

---

# Credimension Viewer Instruction Manual

---

Revision Update Date			
Date	Revision	Description	Editor
December 3, 2021	V1.0.0		Daisy
December 7, 2021	V1.0.1		Daisy
March 18, 2022	V1.0.2	Added adjustment distance and integration time function	Daisy
July 26, 2022	V2.0.0	Added RGBD fusion	Daisy
August 18,2022	V2.0.1	Depth display texture optimization, Screen display scale optimization	Daisy

## *Contents*

<b>1.</b>	<b><i>Tool Introduction</i></b>	<b>1</b>
<b>2.</b>	<b><i>Installation Instructions</i></b>	<b>1</b>
2.1.	System requirements	1
2.2.	Credimension Viewer Installation	1
2.3.	Hardware connection	2
<b>3.</b>	<b><i>Tool instruction</i></b>	<b>4</b>
3.1.	Turn on the device	4
3.2.	Obtain Device Information	4
3.3.	Display 2D depth image	5
3.4.	Adjustment parameters	6
3.5.	Pause the depth image screen	7
3.6.	Depth image saving	8
3.7.	Display color bar	9
3.8.	Display screen information	10
3.9.	Screen maximize or restore	10
3.10.	Display point cloud	11
3.11.	Screen settings	12
3.12.	Turn on RGB	14
3.13.	Display RGB image information	14
3.14.	Pause RGB Screen	15
3.15.	RGB window zoom/restore	15
3.16.	RGB image saving	16
3.17.	RGB switch resolution	17
3.18.	RGBD Fusion	17
3.19.	RGBD Point Cloud	18
3.20.	Total save	19
3.21.	Error message dmp address	20
<b>4.</b>	<b><i>Disclaimer</i></b>	<b>21</b>

# 1. Tool Introduction

Tool name: Credimension Viewer

Tool description:

Credimension Viewer is CS30 series windows demo GUI Tool. This tool is mainly used to obtain and save Depth, IR, Point cloud, RGB picture information, at the same time, it supports functions such as viewing the basic information of the device and setting the solution and integration time.

## 2. Installation Instructions

### 2.1. System requirements

The current Credimension Viewer supports the Windows 10 system.

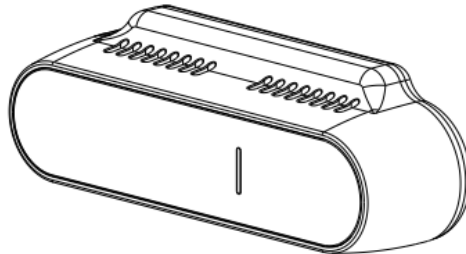
### 2.2. Credimension Viewer Installation

Credimension Viewer is a green version and does not need to be installed.

名称	修改日期	类型	大小
Log	2021/12/3 10:25	文件夹	
plugins	2021/9/16 17:21	文件夹	
soni	2021/9/16 17:21	文件夹	
concr140.dll	2019/9/27 20:06	应用程序扩展	326 KB
configuration.ini	2021/12/3 13:44	配置设置	1 KB
Credimension.exe	2021/12/3 10:21	应用程序	936 KB
cscamera.dll	2021/12/1 15:35	应用程序扩展	1,474 KB
csreconstruction.dll	2021/12/1 15:07	应用程序扩展	1,844 KB
cstreamer.dll	2021/12/3 10:23	应用程序扩展	1,602 KB
msvc120d.dll	2013/10/4 23:58	应用程序扩展	1,076 KB
msvc140.dll	2021/7/17 17:22	应用程序扩展	604 KB
msvc100.dll	2019/1/17 4:48	应用程序扩展	810 KB
msvc120d.dll	2013/10/4 23:58	应用程序扩展	2,101 KB
opencv_core440.dll	2021/5/31 19:12	应用程序扩展	16,789 KB
opencv_highgui440.dll	2021/5/31 19:13	应用程序扩展	196 KB
opencv_imgcodecs440.dll	2021/5/31 19:12	应用程序扩展	3,427 KB
opencv_imgproc440.dll	2021/5/31 19:12	应用程序扩展	28,643 KB
opencv_videoio440.dll	2021/5/31 19:13	应用程序扩展	558 KB
OpenNI2.dll	2013/11/12 16:12	应用程序扩展	286 KB
pcl_common_release.dll	2017/8/8 16:56	应用程序扩展	690 KB
pcl_features_release.dll	2017/8/8 17:36	应用程序扩展	4,465 KB
pcl_filters_release.dll	2017/8/8 17:13	应用程序扩展	5,248 KB
pcl_io_ply_release.dll	2017/8/8 17:18	应用程序扩展	462 KB
pcl_io_release.dll	2017/8/8 17:22	应用程序扩展	6,178 KB

### 2.3. Hardware connection

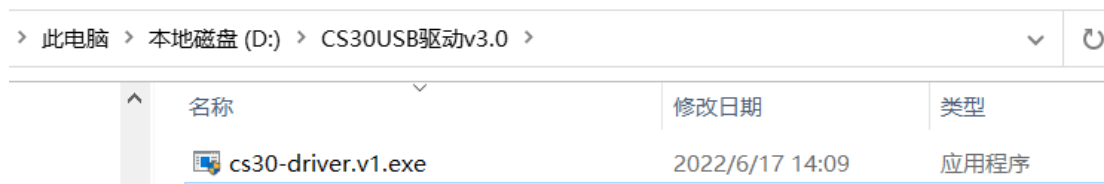
Connect the CS30 camera to the USB interface of the PC computer through the data cable:



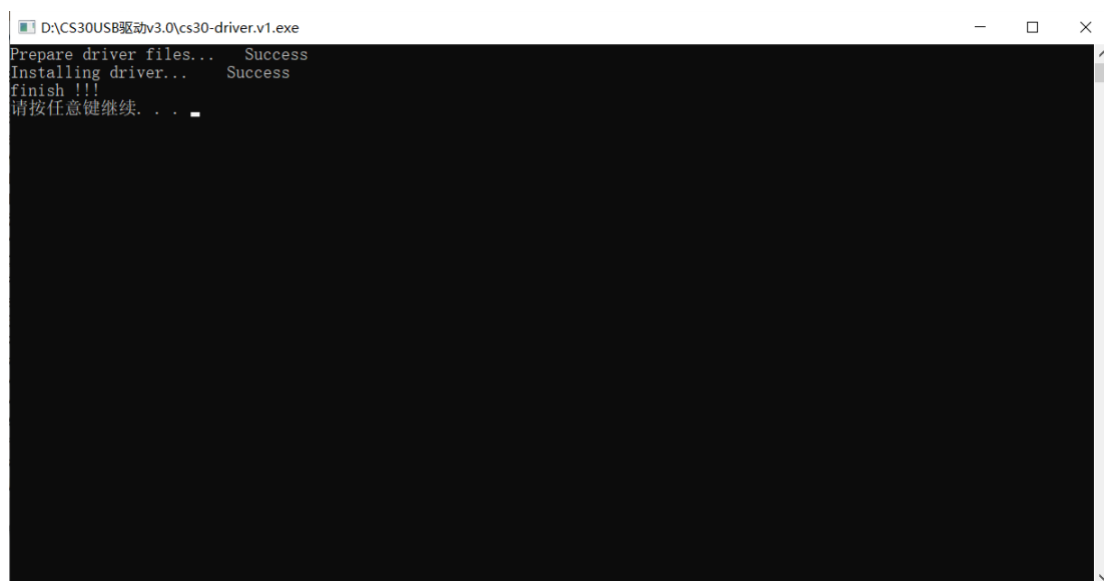
CS30 outside view

(Note: First time running the Credimension Viewer tool, you need to install driver, the Step as follows:)

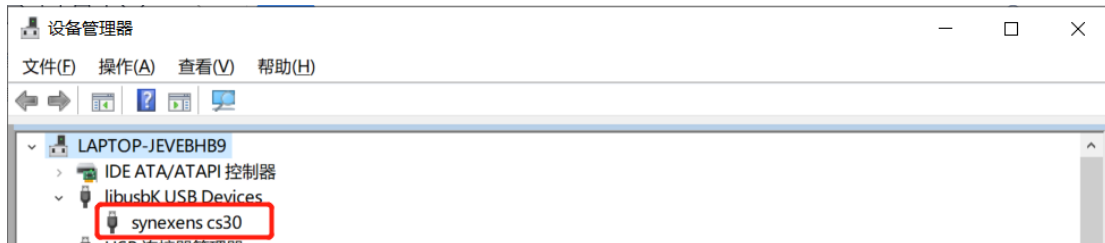
Download the drivers to locally:



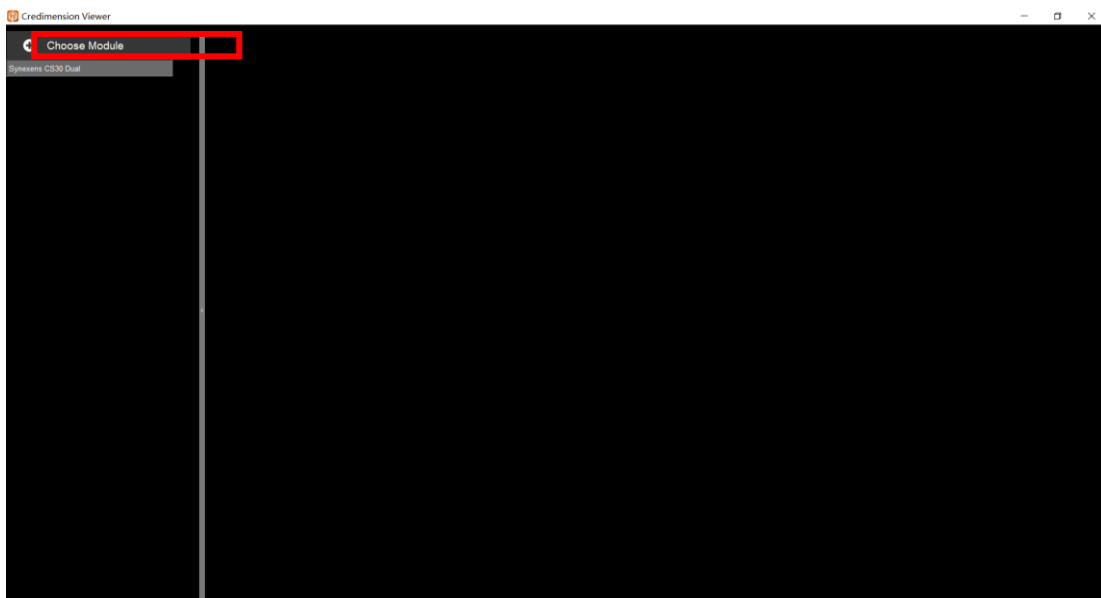
Connect the camera to the PC computer, double-click the cs30-driver.v1.exe file to install the driver, as shown in the figure below:



At this time, the current camera can be identified in the device manager, as shown in the figure below. When the device manager displays the synexes CS30, the driver installation is completed.



