

Application Note

DNF_LED

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1. Preface

This application note describes the sample software of DNF_LED using Digital Noise Filter (DNF). This document helps the user check operation of a product under development and develop its program.

2. Technical Term

| Term/Abbreviation | Definition |
|-------------------|----------------------------|
| DNF | Digital Noise Filter |
| T32A | 32-bit Timer Event Counter |

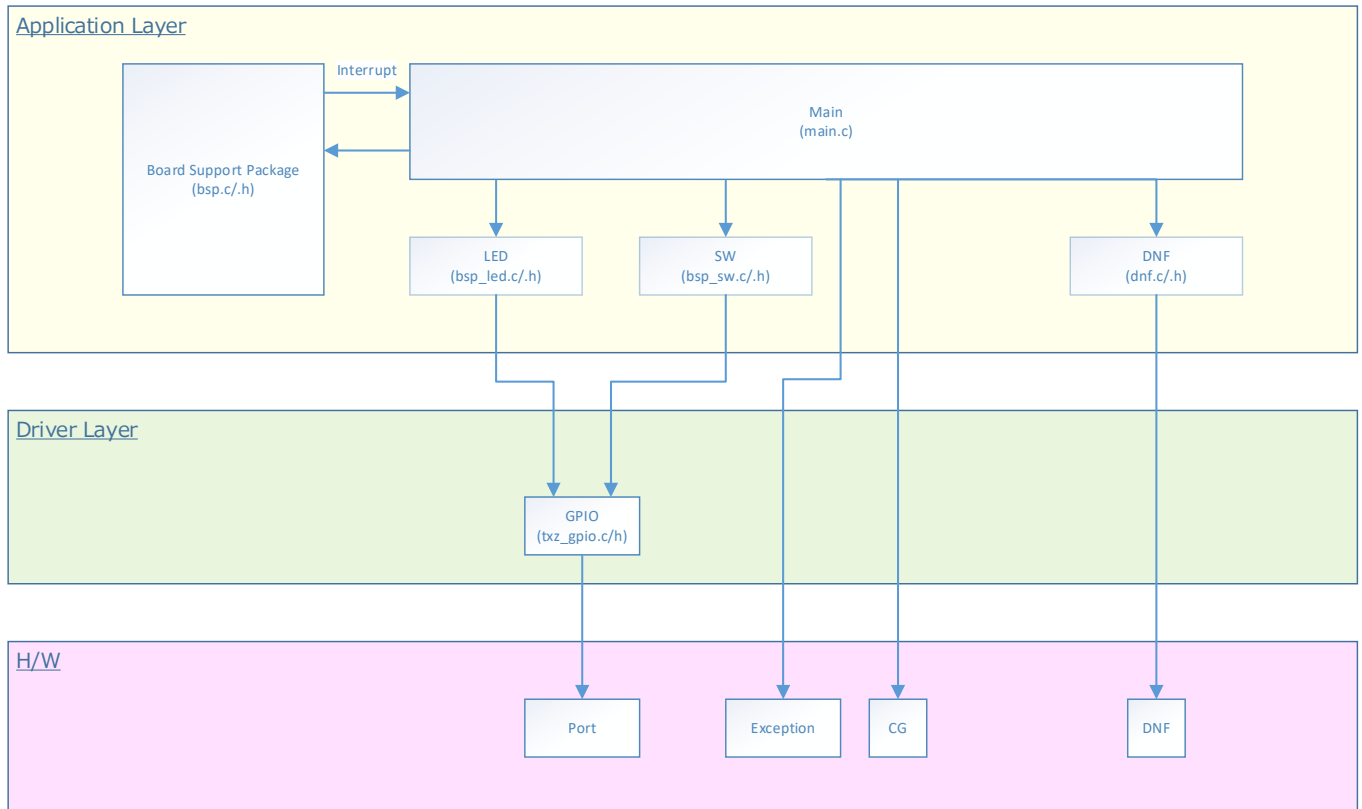
3. Reference Document

| 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 |
|----------------|--|
| DNF_LED | Sample of DNF_LED (Digital noise filter) |

5. Configuration Diagram



6. Sample Program: DNF_LED

This sample software removes SW input noise using DNF function.

6.1. Outlines of Operation

The noise is removed from the input signal of the push BSP_PSW_4 which is pushed down. When the BSP_PSW_4 is pushed down during turn-off of a corresponding BSP_LED_3, the BSP_LED_3 turns on. On the other hand, when the BSP_PSW_4 is pushed down during turn-on of the BSP_LED_3, the BSP_LED_3 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_PSW_4 | Switch input |
| PORT | BPS_LED_3 | LED control |

6.3. Interrupt to Use

| Interrupt | Outlines |
|-----------------|--|
| INT01 Interrupt | External switch interrupt when BSP_PSW_4 push down |
| 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 | 2021-10-18 | First release |

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