



DEMO Board and Software User Manual

V1.2



DSP 微控制器、SOC 系统芯片、专用逻辑 IC 的设计以及相关配套软件的开发与销售



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1. Hardware setup

1.1 Power supply mode selection

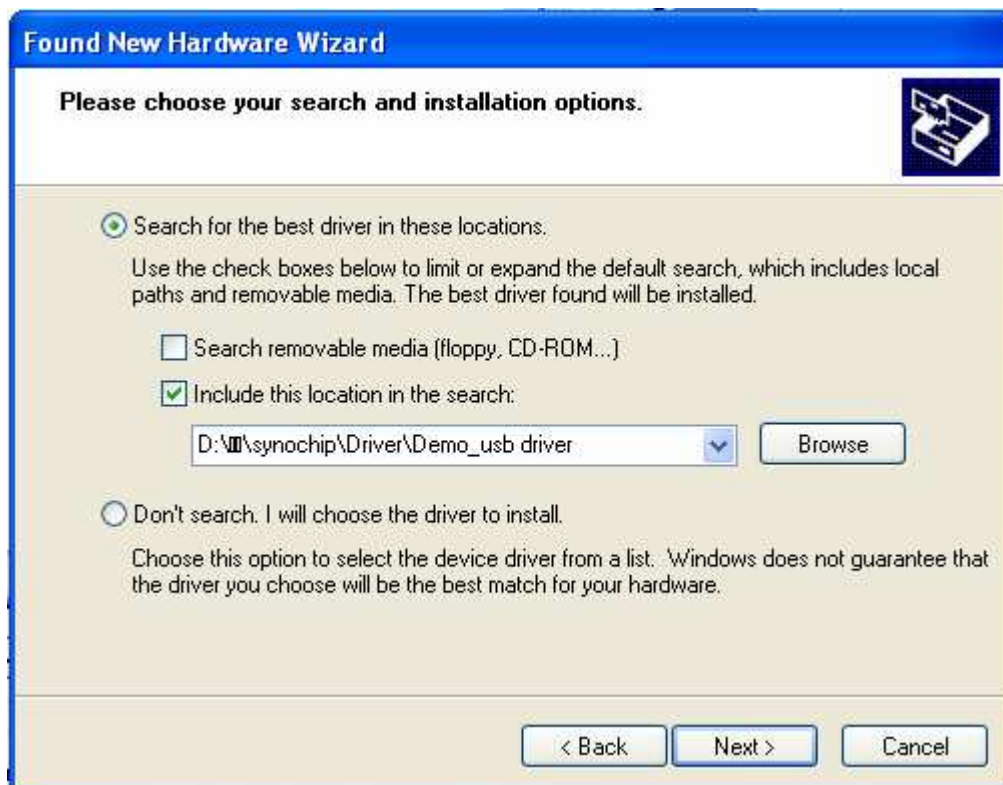
- USB mode: Turn the DIP switch JP1 to “USB”, and then connect PC with DEMO board through USB cable.
- Regulated DC mode: Turn the DIP switch JP1 to “DC5V” and connect the serial port of PC with the one of Demo board through RS232 cable. Then, channel +5V power supply to Demo board power socket J1.