After the driver installation is completed, the device is connected normally (after connecting the device, it needs wait 5 seconds connection time), Running the Credimension Viewer tool (double-click the Credion.exe execution file), click Choose Module, and CS30 will appear:

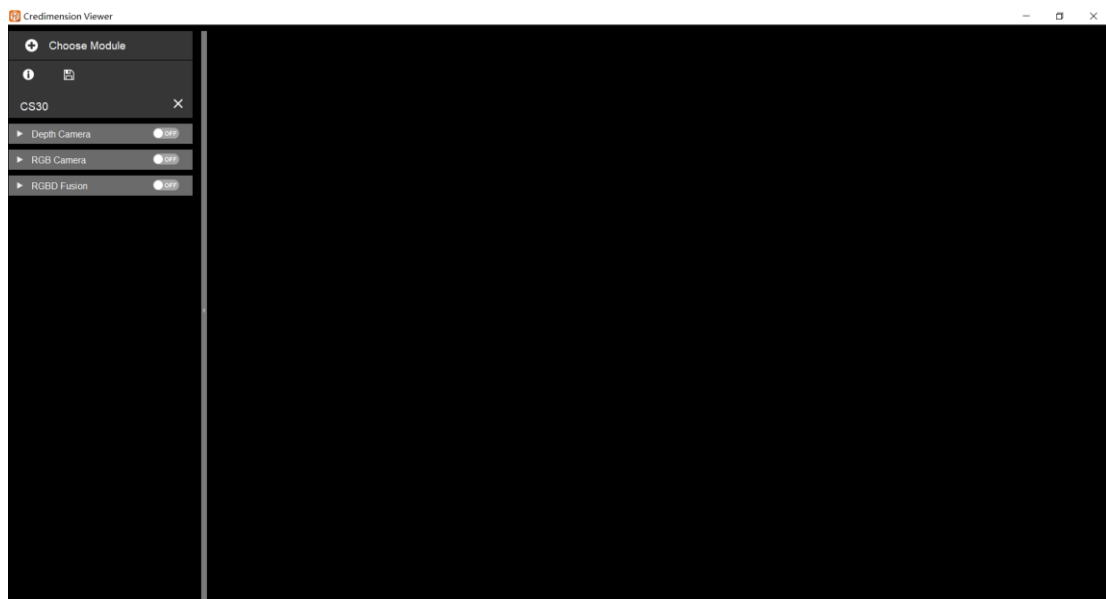


Note: Turn off others camera devices in the computer before turning CS30 on, otherwise the CS30 camera will be occupied and there will be no screen display.

### 3. Tool instruction

#### 3.1. Turn on the device

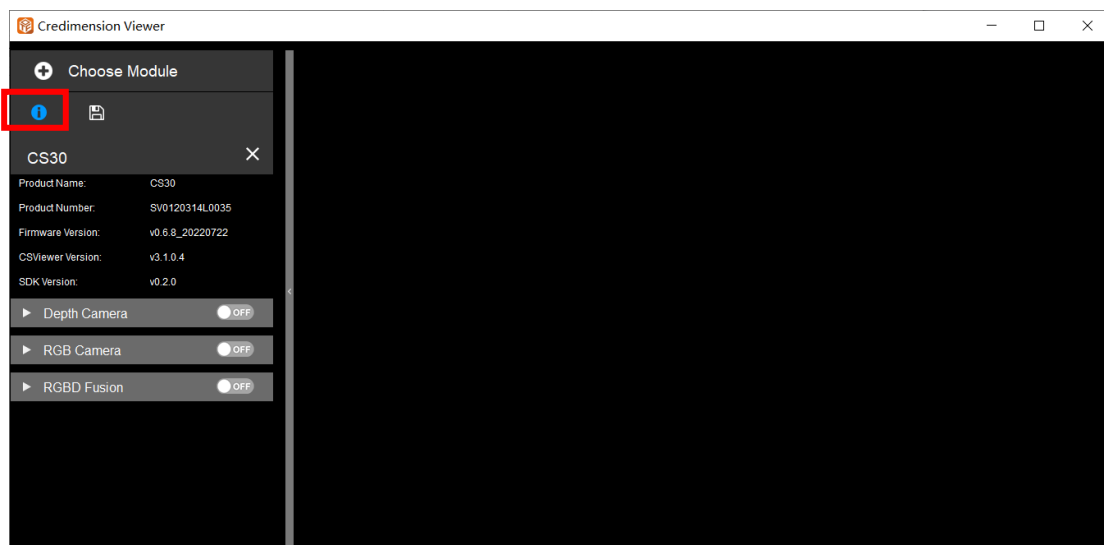
Select the current camera device, it will display Depth Camera, RGB Camera and RGBD Fusion function.



#### 3.2. Obtain Device Information

Click the Device Information button to get the basic information of the current device.

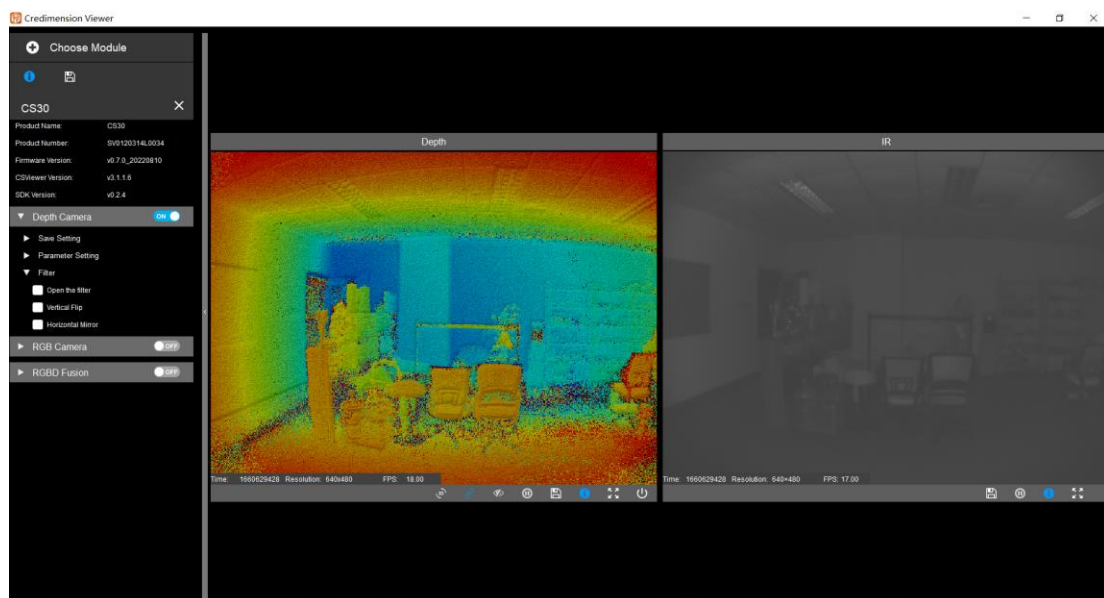
The basic information includes: product name, product SN number, firmware version, SDK and Viewer version.



