

How to resolve hardfault issue when using AT32 Pack on M3 core MCU

Questions:

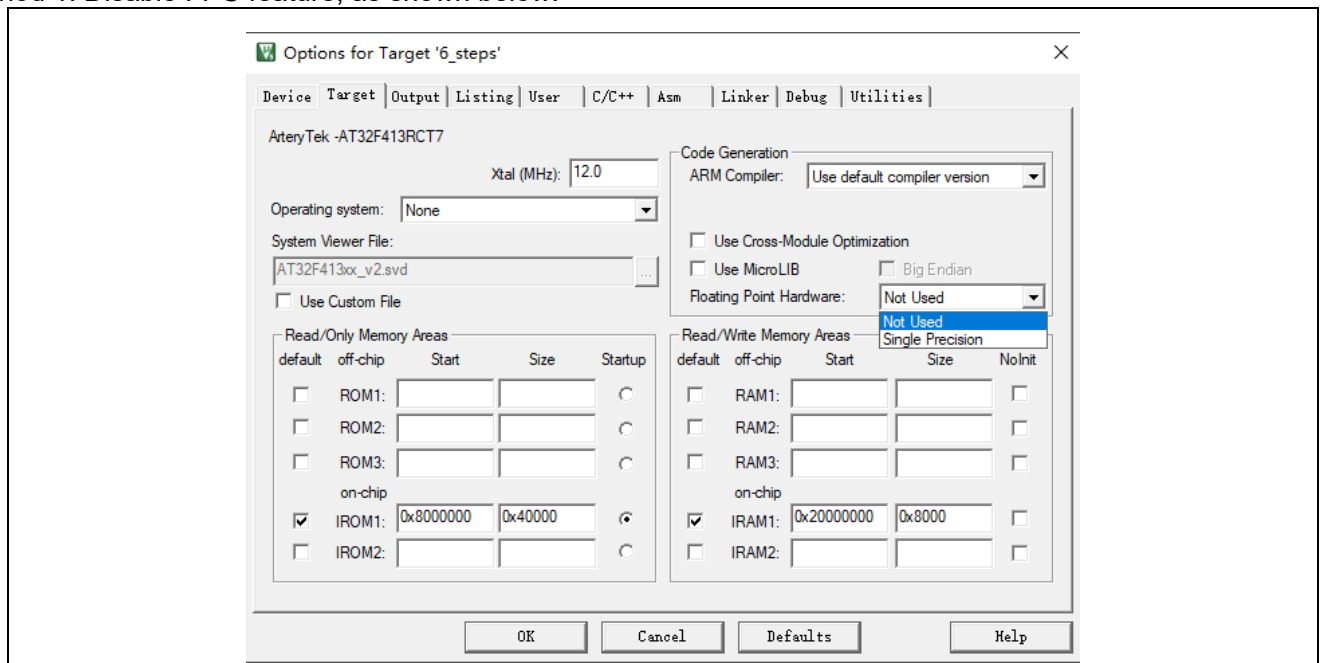
How to address hardfault issue when using AT32 Pack file on other M3-core MCU?

Answer:

The reason for hardfault is that the user uses a non-AT32 M3-core MCU without FPU, while at the same time selecting AT32 Pack file and enabling FPU.

There are two methods here to solve this problem.

Method 1: Disable FPU feature, as shown below:



Method 2: Add FPU-related macro definitions to the "SystemInit" function in the "system_XXXXXXXX.c" library file, as shown in bold font below.

```
void SystemInit (void)
{
    #if defined (__FPU_USED) && (__FPU_USED == 1U)
        SCB->CPACR |= ((3U << 10U * 2U) |           /* set CP10 Full Access */
                      (3U << 11U * 2U) );         /* set CP11 Full Access */
    #endif

    /* Reset the RCC clock configuration to the default reset state(for debug purpose) */
    /* Set HSION bit */
    RCC->CR |= (uint32_t)0x00000001;
    ...
}
```

Type: MCU application

Applicable products: AT32F413, AT32F403, AT32F403A, AT32F407

Main function: FPU

Other function: None

Document revision history

Date	Revision	Changes
2022.2.28	2.0.0	Initial release

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