

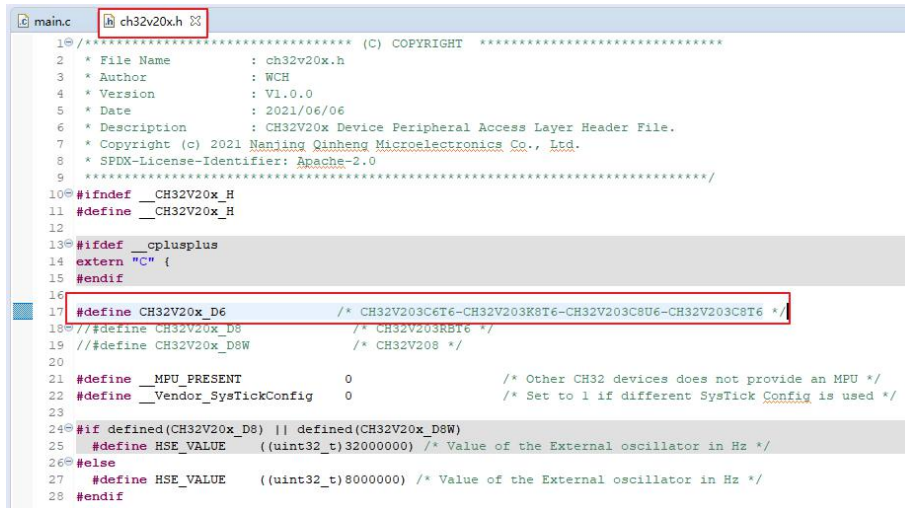
CH32V 系列

1、MCU 型号为:

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

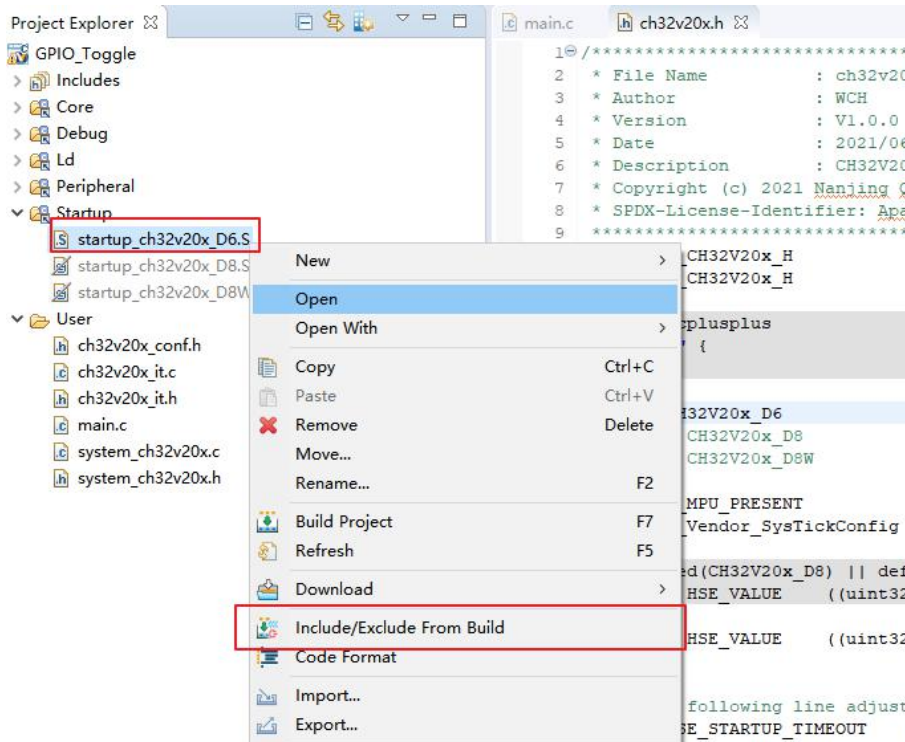
CH32V203K8T6-CH32V203C8U6-CH32V203C8T6 (FLASH: 64K+RAM: 20K)