### 3.3. Display 2D depth image

Click the Depth Camera switch to display depth image (left) and IR image (right);

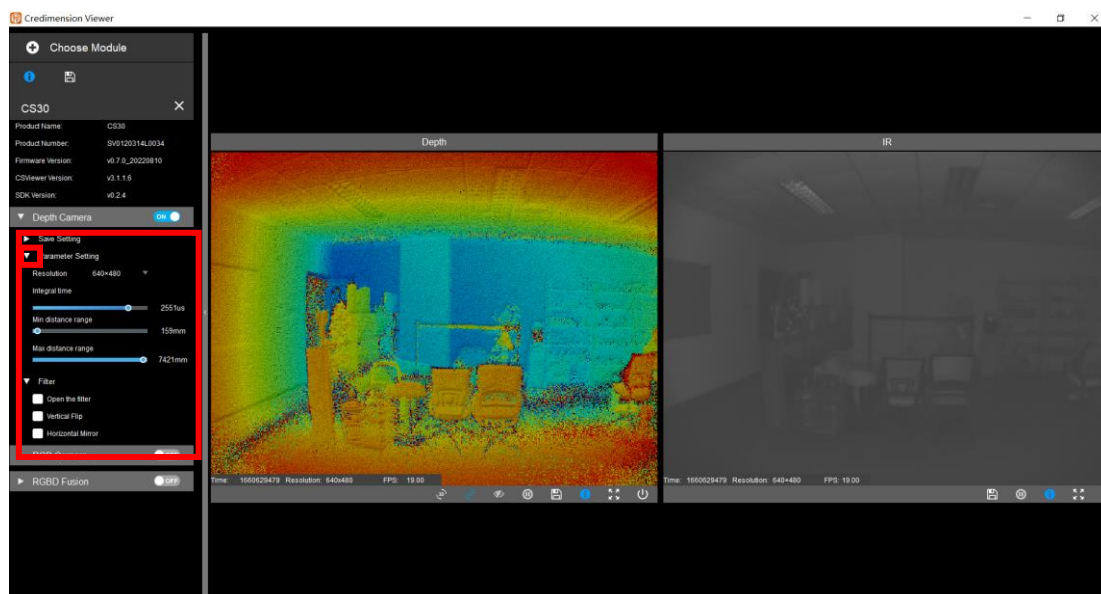
Click the mouse on the depth screen to view the depth value of the currently clicked pixel.



(Note: The right switch button under the depth screen window has the same function as the left depth camera switch button. The IR image is displayed or hidden with the depth screen window switch button, the IR screen window without a separate control switch.)

### 3.4. Adjustment parameters

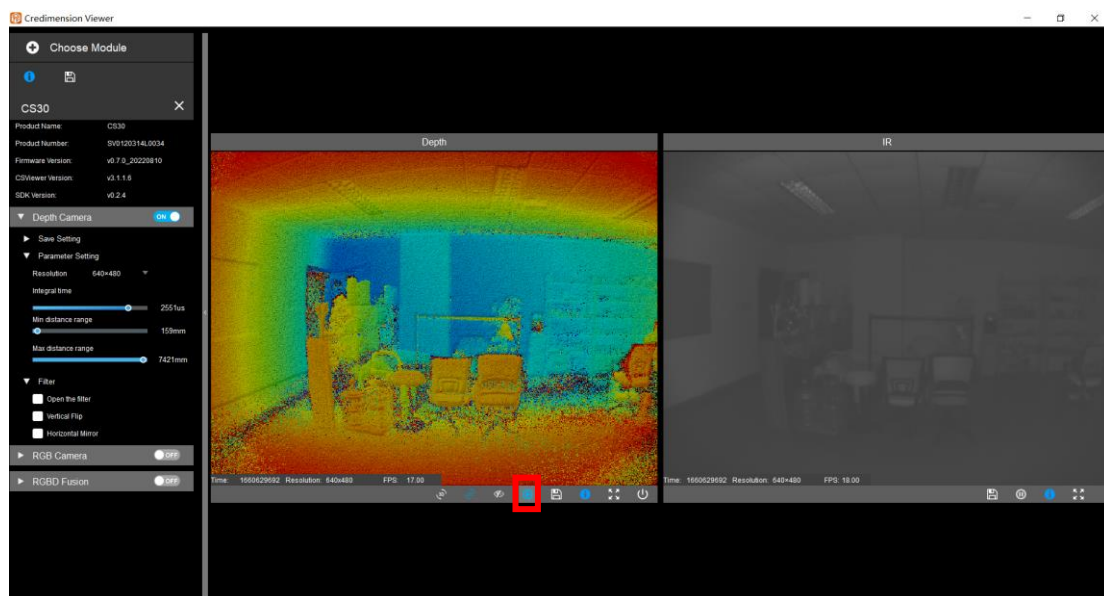
Click the drop-down arrow on the left side of Depth Camera to set saving information, adjusting parameter information, setting screen, etc. Click parameter setting to display the parameter adjustment box, you can choose the resolution 320\*240 (default) or 640\*480; adjust the exposure time; the minimum distance display range; the maximum distance display range.



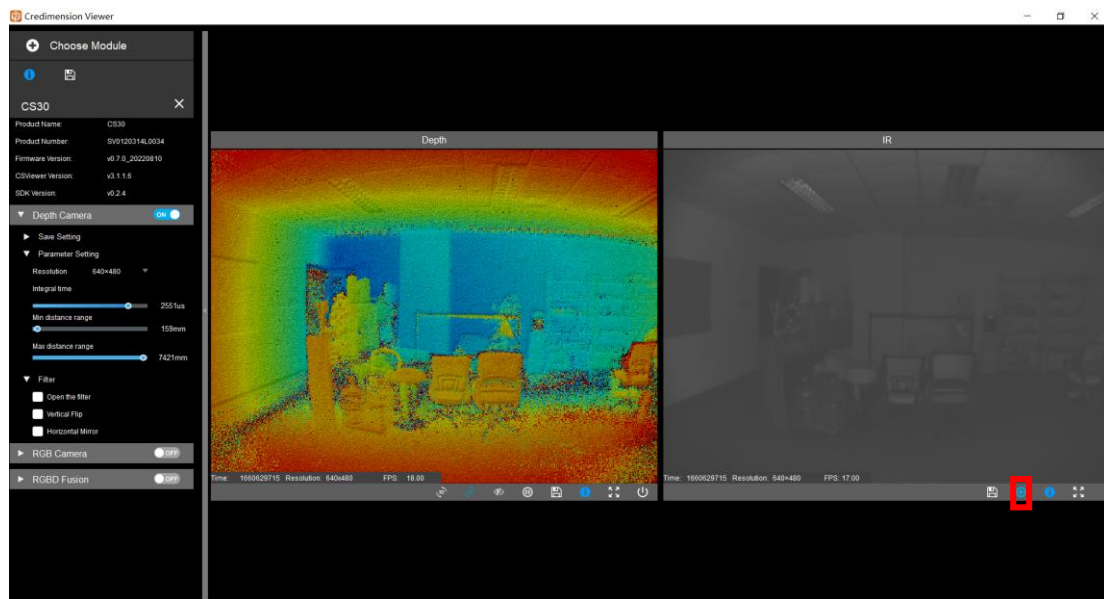


### 3.5. Pause the depth image screen

Click the pause button at the bottom of the screen to pause the depth image screen or IR image screen.



Pause Depth image screen

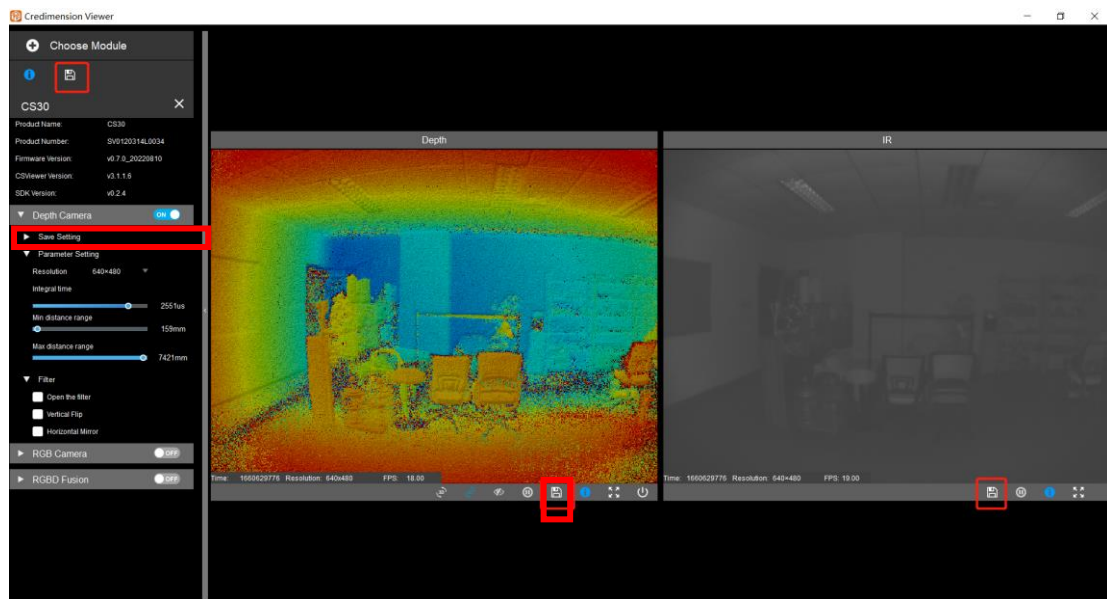


Pause IR image screen

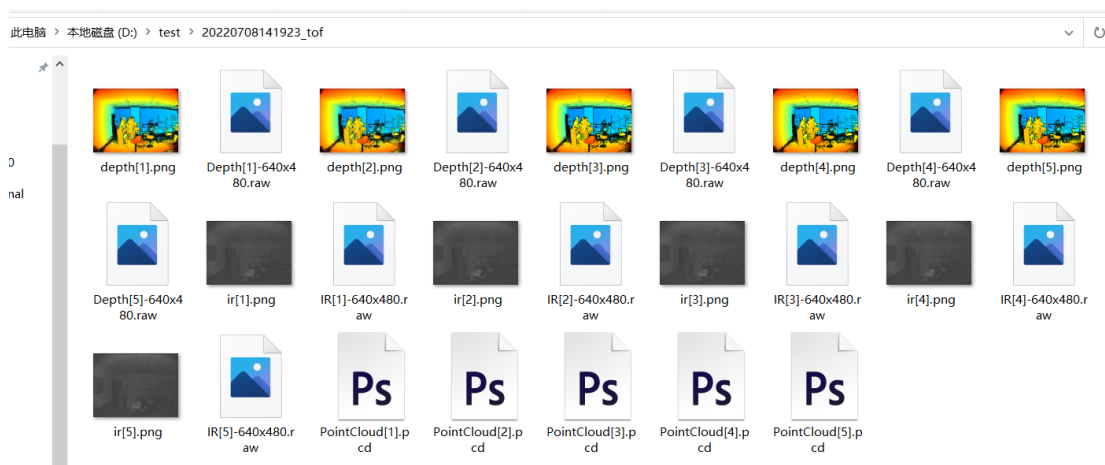
### 3.6. Depth image saving

Click the drop-down arrow on the left side of Depth Camera to set saving information, adjusting parameter information, setting screen, etc. Click the drop-down button on the left side of save setting to set the number of data frames to be saved. Check the type Depth, IR or Point cloud, and select the file path to save the data. After setting, when it starts again, the software will default to the latest save path, save frame number.

