

Credimension Viewer User Guide

Revision Instructions			
Date	Version	Description	Author
2021/12/03	V1.0.0	First release	Daisy
2022/07/26	V2.0.0	Version 3.0 SDK& New RGBD features added	Daisy
2022/12/01	V3.0.0	The GUI supports enabling CS30 dual-band or single-band products and optimizes and updates related functions	Daisy
2023/09/11	V4.1.0	GUI4.1.0 supports multi-device connection with updated optimizations	Daisy
20240229	V4.1.3	GUI4.1.3 corresponds to updated and optimized content	Daisy
20241028	V4.2.3	GUI4.2.3 corresponds to update optimizations, supports CS40pro, supports IP modification, etc	Daisy
20250425	V4.2.4	GUI4.2.4 corresponds to updated optimizations, supporting CS40Pro frame rate changes, yaml functionality, RGBD fusion direction, etc	Daisy

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1. Tool Introduction

Tool name: Credimension Viewer v4.2.4

工具说明：“Credimension Viewer v4.x” It is a Windows multi-machine presentation GUI tool that supports products such as CS20, CS30, CS20-P, CS40, CS40Pro, etc. This tool is mainly used to get, display or save Pointcloud, Depth, IR(Depth can be streamed separately after streaming). RGB (supported only by CS30&CS40Pro), RGBD (supported only by CS30&CS40Pro), etc. It also supports viewing device base information, setting resolution, setting integral time, modifying IP address (CS20-P&CS40&CS40Pro) and setting frame rate (supported by CS40Pro). It also supports simultaneous connection of multiple products.

2. Installation Instructions

2.1. System Requirements

The current version supports Windows 10 and Windows 11;

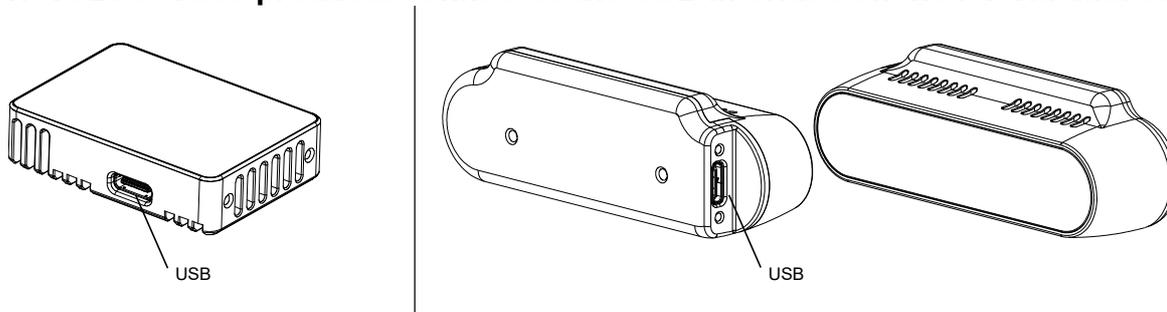
2.2. Credimension Viewer installation method

The software is the green version. Double-click the "Credimension.exe" file under the package to use it directly;

styles	2023/4/26 11:42	文件夹	
translations	2023/4/26 11:42	文件夹	
ChangeLog.txt	2023/4/24 16:38	文本文档	1 KB
concrct140d.dll	2023/3/21 11:11	应用程序扩展	714 KB
configuration.ini	2023/5/16 10:13	配置设置	1 KB
Credimension.exe	2023/4/26 11:41	应用程序	1,448 KB
csreconstruction2.0.dll	2023/4/24 14:56	应用程序扩展	15,118 KB

2.3. Hardware Link

2.3.1. CS20 & CS30 products connect to the USB interface on the PC via data cable:

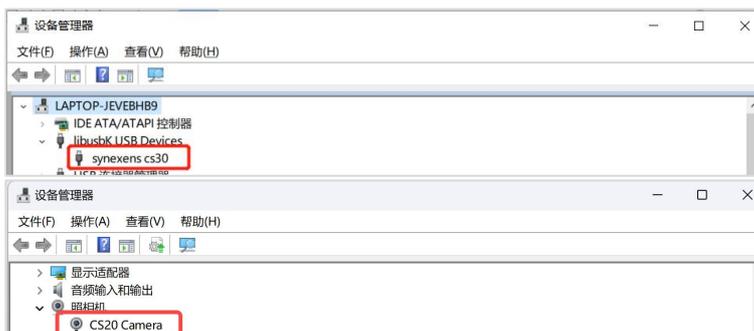


To run the CS30 series for the first time using Credimension Viewer version 4.0, you need to install the driver first (this can be ignored if your computer has run older Credimension Viewer versions and installed the driver). The installation steps are as follows:

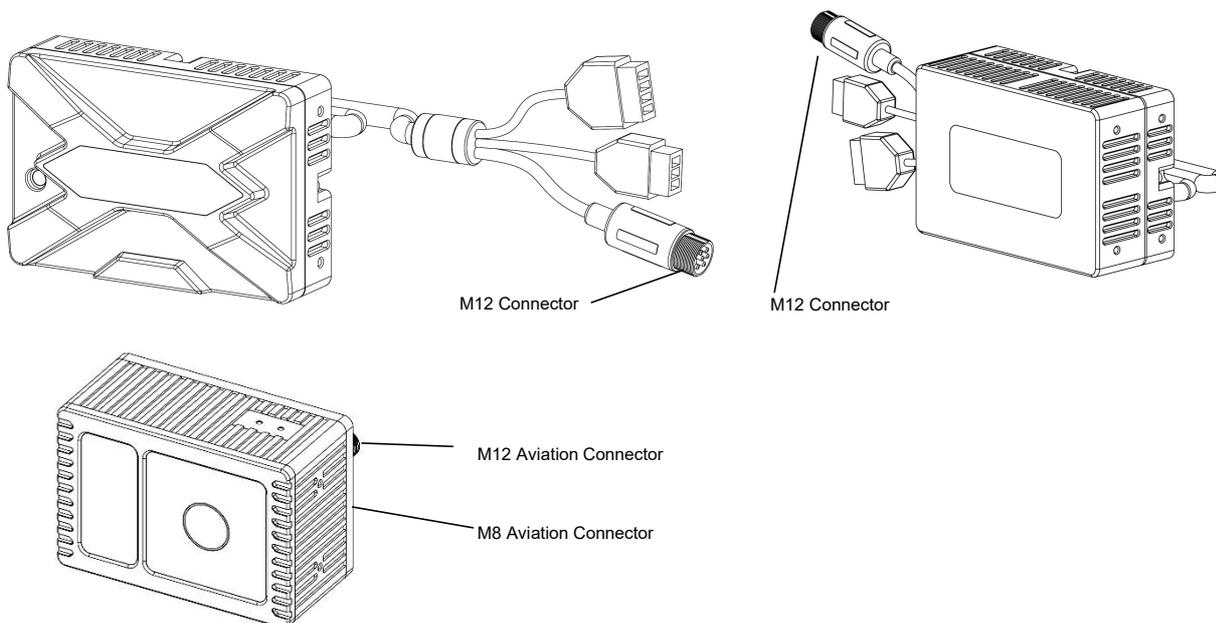
a: Connect cs30 to PC, double-click the "cs30-driver.v1.exe" file, and after about 1 minute, prompt: "Please press any key to continue..." The installation is done;



b: The display of "synexens CS30" in the device manager indicates that the driver installation was successful; Among them, the CS20 product does not require driver installation. After about 5 seconds of connection, the connection is successful when "CS20 Camera" appears in the camera list of the device manager



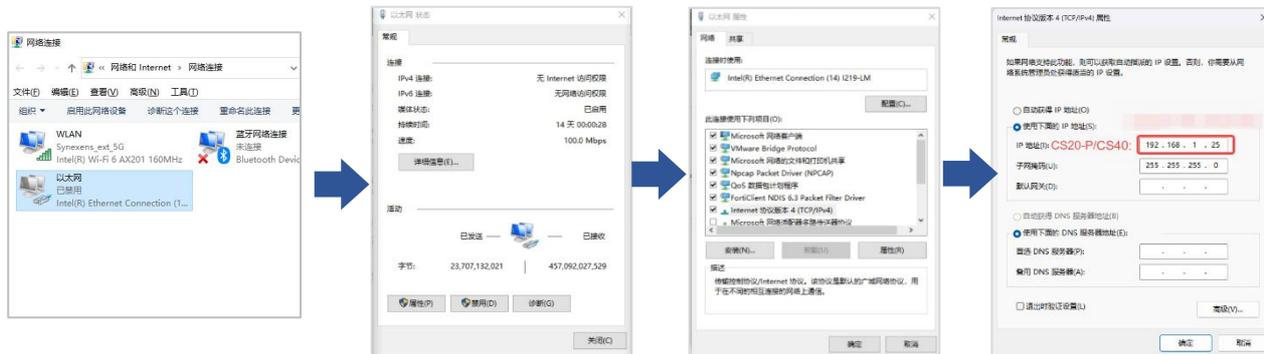
2.3.2. The CS20-P & CS40 & CS40Pro products connect to the computer via TCP:



Connect the CS20-P/CS40 product to the power supply. After connecting the network port terminal to the computer, the ip address needs to be configured as follows:

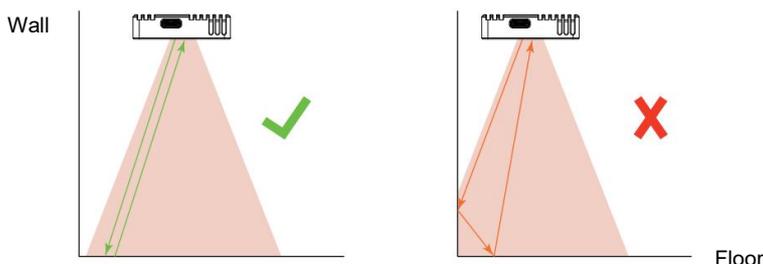


The ip address is 192.168.1.1 to 100, and "1 to 100" is an integer containing 1 and 100

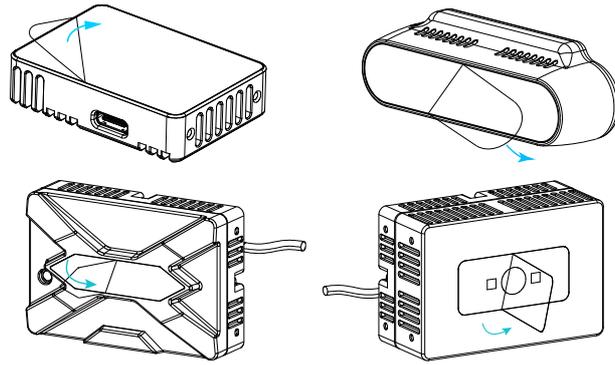


2.4. Device usage notes

- a: Before use, make sure to turn off antivirus software such as 360 Antivirus on your computer, and turn off or disable Camera software on your laptop to avoid images not being displayed;
- b: It is recommended that the searchable FOV area of the product be kept at a certain distance from the wall and not overlap with the wall to prevent image anomalies;



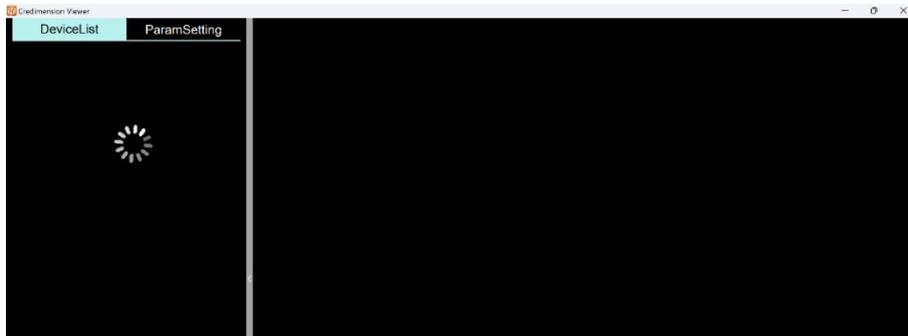
- c: Remove the surface protective film of the glass cover plate before use in case of abnormal images;



3. Instructions for Use

3.1. Get device information

点击“Device List”按钮，等待约 5S 后可显示已连接设备列表，设备列表刷新中：



When connecting a device, the current device is selected by default, as shown in the device information blue background highlighted below;

When connecting two devices, the device at the top of the list is selected by default, gray is unselected, and the device can be selected by clicking the device name or serial number;



Once a device is selected, click "Param Setting" to display information about the current device, including device name, device SN, SDK version, firmware version, etc. At the same time, you can turn the current device on or off. As shown below:



3.2. Turn on the device

3.2.1. Turn on a single device

Select the device you want to turn ON now, click on ParamSetting, and then click on the "ON" switch on the right side of the Depth Camera to display the depth image of the current device.

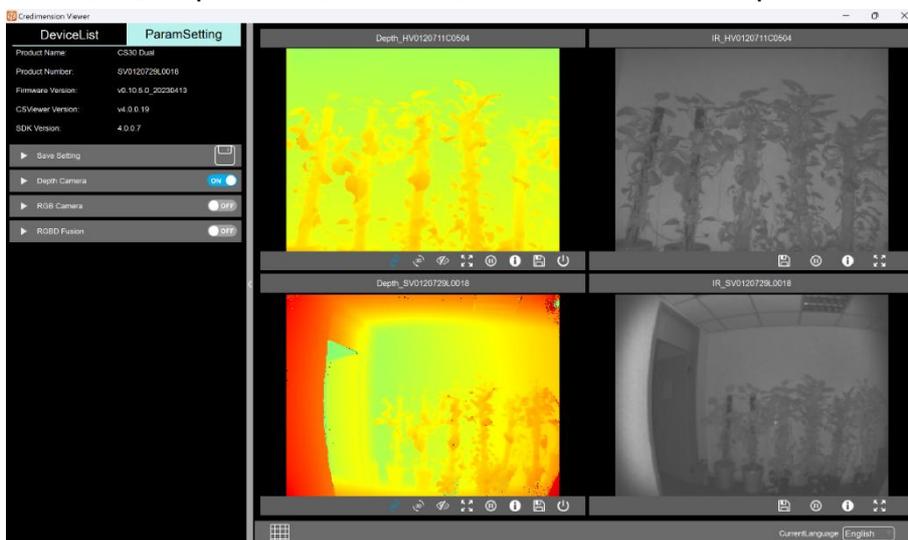
When CS20 starts running, it will automatically download the internal reference file, which takes about 60 seconds. During this process, the display frame rate will be reduced, and it will return to normal after the download is completed.

Also, each resolution update in CS20 corresponds to a separate download of the reference file. Be careful not to turn off depth or the program during the download process. If you need to open multiple devices, make sure the reference files have been downloaded before opening them; In the parameters directory under the GUI, check if there is a file named "Resolution +SN" to confirm that the parameters have been downloaded.



