

Application Note

RMC

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1. Preface

This application note describes sample software RMC using remote control receiving circuit(RMC).
This document helps the user check operation of a product under development and develop its program.

2. Technical Term

Term/Abbreviation	Definition
BSP	Board Support Package
CG	Clock Control and Operation Mode
RMC	Real Time Clock
Timer	T32A:32-bit Timer Event Counter
UART	Universal Asynchronous Receiver Transmitter

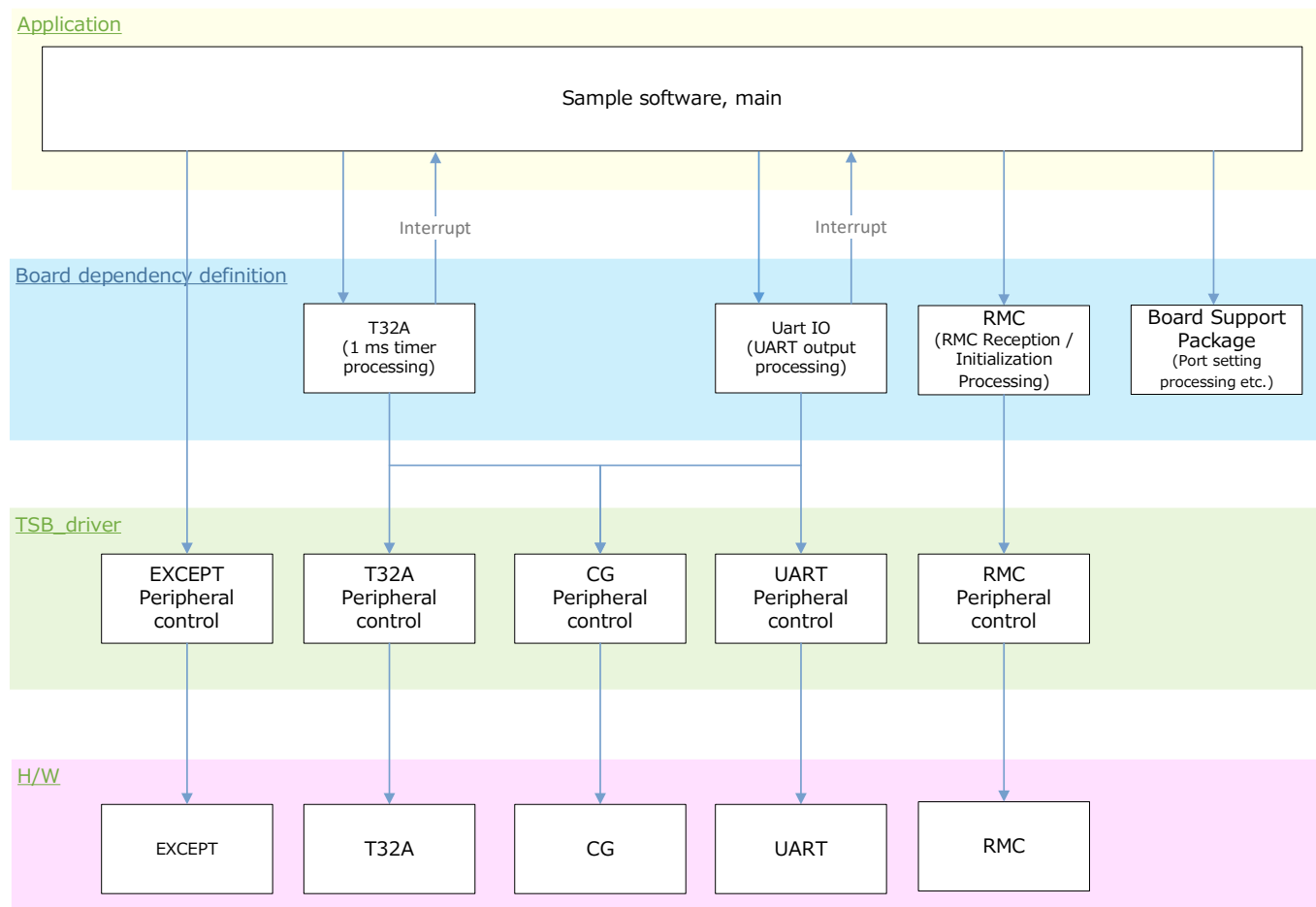
3. Reference Document

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
RMC	Sample program of RMC function

5. Configuration Diagram



6. Sample Program: RMC

This is sample software for RMC that outputs reception date form remote control to terminal soft.