(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



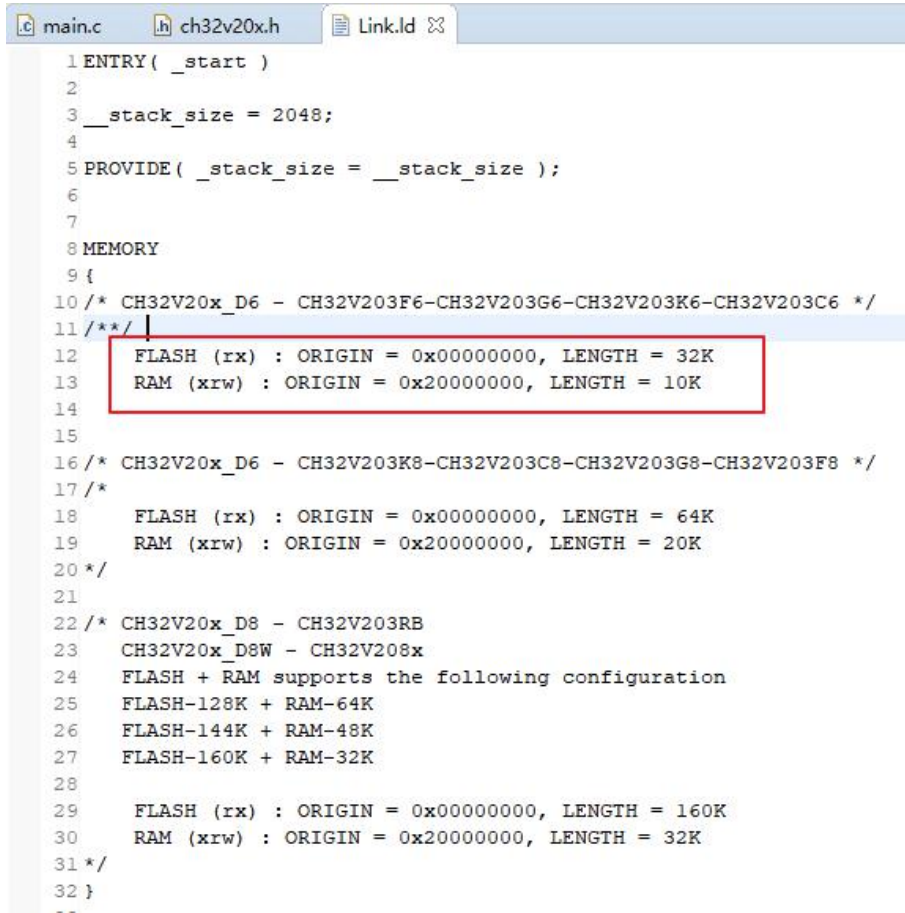
```
10 #ifndef __CH32V20x_H
11 #define __CH32V20x_H
12
13 #ifndef __cplusplus
14 extern "C" {
15 #endif
16
17 #define CH32V20x_D6 /* CH32V203C6T6-CH32V203K8T6-CH32V203C8U6-CH32V203C8T6 */
18 // #define CH32V20x_D8 /* CH32V203R8T6 */
19 // #define CH32V20x_D8W /* CH32V208 */
20
21 #define MPU_PRESENT 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
```

(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

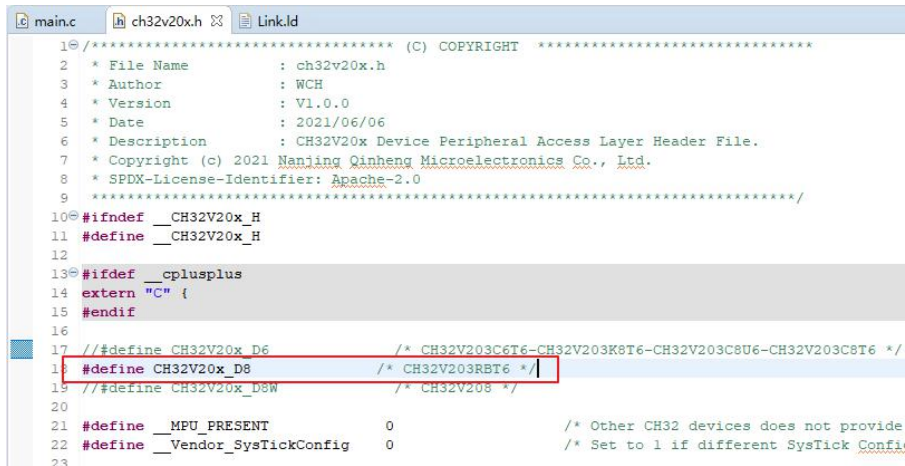
实际大小修改，此处以 CH32V203F6P6（FLASH-32K，RAM-10K）为例，具体修改如下图：



```
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 = 160K
30     RAM (xrw) : ORIGIN = 0x20000000, LENGTH = 32K
31 */
32 }
```

