

Application Note

RTC

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1. Preface

This application note describes sample software for the RTC function using the rtc driver.
This document helps the user check operation of a product under development and develop its program.

2. Technical Term

Term/Abbreviation	Definition
RTC	Real-Time Clock
BSP	Board Support Package
UART	Universal Asynchronous Receiver Transmitter
Timer	T32A : 32-bit Timer Event Counter

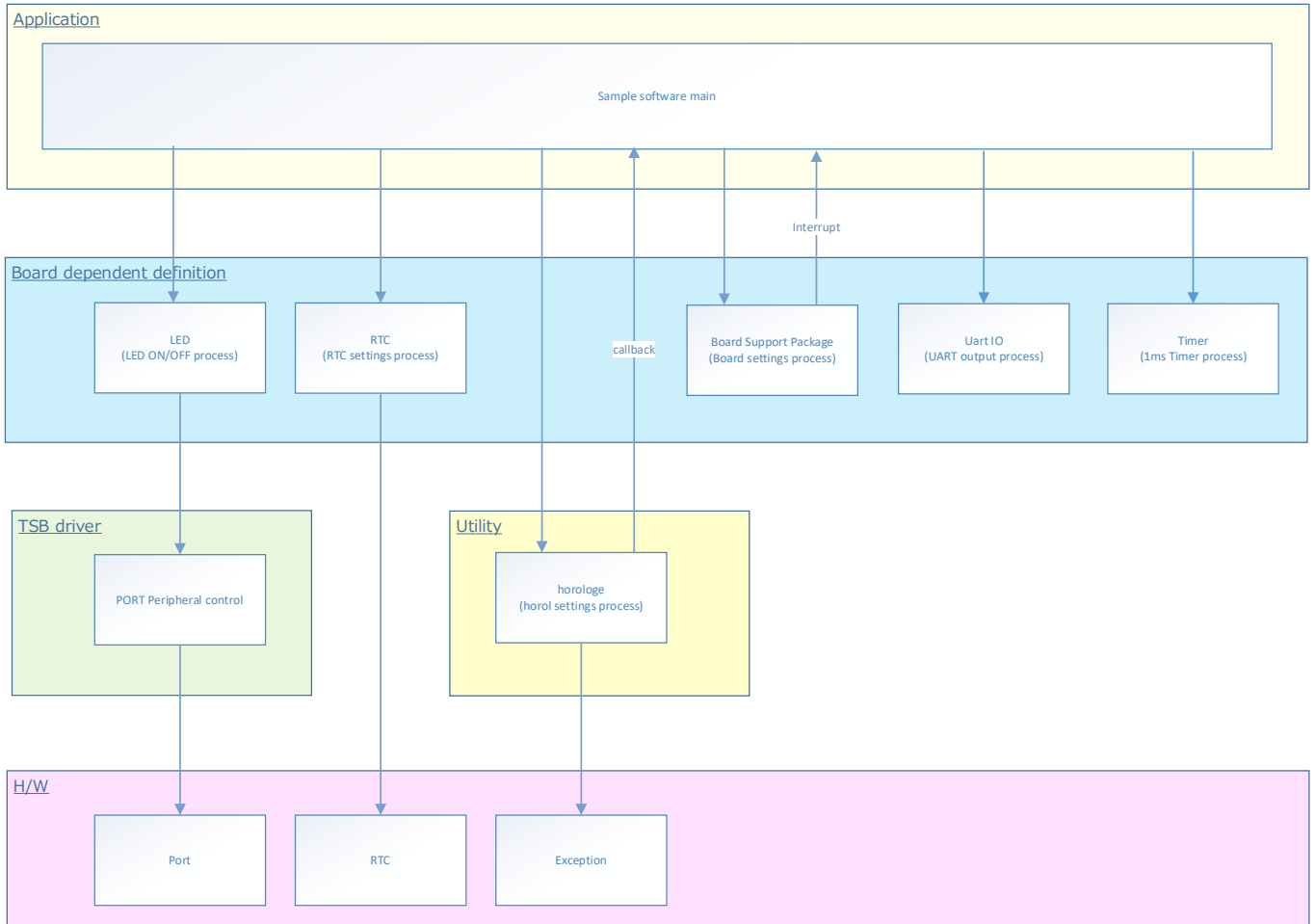
3. Reference Document

Document	Notes
Data sheet	Refer to the data sheet of MCU to be used.
Reference manual	Refer to the reference manual of each IP to be used.
Application note MCU User Guide	Refer to the MCU user guide to be used.

4. Target Sample Program

Sample Program	Outline
RTC	Sample program of RTC function

5. Configuration Diagram



6. Sample Program : RTC

This sample software is clock control software. The LED is turn on / off every time Timer_A elapses.

6.1. Outlines of Operation

The calendar and time are displayed on the terminal software.

Set the initial time and switch BSP_LED_1 ON / OFF every time Timer_A elapses.

Outputs a log every time Timer_B elapses.

6.2. Function to Use

The functions to use are as follows.

For the Port assignment of each channel, refer to the MCU user guide.

IP	Channel	Objective
PORT(LED)	BSP_LED_1	For operation check
UART	BSP_UART_1	For terminal emulator communication (Outputs log)

6.3. Interrupt to Use

Interrupt	Outlines
INTRTC	RTC interrupt. Get date / time
INTUART0RX	UART ch0 Receive interrupt for terminal emulator
INTUART0TX	UART ch0 Transmission interrupt for terminal emulator
INTUART0ERR	UART ch0 Error interrupt for terminal emulator

6.4. Configuration

“main.c” configuration setting.

Configuration	Current Value	Description
Initial time	2017-01-01 21:17:30	Y - M - D H : M : S
Timer_A	500ms	-
Timer_B	1000ms	-

6.5. Example of Terminal Emulator Output

6.5.1. Normal Operation

```
2016-01-01 00:00:00  
2016-01-01 00:00:01  
2016-01-01 00:00:02  
2016-01-01 00:00:03  
2016-01-01 00:00:04
```

6.5.2. Case of Error Occurrence

Nothing.

7. Driver

Nothing.

8. Revision History

Revision	Date	Description
1.0	2023-06-28	First release

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