RT-THREAD W60X SDK Quick Start

RT-THREAD Document Center

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This document will introduce the basics of the W601 IoT Board and the w60X SDK. It will also help developers get familiar with the contents of the W60X SDK. structure, and can run the sample programs provided by the SDK.

1 Introduction to the W601 IoT Board

The development board has rich onboard peripheral resources, as shown in the figure below:

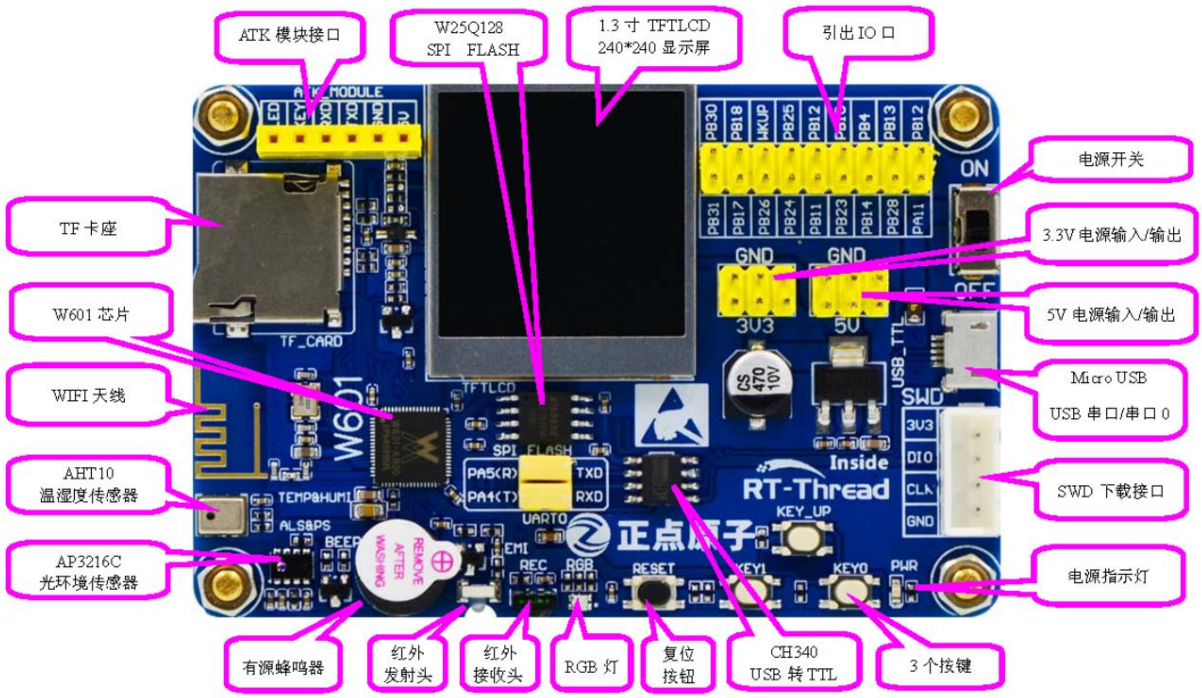

Figure **1:** *W601 IoT Board*

2 W60X SDK Description

The directory structure of the W60X SDK is as follows:

name	illustrate
docs	Documentation
drivers	Development board driver file
examples	Sample Program
libraries	Library Files
rt-thread	rt-thread source code
tools	Tool Catalog

The example programs provided for the development board are stored in the examples folder. The following will take the first example program as an example to introduce how to Run the sample program provided by the SDK.

3 MDK compilation and download

3.1 MDK Preparation

The sample programs in W60X SDK provide MDK and IAR projects, and support GCC development environment. The following is developed with MDK

Using the environment as an example, we will introduce how to run the sample program. Before running the sample program, you need to do the following preparations:

1. MDK development environment

We need to install MDK-ARM 5.24 (official version or evaluation version, 5.14 and above are all available), which is also the most popular version.

A newer version that provides relatively complete debugging capabilities. For installation instructions, refer to Keil MDK Installation.