Click the Save button at the bottom of the Depth screen or the bottom of the IR image to save successfully (Note: If only the Depth Camera is currently turned on, click the General Save button and click the button at the bottom of the screen to save the data).

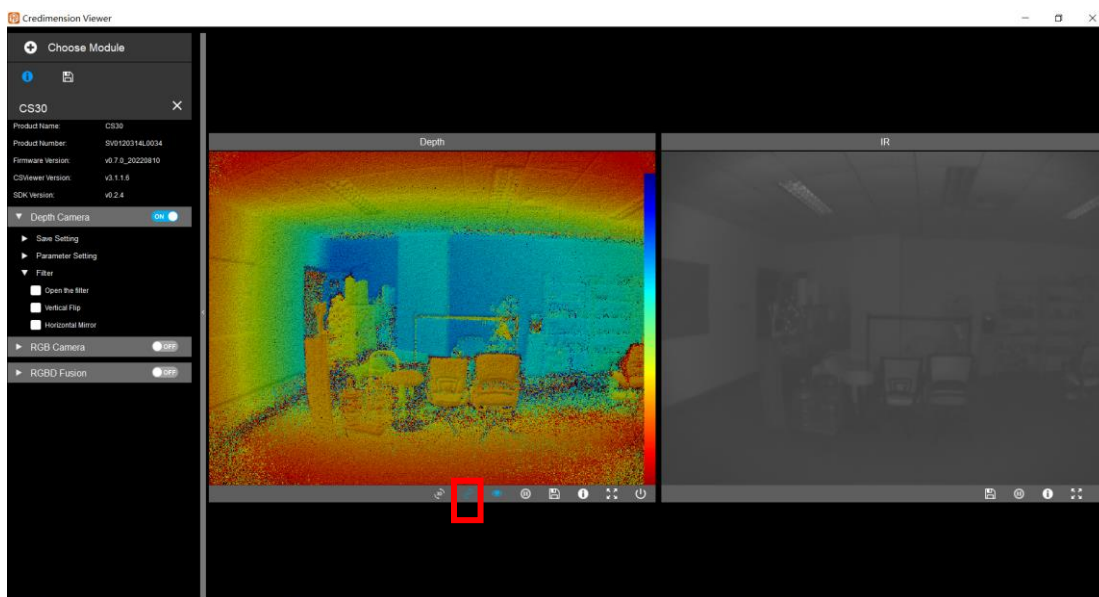


After saving, create a folder in chronological order to automatically save data, save depth png and raw data formats, IR png and raw data formats, and point clouds save pcd data formats.



### 3.7. Display color bar

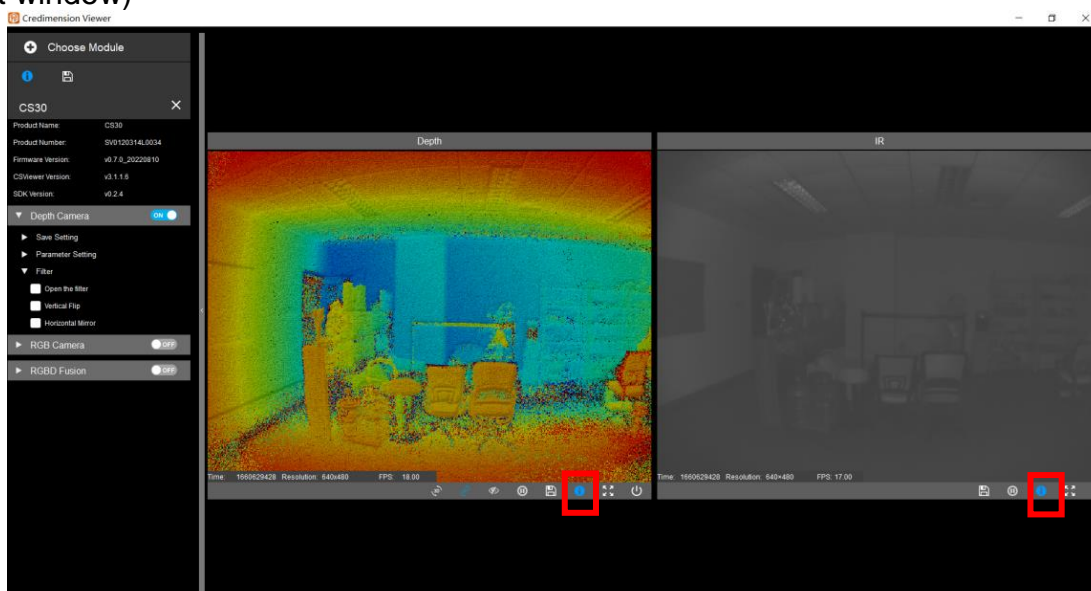
Click the View color bar button at the bottom of the screen to display the color bar



### 3.8. Display screen information

Click the picture information button at the bottom of the picture to display the current time stamp, current resolution, and current frame rate information at the lower left corner of the picture. The frame rate is 20 frames at the default resolution of depth (320 \* 240), and 18 frames at the resolution of 640 \* 480 (13 fps after filtering is enabled).

(Note: This button is available under each window to view the screen information of the current window)

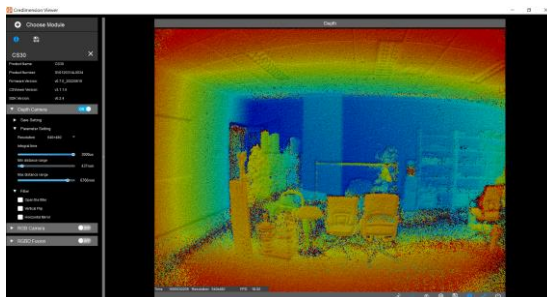
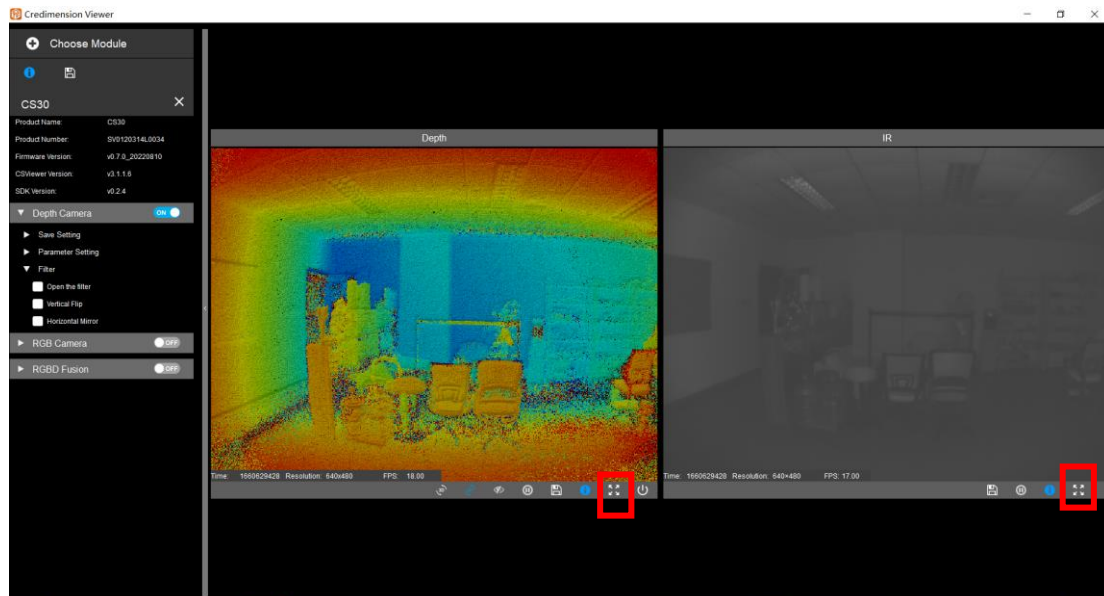


### 3.9. Screen maximize or restore

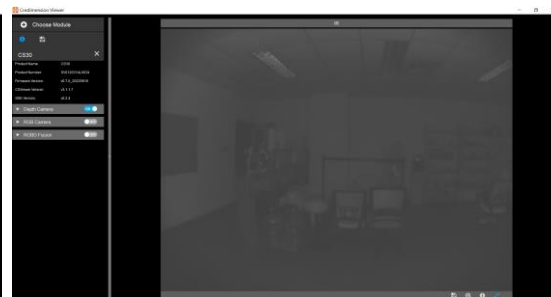
Click the maximize screen button at the bottom of the screen, (once two valid screen

windows displayed at the same time; the button will show at the bottom of each screen).

The currently selected screen can be displayed maximized, If the window is not clicked it will be hidden. Click the restore button again, and all the currently opened screens will be displayed normally.



