

# STM32F0308-Discovery BSP User Manual

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—	b	l	u					

Here is a list of all functions, variables, defines, enums, and typedefs with links to the files they belong to:

- \_ -

- \_\_STM32F0308\_DISCO\_BSP\_VERSION : [stm32f0308\\_discovery.c](#)
- \_\_STM32F0308\_DISCO\_BSP\_VERSION\_MAIN : [stm32f0308\\_discovery.c](#)
- \_\_STM32F0308\_DISCO\_BSP\_VERSION\_RC : [stm32f0308\\_discovery.c](#)
- \_\_STM32F0308\_DISCO\_BSP\_VERSION\_SUB1 : [stm32f0308\\_discovery.c](#)
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- BSP\_GetVersion() : [stm32f0308\\_discovery.c](#)
- BSP\_LED\_Init() : [stm32f0308\\_discovery.c](#)
- BSP\_LED\_Off() : [stm32f0308\\_discovery.c](#)
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- BUTTONn : [stm32f0308\\_discovery.h](#)
- BUTTONx\_GPIO\_CLK\_DISABLE : [stm32f0308\\_discovery.h](#)
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- LED3 : [stm32f0308\\_discovery.h](#)
- LED3\_GPIO\_CLK\_DISABLE : [stm32f0308\\_discovery.h](#)
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- USER\_BUTTON\_EXTI\_IRQn : [stm32f0308\\_discovery.h](#)
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- USER\_BUTTON\_GPIO\_CLK\_ENABLE : [stm32f0308\\_discovery.h](#)

- USER\_BUTTON\_GPIO\_PORT : [stm32f0308\\_discovery.h](#)
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- [BSP\\_GetVersion\(\)](#) : [stm32f0308\\_discovery.c](#)
- [BSP\\_LED\\_Init\(\)](#) : [stm32f0308\\_discovery.c](#)
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- BUTTON\_IRQn : [stm32f0308\\_discovery.c](#)
- BUTTON\_PIN : [stm32f0308\\_discovery.c](#)
- BUTTON\_PORT : [stm32f0308\\_discovery.c](#)
- LED\_PIN : [stm32f0308\\_discovery.c](#)
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- Button\_TypeDef : [stm32f0308\\_discovery.h](#)
- ButtonMode\_TypeDef : [stm32f0308\\_discovery.h](#)
- Led\_TypeDef : [stm32f0308\\_discovery.h](#)

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- `BUTTON_MODE_GPIO` : [stm32f0308\\_discovery.h](#)
- `BUTTON_USER` : [stm32f0308\\_discovery.h](#)
- `LED3` : [stm32f0308\\_discovery.h](#)
- `LED4` : [stm32f0308\\_discovery.h](#)
- `LED_BLUE` : [stm32f0308\\_discovery.h](#)
- `LED_GREEN` : [stm32f0308\\_discovery.h](#)

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- \_\_STM32F0308\_DISCO\_BSP\_VERSION : [stm32f0308\\_discovery.c](#)
- \_\_STM32F0308\_DISCO\_BSP\_VERSION\_MAIN : [stm32f0308\\_discovery.c](#)
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- BUTTONn : [stm32f0308\\_discovery.h](#)
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- LEDx\_GPIO\_CLK\_DISABLE : [stm32f0308\\_discovery.h](#)
- LEDx\_GPIO\_CLK\_ENABLE : [stm32f0308\\_discovery.h](#)
- USER\_BUTTON\_EXTI\_IRQn : [stm32f0308\\_discovery.h](#)
- USER\_BUTTON\_GPIO\_CLK\_DISABLE :



### **stm32f0308\_discovery.h**

- USER\_BUTTON\_GPIO\_CLK\_ENABLE :  
**stm32f0308\_discovery.h**
- USER\_BUTTON\_GPIO\_PORT : **stm32f0308\_discovery.h**
- USER\_BUTTON\_PIN : **stm32f0308\_discovery.h**

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## stm32f0308\_discovery.c File Reference

This file provides set of firmware functions to manage Leds and push-button available on STM32F0308-DISCOVERY Kit from STMicroelectronics. [More...](#)

```
#include "stm32f0308_discovery.h"
```

[Go to the source code of this file.](#)

## Defines

#define	<b>__STM32F0308_DISCO_BSP_VERSION_MAIN</b>	(0x02)
	STM32F0308 DISCO BSP Driver version number V2.0.5.	
#define	<b>__STM32F0308_DISCO_BSP_VERSION_SUB1</b>	(0x00)
#define	<b>__STM32F0308_DISCO_BSP_VERSION_SUB2</b>	(0x05)
#define	<b>__STM32F0308_DISCO_BSP_VERSION_RC</b>	(0x00)
#define	<b>__STM32F0308_DISCO_BSP_VERSION</b>	

## Functions

uint32_t	<b>BSP_GetVersion</b> (void)	This method returns the STM32F0308 DISCO BSP Driver revision.
void	<b>BSP_LED_Init</b> ( <b>Led_TypeDef</b> Led)	Configures LED GPIO.
void	<b>BSP_LED_On</b> ( <b>Led_TypeDef</b> Led)	Turns selected LED On.
void	<b>BSP_LED_Off</b> ( <b>Led_TypeDef</b> Led)	Turns selected LED Off.
void	<b>BSP_LED_Toggle</b> ( <b>Led_TypeDef</b> Led)	Toggles the selected LED.
void	<b>BSP_PB_Init</b> ( <b>Button_TypeDef</b> Button, <b>ButtonMode_TypeDef</b> Mode)	Configures Button GPIO and EXTI Line.
uint32_t	<b>BSP_PB_GetState</b> ( <b>Button_TypeDef</b> Button)	Returns the selected Button state.

## Variables

GPIO_TypeDef *	LED_PORT [LEDn] = {LED3_GPIO_PORT, LED4_GPIO_PORT}
const uint16_t	LED_PIN [LEDn] = {LED3_PIN, LED4_PIN}
GPIO_TypeDef *	BUTTON_PORT [BUTTONn] = {USER_BUTTON_GPIO_PORT}
const uint16_t	BUTTON_PIN [BUTTONn] = {USER_BUTTON_PIN}
const uint8_t	BUTTON_IRQn [BUTTONn] = {USER_BUTTON_EXTI_IRQn}

## Detailed Description

This file provides set of firmware functions to manage Leds and push-button available on STM32F0308-DISCOVERY Kit from STMicroelectronics.

