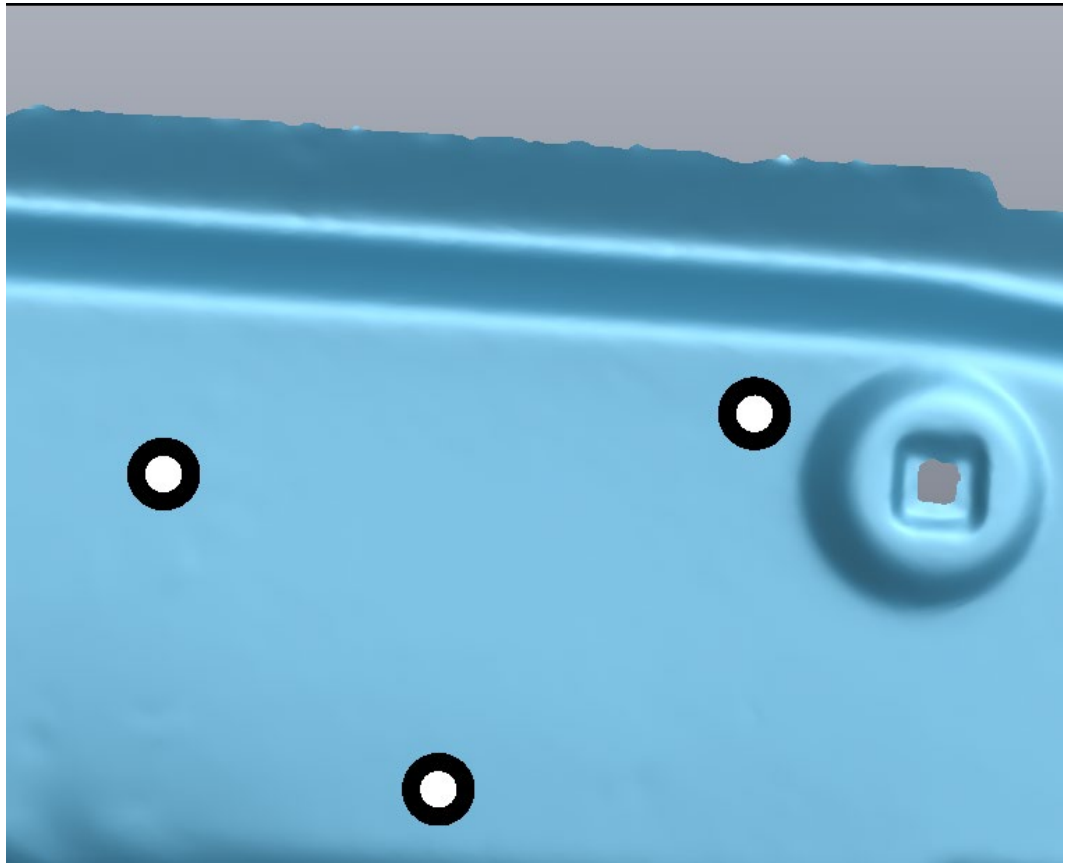
5. SCANNING PROCESS

Data Edit Operation

Before Selection



After Selection

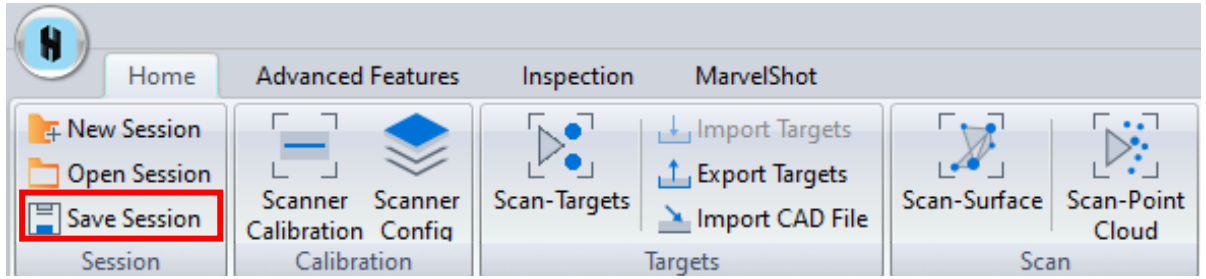


“ TRY IT BY YOURSELF

6. DATA SAVE

HEXAGON

6. DATA SAVE



Session:

- New Session: to create a new session
- Open Session: to open a saved session
- Save Session: to save current session

➢ Project are saved in the format of **.hsp** which can only be opened by ZG Scanning software.

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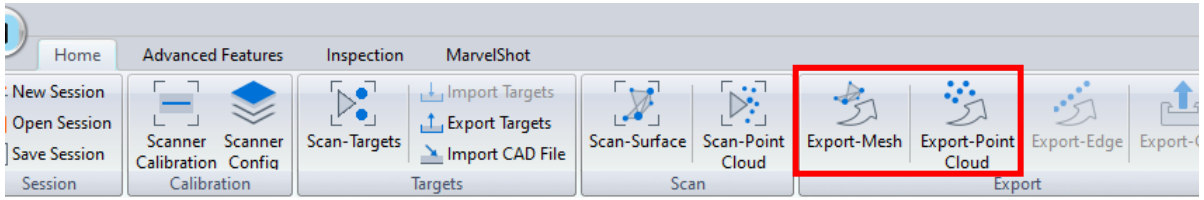
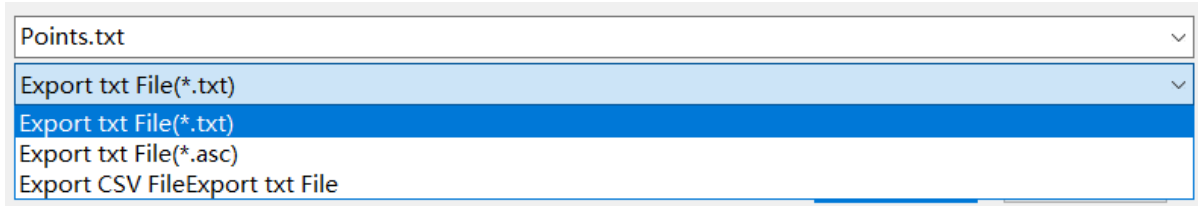
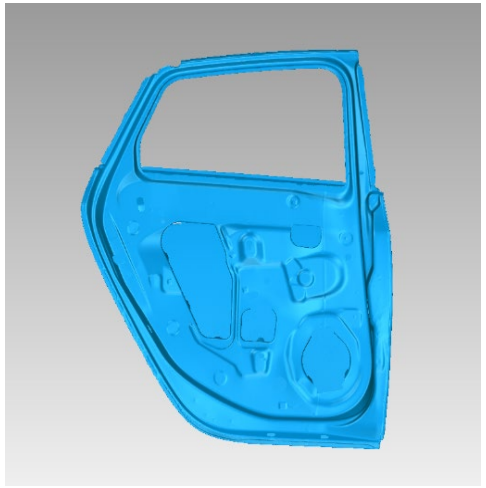
6. DATA SAVE

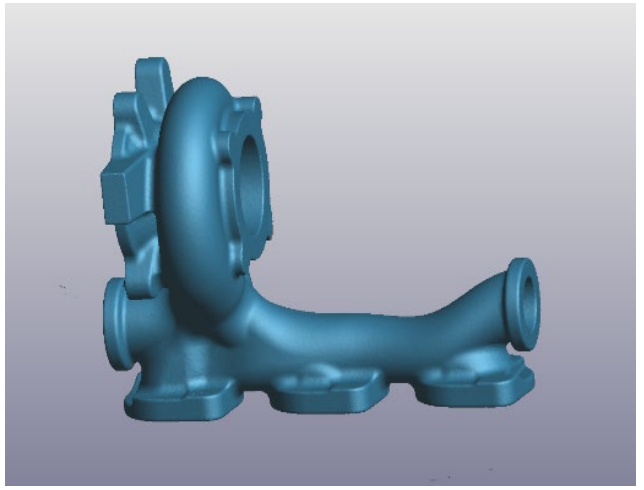


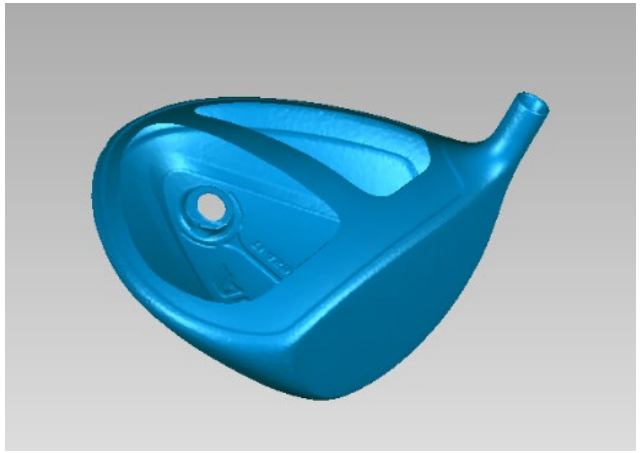
- Export mesh format as .obj; .stl; .ply; etc.

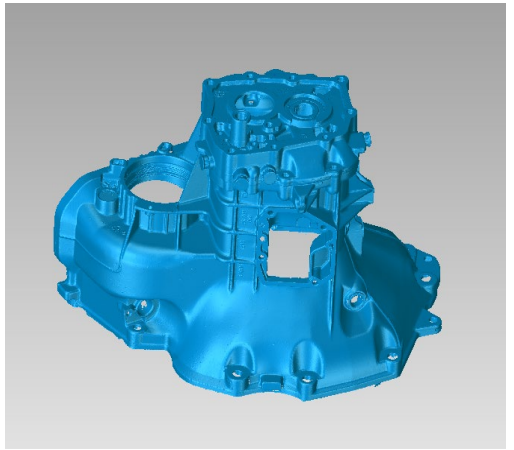
- Export point cloud format as .txt; .asc; etc.











HEXAGON

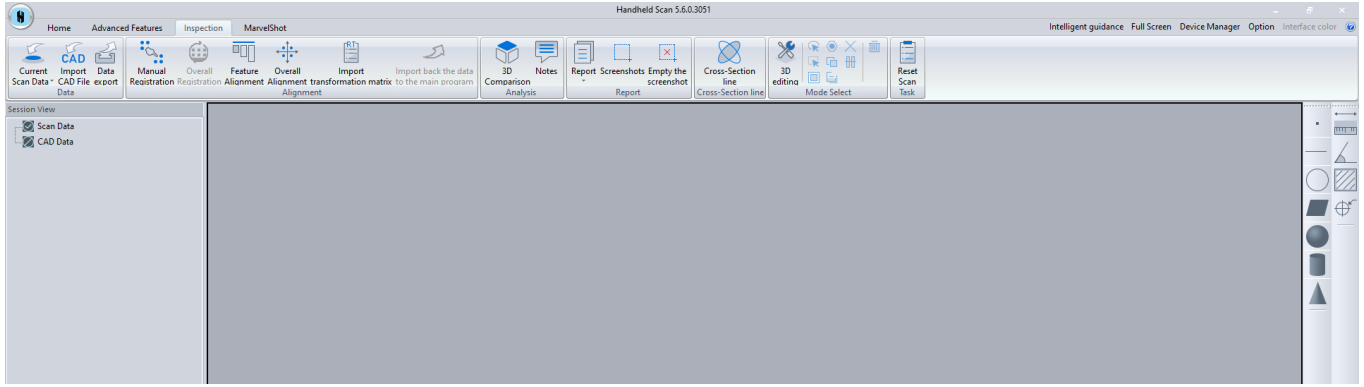
“ TRY IT BY YOURSELF

7. OTHER FUNCTIONS

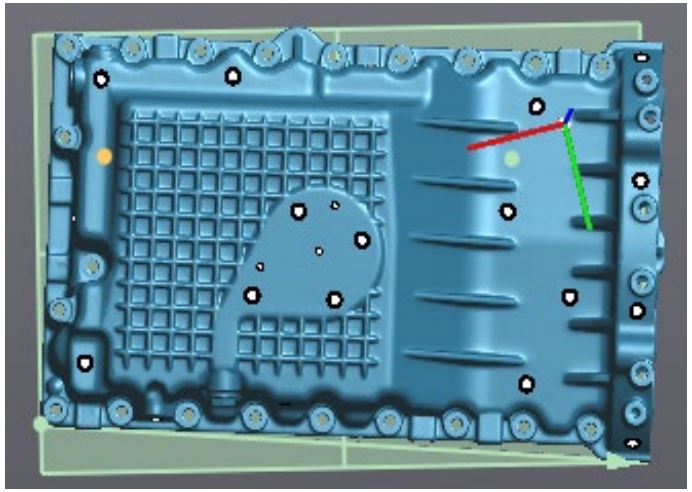
HEXAGON

7. OTHER FUNCTIONS

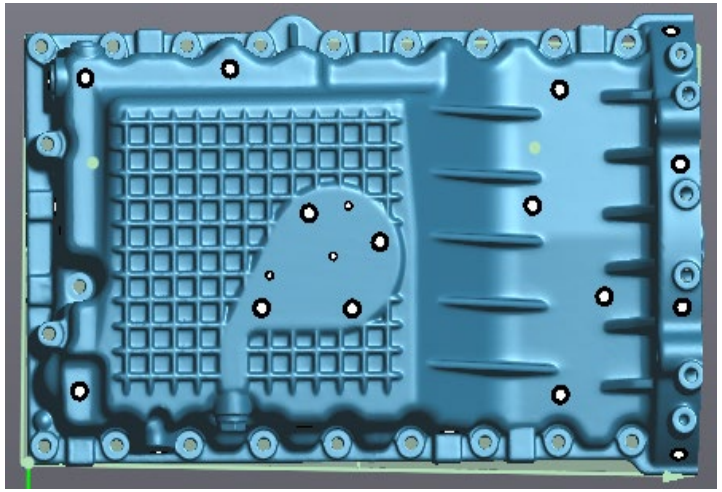
Inspection Module



- To create the features like "point", "line" and "face" on the model
- To align 3D model with the feature establishment of “point”, “line” and “face”
- To measure the distance of two points or two features for model



