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Key words	KEIL Virtual Serial Port screen, on-line debugging
Summary	

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1. Scope

This document is for all large color screen serial products.

2. Development Environment version

1 . VisualTFT Software version: V3.0.0.944 And above version View:

        a) Open the software chart 2-1 The software version lower right corner of the display.

        b) turn on VisualTFT Click Help -> About VisualTFT You can view the current software .

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Map 2-1 Software version

2. Serial screen hardware version: V3.0.287.0 And above version View:

      a) Check the version number sticker on the back screen.

      b) VisualTFT After the success of the online screen, the version number displayed in the lower right corner.

3. Functional Overview

KEIL The software has simulation capabilities, VisualTFT The virtual serial port can be achieved with screen KEIL FBI simulation program, this feature can greatly reduce the download in the process of developing a program to MCU The number of times, thereby reducing MCU Program development time.

This document focuses on how to achieve VisualTFT The screen with virtual serial port KEIL Simulation engineering FBI.

4. FBI simulation tutorial

VisualTFT The screen with virtual serial port KEIL FBI simulation project mainly consists of the following 4 Achieved in stages:

1. Create a virtual serial port;

2. Configuration KEIL Engineering properties;

3. Serial Configuration screen works;

4. FBI demonstration program.

4.1 Create a virtual serial port

VisualTFT The screen with virtual serial port KEIL Engineering FBI needs to implement virtual serial port associated pair of. software

VSPD Generate a virtual serial port driver software, you can create virtual serial port pair of two linked by the software.

4.1.1. Install the virtual serial port software

If the software has been installed VSPD This section can be skipped. Installation steps are as follows:

1. In the official website of our company and software development kits have provided a virtual serial port software VSPD Installation package, FIG. 4-1 Shown;

vspd.exe	2014/3/30 23:14	应用程序	5,490 KB
vspdctl.dll	2011/12/16 17:42	应用程序扩展	3,820 KB
使用前必读.TXT	2014/12/9 14:07	文本文档	1 KB

Map 4-1 VSPD Installation package

2. run vspd.exe Install the software, select the default path, click Next until the installation has been completed, as 4-2
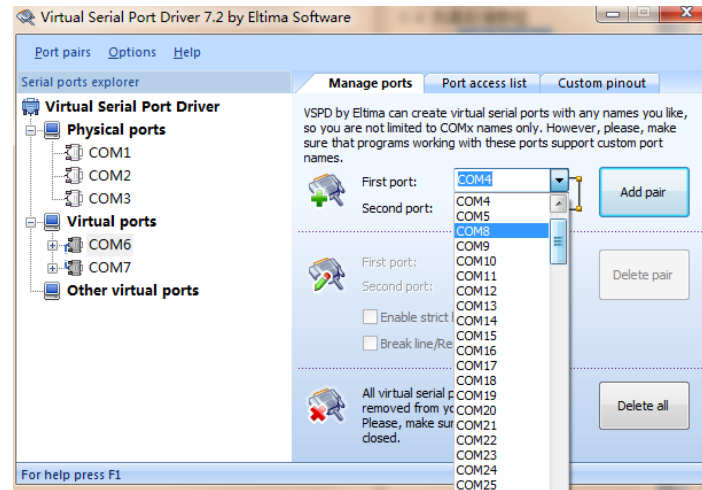
Shown;

Map 4-2 Software Installation

4.1.2 Create a virtual serial port

Open the virtual serial port software, select com6 with com7 Click on Add pair Generate a pair of associated virtual serial port, create virtual serial port

Figure 4-3 Shown;

Note: virtual serial number and serial number can not repeat that already exists, otherwise it will lead to the serial port does not work, try a virtual

serial number programmed in 10 Within the virtual serial port number exceeds 10 Time, KEIL It may not support a software emulation.

