

Application Note

LVD Interrupt

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1. Preface

This application note describes sample software for the function of using the LVD driver to generate an interrupt at a specified voltage drop.

This document helps the user check operation of a product under development and develop its program.

2. Technical Term

Term/Abbreviation	Definition
LVD	Low Voltage Discharge
BSP	Board Support Package

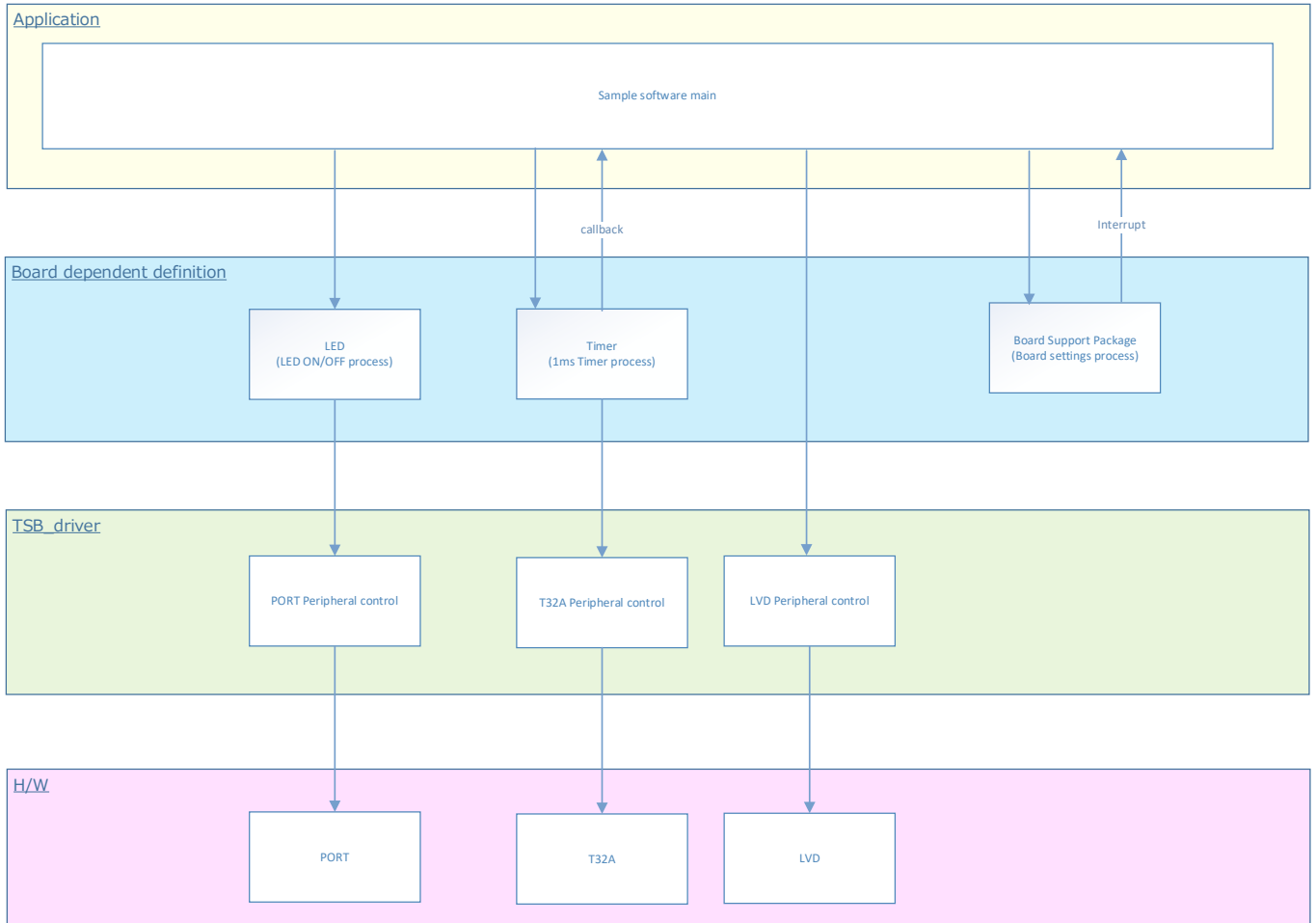
3. Reference Document

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
LVD_Interrupt	Sample program of LVD_Interrupt function

5. Configuration Diagram



6. Sample Program : LVD_Interrupt

This is sample software that generates an interrupt at the specified voltage drop.

6.1. Outlines of Operation

The LED is on (blinks) changes according to the detected voltage value.

If the power supply voltage is higher than the detection voltage, BSP_LED_2 is turn on.

If the power supply voltage is lower than the detection voltage, BSP_LED_2 will be turn off and BSP_LED_1 will be blinking.

When the power supply voltage exceeds the release voltage, BSP_LED_1 turn off and BSP_LED_2 blinks.

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
PORT(LED)	BSP_LED_1	For operation check
	BSP_LED_2	For operation check
T32A Control	BSP_T32A_TIMER_1	Used as a 1ms interval timer. For application

6.3. Interrupt to Use

Interrupt	Outlines
INTT32A00A	T32A Timer A Timer counter increment every 1ms for LED processing

6.4. Configuration

“main.c” configuration setting.

Configuration	Current Value	Description
Cycle A	2Hz	-
Duty A	50%	-
Detection voltage	4.0V	Release voltage is 4.05V

6.5. Example of Terminal Emulator Output

Nothing.

7. LVD Driver

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

Driver	Control Outlines
init_LVD	LVD Object initialization
start_LVD	LVD Start of object

8. Revision History

Revision	Date	Description
1.0	2023-06-28	First release

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