

MechEye_OpenInterface Interface Description

1. Overview

MechEye_OpenInterface includes interface functions and examples, configured with CMake. A folder including the third-party library “dependencies for MechEye_OpenInterface” is offered, which can be directly used. A customized third-party library is also supported.

2. Function Description

Currently the MechEye_OpenInterface interface opens the following functions which are declared in the file “CameraClient.h”

- Collect depth image, RGB image and point cloud
- Get camera status (IP, number, version)
- Obtain camera’s intrinsic parameters

3. Camera Update Instructions

Due to the different factory time of the camera, the firmware version of the camera may be different. Using the Mech-Eye software can update the camera to the latest version. When connecting the camera with the software, a pop-up window will appear to remind you for the update. You can choose to update or ignore it. Lately if you want to update the camera version, following the steps:

- Connect the software with camera.
- Click “Advance” -> “Administrator” and enter the password “MechMind”.
- Click “Advance” -> “Controller” and choose the “Update Server” option.

4. Other Instructions

The camera's parameter settings, network settings and other functions can be operated through the Eye client.

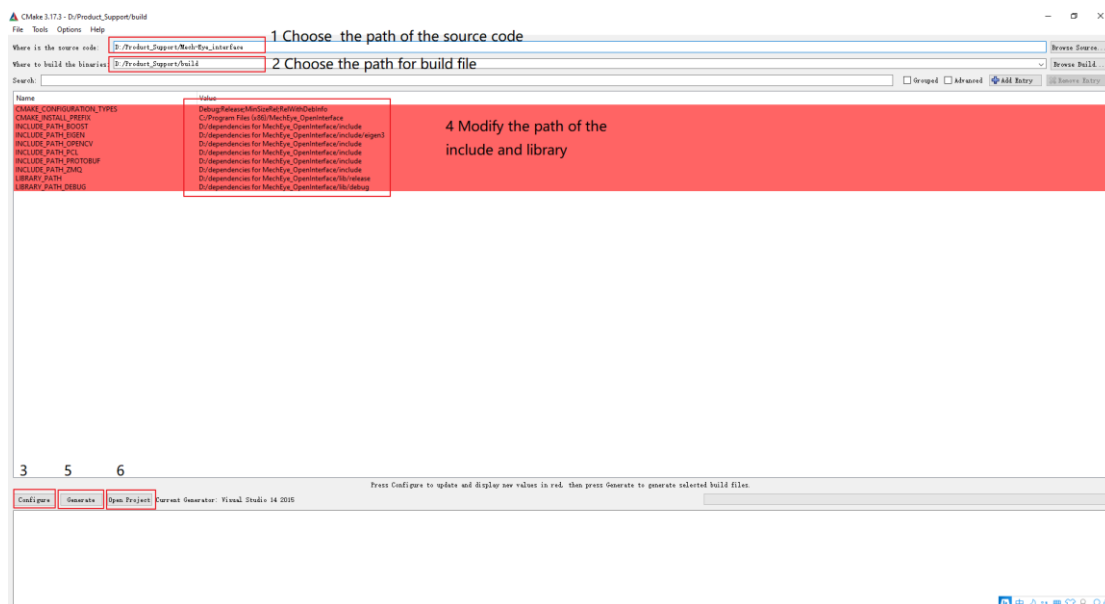
5. Using the MechEye_OpenInterface Interface

5.1 Download and Install preparations.

- Download CMake, the version is not lower than VERSION 3.7.
- Download and install the compiler, here we use VS 2019 as an example.

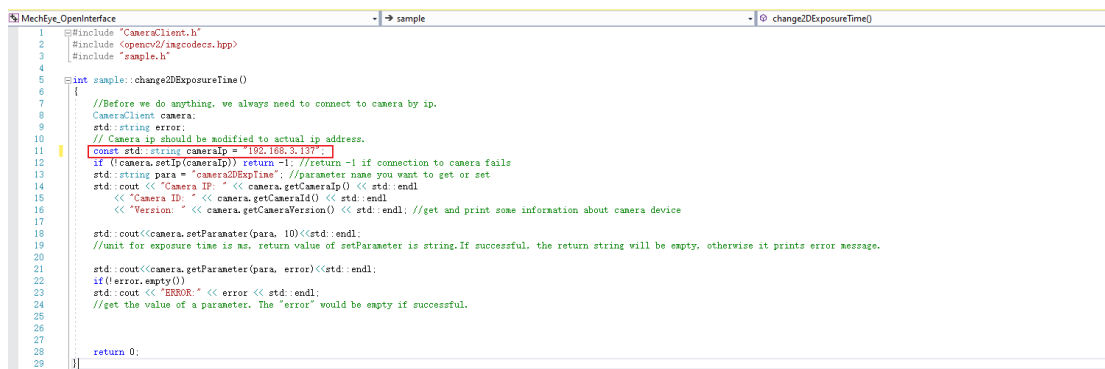
5.2 Configure the project.

Run Cmake in the following steps:



5.3 Connect to the camera

Modify the “cameraIP” to your own camera’s IP. As shown in Figure 2



5.4 Build the project

Copy corresponding dll files in the “dependencies for MechEye_OpenInterface” folder to the .exe file path. Then, run the .exe file and the camera can be triggered to operate the defined functions .

As the Figure 3 shown.

```
D:\Product_Support\build\Debug\MechEye_OpenInterface.exe
Connect to tcp://192.168.3.146:5577
Camera IP: 192.168.3.146
Camera ID: K0059
Version: 0.4.1

10
Connect to tcp://192.168.3.146:5577
Camera IP: 192.168.3.146
Camera ID: K0059
Version: 0.4.1
Connect to tcp://192.168.3.146:5577
Camera IP: 192.168.3.146
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Version: 0.4.1

Connect to tcp://192.168.3.146:5577
Camera IP: 192.168.3.146
Camera ID: K0059
Version: 0.4.1
Connect to tcp://192.168.3.146:5577
Camera IP: 192.168.3.146
Camera ID: K0059
Version: 0.4.1
Camera intrinsics:
{
  "dist_coefficients": [
    -0.094405964684744118,
```

5.5 Other functions can be realized by adding the corresponding .cpp file and including it in the main.cpp.