

CH32V 系列

注意：

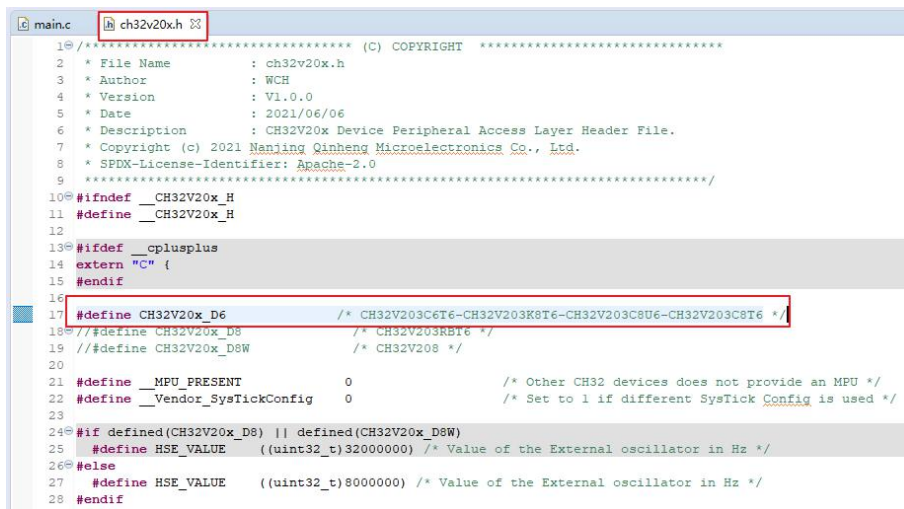
- 1、我们 EVT 例程中默认配置是 CH32V203C8T6 配置，若使用 MCU 为 CH32V203K8T6-CH32V203C8U6-CH32V203C8T6，无需修改配置
- 2、若使用 MCU 为 CH32V203RBT6 或 CH32V208 系列，注意使用外部晶振大小为 32MHz

1、MCU 型号为：

CH32V203F6P6-CH32V203G6U6-CH32V203K6T6-CH32V203C6T6 (FLASH: 32K+RAM: 10K)

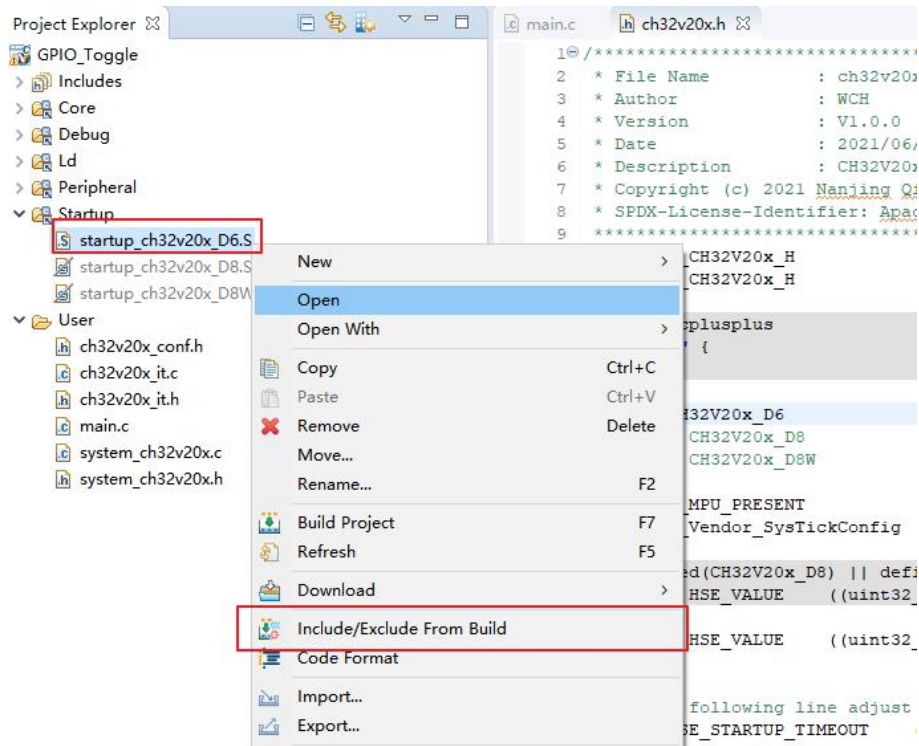
CH32V203K8T6-CH32V203C8U6-CH32V203C8T6 (FLASH: 64K+RAM: 20K)

