

Application Note

RMC

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1. Preface

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

2. Technical Term

Term/Abbreviation	Definition
RMC	Remote Control
BSP	Board Support Package
UART	Universal Asynchronous Receiver Transmitter
Timer	T32A : 32-bit Timer Event Counter

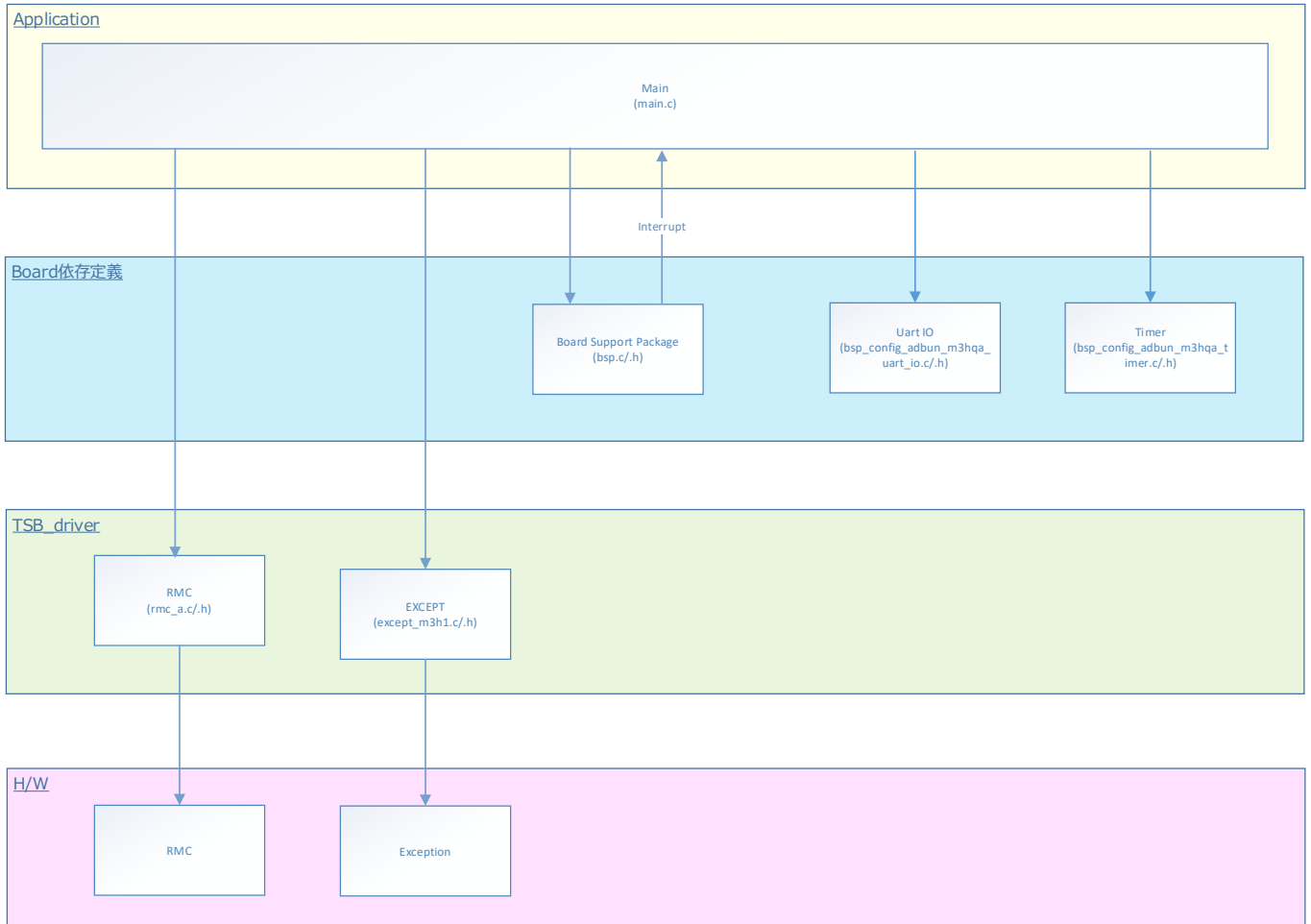
3. Reference Document

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 manual to be used.
Driver API list	Refer to the MCU Doc folder to be used.

4. Target Sample Program

Sample Program	Outline
RMC	Sample program of RMC function

5. Configuration Diagram



6. Sample Program : RMC

This sample software for RMC.

6.1. Outlines of Operation

The information received by RMC is output to the terminal emulator.
The corresponding reception formats are as follows.

NEC format

TOSHIBA format

AEHA format (Association for Electric Home Appliances)

When the remote control mode is received, the log is output according to each format.

6.2. Function to Use

The functions to use are as follows.

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

IP	Channel	Objective
RMC	BSP_RMC_1	For remote control reception
UART	BSP_UART_1	For terminal emulator communication (Outputs log)

6.3. Interrupt to Use

Interrupt	Outlines
INTRMCO	RMC ch0 Remote control interrupt. Remote control reception
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
Support Format	NEC Format	Default operation. Please switch so that you can check the operation.

6.5. Example of Terminal Emulator Output

6.5.1. NEC format / TOSHIBA format

```
Customer Code
=>00000010:0x02
=>11111101:0xFD
Data Code
=>01001000:0x48
=>10110111:0xB7
```

6.5.2. AEHA format

```
Remocon Code
=>00110100:0xC2
=>01001010:0x25
=>10010000:0x90
=>01010100:0xA2
=>11000100:0x32
```

7. RMC Driver

7.1. List of driver

The RMC is controlled by using the following interface.
For an example of use, refer to the source code.

Driver	Control Outlines
rmc_init	Build an object
rmc_deinit	Discard the object
rmc_enable	Enable RMC
rmc_disable	Disable RMC
rmc_rx_enable	Enable reception
rmc_rx_disable	Disable reception
rmc_get_status	Get status
rmc_get_data	Get received data

7.2. Details

See “3. Reference Documents” for more information.

8. Revision History

Revision	Date	Description
1.0	2022-04-08	First release

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