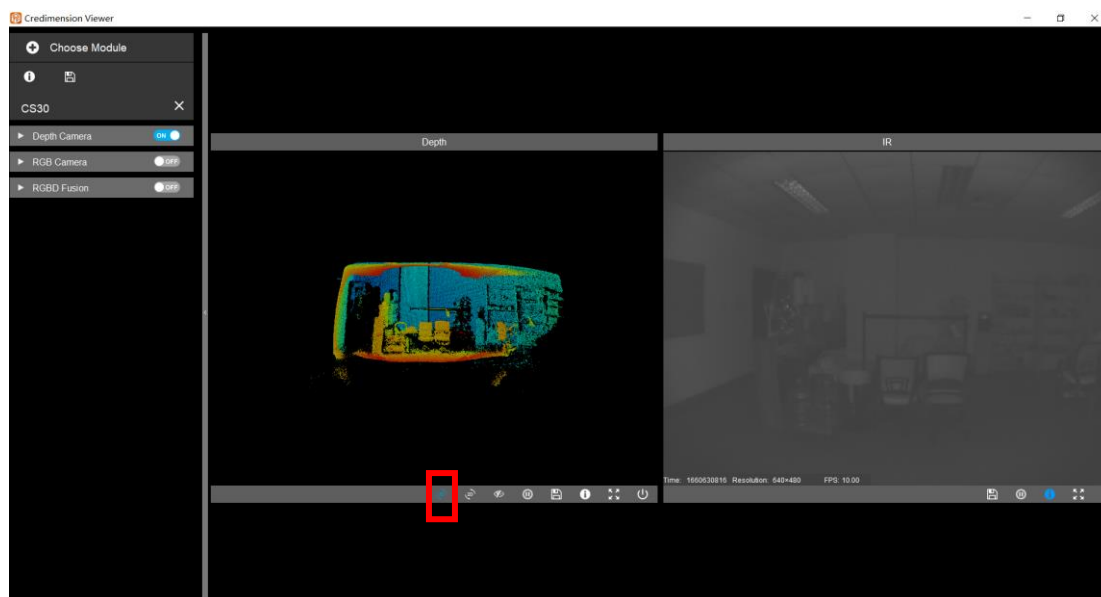
Click depth window to enlarge



Click IR window to enlarge

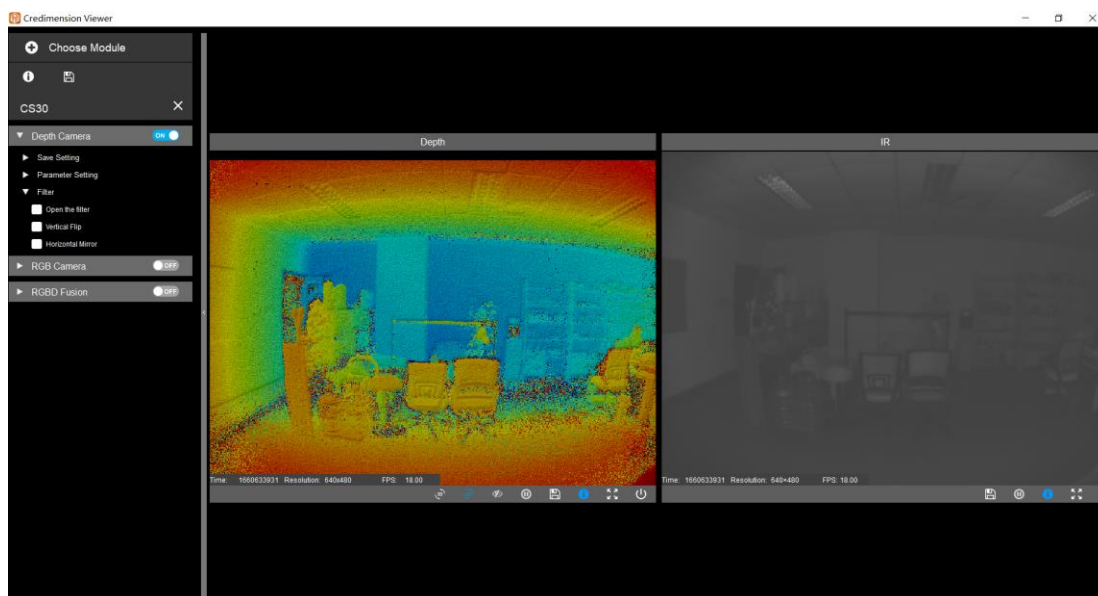
### 3.10. Display point cloud

Click the 3D display button to display the point cloud image.



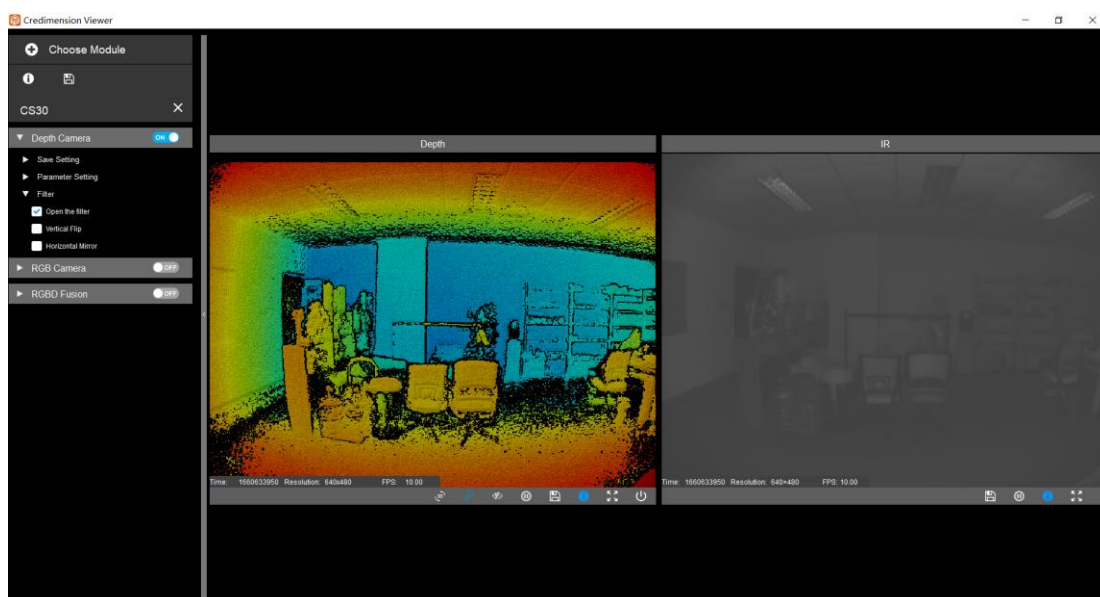
### 3.11. Screen settings

Click the drop-down button on the left side of the filter to set whether to add filtering to the screen, and whether to flip it horizontally or vertically.



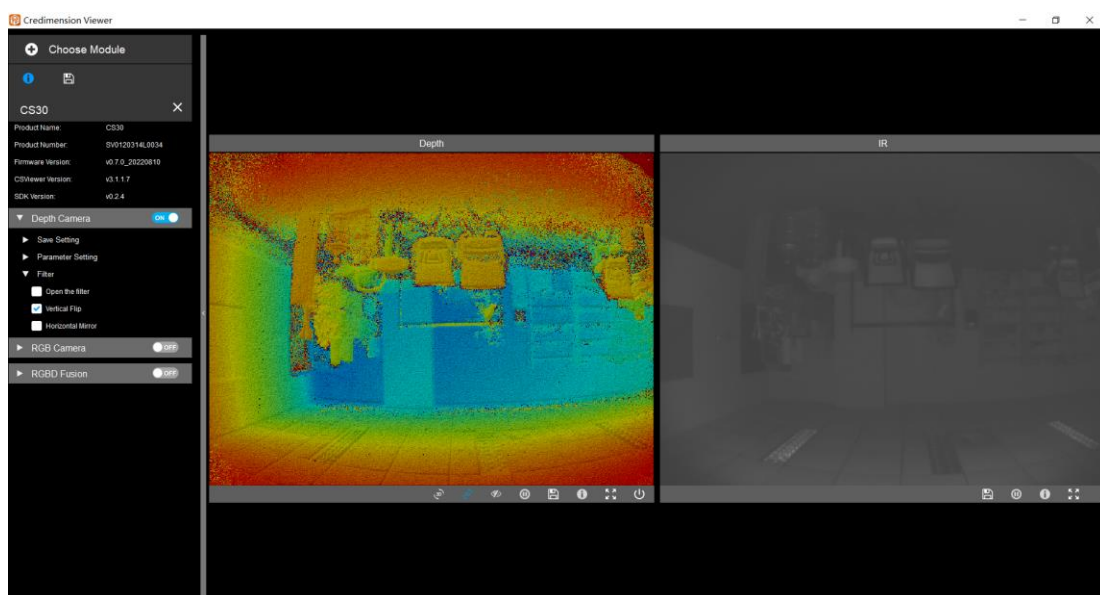
Open filter function :