(1) 修改 ch32v20x.h 文件中宏定义。如下图圈出部分，根据芯片型号，选择对应的宏定义

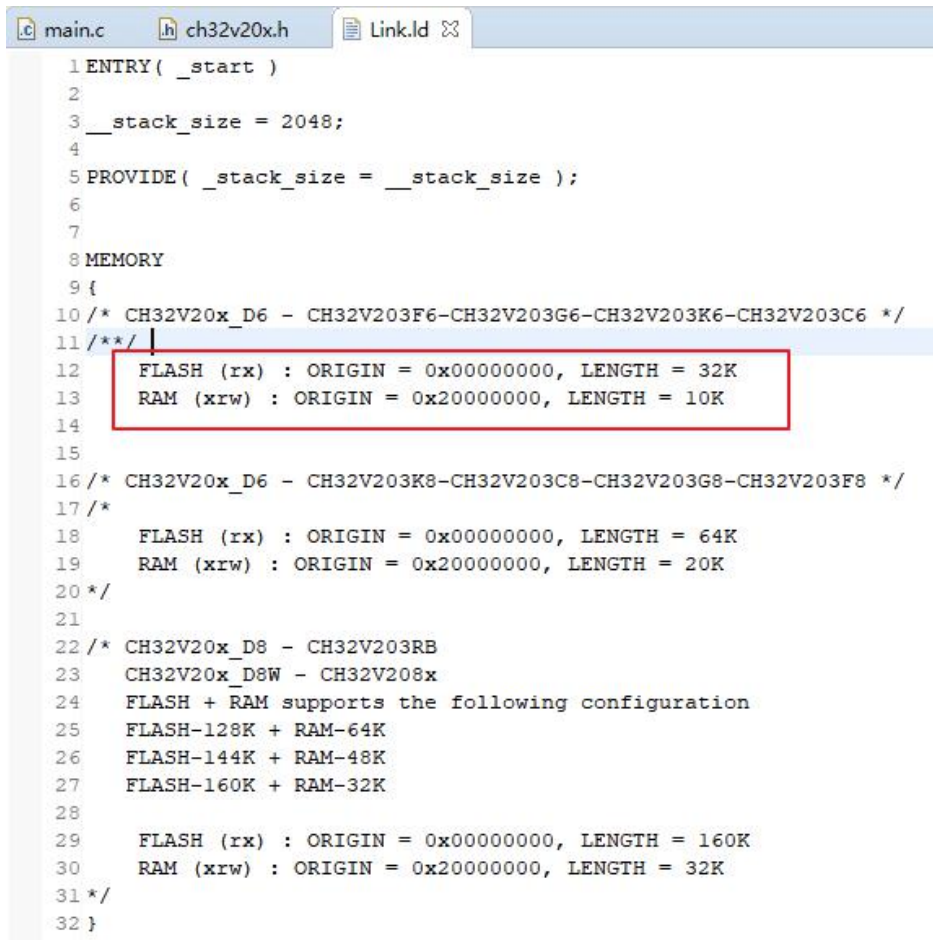


```
10 #ifndef __CH32V20x_H
11 #define __CH32V20x_H
12
13 #ifdef __cplusplus
14 extern "C" {
15 #endif
16
17 #define CH32V20x_D6 /* CH32V203C6T6-CH32V203K8T6-CH32V203C8U6-CH32V203C8T6 */
18 // #define CH32V20x_D8 /* CH32V203RBT6 */
19 // #define CH32V20x_D8W /* CH32V208 */
20
21 #define __MPU_PRESENT 0 /* Other CH32 devices does not provide an MPU */
22 #define __Vendor_SysTickConfig 0 /* Set to 1 if different SysTick Config is used */
23
24 #if defined(CH32V20x_D8) || defined(CH32V20x_D8W)
25 #define HSE_VALUE ((uint32_t)32000000) /* Value of the External oscillator in Hz */
26 #else
27 #define HSE_VALUE ((uint32_t)8000000) /* Value of the External oscillator in Hz */
28 #endif
29
```

