



DWIN COF Screen User Manual

2022/2/11

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V7.624.exe

DGUSII



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Video tutorial

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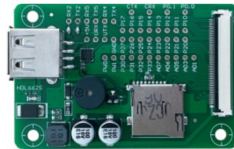
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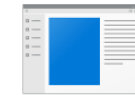
Common tools



HDL662S
Adapter board



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ED4 USB
Download driver

FAQ



FAQ合集.docx

COF screen FAQ

1 Software



T5L_DGUSII_V7.624

*For V4.0 and above kernel.

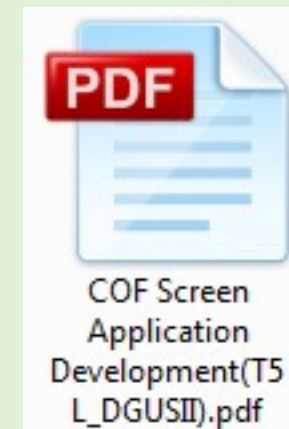
3 Video tutorial



How to use development
software to create GUI
projects.

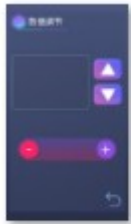
2 User manual

COF Screen Application Development(T5L_DGUSII) introduces
the user interface functions and hardware configuration methods.

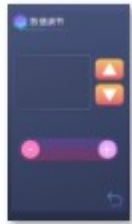


How to make GUI

1 Prepare image files in jpg & bmp format



0.jpg



1.jpg

The resolution of background images should be consistent with the screen.



0.jpg



1.jpg



2.jpg



3.jpg



4.jpg



5.jpg



6.jpg



7.jpg



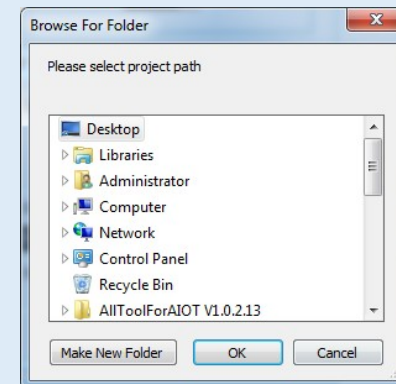
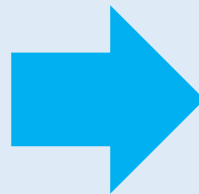
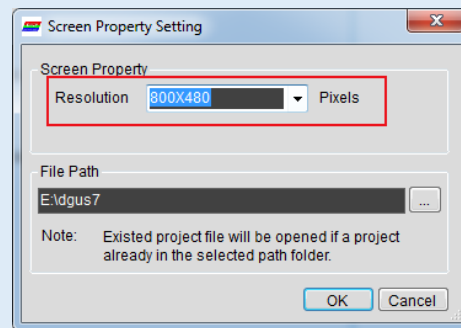
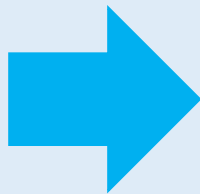
8.jpg



9.jpg

Icon file

2 Open the DGUS V7.624 and create a new project



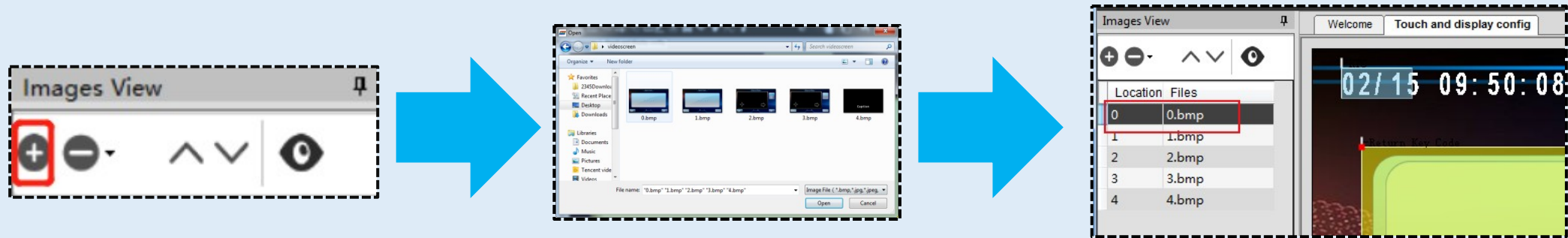
Refer to the video tutorial for more details

