SDK Calibration Demo Description Document

We have also made interface modifications for calibration demo. Check whether the device is powered and properly connected before scanning. Note that the USB interface should be connected to the USB3.0 interface of the computer. The following is the operating instructions of the SDK calibration demo. The process is shown in figure 1.

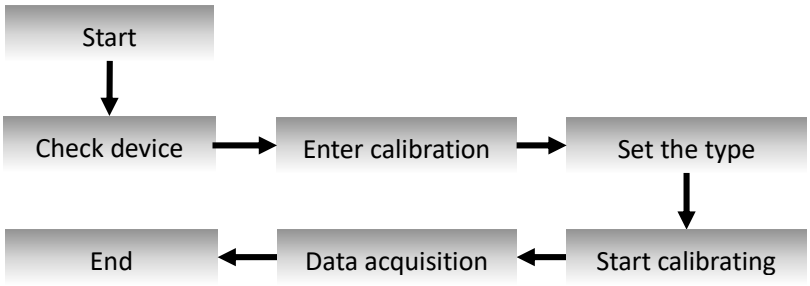


Figure 1 Process of SDK Calibration Demo

The following conditions require the scanner to calibrate:

- Initial use of scanners;
- Use after a long time;
- Scanning data is incomplete and data quality is seriously degraded during scanning.

Should pay attention to the calibration process:

- Make sure the calibration plate is clean and free of scratches;
- Make sure to use the calibration plate corresponding to the device for calibration.

1、Start

Open the SDK Calibration, the interface is shown in figure 2.

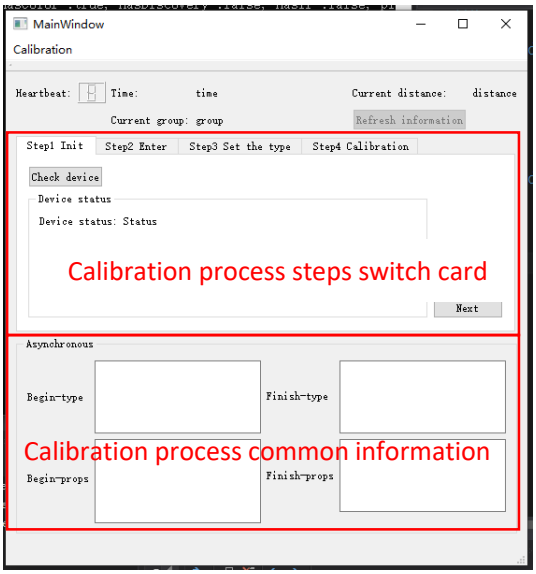


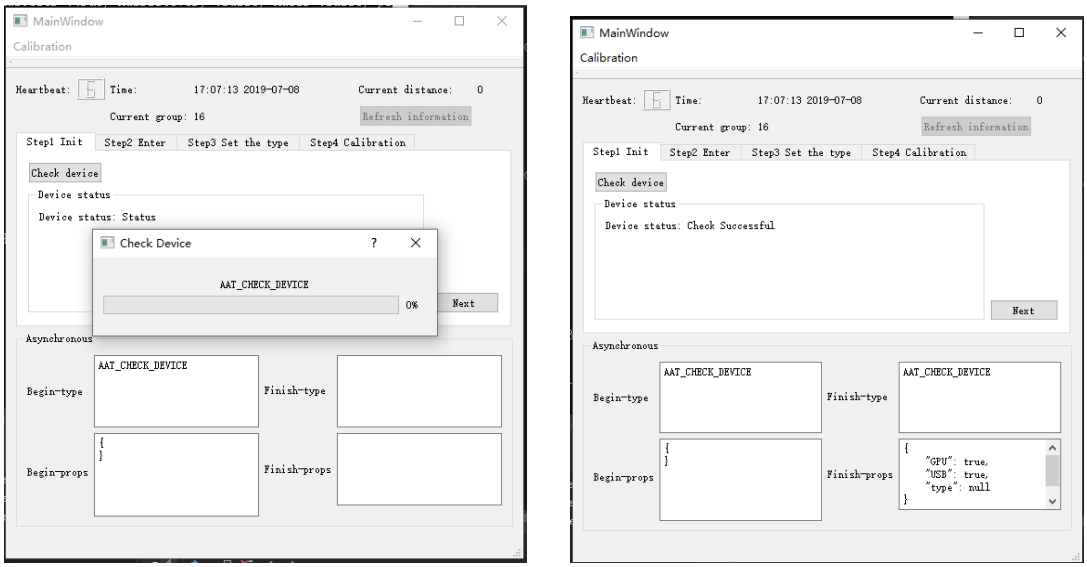
Figure 2 SDK Calibration Interface

According to the calibration process and some feedback information, the calibration interface is divided into two parts. one is to display the common information of each step, the other is to process each step and its proprietary information, as shown in Figure 2. Asynchronous callback information and scanner

heart rate are common to each step. We will summarize the calibration steps and divide the calibration process into four steps:Step1:Init; Step2:Enter; Step3:Set the type; Step4:Calibration;