**Author:**

MCD Application Team

**Attention:**

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Definition in file [stm32f0308\\_discovery.c](#).

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				<a href="#">Defines</a>   <a href="#">Enumerations</a>   <a href="#">Functions</a>

## stm32f0308\_discovery.h File Reference

This file contains definitions for STM32F0308-Discovery's Leds, push-buttons hardware resources. [More...](#)

```
#include "stm32f0xx_hal.h"
```

[Go to the source code of this file.](#)



## Defines

#define	<b>LEDn</b>	2
#define	<b>LED3_PIN</b>	GPIO_PIN_9
#define	<b>LED3_GPIO_PORT</b>	GPIOC
#define	<b>LED3_GPIO_CLK_ENABLE()</b>	__HAL_RCC_GPIOC_CLK_E
#define	<b>LED3_GPIO_CLK_DISABLE()</b>	__HAL_RCC_GPIOC_CLK_D
#define	<b>LED4_PIN</b>	GPIO_PIN_8
#define	<b>LED4_GPIO_PORT</b>	GPIOC
#define	<b>LED4_GPIO_CLK_ENABLE()</b>	__HAL_RCC_GPIOC_CLK_E
#define	<b>LED4_GPIO_CLK_DISABLE()</b>	__HAL_RCC_GPIOC_CLK_D
#define	<b>LEDx_GPIO_CLK_ENABLE(__LED__)</b>	
#define	<b>LEDx_GPIO_CLK_DISABLE(__LED__)</b>	
#define	<b>BUTTONn</b>	1
#define	<b>USER_BUTTON_PIN</b>	GPIO_PIN_0 /* PA0 */ USER push-button.
#define	<b>USER_BUTTON_GPIO_PORT</b>	GPIOA
#define	<b>USER_BUTTON_GPIO_CLK_ENABLE()</b>	__HAL_RCC_GPIOA_CLK_E
#define	<b>USER_BUTTON_GPIO_CLK_DISABLE()</b>	__HAL_RCC_GPIOA_CLK_D
#define	<b>USER_BUTTON_EXTI_IRQn</b>	EXTI0_1_IRQn
#define	<b>BUTTONx_GPIO_CLK_ENABLE(__BUTTON__)</b>	do { if((__B BUTTON_USER) <b>USER_BUTTON_GPIO_CLK_ENABLE()</b> );} v
#define	<b>BUTTONx_GPIO_CLK_DISABLE(__BUTTON__)</b>	(((__BUTT BUTTON_USER) ? <b>USER_BUTTON_GPIO_CLK_DISABLE()</b>

## Enumerations

enum	<b>Led_TypeDef</b> { <b>LED3</b> = 0, <b>LED4</b> = 1, <b>LED_GREEN</b> = LED3, <b>LED_BLUE</b> = LED4 } LED Types Definition. <a href="#">More...</a>
enum	<b>Button_TypeDef</b> { <b>BUTTON_USER</b> = 0 } BUTTON Types Definition. <a href="#">More...</a>
enum	<b>ButtonMode_TypeDef</b> { <b>BUTTON_MODE_GPIO</b> = 0, <b>BUTTON_MODE_EXTI</b> = 1 }

## Functions

uint32_t	<b>BSP_GetVersion</b> (void)	This method returns the STM32F0308 DISCO BSP Driver revision.
void	<b>BSP_LED_Init</b> ( <b>Led_TypeDef</b> Led)	Configures LED GPIO.
void	<b>BSP_LED_On</b> ( <b>Led_TypeDef</b> Led)	Turns selected LED On.
void	<b>BSP_LED_Off</b> ( <b>Led_TypeDef</b> Led)	Turns selected LED Off.
void	<b>BSP_LED_Toggle</b> ( <b>Led_TypeDef</b> Led)	Toggles the selected LED.
void	<b>BSP_PB_Init</b> ( <b>Button_TypeDef</b> Button, <b>ButtonMode_TypeDef</b> Mode)	Configures Button GPIO and EXTI Line.
uint32_t	<b>BSP_PB_GetState</b> ( <b>Button_TypeDef</b> Button)	Returns the selected Button state.

## Detailed Description

This file contains definitions for STM32F0308-Discovery's Leds, push-buttons hardware resources.

**Author:**

MCD Application Team

**Attention:**

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Definition in file [stm32f0308\\_discovery.h](#).

# STM32F0308-Discovery BSP User Manual

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## Modules

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Here is a list of all modules:

- **BSP**
  - **STM32F0308\_DISCOVERY**
    - **STM32F0308\_DISCOVERY Common**
      - **Private Constants**
      - **Private Variables**
      - **Exported Types**
      - **Exported Constants**
        - **STM32F0308\_DISCOVERY LED**
        - **STM32F0308\_DISCOVERY BUTTON**
      - **Exported Functions**

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## File List

Here is a list of all files with brief descriptions:

<a href="#">stm32f0308_discovery.c</a> [code]	This file provides set of firmware functions to manage Leds and push-button available on STM32F0308-DISCOVERY Kit from STMicroelectronics
<a href="#">stm32f0308_discovery.h</a> [code]	This file contains definitions for STM32F0308-Discovery's Leds, push- buttons hardware resources

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## Directories

This directory hierarchy is sorted roughly, but not completely, alphabetically:

- **Firmware**
  - **Drivers**
    - **BSP**
      - **STM32F0308-Discovery**

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## Private Constants

[STM32F0308\\_DISCOVERY Common](#)

## Defines

#define	<b>__STM32F0308_DISCO_BSP_VERSION_MAIN</b>	(0x02)
	STM32F0308 DISCO BSP Driver version number V2.0.5.	
#define	<b>__STM32F0308_DISCO_BSP_VERSION_SUB1</b>	(0x00)
#define	<b>__STM32F0308_DISCO_BSP_VERSION_SUB2</b>	(0x05)
#define	<b>__STM32F0308_DISCO_BSP_VERSION_RC</b>	(0x00)
#define	<b>__STM32F0308_DISCO_BSP_VERSION</b>	

## Define Documentation

**#define** `__STM32F0308_DISCO_BSP_VERSION`

**Value:**

```
((__STM32F0308_DISCO_BSP_VERSION_MAIN << 24) | \
    (__STM32F0308_DISCO_BSP_VERSION_SUB1 << 16) | \
    (__STM32F0308_DISCO_BSP_VERSION_SUB2 << 8) | \
    (__STM32F0308_DISCO_BSP_VERSION_RC))
```

Definition at line **65** of file `stm32f0308_discovery.c`.