(2) 修改启动文件 (.s 文件)。如下图，选中启动文件，点击鼠标右键，选择或屏蔽该启动文件。如何选择启动文件根据宏定义来选择

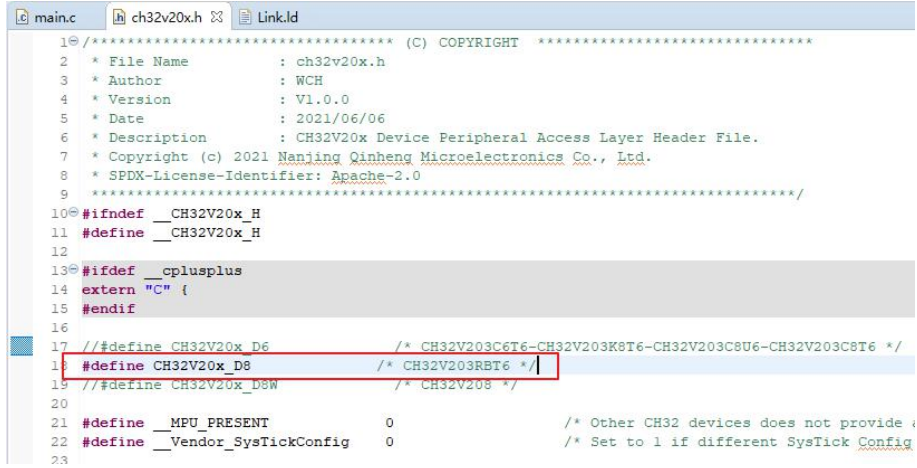


(3) 修改ld文件.ld文件中，主要修改FLASH和RAM的大小，具体大小根据所选MCU实际大小修改，此处以CH32V203F6P6（FLASH-32K，RAM-10K）为例，具体修改如下图：



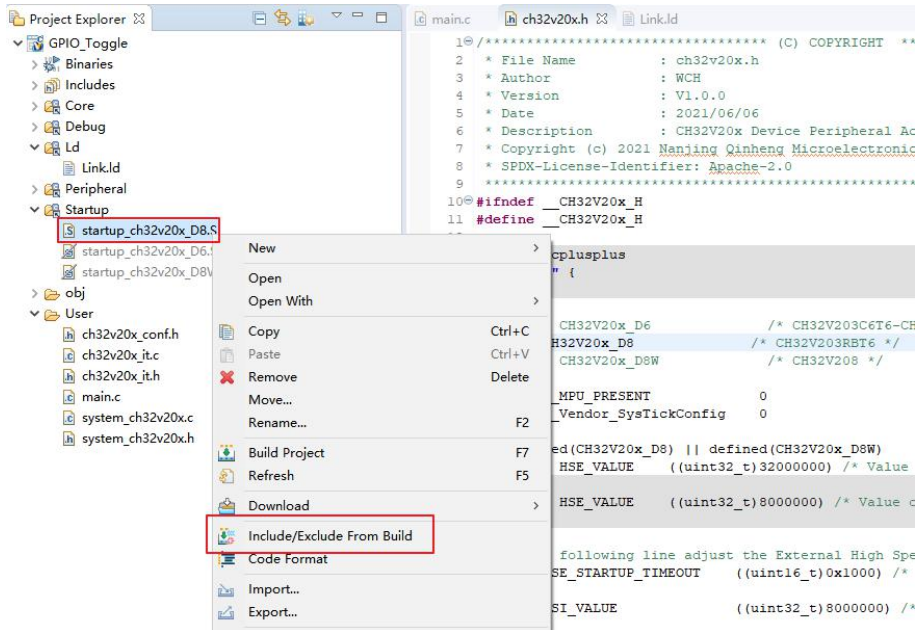
2、MCU 型号为：CH32V203RBT6（FLASH：128K+RAM：32K）

(1) 修改 ch32v20x.h 文件中宏定义。如下图圈出部分，根据芯片型号，选择对应的宏定义



```
1 ① /****** (C) COPYRIGHT *****/
2  * File Name      : ch32v20x.h
3  * Author        : WCH
4  * Version       : V1.0.0
5  * Date          : 2021/06/06
6  * Description    : CH32V20x Device Peripheral Access Layer Header File.
7  * Copyright (c) 2021 Nanjing Qinheng Microelectronics Co., Ltd.
8  * SPDX-License-Identifier: Apache-2.0
9  *****/
10 #ifndef __CH32V20x_H
11 #define __CH32V20x_H
12
13 #ifndef __cplusplus
14 extern "C" {
15 #endif
16
17 // #define CH32V20x_D6          /* CH32V203C6T6-CH32V203K8T6-CH32V203C8U6-CH32V203C8T6 */
18 #define CH32V20x_D8          /* CH32V203RBT6 */
19 // #define CH32V20x_D8W       /* CH32V208 */
20
21 #define __MPU_PRESENT        0          /* Other CH32 devices does not provide MPU */
22 #define __Vendor_SysTickConfig 0      /* Set to 1 if different SysTick Config */
23
```

(2) 修改启动文件（.s 文件）。如下图，选中启动文件，点击鼠标右键，选择或屏蔽该启动文件。如何选择启动文件根据宏定义来选择



```
1 ① /****** (C) COPYRIGHT *****/
2  * File Name      : ch32v20x.h
3  * Author        : WCH
4  * Version       : V1.0.0
5  * Date          : 2021/06/06
6  * Description    : CH32V20x Device Peripheral Access Layer Header File.
7  * Copyright (c) 2021 Nanjing Qinheng Microelectronics Co., Ltd.
8  * SPDX-License-Identifier: Apache-2.0
9  *****/
10 #ifndef __CH32V20x_H
11 #define __CH32V20x_H
12
13 #ifndef __cplusplus
14 extern "C" {
15 #endif
16
17 // #define CH32V20x_D6          /* CH32V203C6T6-CH32V203K8T6-CH32V203C8U6-CH32V203C8T6 */
18 #define CH32V20x_D8          /* CH32V203RBT6 */
19 // #define CH32V20x_D8W       /* CH32V208 */
20
21 #define __MPU_PRESENT        0          /* Other CH32 devices does not provide MPU */
22 #define __Vendor_SysTickConfig 0      /* Set to 1 if different SysTick Config */
23
```