Before alignment



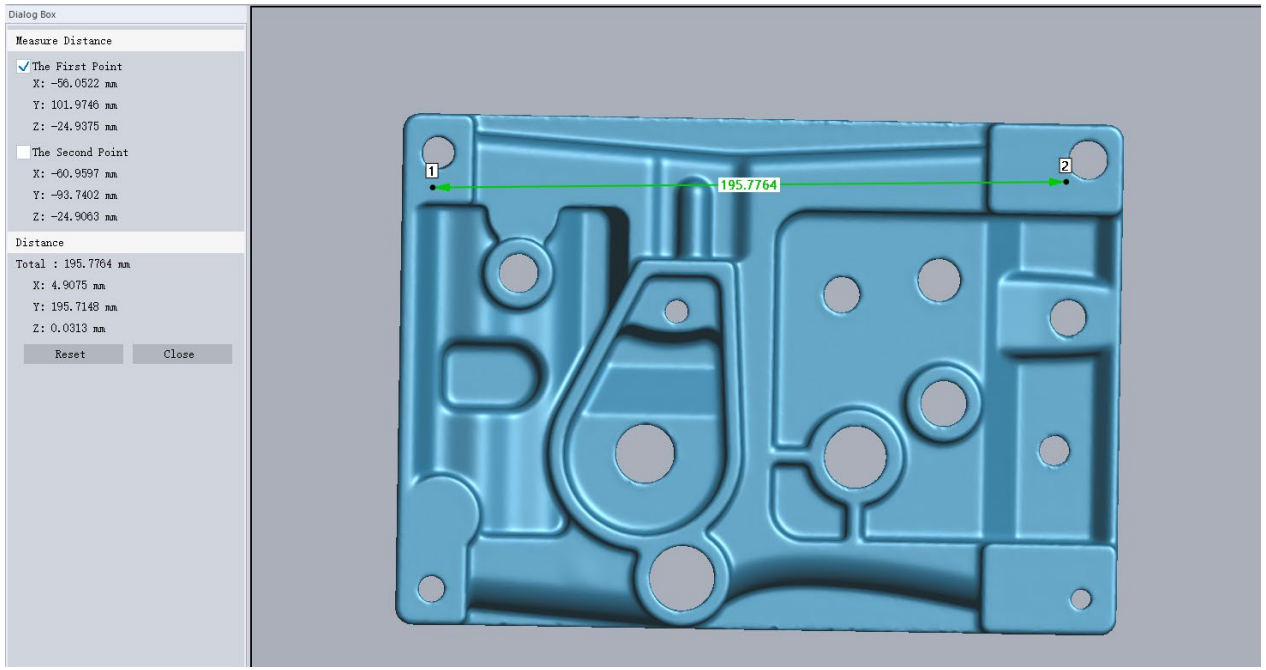
After alignment

HEXAGON

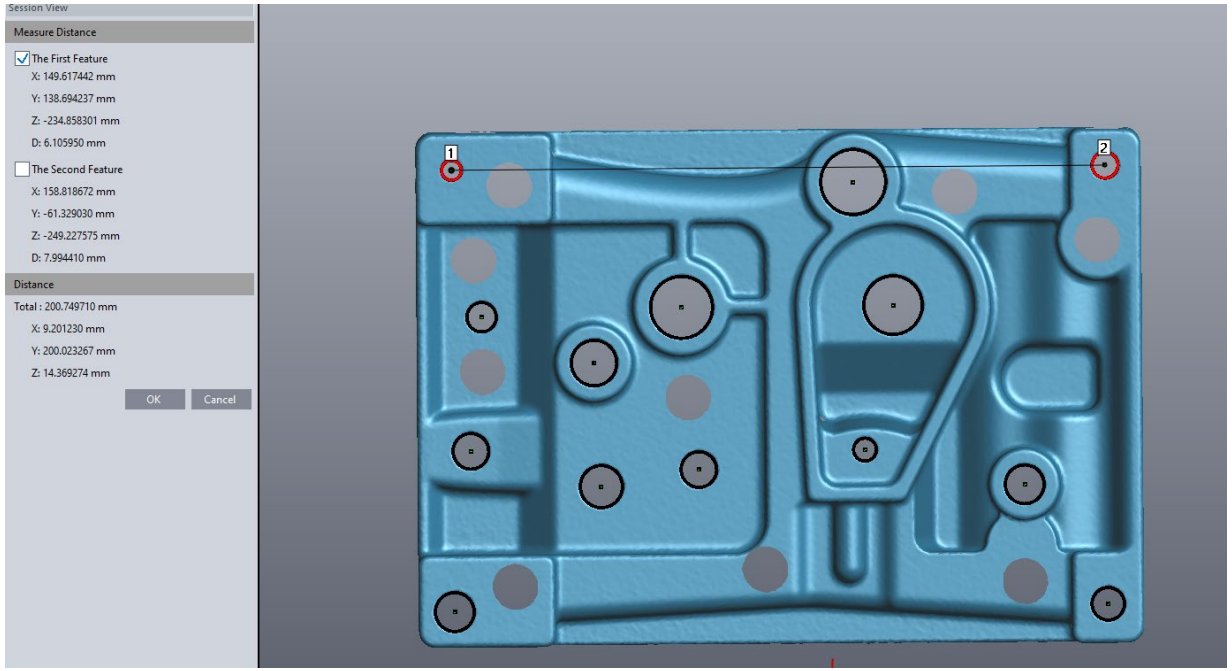
7. OTHER FUNCTIONS

Inspection Module

Distance between two points



Distance between two features

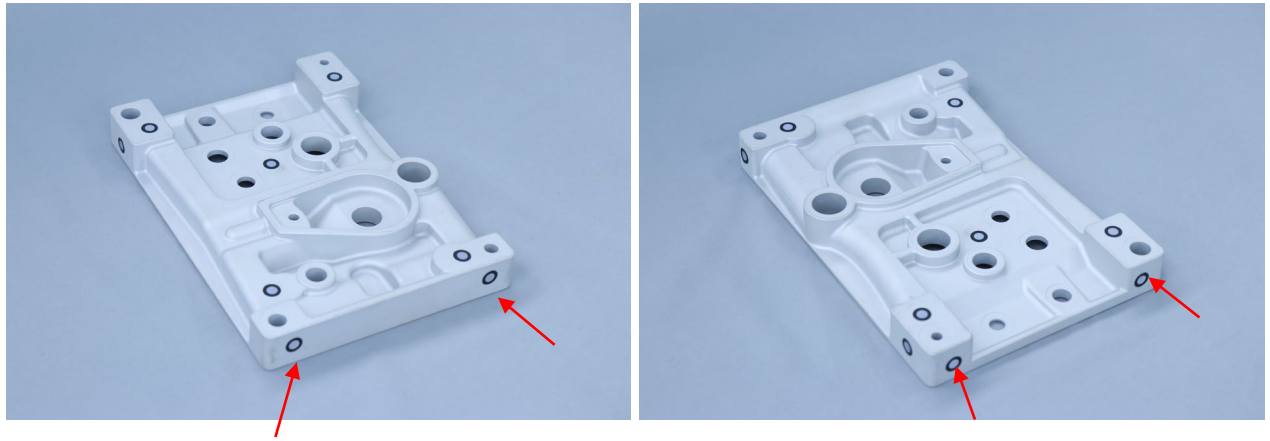


HEXAGON

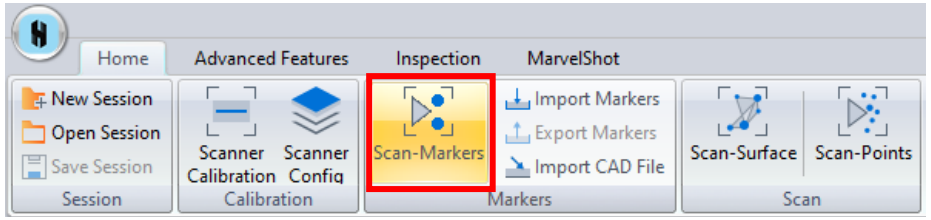
7. OTHER FUNCTIONS

New Group Scanning

SETP ONE: To place targets on surface of object randomly & evenly, especially place 5-6 targets on side of object.



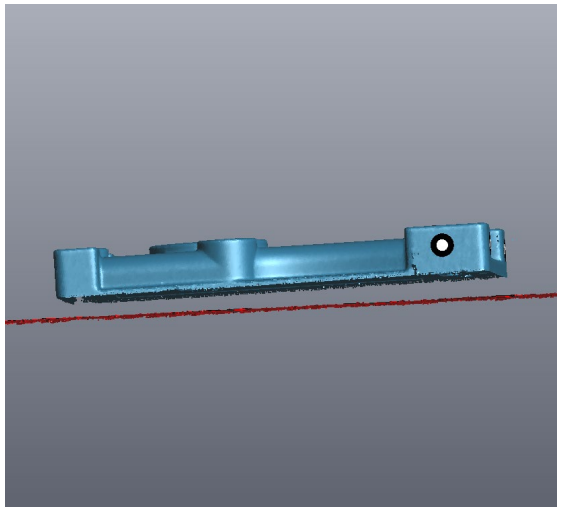
SETP TWO: Click “Scan-Targets” to collect the Targets

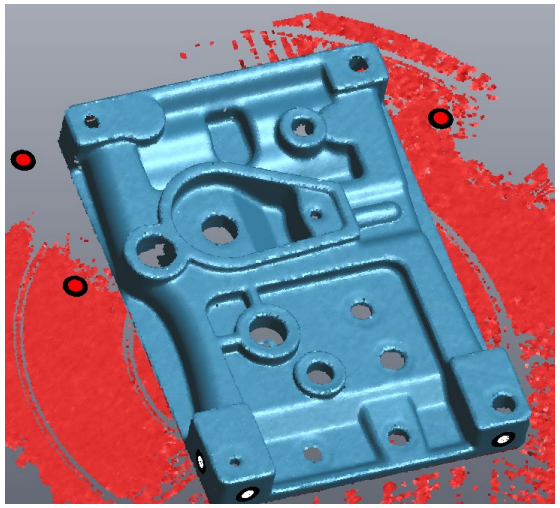


7. OTHER FUNCTIONS

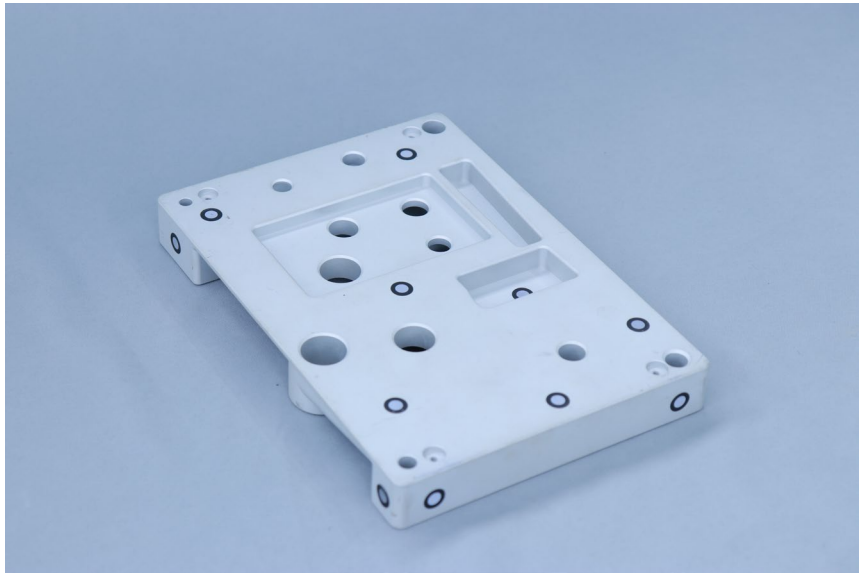
New Group Scanning

STEP THREE: To scan the object with right position and delete extra data and Targets





STEP FOUR: To flip the object and continue to scan the object with right position and delete extra data and Targets

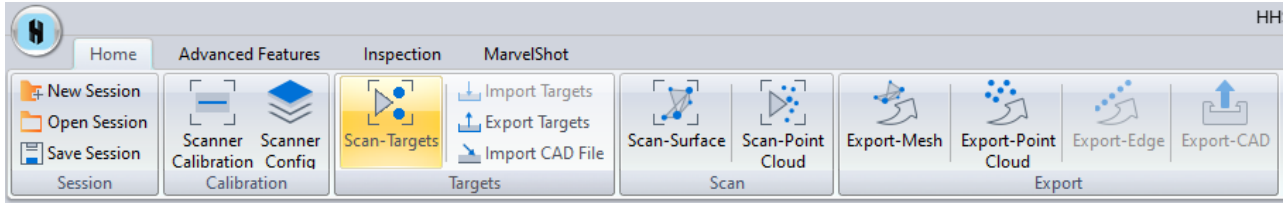


HEXAGON

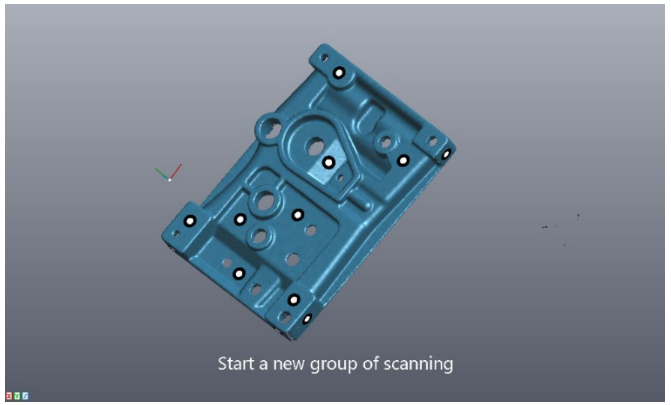
7. OTHER FUNCTIONS

New Group Scanning

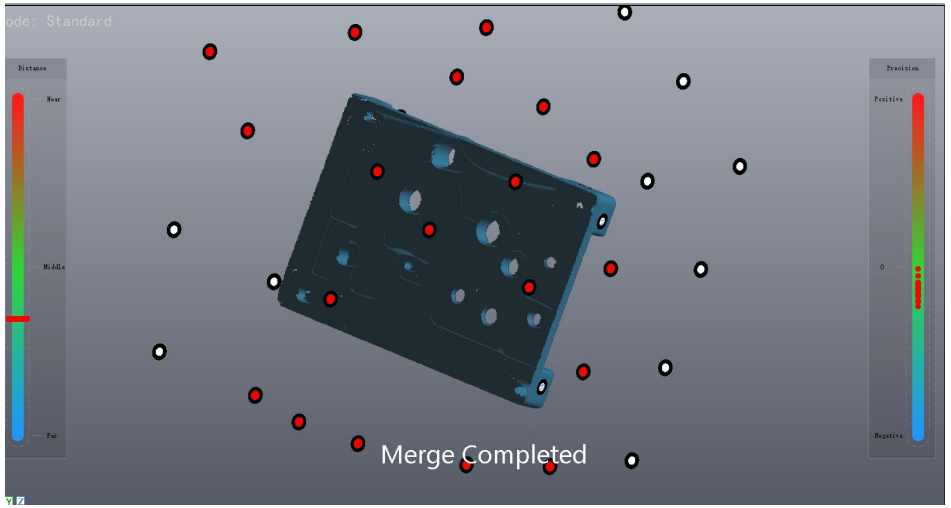
STEP FIVE: Click “Scan-Targets” double click the top button of the scanner to start a new group of scanning.



“Press twice”



STEP SIX: Scan the Targets from front and the sides, then Merge completely.

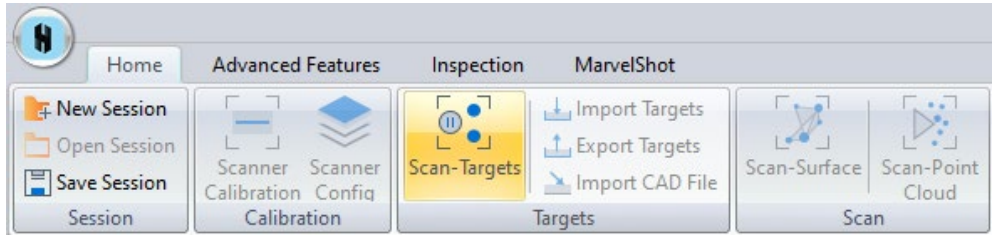


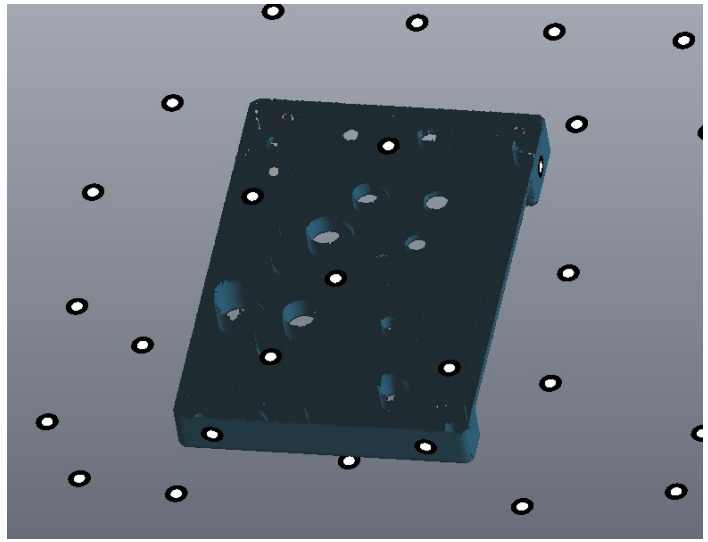
HEXAGON

7. OTHER FUNCTIONS

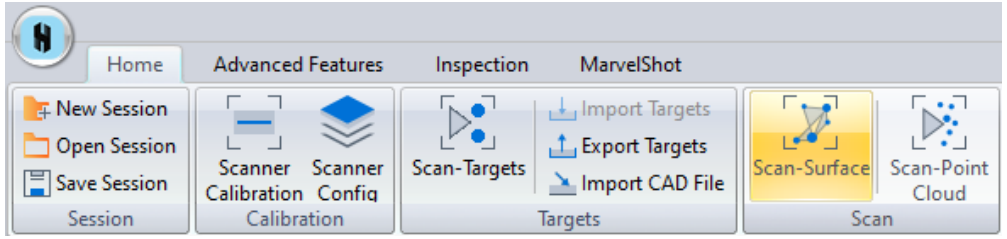
New Group Scanning

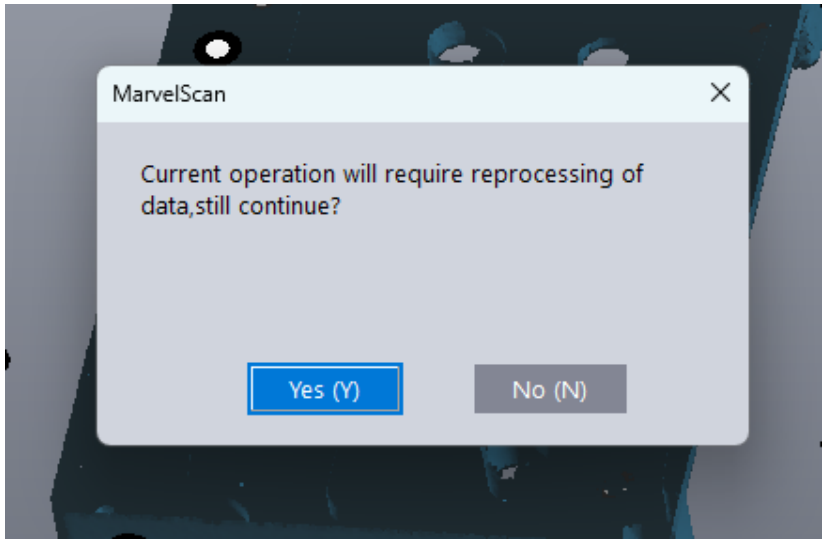
STEP SEVEN: Click “Scan-Targets” again to calculate the newly added Targets.





STEP EIGHT: Click “Scan-Surface”, select “Yes” in prompt window.



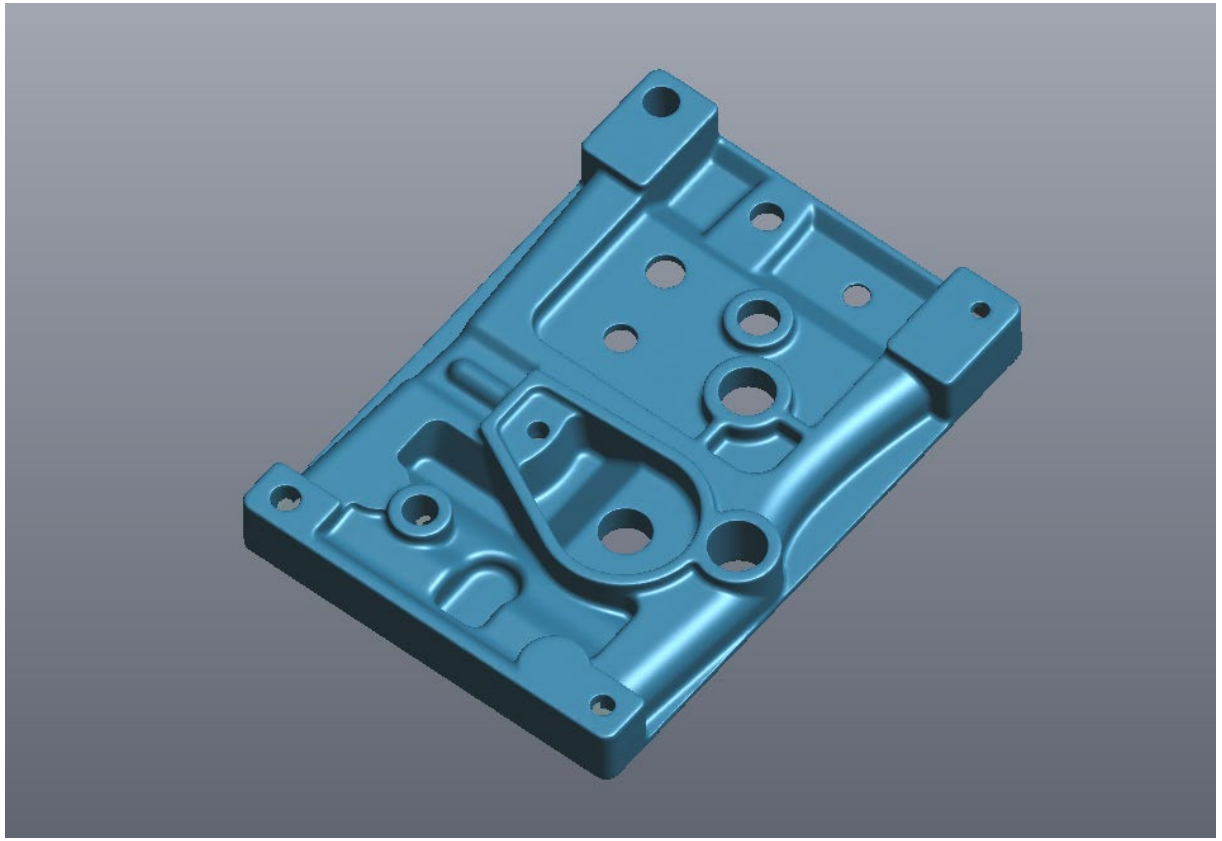


HEXAGON

7. OTHER FUNCTIONS

New Group Scanning

STEP TEN: Continue scanning to complete the data collection.