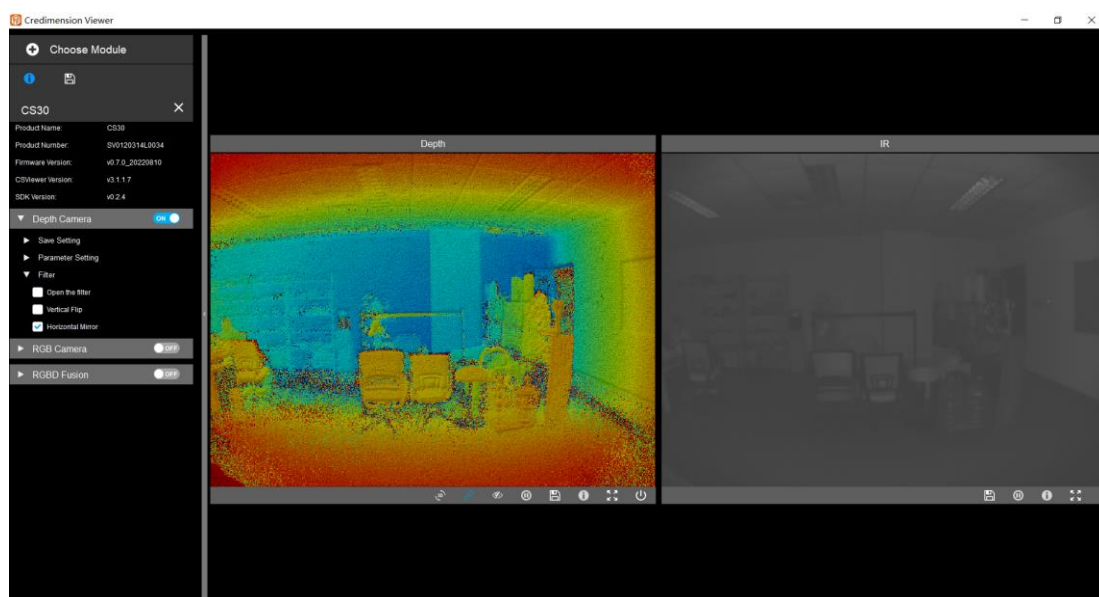


Note: When filtering is enabled, the frame rate will be reduced to 13fps.

Vertical flip:

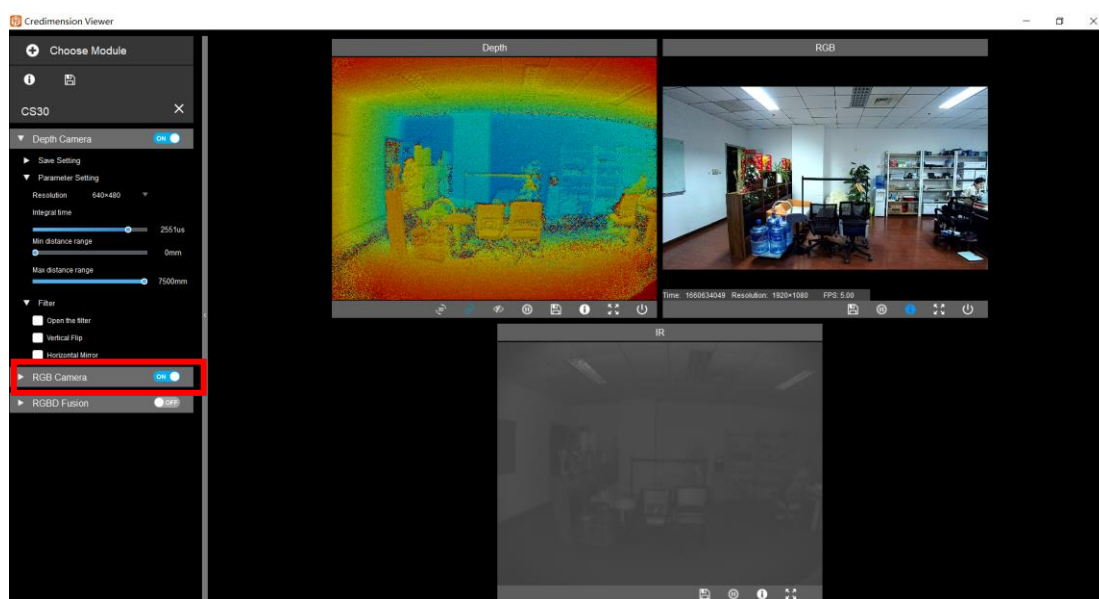


Horizontal mirror:



### 3.12. Turn on RGB

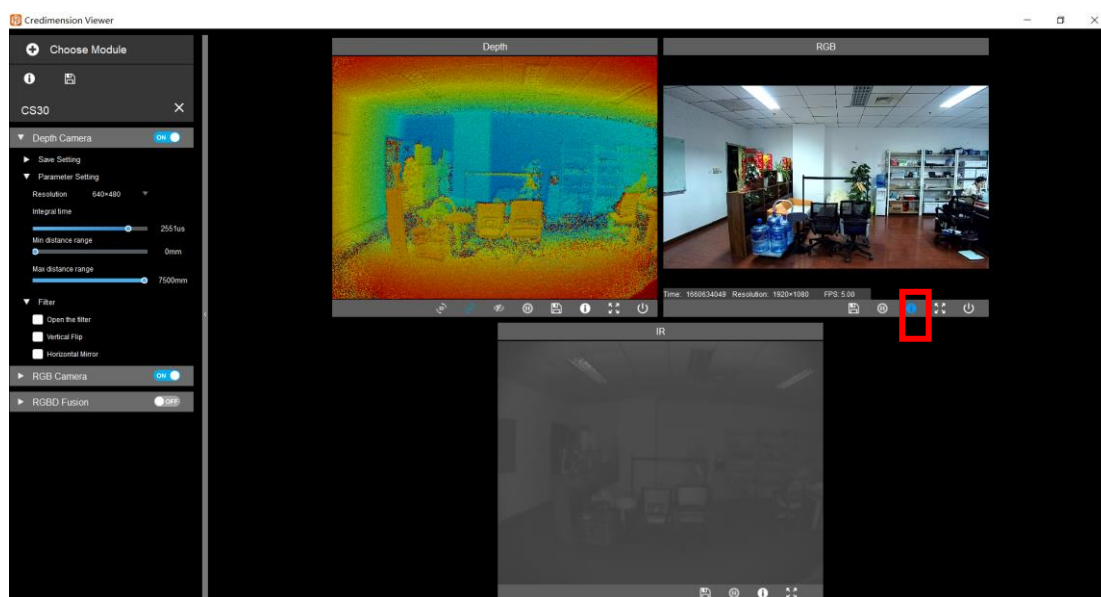
Click RGB Camera switch to display RGB image (to facilitate the comparison between depth and RGB, align RGB image and depth image horizontally)



### 3.13. Display RGB image information

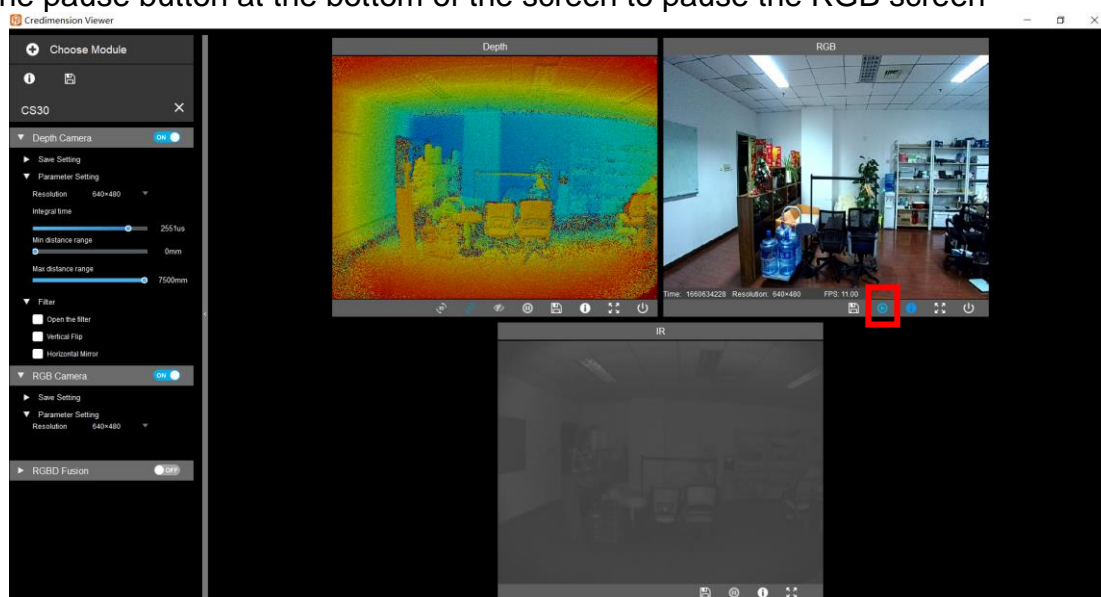
Click the screen information button at the bottom of the RGB screen,  
The current time stamp, resolution, and frame rate information can be displayed in the bottom left corner of the RGB screen.