2. Connect the development board to the PC

- Connect the SWD port of the development board to the J-Link, and then connect the J-Link to the PC.
- Use a micro usb cable to connect the UART0 of the development board and the other end of the micro usb to the PC.

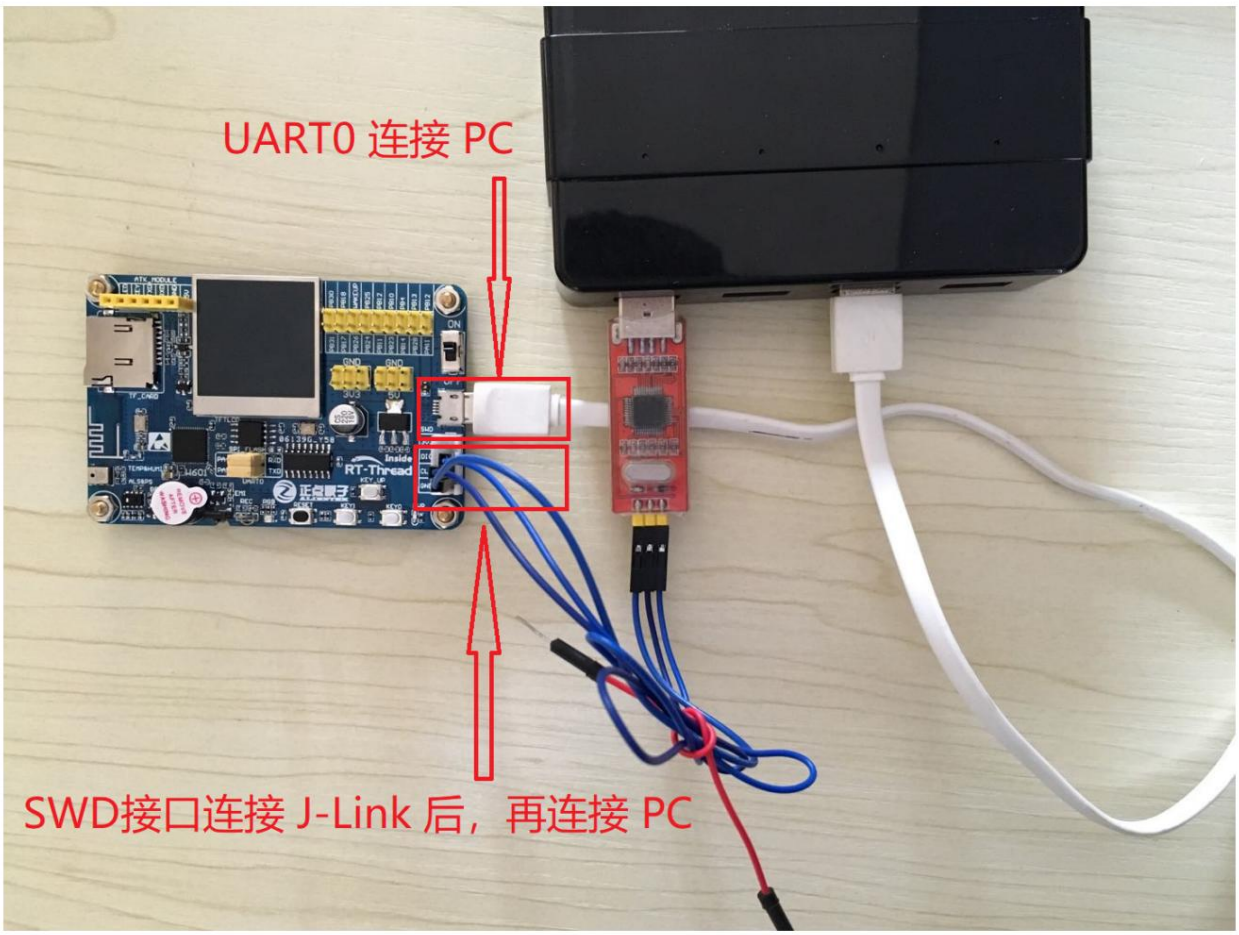

Figure 2: Development Board Connection PC machine

3. Copy and download algorithm

ÿ RT-Thread_W60X_SDK/ libraries/ WM_Libraries/ Doc/ W60X_QFLASH_Driver_for_SWD/

Copy the W60X_QFlash file to the Flash path of the Keil directory.

