

Glass-Free 3D Monitor 28"
With Eye-tracking System

User Guide

v1.2

Revisions

Version	Date	Author	Revision
V1.0	2019-5-23	张伟香	Create document
V1.1	2019-5-24	张伟香	Add tracker component
V1.2	2021-12-20	Kano3D	Updated driver links

Copyright

The copyright of this manual belongs to JSDigitech (Shanghai) Co., LTD. In addition to copyright law, you may not reproduce, modify, distribute, or publicly display the Materials without prior written consent.

Content

1	System Requirements.....	6
2	Hardware Setup	6
3	Software Installation	7
3.1	Camera Driver	7
3.2	USB Driver	9
3.3	Glass-Free 3D Player.....	10
3.4	Glass-Free 3D Controller	10
3.5	Tracker Driver	10
4	Software Usage	11
4.1	Glass-Free 3D Controller	11
4.2	Glass-Free 3D Player.....	12
4.3	Unity Demo	13
5	FAQ.....	14
5.1	Glass-Free 3D Controller hangs or crashes.....	14
5.2	Bad performance of eyes tracking	14
5.3	Monitor power off.....	15
5.4	Display side-by-side content	15

1 System Requirements

For full functions usage, the PC configuration must meet following requirements.

Essential	
CPU	4 th generation (or later) Intel Core processors
USB Port	USB 3.0 * 2
OS	Windows 10 64bit
Optional	
Memory	8GB
Disk	256GB SSD
Graphics	Depend on application scenario. Integrated Graphics is enough for video playback

2 Hardware Setup

Follow the steps to setup Glass-Free 3D monitor.

1. Connect monitor to PC with HDMI cable.
2. Connect the two USB ports of monitor to PC USB 3.0 ports.
3. Connect monitor power cable.
4. Connect PC power cable.

If the Tracker component is included, complete following steps

1. Connect Tracker component USB port to PC USB 3.0 port
2. Connect Tracker component power cable.

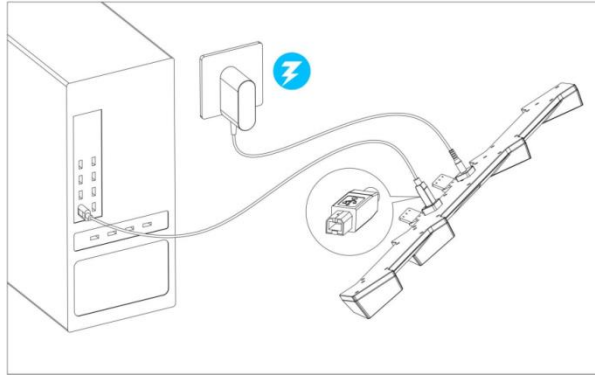


Figure 1

3. Connect the Pen to PC USB port (USB 2.0 or 3.0).

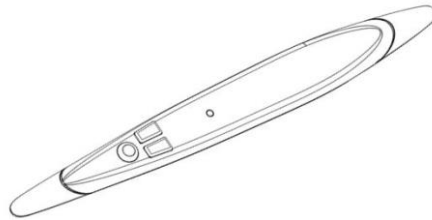


Figure 2

After finished, power on system.

3 Software Installation

Download software package from following link

Tridimensional downloads: <https://www.tridimensional.info/tienda/support/>

Go to *Drivers & Software* tab (under *Manuals*) and find the drivers for ProMa VR monitor.

3.1 Camera Driver

Open the *Camera Driver* directory in the downloaded software packages and run “intel_rs_dcm_sr300_3.3.27.5718.exe” to install camera driver and then run “intel_rs_sdk_offline_package_10.0.26.0396.exe” to install SDK. Keep all the options as default during installation.

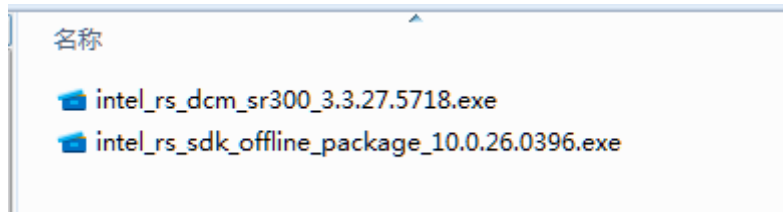


Figure 3

After installation, following steps to check if camera works fine.

- 1) Open "Intel RealSense SDK Gold" directory in Windows Desktop.



