Application Note

DAC_UART

Table of Contents

1. Preface

This application note describes the sample software of DAC_UART using Digital to Analog Converter (DAC). This document helps the user check operation of a product under development and develop its program.

2. Technical Term

Term/Abbreviation	Definition
UART	Universal Asynchronous Receiver Transmitter
DAC	Digital to Analog Converter

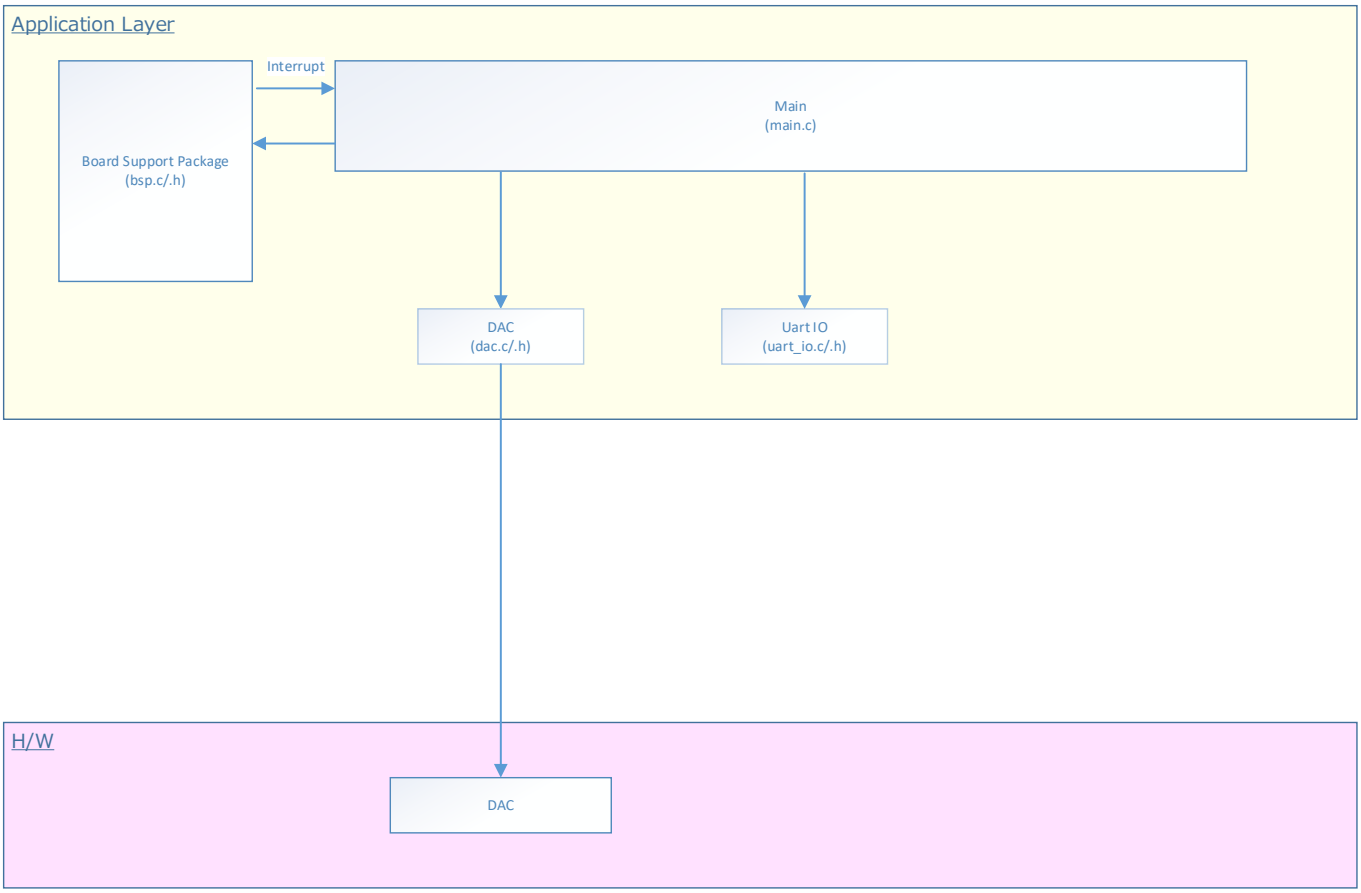
3. Reference Document

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.

4. Target Sample Program

Sample Program	Outlines
DAC_UART	Sample of DAC_UART (Digital to analog output)

5. Configuration Diagram



6. Sample Program: DAC_UART

This sample program outputs the analog data to which the DAC converts digital data input from the terminal emulator.

6.1. Outlines of Operation

An 8-bit data input from the terminal emulator is received and converted to an analog data. The analog voltage level is output from BSP_DAC_0.

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
UART	BSP_UART_0	Communication with the terminal emulator
DAC	BSP_DAC_0	Digital to analog converter

6.3. Interrupt to Use

Interrupt	Outlines
UART Interrupt	UART transmission end interrupt
	UART reception end interrupt
	UART error interrupt process

6.4. Configuration

Nothing.

6.5. Example of Terminal Emulator Output

6.5.1. Normal Operation

```
Input > 128
Input > 0xc0
Input > 0xFF
```

6.5.2. Case of Error Occurrence

```
Input > 256
A significant figures of input data is 8bit !!
```

7. Revision History

Revision	Date	Description
1.0	2021-10-18	First release

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