3.2.2. Enable multiple devices

点击左上角设备列表“DeviceList”，选中另一台设备，点击“Param Setting”按钮后，再点击“Depth Camera”右侧“ON”按钮，可开启第二台设备。同样方法可开启多台设备，开启 depth 后可支持开启当前设备对应 IR 图，Depth 关闭会将当前设备 depth&IR 同时关闭，单独关闭 IR 图不会影响 Depth 图显示,下图所示为开启两台设备 Depth 图+IR 图；

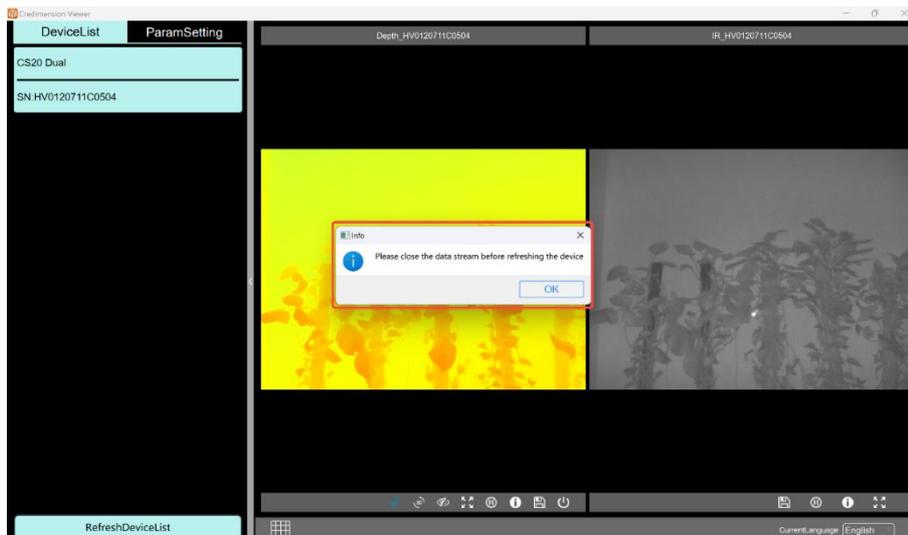


3.3. Introduction to Window key functions

3.3.1. Refresh the device list

When no Device is running, click "Refresh Device List" to display the currently connected device in the device list bar on the left. If there are currently running devices, it will prompt you to turn off the running device first and then refresh again;

When a device connection is interrupted, it will prompt that the current device has been removed, and after clicking the OK button, the disconnected device will no longer be displayed in the device list;



3.3.2. Switch between Chinese and English

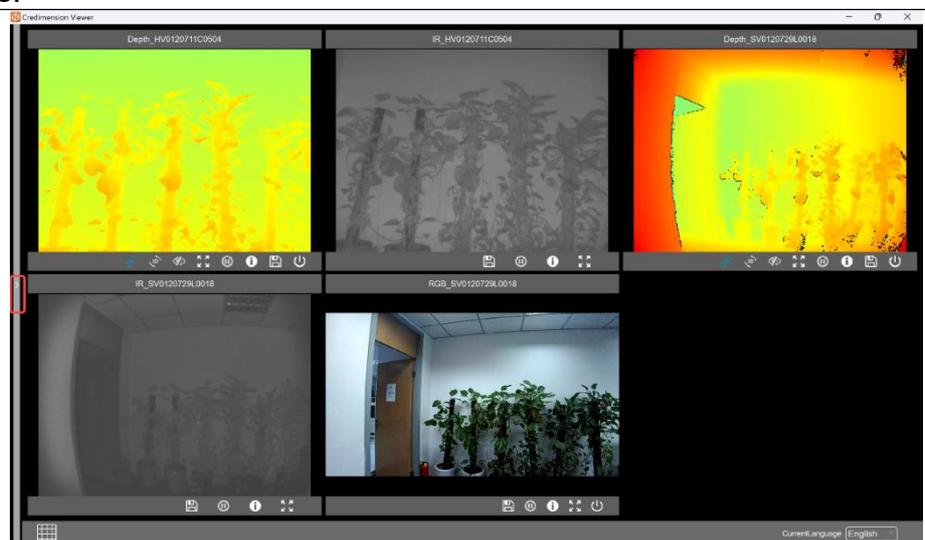
The current language is displayed in the bottom right corner of the page, and switching between Chinese and English is supported, with English as the default;



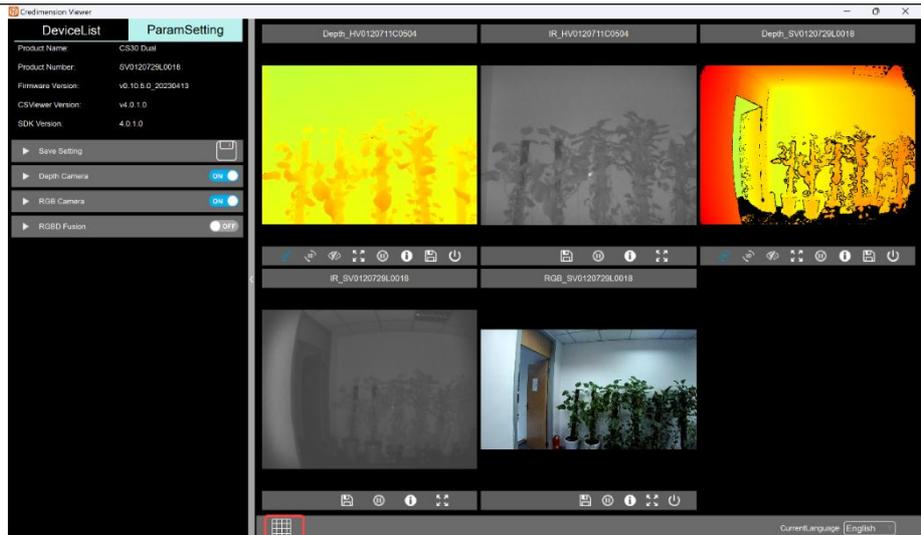
3.3.3. Window Layout Settings

You can adjust the page size and bring up some functions by clicking different buttons on the window, as follows:

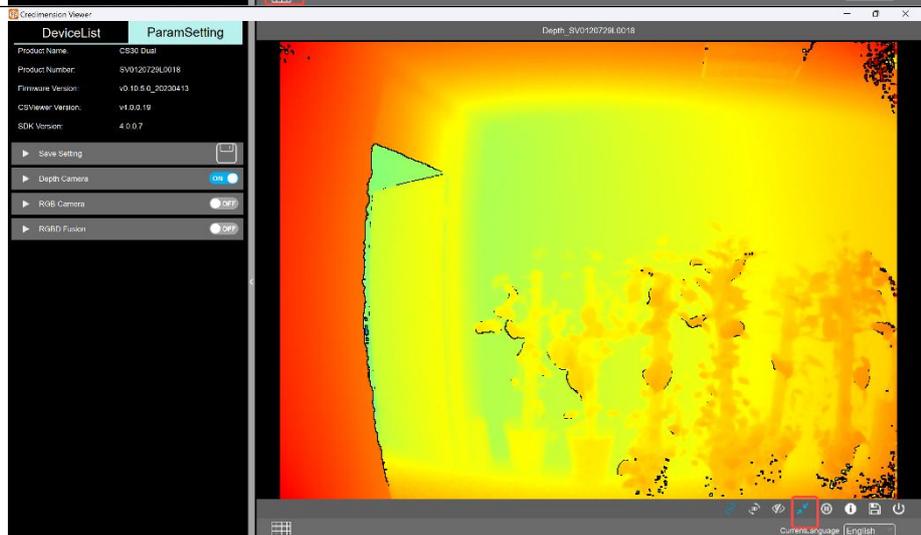
Click the ">" button on the left to hide the device list and menu bar, and click the "<" button again to restore it;
Click the frame to adjust the position and size of each frame window



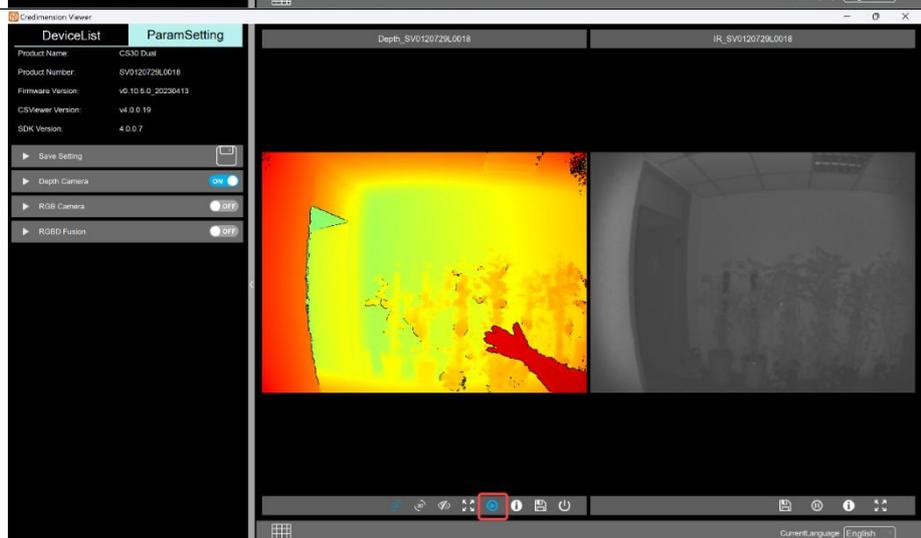
You can click and drag the edge of the window with your mouse to change the size or position of the window; The nine-grid button rearranges and restores



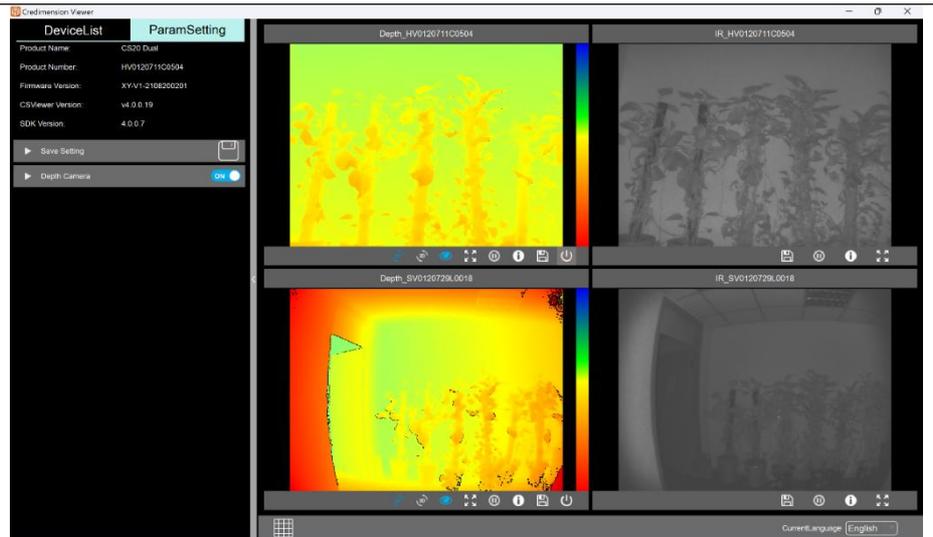
Click the "Enlarge" button at the lower right corner of the screen to maximize the current screen, and the other screen Windows will be hidden. Click the "Restore" button again to restore the previously displayed screen 



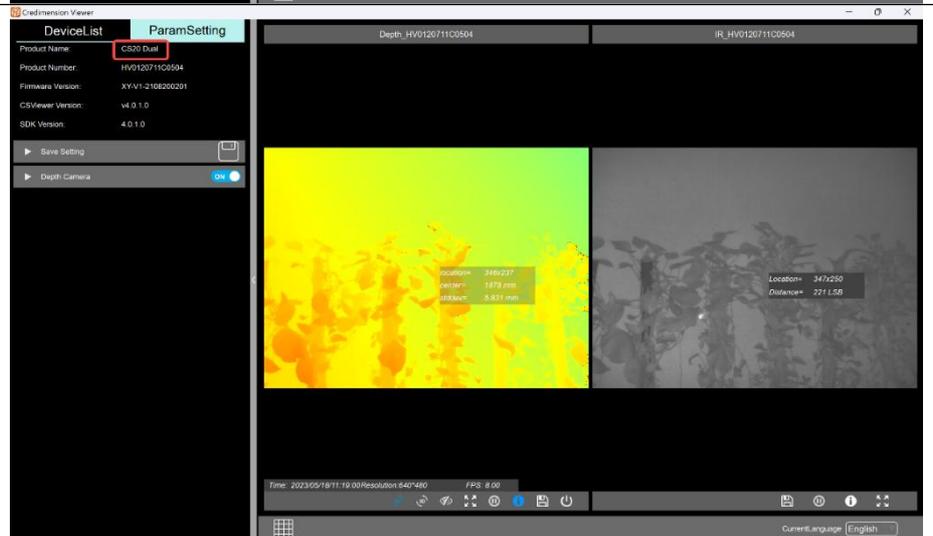
Click the pause button "" at the bottom of the screen to pause the display of the corresponding window 



Click the  button below the Depth screen to display the color bar 



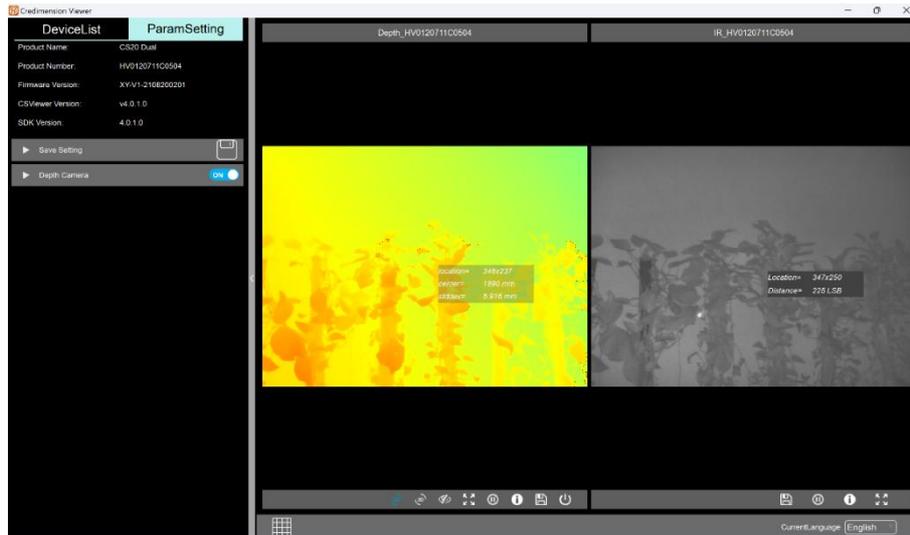
Click the Picture Information button  at the bottom of the picture to display the current timestamp, current resolution, and current frame rate information in the lower left corner of the picture; 



3.4. Show the 2D Depth image

After clicking the switch button "ON" ON the right side of "Depth Camera", the device starts running and opens the Depth image window by default. If you need to open the IR image window, click  to expand the Depth switch after opening the stream of Depth, and click the switch button "ON" on the right side of IR to open the IR window. The window name format is: Depth_SN, IR_SN, where SN is used to distinguish the corresponding window from the device when multiple devices are connected simultaneously, and Depth and IR are used to distinguish the type of the opened window; When the mouse clicks on the depth screen, you can see the depth value of the currently clicked pixel. Click the IR screen with your mouse to view the IR intensity value;

The "OFF" button on the lower right of the depth screen window is the same as the "OFF" button on the left side of the Depth Camera. The IR map is turned off when the depth screen window is closed, and the IR switch can be controlled separately after the Depth stream is turned on. 