Figure 4

- 2) Run "Intel RealSense SDK Sample Browser"

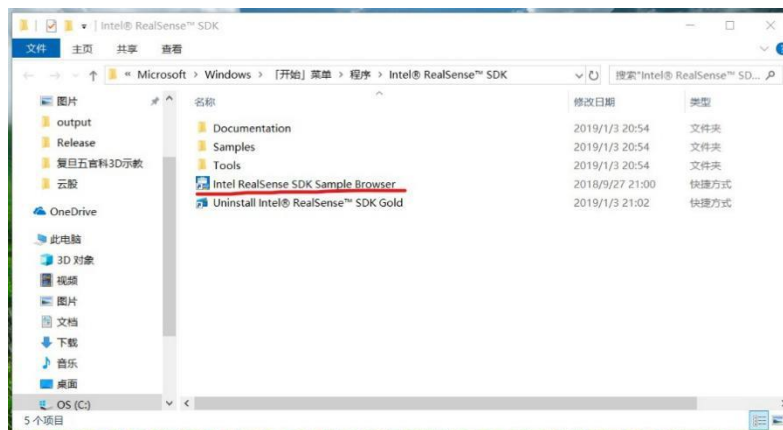


Figure 5

- 3) Click "Tools" tab and run "Camera Explorer"

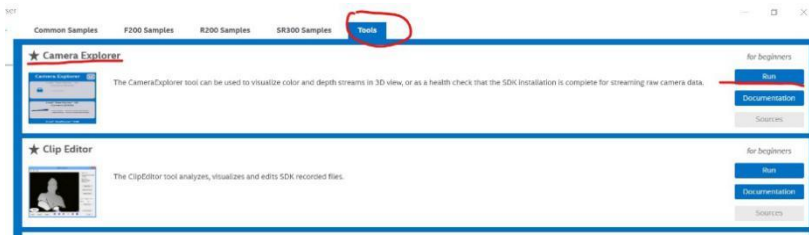


Figure 6

- 4) If you can camera information, as illustrated in Figure 7, then it works.



Figure 7

3.2 USB Driver

Open the *USB Driver* directory in the downloaded software packages and run the installer. Click the 1st button to install, as illustrated in Figure 8.



Figure 8

3.3 Glass-Free 3D Player

Open the *Player* directory in the downloaded software packages and run the installer.

Keep all options as default during installation, after finished a shortcut is created on Windows Desktop, as illustrated in Figure 8.



Figure 8

3.4 Glass-Free 3D Controller

Open the *Glass-Free 3D Controller* directory in the downloaded software packages and run the installer. Keep all options as default during installation, after finished a shortcut is created on Windows Desktop, as illustrated in Figure 9.



Figure 9

3.5 Tracker Driver

If Tracker component is included, then you need install its software.

Open the *Tracker* directory in the downloaded software packages and complete the following steps.

- 1) Run "VoxelTracker V4 Driver.exe" and keep all options as default. After finished, you can find four cameras in Windows Device Manager, as illustrated in Figure 10.



Figure 10

- 2) Run “VoxelTracker.v4.Service.EVIS.v1.0.exe” and keep all options as default. After finished, you need reboot Windows system and then check if TrackerService is in running status in Windows Task Manager, as illustrated in Figure 11.

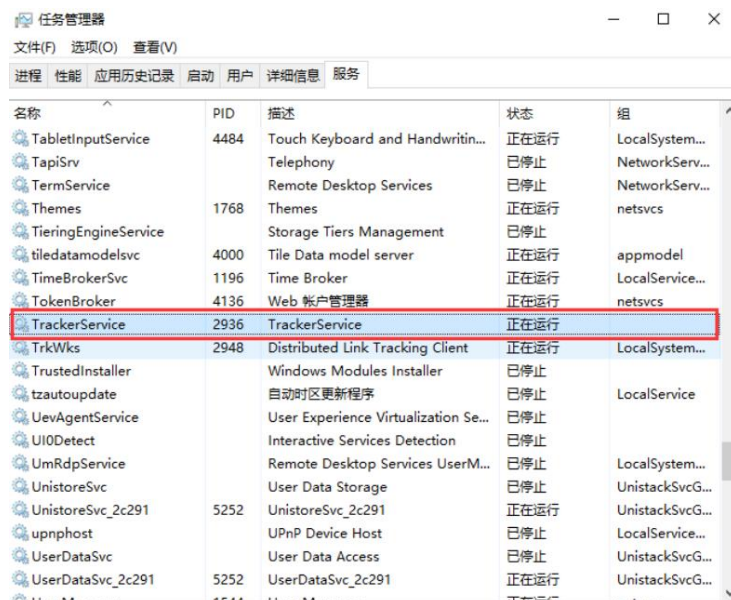


Figure 11

4 Software Usage

Following the below sequence to start the software.

4.1 Glass-Free 3D Controller

To experience Glass-Free 3D effect, the Glass-Free 3D Controller application MUST be running. Find and click the shortcut on Windows Desktop to start the controller application, as illustrated in Figure 12.



Figure 12

After running, there are two windows, one is command window and the other is camera preview window. In camera preview window, if there are two red circle on eyes, then the user is tracked and the tracked user will get the best Glass-Free 3D effect, as illustrated in Figure 13.

A hotkey SHIFT + M is registered to switch between 2D mode and 3D mode.