Map 4-3 Creates a virtual serial port

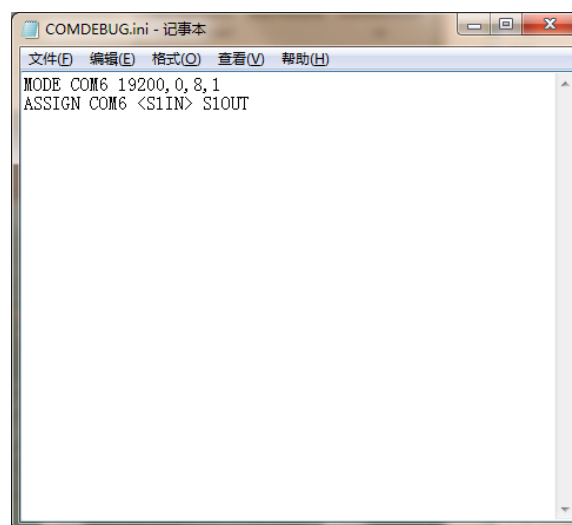## 4.2 Configuration KEIL Project Properties

In the previous chapter we have generated a pair of virtual serial port COM6 with COM7 , Then we need to KEIL Simulator serial port mapped to COM6

Virtual serial port connected to the screen COM7 , And then through some configuration attributes, both can be done online. Steps are as follows:

1. create COMDEBUG.ini Profiles

1) in KEIL Under the program works in any directory, create 1 A notepad, named: COMDEBUG.txt And FIG.

4-4 Write command as shown in the following two lines in the text:

MODE COM6 19200,0,8,1 ASSIGN

COM6 <S1IN> S1OUT

Map 4-4 Write configuration file

The first 1 Function is to set the command line COM6 The property, set the baud rate 19200 , No parity, 8 Place

Data bits, 1 Stop bits; the first 2 Command line functions of the software simulator is mapped to a serial port COM6 . Special Note: Different MCU

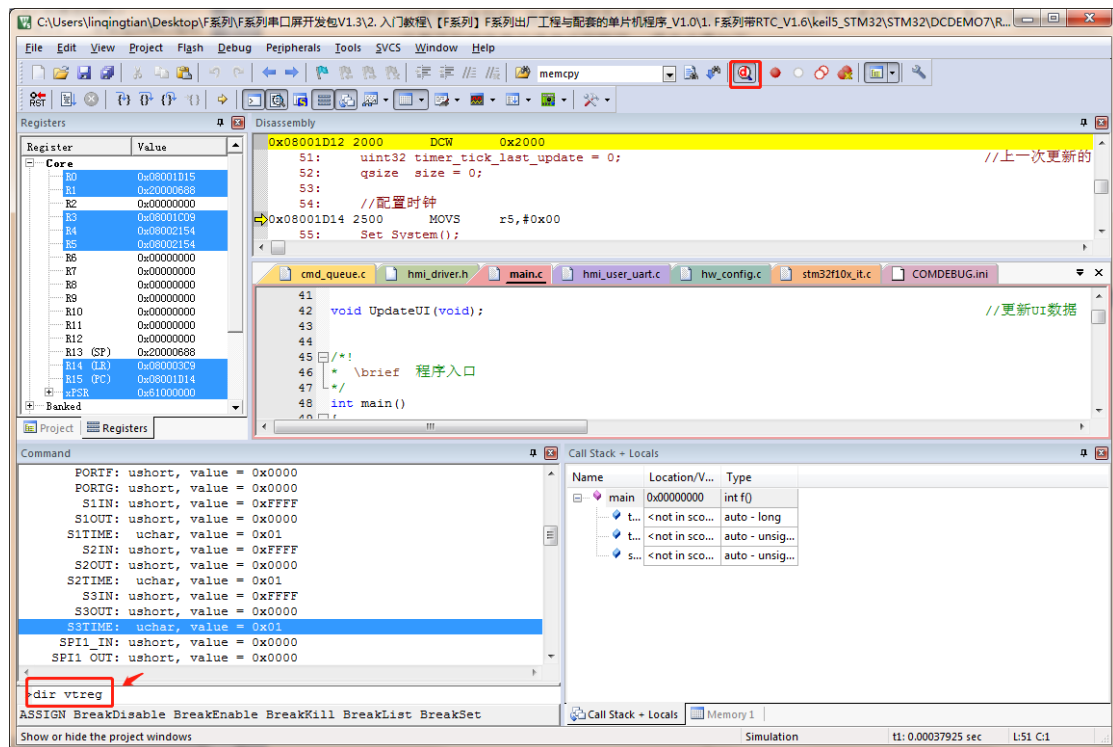The above ASSIGN Statement there are subtle differences, as follows:

> ARM series MCU : ASSIGN COM6 <S1IN> S1OUT 8051 series MCU
>
> : ASSIGN COM6 <SIN> SOUT STC series MCU : ASSIGN COM6
>
> <S0IN> S0OUT

Tip: ARM MCU series may have multiple serial ports, click the Debug menu [] button to enter debug state, and then in the lower left corner of the window KEIL engineering input "dir vtreg" That can view the serial number of the current MCU emulation support, shown in Figure 4-5 shown;
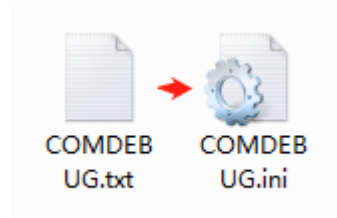
When using a different port, modify the corresponding serial port, such as serial port using a 2, S1IN to S2IN, S1OUT to S2OUT.

Map 4-5 Check the serial port emulation

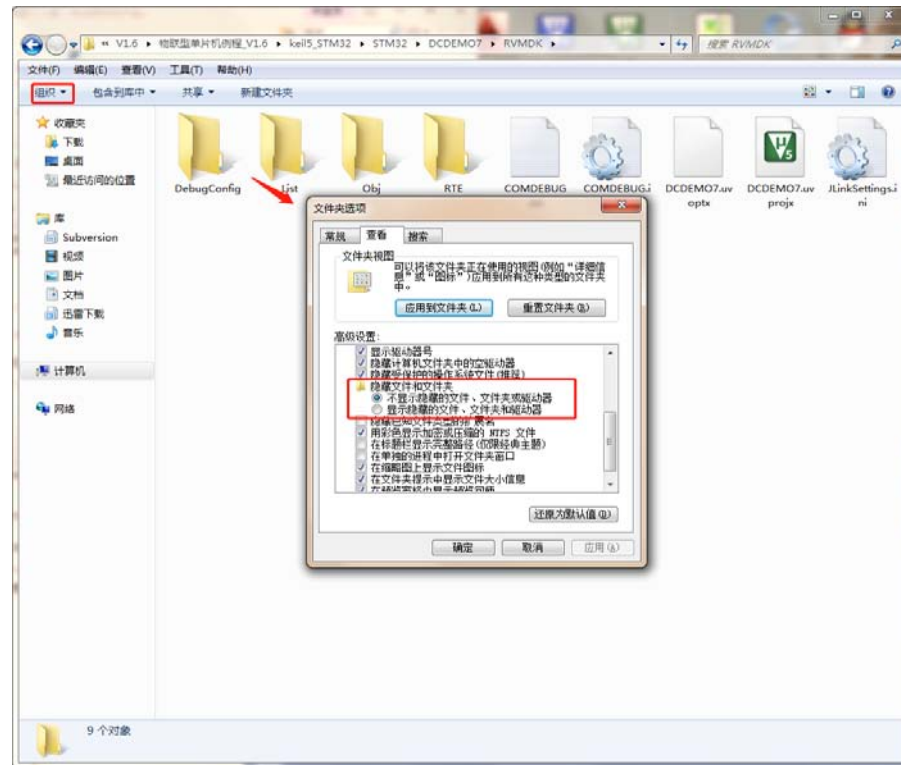2) modify COMDEBUG.txt Name suffix COMDEBUG.ini This completes the configuration file is created, as

4-6 Shown;