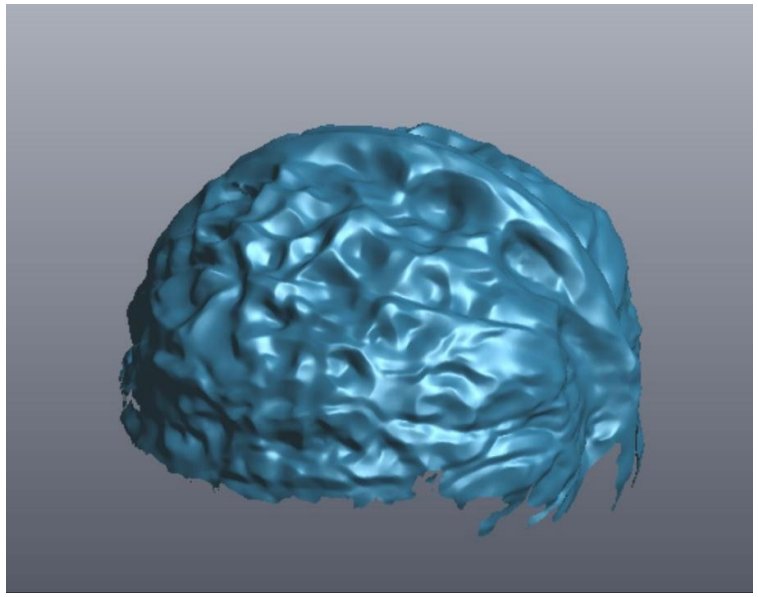
HEXAGON

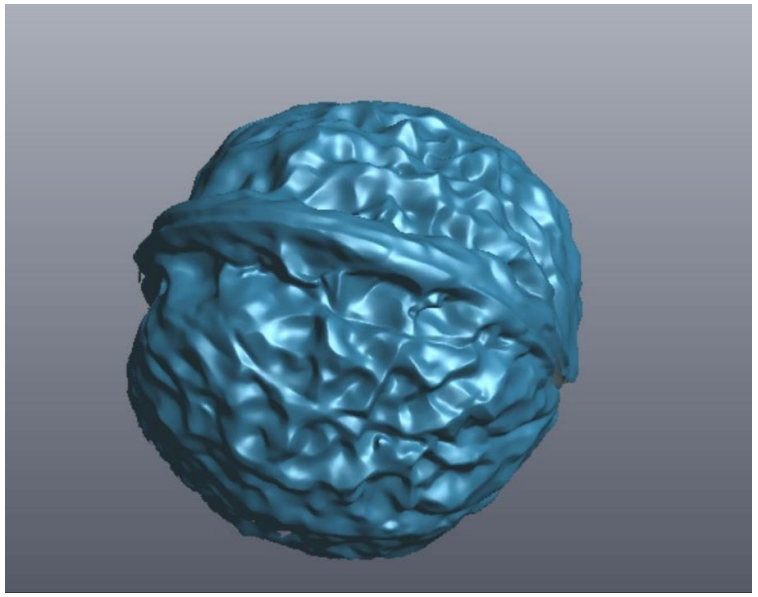
7. OTHER FUNCTIONS

Scan Data Merge

Two methods of Scanning Data Merge:

1. To merge two scanning data by data in common surface
2. To merge two scanning data by common Targets





***Take below two scan data as example to demonstrate how to merge by data in common surface.

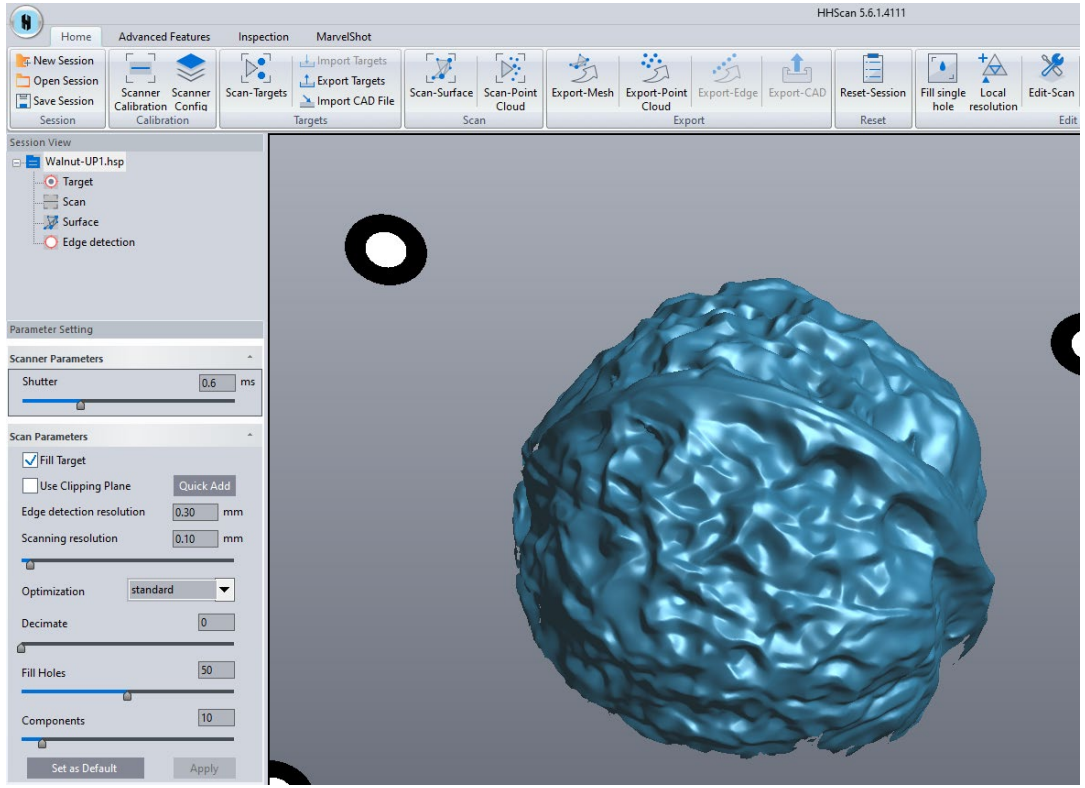
HEXAGON

7. OTHER FUNCTIONS

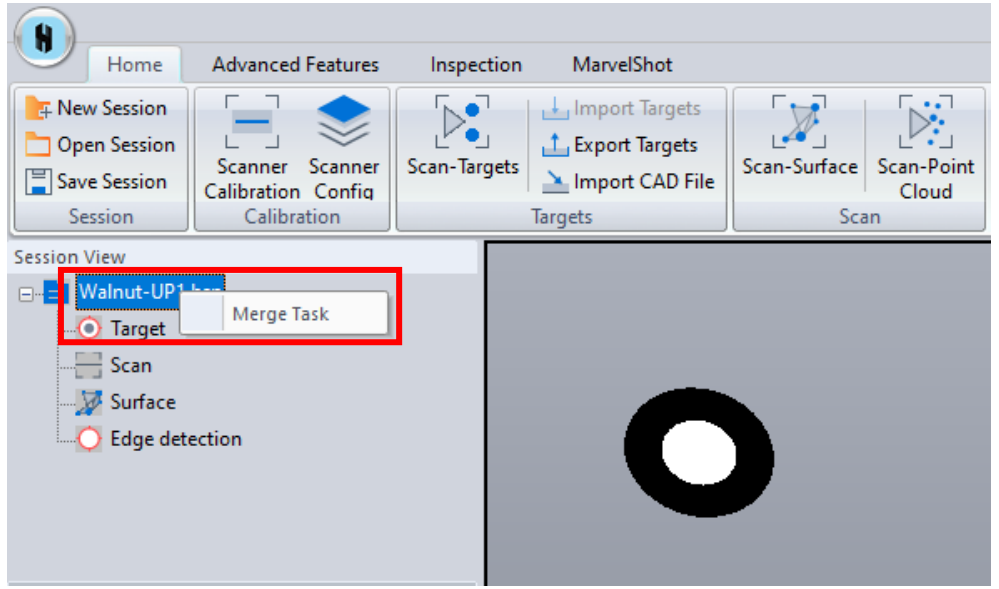
Scan Data Merge

#1, To merge by data in common surface

STEP ONE: To import first session scan data



STEP TWO: To right-click on the session and select “Merge Task”



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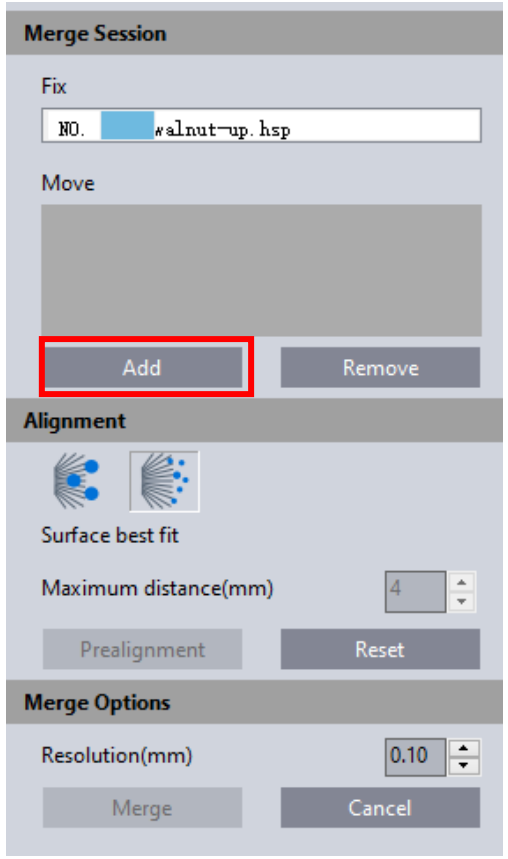
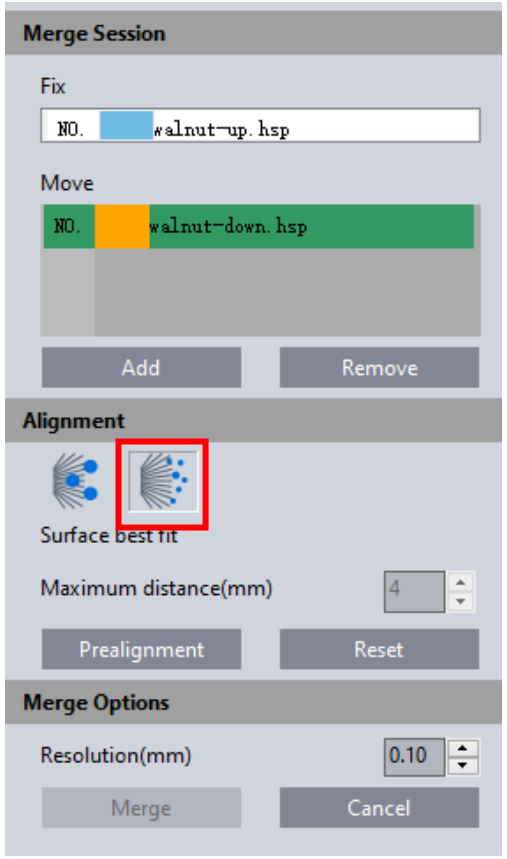
7. OTHER FUNCTIONS

Scan Data Merge

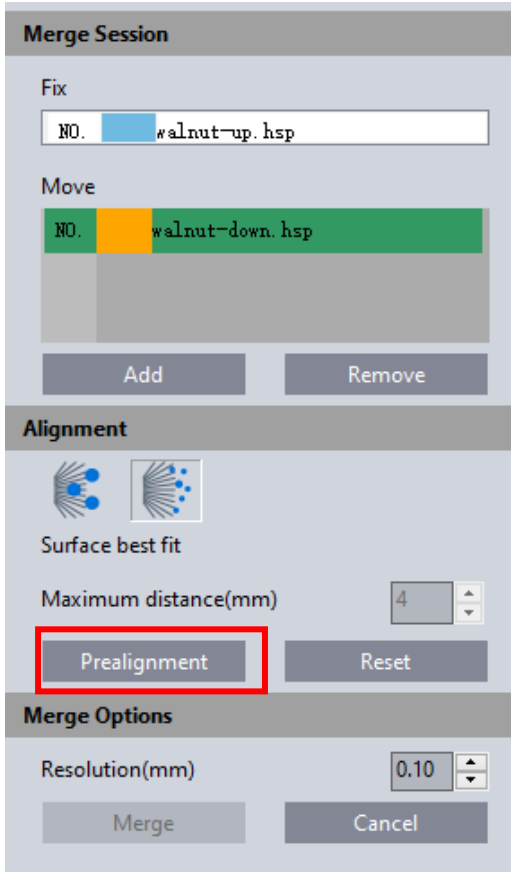
STEP THREE: To import second session scanning data



STEP FOUR: To select “Mesh best fit”



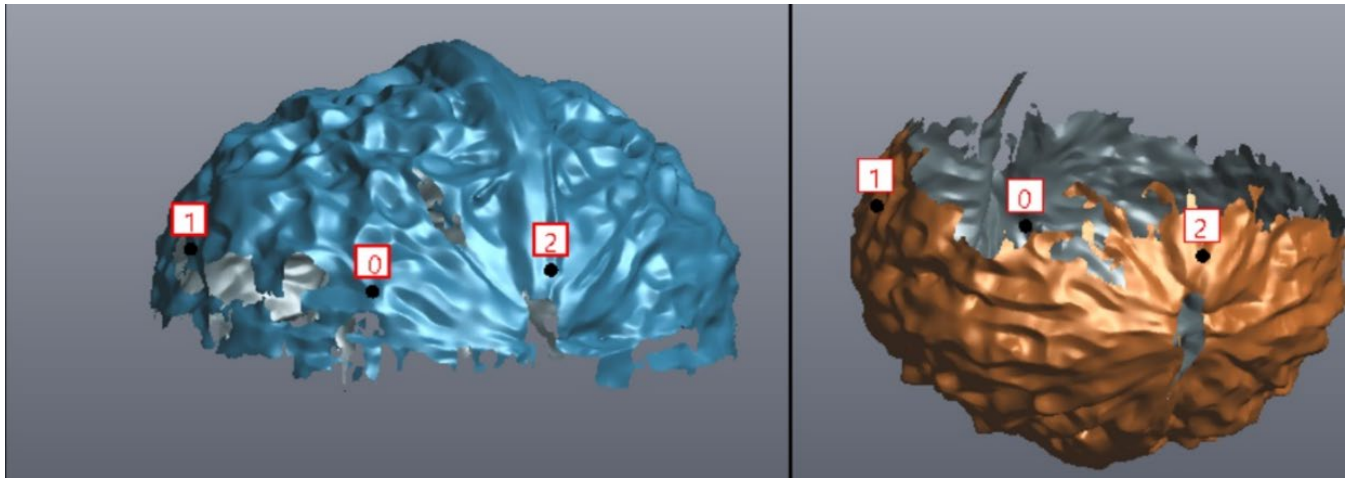
STEP FIVE: To select “Pre-Align”



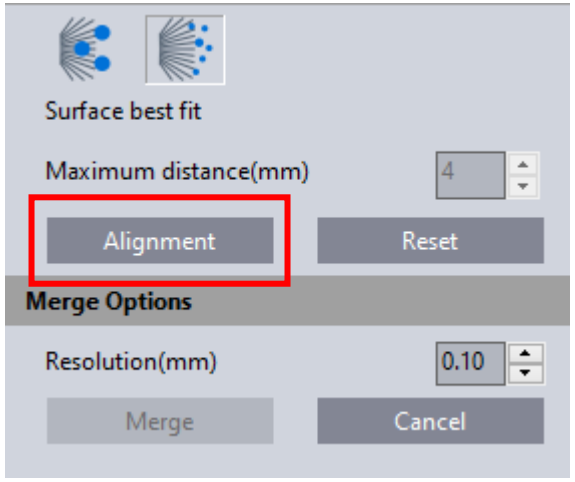
7. OTHER FUNCTIONS

Scan Data Merge

STEP SIX: To select 3 or more points on common surface of two scanning data;



STEP SEVEN: To click “Align” to align two scanning data;