New → Set the resolution
→ Set the saving path

How to make GUI

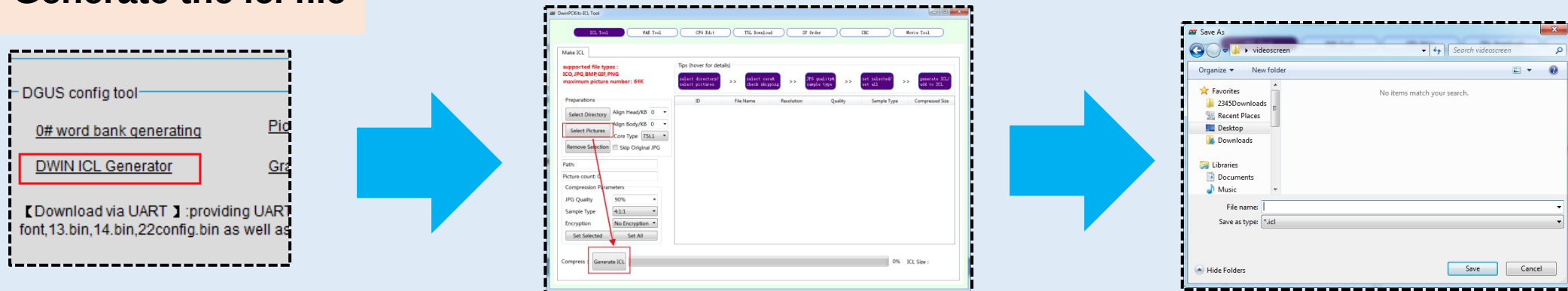
3 Import the background images

Click “+” → choose the images → successful import



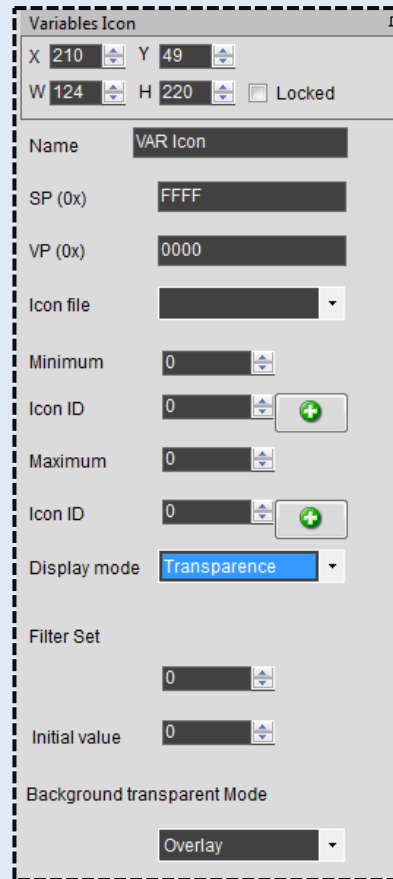
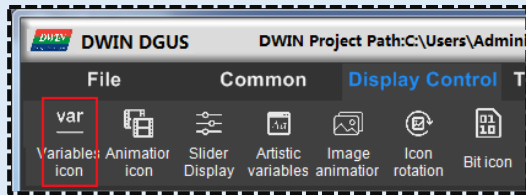
4 Generate the icl file

Click the icl generator → click generate → set the saving path



How to make GUI

5 Set the display control

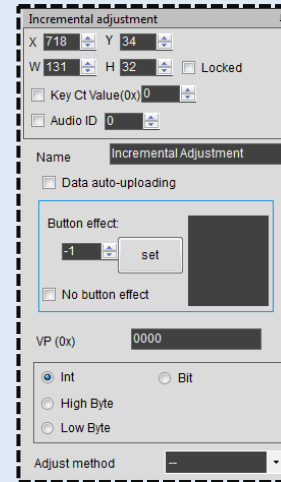
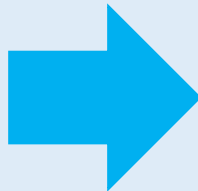
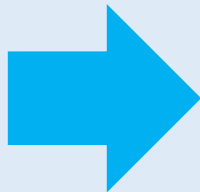
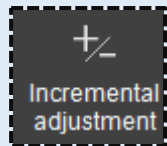


Select the variable icon control → Set its range on the background image → Click it to view and set the properties.

For detailed descriptions of each control, refer to the **"T5L_DGUSII Application Development Guide"** in the **"Additional Information"**.