Map 4-6 Modify extension

Tip: If the notebook is not displayed on the computer this suffix .txt extension, can enter the folder selection, remove
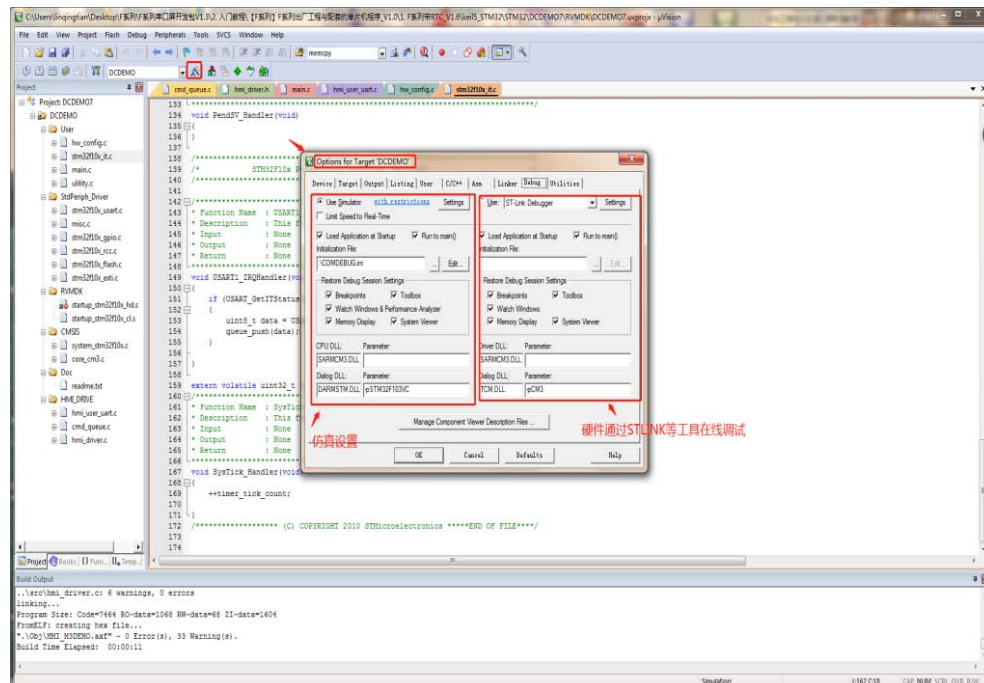
" Hide extensions for known file types " ,Such as Map 4-7 Fig. For WIN7 system, click File column " organization " ,select " Folder and Search

Options " , To eject the configuration interface, such as Map 4-7 Fig.

Map 4-7 Display extension

2. turn on KEIL Project, click on the toolbar [Options for Target], And select the popup window [Debug] Configuration,
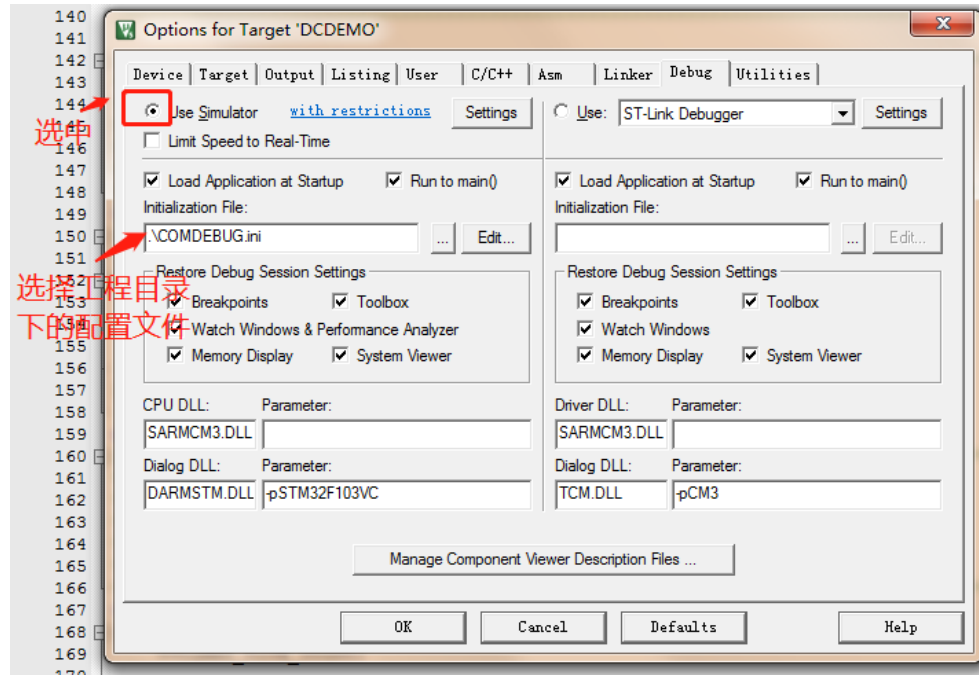
Figure 4-8 Shown;