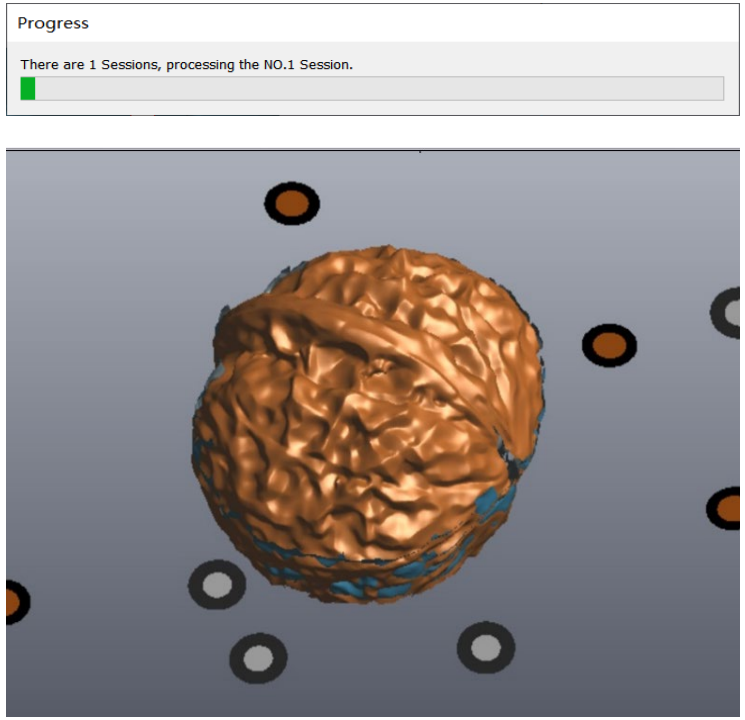


HEXAGON

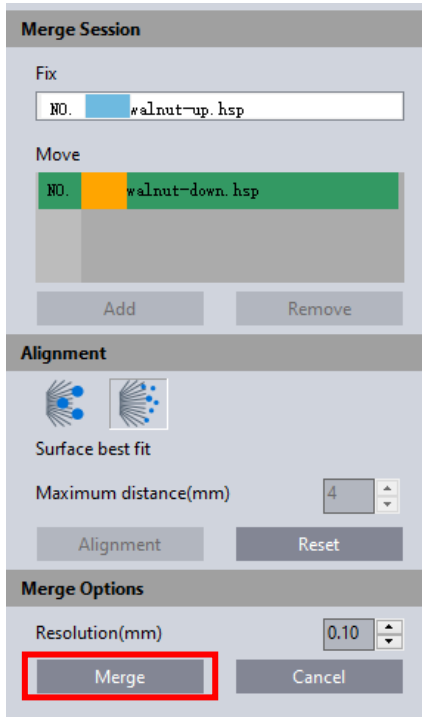
7. OTHER FUNCTIONS

Scan Data Merge

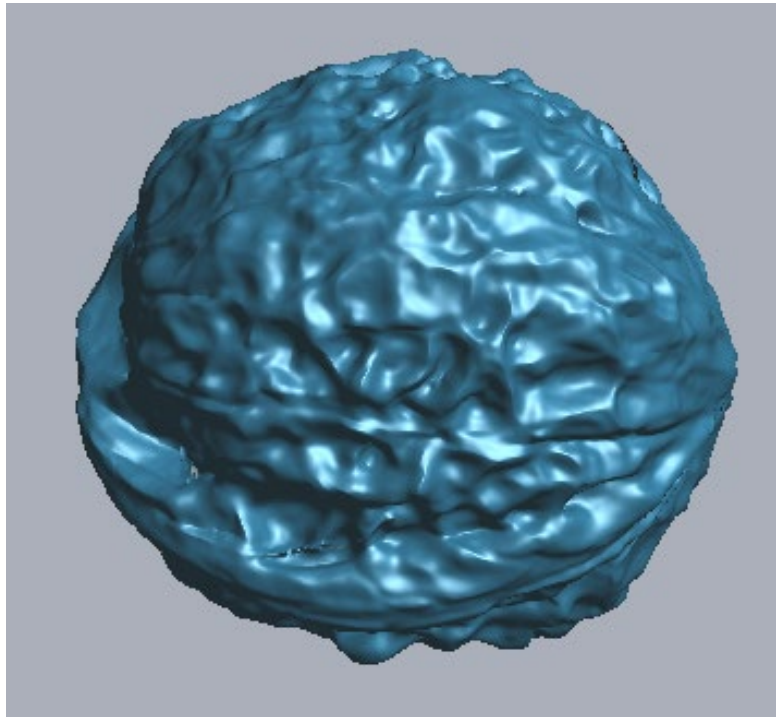
STEP EIGHT: to wait for data processing and show the alignment result



STEP NINE: Click “Merge”



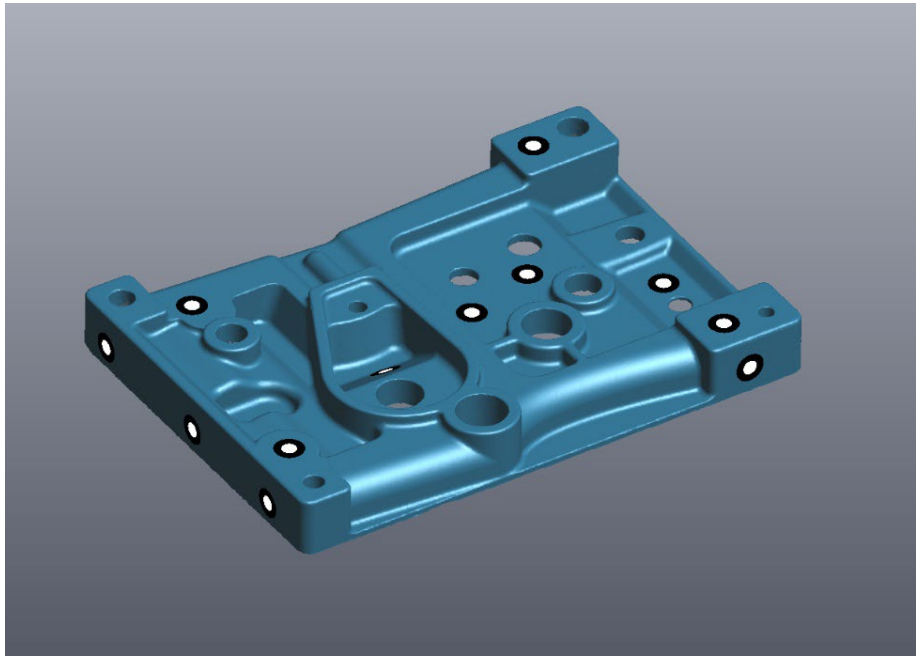
STEP TEN: Complete merged scanning data

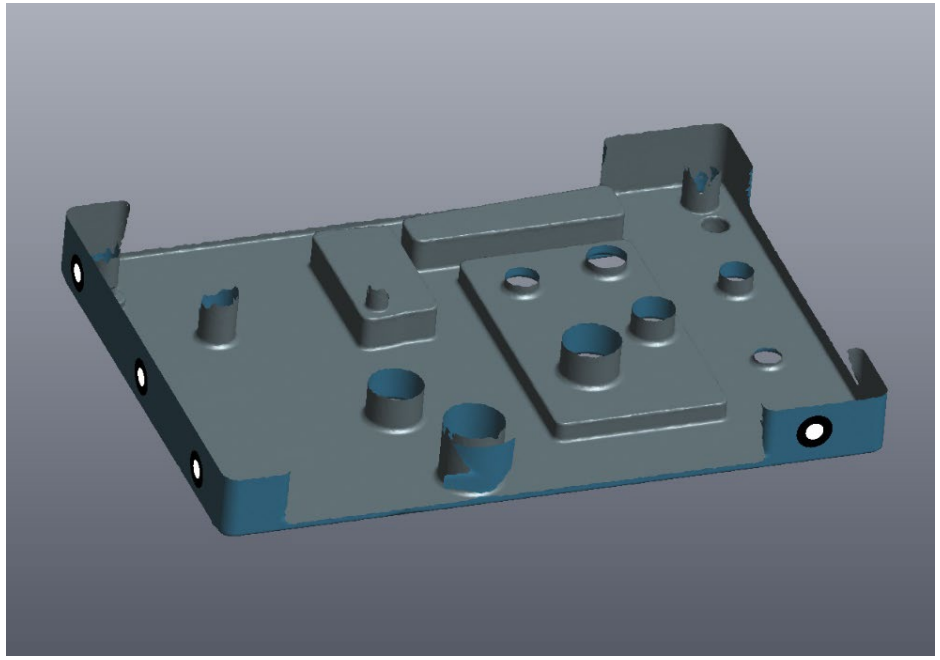


7. OTHER FUNCTIONS

Scan Data Merge

#2, To merge by common Targets





***Take below two scanning data as example to demonstrate how to merge by common Targets.

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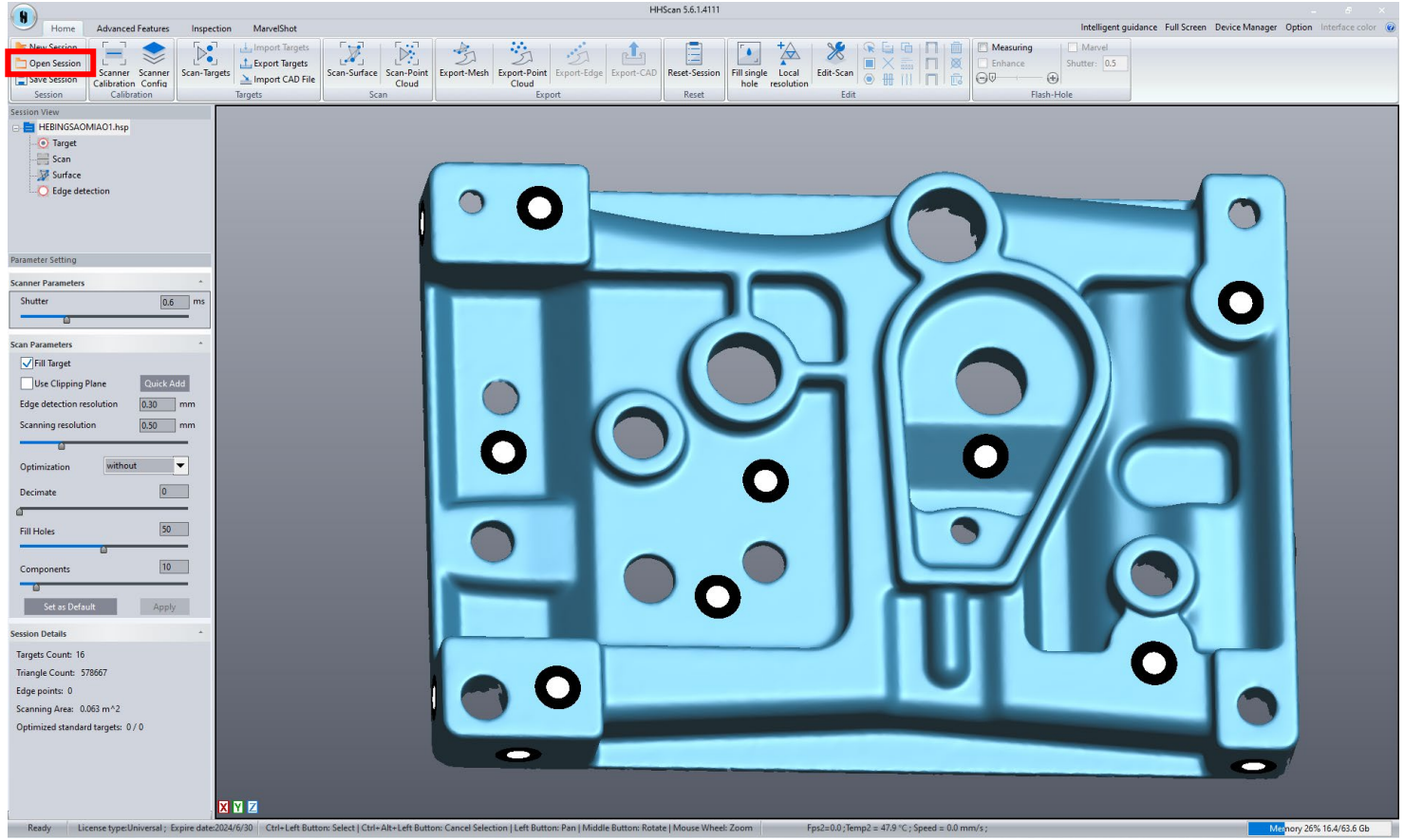
7. OTHER FUNCTIONS

Scan Data Merge

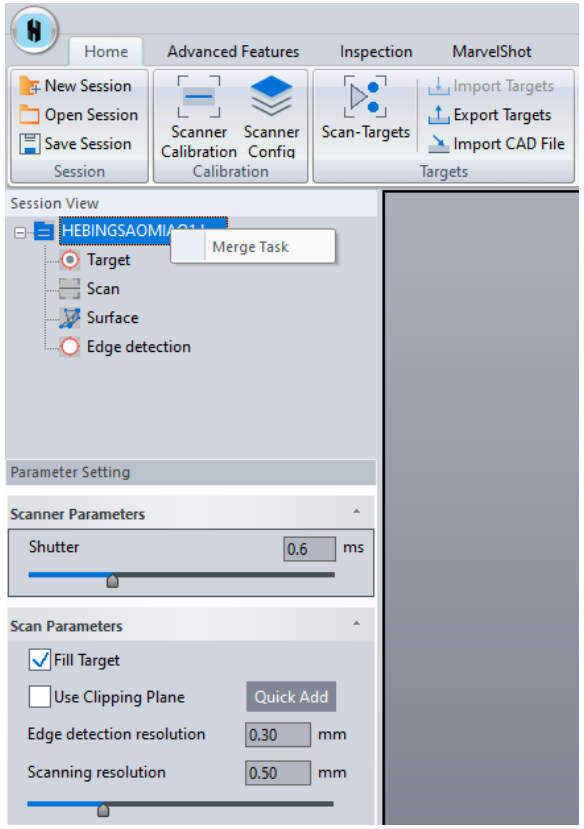
STEP ONE: Click “Open Session”, to import first session scanning data



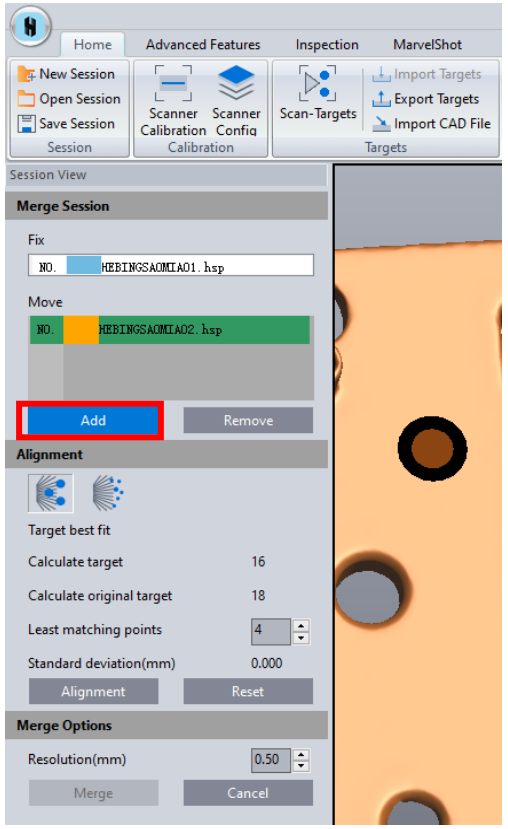
7. OTHER FUNCTIONS

Scan Data Merge

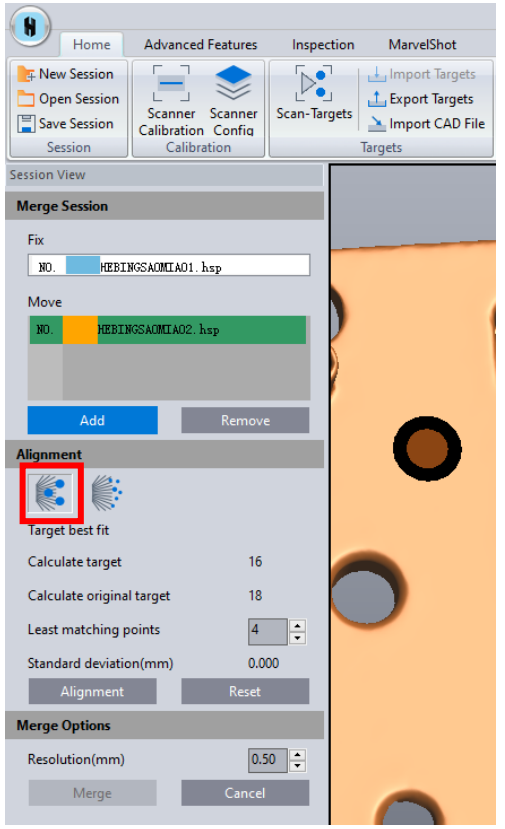
STEP TWO: To right-click on the session and select “Merge Task”



STEP THREE: To import second session scanning data



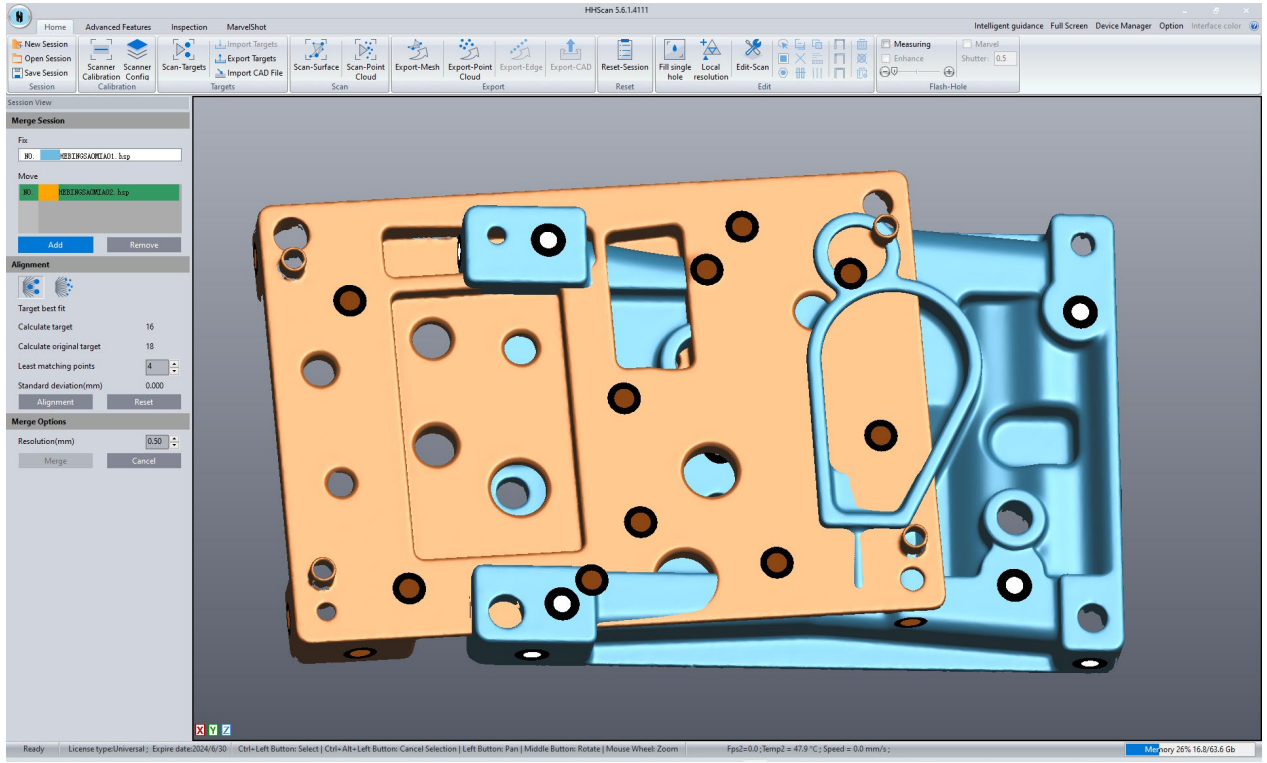
STEP FOUR: To select “Mesh best fit”



