

How to enter Deepsleep mode?

Questions:

How to enter Deepsleep mode for AT32F4XX?

Answer:

If SysTick timer is not disabled before entering Deepsleep mode, the MCU will be woken up again from Deepsleep mode by SysTick timer.

Take AT32F403A code as an example below, for other product series, please refer to Deepsleep demo under \examples\pwc of the corresponding BSP

```
/* clear second flag */
rtc_flag_clear(RTC_TS_FLAG);
/* wait for the second flag to be set */
while(rtc_flag_get(RTC_TS_FLAG) == RESET);
/* set the wakeup time to 3 seconds */
rtc_alarm_set(rtc_counter_get() + 3);
/* wait for the register write to complete */
rtc_wait_config_finish();
at32_led_off(LED2);
/* save systick register configuration */
systick_index = SysTick->CTRL;
systick_index &= ~((uint32_t)0xFFFFFFFF);
/* disable systick */
SysTick->CTRL &= (uint32_t)0xFFFFFFFF;

/* config the voltage regulator mode */
pwc_voltage_regulate_set(PWC_REGULATOR_LOW_POWER);
/* enter deep sleep mode */
pwc_deep_sleep_mode_enter(PWC_DEEP_SLEEP_ENTER_WFI);
/* restore systick register configuration */
SysTick->CTRL |= systick_index;
/* wake up from deep sleep mode, config the system clock */
system_clock_recover();
at32_led_on(LED2);
for(index = 0; index < 500000; index++);
```

Type: MCU

Applicable products: AT32F4xx MCU

Main function: PWR

Minor function: None

Document revision history

Date	Revision	Changes
2022.2.21	2.0.0	Initial release

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