Referenced by `BSP_GetVersion()`.

**#define** `__STM32F0308_DISCO_BSP_VERSION_MAIN` (0x02)

STM32F0308 DISCO BSP Driver version number V2.0.5.

[31:24] main version

Definition at line **61** of file `stm32f0308_discovery.c`.

**#define** `__STM32F0308_DISCO_BSP_VERSION_RC` (0x00)

[7:0] release candidate

Definition at line **64** of file `stm32f0308_discovery.c`.

**#define** `__STM32F0308_DISCO_BSP_VERSION_SUB1` (0x00)

[23:16] sub1 version

Definition at line **62** of file **stm32f0308\_discovery.c**.

**#define \_\_STM32F0308\_DISCO\_BSP\_VERSION\_SUB2 (0x05)**

[15:8] sub2 version

Definition at line **63** of file **stm32f0308\_discovery.c**.

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## Exported Functions

[STM32F0308\\_DISCOVERY Common](#)

## Functions

uint32_t	<b>BSP_GetVersion</b> (void)	This method returns the STM32F0308 DISCO BSP Driver revision.
void	<b>BSP_LED_Init</b> ( <b>Led_TypeDef</b> Led)	Configures LED GPIO.
void	<b>BSP_LED_On</b> ( <b>Led_TypeDef</b> Led)	Turns selected LED On.
void	<b>BSP_LED_Off</b> ( <b>Led_TypeDef</b> Led)	Turns selected LED Off.
void	<b>BSP_LED_Toggle</b> ( <b>Led_TypeDef</b> Led)	Toggles the selected LED.
void	<b>BSP_PB_Init</b> ( <b>Button_TypeDef</b> Button, <b>ButtonMode_TypeDef</b> Mode)	Configures Button GPIO and EXTI Line.
uint32_t	<b>BSP_PB_GetState</b> ( <b>Button_TypeDef</b> Button)	Returns the selected Button state.

## Function Documentation

**uint32\_t BSP\_GetVersion ( void )**

This method returns the STM32F0308 DISCO BSP Driver revision.

**Return values:**

**version** : 0xXYZR (8bits for each decimal, R for RC)

Definition at line **96** of file **stm32f0308\_discovery.c**.

References **\_\_STM32F0308\_DISCO\_BSP\_VERSION**.

**void BSP\_LED\_Init ( Led\_TypeDef Led )**

Configures LED GPIO.

**Parameters:**

**Led** Specifies the Led to be configured. This parameter can be one of following parameters:

- LED3
- LED4

**Return values:**

**None**

Definition at line **109** of file **stm32f0308\_discovery.c**.

References **LED\_PIN**, **LED\_PORT**, and **LEDx\_GPIO\_CLK\_ENABLE**.

**void BSP\_LED\_Off ( Led\_TypeDef Led )**

Turns selected LED Off.

**Parameters:**

**Led** Specifies the Led to be set off. This parameter can be one of following parameters:

- LED3
- LED4

**Return values:**

**None**

Definition at line **148** of file **stm32f0308\_discovery.c**.

References **LED\_PIN**, and **LED\_PORT**.

**void BSP\_LED\_On ( Led\_TypeDef Led )**

Turns selected LED On.

**Parameters:**

**Led** Specifies the Led to be set on. This parameter can be one of following parameters:

- LED3
- LED4

**Return values:**

**None**

Definition at line **135** of file **stm32f0308\_discovery.c**.

References **LED\_PIN**, and **LED\_PORT**.

**void BSP\_LED\_Toggle ( Led\_TypeDef Led )**

Toggles the selected LED.

**Parameters:**



**Led** Specifies the Led to be toggled. This parameter can be one of following parameters:

- LED3
- LED4

**Return values:**

**None**

Definition at line **161** of file **stm32f0308\_discovery.c**.

References **LED\_PIN**, and **LED\_PORT**.

**uint32\_t BSP\_PB\_GetState ( Button\_TypeDef **Button** )**

Returns the selected Button state.

**Parameters:**

**Button** Specifies the Button to be checked. This parameter should be: BUTTON\_USER

**Return values:**

**The** Button GPIO pin value.

Definition at line **217** of file **stm32f0308\_discovery.c**.

References **BUTTON\_PIN**, and **BUTTON\_PORT**.

**void BSP\_PB\_Init ( Button\_TypeDef **Button**,  
                    ButtonMode\_TypeDef **Mode**  
                    )**

Configures Button GPIO and EXTI Line.

**Parameters:**

**Button** Specifies the Button to be configured. This parameter

should be: `BUTTON_USER`

**Mode** Specifies Button mode. This parameter can be one of the following values:

- `BUTTON_MODE_GPIO`: Button will be used as simple IO
- `BUTTON_MODE_EXTI`: Button will be connected to EXTI line with interrupt generation capability

**Return values:**

**None**

Definition at line **177** of file `stm32f0308_discovery.c`.

References `BUTTON_IRQn`, `BUTTON_MODE_EXTI`, `BUTTON_MODE_GPIO`, `BUTTON_PIN`, `BUTTON_PORT`, and `BUTTONx_GPIO_CLK_ENABLE`.