1.2 USB driver setup:

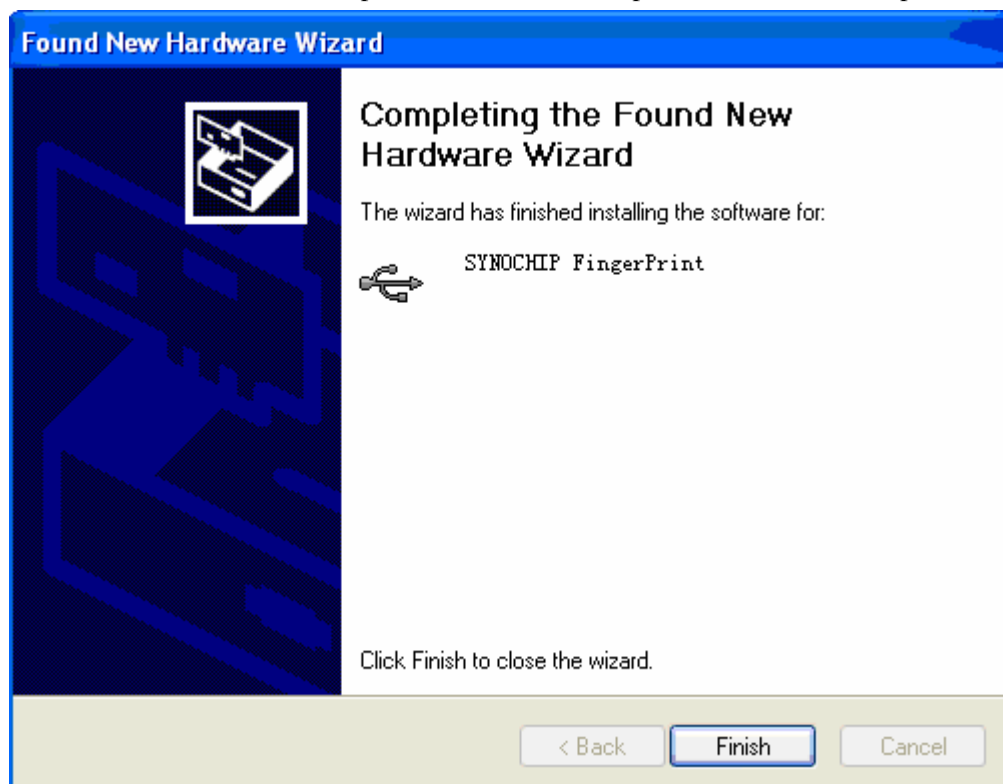
- a) Having connected PC to Demo board through USB, Windows will scan new hardware automatically, while starting up the setup wizard. Click “next” to continue.



- b) Click “browse” to select the USB driver folder and then click “next” to continue.



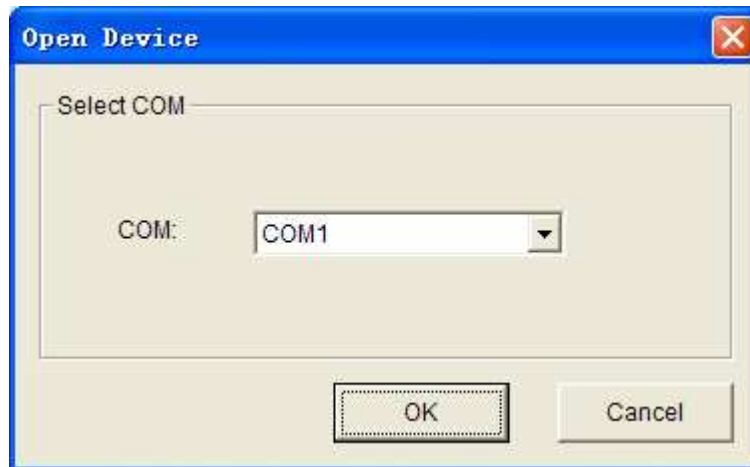
c) Then it will show the completion of hardware setup. Click “finish” to complete this.



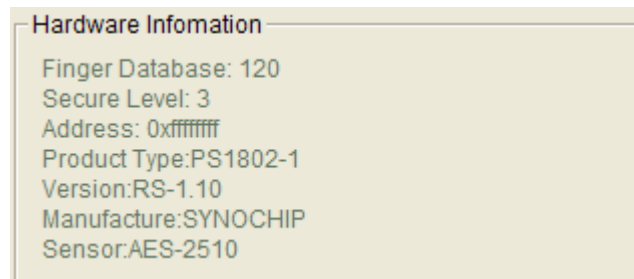


2. Software quick start

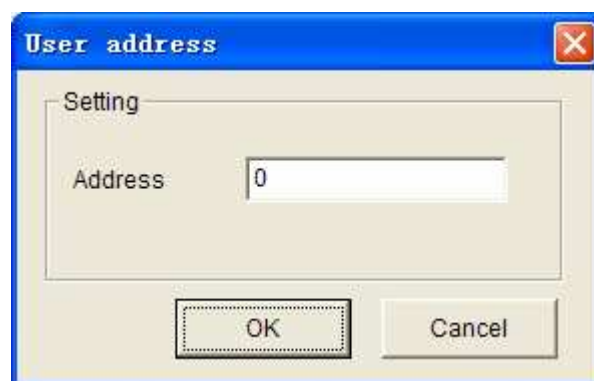
- a) Open device: click “Open device” to Open Fingerprint Demo board, if the device connect to PC by serial port, it will popup the following dialogue, Select the com port then click “OK”



If device has been successfully connected, relevant hardware information will show up above the “Open device” button.