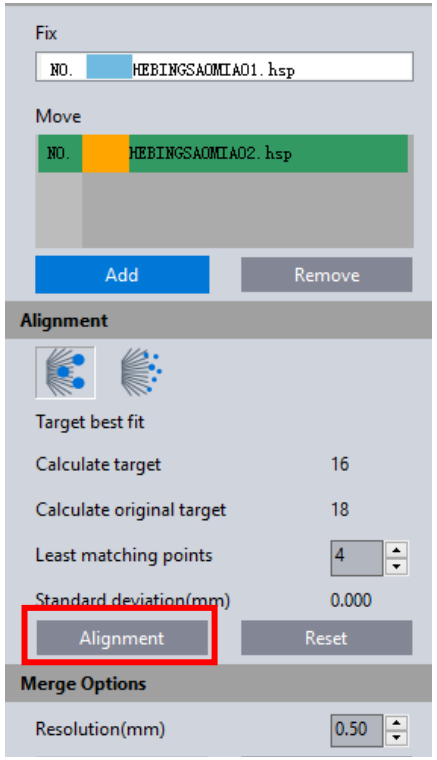
7. OTHER FUNCTIONS

Scan Data Merge

STEP FIVE: Based on the numbers of common Targets to set the minimum match Targets (Min. Targets number should be more than 4), it is recommended to set 6 or more



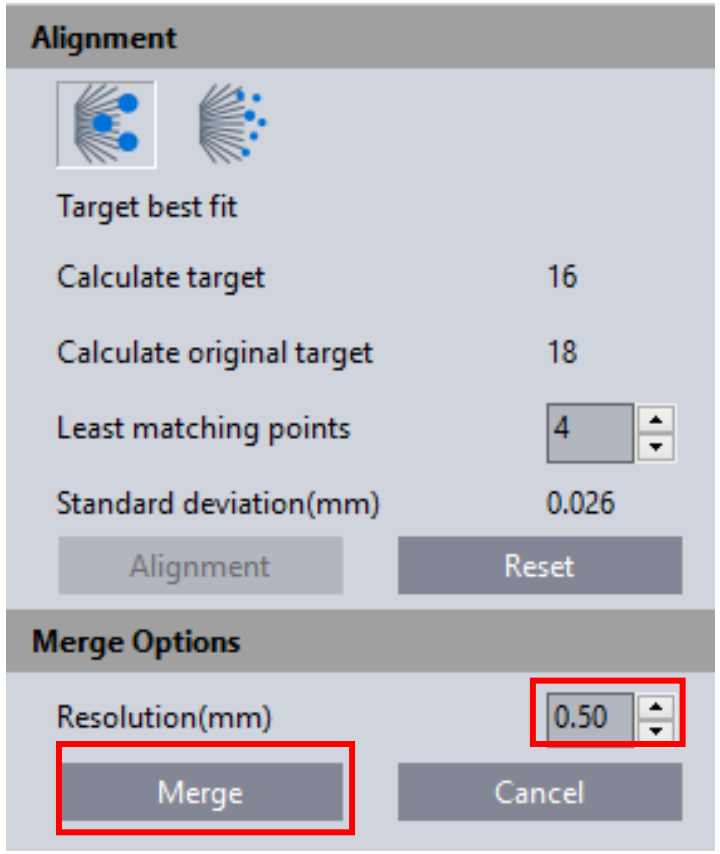
STEP SIX: Click “Alignment”



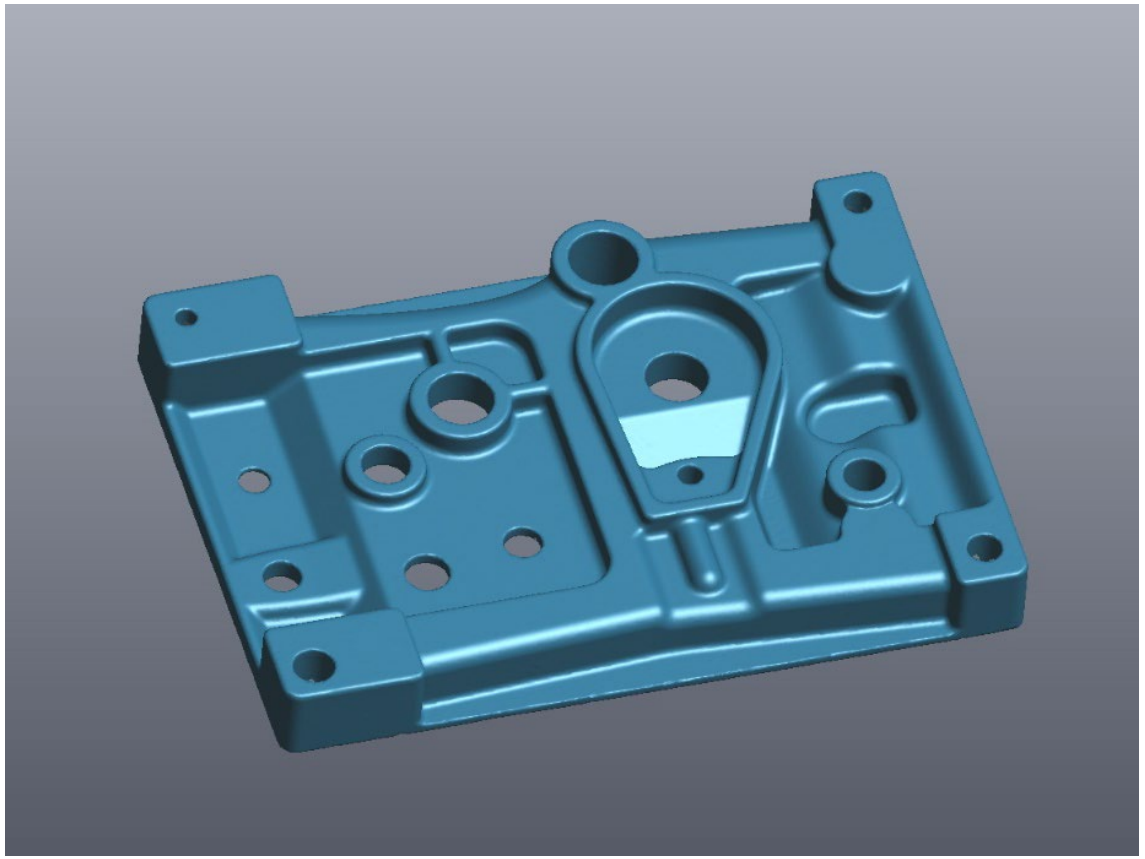
7. OTHER FUNCTIONS

Scan Data Merge

STEP SEVEN: Input the resolution you want to set and click "Merge"



STEP EIGHT: To wait for data processing and show merged result



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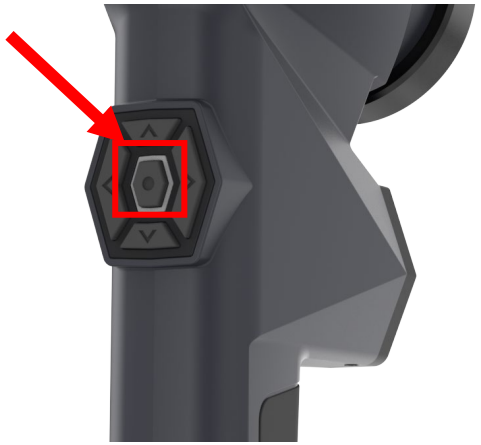
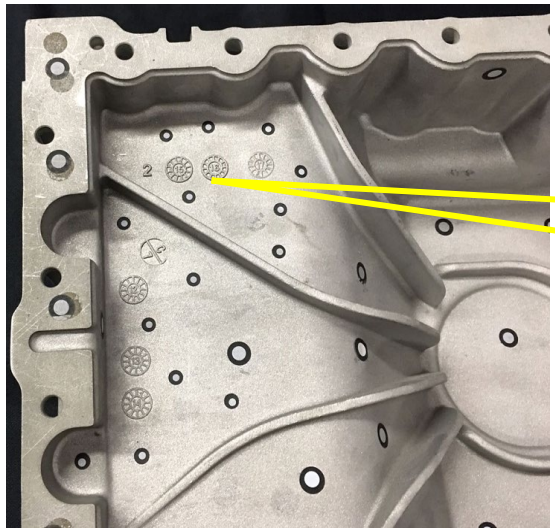
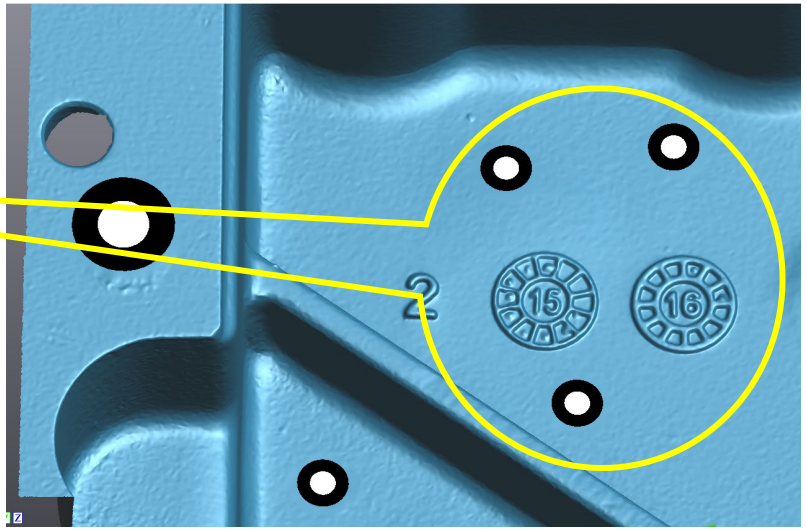
7. OTHER FUNCTIONS

Fine Scanning Mode

STEP ONE: To double-click start key to switch to fine scanning mode (14 laser lines)
Tips: Please note stand-off distance of fine scanning mode is 200mm, the depth of field is up to 450mm, and the effective working range is 100mm to 300mm, which is much closer to object than that of stand scanning mode.
STEP TWO: To place Targets (size of 6mm or 3mm) on the surface of object;
Tips: 3mm Targets are better for fine scanning mode.
STEP THREE: To scan under the fine scanning mode;
Tips: The longer you scan, the more details you will get and the larger file it will generate.







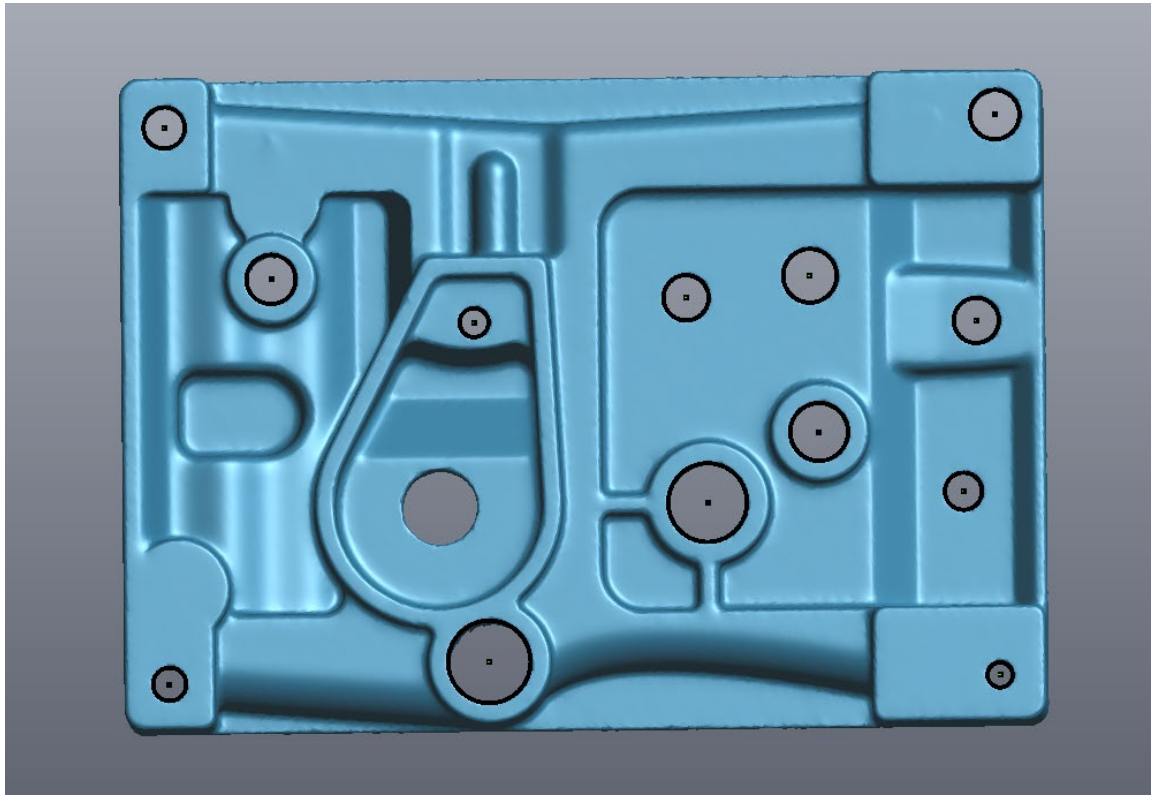
HEXAGON

7. OTHER FUNCTIONS

Hole Flash Capture

Hole Flash Capture Technology

- To capture hole coordination and data in second
- To capture surface mesh simultaneously of circle boundary to improve accuracy



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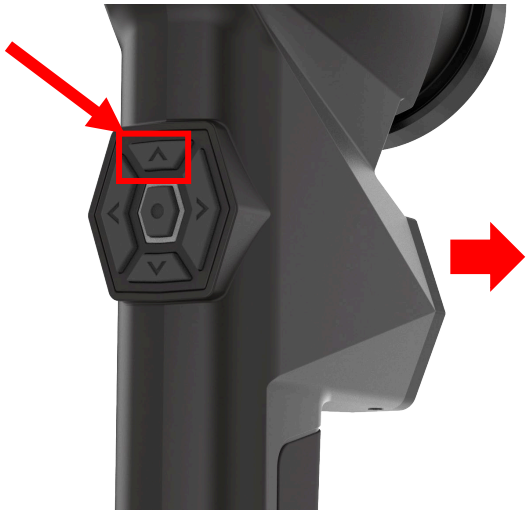
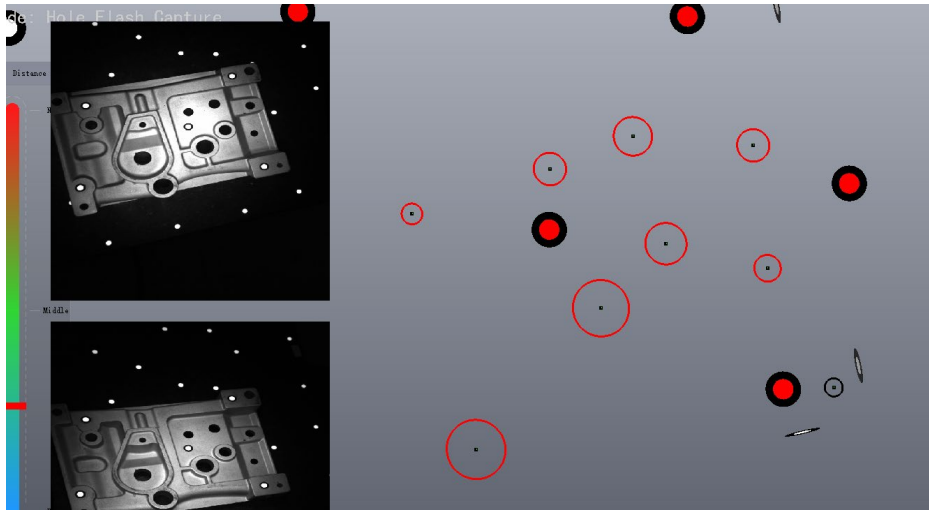
7. OTHER FUNCTIONS

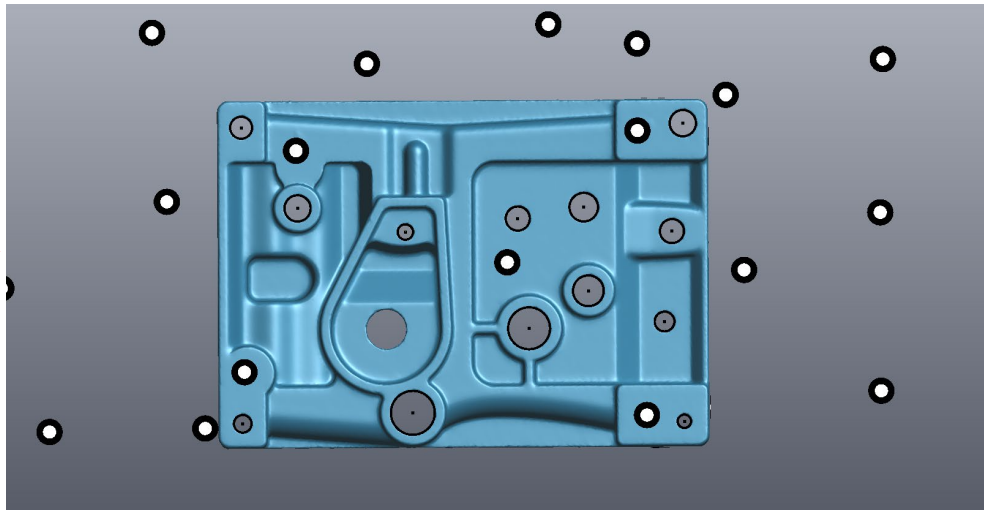
Hole Flash Capture

STEP ONE: to select “measuring” before scanning (it also can be selected during scanning), press twice (see below) to switch to measuring hole mode

Tips: If you do not select “measuring” before scanning, it will start a new group of scanning, details see ***OTHER FUNCTIONS-Multiple Data Splicing, STEP FIVE.***