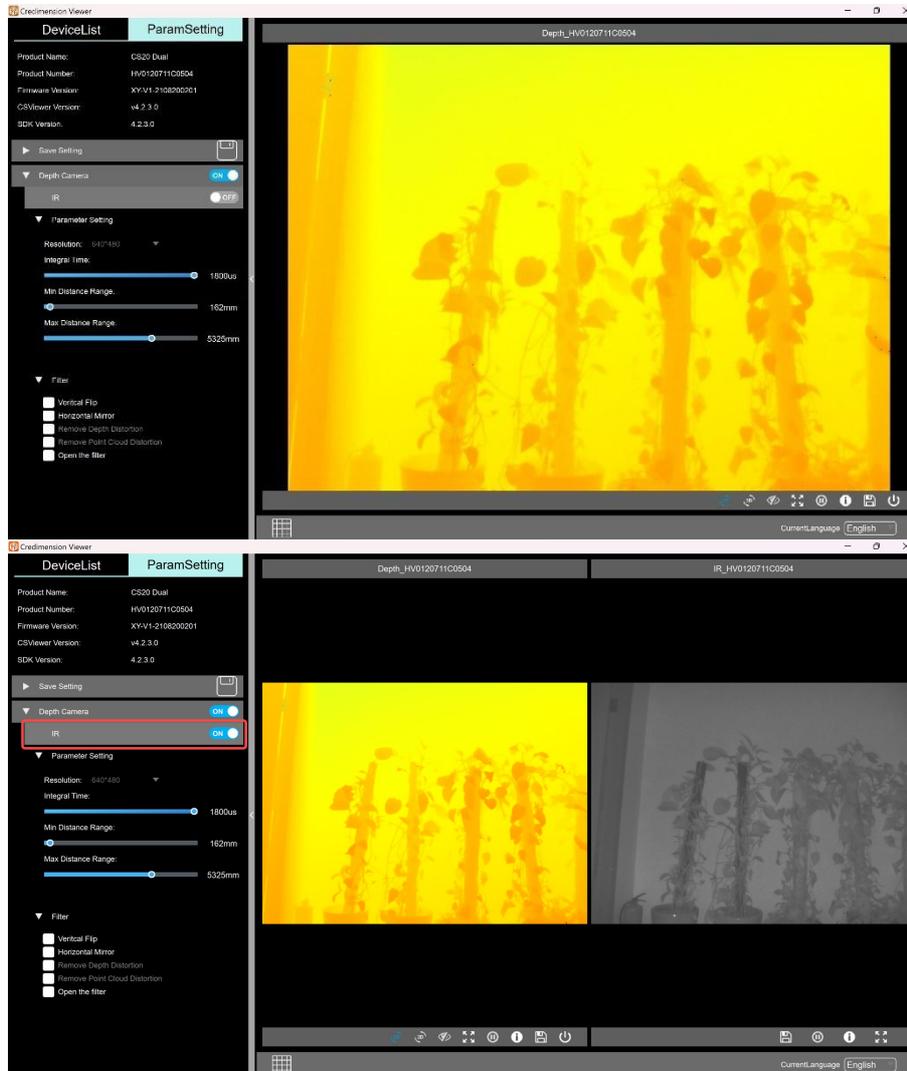
3.5. Display 3D pseudo-color dot cloud

Click the 3D button "" under the depth window to view the real-time pseudo-color dot cloud image corresponding to the current device. Drag the mouse to control the view of the dot cloud or slide the scroll wheel to zoom in and out to view the dot cloud of both devices simultaneously.

<p>View the pseudo-color dot cloud of one device</p>	
<p>View the false color dot clouds of 2 devices</p>	

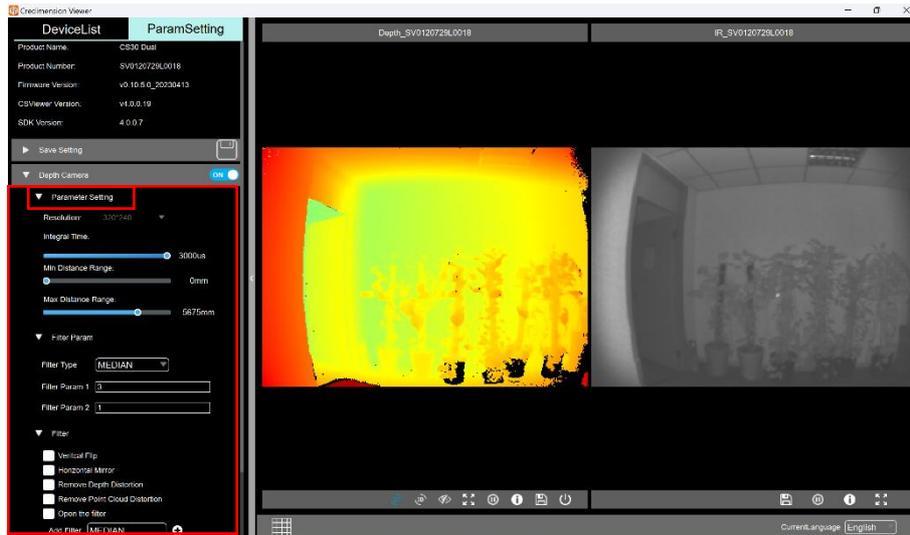
3.6. Control IR switches

Click the pull-down button "" ON the left side of the Depth Camera to control the IR switch of the current device (OFF by default), click the " ON/OFF "switch button on the right side of IR to control the IR switch separately. When the Depth image is off, the IR image is off along with the Depth image, and the IR on/off does not affect the display of the Depth image. ▾



3.7. Adjust the parameters

Click the drop-down button "" on the left side of the Depth Camera to set the adjustment parameter information, filter parameter Settings, set the screen, etc. ▾ Click parameter setting, and the parameter adjustment box will be displayed. You can choose to switch between 320*240 (this is the only low resolution for CS20/CS30/CS20-P single-frequency devices) or 640*480(the default resolution for CS20/CS40/CS40Pro). CS40Pro adds frame rate adjustment, exposure time adjustment, minimum distance display range adjustment or maximum distance display range adjustment (parameter adjustment is set to the selected device in the list when multiple devices are turned on simultaneously);



Note: The detection distance is related to the integration time. Different distances need to be adjusted to correspond to different integration times to achieve the accuracy of the test data. It is recommended to refer to the following CS30 integration time correspondence diagram:

Test distance	Integral time
300mm~500mm	<500us
600mm~900mm	500us~1000us
1000mm~1700mm	1500us~2500us
>1700mm	2800us(Long distance requires no interference in the test environment at close range)

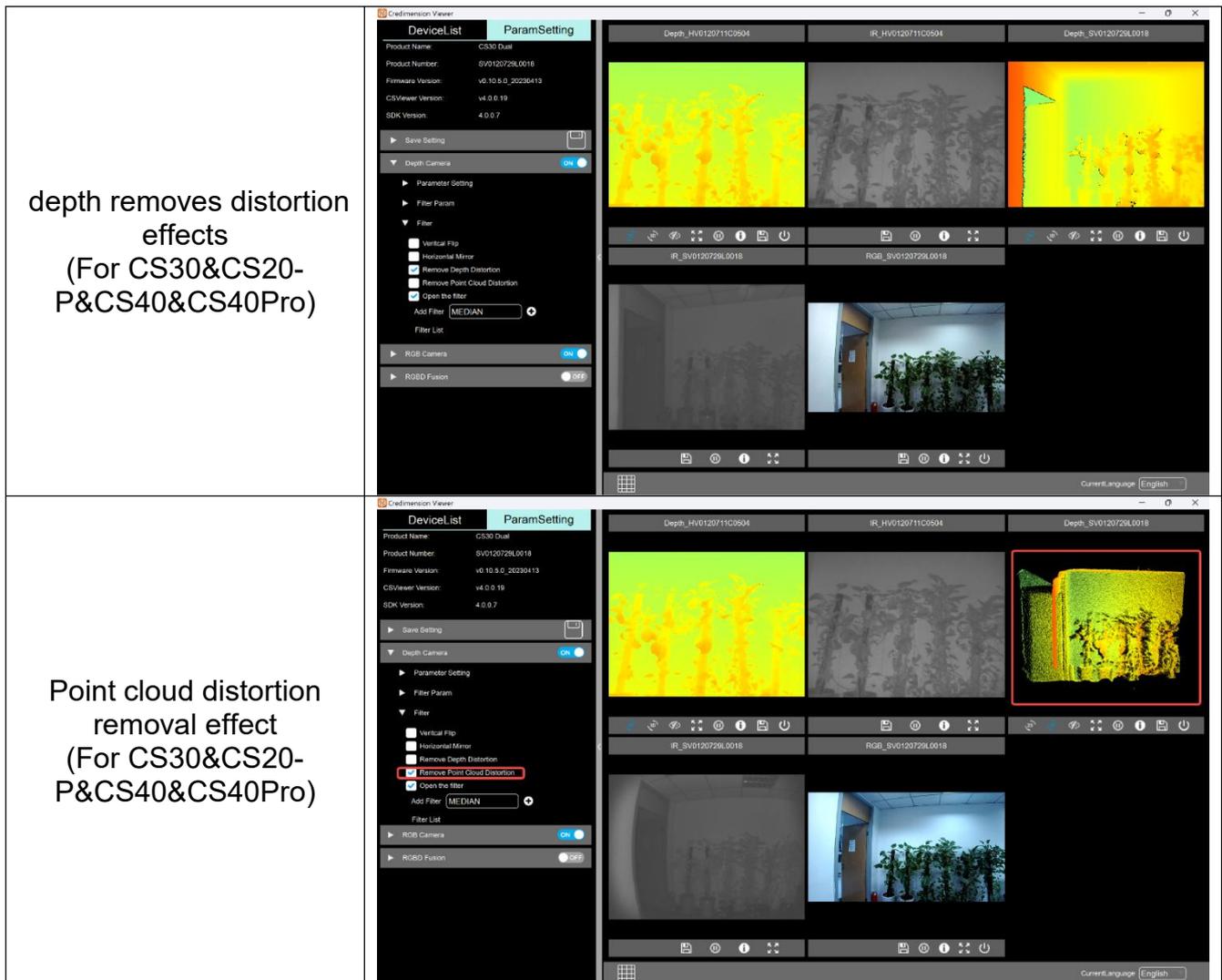
注：各设备最大最小积分时间设置如下：

Device type	Resolution	Minimum integral time	Default power-on	Maximum integral time
CS20	640 * 480	65us	1800us	1800us
	320 * 240	41us	580us	580us
CS30	480/320 * 640 * 240	16us	2800us	2800us
CS20-P	320 * 240	16us	3000us	3000us
CS40	480/320 * 640 * 240	10us	3000us	3000us
CS40Pro	480/320 * 640 * 240	1us	1951us	1951us

3.8. Screen Settings

Click the drop-down button "" on the left side of the filter to open the detailed Settings list, where you can set whether to add filters, flip horizontally, flip vertically, remove distortion, etc. ▾

<p>Vertical flip effect</p>	
<p>Horizontal flip effect</p>	
<p>Effect after flipping horizontally + vertically</p>	



depth removes distortion effects
(For CS30&CS20-P&CS40&CS40Pro)

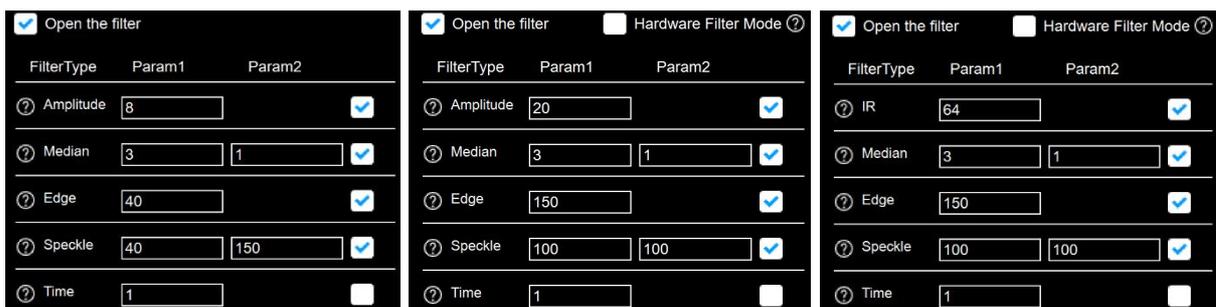
Point cloud distortion removal effect
(For CS30&CS20-P&CS40&CS40Pro)

注：CS20 产品无去除畸变功能，“Remove Depth Distortion”、“Remove Point Cloud Distortion”为禁用状态；

3.9. Filter parameter Settings

This option sets the filter parameters as: Median filter, Amplitude filter, Edge filter, Speckle filter, as shown below:

The left image shows the version status of CS30 firmware V1.0.2.0_20240328 and other versions that do not support setting the filter on the lower computer. The right image shows the lower computer filtering version supported by the new version after that. In the right picture, when filtering is enabled, the default filtering Settings run on the PC side (upper computer). After checking the HardWare Filter Mode, all filtering Settings run on the Mode side (lower computer). Click the "?" button on the right side of the Hardware Filter Mode to view this annotation. **Note:** 1. When "Open the filter" is not checked, the filtering is not enabled. When "HardWare Filter Mode" is checked, there is no change in filtering. For versions of CS30 V1.0.2.0_20240328 and CS20 and other firmware versions that do not support filtering on lower computers, after checking Open the filter, boundary filtering (Edge) is effective regardless of whether the status is checked or not. For new versions, the parameter will only take effect after checking it.