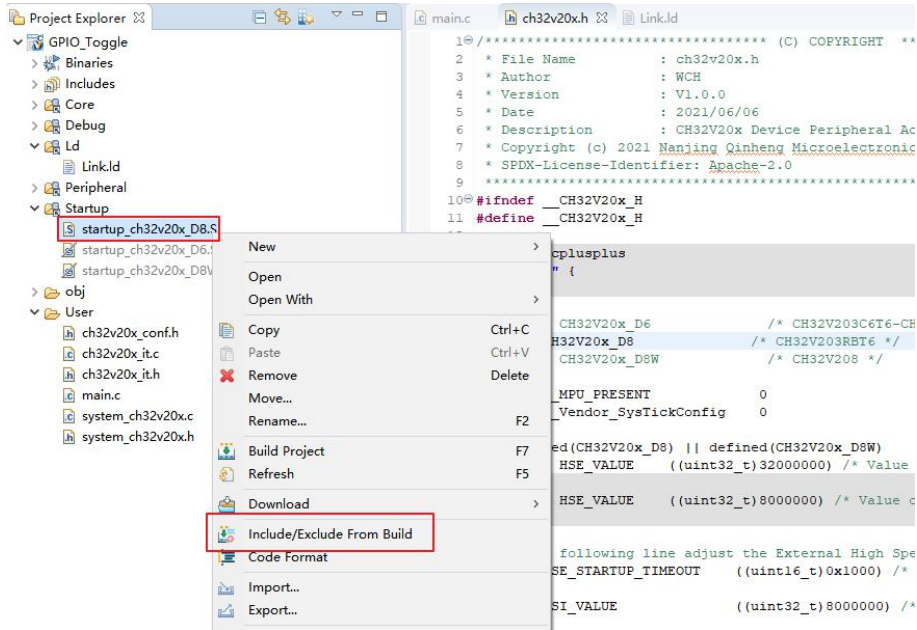
2、MCU 型号为：CH32V203RBT6（FLASH：128K+RAM：32K）