2、Check device

As shown in figure 3, click the "check device" button to enter the detection status of the device, and a progress bar indicates the progress of the detection. When the device is successfully detected, the detection status changes to "Check Successful" and clicks the "Next" button in the lower right corner of the “Step1 Init” tab to enter the next operation page.

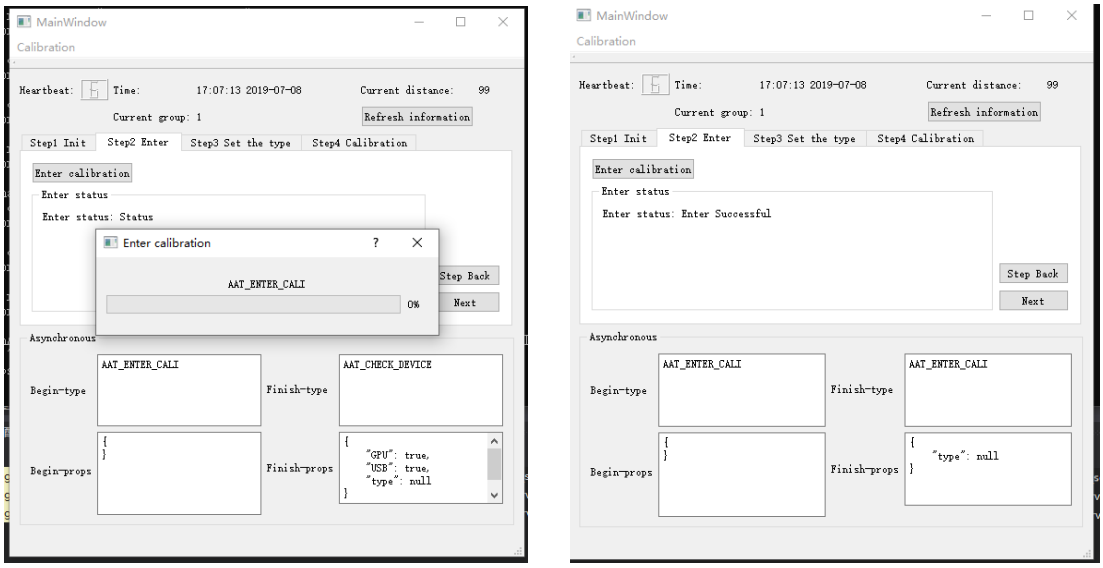


(a) Start detection interface (b) detection completion interface

Figure 3 "Check device" button interface diagram

3、Enter

When you click the "Enter calibration" button in “Step2 Enter”, the device enters the calibration state.As shown in Figure 4, when successfully entering the calibration state, the device status is updated to "Enter Successful", click the "Next" button in the lower right corner of the “Step2 Enter” tab to enter the next operation page, and click the "Step Back" button in the lower right corner of the “Step2 Enter” tab to return to the previous operation page.



(a)Start calibration interface (b)Enter the successful interface

Figure 4 "Enter" button interface diagram

4、Set the type

You can select the calibration type in the “step3 set the type” tab as needed, as shown in Figure 5, click the “Next” button to proceed to the next step.

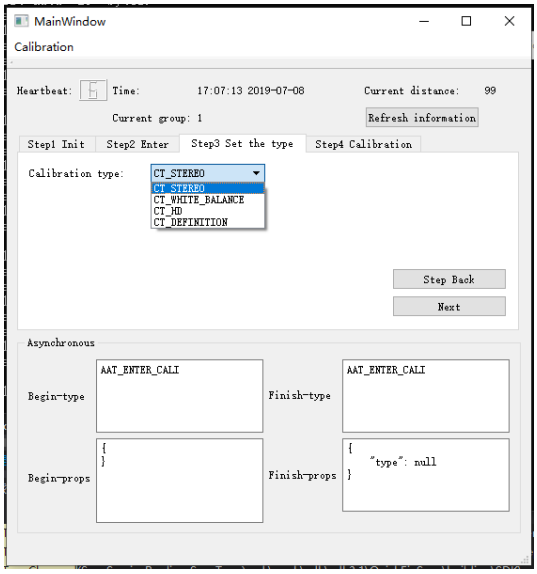


Figure 5 Set the type interface

5、Start calibration

According to the selected calibration type, there are some small differences in the calibration. Here we take the dual target top as an example to introduce the calibration process.The scanner calibration requires five position, five images for each position, and each position scanner should be perpendicular to the horizontal plane. The five positions of the calibration plate are placed horizontally, and the calibration plate is placed on the bracket to fix different sides. The click the “start calibration” button to start the calibration, as shown in figure 6.