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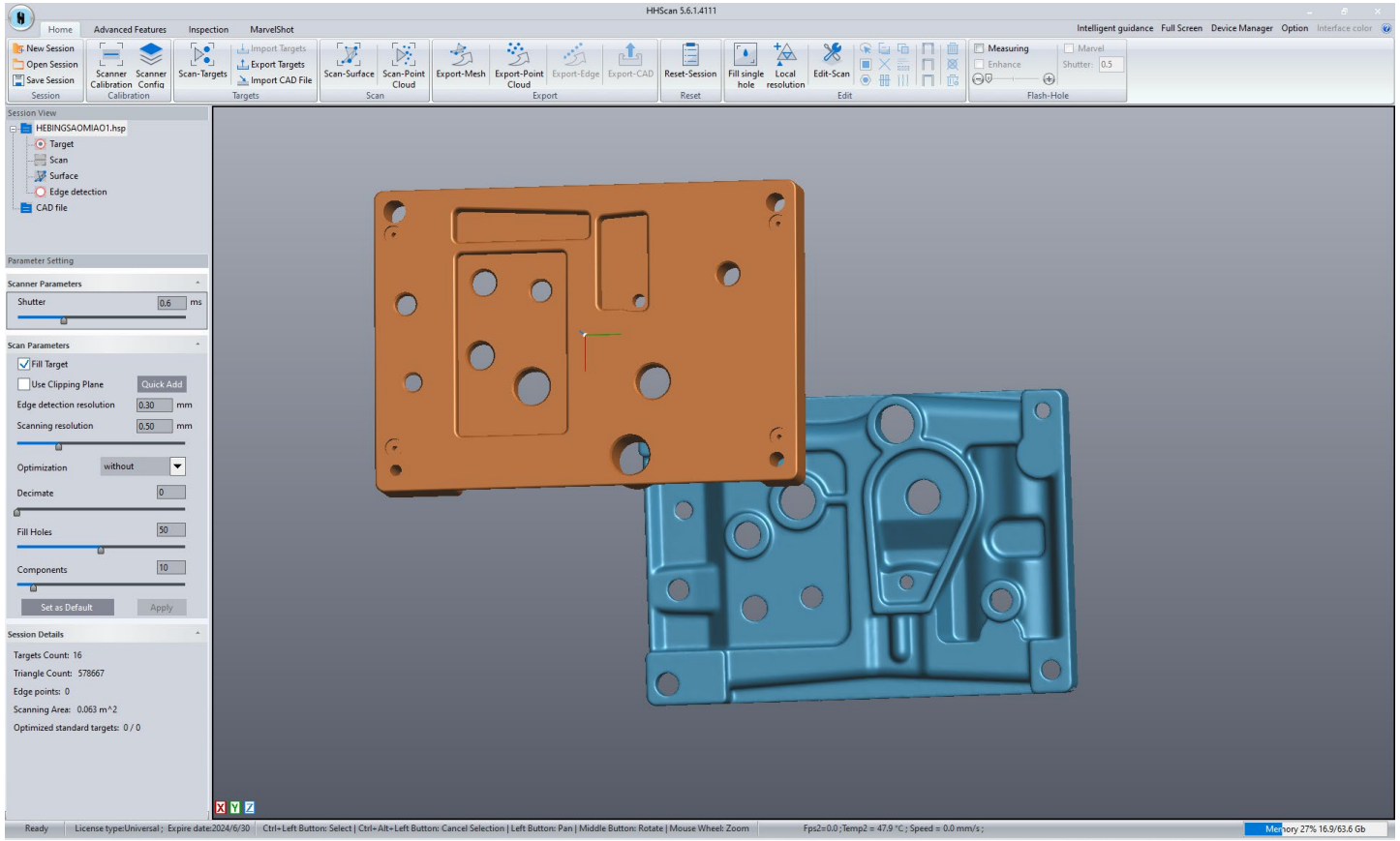
7. OTHER FUNCTIONS

Hole Flash Capture

STEP TWO: To import CAD model into scanning software

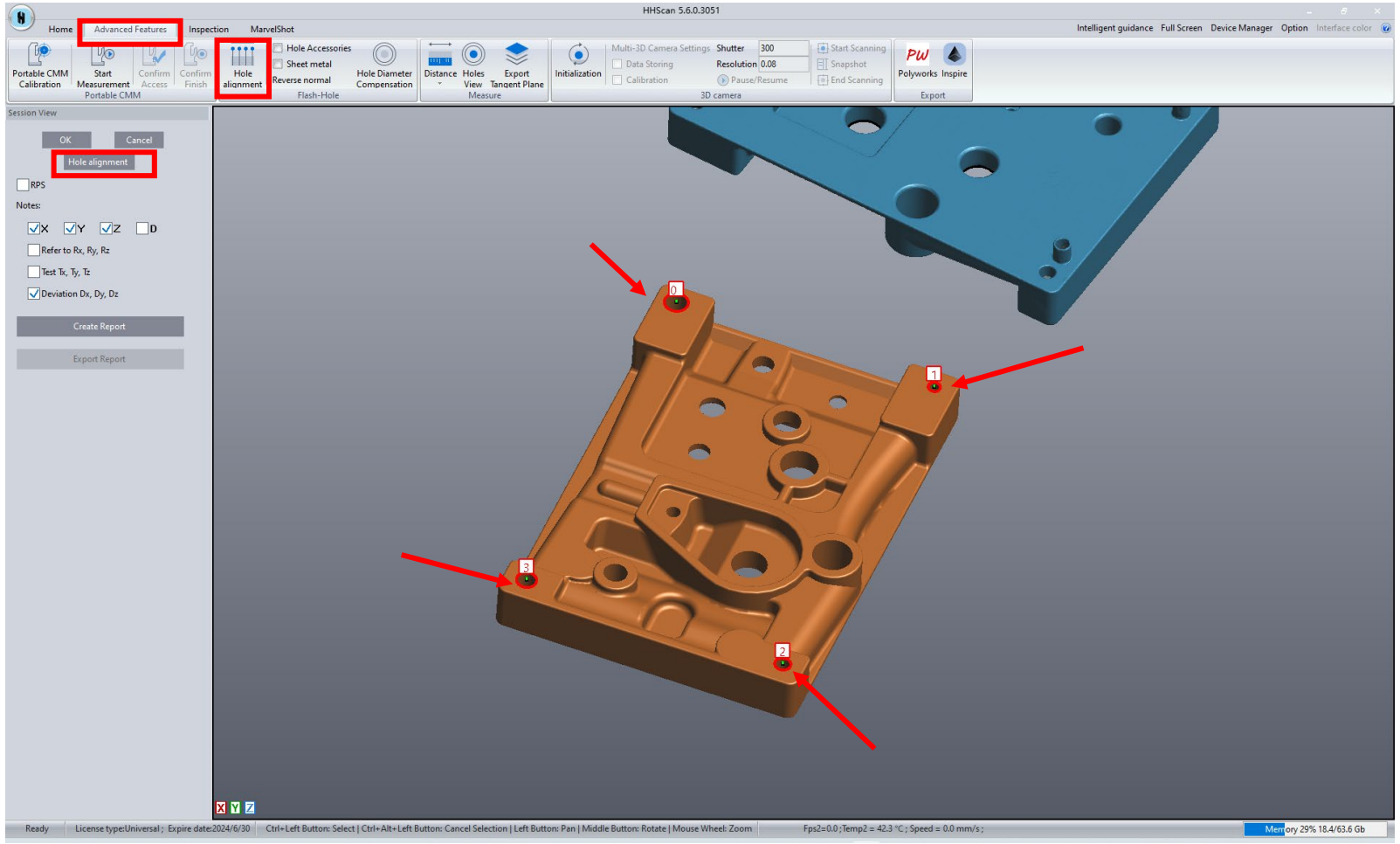


7. OTHER FUNCTIONS

Hole Flash Capture

STEP THREE: After importing CAD model and then click “hole alignment” to align two models

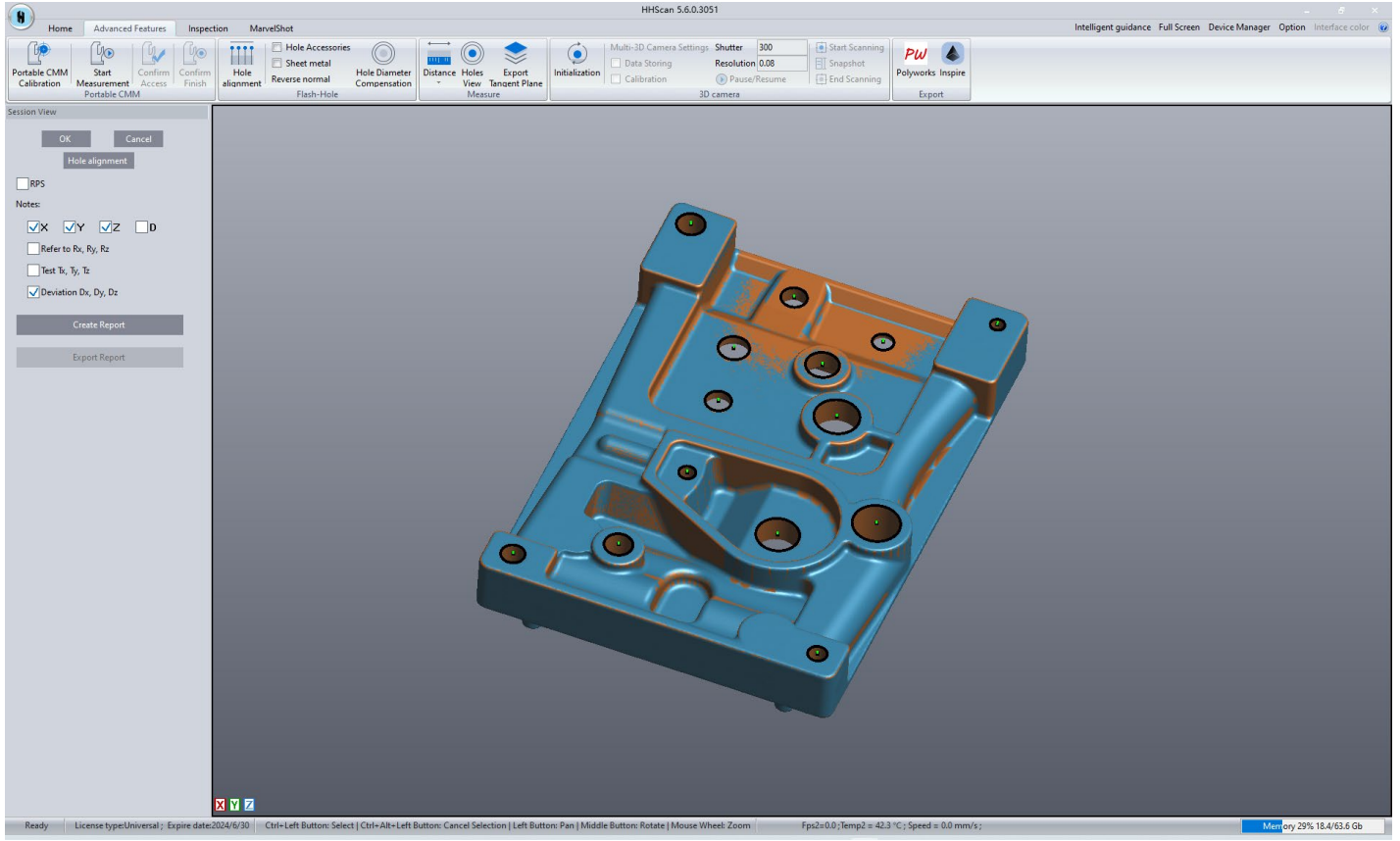
Tips: To select 3 or more holes on CAD model and select holes from scanning side and align them based on the holt position.



7. OTHER FUNCTIONS

Hole Flash Capture

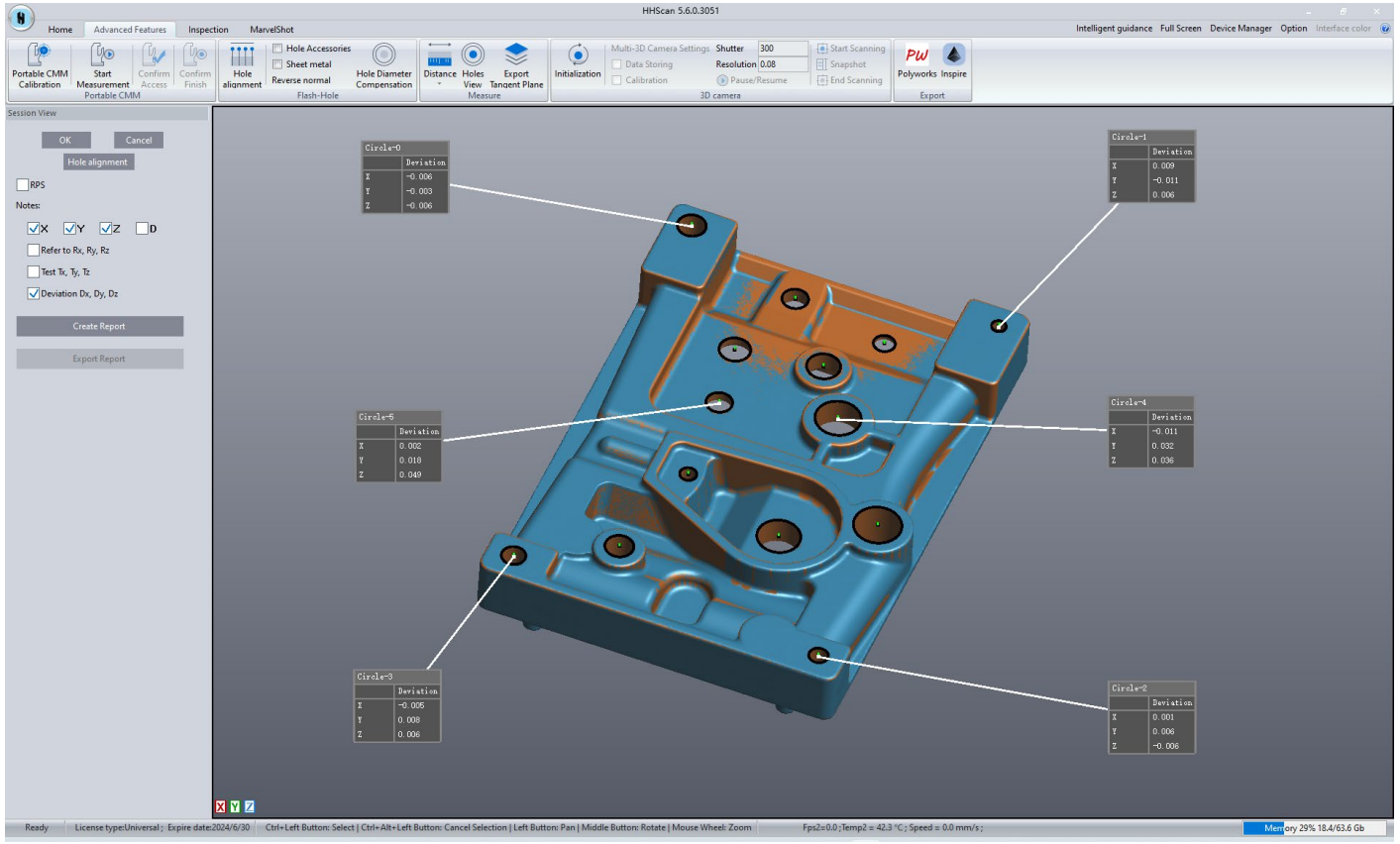
Alignment Result



7. OTHER FUNCTIONS

Hole Flash Capture

STEP FOUR: After alignment, you can check the hole deviation by clicking left button on the hole for inspection. You also can drag the annotation on the right button, and customize annotation column



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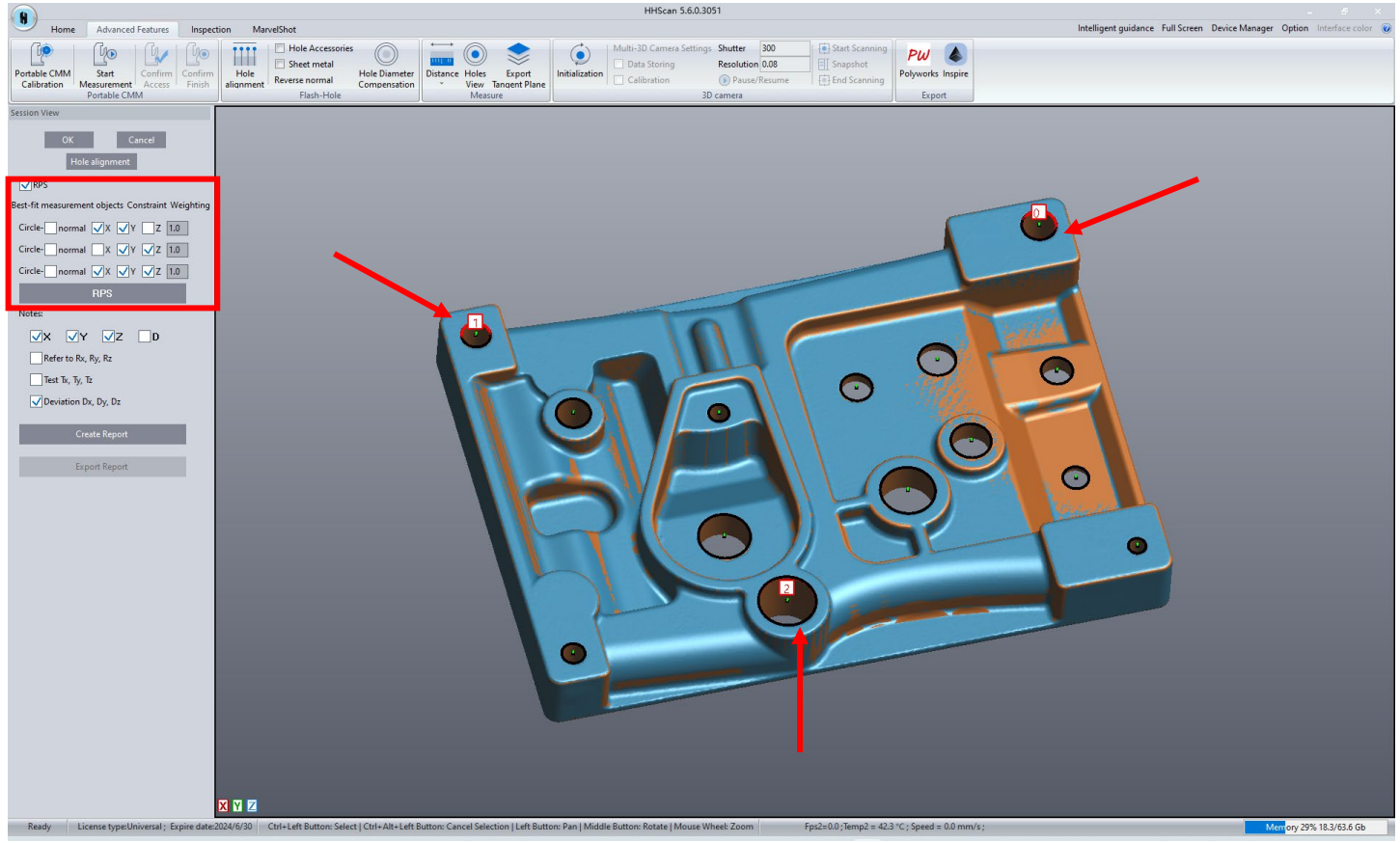
7. OTHER FUNCTIONS