(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

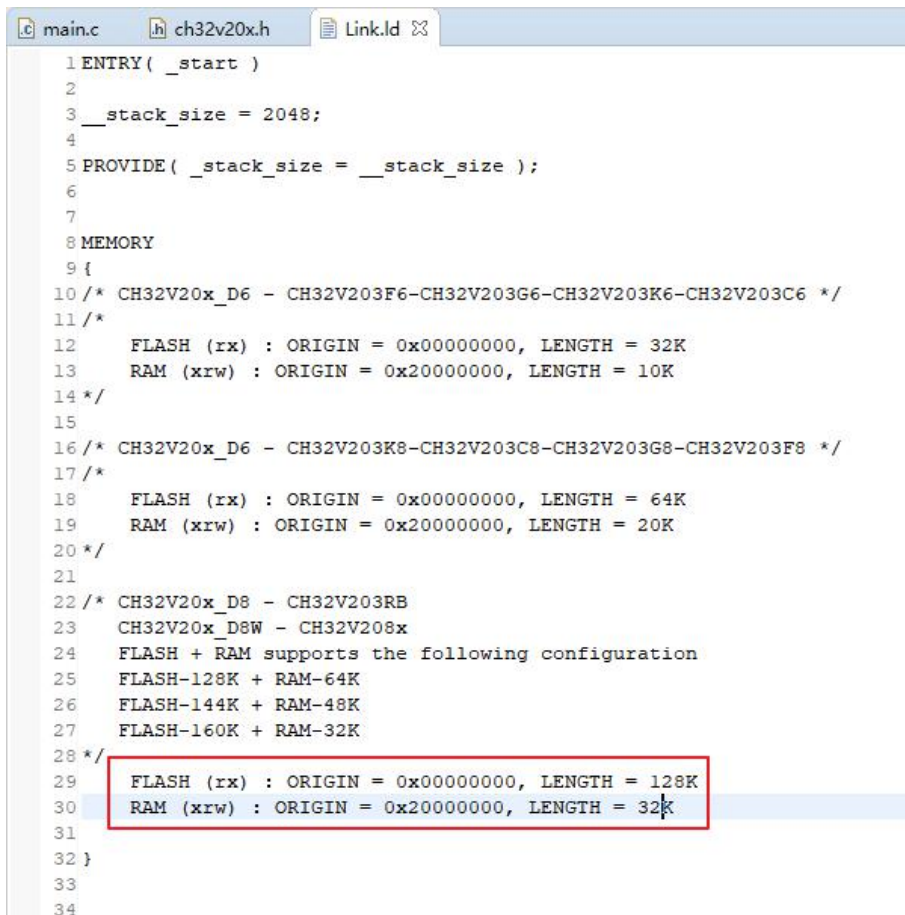


```
1 @/***** (C) COPYRIGHT *****/
2 * File Name      : ch32v20x.h
3 * Author         : WCH
4 * Version        : V1.0.0
5 * Date           : 2021/06/06
6 * Description    : CH32V20x Device Peripheral Access Layer Header File.
7 * Copyright (c) 2021 Nanjing Qinheng Microelectronics Co., Ltd.
8 * SPDX-License-Identifier: Apache-2.0
9 *****/
10 #ifndef __CH32V20x_H
11 #define __CH32V20x_H
12
13 #ifdef __cplusplus
14 extern "C" {
15 #endif
16
17 // #define CH32V20x_D6 /* CH32V203C6T6-CH32V203K6T6-CH32V203C8U6-CH32V203C8T6 */
18 #define CH32V20x_D8 /* CH32V203RBT6 */
19 // #define CH32V20x_D8W /* CH32V208 */
20
21 #define __MPU_PRESENT 0 /* Other CH32 devices does not provide
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

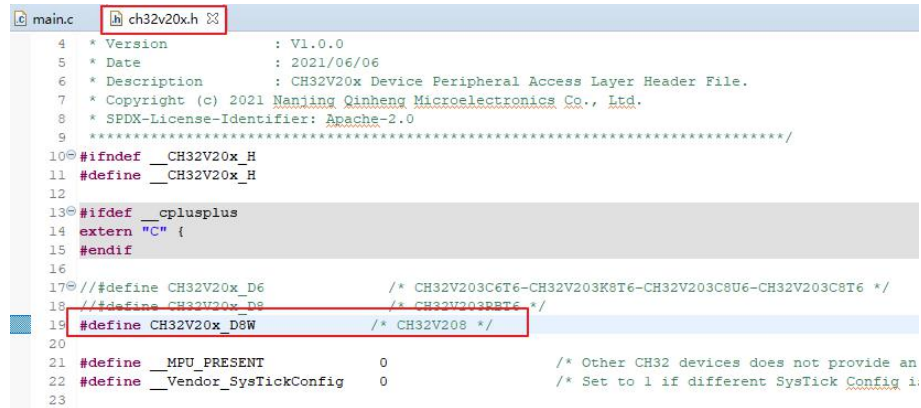


(3) 修改 ld 文件。ld 文件中，主要修改 FLASH 和 RAM 的大小，具体大小根据所选 MCU 实际大小修改，此处以 CH32V203RBT6（FLASH-128K，RAM-32K）为例，具体修改如下图：



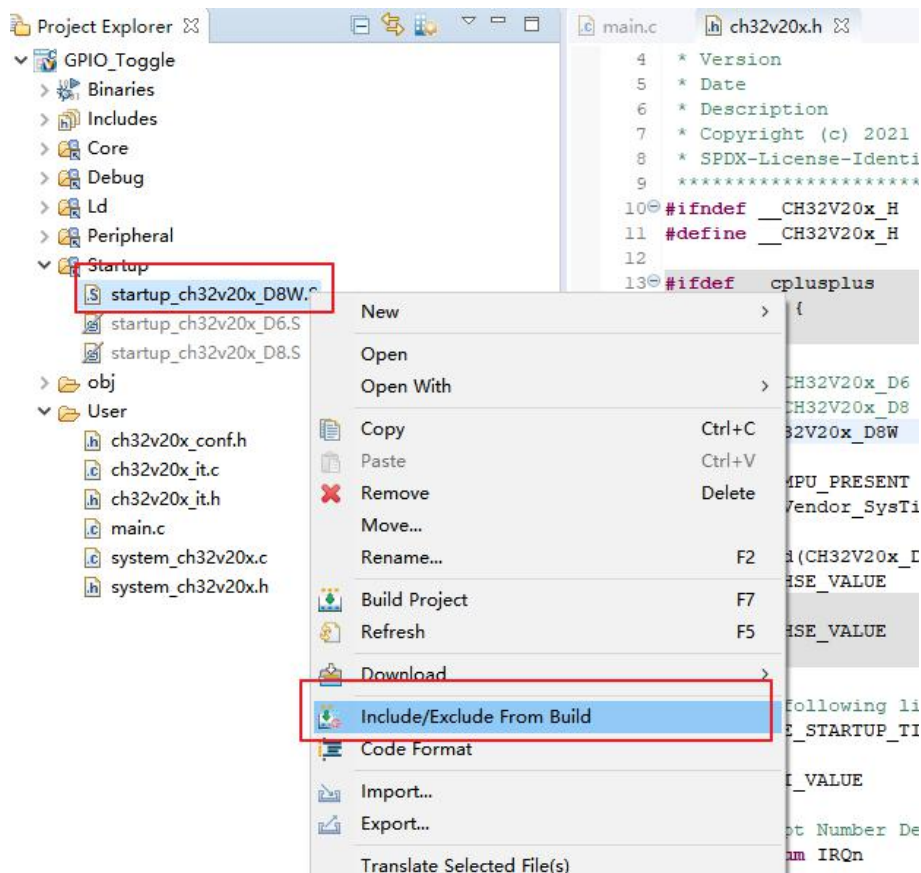
3、MCU 型号为：CH32V208 系列（FLASH：128K+RAM：64K）

(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




