

User Guide for PIOC

Version: V1.0

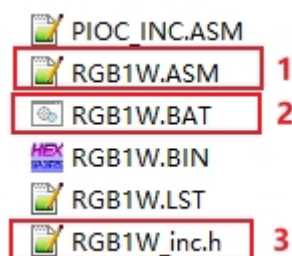
<https://wch-ic.com>

1. Overview

Taking the CH32H417 chip as an example, the MounRiver IDE supports both onboard and standalone WCH-Link for simulation and programming, and provides an application reference example for implementing 1-Wire communication via PIOC emulation.

2. Download and usage process

1. Open the assembly source file PIOC\PIOC_1_Wire\V3F\Asm\RGB1W.ASM, modify it, and save.



2. Double-click the RGB1W.BAT script to compile.

```
C:\Windows\system32\cmd.exe

C:\Users\OWNER\Documents\Download\CH32H417EVT_V1.2\CH32H417EVT_V1.2\EVT\EXAM\PIOC\PIOC_1_Wire\V3F\Asm>..\..\..\Tool_Manual\Tool\WASM53B RGB1W
MCU CH53X ASSEMBLER: WASM53B Ver 3.1
Copyright (C) wch.cn 1998-2021, B211121
Website: http://wch.cn

Open source file RGB1W.ASM
Create list file RGB1W.LST
Create data file RGB1W.BIN
Success, END=0240H

C:\Users\OWNER\Documents\Download\CH32H417EVT_V1.2\CH32H417EVT_V1.2\EVT\EXAM\PIOC\PIOC_1_Wire\V3F\Asm>..\..\..\Tool_Manual\Tool\BIN_HEX RGB1W.BIN RGB1W_inc.h /C

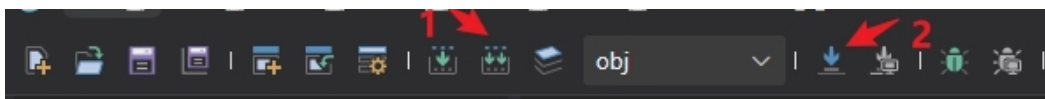
Binary to HEX V3.0, Copyright (C) wch.cn 2016
for include data in C or ASM source file
Source size: 1152 bytes

C:\Users\OWNER\Documents\Download\CH32H417EVT_V1.2\CH32H417EVT_V1.2\EVT\EXAM\PIOC\PIOC_1_Wire\V3F\Asm>PAUSE
请按任意键继续. . .
```

3. Open RGB1W_inc.h, select all the content and copy it.
4. Open the PIOC\PIOC_1_Wire folder, double-click to open the PIOC_1Wire.wvsln project, then replace the PIOC_1W_CODE array in both PIOC_1_Wire_V3F\User\RGB1W.C and PIOC_1_Wire_V5F\User\RGB1W.C with the content just copied.

```
__attribute__((aligned(16))) const unsigned char PIOC_1W_CODE[] =
{0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x1F,0x60,0x00,0x00,0x00,0x00,0x00,0x00,
 0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x30,0x00,0x00,0x00,0x08,0x70,
 0x00,0x00,0x08,0x70,0x00,0x00,0x08,0x70,0x00,0x00,0x00,0x00,0x00,0x00,0x08,0x70,
 0x08,0x70,0x00,0x00,0x00,0x00,0x00,0x00,0x30,0x00,0x00,0x00,0x00,0x00,0x1C,0x5E,
 0x1C,0x47,0x1C,0x5D,0x1F,0x60,0x1C,0x47,0x1E,0x02,0x09,0x10,0x3C,0xC1,0x49,0xC2,
 0x3F,0xC3,0x3A,0x80,0x20,0x2F,0x4C,0x38,0x60,0x2F,0x9E,0x38,0x87,0x2F,0x3A,0x38,
 0xFC,0x2F,0xED,0x38,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
 0x00,0x00,0x00,0x00,0x01,0x28,0x99,0x60,0x00,0x00,0x00,0x27,0x72,0x99,0x60,0x00,0x00,
 0x27,0x72,0x99,0x30,0x4B,0x24,0x28,0x22,0xE5,0x71,0x04,0x15,0x44,0x30,0x09,0x15,
 0x43,0x30,0x00,0x00,0x33,0x72,0x99,0x60,0x00,0x00,0x00,0x08,0x01,0x0B,0x40,0x0A,0x48,
 0x0C,0x01,0x06,0x28,0x0B,0x54,0x99,0x60,0x09,0x02,0x04,0x10,0x20,0x24,0x00,0x00,
 0x0B,0x48,0x15,0x70,0x01,0x5F,0x0B,0x40,0x0E,0x70,0x0B,0x40,0x14,0x70,0x0B,0x48,
```

5. Compile the project, then select the programming option to download the firmware.



3.Disclaimer and Precautions

When using the WCH-Link for programming, its CON indicator should remain off. If the CON indicator is lit, refer to the WCH-Link user manual for specific mode switching methods.

For detailed inquiries or questions, please visit the following:

WCH Electronic Community: <https://www.wch.cn/bbs/forum-106-1.html>

WCH official website: <https://www.wch-ic.com/>

WCH-LINK instructions for use: <https://www.wch-ic.com/products/WCH-Link.html>