(3) 修改 ld 文件.ld 文件中，主要修改 FLASH 和 RAM 的大小，具体大小根据所选 MCU 实际大小修改，此处以 CH32V203RBT6（FLASH-128K，RAM-32K）为例，具体修改如下图：

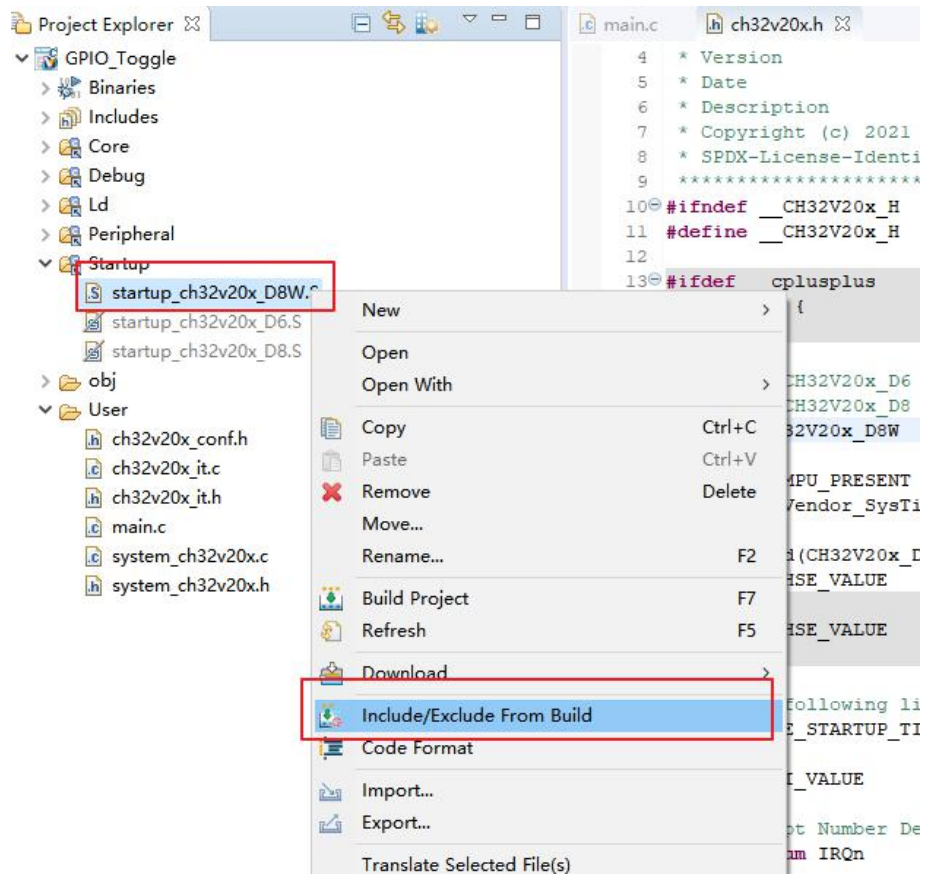
```
main.c ch32v20x.h Link.ld
1 ENTRY( _start )
2
3 __stack_size = 2048;
4
5 PROVIDE( _stack_size = __stack_size );
6
7
8 MEMORY
9 {
10 /* CH32V20x_D6 - CH32V203F6-CH32V203G6-CH32V203K6-CH32V203C6 */
11 /*
12     FLASH (rx) : ORIGIN = 0x00000000, LENGTH = 32K
13     RAM (xrw) : ORIGIN = 0x20000000, LENGTH = 10K
14 */
15
16 /* CH32V20x_D6 - CH32V203K8-CH32V203C8-CH32V203G8-CH32V203F8 */
17 /*
18     FLASH (rx) : ORIGIN = 0x00000000, LENGTH = 64K
19     RAM (xrw) : ORIGIN = 0x20000000, LENGTH = 20K
20 */
21
22 /* CH32V20x_D8 - CH32V203RB
23     CH32V20x_D8W - CH32V208x
24     FLASH + RAM supports the following configuration
25     FLASH-128K + RAM-64K
26     FLASH-144K + RAM-48K
27     FLASH-160K + RAM-32K
28 */
29     FLASH (rx) : ORIGIN = 0x00000000, LENGTH = 128K
30     RAM (xrw) : ORIGIN = 0x20000000, LENGTH = 32K
31
32 }
33
34
```