# STM32F0308-Discovery BSP User Manual

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## Private Variables

[STM32F0308\\_DISCOVERY Common](#)

## Variables

GPIO_TypeDef *	LED_PORT [LEDn] = {LED3_GPIO_PORT, LED4_GPIO_PORT}
const uint16_t	LED_PIN [LEDn] = {LED3_PIN, LED4_PIN}
GPIO_TypeDef *	BUTTON_PORT [BUTTONn] = {USER_BUTTON_GPIO_PORT}
const uint16_t	BUTTON_PIN [BUTTONn] = {USER_BUTTON_PIN}
const uint8_t	BUTTON_IRQn [BUTTONn] = {USER_BUTTON_EXTI_IRQn}

## Variable Documentation

**const uint8\_t BUTTON\_IRQn[BUTTONn] = {USER\_BUTTON\_EXTI\_I**

Definition at line **82** of file **stm32f0308\_discovery.c**.

Referenced by **BSP\_PB\_Init()**.

**const uint16\_t BUTTON\_PIN[BUTTONn] = {USER\_BUTTON\_PIN}**

Definition at line **81** of file **stm32f0308\_discovery.c**.

Referenced by **BSP\_PB\_GetState()**, and **BSP\_PB\_Init()**.

**GPIO\_TypeDef\* BUTTON\_PORT[BUTTONn] = {USER\_BUTTON\_GP**

Definition at line **80** of file **stm32f0308\_discovery.c**.

Referenced by **BSP\_PB\_GetState()**, and **BSP\_PB\_Init()**.

**const uint16\_t LED\_PIN[LEDn] = {LED3\_PIN, LED4\_PIN}**

Definition at line **78** of file **stm32f0308\_discovery.c**.

Referenced by **BSP\_LED\_Init()**, **BSP\_LED\_Off()**, **BSP\_LED\_On()**, and **BSP\_LED\_Toggle()**.

**GPIO\_TypeDef\* LED\_PORT[LEDn] = {LED3\_GPIO\_PORT, LED4\_GP**

Definition at line **77** of file **stm32f0308\_discovery.c**.

Referenced by **BSP\_LED\_Init()**, **BSP\_LED\_Off()**, **BSP\_LED\_On()**,

and **BSP\_LED\_Toggle()**.

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# STM32F0308-Discovery BSP User Manual

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## Exported Types

[STM32F0308\\_DISCOVERY Common](#)

## Enumerations

enum	<b>Led_TypeDef</b> { <b>LED3</b> = 0, <b>LED4</b> = 1, <b>LED_GREEN</b> = LED3, <b>LED_BLUE</b> = LED4 } LED Types Definition. <a href="#">More...</a>
enum	<b>Button_TypeDef</b> { <b>BUTTON_USER</b> = 0 } BUTTON Types Definition. <a href="#">More...</a>
enum	<b>ButtonMode_TypeDef</b> { <b>BUTTON_MODE_GPIO</b> = 0, <b>BUTTON_MODE_EXTI</b> = 1 }



## Enumeration Type Documentation

### enum [Button\\_TypeDef](#)

BUTTON Types Definition.

**Enumerator:**

*BUTTON\_USER*

Definition at line [79](#) of file [stm32f0308\\_discovery.h](#).

### enum [ButtonMode\\_TypeDef](#)

**Enumerator:**

*BUTTON\_MODE\_GPIO*

*BUTTON\_MODE\_EXTI*

Definition at line [84](#) of file [stm32f0308\\_discovery.h](#).

### enum [Led\\_TypeDef](#)

LED Types Definition.

**Enumerator:**

*LED3*

*LED4*

*LED\_GREEN*

*LED\_BLUE*

Definition at line [67](#) of file [stm32f0308\\_discovery.h](#).

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# STM32F0308-Discovery BSP User Manual

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## STM32F0308\_DISCOVERY\_BUTTON

[Exported Constants](#)

## Defines

#define	<b>BUTTONn</b>	1		
#define	<b>USER_BUTTON_PIN</b>	GPIO_PIN_0 /* PA0 */ USER push-button.		
#define	<b>USER_BUTTON_GPIO_PORT</b>	GPIOA		
#define	<b>USER_BUTTON_GPIO_CLK_ENABLE()</b>	__HAL_RCC_GPIOC		
#define	<b>USER_BUTTON_GPIO_CLK_DISABLE()</b>	__HAL_RCC_GPIOC		
#define	<b>USER_BUTTON_EXTI_IRQn</b>	EXTI0_1_IRQn		
#define	<b>BUTTONx_GPIO_CLK_ENABLE(__BUTTON__)</b>	do { if((__B <b>BUTTON_USER)</b>	<b>USER_BUTTON_GPIO_CLK_ENABLE();}</b>	v
#define	<b>BUTTONx_GPIO_CLK_DISABLE(__BUTTON__)</b>	(((__BUTT <b>BUTTON_USER)</b>	<b>? USER_BUTTON_GPIO_CLK_DISABLE()</b>	

## Define Documentation

**#define BUTTONn 1**

Definition at line **131** of file **stm32f0308\_discovery.h**.

**#define BUTTONx\_GPIO\_CLK\_DISABLE ( \_\_BUTTON\_\_ ) (((\_\_BL**

Definition at line **144** of file **stm32f0308\_discovery.h**.

**#define BUTTONx\_GPIO\_CLK\_ENABLE ( \_\_BUTTON\_\_ ) do { if((**

Definition at line **142** of file **stm32f0308\_discovery.h**.

Referenced by **BSP\_PB\_Init()**.

**#define USER\_BUTTON\_EXTI\_IRQn EXTI0\_1\_IRQn**

Definition at line **140** of file **stm32f0308\_discovery.h**.

**#define USER\_BUTTON\_GPIO\_CLK\_DISABLE ( ) \_\_HAL\_RCC\_GI**

Definition at line **139** of file **stm32f0308\_discovery.h**.

**#define USER\_BUTTON\_GPIO\_CLK\_ENABLE ( ) \_\_HAL\_RCC\_GF**

Definition at line **138** of file **stm32f0308\_discovery.h**.

**#define USER\_BUTTON\_GPIO\_PORT GPIOA**

Definition at line **137** of file **stm32f0308\_discovery.h**.

```
#define USER_BUTTON_PIN  GPIO_PIN_0 /* PA0 */
```

USER push-button.