6.1. Outlines of Operation

Wait for the reception of the remote control code.
When the remote control code is received, output a log.
The supported reception format is NEC 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 guide.

IP	Channel	Objective
RMC	BSP_RMC_1	For reception of remote control
UART	BSP_UART_1	For terminal soft communication

6.3. Interrupt to Use

Interrupt	Outlines
INTT32A00A	T32A Timer A Timer counter increment every 1ms
INTRMC0	RMC interrupt - Leader detection interrupt - Configure to end reception / trigger an interrupt when the data bit period reaches MAX
INTUART0TX	UART Transmission interrupt
INTUART0ERR	UART Error Interrupt

6.4. Configuration

Configuration setting.

Configuration	Soft Definition Name	Current Value (Defaults)	Description
Support Format	None	NEC Format	Only support NEC format

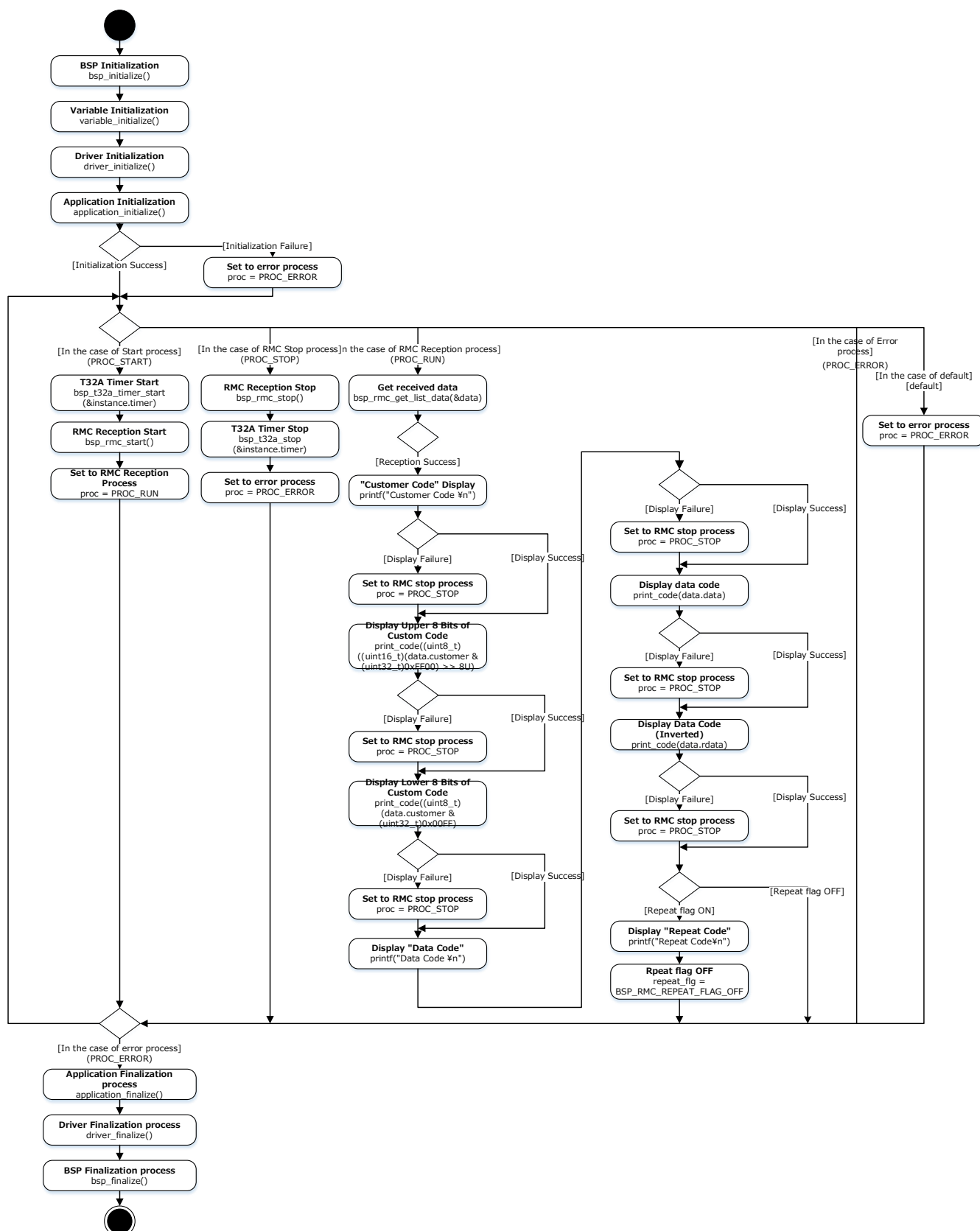
6.5. Example of Terminal Emulator Output

