<CHANGE THE PROJECT NAME AND DELETE THIS COMMENT>

Component Design Document

For

<Temperature Alarm>

<HomeTech>

**Table of Contents**

Revision History 1

*1. Introduction* 2

1.1 Objective 2

1.2 Context Diagram 2

2. *External Interface* 2

2.1 <file name.h> 2

3. *Static Design* 2

3.1 Files 2

3.2 Types 3

3.3 Symbol Define <#define> 3

3.4 Const 3

3.5 Interface (Services) 3

*4.* *Dynamic Design* 4

4.1 Mode Management 4

4.2 Sequence Diagram 4

*5.* *Shared Resources* 4

5.1 Analysis 4

5.2 Protection 4

6. *Configuration Parameters* 4

6.1 Pre-compile time 4

6.2 Link time 5

6.3 Post-build 5

*7.* *Configuration Constrains* 5

*8.* *Integration Constrains* 5

*9.* *History* 5

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Ahmed El-Gawahergy | 15th April 2018 | Create the template | 1.0 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# *1. Introduction*

## Objective

## Context Diagram

# *External Interface*

## <file name.h>

### Types

|  |  |
| --- | --- |
| Data Type | Description |
|  |  |

### Interface

|  |  |
| --- | --- |
| Function | Description |
|  |  |

### Const

### Symbol <#defines>

# *Static Design*

## Files

### Used Files

|  |  |
| --- | --- |
| FILE NAME | Description |
|  |  |
|  |  |
|  |  |

### Files Inclusion

<Diagram for the files inclusion>

## Types

|  |  |
| --- | --- |
| Req ID | DIO\_001 |
| Covers | HLD\_004 |
| Name | DIO\_pinName |
| Type | Enumeration |
| Range | It’s Configuration |
| Description | ------------------------ |

## Symbol Define <#define>

|  |  |
| --- | --- |
| Req ID | DIO\_001 |
| Covers | HLD\_004 |
| Name | DIO\_pinName |
| Type | Enumeration |
| Range | It’s Configuration |
| Description | ------------------------ |

## Const

|  |  |
| --- | --- |
| Req ID | DIO\_001 |
| Covers | HLD\_004 |
| Name | DIO\_pinName |
| Type | Enumeration |
| Range | It’s Configuration |
| Description | ------------------------ |

## Interface (Services)

|  |  |  |  |
| --- | --- | --- | --- |
| Req ID | DIO\_001 | | |
| Covers | HLD\_004 | | |
| Name/protoTypes | DIO\_pinName | | |
| Service ID | Enumeration | | |
| Re-entrant / Non re- entrant | It’s Configuration | | |
| Synchronous/Asynchronous | ------------------------ | | |
| Return Value | | NAME | DESCRIPTION |
| Input parameter | | NAME | DESCRIPTION |
| Output parameter | | NAME | DESCRIPTION |
| Input /Output Parameter | | NAME | DESCRIPTION |

# *Dynamic Design*

## Mode Management

<Draw the state diagram for the component if it’s not exist don’t draw it >

## Sequence Diagram

<Draw the Sequence diagram for each function if the function too simple doesn’t draw it >

# *Shared Resources*

## Analysis

### <Variable is shared between multiple function or ISR>

## Protection

### <How we protected the variable in 5.1.1 like disabling interrupt>

# *Configuration Parameters*

## Pre-compile time

### <el #define ely bn3mlo configuration>

## Link time

### < el variable el const ely bn3ml beh configuration zy fel dio>

## Post-build

### <lma el configuration tb2a bt3ml fel run-time>

# *Configuration Constrains*

<Example Number of pins for anything configurable >

# *Integration Constrains*

<I need to clarify here what I need before use this component like call Init() and the pre-requests and if there’s a task what it’s minimum periodicity >

# *History*

<The changes happened in the documents>

**Appendix A: Glossary**