Definition at line **136** of file **stm32f0308\_discovery.h**.

---

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# STM32F0308-Discovery BSP User Manual

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## STM32F0308\_DISCOVERY\_LED

[Exported Constants](#)

Define for STM32F0308\_DISCOVERY board. [More...](#)

## Defines

#define	LEDn	2
#define	LED3_PIN	GPIO_PIN_9
#define	LED3_GPIO_PORT	GPIOC
#define	LED3_GPIO_CLK_ENABLE()	__HAL_RCC_GPIOC_CLK_E
#define	LED3_GPIO_CLK_DISABLE()	__HAL_RCC_GPIOC_CLK_D
#define	LED4_PIN	GPIO_PIN_8
#define	LED4_GPIO_PORT	GPIOC
#define	LED4_GPIO_CLK_ENABLE()	__HAL_RCC_GPIOC_CLK_E
#define	LED4_GPIO_CLK_DISABLE()	__HAL_RCC_GPIOC_CLK_D
#define	LEDx_GPIO_CLK_ENABLE(__LED__)	
#define	LEDx_GPIO_CLK_DISABLE(__LED__)	



## Detailed Description

Define for STM32F0308\_DISCOVERY board.

---

## Define Documentation

**#define LED3\_GPIO\_CLK\_DISABLE ( ) \_\_HAL\_RCC\_GPIOC\_CLK**

Definition at line **112** of file **stm32f0308\_discovery.h**.

**#define LED3\_GPIO\_CLK\_ENABLE ( ) \_\_HAL\_RCC\_GPIOC\_CLK**

Definition at line **111** of file **stm32f0308\_discovery.h**.

**#define LED3\_GPIO\_PORT GPIOC**

Definition at line **110** of file **stm32f0308\_discovery.h**.

**#define LED3\_PIN GPIO\_PIN\_9**

Definition at line **109** of file **stm32f0308\_discovery.h**.

**#define LED4\_GPIO\_CLK\_DISABLE ( ) \_\_HAL\_RCC\_GPIOC\_CLK**

Definition at line **117** of file **stm32f0308\_discovery.h**.

**#define LED4\_GPIO\_CLK\_ENABLE ( ) \_\_HAL\_RCC\_GPIOC\_CLK**

Definition at line **116** of file **stm32f0308\_discovery.h**.

**#define LED4\_GPIO\_PORT GPIOC**

Definition at line **115** of file **stm32f0308\_discovery.h**.

```
#define LED4_PIN GPIO_PIN_8
```

Definition at line **114** of file [stm32f0308\\_discovery.h](#).

```
#define LEDn 2
```

Definition at line **107** of file [stm32f0308\\_discovery.h](#).

```
#define LEDx_GPIO_CLK_DISABLE ( __LED__ )
```

Value:

```
(((__LED__) == LED3) ? LED3_GPIO_CLK_DISABLE() :\n                                     ((__LED__\n__ ) == LED4) ? LED4_GPIO_CLK_DISABLE() : 0 )
```

Definition at line **122** of file [stm32f0308\\_discovery.h](#).

```
#define LEDx_GPIO_CLK_ENABLE ( __LED__ )
```

Value:

```
do { if((__LED__) == LED3) LED3_GPIO_CLK_ENABLE()\n; else \n                                     if((__LE\nD__) == LED4) LED4_GPIO_CLK_ENABLE();} while(0)
```

Definition at line **119** of file [stm32f0308\\_discovery.h](#).

Referenced by [BSP\\_LED\\_Init\(\)](#).

# STM32F0308-Discovery BSP User Manual

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## Firmware Directory Reference

## Directories

---

directory **Drivers**

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# STM32F0308-Discovery BSP User Manual

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## Drivers Directory Reference

## Directories

directory **BSP**

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# STM32F0308-Discovery BSP User Manual

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## BSP Directory Reference

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## Directories

directory **STM32F0308-Discovery**

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# STM32F0308-Discovery BSP User Manual

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<a href="#">Firmware</a>	<a href="#">Drivers</a>	<a href="#">BSP</a>	<a href="#">STM32F0308-Discovery</a>	

## STM32F0308-Discovery Directory Reference

---

## Files

file [stm32f0308\\_discovery.c](#) [code]

This file provides set of firmware functions to manage Leds and push-button available on STM32F0308-DISCOVERY Kit from STMicroelectronics.

file [stm32f0308\\_discovery.h](#) [code]

This file contains definitions for STM32F0308-Discovery's Leds, push- buttons hardware resources.

# STM32F0308-Discovery BSP User Manual

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<a href="#">File List</a>	<a href="#">Globals</a>		
<a href="#">Firmware</a>	<a href="#">Drivers</a>	<a href="#">BSP</a>	<a href="#">STM32F0308-Discovery</a>

