

# **Detailed Design of BUZZER Driver**

**Team X**

## Contents

Introduction and functional overview: .....	2
Dependencies to other modules: .....	2
File structure: .....	2
Requirements traceability: .....	<b>Error! Bookmark not defined.</b>
API specification:.....	3
Imported types: .....	<b>Error! Bookmark not defined.</b>
Type definitions: .....	3
Function definitions: .....	4

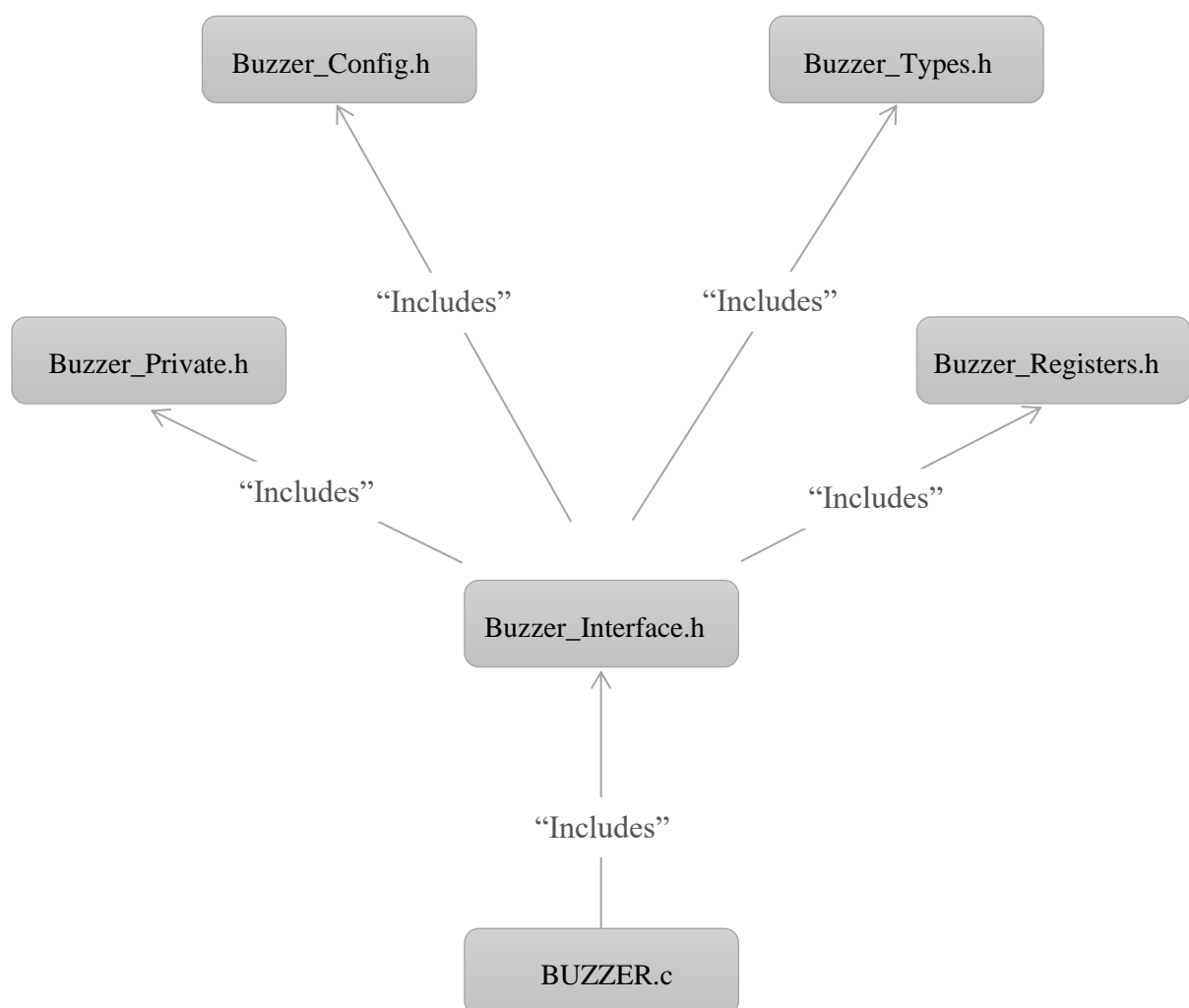
## Introduction and functional overview:

This document specifies detailed design of the Buzzer Driver.

## Dependencies to other modules:

## File structure:

The Buzzer module shall comply with the following file structure:



## API specification:

### Type definitions:

#### 1- [DD\_BUZZER-15330]

<b>Name:</b>	E_DioPort
<b>Type</b>	Enum
<b>Range:</b>	0 : 4
<b>Description:</b>	Number of ports included in the microcontroller
<b>Covered requirements:</b>	

#### 2- [DD\_BUZZER\_15331]

<b>Name:</b>	E_DioPin
<b>Type</b>	Enum
<b>Range:</b>	0x00 : 0x80
<b>Description:</b>	Number of pins specified on each port
<b>Covered requirements:</b>	

#### 3- [DD\_BUZZER\_15332]

<b>Name:</b>	S_Dio
<b>Type</b>	Structure
<b>Range:</b>	--
<b>Description:</b>	Structure that hold Pin number & associated pins & desired direction
<b>Covered requirements:</b>	=

## Function definitions:

### 1- [DD\_BUZZER\_15333]

<b>Service name:</b>	Buzzer Initialization
<b>Syntax:</b>	__EErrorType HAL_BUZZER_INIT(E_DioPort BUZZERPORT, E_DioPin BUZZERPin)
<b>Sync/Async:</b>	Synchronous
<b>Re-entrancy:</b>	Re-entrant
<b>Parameters (in):</b>	Dio Structure
<b>Parameters (out):</b>	none
<b>Parameters (inout):</b>	none
<b>Return type:</b>	Std_type (error)
<b>Description:</b>	Function that initializes the Desired Structure
<b>Covered requirements:</b>	

### 2- [DD\_BUZZER\_15334]

<b>Service name:</b>	Turn Buzzer on
<b>Syntax:</b>	__EErrorType HAL_BUZZER_ON(E_DioPort BUZZERPORT, E_DioPin BUZZERPin)
<b>Sync/Async:</b>	Synchronous
<b>Re-entrancy:</b>	Re-entrant
<b>Parameters (in):</b>	Dio Structure
<b>Parameters (out):</b>	none
<b>Parameters (inout):</b>	none
<b>Return type:</b>	Std_type (error)
<b>Description:</b>	Function that reads the value of the desired port and pin and turns on the buzzer.
<b>Covered requirements:</b>	

**3- [DD\_BUZZER\_15336]**

<b>Service name:</b>	Turn LED off
<b>Syntax:</b>	__EErrorType HAL_BUZZER_OFF(E_DioPort BUZZERPORT, E_DioPin BUZZERPin)
<b>Sync/Async:</b>	Synchronous
<b>Re-entrancy:</b>	Re-entrant
<b>Parameters (in):</b>	Dio Structure
<b>Parameters (out):</b>	none
<b>Parameters (inout):</b>	none
<b>Return type:</b>	Std_type (error)
<b>Description:</b>	Function that reads the value of the desired port and pin and turns off the buzzer.
<b>Covered requirements:</b>	