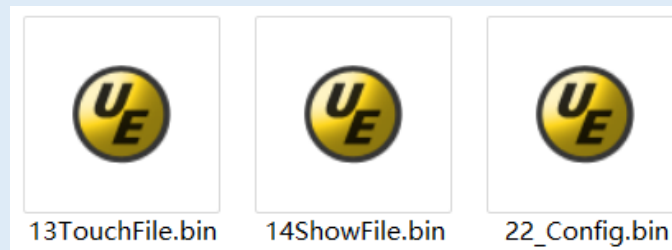
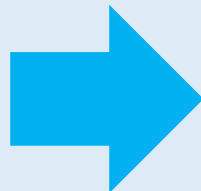
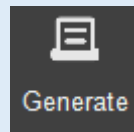
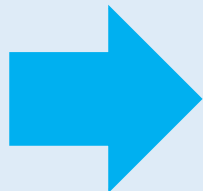
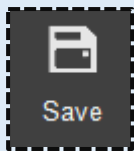
How to make GUI

4 Set the touch control



Select the incremental adjustment control
➔Set its range on the background image
➔Click it to view and set the properties.

5 Click Save and Generate

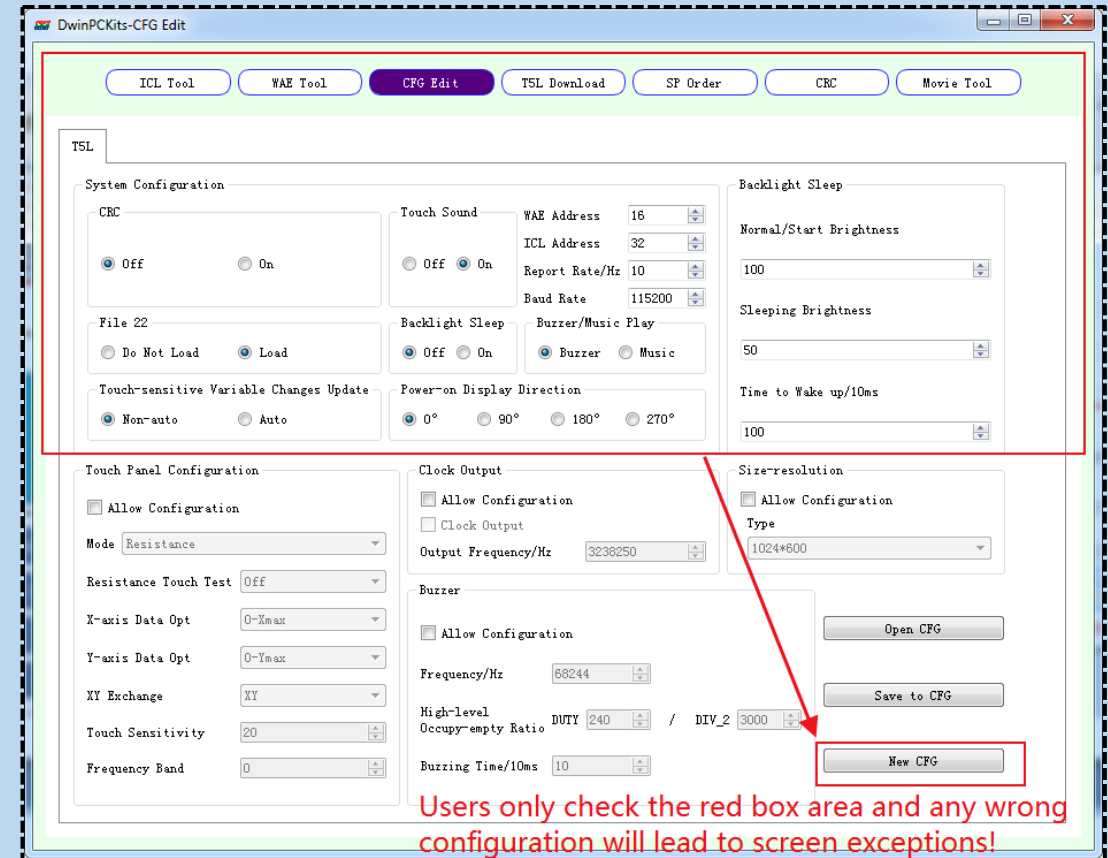
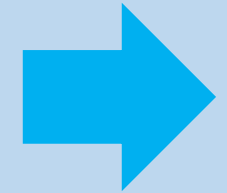
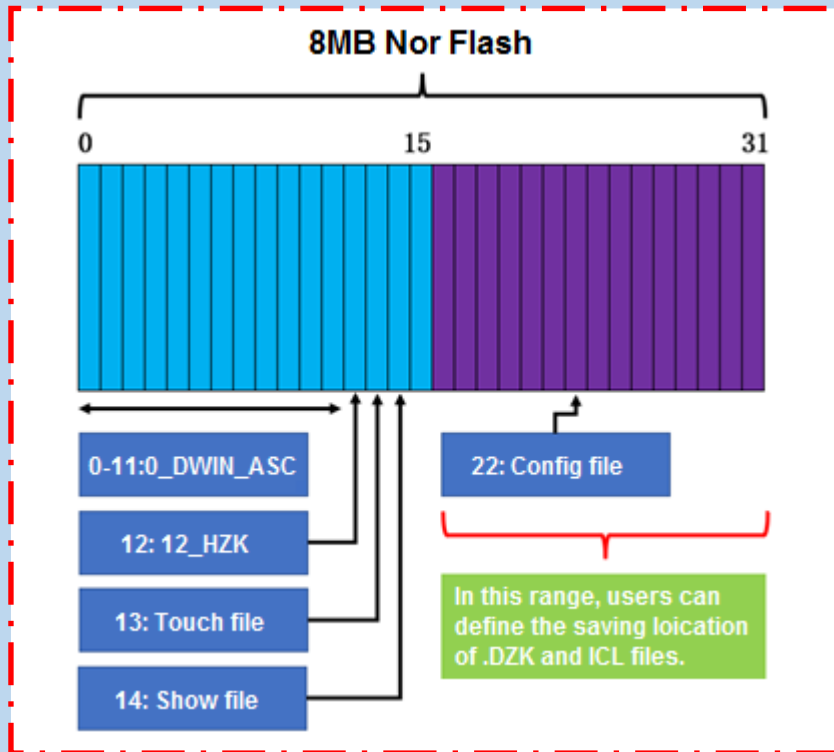
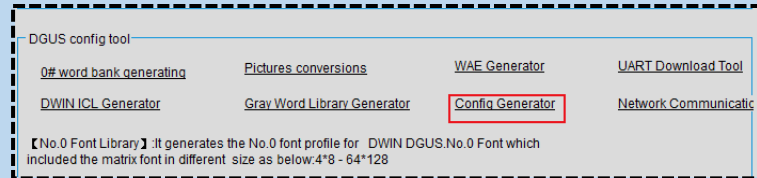