6.5.1. NEC format

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

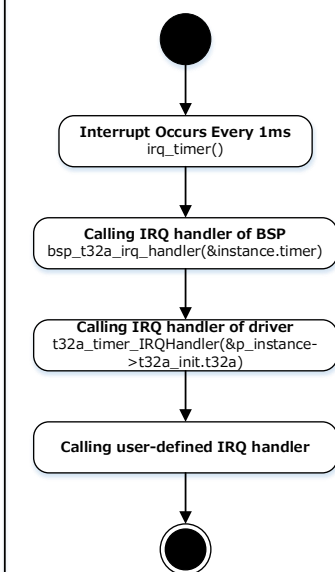
7. Activity diagram

7.1. main

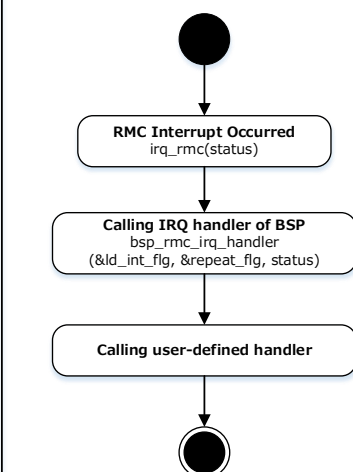


7.2. Interrupt

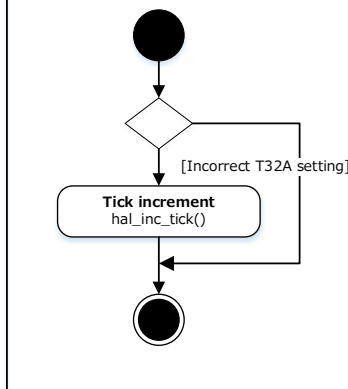
1ms timer Interrupt calling flow chart



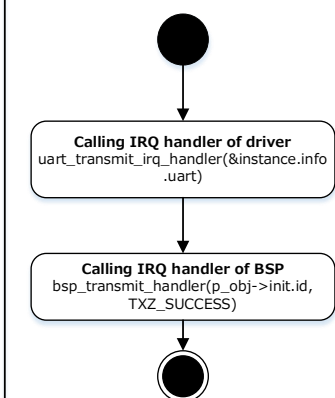
Remote Control Interrupt calling flow chart



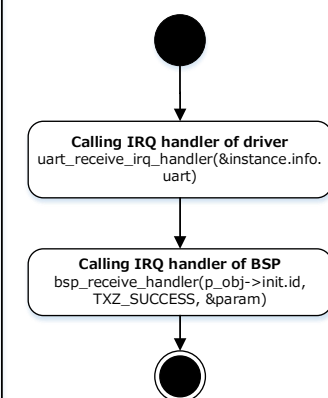
timer_interval_handler



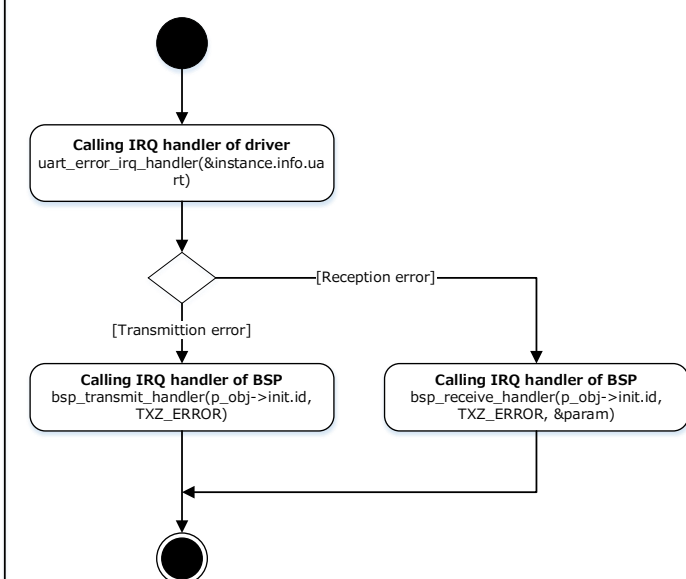
UART Transmission Interrupt calling flow chart



UART Reception Interrupt calling flow chart



UART Communication Error Interrupt Calling Flow



8. Revision History

Revision	Date	Description
1.0	2025-10-30	First release

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