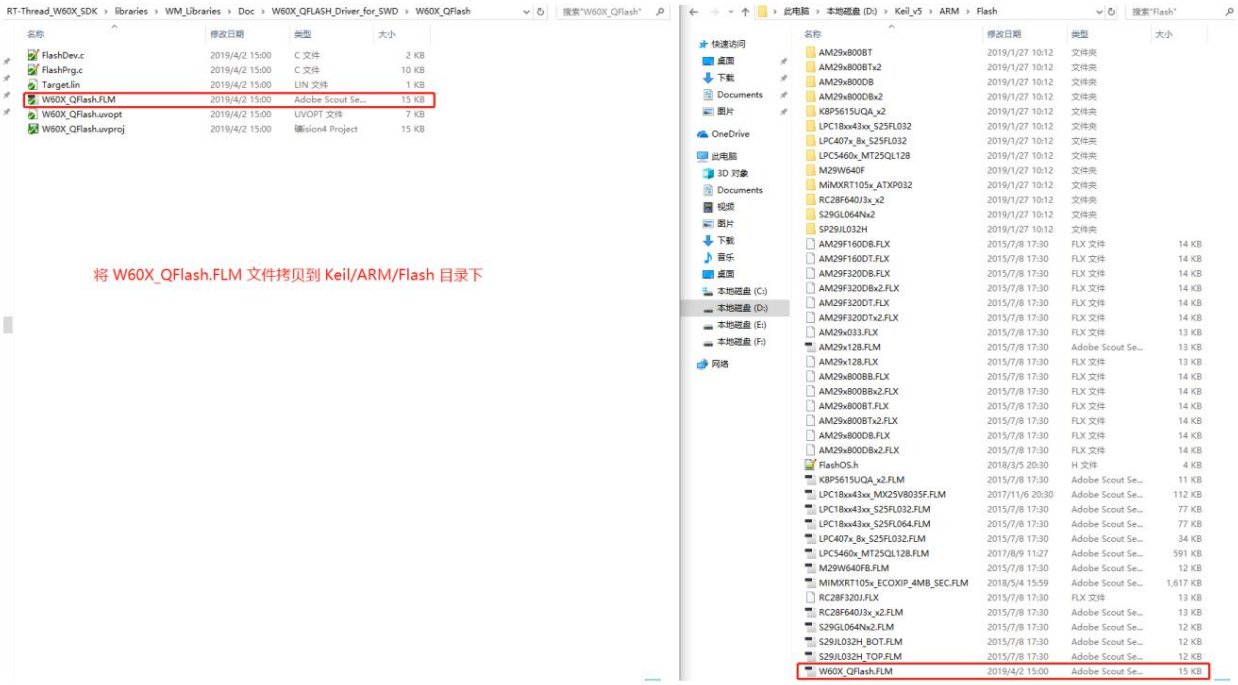

Figure 3: Copy download algorithm

3.2 MDK runs the first sample program

Go to the examples/01_basic_led_blink folder, double-click the project.uvprojx file, open the MDK5 project, and execute

After the compilation is complete, click the Download button to download the firmware to the development board and observe the program running status.