The generated configuration Files will be saved in the DWIN_SET folder.

How to make GUI

8 Set the CFG file

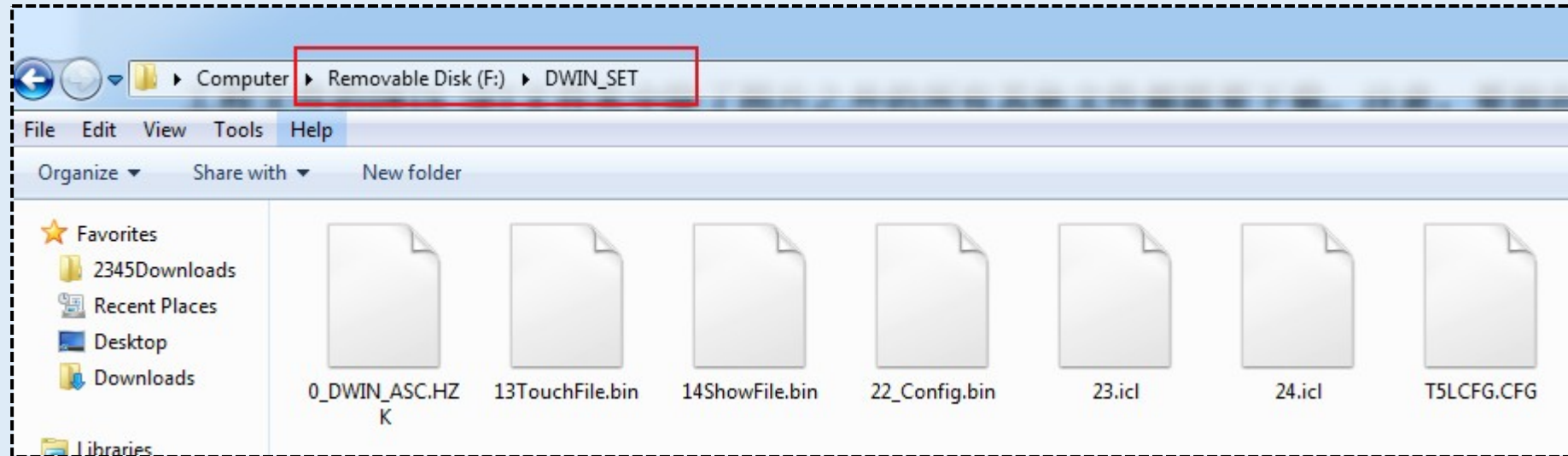
Find the Config generator → Set the WAE and ICL location → Create a new CFG file and name it "T5LCFG.CFG"



Users only check the red box area and any wrong configuration will lead to screen exceptions!

