**CDD**

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| |  |  | | --- | --- | | Version: | V0.0 | | Updated by: | Ahmed Tarek | | History: | 2/3/2019 | |
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| |  |  | | --- | --- | | Version: | V0.1 | | Updated by: | Nada | | History: | 2/3/2019 | |
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| |  |  | | --- | --- | | Version: | V0.2 | | Updated by: | Bassem | | History: | 2/3/2019 | |
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| |  |  | | --- | --- | | Version: | V0.3 | | Updated by: | Mina | | History: | 2/3/2019 | |

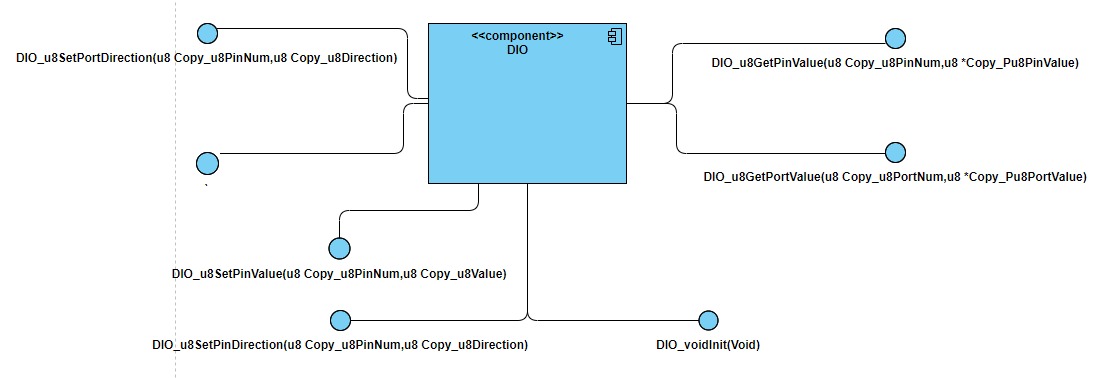
**Description:**

This file contains all the information concerning the **Component Design Document for DIO Component**

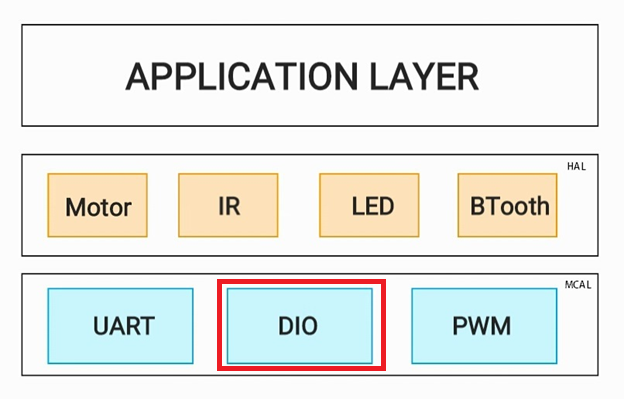
needed to specify the **DIO** APIs and design in the MCAL Layer used in this project.

We also can find the coverage range of each API along with the GDD document.

**UML:**



**Component Layer:**



**APIs Used:**

**API\_CDD\_DIO\_1**

**==> SET PIN DIRECTION ( Covers API\_GDD\_DIO\_1 )**

Description: set pin Direction

Inputs : u8 u8PinNB : pin Number

: u8 u8Direction : if it DIO\_INPUT\_LOW mean that this pin is input , if it DIO\_INPUT\_HOGH mean that this pin is output

Outputs: Error state

u8 **DIO\_u8SetPinDirection**(u8 u8PinNB,u8 u8Direction);

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No Error

Error

Check Input Error

**DIO\_u8SetPinDirection(u8,u8)**

ASSIGN\_BIT(BIT\_NUMBER,DIRECTION)

**API\_CDD\_DIO\_2s**

**==> SET PIN VALUE ( Covers API\_GDD\_DIO\_2 )**

Description: set pin value

Inputs : u8 u8PinNB : pin Number

: u8 u8Value : if it DIO\_LOW mean that this pin is low , if it DIO \_HOGH mean that this pin is high

Outputs: Error state

u8 **DIO\_u8SetPinValue**(u8 u8PinNB,u8 u8Value);

No Error

Error

Check Input Error

**DIO\_u8SetPinValue(u8,u8)**

ASSIGN\_BIT(BIT\_NUMBER,Value)

**API\_CDD\_DIO\_3**

**==> GET PIN VALUE ( Covers API\_GDD\_DIO\_3 )**

Description: GET pin value

Inputs : u8 u8PinNB : pin Number

: u8\* u8Value : pointer to value which it may be high (1) or low (0)

Outputs: Error state

Outputs: Error state

u8 **DIO\_u8GetPinValue**(u8 u8PinNB,u8\* u8Value);

No Error

Error

Check Input Error

**DIO\_u8GetPinValue(u8,u8\*)**

GET\_BIT(BIT\_NUMBER,Value)