### 3.14. Pause RGB Screen

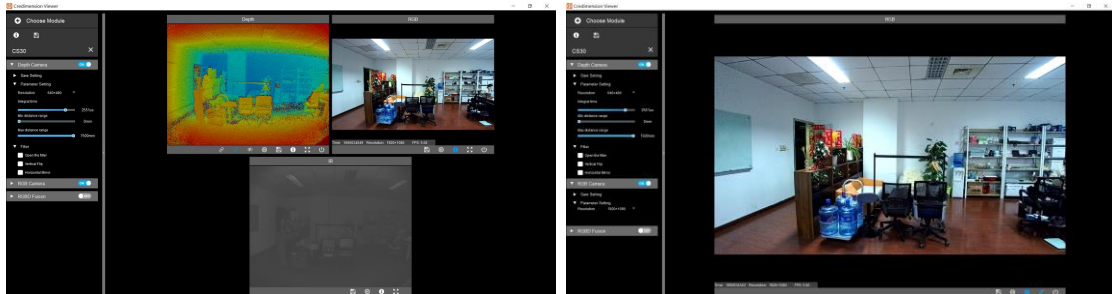
Click the pause button at the bottom of the screen to pause the RGB screen



### 3.15. RGB window zoom/restore

Click the maximize button at the bottom of the RGB screen (it is invalid to open the RGB screen window separately, but it is necessary to open the depth window at the same time, or it is effective to open the RGB window), the RGB screen will be displayed as maximized,

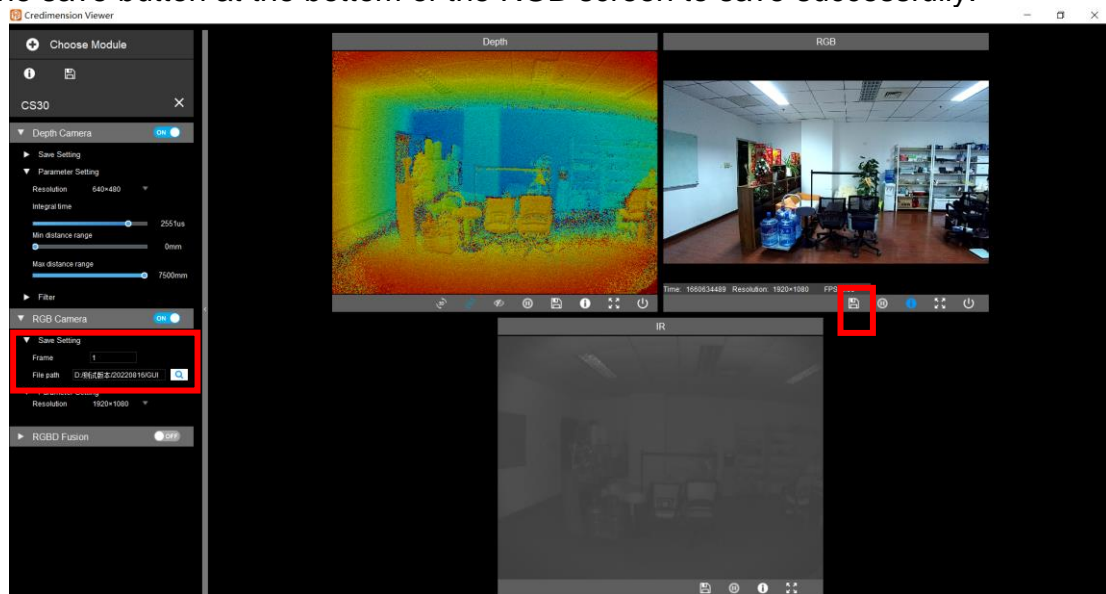
and other windows will be hidden. Click the restore button again, and RGB and other windows will be displayed normally. The magnified effect is as follows:



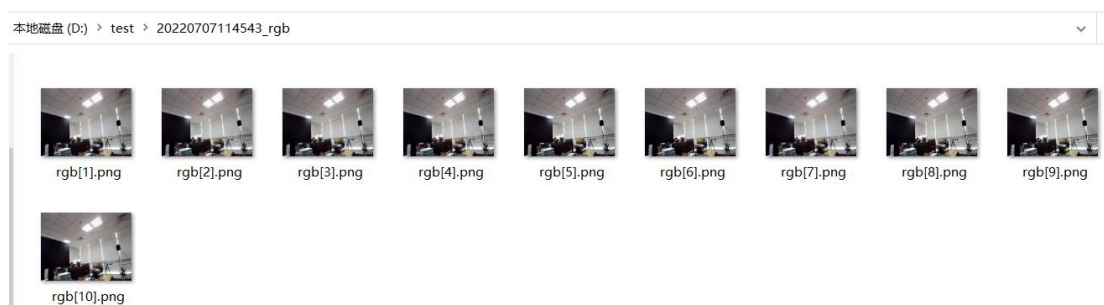
### 3.16. RGB image saving

Click the drop-down arrow on the left side of RGB Camera to set save information, set resolution, etc. Click the save setting drop-down button on the left side to set the number of data frames to be saved, and select the file path to save the data (the default path is the current software installation path). After setting, the software will default to the latest setting save path, save frame number, etc.

Click the save button at the bottom of the RGB screen to save successfully.

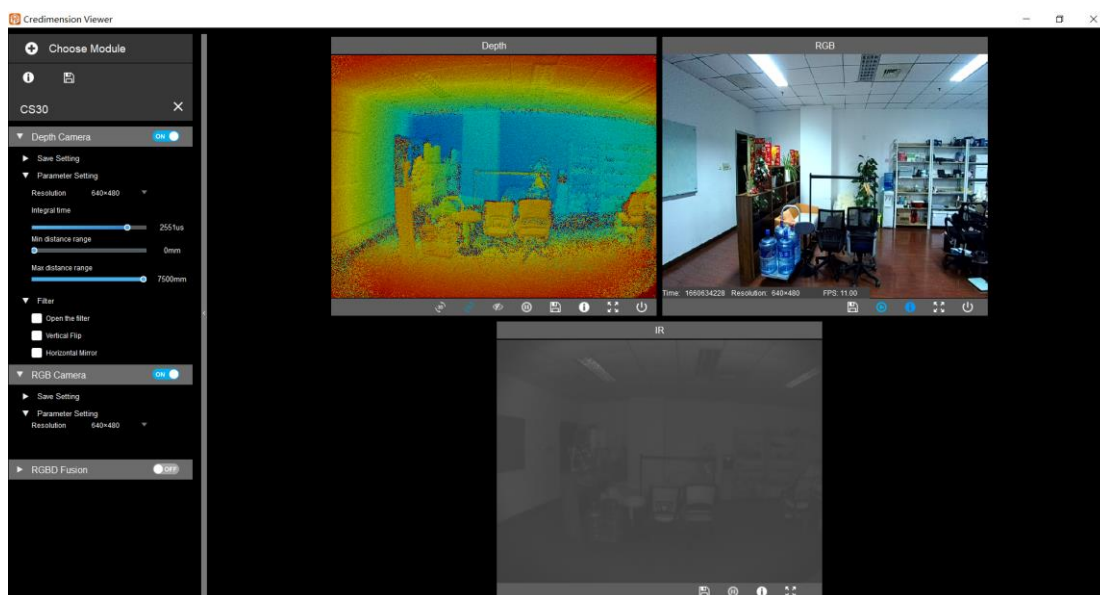


Create folders in chronological order after saving, and save data automatically.



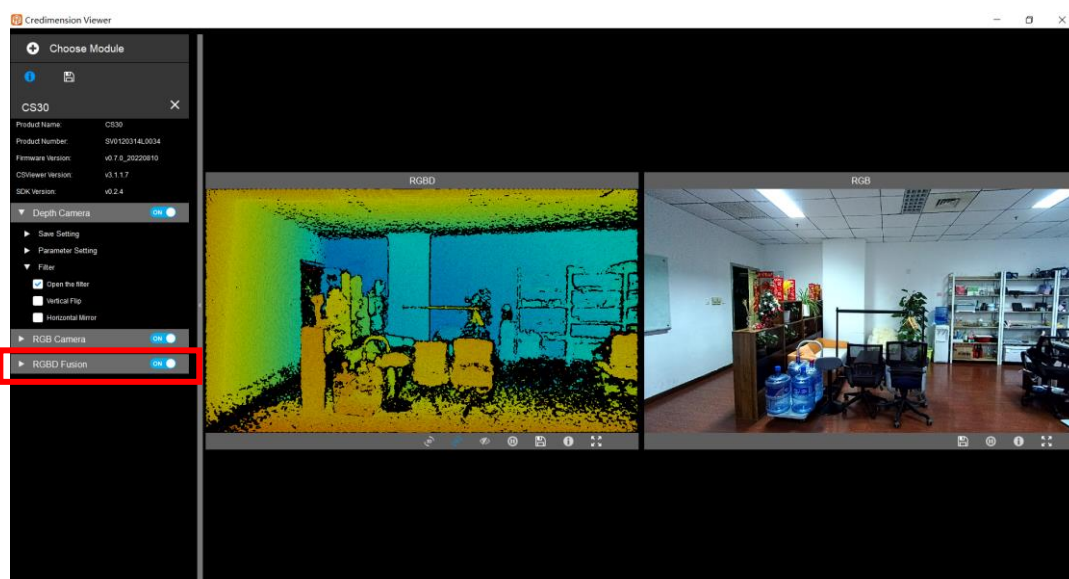
### 3.17. RGB switch resolution

RGB is currently on at 1920 \* 1080 resolution by default, and can be switched to 640 \* 480 resolution



### 3.18. RGBD Fusion

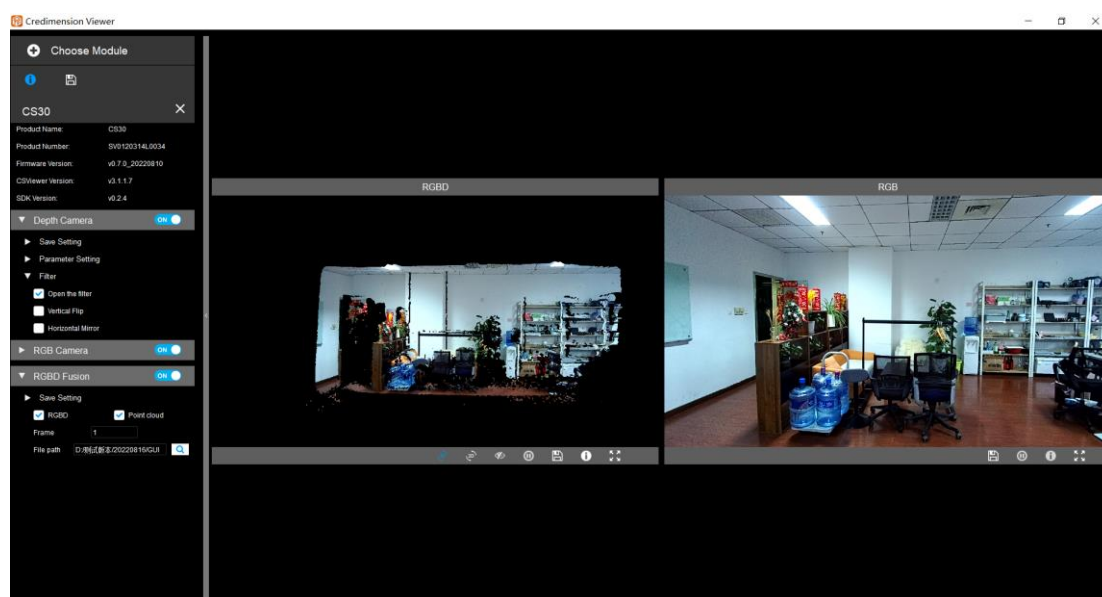
Turn on RGB Fusion button, the screen displays depth and RGB pictures after alignment.