Map 4-8 Debug

3. in 【 Debug 】 Configuration is selected in the left " Use Simulator "And the project directory COMDEBUG.ini Configuration
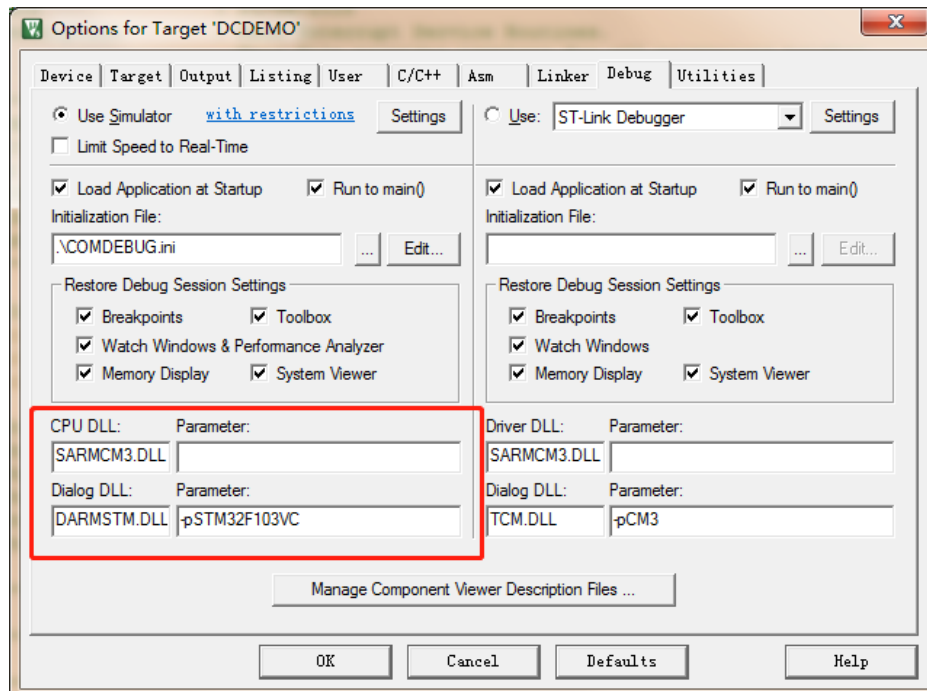
Files added to the " Initialization File ", As 4-9 Shown;

Map 4-9 Debug Configuration

Then modify the following window CPU Simulation parameters:

1) CPU DLL :change into SARMCM3.DLL ;

2) Parameter : Empty the contents inside;

3) Dialog.DLL :change into DARMSTM.DLL ;

4) Parameter : - pSTM32F103VC (Here chip simulation models). Configuration shown in Figure 4-10
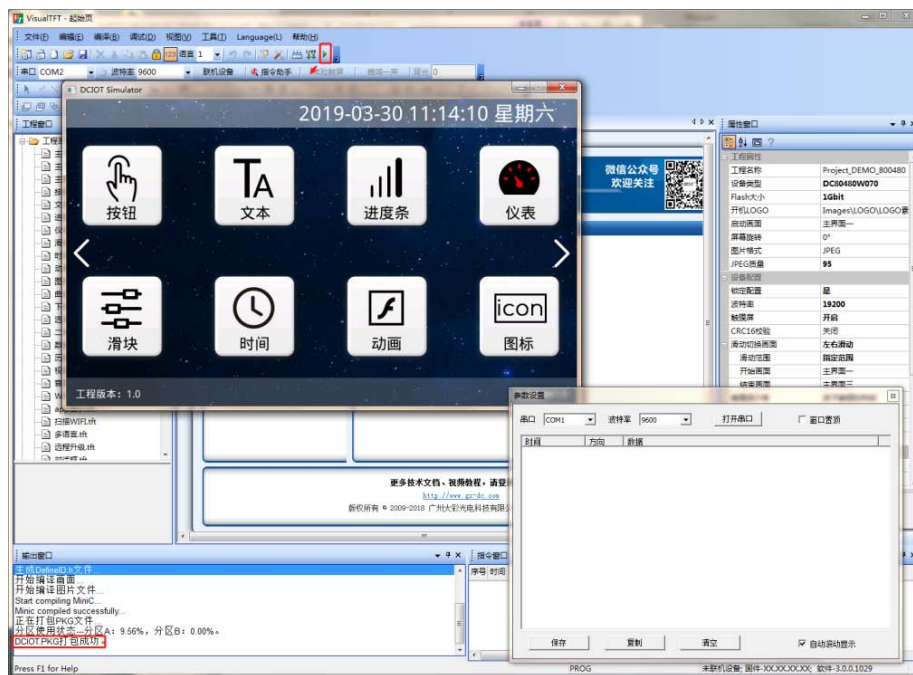
Fig.