## stm32f0308\_discovery.h

[Go to the documentation of this file.](#)

```
00001  /**
00002      ****
00003      ****
00004      * @file    stm32f0308_discovery.h
00005      * @author  MCD Application Team
00006      * @brief   This file contains definitions
00007      *          for STM32F0308-Discovery's Leds, push-
00008      *          buttons hardware resources.
00009      ****
00010      ****
00011      * @attention
00012      *
00013      * <h2><center>&copy; COPYRIGHT(c) 2016 STM
00014      * icroelectronics</center></h2>
00015      *
00016      * Redistribution and use in source and bin
00017      * ary forms, with or without modification,
00018      * are permitted provided that the followin
00019      * g conditions are met:
00020      * 1. Redistributions of source code must
00021      *    retain the above copyright notice,
00022      *    this list of conditions and the fol
00023      *    lowing disclaimer.
00024      * 2. Redistributions in binary form must
```

```
reproduce the above copyright notice,  
00017      *      this list of conditions and the fol  
lowing disclaimer in the documentation  
00018      *      and/or other materials provided wit  
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00019      *      3. Neither the name of STMicroelectron  
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D FITNESS FOR A PARTICULAR PURPOSE ARE  
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GHT HOLDER OR CONTRIBUTORS BE LIABLE  
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ECIAL, EXEMPLARY, OR CONSEQUENTIAL  
00028      * DAMAGES (INCLUDING, BUT NOT LIMITED TO,  
PROCUREMENT OF SUBSTITUTE GOODS OR  
00029      * SERVICES; LOSS OF USE, DATA, OR PROFITS;  
OR BUSINESS INTERRUPTION) HOWEVER  
00030      * CAUSED AND ON ANY THEORY OF LIABILITY, W  
HETHER IN CONTRACT, STRICT LIABILITY,  
00031      * OR TORT (INCLUDING NEGLIGENCE OR OTHERWI  
SE) ARISING IN ANY WAY OUT OF THE USE  
00032      * OF THIS SOFTWARE, EVEN IF ADVISED OF THE  
POSSIBILITY OF SUCH DAMAGE.  
00033      *  
00034      *****  
*****  
00035      */  
00036
```

```

00037 /* Define to prevent recursive inclusion ---
-----*/
00038 #ifndef __STM32F0308_DISCOVERY_H
00039 #define __STM32F0308_DISCOVERY_H
00040
00041 #ifdef __cplusplus
00042     extern "C" {
00043 #endif
00044
00045 /* Includes -----
-----*/
00046 #include "stm32f0xx_hal.h"
00047
00048 /** @addtogroup BSP
    * @{
00050     */
00051
00052 /** @defgroup STM32F0308_DISCOVERY STM32F030
8_DISCOVERY
    * @{
00054     */
00055
00056 /** @defgroup STM32F0308_DISCOVERY_Common ST
M32F0308_DISCOVERY Common
    * @{
00058     */
00059
00060 /** @defgroup STM32F0308_DISCOVERY_Exported_
Types Exported Types
    * @{
00062     */
00063
00064 /**
    * @brief LED Types Definition
    */
00066
00067 typedef enum
00068 {

```

```

00069     LED3 = 0,
00070     LED4 = 1,
00071     /* Color led aliases */
00072     LED_GREEN = LED3,
00073     LED_BLUE  = LED4
00074 }Led_TypeDef;
00075
00076 /**
00077  * @brief BUTTON Types Definition
00078  */
00079 typedef enum
00080 {
00081     BUTTON_USER = 0
00082 }Button_TypeDef;
00083
00084 typedef enum
00085 {
00086     BUTTON_MODE_GPIO = 0,
00087     BUTTON_MODE_EXTI = 1
00088 }ButtonMode_TypeDef;
00089
00090 /**
00091  * @}
00092  */
00093
00094 /** @defgroup STM32F0308_DISCOVERY_Exported_
Constants Exported Constants
00095  * @{
00096  */
00097 /**
00098  * @brief Define for STM32F0308_DISCOVERY bo
ard
00099  */
00100 #if !defined (USE_STM320308_DISCO)
00101 #define USE_STM320308_DISCO
00102 #endif
00103

```

```

00104 /** @defgroup STM32F0308_DISCOVERY_LED STM32
F0308_DISCOVERY_LED
00105     * @{
00106     */
00107 #define LEDn                2
00108
00109 #define LED3_PIN            GPI
O_PIN_9
00110 #define LED3_GPIO_PORT    GPI
OC
00111 #define LED3_GPIO_CLK_ENABLE()    __H
AL_RCC_GPIOC_CLK_ENABLE()
00112 #define LED3_GPIO_CLK_DISABLE()    __H
AL_RCC_GPIOC_CLK_DISABLE()
00113
00114 #define LED4_PIN            GPI
O_PIN_8
00115 #define LED4_GPIO_PORT    GPI
OC
00116 #define LED4_GPIO_CLK_ENABLE()    __H
AL_RCC_GPIOC_CLK_ENABLE()
00117 #define LED4_GPIO_CLK_DISABLE()    __H
AL_RCC_GPIOC_CLK_DISABLE()
00118
00119 #define LEDx_GPIO_CLK_ENABLE(__LED__)    do {
    if((__LED__) == LED3) LED3_GPIO_CLK_ENABLE(); els
e \
00120                                     if(
(__LED__) == LED4) LED4_GPIO_CLK_ENABLE();} while(
0)
00121
00122 #define LEDx_GPIO_CLK_DISABLE(__LED__)    (((_
_LED__) == LED3) ? LED3_GPIO_CLK_DISABLE() :\
00123                                     ((_
_LED__) == LED4) ? LED4_GPIO_CLK_DISABLE() : 0 )
00124 /**
00125     * @}

```



```

00126    */
00127
00128 /** @defgroup STM32F0308_DISCOVERY_BUTTON ST
M32F0308_DISCOVERY BUTTON
00129    * @{
00130    */
00131 #define BUTTONn                                1
00132
00133 /**
00134  * @brief USER push-button
00135  */
00136 #define USER_BUTTON_PIN                        GPIO_
PIN_0                                           /* PA0 */
00137 #define USER_BUTTON_GPIO_PORT                  GPIOA
00138 #define USER_BUTTON_GPIO_CLK_ENABLE()  __HAL
_RCC_GPIOA_CLK_ENABLE()
00139 #define USER_BUTTON_GPIO_CLK_DISABLE()  __HAL
_RCC_GPIOA_CLK_DISABLE()
00140 #define USER_BUTTON_EXTI_IRQn                EXTI0
_1_IRQn
00141
00142 #define BUTTONx_GPIO_CLK_ENABLE(__BUTTON__)
do { if((__BUTTON__) == BUTTON_USER) USER_BUTTO
N_GPIO_CLK_ENABLE(); } while(0)
00143
00144 #define BUTTONx_GPIO_CLK_DISABLE(__BUTTON__)
(((__BUTTON__) == BUTTON_USER) ? USER_BUTTON_GP
IO_CLK_DISABLE() : 0 )
00145 /**
00146  * @}
00147  */
00148
00149 /**
00150  * @}
00151  */
00152
00153 /** @defgroup STM32F0308_DISCOVERY_Exported_