Note: After RGBD is enabled, only the depth integration time and filter are allowed to be enabled, other switching resolution or saving paths are not allowed to be modified, and RGB parameters are also not allowed to be modified; The point cloud data is after alignment of depth and RGB picture.

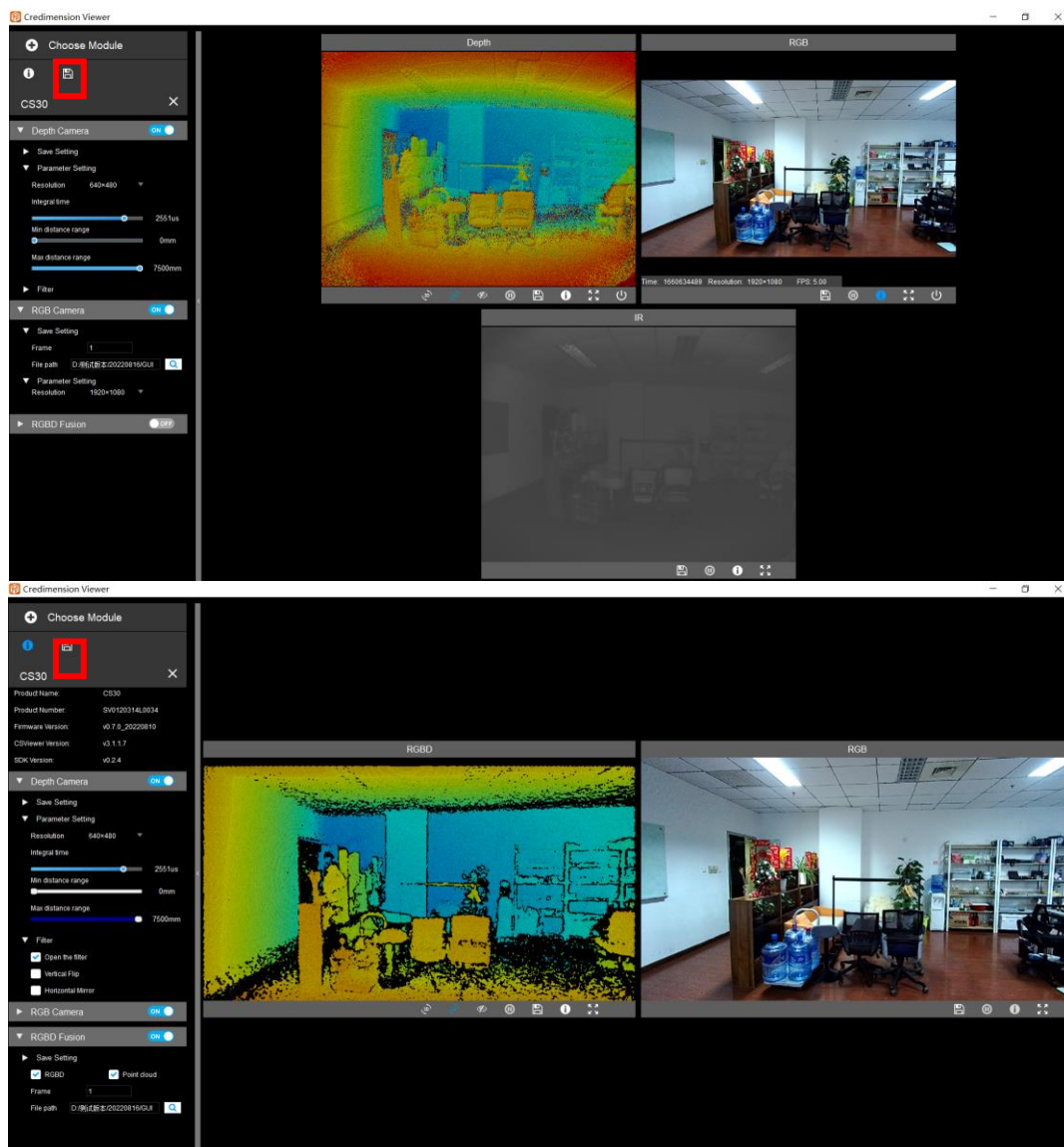
### 3.19. RGBD Point Cloud

Click the 3D button under the RGBD window to display the RGBD 3D point cloud.



### 3.20. Total save

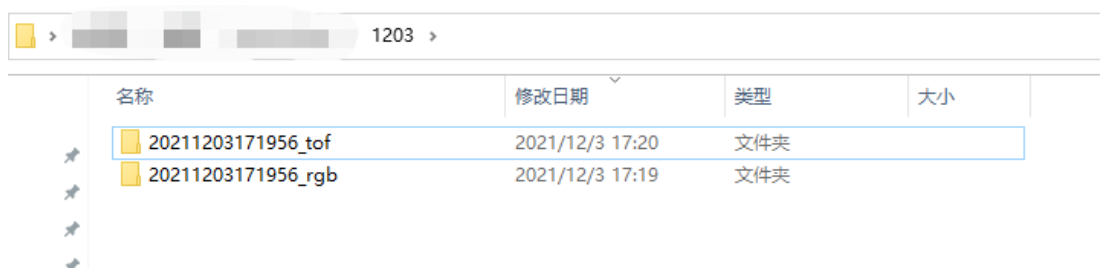
Click the total save button to save the currently depth and RGB picture to the Depth and RGB setting files path.



If RGBD button is not turn on, click the general save button to create a folder for saving data in chronological order. The folder is marked according to ToF/RGB and saved in the file path set respectively.

If turn on RGBD button, the save path is the current RGBD file path.



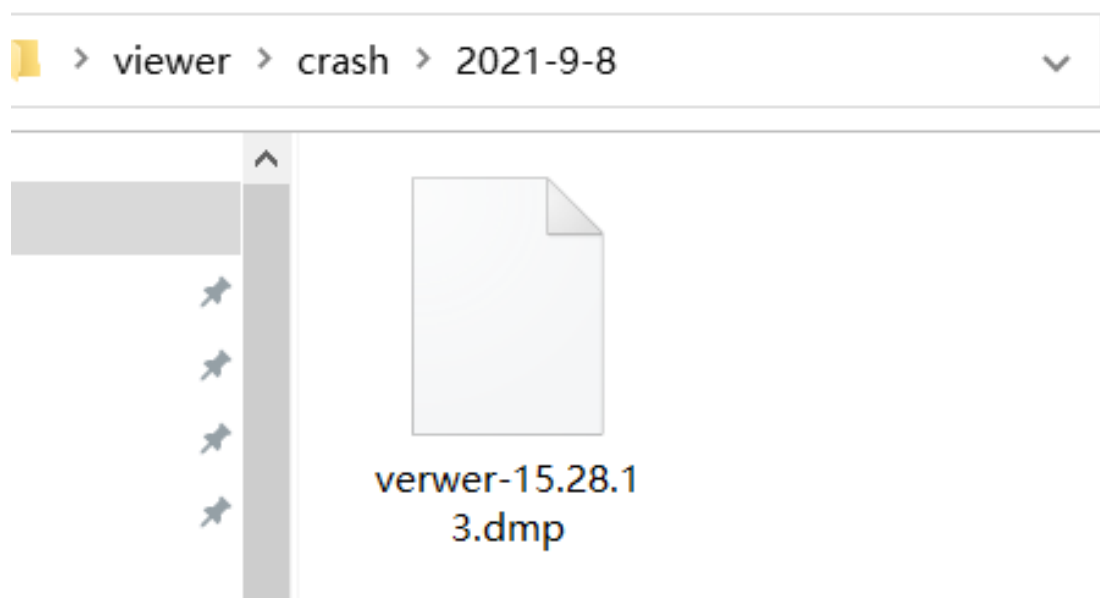


RGBD save data:



### 3.21. Error message dmp address

Under the crash folder at the same level of the installation directory, Find the folder with the error date to find the dmp file, as below:



## **4. Disclaimer**

The device application information and other similar content described in this publication is provided for your convenience only and may be superseded by updated information. It is your responsibility to ensure the application meets the technical specifications. Regarding this information, our company does not make any express or implied, written or oral, statutory or other statements or guarantee, including, but not limited to, representations or warranties with respect to its use, quality, performance, merchantability or fitness for a particular purpose. Our company does not assume any responsibility for this information and the consequences arising from its use. This product must not be used as a critical component in life support systems without the written approval of the company.