WB32F10x-EVAL
User Manual

Westberry Technology (ChangZhou) Corp., ltd
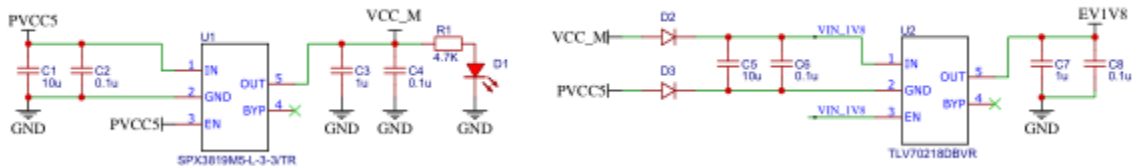
Contents
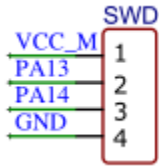
1 EVAL Board Photo
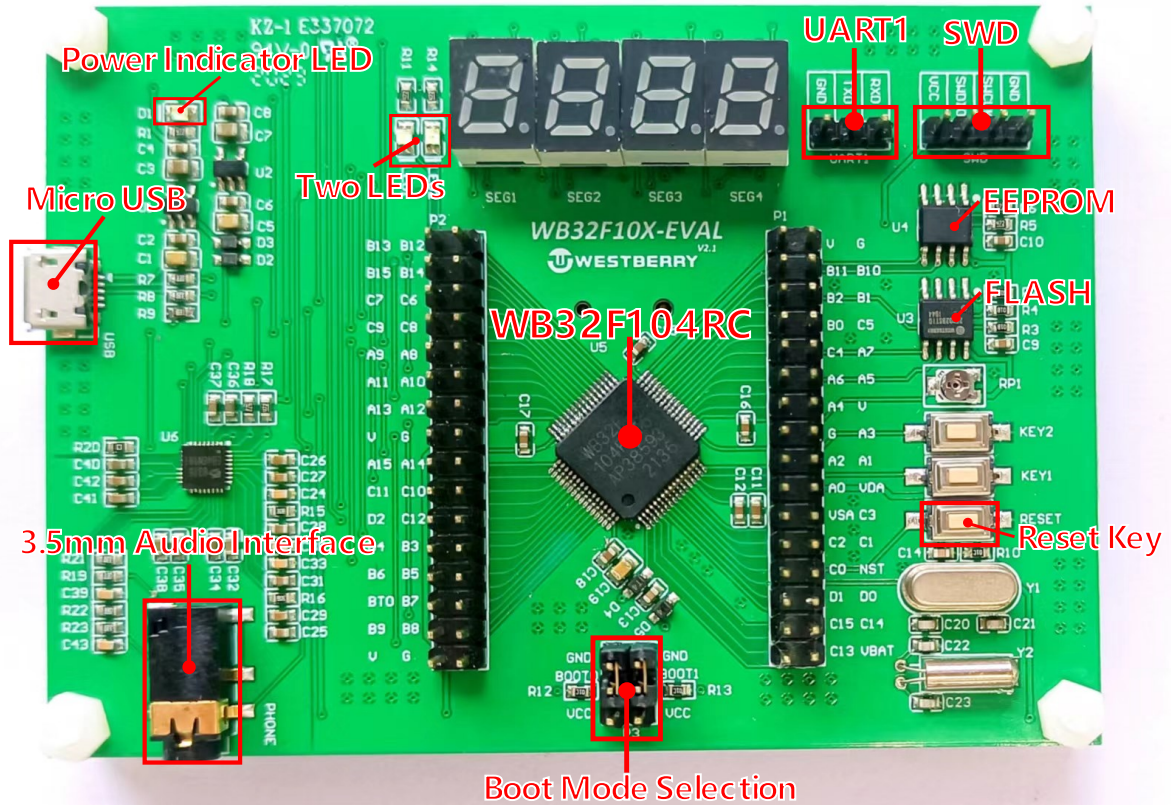
2 Power

The EVAL board uses **Micro USB** connecter to get power DC +5V.

Select the correct boot mode and then power on, the D1(red LED) will turn on, which indicates that the power supply is OK.

3 Debug

You can debug and download by connecting the SWD interface on the board through a J-Link tool.