Hole Flash Capture

Extra functions: RPS alignment

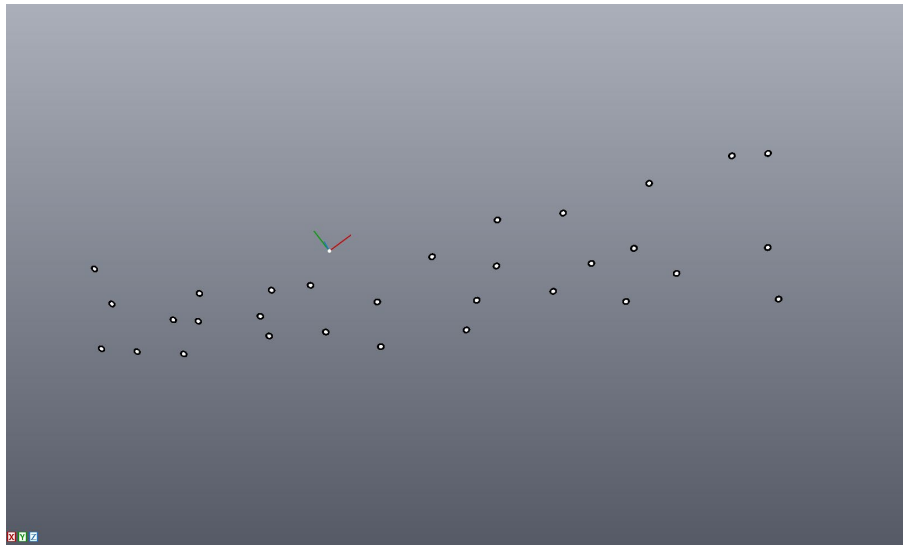
After hole alignment, you can select "use alignment RPS” and then select 3 holes for RPS alignment, set orientation of selected holes (select x,y,z of circle), and click Alignment RPS to align.



7. OTHER FUNCTIONS

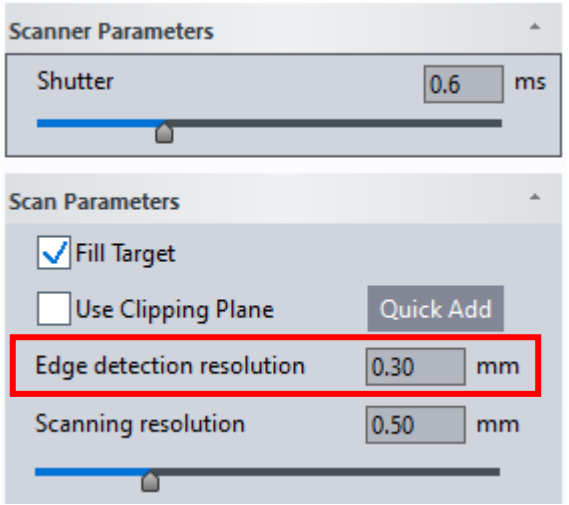
Edge Detection

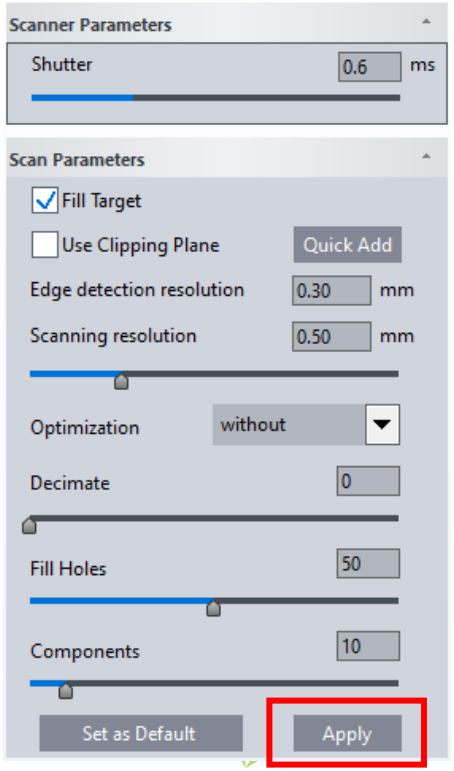
STEP ONE: Scan all the targets on the object



STEP TWO: Choose the resolution for edge detection and apply

Tips: default resolution for edge detection is 0.3mm which is suitable for most scanning scenarios.

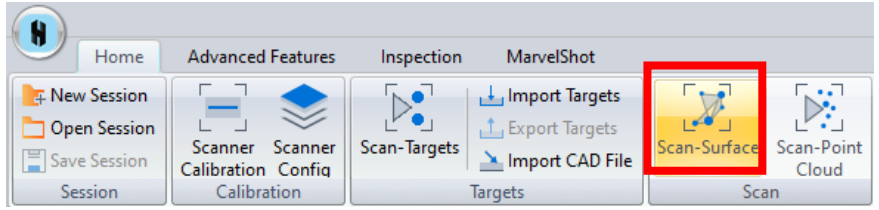




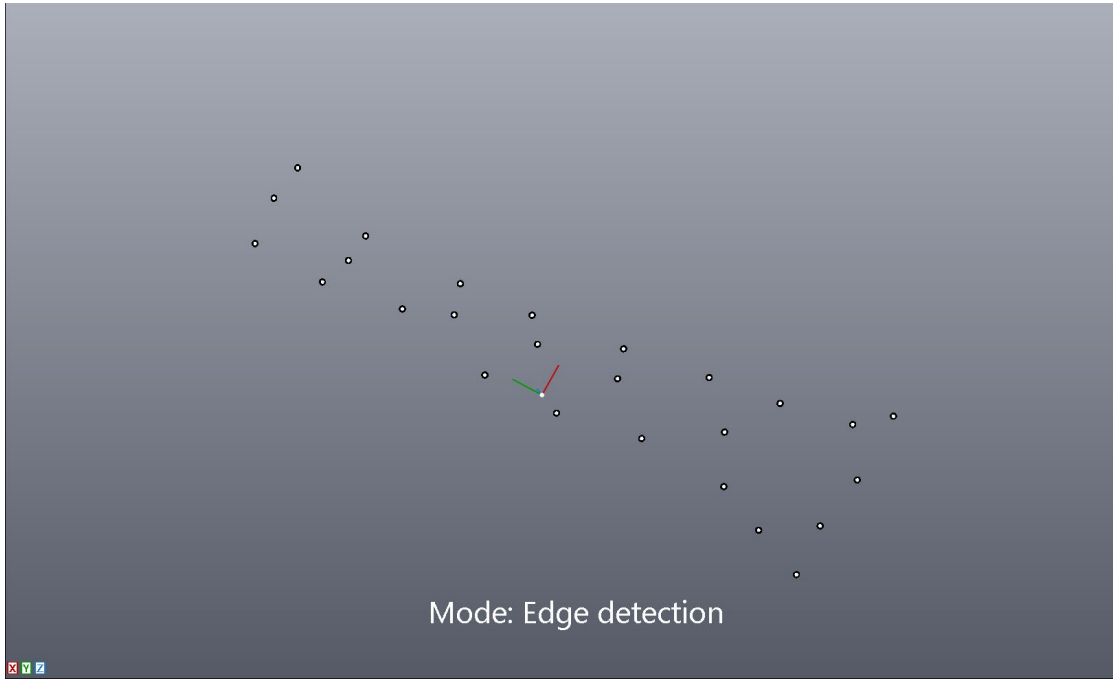
7. OTHER FUNCTIONS

Edge Detection

STEP THREE: Click on “Scan Surface” enter scanning interface as below



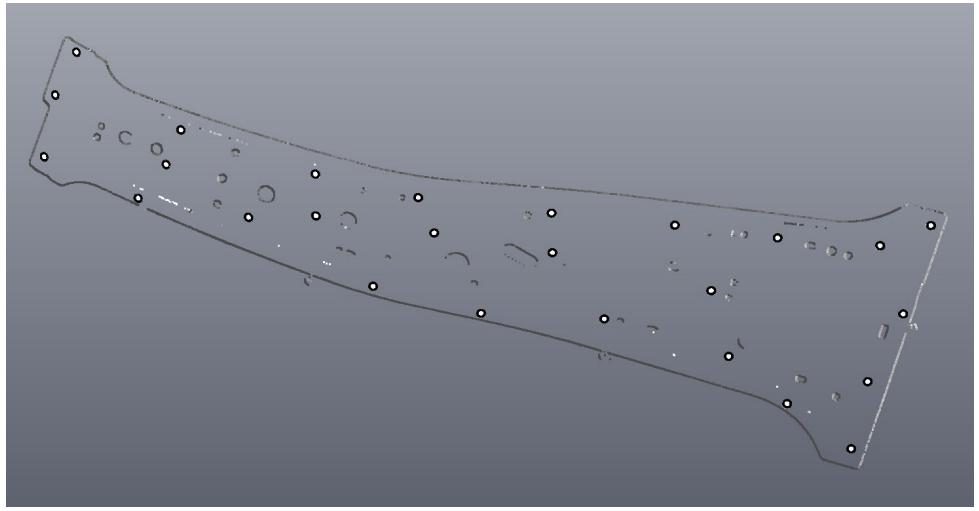
STEP FOUR: Press the bottom-push button twice to enter “edge detection” mode



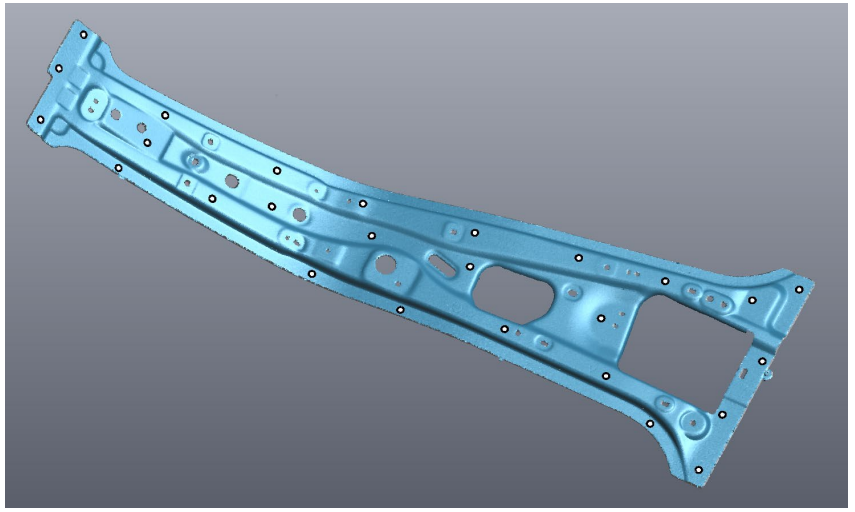
7. OTHER FUNCTIONS

Edge Detection

STEP SIX: Move scanner gently to collect the points cloud of the edge



STEP SEVEN: After collecting the edge detection data, press bottom push-button again and switch back to scan surface, so you can continue to scan the surface data.



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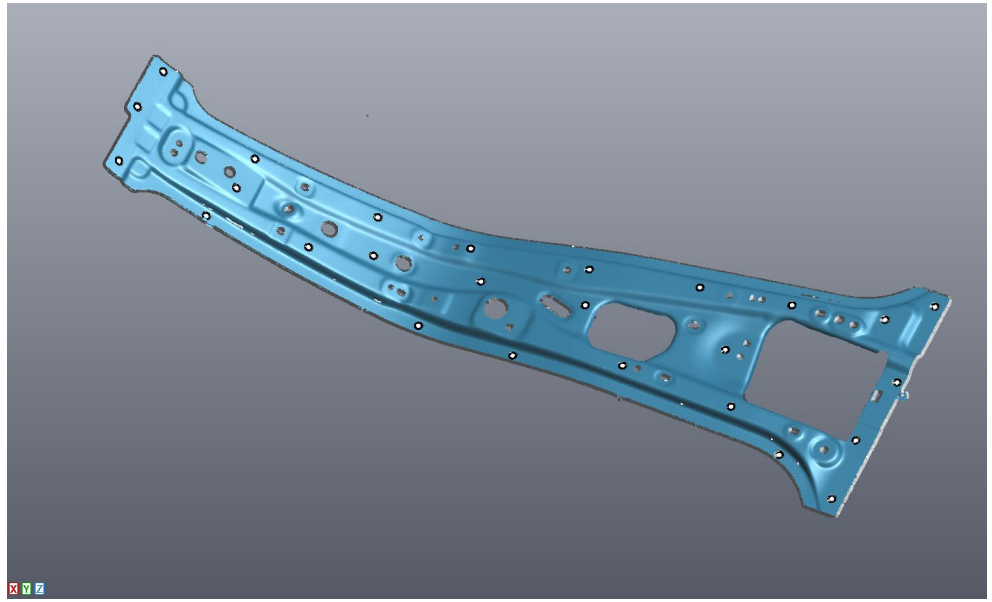
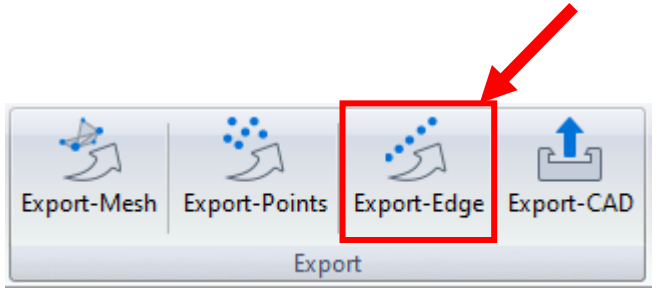
7. OTHER FUNCTIONS

Edge Detection

STEP EIGHT: After the scan is completed, press the space button on the keyboard to post-processing data



STEP NINE: Click on “Export-Edge” to export the edge data.



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“ TRY IT BY YOURSELF

8. BASIC TROUBLESHOOTING

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8. BASIC TROUBLESHOOTING

Software Installation

Installation Tips：

- Do not install any anti-virus software in your workstation;

  e.g.: Avira, panda etc.

- Computer configuration;

  e.g.: Nvidia graphics card is necessary, Portable workstation, RAM 32GB or above.

- Driver signature (Win10 OS or Win11 OS);

  e.g.: to change the BIOS Settings system for certain workstation.

- VC Library (Win7 OS);

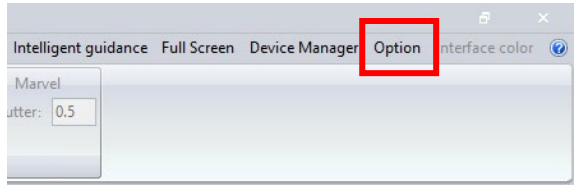
  e.g.: To install library file for certain workstation.