How to make GUI

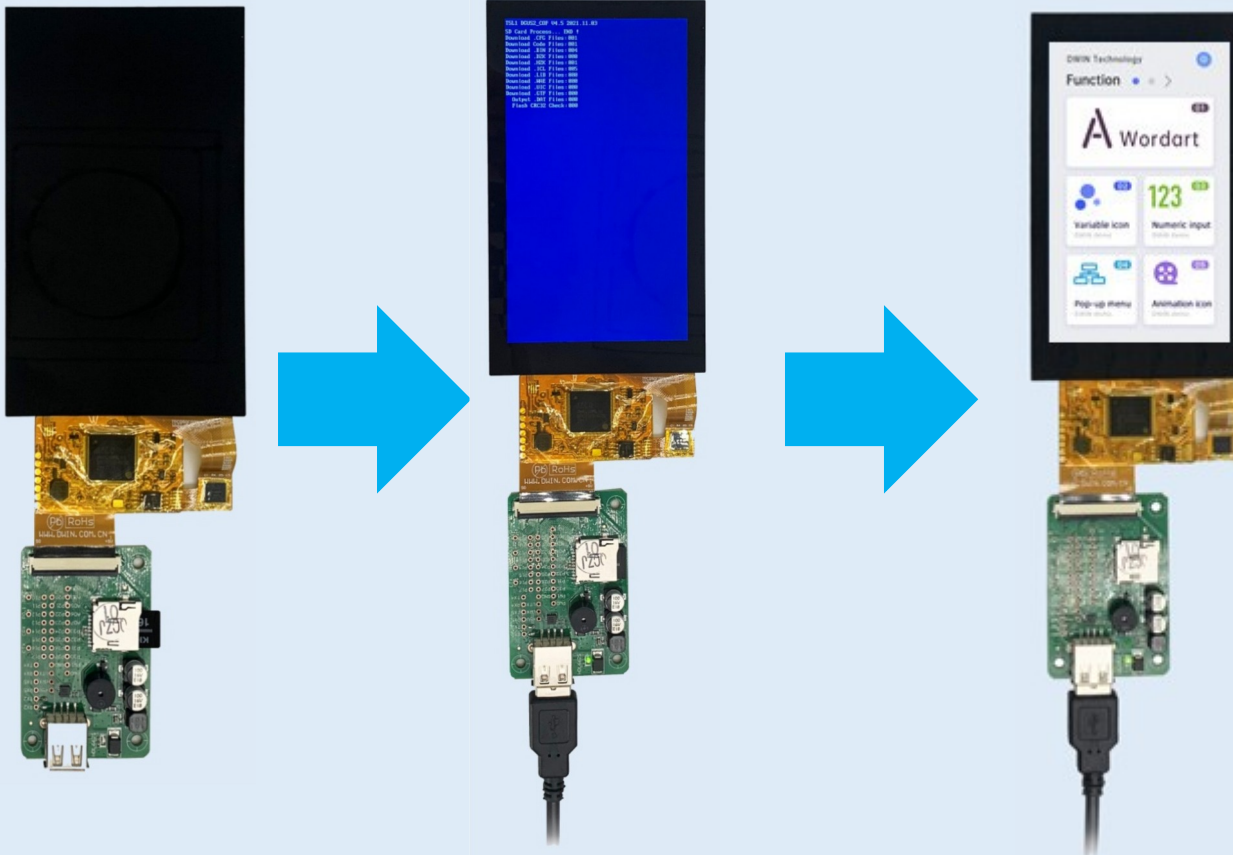
9 Download the configuration files to the SD card



**All the configuration files need to be downloaded.
Note that they should be placed in the DWIN_SET folder of the SD card.**

How to make GUI

10 Download the GUI file



The wiring diagram and tools are in "Common Tools" section.