There are Keil version of all projects. Keil version of the projects are created based on Keil MDK-ARM 5.23 uVision5.
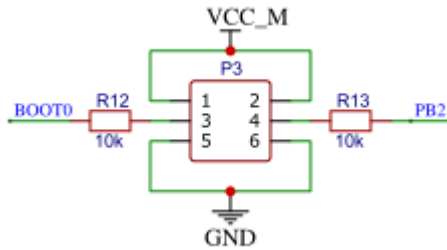
In the standard library package **(WB32F10x_Standard_Library**), there are demo for all peripherals of the EVAL board.

4 BOOT

After reset the boot address can be selected through the BOOT pin(BOOT0 and BOOT1).

You can use jumper to change the levels of BOOT0 and BOOT1.

Boot mode selection pins		Boot mode	Aliasing
BOOT1	BOOT0		
x	0	Main Flash memory	Main Flash memory is selected as the boot space
0	1	System memory	System memory is selected as the boot space
1	1	Embedded SRAM	Embedded SRAM is selected as the boot space

The **Boot Loader** is located in system memory. It is used to reprogram the Flash memory by using UART1(PA9, PA10).

5 Reset

A reset pulse can be generated by pressing the reset button of the board.
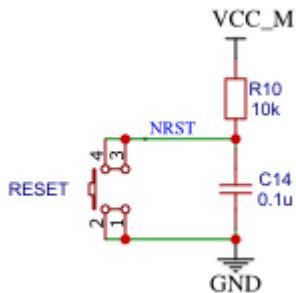
6 Pin Header

The two-column double-row pin headers on the evaluation board lead out all the pins of the MCU for developer testing.

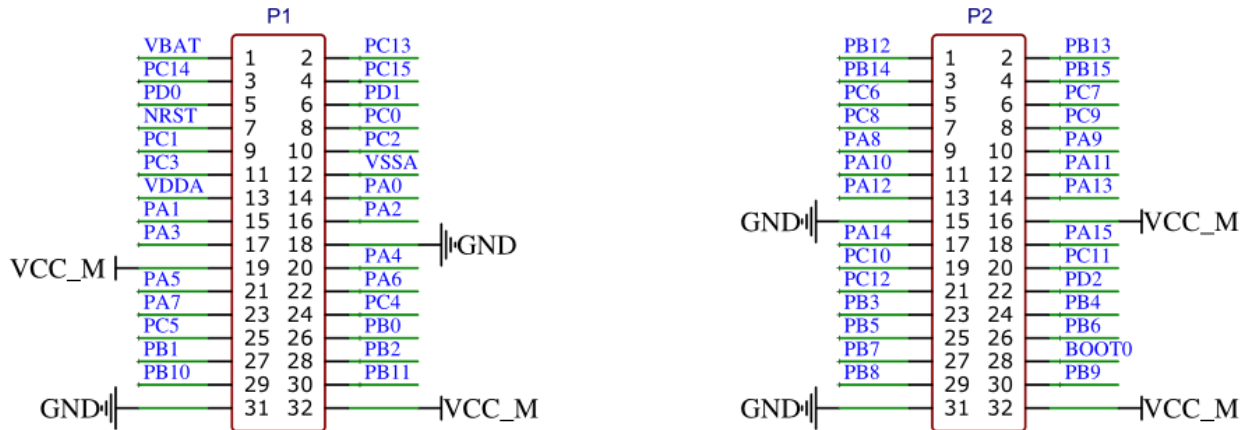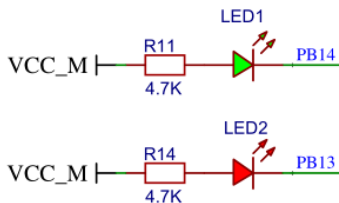For example, when using the TIM module to output PWM, the output pins can be connected to devices such as an oscilloscope or logic analyzer to observe the waveform.

7 LED

There are two LEDs on the board that connected to the IO ports(PB13 and PB14), which can test the output of the GPIO.

Download the program in the WB32F10x_StdPeriph_Lib\Project\WB32F10x_StdPeriph_Examples\GPIO\GPIO_IOToggle folder for testing.
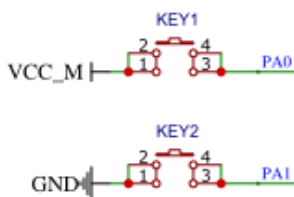
8 KEY

There are two buttons on the board that connected to the IO port, which can test the input of the GPIO.