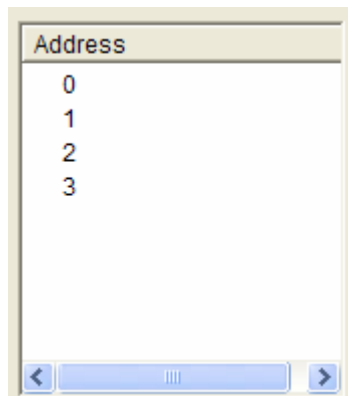
- b) Capture image
Click “Capture”, Demo board will upload the present collected FP image (Fingerprint image) to the display area of the software; Click “Con Capture” to upload the collected fingerprints to the display area continuously.
- c) Fingerprint enrollment
Click “Enroll” to popup “User address” dialogue. Fill the “address”, click “OK” to continue.



According to the prompt on the upper part of the screen, put finger tip on the sensor to input the



first fingerprint. When the extraction of reference points finishes, it will prompt you to put the same finger tip on the sensor again. The software will extract the reference points and combine it with the previous one to complete the enrollment of a fingerprint.



Tips: If you want to enroll many fingerprints successively, click “Con Enroll”. That will relieve you from the repetitive click of “enroll”. Of course you can quit this by select “Cancel operate” .

d) Fingerprint searching

Click “search” button, and put fingertip on the sensor according to the prompt. It searches the fingerprint library automatically and decides if there is one in the library that matches the present inputting fingerprint. At finding, a prompt will popup with the information of both FP ID and time consumed.

**Find same finger! ID = 0,
Used:15 ms**

Tips: you can run FP searching continually by click “Con Search” and quit the process by “Cancel operate”.

e) Delete fingerprint.

- Delete a single fingerprint

In “Match” section, choose one FP templet, and click “Delete” to delete the FP templet.

- Delete whole FP library:

Click “Empty”.

3. Introduction to Demo software and its main functions

3.1 Initialization:

3.1.1 Open device

For USB communication, just click “OK” with the default port selection; for serial communication, firstly select serial port and then click “OK”



3.2 Device configuration

- 3.2.1 Delete: Delete the selected FP templet in the FP library;
- 3.2.2 Empty: Clear the FP library;

3.3 Prompt information:

- 3.3.1 Cancel operate;
- 3.3.2 Exit: close the software.

3.4 Image management

- 3.4.1 Capture: Get one FP image from the device
- 3.4.2 Con Capture: Get FP images from the Demo's memories continuously;
- 3.4.3 Save image: Save current collected image to specified location;
- 3.4.4 Download image: Download a FP image to device, and Show the FP image at the display area.

3.5 Enroll fingerprint

- 3.5.1 Enroll : Enroll one FP to specified location of the FP library;
- 3.5.2 Con Enroll: Enroll FPs continuously to sequential locations of the FP library;

3.6 Match

- 3.6.1 Match: Select the FP templet to be matched, and put the fingertip on the sensor for FP matching.
Matching information will show up in the upper area.
- 3.6.2 Search: Search templet in the library and compare it with the current collected FP image.
Searching information will show up in the upper area.
- 3.6.3 Con Search: Search templet in the library continuously and compare it with the current collected FP image. Searching information will show up in the upper area.

3.7 Special utility

- 3.7.1 Read notepad: Read the notepad content from flash of the Demo board and display them on PC screen.
- 3.7.2 Write notepad: Modify the notepad content from flash of the Demo board
- 3.7.3 Random: Get random number and display them in the upper area.
- 3.7.4 Valid templet: Get the number of valid templets in the FP library.
- 3.7.5 Capture Image DB: Set up FP library and collect FP image and save it continuously to the specified location according to user's setting.



3.8 Deal with Image

- 3.8.1 Path: Specify the absolute path for image loading
- 3.8.2 Source: Obtain the original image of the setting path.
- 3.8.3 Thin image: Obtain the thinned image of the specified image.
- 3.8.4 Bi Image: Obtain the binary image of the specified image.
- 3.8.5 Template image: Obtain the thinned characteristic image of the specified image.