Insert the SD card
→ Power up the screen
→ Pull out the SD card and re-power up the screen

OS Development Materials

1 Software



Osbuild 3.0.2.6

For assembly development

2 C51 Tool



DownloadFor8051

*** The C51 files generated by Keil development are converted to bin files by this tool**

3 OS Development Guide



For assembly development

***The original OS program will remain after the DWINOS.bin file is downloaded, and UART2 can be used normally.**

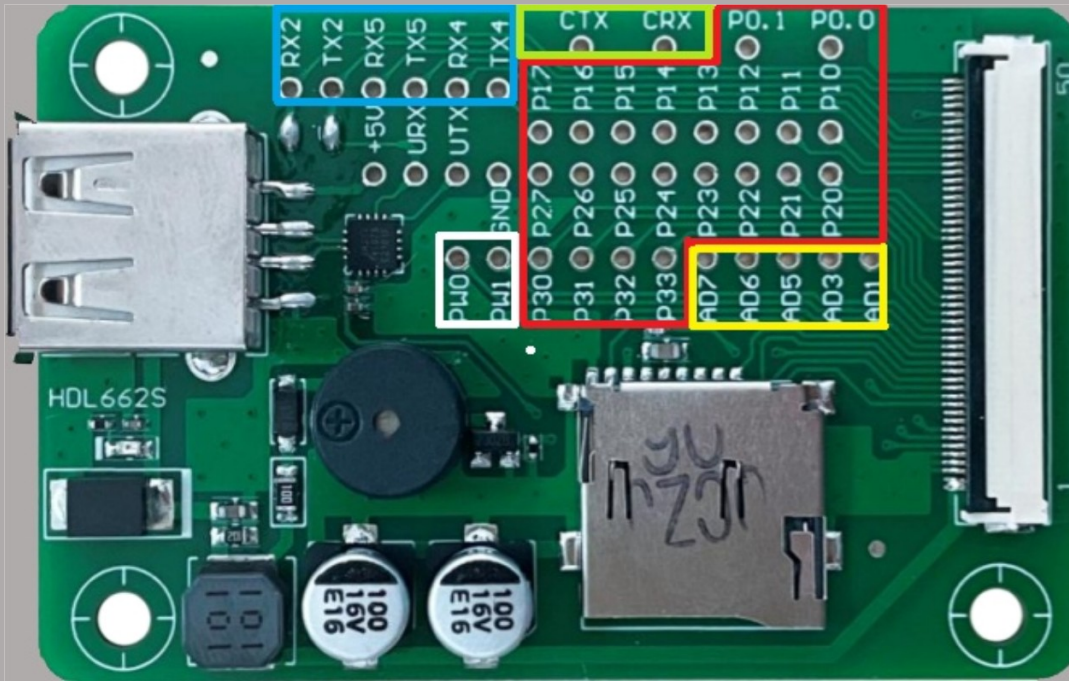
4 Development Guide of T5L ASIC



It describes the usage of OS core and T5L peripherals, including AD, PWM, IO, CAN and UART.

COF Screen Interface

The HDL662S adapter board can be used to connect the USB interface to the SD card interface and lead the signal out to the 2.54mm adapter board.



3 UARTs

1 CAN

2 PWM

22 IOs

5 ADs

By UART2, users can communicate with GUI via the 5AA5 command; UART4/5 can be used after parsed.

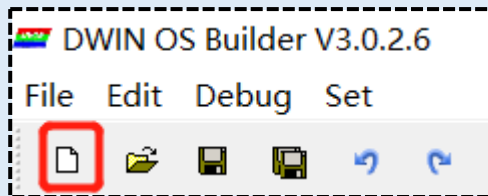
The usage of IO interfaces are similar to the MCU. (Refer to the video tutorials in OS development materials)

The development of 2PWMs and 5 ADs are detailed in the COF screen development guide.

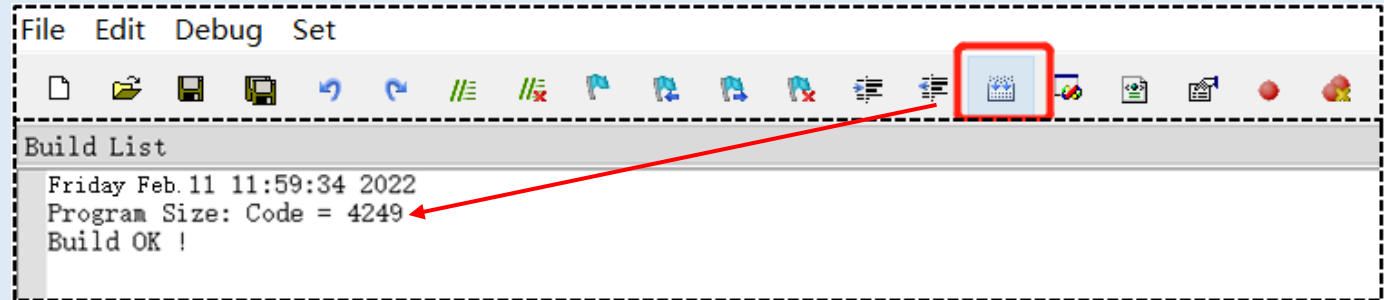
Refer to “COF Screen Application Development(T5L_DGUSII)” for more details.