Download the program in the WB32F10x_StdPeriph_Lib\Project\WB32F10x_StdPeriph_Examples\GPIO\GPIO_InputOutput folder for testing

9 SPI and QSPI

The EVAL board integrates QSPI module with Quad-SPI mode and the mode can communicate with external NOR Flash devices.

The external FLASH device on the board is connected to pins of the MCU with QSPI alternate function.
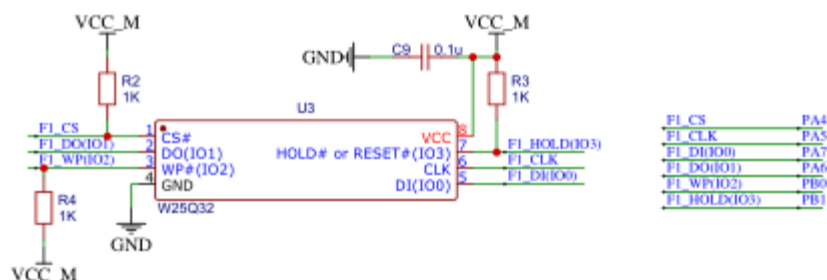
Download programs in the WB32F10x_StdPeriph_Lib\Project\WB32F10x_StdPeriph_Examples\SPI folder for testing.

📁 QSPI_QuadSPI_FLASH

📁 QSPI_SPI_FLASH

10 UART

There is a UART interface on the EVAL board, which can be used to test the UART function of the chip. The UART interface can be connected to the serial port of the computer or to other UART devices. Note that these two devices need a common ground(via GND pin).
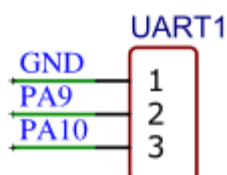
PA9(UART_TX), PA10(UART_RX)

Download programs in the WB32F10x_StdPeriph_Lib\Project\WB32F10x_StdPeriph_Examples\UART folder for testing

📁 UART_9BitDataTransfer

📁 UART_AutoFlowControl

📁 UART_CharacterTimeout

📁 UART_Interrupt

📁 UART_IrDA

📁 UART_Polling

📁 UART_Printf

11 I2S

MCU supports Inter-integrated sound(I2S) protocol.