```

## Functions Exported Functions

```
00154     * @{
00155     */
00156 uint32_t BSP_GetVersion(void);
00157 void      BSP_LED_Init(Led_TypeDef Led);
00158 void      BSP_LED_On(Led_TypeDef Led);
00159 void      BSP_LED_Off(Led_TypeDef Led);
00160 void      BSP_LED_Toggle(Led_TypeDef Led);
00161 void      BSP_PB_Init(Button_TypeDef Button,
ButtonMode_TypeDef Mode);
00162 uint32_t BSP_PB_GetState(Button_TypeDef Butt
on);
00163 /**
00164     * @}
00165     */
00166
00167 /**
00168     * @}
00169     */
00170
00171 /**
00172     * @}
00173     */
00174
00175 /**
00176     * @}
00177     */
00178
00179 #ifdef __cplusplus
00180 }
00181 #endif
00182
00183 #endif /* __STM32F0308_DISCOVERY_H */
00184
00185 /***** (C) COPYRIGHT STMi
croelectronics *****/
```

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## stm32f0308\_discovery.c

[Go to the documentation of this file.](#)

```
00001  /**
00002      ****
00003      ****
00004      * @file    stm32f0308_discovery.c
00005      * @author  MCD Application Team
00006      * @brief   This file provides set of firmw
are functions to manage Leds and
00007      *          push-button available on STM32F
0308-DISCOVERY Kit from STMicroelectronics.
00008      ****
00009      ****
00010      * @attention
00011      *
00012      * <h2><center>&copy; COPYRIGHT(c) 2016 STM
icroelectronics</center></h2>
00013      *
00014      * Redistribution and use in source and bin
ary forms, with or without modification,
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retain the above copyright notice,
00017      * this list of conditions and the fol
lowing disclaimer.
```

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00018 \* and/or other materials provided wit  
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OR BUSINESS INTERRUPTION) HOWEVER  
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HETHER IN CONTRACT, STRICT LIABILITY,  
00031 \* OR TORT (INCLUDING NEGLIGENCE OR OTHERWI  
SE) ARISING IN ANY WAY OUT OF THE USE  
00032 \* OF THIS SOFTWARE, EVEN IF ADVISED OF THE  
POSSIBILITY OF SUCH DAMAGE.  
00033 \*  
00034 \*  
\*\*\*\*\*  
\*\*\*\*\*  
00035 \*/

```

00036
00037 /* Includes -----
----- */
00038 #include "stm32f0308_discovery.h"
00039
00040 /** @addtogroup BSP
00041     * @{
00042     */
00043
00044 /** @addtogroup STM32F0308_DISCOVERY
00045     * @{
00046     */
00047
00048 /** @addtogroup STM32F0308_DISCOVERY_Common
00049     * @brief This file provides firmware functions to manage Leds and push-buttons,
00050     *         available on STM32F0308_DISCOVERY evaluation board from STMicroelectronics.
00051     * @{
00052     */
00053
00054 /** @defgroup STM32F0308_DISCOVERY_Private_Constants Private Constants
00055     * @{
00056     */
00057
00058 /**
00059     * @brief STM32F0308 DISCO BSP Driver version number V2.0.5
00060     */
00061 #define __STM32F0308_DISCO_BSP_VERSION_MAIN (0x02) /*!< [31:24] main version */
00062 #define __STM32F0308_DISCO_BSP_VERSION_SUB1 (0x00) /*!< [23:16] sub1 version */
00063 #define __STM32F0308_DISCO_BSP_VERSION_SUB2 (0x05) /*!< [15:8] sub2 version */
00064 #define __STM32F0308_DISCO_BSP_VERSION_RC

```

```

    (0x00) /*!< [7:0]  release candidate */
00065 #define __STM32F0308_DISCO_BSP_VERSION
    ((__STM32F0308_DISCO_BSP_VERSION_MAIN << 24)|\
00066
    (__STM32F0308_DISCO_BSP_VERSION_SUB1 << 16)|\
00067
    (__STM32F0308_DISCO_BSP_VERSION_SUB2 << 8 )|\
00068
    (__STM32F0308_DISCO_BSP_VERSION_RC))
00069
00070 /**
00071  * @}
00072  */
00073
00074 /** @defgroup STM32F0308_DISCOVERY_Private_V
    ariables Private Variables
00075  * @{
00076  */
00077 GPIO_TypeDef* LED_PORT[LEDn] = {LED3_GPIO_PO
RT, LED4_GPIO_PORT};
00078 const uint16_t LED_PIN[LEDn] = {LED3_PIN, LE
D4_PIN};
00079
00080 GPIO_TypeDef* BUTTON_PORT[BUTTONn] = {USER_B
UTTON_GPIO_PORT};
00081 const uint16_t BUTTON_PIN[BUTTONn] = {USER_B
UTTON_PIN};
00082 const uint8_t BUTTON_IRQn[BUTTONn] = {USER_B
UTTON_EXTI_IRQn};
00083
00084 /**
00085  * @}
00086  */
00087
00088 /** @addtogroup STM32F0308_DISCOVERY_Exporte
d_Functions
00089  * @{

```

```

00090     */
00091
00092 /**
00093  * @brief This method returns the STM32F03
00094  * @retval version : 0xXYZR (8bits for each
00095  * decimal, R for RC)
00096  */
00097 uint32_t BSP_GetVersion(void)
00098 {
00099     return __STM32F0308_DISCO_BSP_VERSION;
00100 }
00101 /**
00102  * @brief Configures LED GPIO.
00103  * @param Led Specifies the Led to be conf
00104  * igured.
00105  * This parameter can be one of following
00106  * parameters:
00107  * @arg LED3
00108  * @arg LED4
00109  * @retval None
00110  */
00111 void BSP_LED_Init(Led_TypeDef Led)
00112 {
00113     GPIO_InitTypeDef GPIO_InitStructure;
00114     /* Enable the GPIO_LED clock */
00115     LEDx_GPIO_CLK_ENABLE(Led);
00116     /* Configure the GPIO_LED pin */
00117     GPIO_InitStructure.Pin = LED_PIN[Led];
00118     GPIO_InitStructure.Mode = GPIO_MODE_OUTPUT_PP
00119 ;
00120     GPIO_InitStructure.Pull = GPIO_NOPULL;
00121     GPIO_InitStructure.Speed = GPIO_SPEED_FREQ_HI
00122 GH;