```
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          /* CH32V203RBT6 */
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 is
```

(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 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
```

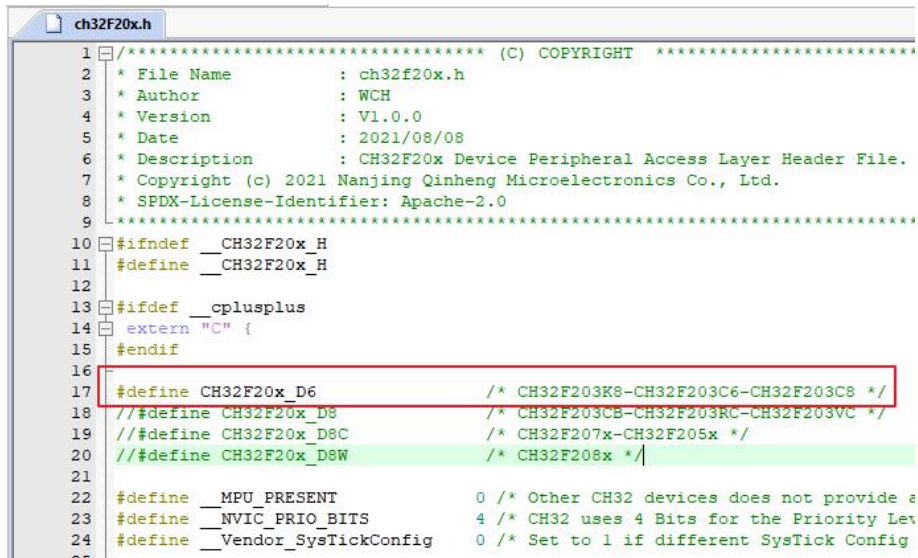
CH32F 系列

1、MCU 型号为:

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

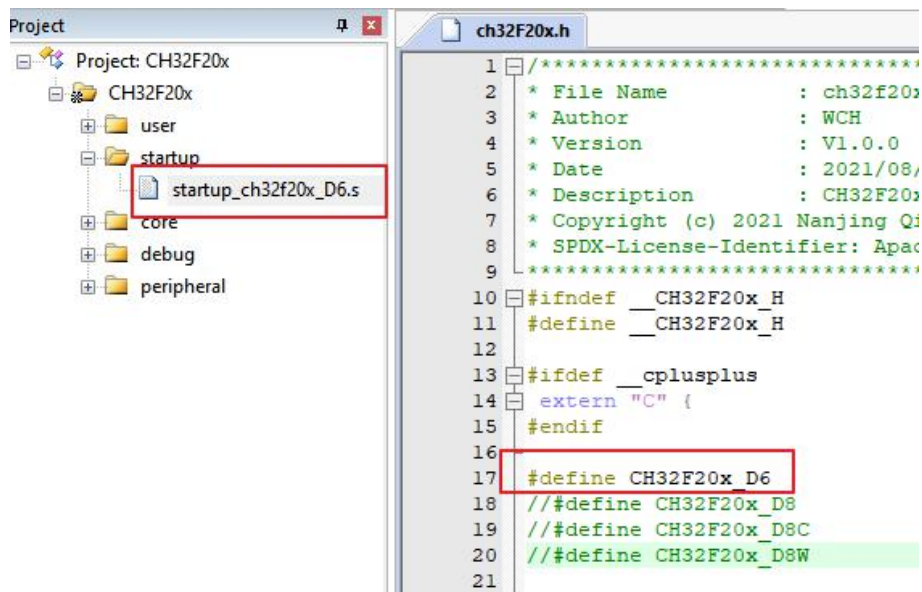
CH32F203K8T6-CH32F203C8T6-CH32F203C8U6 (FLASH: 64K+RAM: 20K)