Map 4-10 CPU Simulation Properties

4.3 Configuration screen virtual serial port

use VisualTFT Serial configuration project to compile and run screen after successful build, the screen will automatically run a virtual serial port, as 4-11 Fig.
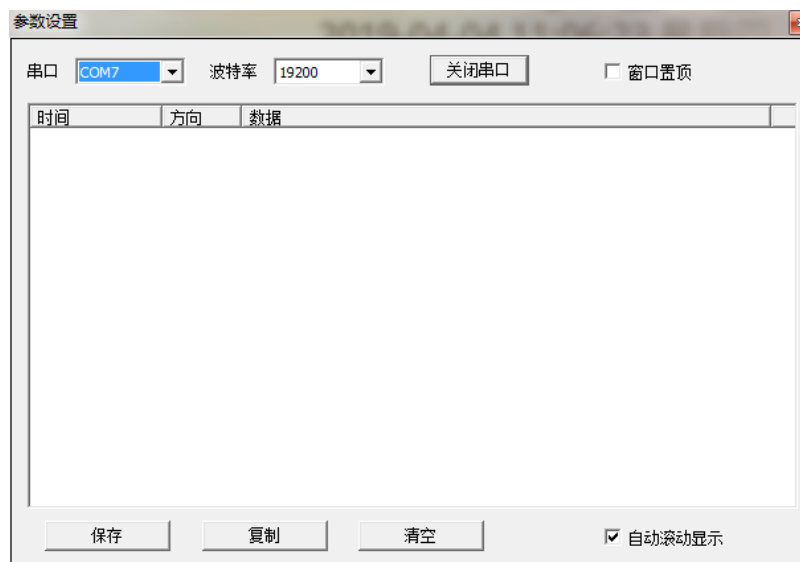