```



```

00121
00122     HAL_GPIO_Init(LED_PORT[Led], &GPIO_InitStr
uct);
00123
00124     HAL_GPIO_WritePin(LED_PORT[Led], LED_PIN[L
ed], GPIO_PIN_RESET);
00125 }
00126
00127 /**
00128  * @brief Turns selected LED On.
00129  * @param Led Specifies the Led to be set
on.
00130  * This parameter can be one of following
parameters:
00131  * @arg LED3
00132  * @arg LED4
00133  * @retval None
00134  */
00135 void BSP_LED_On(Led_TypeDef Led)
00136 {
00137     HAL_GPIO_WritePin(LED_PORT[Led], LED_PIN[L
ed], GPIO_PIN_SET);
00138 }
00139
00140 /**
00141  * @brief Turns selected LED Off.
00142  * @param Led Specifies the Led to be set
off.
00143  * This parameter can be one of following
parameters:
00144  * @arg LED3
00145  * @arg LED4
00146  * @retval None
00147  */
00148 void BSP_LED_Off(Led_TypeDef Led)
00149 {
00150     HAL_GPIO_WritePin(LED_PORT[Led], LED_PIN[L

```

```

ed], GPIO_PIN_RESET);
00151 }
00152
00153 /**
00154  * @brief Toggles the selected LED.
00155  * @param Led Specifies the Led to be toggled.
00156  * This parameter can be one of following parameters:
00157  * @arg LED3
00158  * @arg LED4
00159  * @retval None
00160 */
00161 void BSP_LED_Toggle(Led_TypeDef Led)
00162 {
00163     HAL_GPIO_TogglePin(LED_PORT[Led], LED_PIN[Led]);
00164 }
00165
00166 /**
00167  * @brief Configures Button GPIO and EXTI Line.
00168  * @param Button Specifies the Button to be configured.
00169  * This parameter should be: BUTTON_USER
00170  * @param Mode Specifies Button mode.
00171  * This parameter can be one of the following values:
00172  * @arg BUTTON_MODE_GPIO: Button will be used as simple IO
00173  * @arg BUTTON_MODE_EXTI: Button will be connected to EXTI line
00174  * with interrupt generation capability
00175  * @retval None
00176 */
00177 void BSP_PB_Init(Button_TypeDef Button, But

```

```

onMode_TypeDef Mode)
00178 {
00179     GPIO_InitTypeDef GPIO_InitStructure;
00180
00181     /* Enable the BUTTON Clock */
00182     BUTTONx_GPIO_CLK_ENABLE(Button);
00183     __HAL_RCC_SYSCFG_CLK_ENABLE();
00184
00185     GPIO_InitStructure.Pin = BUTTON_PIN[Button];
00186     GPIO_InitStructure.Pull = GPIO_NOPULL;
00187     GPIO_InitStructure.Speed = GPIO_SPEED_FREQ_HI
GH;
00188
00189     if(Mode == BUTTON_MODE_GPIO)
00190     {
00191         /* Configure Button pin as input */
00192         GPIO_InitStructure.Mode = GPIO_MODE_INPUT;
00193         GPIO_InitStructure.Pull = GPIO_PULLDOWN;
00194         HAL_GPIO_Init(BUTTON_PORT[Button], &GPIO
_InitStruct);
00195     }
00196
00197     if(Mode == BUTTON_MODE_EXTI)
00198     {
00199         /* Configure Button pin as input with Ex
ternal interrupt */
00200         GPIO_InitStructure.Pull = GPIO_NOPULL;
00201         GPIO_InitStructure.Mode = GPIO_MODE_IT_FALL
ING;
00202         HAL_GPIO_Init(BUTTON_PORT[Button], &GPIO
_InitStruct);
00203
00204         /* Enable and set Button EXTI Interrupt
to the lowest priority */
00205         HAL_NVIC_SetPriority((IRQn_Type)(BUTTON_
IRQn[Button]), 0x03, 0x00);
00206         HAL_NVIC_EnableIRQ((IRQn_Type)(BUTTON_IR

```

```

Qn[Button]));
00207     }
00208 }
00209
00210
00211 /**
00212  * @brief Returns the selected Button stat
e.
00213  * @param Button Specifies the Button to b
e checked.
00214  * This parameter should be: BUTTON_USER

00215  * @retval The Button GPIO pin value.
00216  */
00217 uint32_t BSP_PB_GetState(Button_TypeDef Butt
on)
00218 {
00219     return HAL_GPIO_ReadPin(BUTTON_PORT[Button
], BUTTON_PIN[Button]);
00220 }
00221
00222 /**
00223  * @}
00224  */
00225
00226 /**
00227  * @}
00228  */
00229
00230 /**
00231  * @}
00232  */
00233
00234 /**
00235  * @}
00236  */
00237

```

```
00238 /***** (C) COPYRIGHT STMicroelectronics *****/
*****END OF FILE*****/
```



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## BSP

## Modules

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### STM32F0308\_DISCOVERY

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## STM32F0308\_DISCOVERY

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## Modules

### STM32F0308\_DISCOVERY Common

This file provides firmware functions to manage Leds and push-buttons, available on STM32F0308\_DISCOVERY evaluation board from STMicroelectronics.

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## STM32F0308\_DISCOVERY Common

[STM32F0308\\_DISCOVERY](#)

This file provides firmware functions to manage Leds and push-buttons, available on STM32F0308\_DISCOVERY evaluation board from STMicroelectronics. [More...](#)

# Modules

Private Constants
Private Variables
Exported Types
Exported Constants
Exported Functions

## Detailed Description

This file provides firmware functions to manage Leds and push-buttons, available on STM32F0308\_DISCOVERY evaluation board from STMicroelectronics.

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## Exported Constants

[STM32F0308\\_DISCOVERY Common](#)

## Modules

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### **STM32F0308\_DISCOVERY\_LED**

Define for STM32F0308\_DISCOVERY board.

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### **STM32F0308\_DISCOVERY\_BUTTON**

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