(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 1 /****** (C) COPYRIGHT *****/
2 2 * File Name      : ch32f20x.h
3 3 * Author        : WCH
4 4 * Version       : V1.0.0
5 5 * Date          : 2021/08/08
6 6 * Description   : CH32F20x Device Peripheral Access Layer Header File.
7 7 * Copyright (c) 2021 Nanjing Qinheng Microelectronics Co., Ltd.
8 8 * SPDX-License-Identifier: Apache-2.0
9 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
25
```

(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



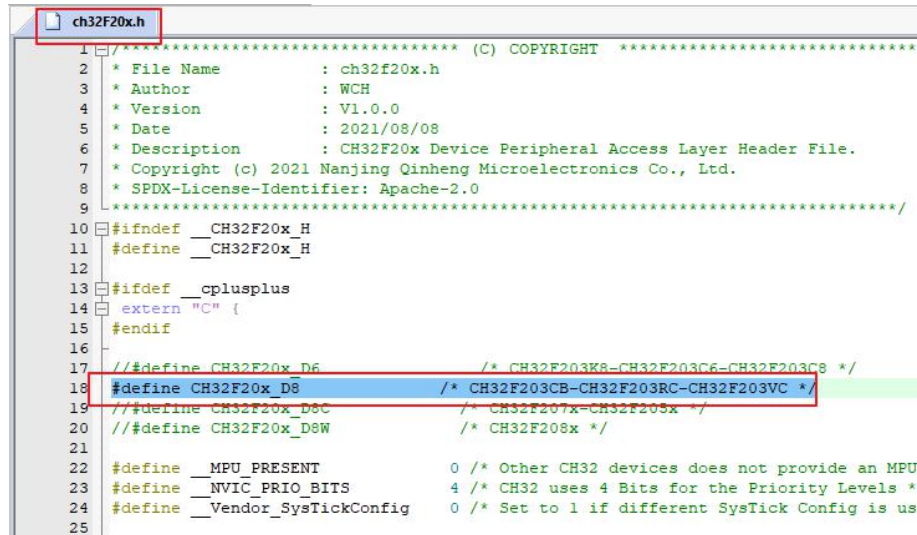
```
1 1 /******
2 2 * File Name      : ch32f20x
3 3 * Author        : WCH
4 4 * Version       : V1.0.0
5 5 * Date          : 2021/08,
6 6 * Description   : CH32F20,
7 7 * Copyright (c) 2021 Nanjing Qi
8 8 * SPDX-License-Identifier: Apac
9 9 *****/
10 #ifndef __CH32F20x_H
11 #define __CH32F20x_H
12
13 #ifdef __cplusplus
14 extern "C" {
15 #endif
16
17 #define CH32F20x_D6
18 //#define CH32F20x_D8
19 //#define CH32F20x_D8C
20 //#define CH32F20x_D8W
21
```

2、MCU 型号为:

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

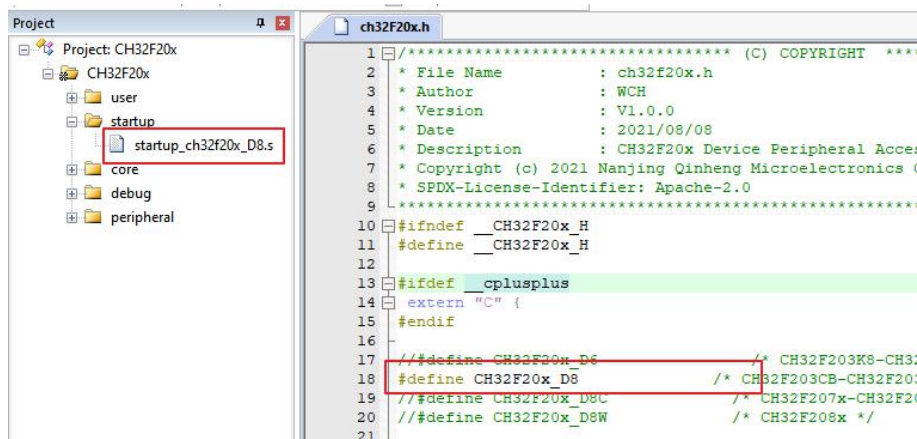
CH32F203RCT6-CH32F203VCT6 (FLASH: 256K+RAM: 64K)

(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