3、MCU 型号为：CH32V208 系列（FLASH：128K+RAM：64K）


(1) 修改 ch32v20x.h 文件中宏定义。如下图圈出部分，根据芯片型号，选择对应的宏定义

```
main.c ch32v20x.h
4 * Version : V1.0.0
5 * Date : 2021/06/06
6 * Description : CH32V20x Device Peripheral Access Layer Header File.
7 * Copyright (c) 2021 Nanjing Qinheng Microelectronics Co., Ltd.
8 * SPDX-License-Identifier: Apache-2.0
9 *****
10 #ifndef __CH32V20x_H
11 #define __CH32V20x_H
12
13 #ifdef __cplusplus
14 extern "C" {
15 #endif
16
17 // #define CH32V20x_D6 /* CH32V203C6T6-CH32V203K8T6-CH32V203C8U6-CH32V203C8T6 */
18 // #define CH32V20x_D8 /* CH32V203BET6 */
19 #define CH32V20x_D8W /* CH32V208 */
20
21 #define __MPU_PRESENT 0 /* Other CH32 devices does not provide an
22 #define __Vendor_SysTickConfig 0 /* Set to 1 if different SysTick Config i
23
```

(2) 修改启动文件（.s 文件）。如下图，选中启动文件，点击鼠标右键，选择或屏蔽该启动文件。如何选择启动文件根据宏定义来选择



(3) 修改 Id 文件. Id 文件中，主要修改 FLASH 和 RAM 的大小，具体大小根据所选 MCU 实际大小修改，此处以 CH32V203RBT6（FLASH-128K，RAM-64K）为例，具体修改如下图：

```
.c main.c .h ch32v20x.h Link.ld 
1 ENTRY( _start )
2
3 __stack_size = 2048;
4
5 PROVIDE( _stack_size = __stack_size );
6
7
8 MEMORY
9 {
10 /* CH32V20x_D6 - CH32V203F6-CH32V203G6-CH32V203K6-CH32V203C6 */
11 /*
12     FLASH (rx) : ORIGIN = 0x00000000, LENGTH = 32K
13     RAM (xrw) : ORIGIN = 0x20000000, LENGTH = 10K
14 */
15
16 /* CH32V20x_D6 - CH32V203K8-CH32V203C8-CH32V203G8-CH32V203F8 */
17 /*
18     FLASH (rx) : ORIGIN = 0x00000000, LENGTH = 64K
19     RAM (xrw) : ORIGIN = 0x20000000, LENGTH = 20K
20 */
21
22 /* CH32V20x_D8 - CH32V203RB
23     CH32V20x_D8W - CH32V208x
24     FLASH + RAM supports the following configuration
25     FLASH-128K + RAM-64K
26     FLASH-144K + RAM-48K
27     FLASH-160K + RAM-32K
28 */
29     FLASH (rx) : ORIGIN = 0x00000000, LENGTH = 128K
30     RAM (xrw) : ORIGIN = 0x20000000, LENGTH = 64K
31
32 }
33
```

CH32F 系列

注意：

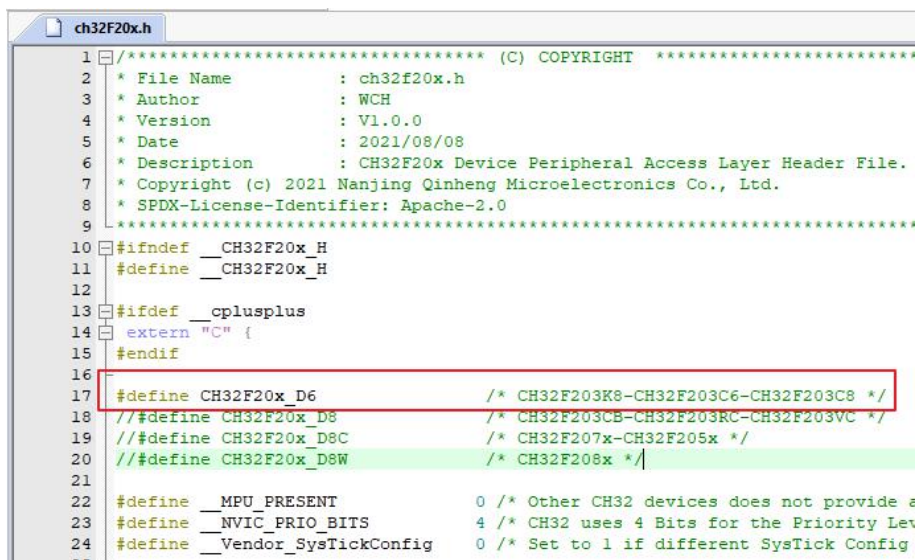
- 1、我们 EVT 例程中默认配置是 CH32F203C8T6 配置，若使用 MCU 为 CH32F203C6T6\CH32F203K8T6-CH32F203C8T6-CH32F203C8U6，无需修改配置
- 2、若使用 MCU 为 CH32F208 系列，注意使用外部晶振大小为 32MHz