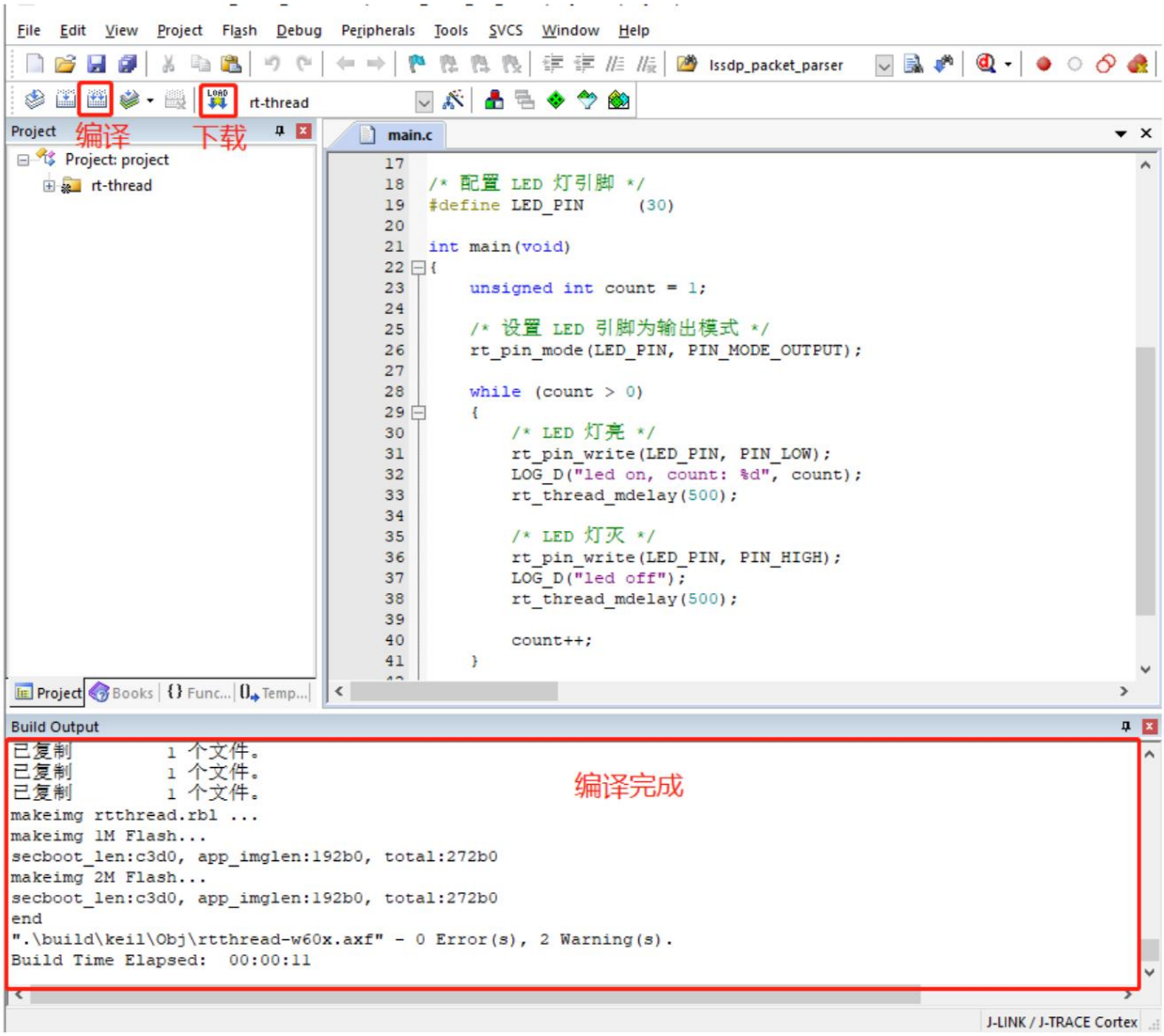

Figure 4: Compiling the first example program

Press the reset button to restart the development board and observe the actual effect of the RBG-LED on the development board. After normal operation, the LED light will flash periodically.