The EVAL board uses the I2S module that connect the audio decoder chip(ES8316) to play audio.
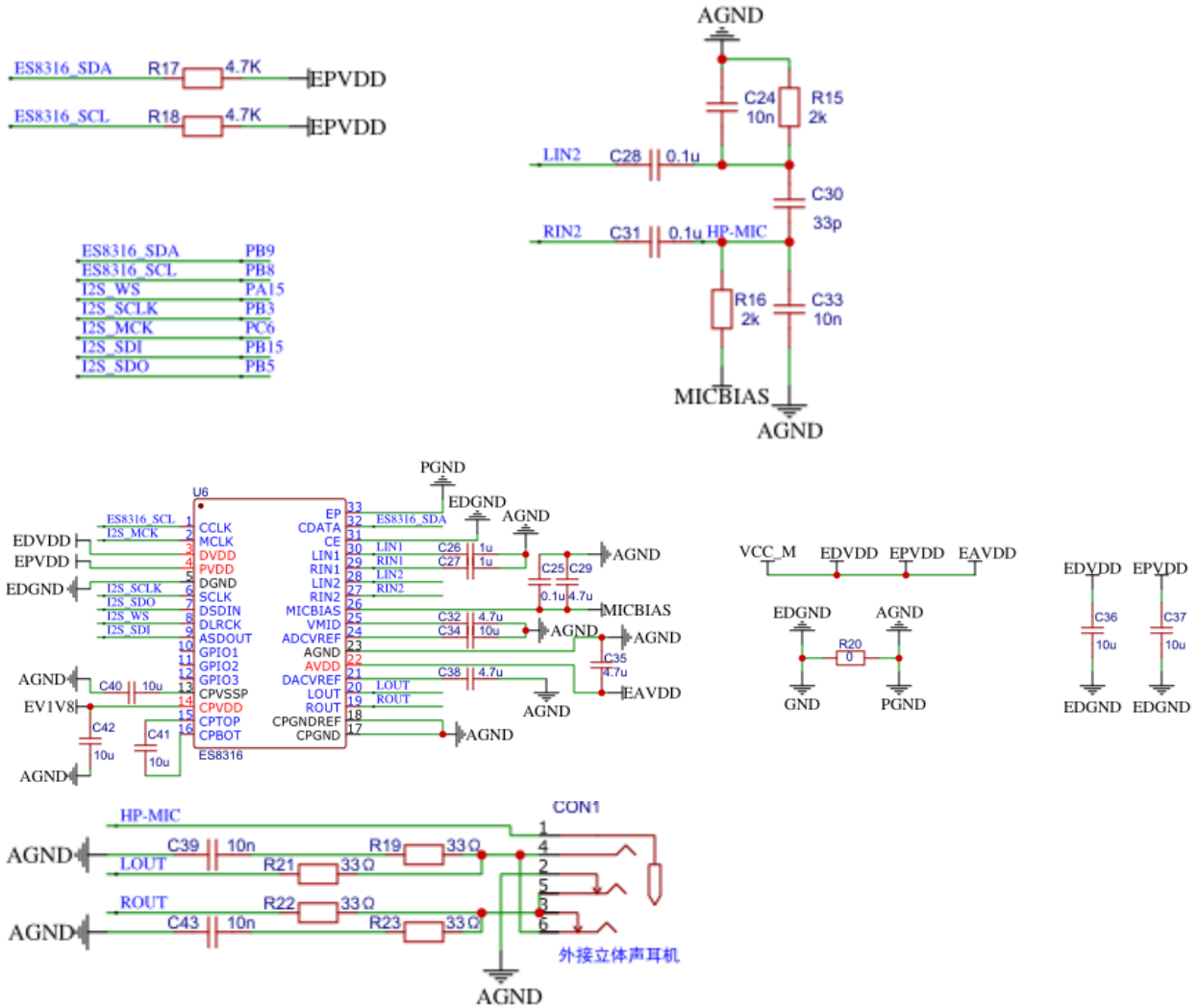
Download programs in the WB32F10x_StdPeriph_Lib\Project\WB32F10x_StdPeriph_Examples\I2S folder for testing.

12 I2C

The I2C module of the MCU can communicate with the EEPROM device as a master.
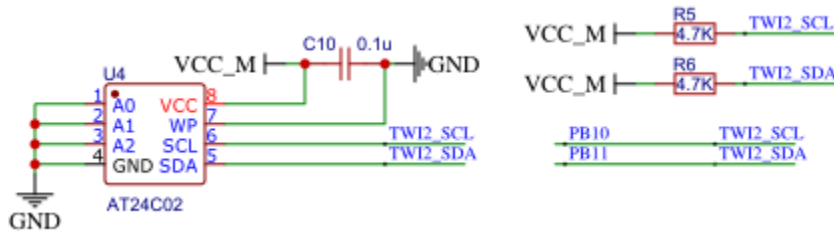
The standard library provides an example of using the I2C master mode to read and write EEPROM .

Download programs in the WB32F10x_StdPeriph_Lib\Project\WB32F10x_StdPeriph_Examples\I2C folder for testing.

13 Digital Tubes

The LED driver module can drive up to Eight 7-segment digital tubes.
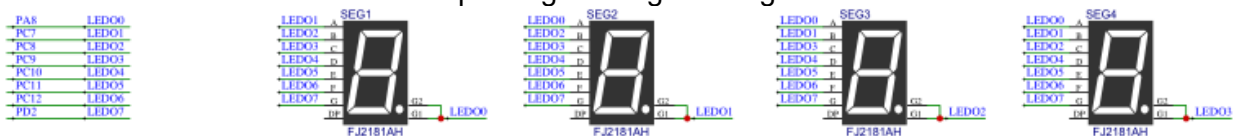
Download the program in the WB32F10x_StdPeriph_Lib\Project\WB32F10x_StdPeriph_Examples\LED\LED_Example folder for testing.

Revision History

Revision	Date	Description
1.0	2022/7/6	Initial Release

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