

NX1 Interrupt Issue

Description: After running RTC and GPIO interrupt vectors for a period of time, sometimes there will have the problems that no longer interrupt.

Reason: The main reason is that when the interrupt flag is cleared, if other interrupt sources of the same interrupt vector occur within this time (in the same System Clock), the NX1 cannot recognize the interrupt source and finally result in not being able to enter the interrupt vector again.

Example: (Take RTC as an example.)

```
void RTC_ISR(void)
{
    if ((P_RTC_INT_Ctrl & C_RTC_1KHz_IEn) && (P_RTC->Flag & C_RTC_1KHz_Flag))
    {
        P_RTC->Flag = C_RTC_1KHz_Flag;
        // If other interrupt sources of the same interrupt vector occur at this
        // time, it will not be able to enter the interrupt vector again.

        // C-Module interrupt service standard code
        // ...
        // User defined code
        // ...
    }
    // ...
    // ...
}
```

Solution: Taking the RTC interrupt vector as an example, the simple solution is to re-enable an action on the RTC interrupt before leaving the interrupt.

Example:

```
void RTC_ISR(void)
{
    unsigned int RTC_INT_temp;
    if ((P_RTC_INT_Ctrl & C_RTC_1KHz_IEn) && (P_RTC->Flag & C_RTC_1KHz_Flag))
    {
        P_RTC->Flag = C_RTC_1KHz_Flag;
```

```
// If other interrupt sources of the same interrupt vector occur at this  
time, it will not be able to enter the interrupt vector again.
```

```
// C-Module interrupt service standard code
```

```
// ...
```

```
// User defined code
```

```
// ...
```

```
}
```

```
// ...
```

```
// ...
```

```
// Add the following code and reset the RTC interrupt vector to remove the above  
problem.
```

```
RTC_INT_temp = P_RTC_INT_Ctrl;
```

```
P_RTC_INT_Ctrl = 0x0000; // Turn off all RTC interrupt sources
```

```
P_RTC_INT_Ctrl = RTC_INT_temp; // Re-enable
```

```
}
```