

Application Note

TSSI ChToCh

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1. Preface

This application note describes the sample software of TSSI_ChToCh using Synchronous Serial Interface (TSSI) and Universal Asynchronous Receiver Transmitter (UART). 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
UART	Universal Asynchronous Receiver Transmitter
TSSI	Synchronous Serial Interface

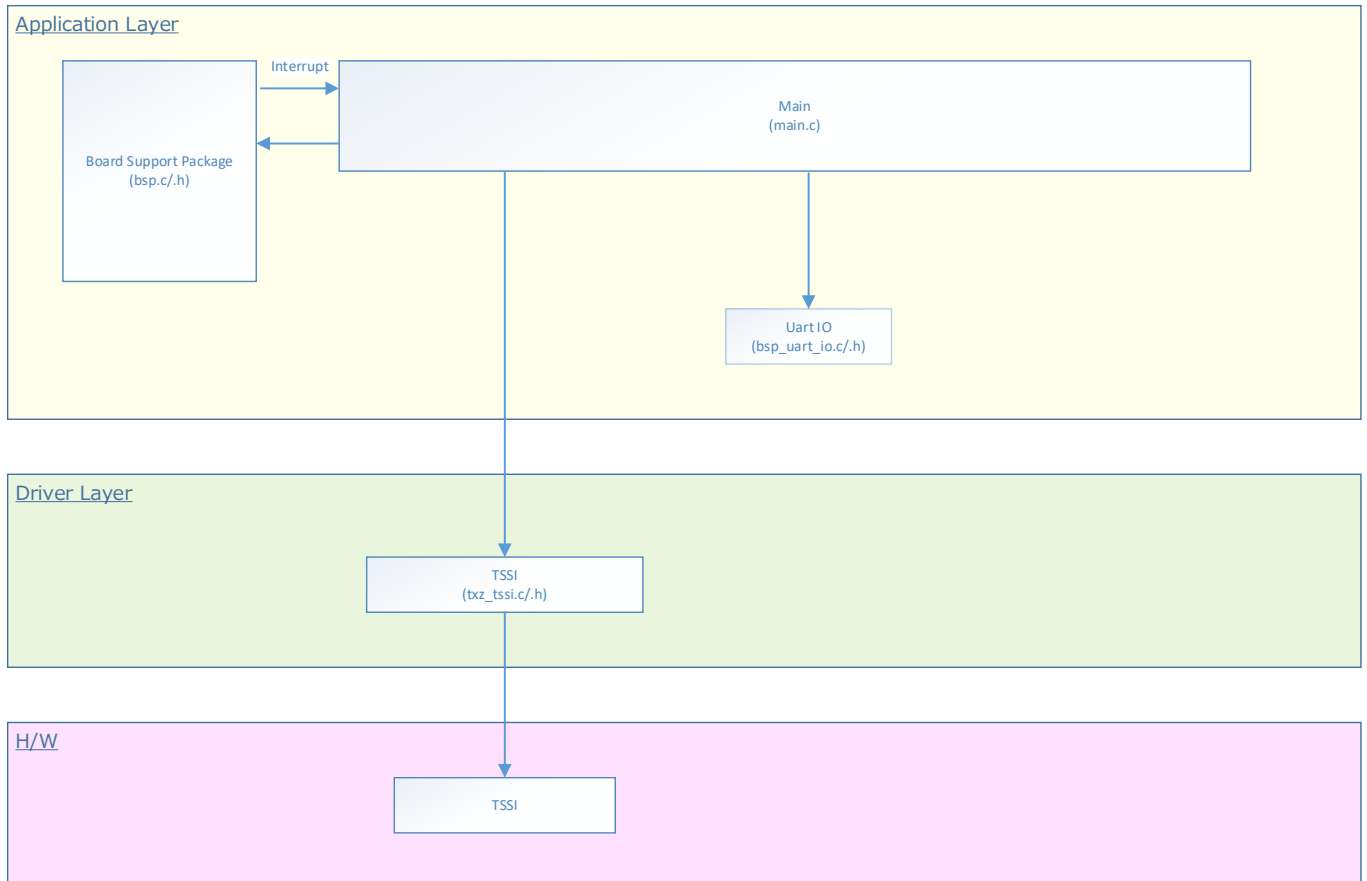
3. Reference Document

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
TSSI_ChToCh	Sample of TSSI function

5. Configuration Diagram



6. Sample Program: TSSI_ChToCh

This sample software transmits and receives data using 2-channel TSSI, and outputs the reception data to the terminal emulator.

6.1. Outlines of Operation

“command >” is displayed on the terminal emulator. “write” should be input to transmit data.

When the “write” command is input, a character string “TOSHIBA” is transmitted, and the display of the terminal emulator view returns to “command >”.

“read” should be input to display reception data. When the “read” command is input, reception data is read, and the reception data is displayed on the terminal emulator view. And the display returns to “command >”.

Clock: 1 MHz (Divider = 1/96 fixed.)

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
TSSI	BSP_TSSI_0	TSSI transmission
	BSP_TSSI_1	TSSI reception

6.3. Interrupt to Use

Interrupt	Outlines
TSSI Interrupt	TSSI reception interrupt
	TSSI transmission interrupt
UART Interrupt	UART reception interrupt
	UART transmission interrupt
	UART ERROR interrupt

6.4. Configuration

Nothing.

6.5. Example of Terminal Emulator Output

6.5.1. Normal Operation

```
command > write
command > read
read data > TOSHIBA
command >
```

6.5.2. Case of Error Occurrence

Nothing.

7. TSSI Driver

7.1. List of Drivers

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

Interface Name	Control Outlines
tssi_deinit	TSSI object is released.
tssi_init	TSSI object is initialized.
tssi_master_transfer	Data is transferred. Non-blocking communication.
tssi_slave_receiver	Data is received. Non-blocking communication.

8. Revision History

Revision	Date	Description
1.0	2021-11-04	First release

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