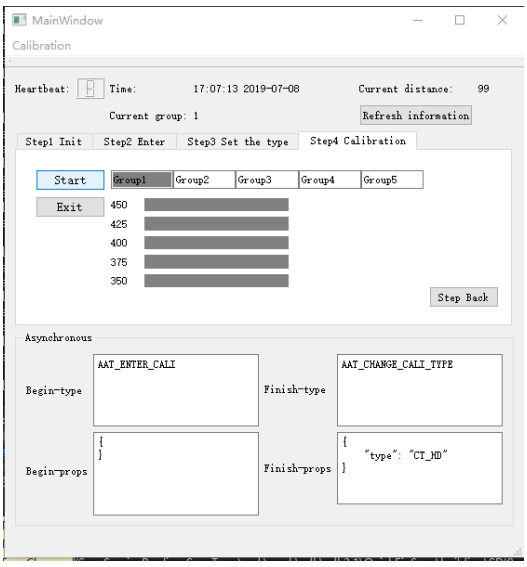


Figure 6 Start calibration interface

To start the calibration, the distance between the scanner and the calibration plate needs to be adjusted. The five indicator bars in the calibration distance frame in figure 6 represent the distance between the scanner and the calibration plate from bottom to top, respectively 350mm, 375mm, 400mm, 425mm, 450mm.

Each group needs to collect different photos of these 5 positions. During the collection process, the LED lights flash, moving the scanner from top to bottom or from bottom to top until the distance bar is filed with green. As shown in figure 7, location image acquisition is complete. In each set of calibration process, the scanner cross or grids should not deviate from white square area in the center of the calibration plate, and the calibration plate should not be moved.

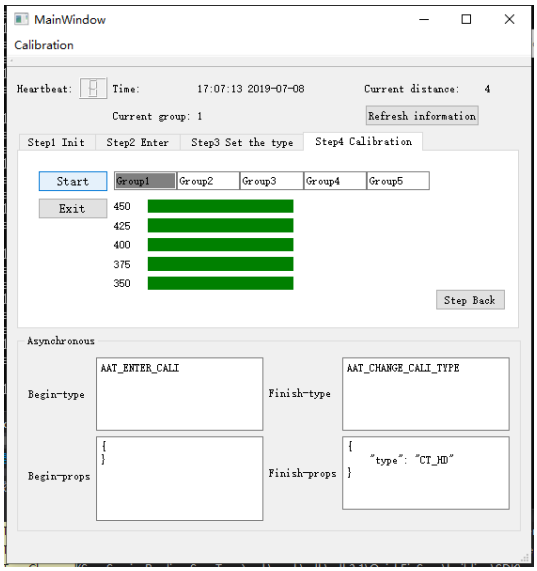


Figure 7 Calibration completes a set of schematics

After a set of data acquisition is completed, it will automatically jump to the next set of calibrations. Adjust the position of the calibration board and click the “Start calibrating” button to start the calibration of current group.

When the 5 groups are calibrated, they will automatically enter the data

processing stage, as shown in Figure 8.When the data is processed, the calibration results are returned and displayed in Finish-props.

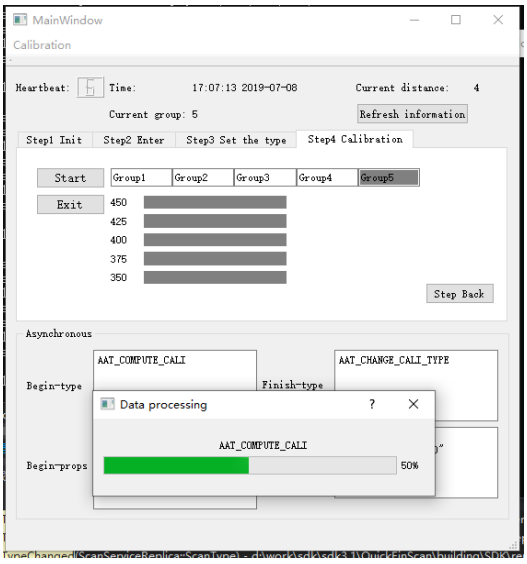


Figure 8 Data post-processing schematic