```
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 an MPU
23 #define NVIC_PRIO_BITS      4 /* CH32 uses 4 Bits for the Priority Levels *
24 #define __Vendor_SysTickConfig 0 /* Set to 1 if different SysTick Config is us
25
```

(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



```
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
```

3、MCU 型号为:

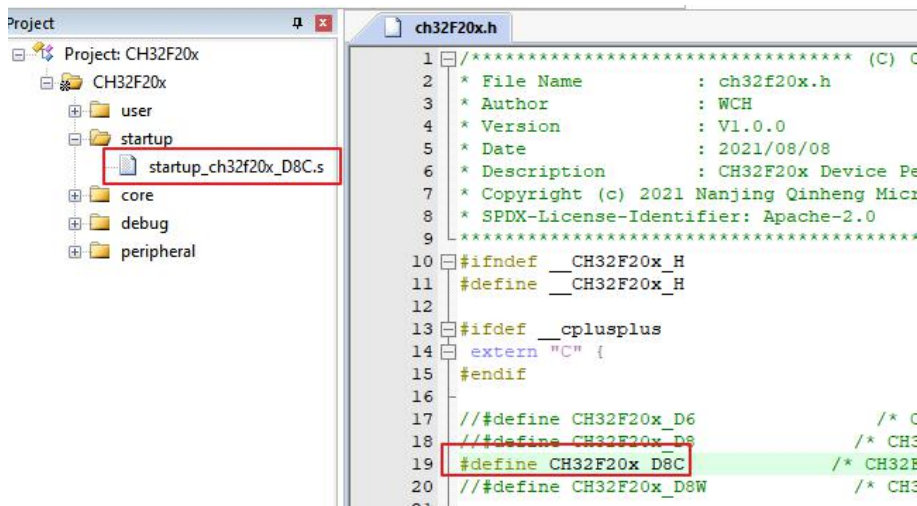
CH32F205xx (FLASH: 128K+RAM: 32K)

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

```
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
25
```

(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



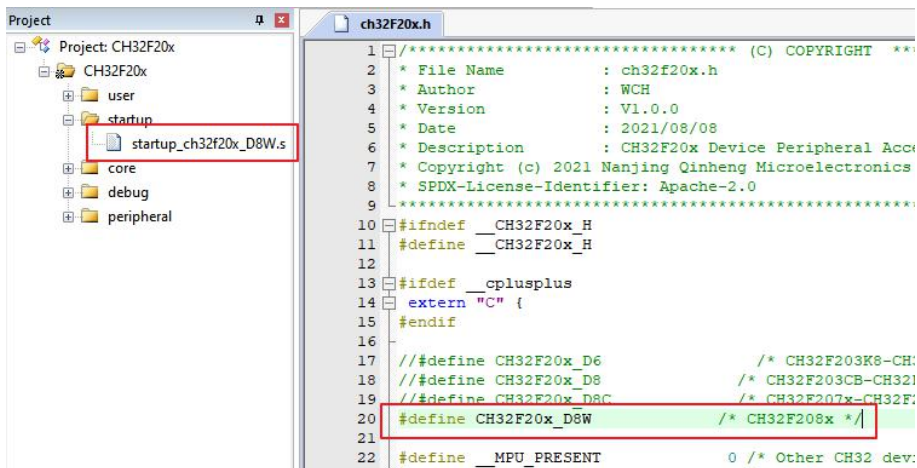
4、MCU 型号为：

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


```
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 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
25
26 #if defined (CH32F20x_D8W)
```

(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 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 dev:
```