8. BASIC TROUBLESHOOTING

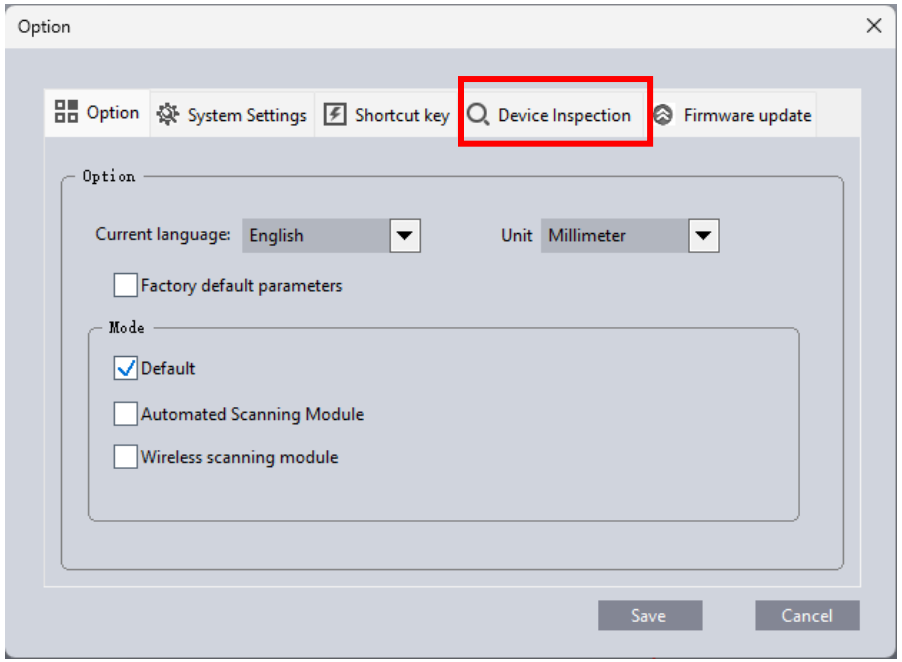
Software Troubleshooting

Troubleshooting #1 : Scanner cannot be connected with workstation after sound equipment check, and scan button is gray and cannot work;

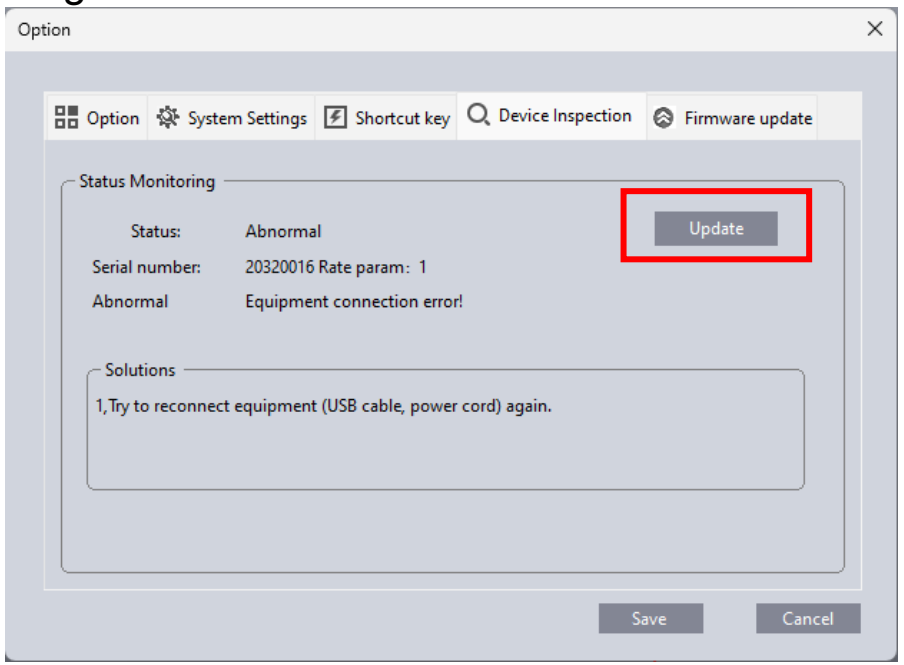
STEP ONE: To click “option”



STEP TWO: To click “check device”



STEP THREE: To click “update” to show the diagnosis



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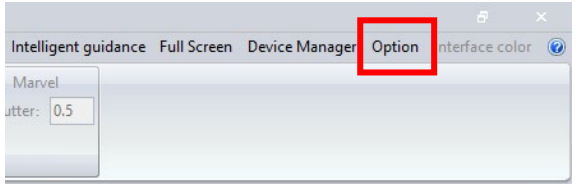
8. BASIC TROUBLESHOOTING

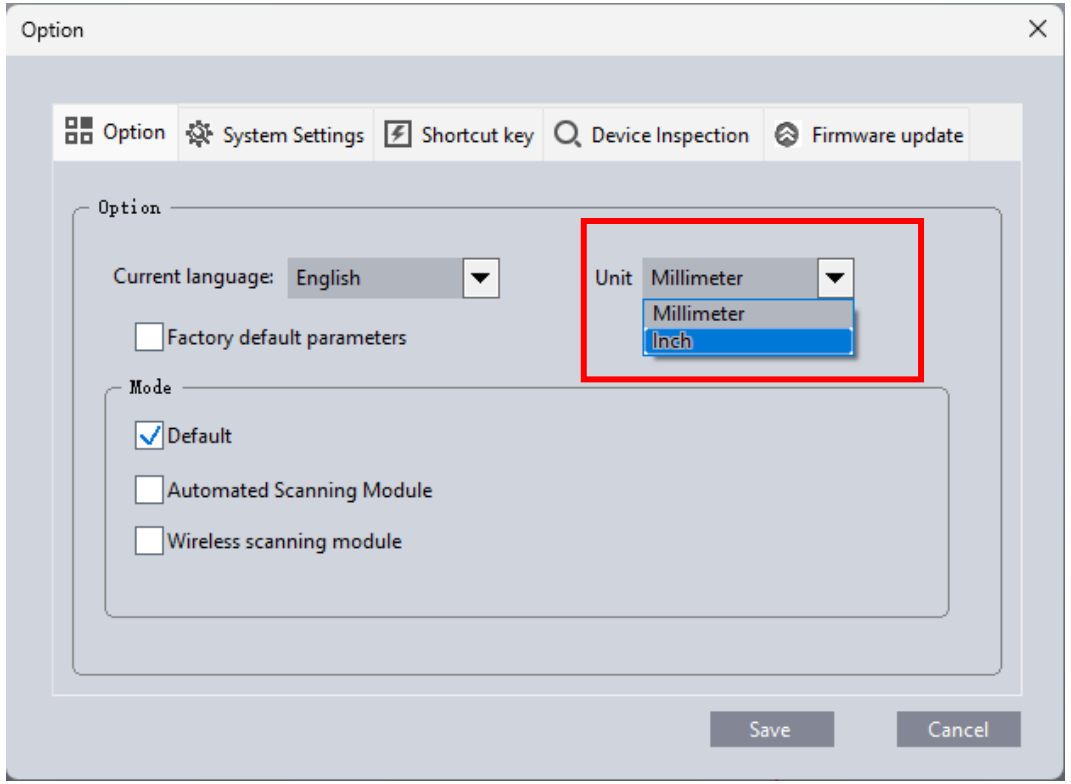
Software Troubleshooting

Troubleshooting #2 :Unit switch function (including scanning software, detection module, photogrammetry, bending module)

STEP ONE: To click “option”



STEP TWO: Choose unit (Millimeter or Inch).



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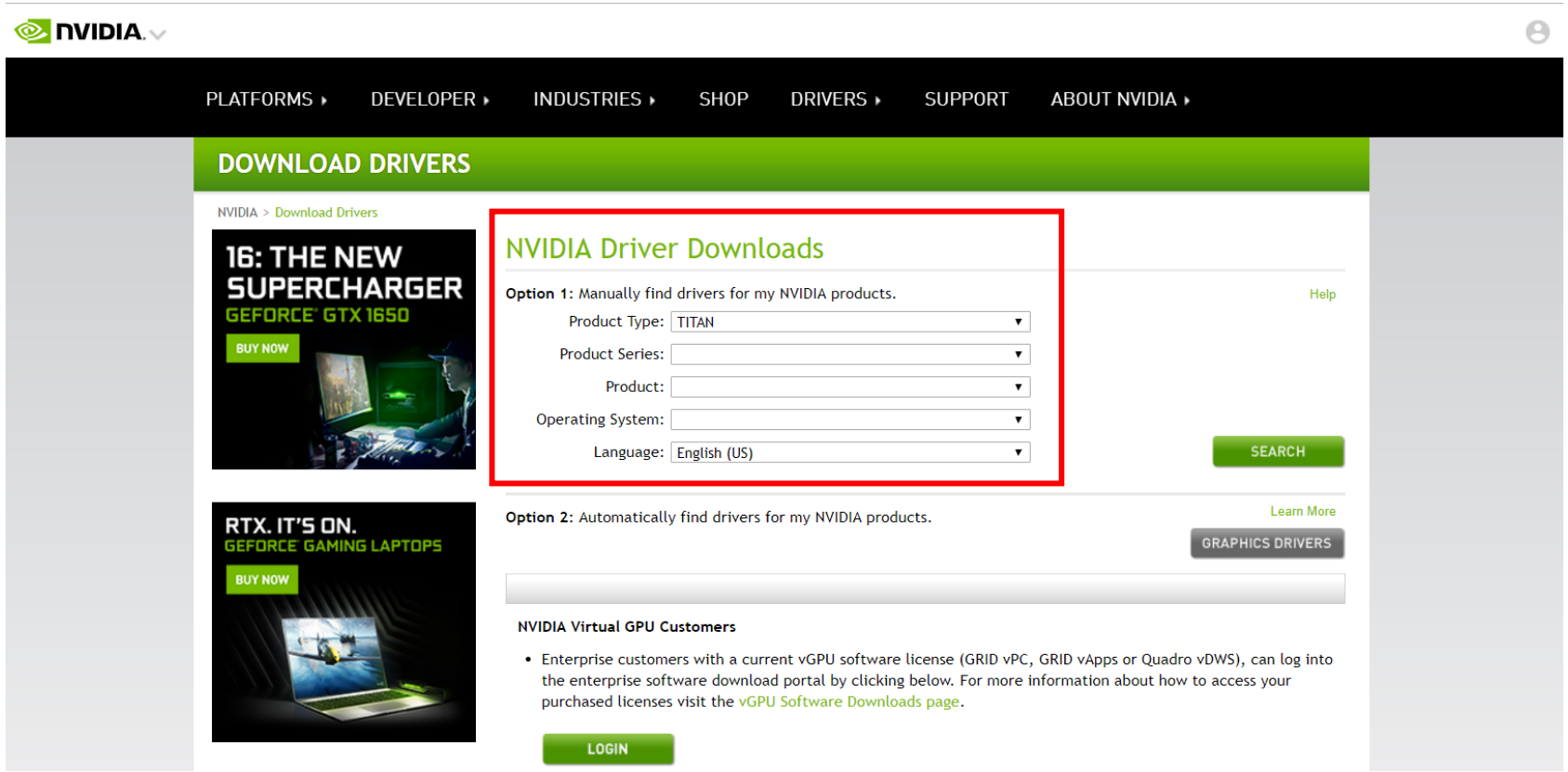
8. BASIC TROUBLESHOOTING

Software Troubleshooting

Troubleshooting #3 : No data can be scanned, and scanner cannot be calibrated after complete connection

Solution: Update the latest Nvidia graphics driver according to the computer graphics model.



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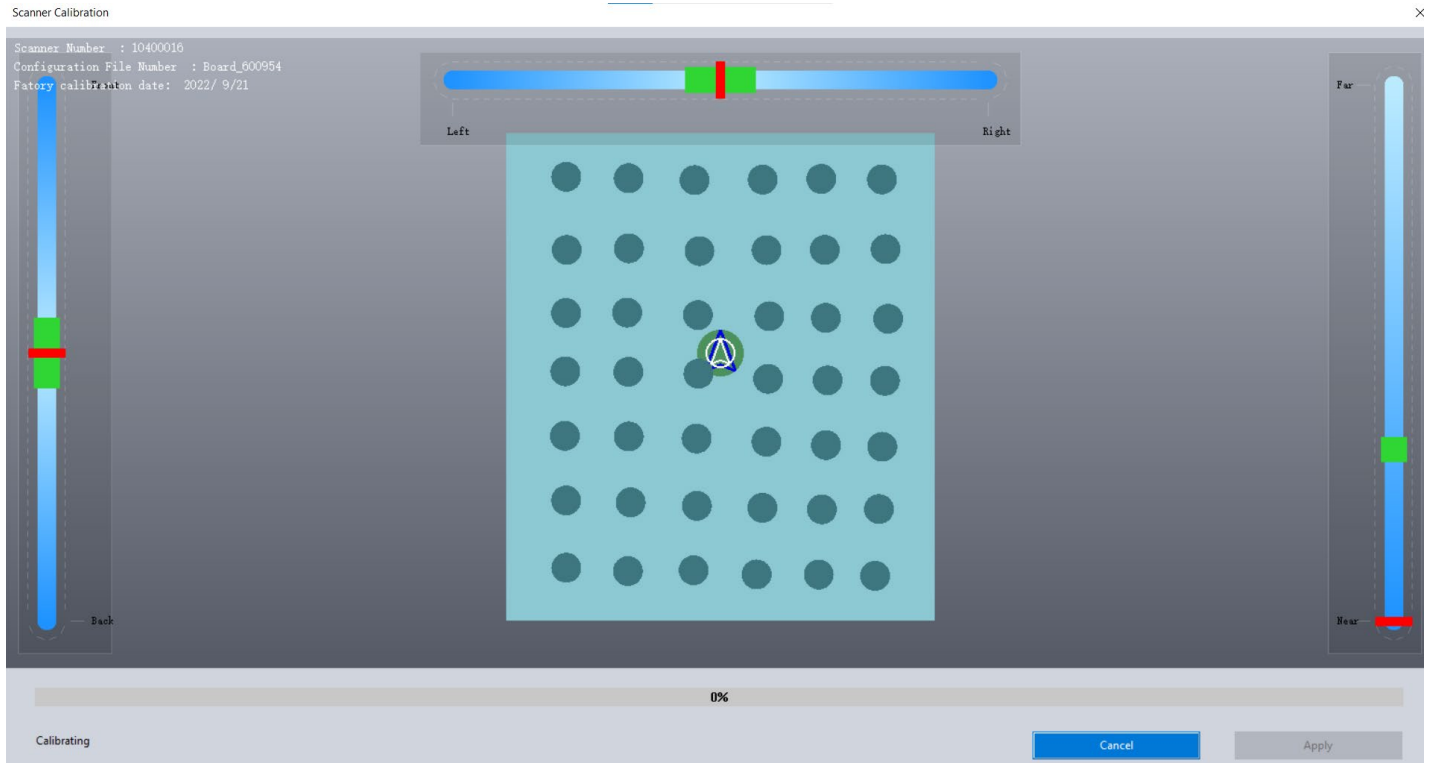
8. BASIC TROUBLESHOOTING

Scanner Troubleshooting

Troubleshooting #4 : Scanner is connected properly, while laser line is incomplete

Solution: Temperature or transportation effects, you need to calibrate again (warm up for 3-5 mins).



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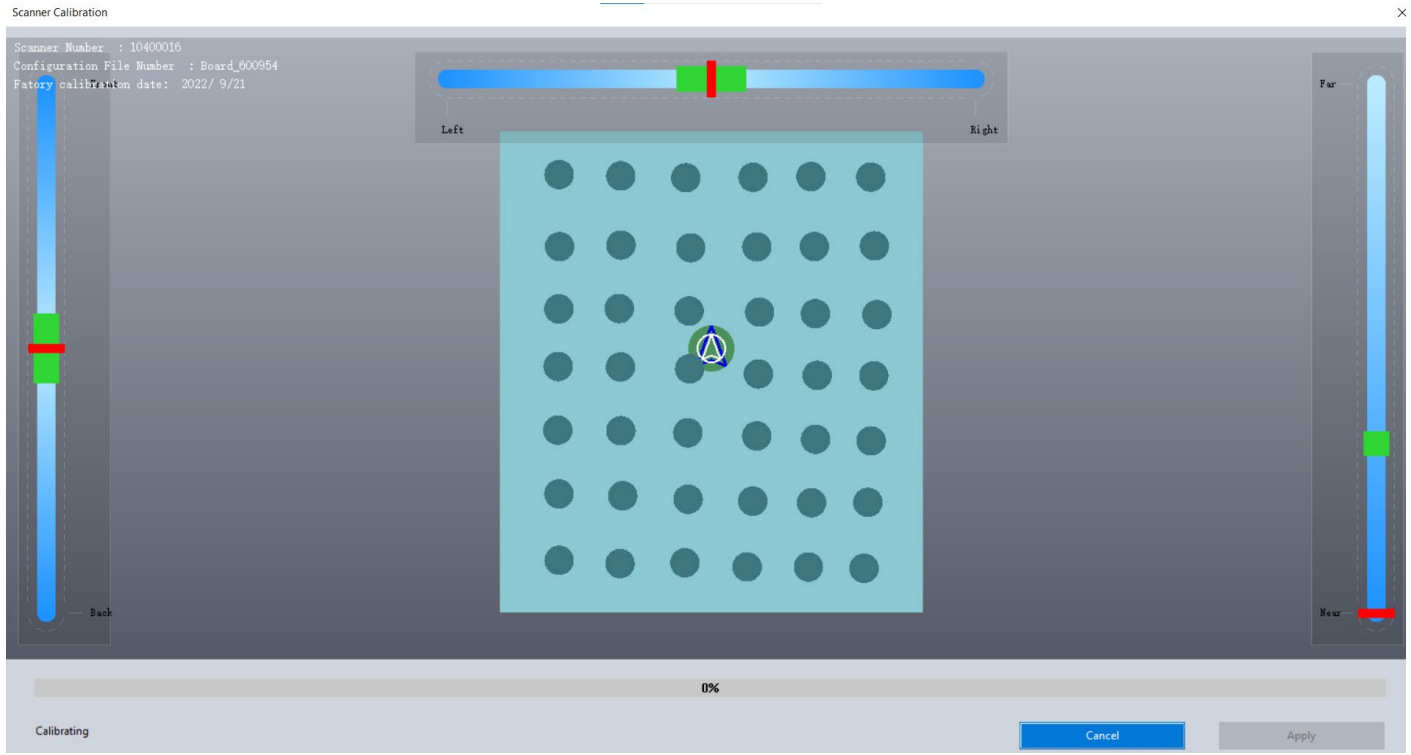
8. BASIC TROUBLESHOOTING

Software Troubleshooting

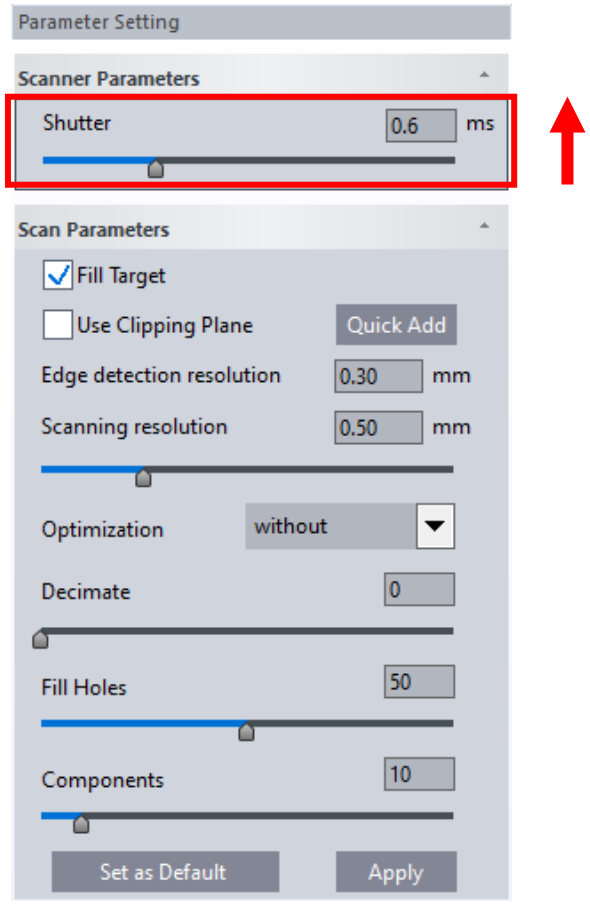
Troubleshooting #5 : Scanner is connected properly, while the Targets are blinking, and FPS is not stable during scanning
Solution: To recalibrate the scanner.



8. BASIC TROUBLESHOOTING

Software Troubleshooting

Troubleshooting #5 : You cannot scan too black or shiny object
Solution: #1, Increase shutter and decrease resolution. #2, Spray the matting agent.



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“ TRY IT BY YOURSELF

Questions, please contact your local Hexagon representative.

THANK YOU

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