Map 4-11 Run virtual serial port

1. Virtual serial port settings screen "serial port" for the COM7 "Baud rate" for the 19200 (Baud rate COMDEBUG.ini
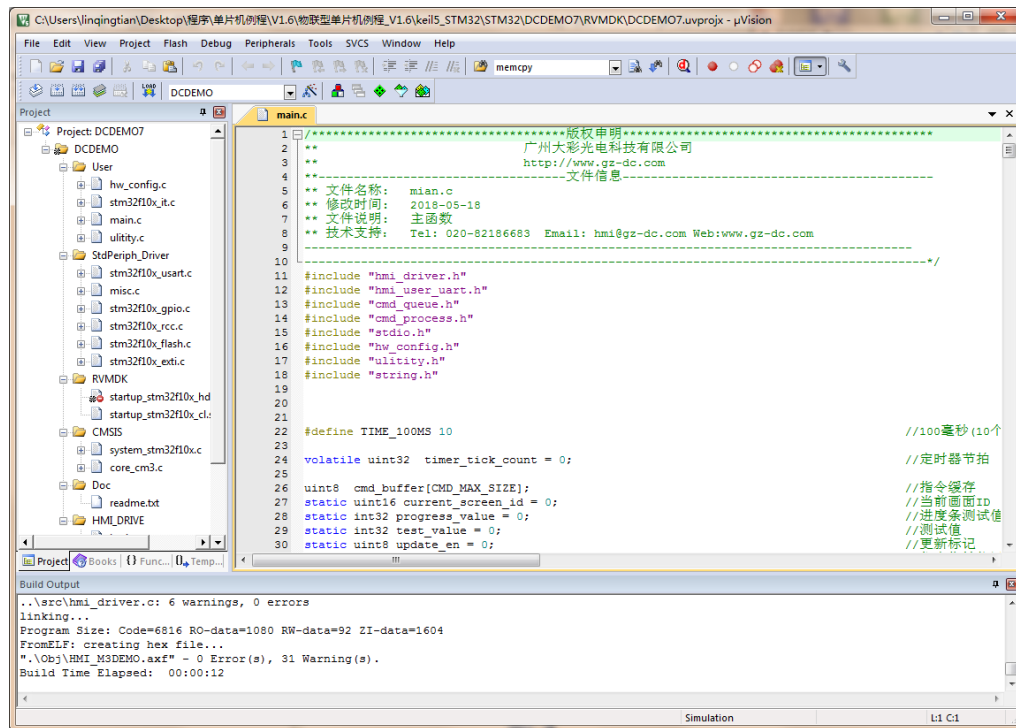
The same configuration file baud rate), and then click "Open serial port" as 4-12 Fig.
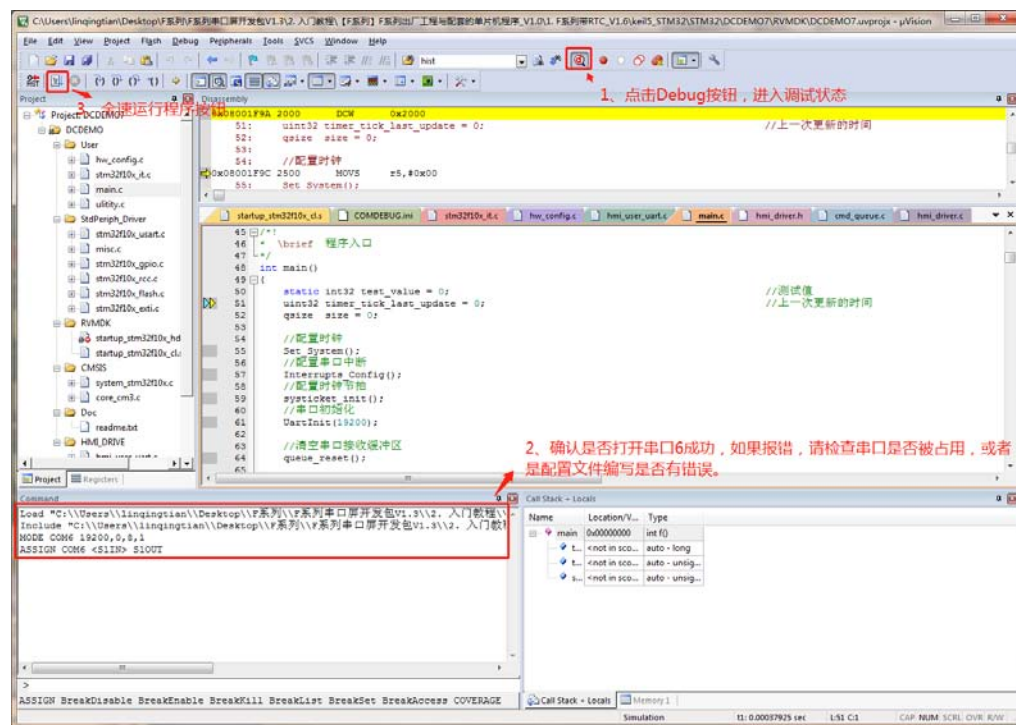