1、MCU 型号为：

CH32F203C6T6 (FLASH: 32K+RAM: 10K)

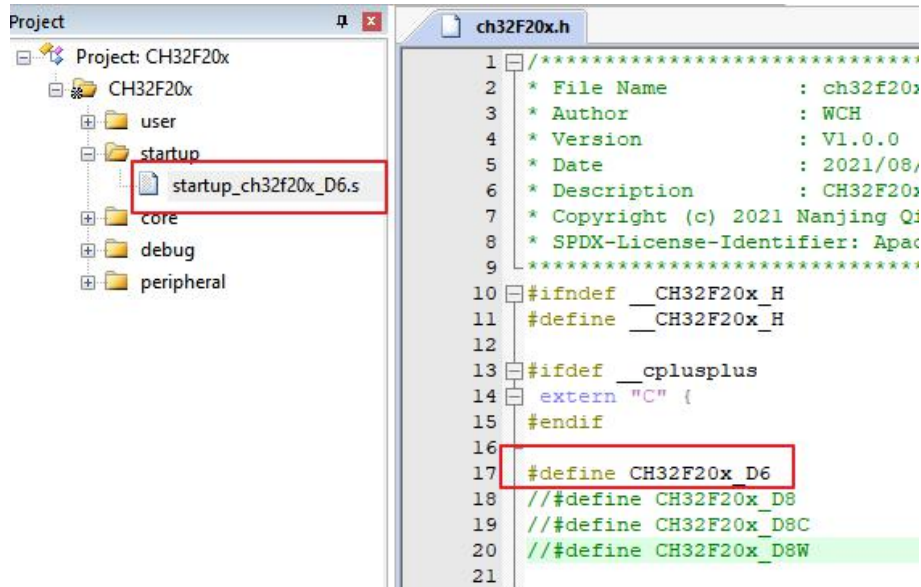
CH32F203K8T6-CH32F203C8T6-CH32F203C8U6 (FLASH: 64K+RAM: 20K)

(1) 修改 ch32f20x.h 文件中宏定义。如下图圈出部分，根据芯片型号，选择对应的宏定义



```
1 /****** (C) COPYRIGHT *****/
2 * File Name      : ch32f20x.h
3 * Author        : WCH
4 * Version       : V1.0.0
5 * Date         : 2021/08/08
6 * Description   : CH32F20x Device Peripheral Access Layer Header File.
7 * Copyright (c) 2021 Nanjing Qinheng Microelectronics Co., Ltd.
8 * SPDX-License-Identifier: Apache-2.0
9 *****/
10 #ifndef __CH32F20x_H
11 #define __CH32F20x_H
12
13 #ifdef __cplusplus
14 extern "C" {
15 #endif
16
17 #define CH32F20x_D6          /* CH32F203K8-CH32F203C6-CH32F203C8 */
18 // #define CH32F20x_D8      /* CH32F203CB-CH32F203RC-CH32F203VC */
19 // #define CH32F20x_D8C    /* CH32F207x-CH32F205x */
20 // #define CH32F20x_D8W    /* CH32F208x */
21
22 #define __MPU_PRESENT        0 /* Other CH32 devices does not provide a
23 #define __NVIC_PRIO_BITS    4 /* CH32 uses 4 Bits for the Priority Lev
24 #define __Vendor_SysTickConfig 0 /* Set to 1 if different SysTick Config
```

(2) 修改启动文件。更改 startup 文件，点击 Manage Project Items 进行文件更换，选用 startup_ch32f20x_D6.s 文件，进行替换，如下图

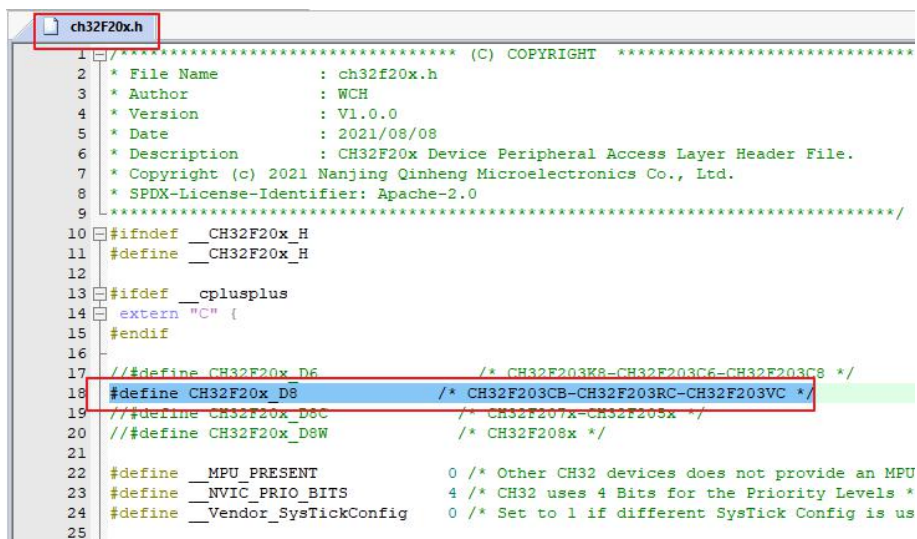


2、MCU 型号为:

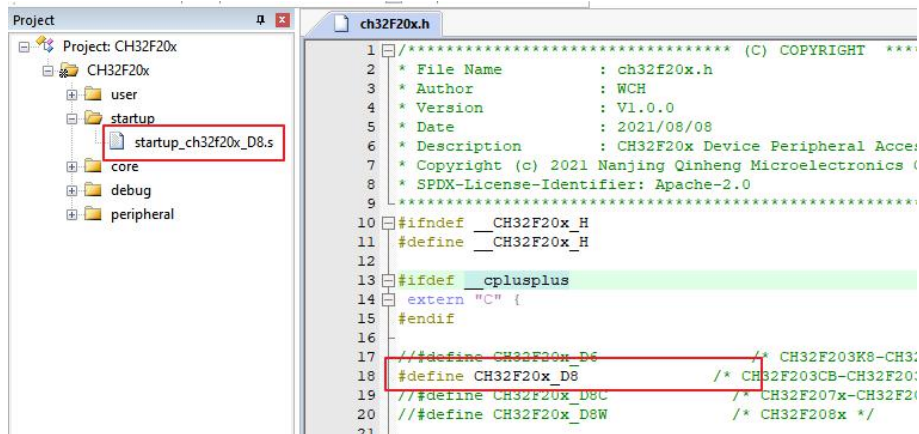
CH32F203CBT6 (FLASH: 128K+RAM: 32K)

CH32F203RCT6-CH32F203VCT6 (FLASH: 256K+RAM: 64K)

(1) 修改 ch32F20x.h 文件中宏定义。如下图圈出部分，根据芯片型号，选择对应的宏定义



(2) 修改启动文件。更改 startup 文件，点击 Manage Project Items 进行文件更换，选用 startup_ch32f20x_D8.s 文件，进行替换，如下图

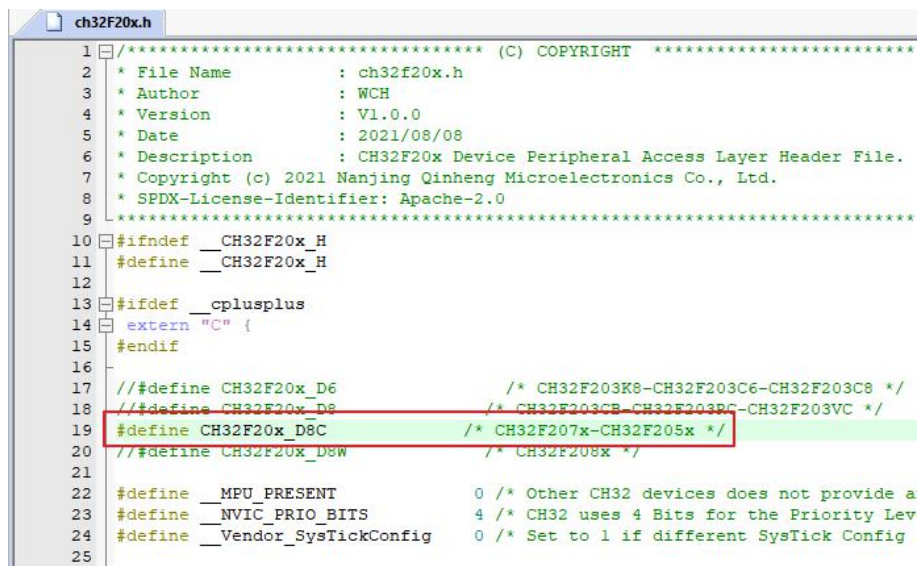


3、MCU 型号为:

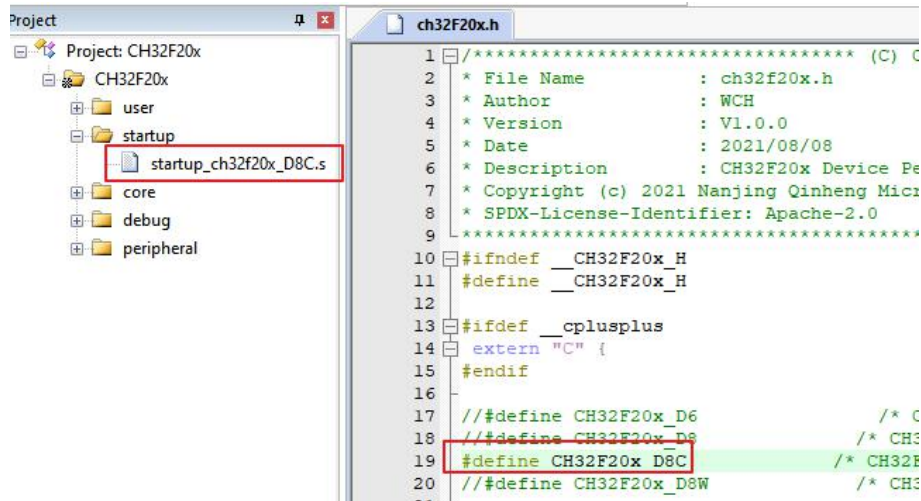
CH32F205xx (FLASH: 128K+RAM: 32K)

CH32F207xx (FLASH: 256K+RAM: 64K)

(1) 修改 ch32f20x.h 文件中宏定义。如下图圈出部分，根据芯片型号，选择对应的宏定义



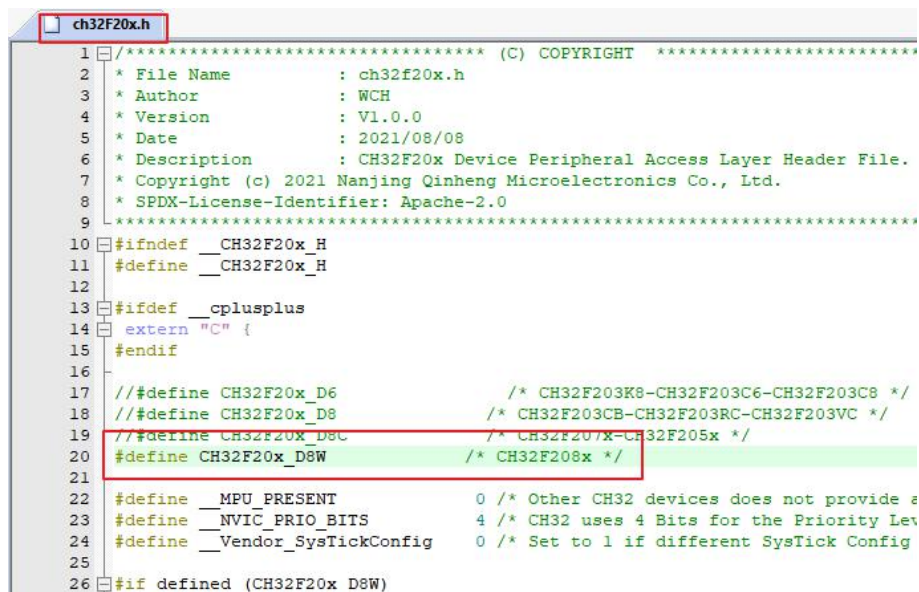
(2) 修改启动文件。更改 startup 文件，点击 Manage Project Items 进行文件更换，选用 startup_ch32f20x_D8C.s 文件，进行替换，如下图



4、MCU 型号为:

CH32F208xx (FLASH: 128K+RAM: 64K)

(1) 修改 ch32f20x.h 文件中宏定义。如下图圈出部分，根据芯片型号，选择对应的宏定义



(2) 修改启动文件。更改 startup 文件，点击 Manage Project Items 进行文件更换，选用 startup_ch32f20x_D8W.s 文件，进行替换，如下图

```
Project: CH32F20x
├── CH32F20x
│   ├── user
│   ├── startup
│   │   └── startup_ch32f20x_D8W.s
│   ├── core
│   ├── debug
│   └── peripheral

ch32f20x.h
1  /****** (C) COPYRIGHT *****/
2  * File Name      : ch32f20x.h
3  * Author        : WCH
4  * Version       : V1.0.0
5  * Date          : 2021/08/08
6  * Description   : CH32F20x Device Peripheral Acc
7  * Copyright (c) 2021 Nanjing Qinheng Microelectronics
8  * SPDX-License-Identifier: Apache-2.0
9  *****/
10 #ifndef __CH32F20x_H
11 #define __CH32F20x_H
12
13 #ifndef __cplusplus
14 extern "C" {
15 #endif
16
17 // #define CH32F20x_D6          /* CH32F203K8-CH32F203
18 // #define CH32F20x_D8          /* CH32F203CB-CH32F203
19 // #define CH32F20x_D8C        /* CH32F207x-CH32F20
20 #define CH32F20x_D8W          /* CH32F208x */
21
22 #define __MPU_PRESENT          0 /* Other CH32 dev:
```