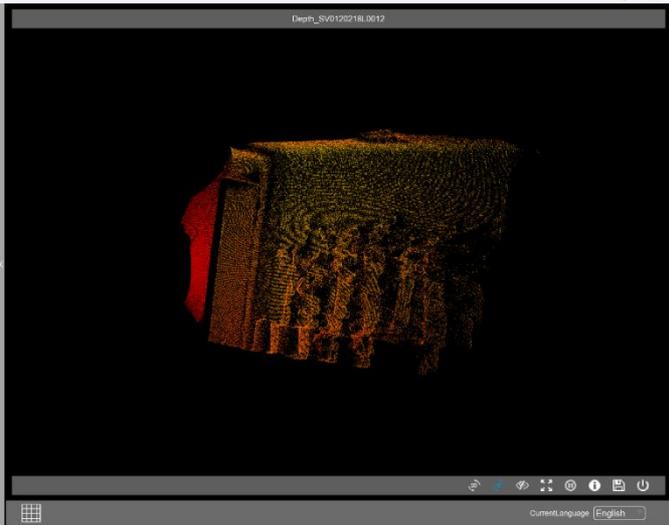
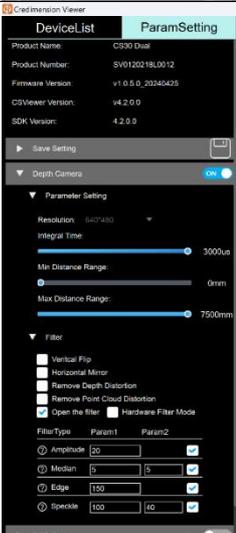
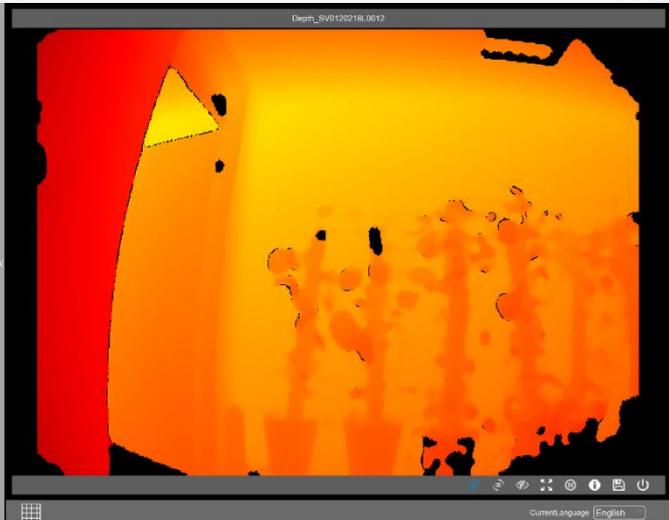
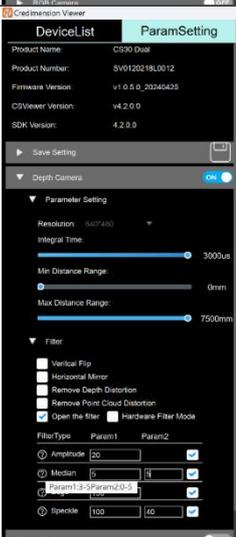
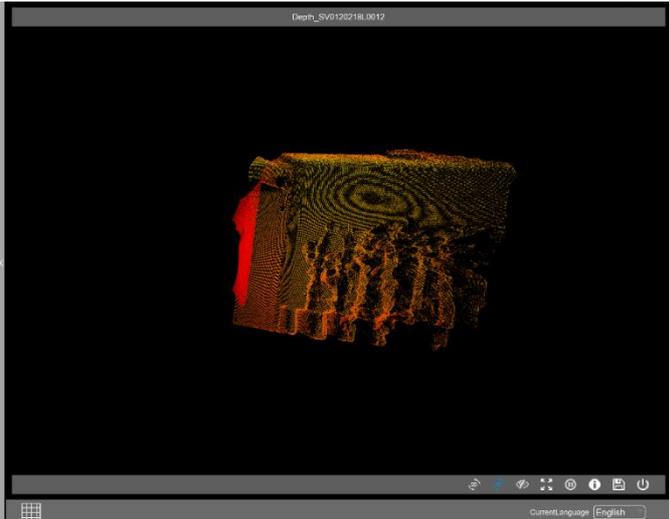
Check "open the filter" to set each filter parameter and view the filtering effect. Except for the Amplitude filter, the other filters can be left unchecked. When the Amplitude parameter is set to 0, there is no Amplitude filtering effect. Note: The amplitude filtering function of CS40&CS40Pro cannot be set.

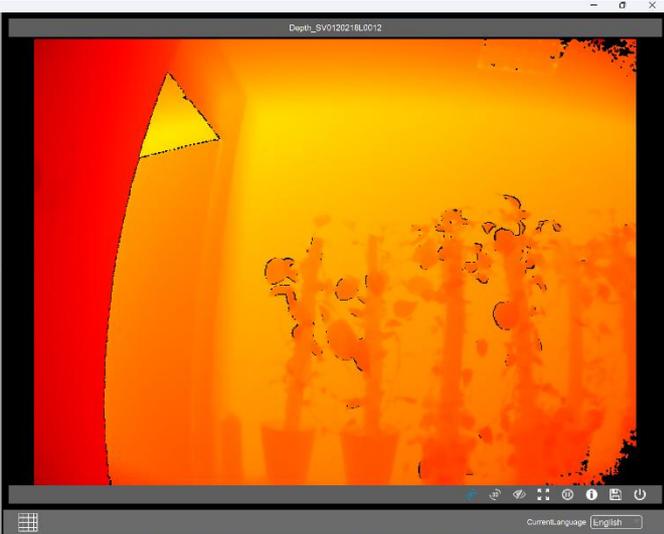
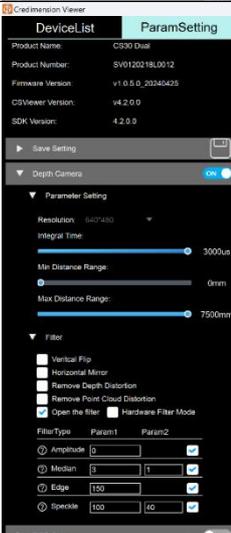
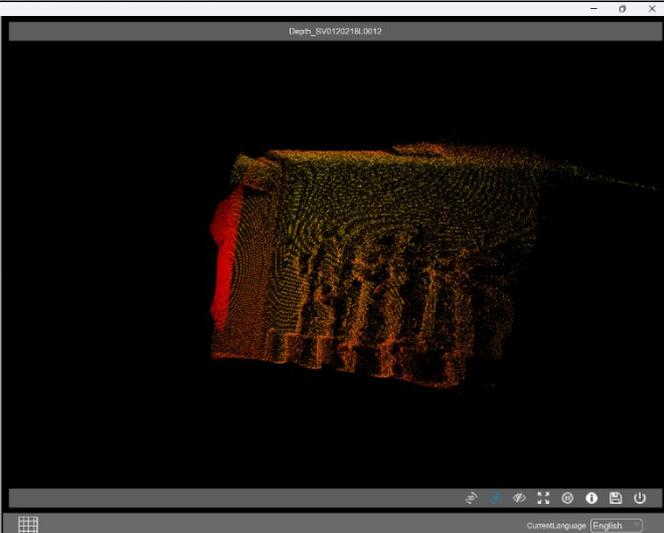
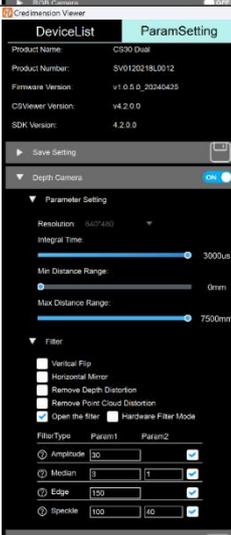
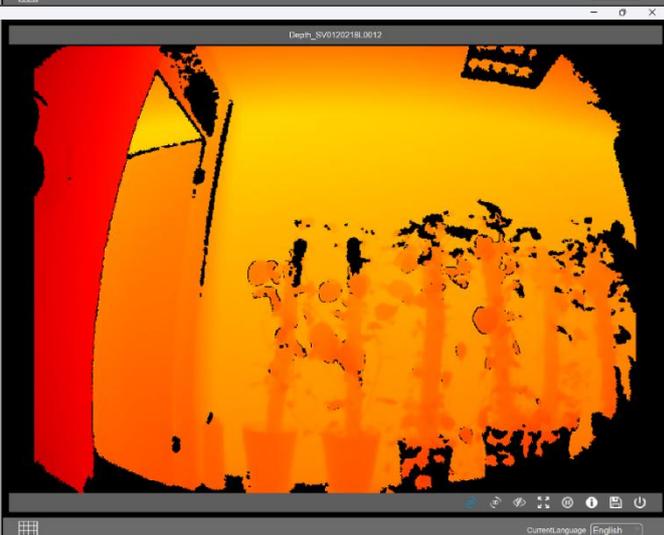
After filtering is enabled, the default parameter values of each filter are set in the state where it performs better in the regular scene. Click the "?" button on the left side of filter to view the range of filter parameter Settings, and you can set the filter parameters according to the current scene. Take CS30 as an example in the following picture:

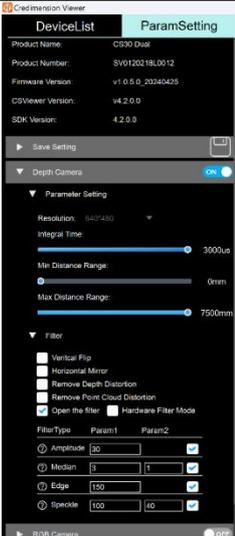
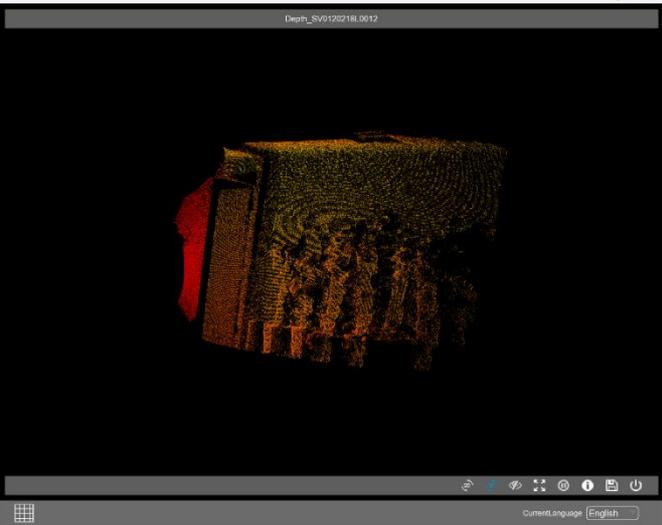
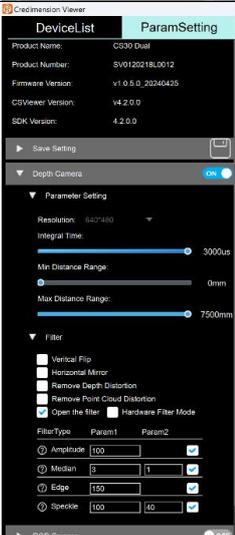
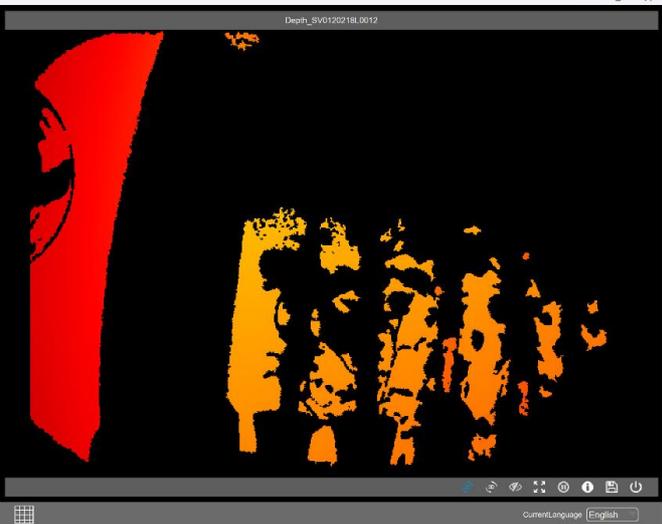
	<p>Parameter setting instructions:</p> <p>Amplitude filtering: The default value is set to 20, the number of parameters is 1, the setting range is 0-100 (CS20 default 8 is required after enabling filtering; CS40&CS40Pro do not have this filter)</p> <p>Median filtering: Default value First parameter scale size Default value 3, can be set to 3 or 5, second parameter number of iterations default value 1, can be set to 0-5.</p> <p>Boundary filtering: The default value is 150, and the range is 20-200. The smaller the parameter Settings, the more content is filtered out, and the more obvious the boundary filtering becomes.</p> <p>Speckle filtering: The default value for the first parameter is 40, with a range of 24-200, and the default value for the second parameter is 100, with a range of 40-200.</p> <p>IR filtering: The default value is 64, with the number of parameters being 1. The setting range is 40 to 200 (CS40&CS40Pro exclusive filtering, mandatory after enabling filtering).</p> <p>Time filter: Default value 3 parameters 1, set range 2 to 10 (Note: After setting Time filter, depth: std jump decreases, point cloud: thickness becomes thinner, the larger the parameter setting, the more obvious it is)</p>
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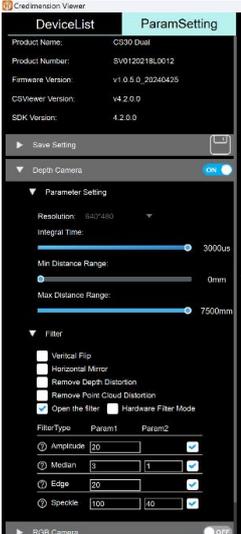
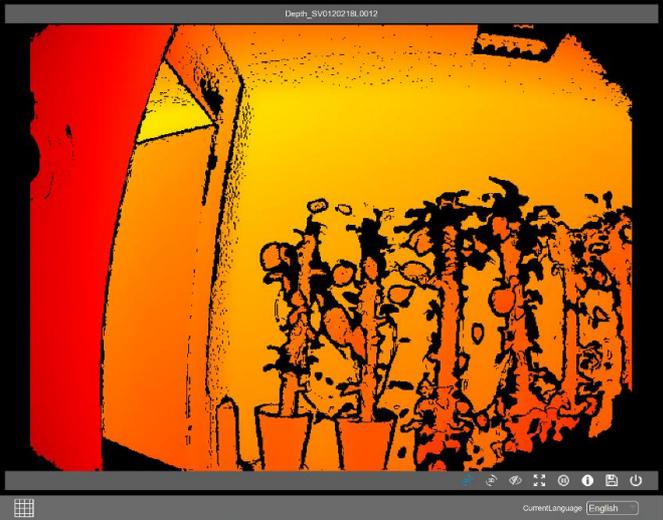
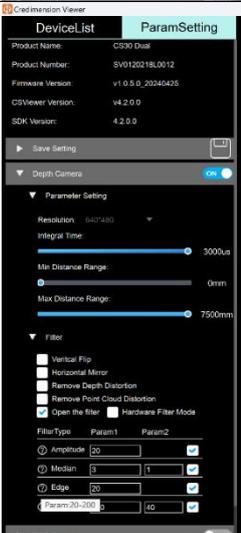
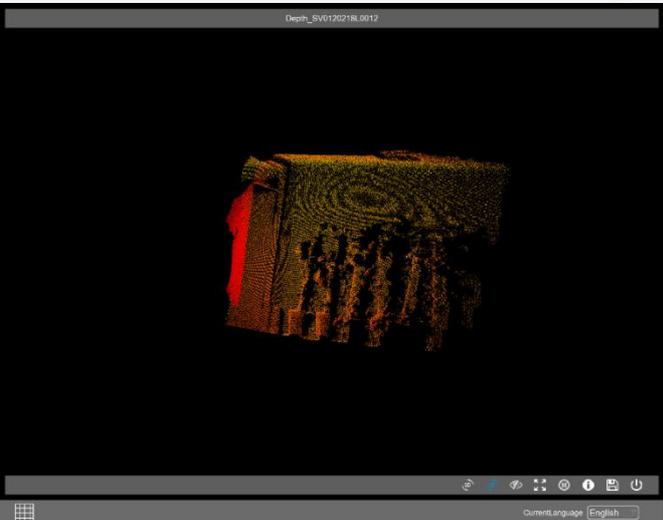
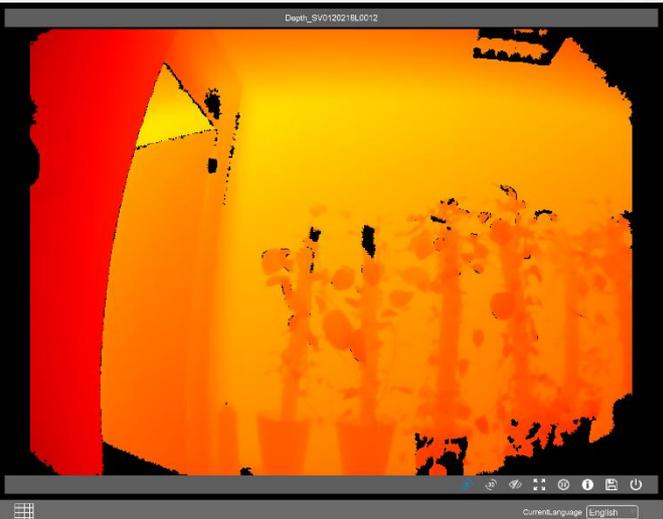
The effect of setting different parameters is as follows:

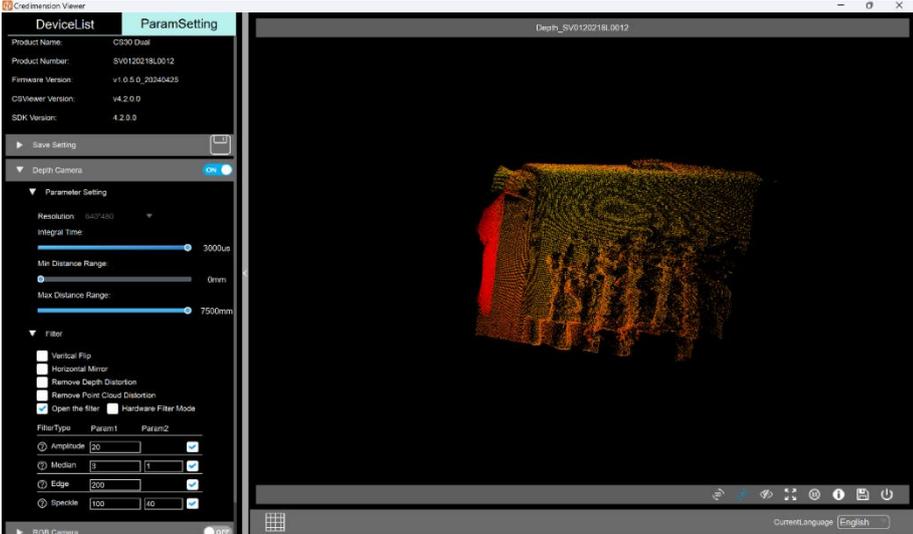
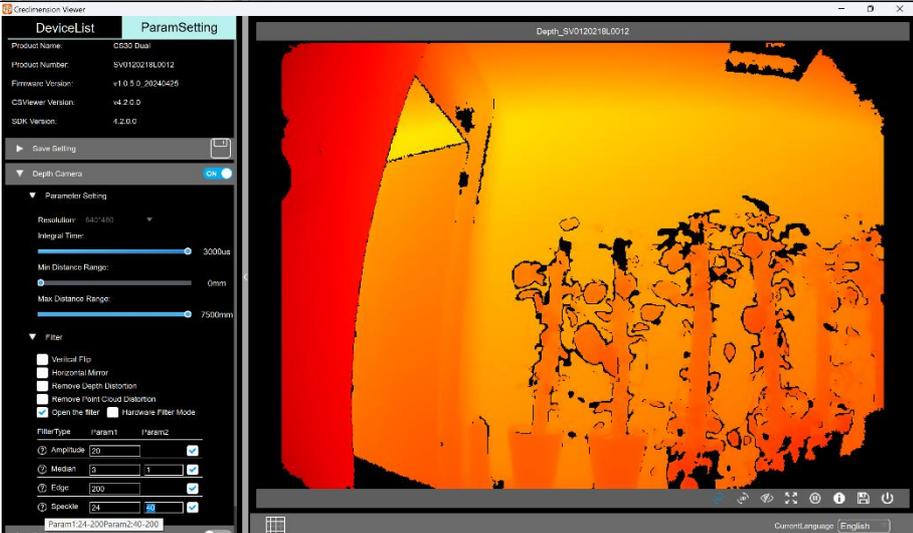
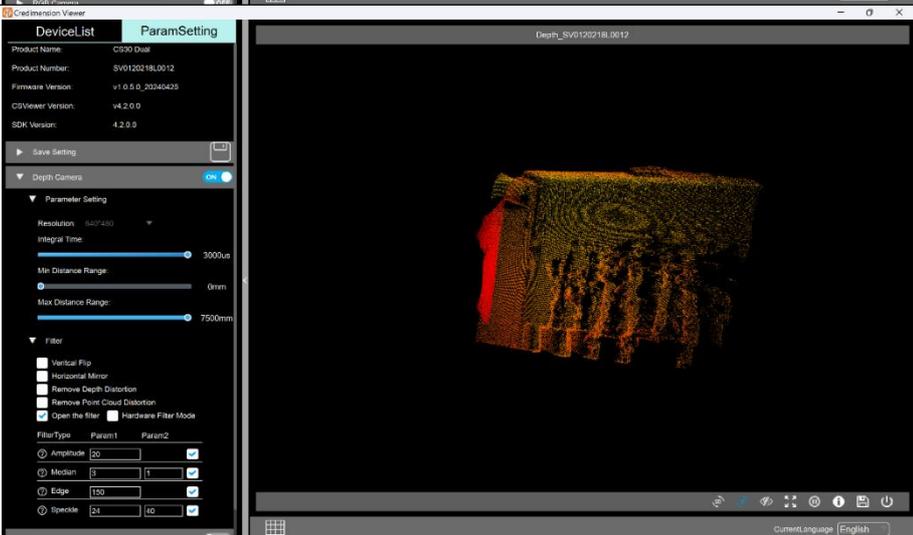
<p>Default filtering effect</p>	
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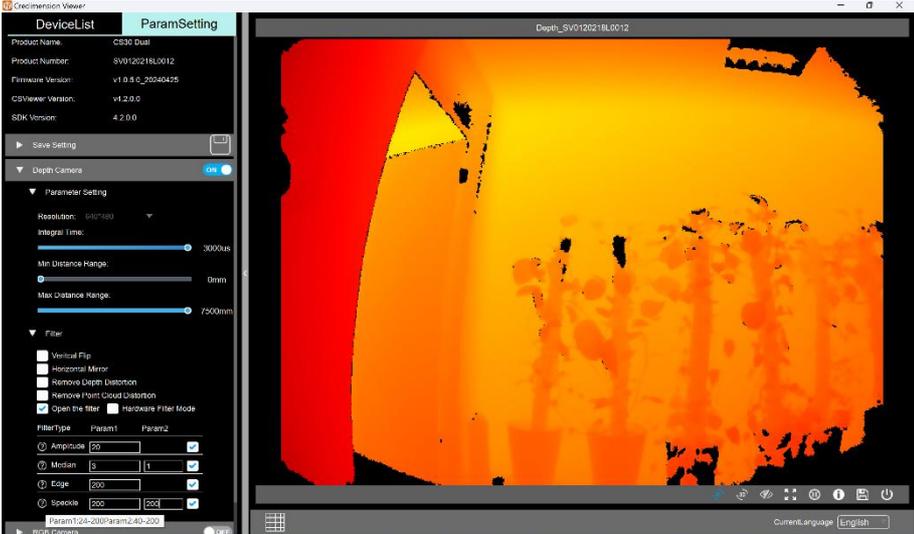
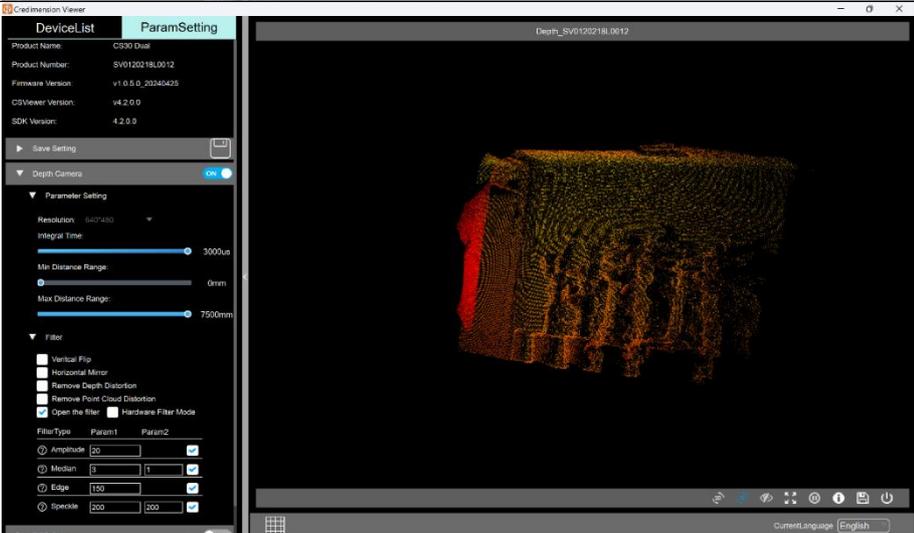
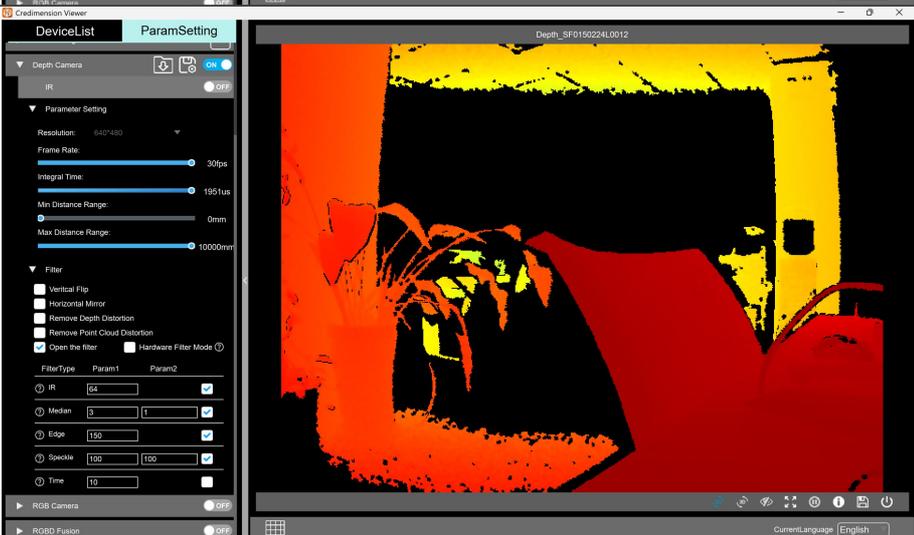
<p>Default point cloud effect</p>		
<p>Median filtering set the parameter to maximum depth effect</p>		
<p>Median filter set the parameter to maximum post-point cloud effect</p>		

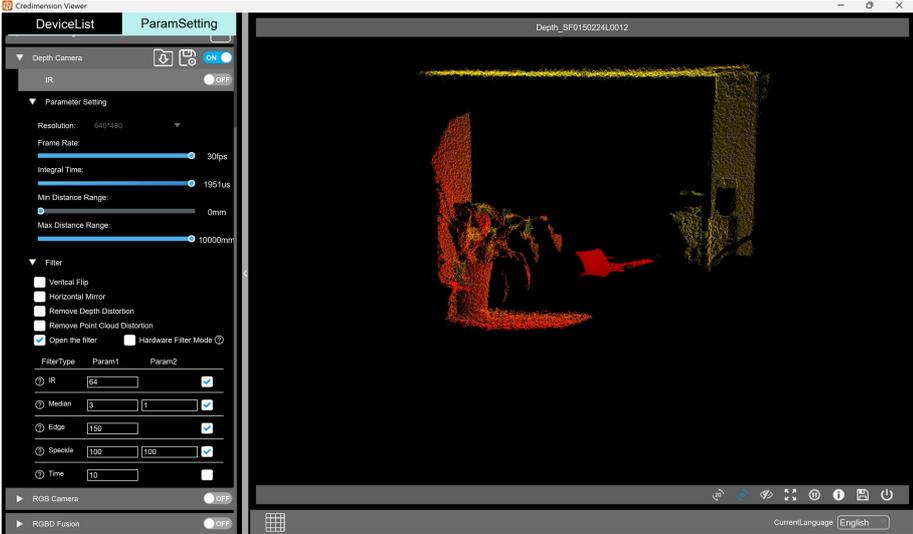
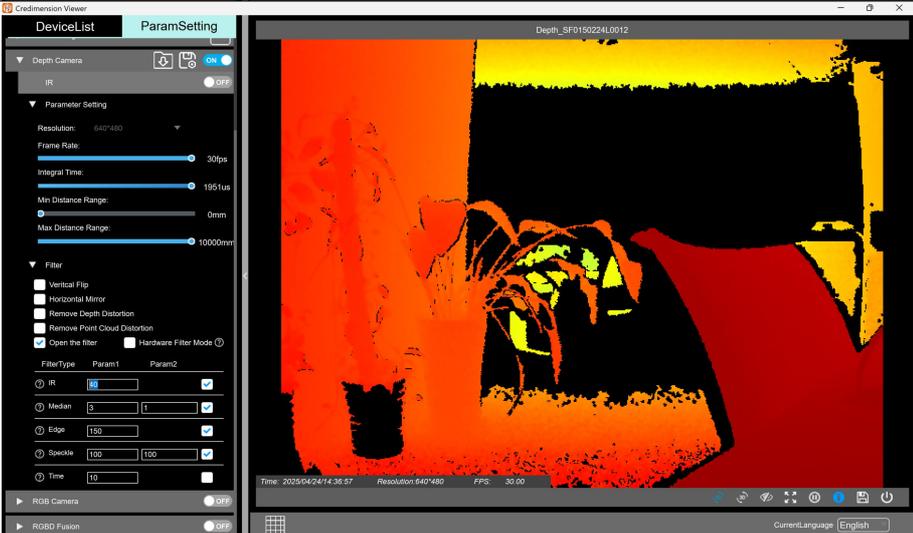
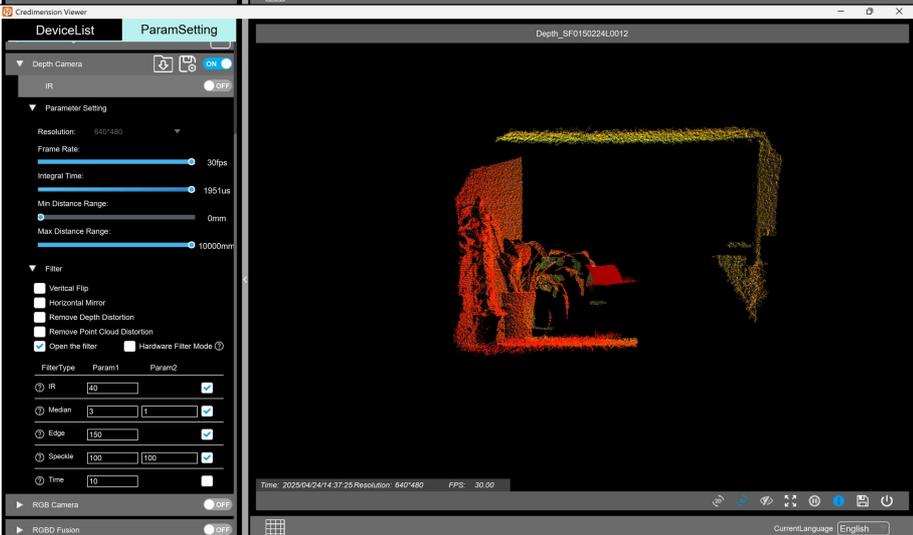
<p>Set the amplitude filter to the minimum depth effect</p>		
<p>Set the amplitude filter to the minimum point cloud effect</p>		
<p>Set the amplitude filter parameter to 30 depth effect</p>		