Map 4-12 Virtual serial port

4.4 FBI demo program

1. Click Compile KEIL Engineering, engineering error is determined, as 4-13 Shown;
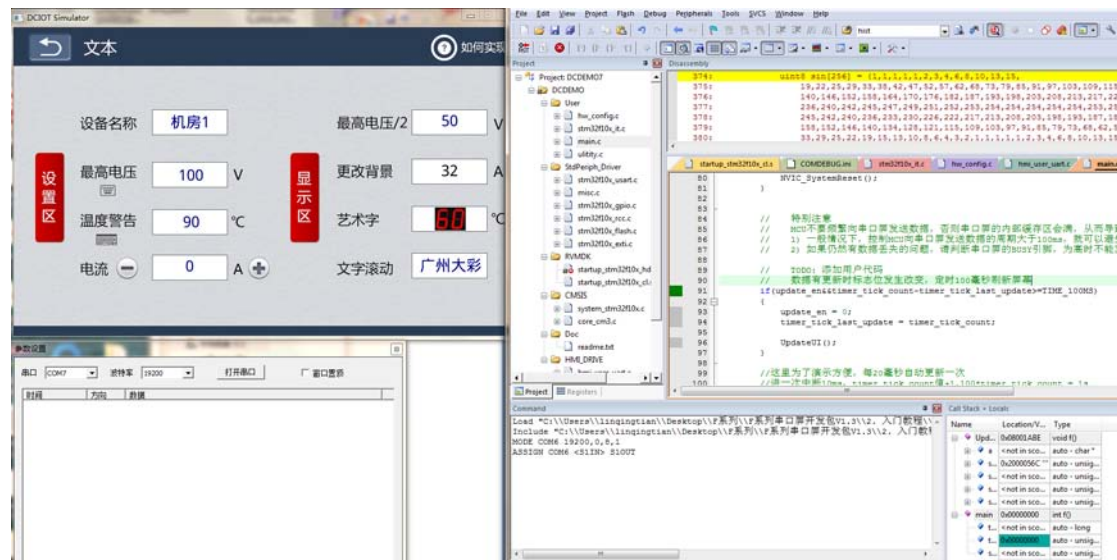
Map 4-13 Compile the project

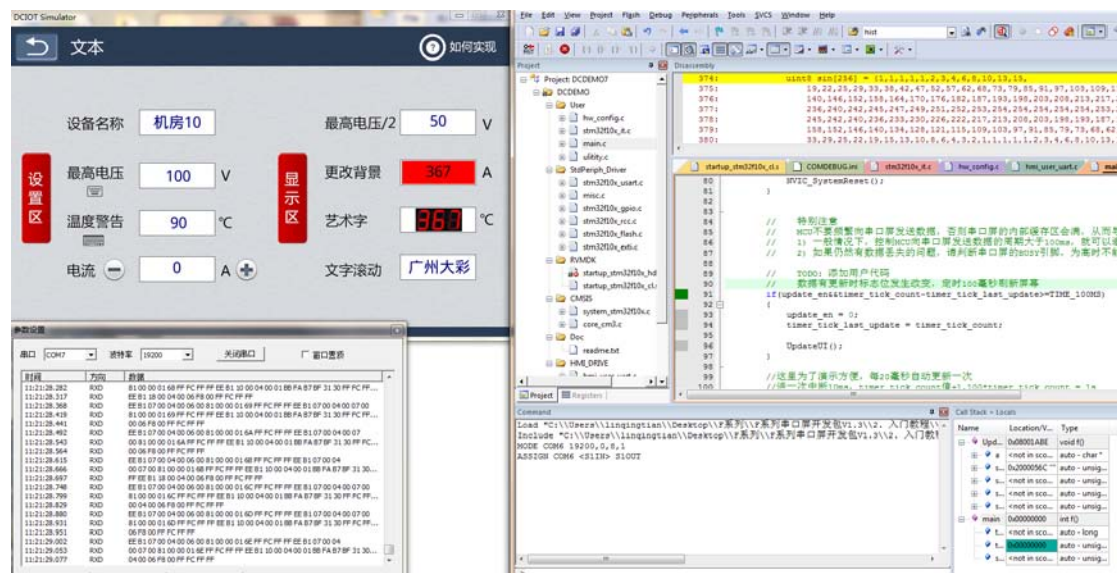2. After successful compilation, click Debug Button, as 4-14 Shown;

Map 4-14 Open Debug debugging

3. After the program starts to run at full speed, the effect of FIG. 4-15 And 4-16 Fig.

Map 4-15 No communication status

Map 4-16 Communication

4 . At this point, KEIL Screen with virtual serial port connection is successful, the user can start KEIL Serial debugging procedures and screen projects.

5. Disclaimer

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