How to develop OS

1 Assembly development method



```
1 ORG 1000H The following command will be put in 0x1000.
2 GOTO MAIN Jump to MAIN.
3 NOP      No operation.
4 NOP
5 NOP
6 ORG 1080H
7
8 MAIN:
9 NOP
10 NOP
11 NOP
12
13 END
```



Create a new project
→ Write OS program
→ Click compile and the program automatically generates the bin file.

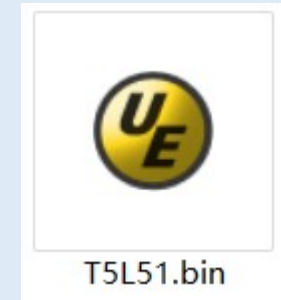
When finished, users can use the SD card to download the DWINOS.bin file.

How to develop OS

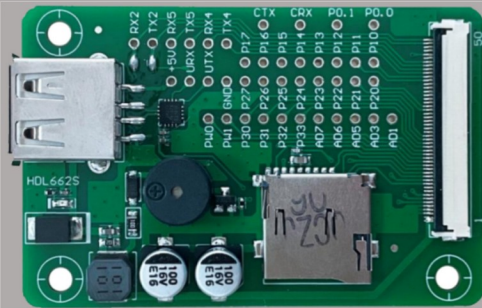
2 Keil development

C51 compile → Open DownLoadFor 8051 → Choose C51 program, and click HEX to BIN to generate the configuration file.

***COF screen does not support this tool to download the T5L51.bin file.**



1 HDL662S adapter board



HDL662S is an adapter board designed for DWIN COF screens.

It leads to the user CPU core of 22 IOs, 3 UARTs, 1 CAN, 5 ADs, 2 PWMs. It supports USB power supply and communication by UART2/4/5 and the default is UART2.

It supports download and update all configuration files by SD card.

2 ED4 USB downloader



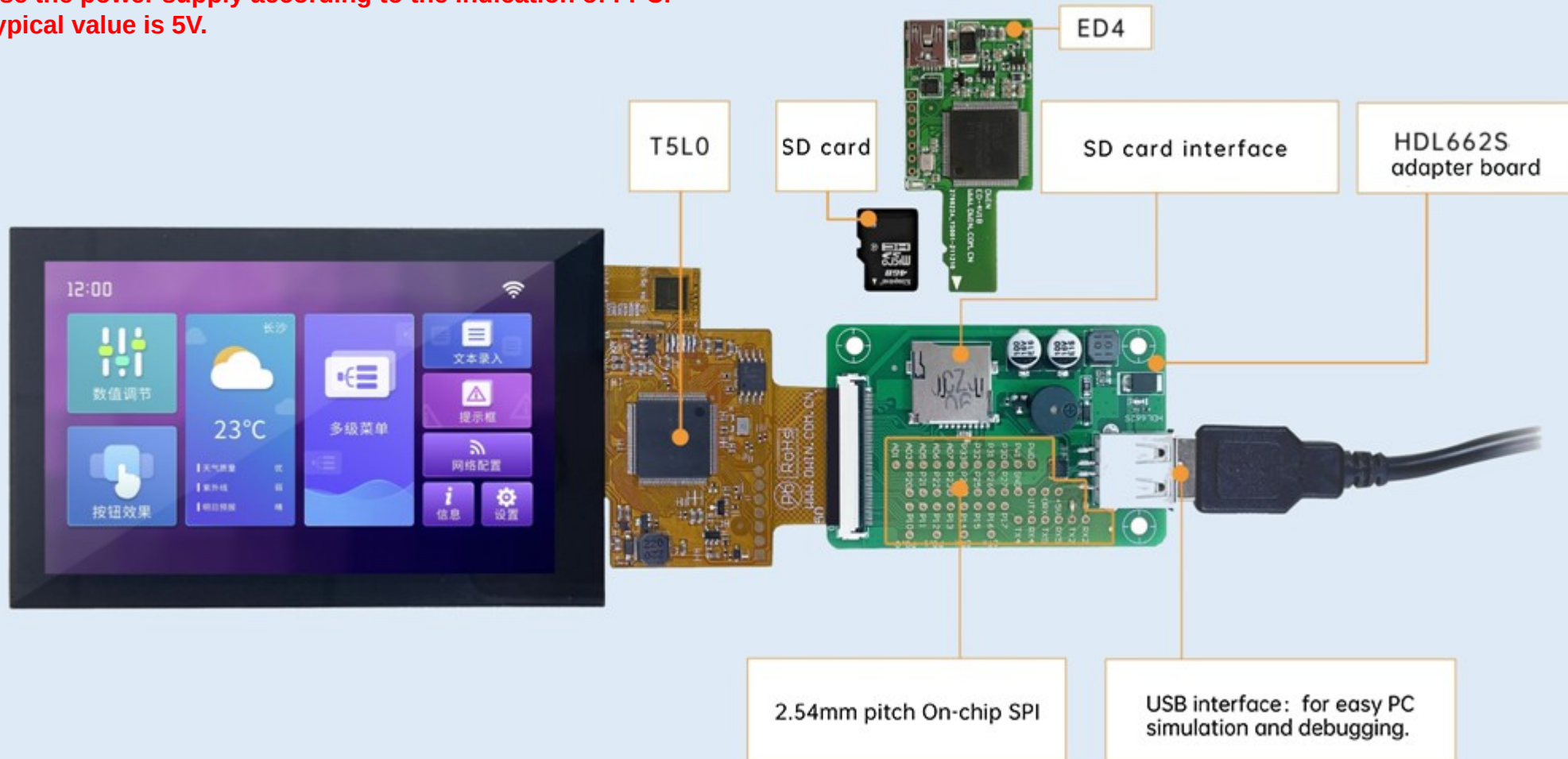
ED4 uses the virtual serial communication protocol to communicate with screen through SD card slot in the virtual serial port mode of 8N1 on the PC side, with a fixed baud rate of 8Mbps.