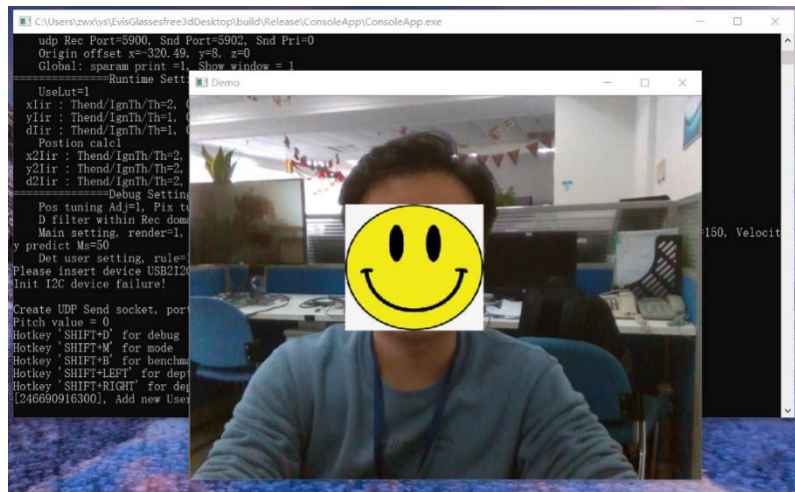


Figure 13

Close the command window to exit.

4.2 Glass-Free 3D Player

Click the shortcut on Windows Desktop to start the player, as illustrated in Figure 14.



Figure 14

When start, the main UI is as below. You can drop a video file to play or drop files into playlist, as illustrated in Figure 15.

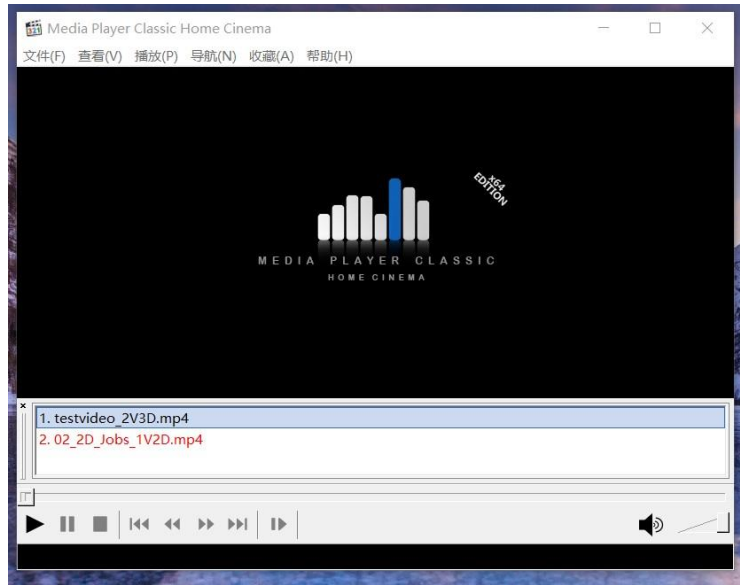


Figure 15

This player is customized to detect file format automatically according to a specified suffix in file name. You can follow the rules to rename video file.

Video Type	Name Suffix	Examples
Normal 2D video	_1V2D or add nothing	Jobs_1V2D.mp4
Side-By-Side 3D video	_2V3D	Avatar_2V3D.mp4

For example, when play a video *Avatar_2V3D.mp4*, player detects the suffix *_2V3D* and when user double click to enter full-screen mode, player will send command to switch to 3D mode and switch back to normal 2D mode when exit from full-screen mode.

Note:

please keep the file name simple only with English characters and number, better not to use SPACE。

4.3 Unity Demo

If Tracker component is included, you can experience it in this Unity demo.

Find the *demo* directory under the *Tracker* directory in the downloaded software packages.

Extract and run directly without installation, and you can use the Pen to do interaction, as illustrated in Figure 16.



Figure 16

NOTE:

Please start Glass-Free 3D Controller, as illustrated in chapter 4.1, before Unity demo.

5 FAQ

5.1 Glass-Free 3D Controller hangs or crashes

Please make sure monitor's two USB ports are well connected with PC USB 3.0 ports.

Please don't use very long USB extension cable which may cause power lost.

The application is still in beta stage, if encounter some issues, please try to restart the application or restart the PC.

5.2 Bad performance of eyes tracking

To get the best eyes tracking performance

- Use monitor in a place with enough illumination.
- User should sit in front of monitor in 30 degree and in 50cm to 130cm, as illustrated in

Figure 17.

- Don't cover face with mask or hat.

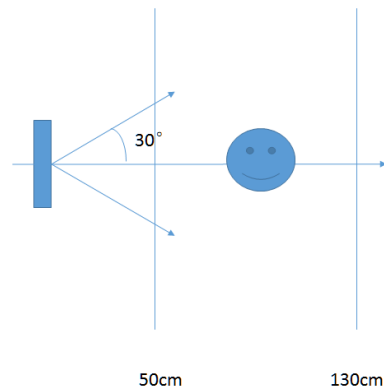


Figure 17

5.3 Monitor power off

When there is no signal input, the monitor will power off.

5.4 Display side-by-side content

Please make sure all cables are well connected.

Please check if the Glass-Free 3D controller is running, as illustrated in chapter 4.1.