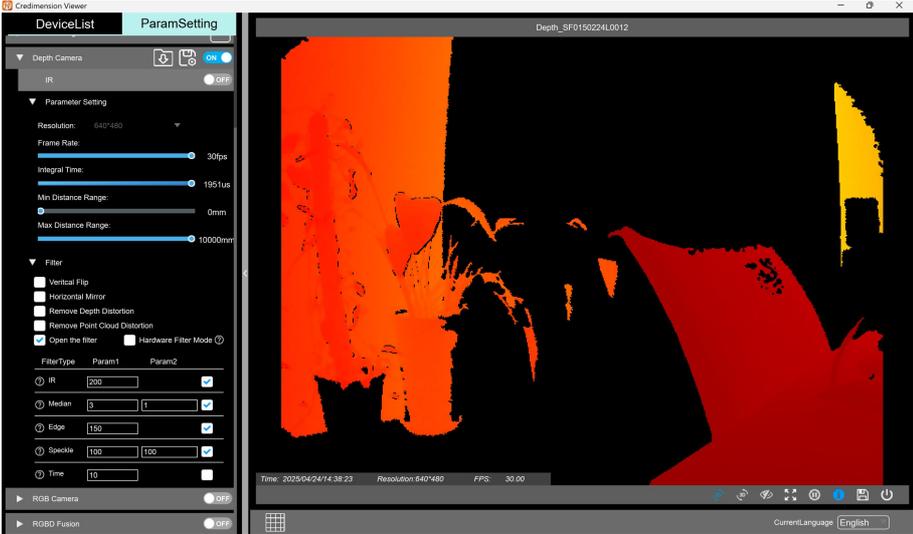
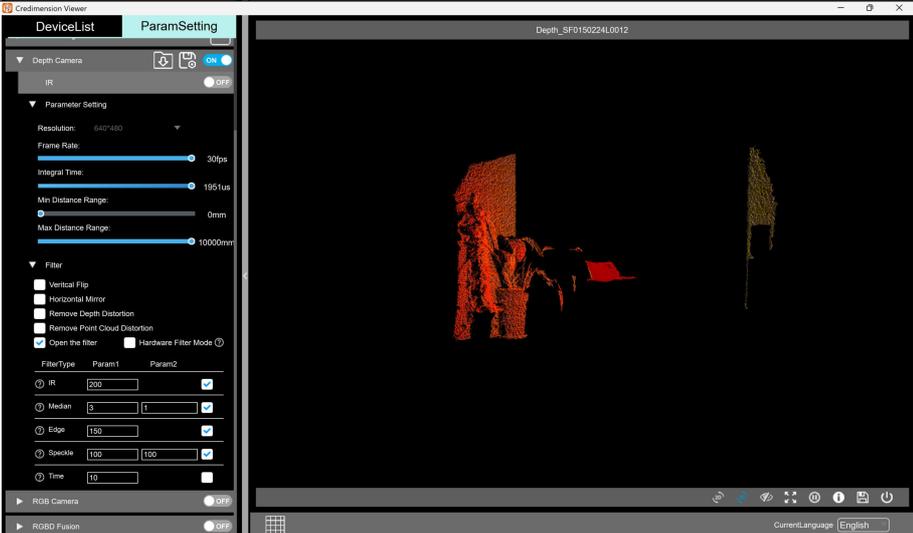
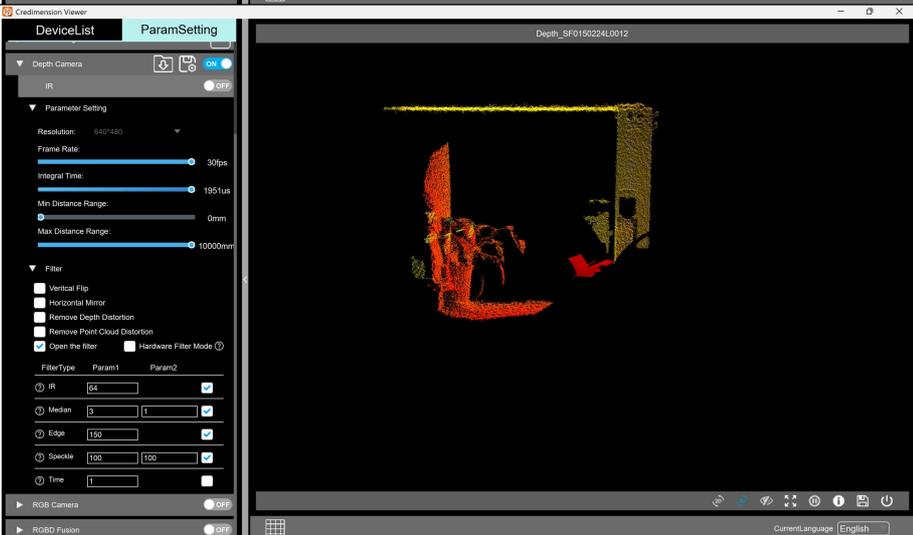
<p>Set the amplitude filter parameter to the 30-point cloud effect</p>		
<p>Set the amplitude filter parameter to the maximum depth effect</p>		
<p>Set the amplitude filter parameter to maximum point cloud effect (The larger the amplitude filter value set, the more data will be filtered out)</p>		

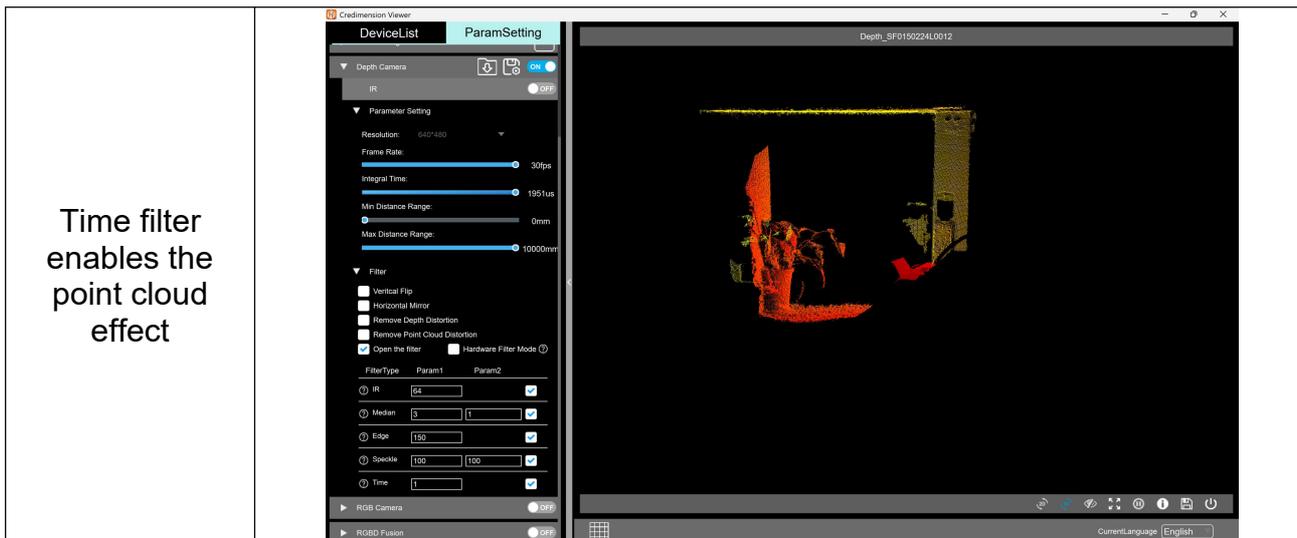
<p>Boundary filtering sets the minimum depth effect</p>		
<p>Set the boundary filter to the minimum point cloud effect</p>		
<p>Set the maximum depth effect for boundary filtering</p>		

<p>Set the boundary filter to maximum point cloud effect</p>	 <p>The screenshot shows the 'ParamSetting' window with the 'Filter' section expanded. The 'Open the filter' checkbox is checked. The 'Filter Type' is set to 'Param1'. The 'Amplitude' is set to 60, 'Median' to 5, 'Edge' to 200, and 'Speckle' to 100. The 'Depth Camera' section shows 'Integral Time' at 3000us, 'Min Distance Range' at 0mm, and 'Max Distance Range' at 7500mm.</p>
<p>Spot filter set the depth effect to the minimum value</p>	 <p>The screenshot shows the same 'ParamSetting' window. The 'Amplitude' is set to 20, 'Median' to 5, 'Edge' to 200, and 'Speckle' to 24. The 'Depth Camera' section remains the same. The main view shows a depth map with a color gradient from red to yellow.</p>
<p>Dot cloud effect after setting dot filter to minimum value</p>	 <p>The screenshot shows the same 'ParamSetting' window. The 'Amplitude' is set to 20, 'Median' to 5, 'Edge' to 100, and 'Speckle' to 24. The 'Depth Camera' section remains the same. The main view shows a point cloud with a dotted effect.</p>

<p>The depth effect after setting the dot filter to the maximum value</p>	
<p>Spot filter set the maximum point cloud effect</p>	
<p>CS40Pro default filter effect</p>	

<p>CS40Pro defaults to filtering point cloud effects</p>	
<p>depth effect after setting the CS40Pro IR filter to the minimum value</p>	
<p>Point cloud effect after setting the minimum value of CS40Pro IR filter</p>	

<p>depth effect after setting the maximum value of CS40Pro IR filter</p>	
<p>Point cloud effect after setting the maximum value of CS40Pro IR filter</p>	
<p>Time filter does not enable point cloud effect</p>	



Time filter enables the point cloud effect

3.10. RGB feature

Some products do not have RGB, do not have RGB and RGBD related functions, the following is an example of turning on the Depth & RGB display function when a CS30 depth is turned on;

Click the "ON" switch on the right side of the RGB Camera, and the RGB image will be displayed.

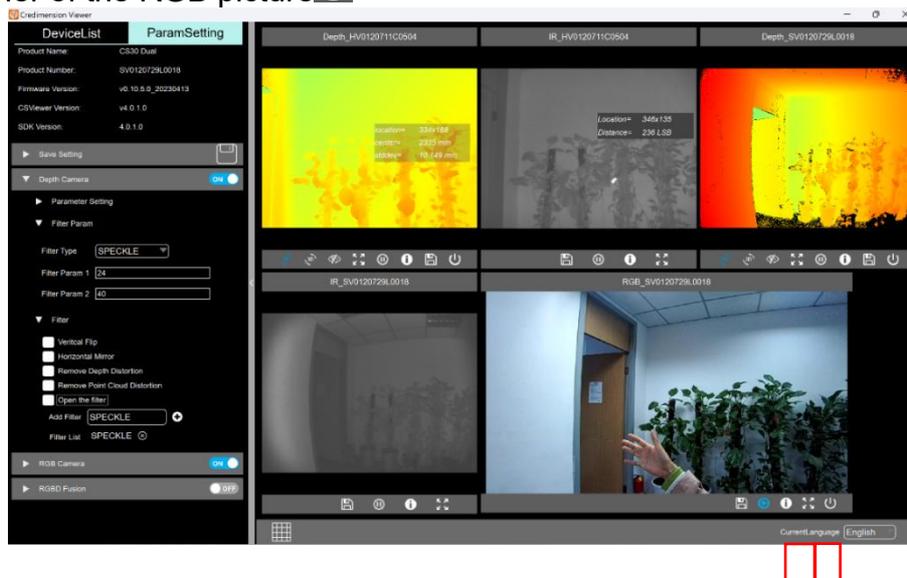
Currently, the CS30 & CS40Pro includes RGB and RGBD-related features.

3.10.1. RGB window controls

A: 有多个窗口时，Click the Picture Maximization button "" below the RGB picture, and the RGB picture will be displayed as maximized, the other Windows will be hidden, and click the Restore button "" again;

B: Click the pause button "" at the bottom of the picture to pause the RGB picture;

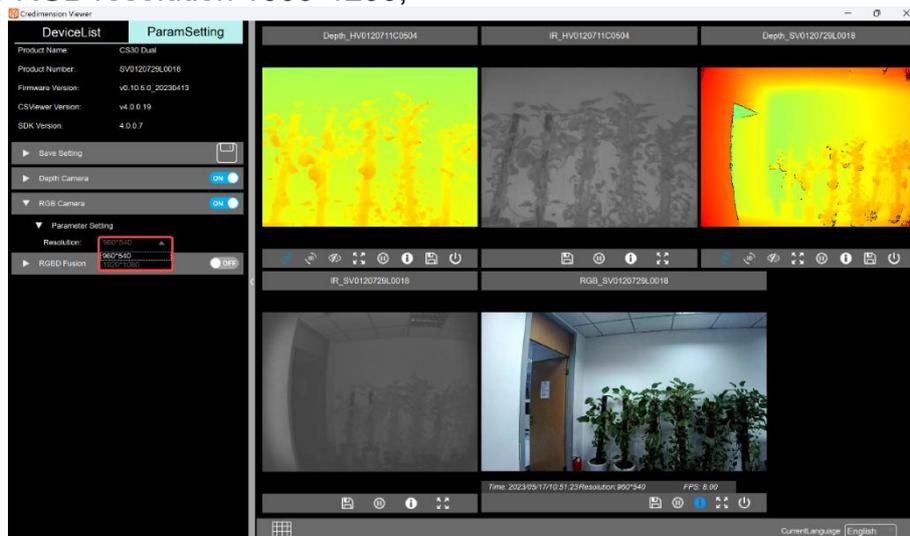
C: Click the Picture Information button "" below the RGB picture, and the current time information, current resolution, current frame rate information, etc. will be displayed in the lower left corner of the RGB picture



3.10.2. RGB switch resolution

When CS30 RGB is enabled, the default resolution is 960*540, which can be switched to 1920*1080;

CS40Pro RGB resolution 1600*1200;