It can download and update files online without re-powering, which is faster and more stable.

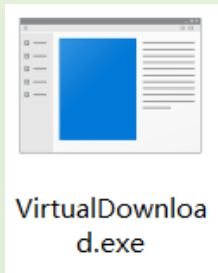
***Both ED4 and SD card are used to download and update files.
ED4 can restart automatically without powering the screen off and up.**

The Wiring Diagram

***Choose the power supply according to the indication of FPC.
The typical value is 5V.**



1 ED4 USB downloader

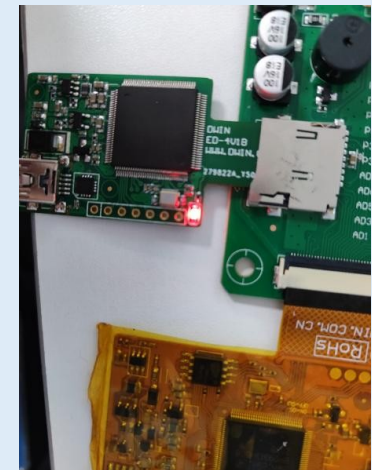


Based on ED4 USB downloader, the attached ED4 can be downloaded (baud rate fixed at 8Mbps) to quickly accomplish the update of configuration files and communication debugging.

2 ED4 download method

Open the software → Click Refresh the UARA → Click Open UART → Select files → Click Start download → The screen will reboot after success download.

***Note that underlying files and CFG file can not be downloaded.**



Q1: Why images can't be displayed or black screen/screen flicker occurs after the DEMO files are downloaded?

COF screen uses 8MB Flash. Thus, according to T5L DGUS storage rules, the storage ID range of the font space is 0-31. When the ID of DEMO files beyond the storage range will cause screen maloperation.

Q2: The FPC is frequently bent when in use, now the touch does not work / screen does not light up.

The FPC should be used carefully for frequent bending will shorten its service life.

Q3: The ID of ICL file is within the range, but the background images can not display in right way.

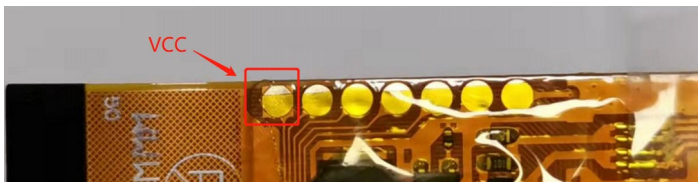
Check whether the CFG file settings are consistent with the ID of the ICL file.

Q4: Why is the screen unable to communicate after downloading the C51 file?

The C51 file will override the factory OS underlying program, making UART2 fail to communicate. Therefore, you need to parse the UART by yourself or use DWIN Osbuild 3.0.2.6 to do the secondary development in assembly

Q5: During the SD card download, the screen was mistakenly powered off and the screen went black. Now, it can't download.

The screen cannot be powered off during the download process. In that case, you need to re-burn the underlying files by the T5L-JTAG burner PGT05 to burn the underlying files or send the product back to the customer service department.



Point marked in the diagram is the positive pole of the power supply