As shown in the following figure:

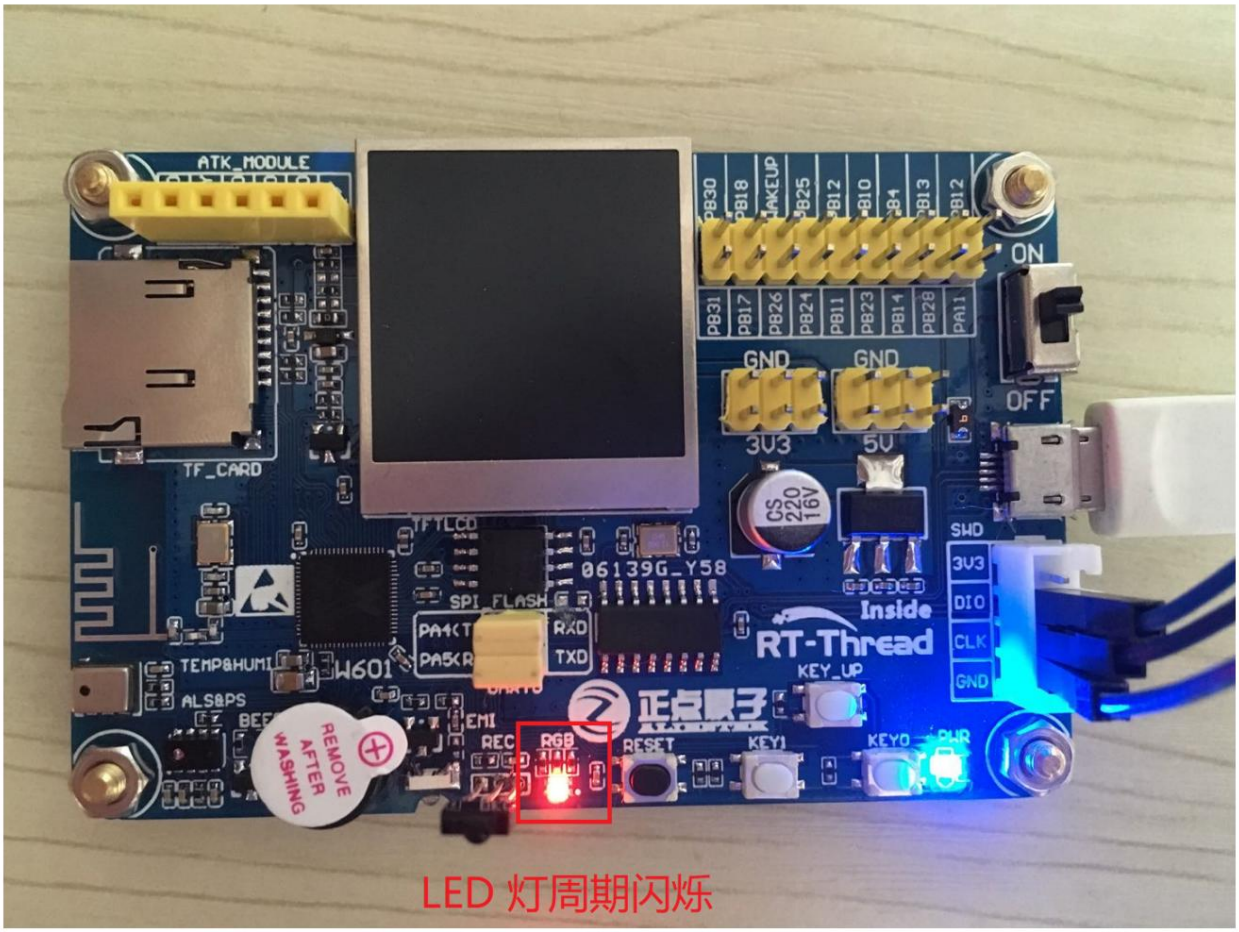

Figure **5:** *LED* Light flashes periodically

The usage of the remaining routines is the same. After understanding how to run the routines, you can run and learn the subsequent routines.

- The MDK download checksum cannot be deleted, otherwise it may cause application disorder

3.3 Notes

If the download fails or the flash is illegally erased, etc., only download the legal firmware through the serial port protocol.

Refer to RT-Thread_W60X_SDK/libraries/WM_Libraries/Doc/WM_W600_ Firmware Upgrade Guide_V1.1.pdf