

Application Note

OFD_LED

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1. Preface

This application note describes the sample software of OFD_LED using Oscillation Frequency Detector (OFD). 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
OFD	Oscillation Frequency Detector
T32A	32bit Timer Event Counter

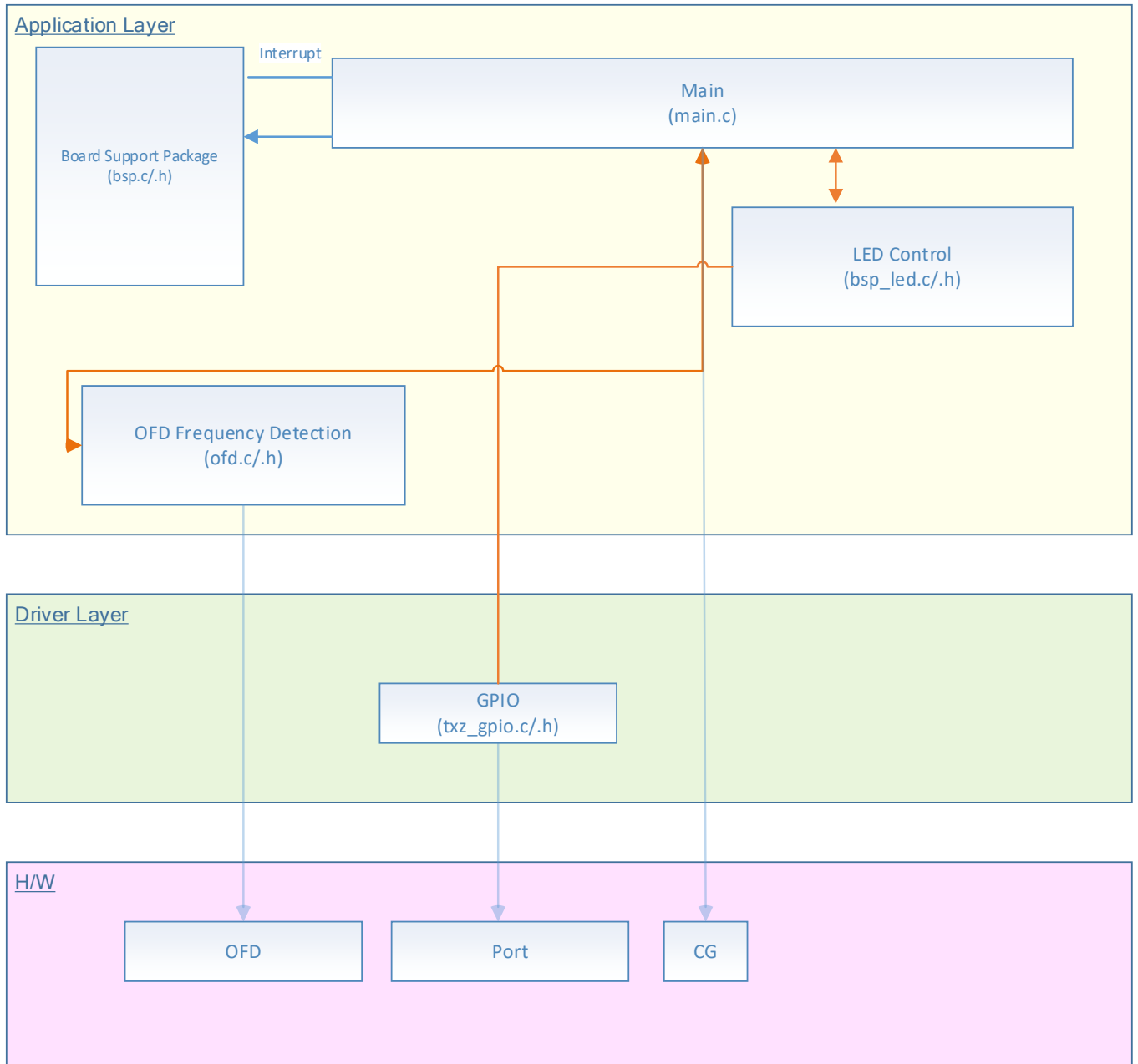
3. Reference Document

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.

4. Target Sample Program

Sample Program	Outlines
OFD_LED	Sample of OFD_LED

5. Configuration Diagram



6. Sample Program: OFD_LED

This sample software detects the frequency of a target clock using OFD function, and turns on the corresponding LED.

6.1. Outlines of Operation

When the target clock frequency does not exceed the OFD detection frequency band, the BSP_LED_0 blinks.

When the clock frequency exceeds the OFD detection frequency band, the OFD generates a reset signal for I/O. Then, the software is reset and the OFD reset flag is set.

When the set of the reset flag is detected, the OFD becomes disabled. The BSP_LED_2 blinks and the BSP_LED_0 turns off.

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
PORT	BSP_LED_0	LED control
	BSP_LED_2	LED control

6.3. Interrupt to Use

Interrupt	Outlines
Timer interrupt	Interval timer interrupt

6.4. Configuration

Nothing.

6.5. Example of Terminal Emulator Output

Nothing.

7. Revision History

Revision	Date	Description
1.0	2021-11-01	First release

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