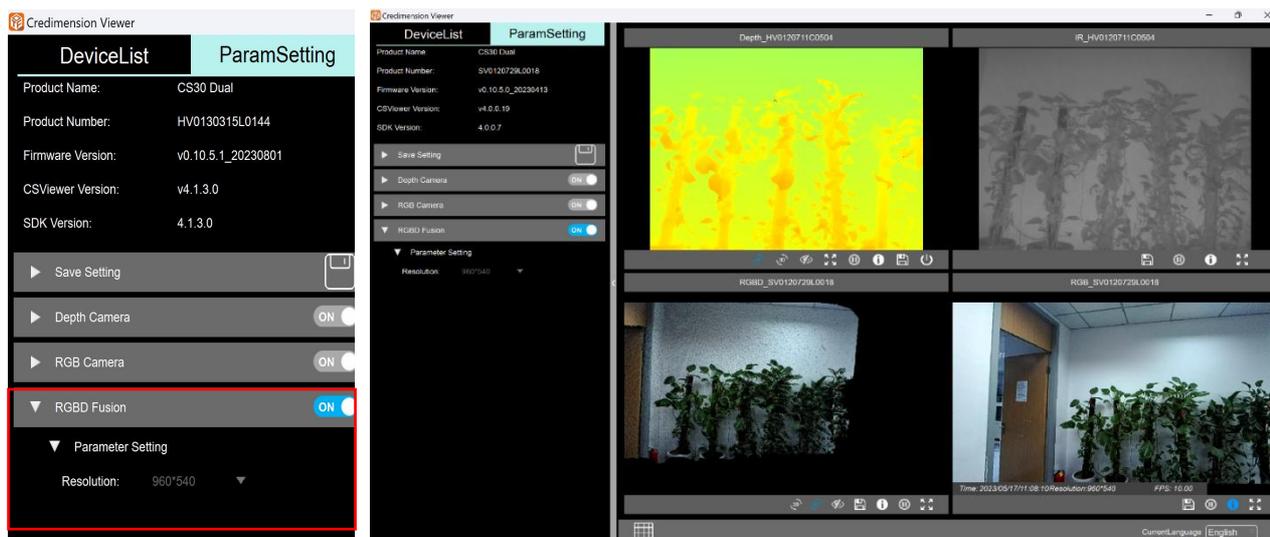


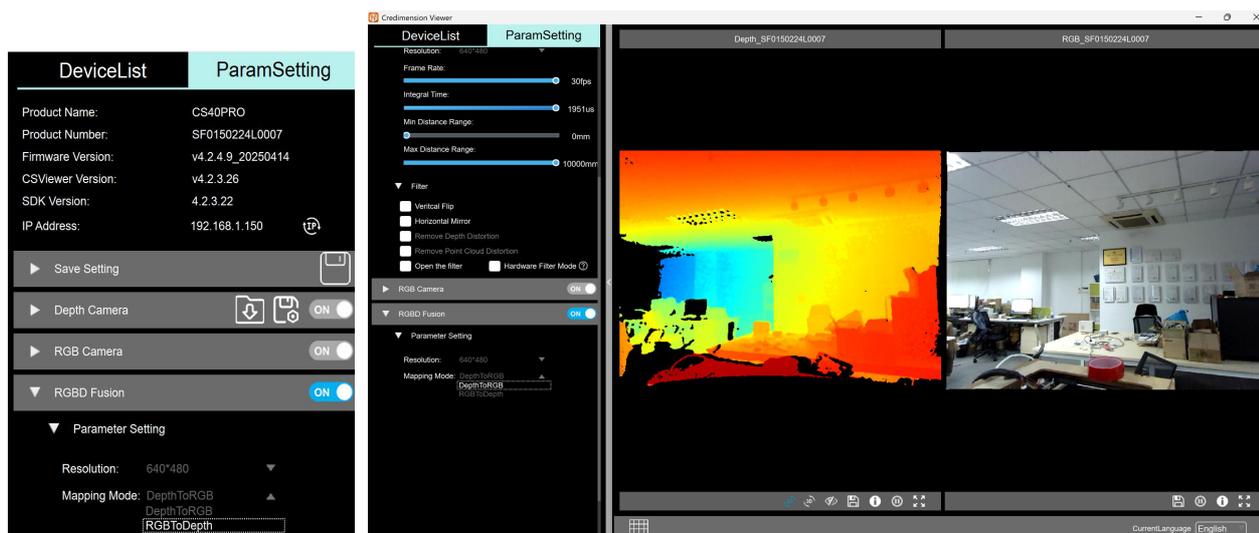
3.11. RGBD fusion enabled

Click the "ON" button on the right side of RGBD Fusion to open the RGBD-Depth window and the RGB window. The RGBD window shows a depth image with a default resolution of 960*540, and the RGB window shows an RGB image with a default resolution of 960*480. Click to display the depth value at the corresponding position of the depth. When the depth window is switched to 3D, the content of the window is displayed as the RGBD image after RGBD-3D mapping.

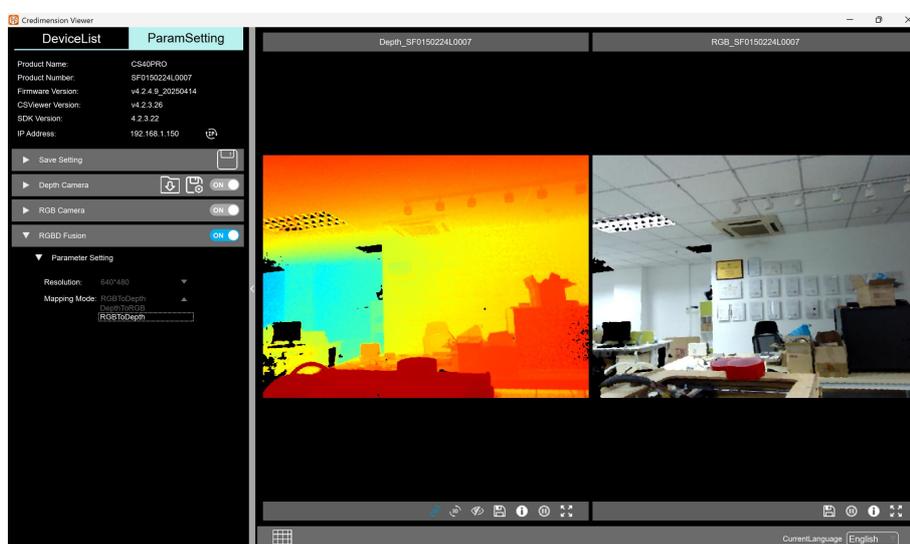
When RGBD is enabled, only the integration time within the Depth parameter can be adjusted, and the point cloud data is saved as RGB-mapped point cloud data. No distance range, filtering, picture flipping, switching depth resolution, RGB resolution, distortion removal, etc.

Click the RGBD Fusion left drop-down button "" to switch between 1920*1080 and 960*540 (CS40Pro's default RGBD resolution is 640*480, which can be switched to 800*600&1600*1200). After switching the resolution, click the 3D button "" under the RGBD window to display the RGBD 3D fusion at the corresponding resolution.





RGBD has DepthtoRGB fusion enabled by default and supports RGBtoDepth fusion at a resolution of 640*480. (RGB-mapped point cloud) The image is as shown on the right:



3.12. Image save

You can click the Total Save button "" or the Save button under each screen window "" to save the relevant data to your local. The save format and save frames can be set in the Save Settings;

3.12.1. Save Settings instructions

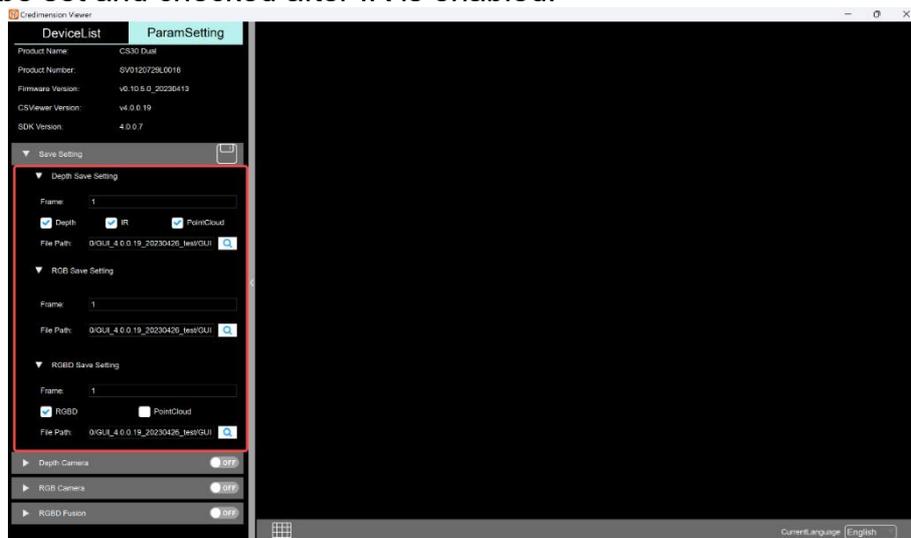
Save path by default in the software directory. In the save Settings of the corresponding module, you can set what you want to save, Frame rate (Frame: Save frame rate set frame rate, frame rate can be set from 1 to 99), click "" to select the path where you want to save data. Do not set Chinese, Chinese character and non-English paths or paths containing non-English characters in the save path to complete the path setting; When you start the software again, the path will be set as the save path by default.

The save Settings page may vary depending on whether the product has RGBD functionality; For example:

CS20, CS40, CS20-P product Save Setting only "Depth Save Setting";

CS30&CS40Pro products' Save Settings include: 'Depth Save Setting', 'RGB Save Setting', 'RGBD Save Setting';

Note: Since the IR image is controlled separately after Depth is enabled, the save Settings can be set and checked after IR is enabled.



3.12.2. Save file format instructions

In depth data saving, you can choose to save data types such as depth, ir (IR format checked in Open Stream and Save Settings), and PointCloud. When checked, the saved data format corresponds to Depth.png and IR.png. PointCloud.pcd, PointCloud.ply; When the relevant options are not checked, data in Depth.raw and IR.raw formats will be saved by default;

In RGB data save, the saved file format is "RGb.png";

In RGBD data saving, save the file format as "RGBD_Depth.png" + "RGBD_Depth.raw" + "RGBD_RGB.png" as shown in the following table:

<p>Depth saves data content and format</p>	
<p>RGB saves the data format</p>	<p>此电脑 > Data (D:) > 20230519172341_SV0120729L0018_rgb</p> 
<p>RGBD save data format</p>	

The software will automatically generate corresponding folders based on the saved content, and the folder naming format is "Save time +SN+ content form", where the content forms are "tof", "rgb", "rgb", as shown below:

20230519172341_SV0120729L0018_rgb	2023/5/19 17:23	文件夹
20230519163332_SV0120729L0018_rgbd	2023/5/19 16:33	文件夹
20230519163041_SV0120729L0018_tof	2023/5/19 16:30	文件夹
20230519163020_SV0120729L0018_tof	2023/5/19 16:30	文件夹

3.12.3. Save button function description

A: General Save button  Function description:

After enabling multiple devices, click the total Save button  on the right side of the Save Setting to save the data content of the currently selected SN product.  For example:

When the current open products are CS20 and CS30, when the device selected in the device list is CS30 and the open streaming type is depth & RGB, and the total save button is clicked, the saved data will be the Depth and RGB data selected under the corresponding SN of the current CS30 product;

B: Window Save button  Function description:

Click the save button  under the screen window to save the information that has been checked in the save Settings under the current screen window;

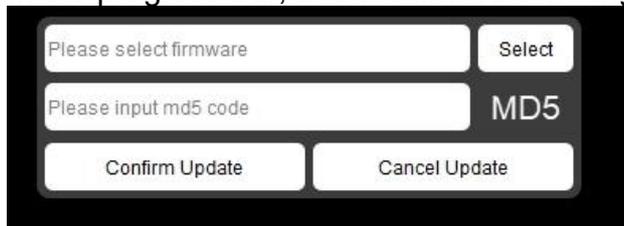
When you click the save button under the depth window or the ir window, save the data as checked in the depth Save Settings of the current window SN;

When you click the save button under the RGB window, save the RGB data of the current window SN; When the software only opens the RGB window, clicking the Save button  under the RGB picture window has the same effect as clicking the Total Save button  in the left menu bar;

If RGBD is enabled on the device, clicking the save button under the window corresponds to saving the RGBD data of that window SN;

3.13. Firmware upgrade

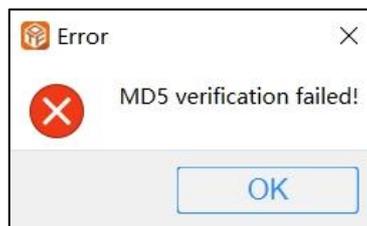
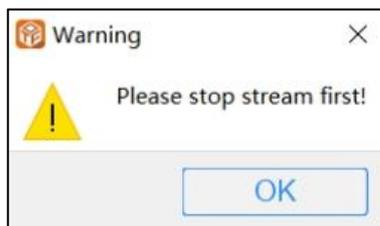
Products that transfer data via TCP network port, such as CS20-P, CS40, CS40Pro, can upgrade the firmware directly in this tool by clicking the arrow "" to the right of the model, and an upgrade pop-up will pop up. Select the current firmware that needs to be upgraded, enter the MD5 password for the current firmware adaptation and click upgrade. Wait for about 1 minute in the progress bar, and the firmware writing is successful.



After the write is successful, the device will be automatically disconnected and reconnected. Once the refresh device list is refreshed, the firmware upgrade is expected to be completed in 3 to 5 minutes.

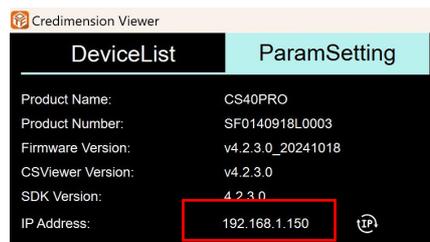
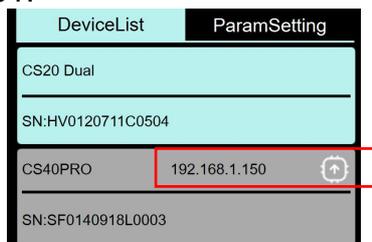
Notes for firmware upgrade:

1. Firmware upgrade is not possible while the device is streaming. If there is a product currently streaming, you need to turn off the stream before clicking upgrade.
2. Enter the MD5 code corresponding to the firmware. If the MD5 code does not match, you cannot upgrade.
3. Keep the device connected normally during the upgrade process and do not disconnect the power.



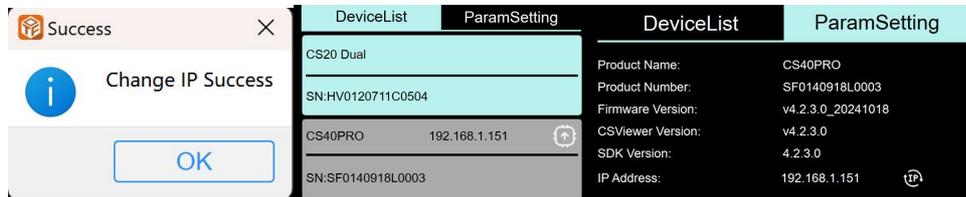
3.14. Device IP modification

This section is for CS20-P&CS40&CS40Pro and is often used when multiple devices have the same IP address and need to modify the IP to ensure normal streaming when one PC is connected to multiple devices. As shown in the following figure, the device whose IP is displayed after the device type can perform IP modification operations. This document takes CS40Pro as an example to change the IP from the default 192.168.1.150 to 192.168.1.151.



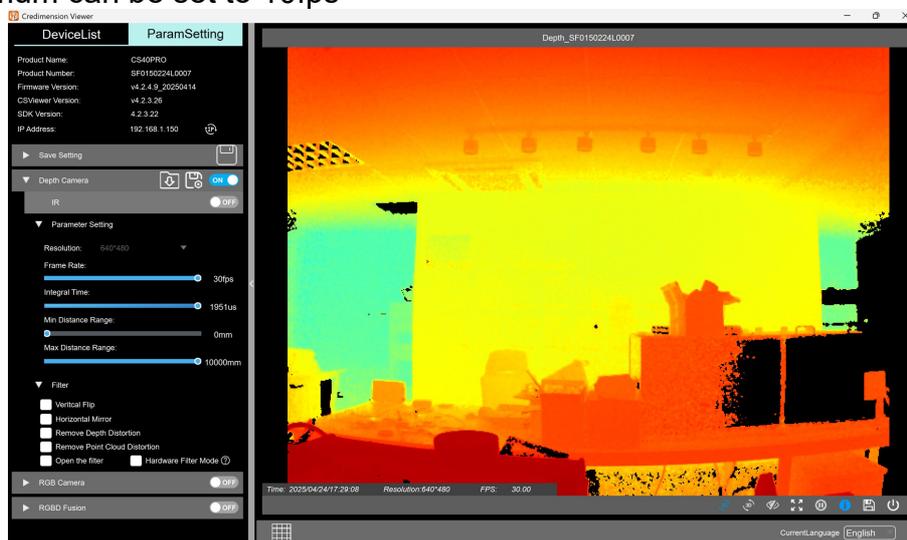
Select the device and click "ParamSetting". After the IP Address, the IP address can be directly modified by clicking the mouse. It is recommended to fix 192.168.1 and only

modify any number in the 150 value in the figure from 0 to 255 (excluding 0 and 255). After the modification is completed, click the "" button. Wait for about 5 seconds and the prompt box "Change IP Success" pops up, indicating that the modification is successful. Wait for the device to restart successfully and then refresh the device list to refresh the modified device IP address. Note: The IP address of the device is being changed while the stream is on. After restarting the device, the list needs to be refreshed and the stream restarted.



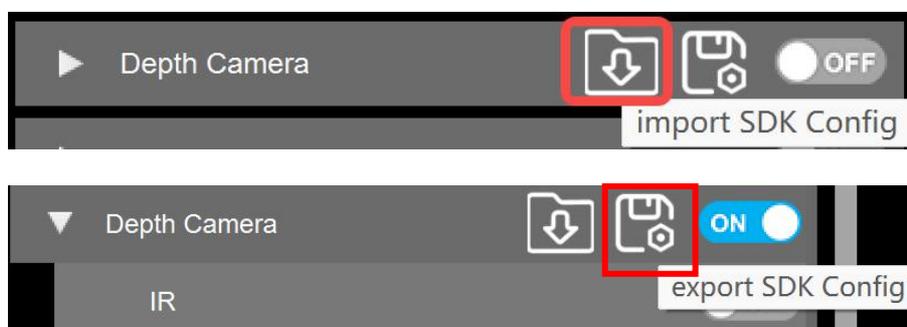
3.15. Modify the device frame rate adjustment

The software supports CS40Pro frame rate adjustment. When CS40Pro depth is enabled, the frame rate can be adjusted after streaming. The default maximum is 30fps, and the minimum can be set to 10fps

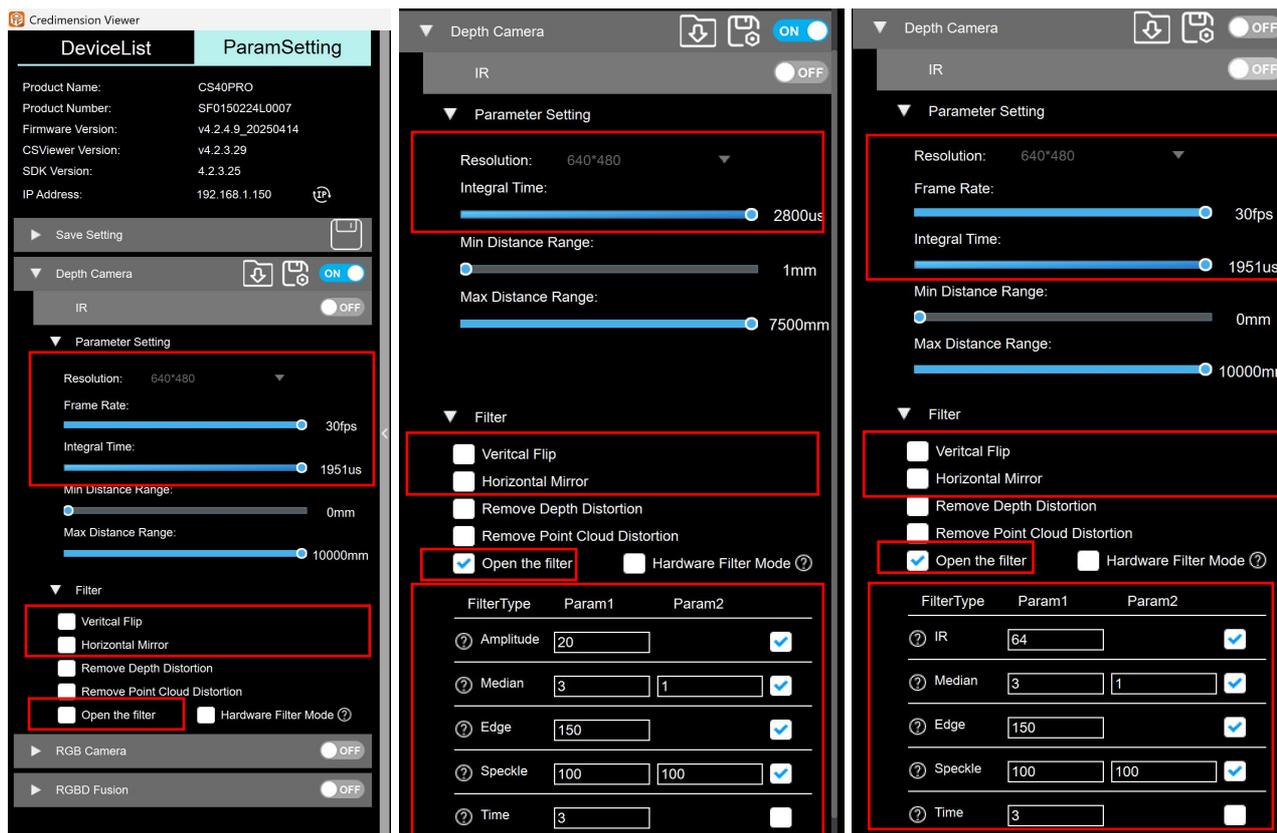


3.16. Device parameter adjustments are recorded to yaml

The software supports Yaml import and export functions. After opening the stream, the Settings related to depth can be recorded to the local path using the export "yaml" function. Before opening the stream, importing "yaml" files can retain the Depth-related Settings in the yaml file.



The functions that can be exported with depth enabled include: depth resolution, integral time, flip status, filter status and various filter parameters, CS40Pro including frame rate Settings (the part marked in the red line below can all be yaml exported records).



3.17. Error message dmp address lookup

在安装目录同一级别下的“crash”文件夹中，找到报错日期对应的文件夹，即可找到dmp文件，如下图：

GUI_4.0.1.0_202305191650 > GUI > crash > 2023-5-22

名称	修改日期	类型	大小
Credimension-13.56.59.dmp	2023/5/22 13:57	DMP 文件	825,041 KB

4. Connected device example

Regular computers (desktops and laptops, laptops need to have USB ports on both sides) support two devices running simultaneously, and the number of products running multiple devices depends on the computer configuration and the USB ports that come with the computer; When connecting devices, try to use the native USB ports of your computer. If you need to connect an external HUB, power the HUB end as needed.

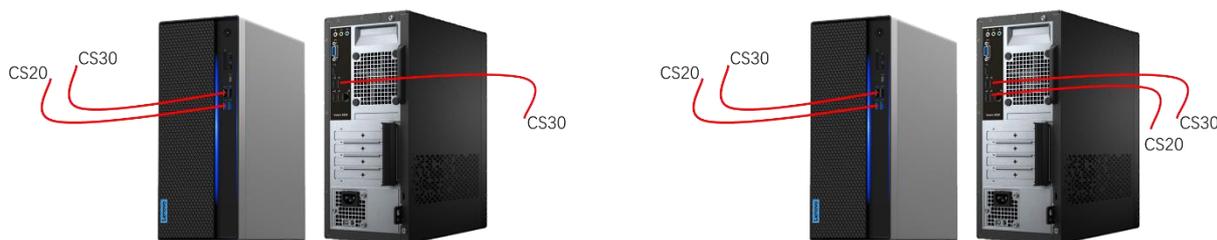
4.1. Desktop computer connection example

<p>Refer to Computer 1 configuration</p>	<p>设备规格</p> <table border="1"> <tr><td>设备名称</td><td>DESKTOP-6VJLMVP</td></tr> <tr><td>处理器</td><td>11th Gen Intel(R) Core(TM) i5-11400 @ 2.60GHz 2.59 GHz</td></tr> <tr><td>机带 RAM</td><td>16.0 GB (15.7 GB 可用)</td></tr> <tr><td>设备 ID</td><td>9D8072C8-9088-4E78-9916-6900068D25F6</td></tr> <tr><td>产品 ID</td><td>00342-36351-00314-AAOEM</td></tr> <tr><td>系统类型</td><td>64 位操作系统, 基于 x64 的处理器</td></tr> <tr><td>笔和触控</td><td>没有可用于此显示器的笔或触控输入</td></tr> </table>	设备名称	DESKTOP-6VJLMVP	处理器	11th Gen Intel(R) Core(TM) i5-11400 @ 2.60GHz 2.59 GHz	机带 RAM	16.0 GB (15.7 GB 可用)	设备 ID	9D8072C8-9088-4E78-9916-6900068D25F6	产品 ID	00342-36351-00314-AAOEM	系统类型	64 位操作系统, 基于 x64 的处理器	笔和触控	没有可用于此显示器的笔或触控输入
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系统类型	64 位操作系统, 基于 x64 的处理器														
笔和触控	没有可用于此显示器的笔或触控输入														
<p>Refer to Computer 2 configuration</p>	<p>设备规格</p> <table border="1"> <tr><td>设备名称</td><td>DESKTOP-OUNKJTF</td></tr> <tr><td>处理器</td><td>Intel(R) Core(TM) i7-10700 CPU @ 2.90GHz 2.90 GHz</td></tr> <tr><td>机带 RAM</td><td>16.0 GB (15.7 GB 可用)</td></tr> <tr><td>设备 ID</td><td>7F2351A1-978B-493B-B354-59251D277BF8</td></tr> <tr><td>产品 ID</td><td>00326-70000-00001-AA031</td></tr> <tr><td>系统类型</td><td>64 位操作系统, 基于 x64 的处理器</td></tr> <tr><td>笔和触控</td><td>没有可用于此显示器的笔或触控输入</td></tr> </table>	设备名称	DESKTOP-OUNKJTF	处理器	Intel(R) Core(TM) i7-10700 CPU @ 2.90GHz 2.90 GHz	机带 RAM	16.0 GB (15.7 GB 可用)	设备 ID	7F2351A1-978B-493B-B354-59251D277BF8	产品 ID	00326-70000-00001-AA031	系统类型	64 位操作系统, 基于 x64 的处理器	笔和触控	没有可用于此显示器的笔或触控输入
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产品 ID	00326-70000-00001-AA031														
系统类型	64 位操作系统, 基于 x64 的处理器														
笔和触控	没有可用于此显示器的笔或触控输入														

Connect two devices to open up the image normally;

When connecting three (CS20+CS30+CS30) devices, it is recommended not to connect on the same side of the host, but to connect on the front and back sides.

When connecting four devices (e.g. Two CS20+ two CS30), it is recommended that the two CS20s not be connected to the computer side at the same time. Connect one side to CS20+CS30 and place another group of CS20+CS30 on the other side as shown in the following figure:



3 ways to connect devices

Connection methods of 4 devices

Connect five devices (CS20+CS30+CS20+CS30+CS20-P), except for CS20-P which is connected to the network port, the other four devices are connected as above (each device has a different distribution of USB ports, connect according to the actual situation);

4.2. Laptop connection example

<p>Reference Computer Configuration</p>	<div data-bbox="710 241 1249 506" style="border: 1px solid #ccc; padding: 5px;"> <p>① 设备规格</p> <table border="1"> <tr> <td>设备名称</td> <td>Synexens-Daisy</td> </tr> <tr> <td>处理器</td> <td>AMD Ryzen 7 6800HS Creator Edition 3.20 GHz</td> </tr> <tr> <td>机带 RAM</td> <td>16.0 GB (13.7 GB 可用)</td> </tr> <tr> <td>设备 ID</td> <td>3B29D2BE-6A26-4AA2-AAC9-12938DCF1846</td> </tr> <tr> <td>产品 ID</td> <td>00342-30661-95430-AAOEM</td> </tr> <tr> <td>系统类型</td> <td>64 位操作系统, 基于 x64 的处理器</td> </tr> <tr> <td>笔和触控</td> <td>没有可用于此显示器的笔或触控输入</td> </tr> </table> </div>	设备名称	Synexens-Daisy	处理器	AMD Ryzen 7 6800HS Creator Edition 3.20 GHz	机带 RAM	16.0 GB (13.7 GB 可用)	设备 ID	3B29D2BE-6A26-4AA2-AAC9-12938DCF1846	产品 ID	00342-30661-95430-AAOEM	系统类型	64 位操作系统, 基于 x64 的处理器	笔和触控	没有可用于此显示器的笔或触控输入
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系统类型	64 位操作系统, 基于 x64 的处理器														
笔和触控	没有可用于此显示器的笔或触控输入														
<p>Laptop USB port</p>	<div style="display: flex; justify-content: space-around;">   </div>														

Note:

1. When running with a laptop, support 2 to 3 devices running simultaneously;
2. As shown above, if the laptop has only one USB port plus one Type-C port, the Type-C port can use the HUB to extend USB ports or TCP network ports to connect devices (the extended USB port can only connect one device), and if power is supplied to the HUB, this HUB can connect two devices;
3. If the device connected to the HUB is CS20-P or CS40, it is not allowed to connect CS20 or CS30 in this HUB, otherwise the product will malfunction due to insufficient power supply.

Disclaimer

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