**PO2EBL\_ELECTRIC BLENDER**

**CDD DOCUMENT**

**Version 1.3**

**Proposed**

# Document Status

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Document Status** | **Author** |
| 03/06/2020 | 1.3 | Proposed | May Alaa |

# Document History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Author | Change |
| 1 | 02/03/20 | May Alaa | Initial Creation |
| 1.1 | 03/03/20 | Mohamed Ibrahem | Adding switch flow chart |
| 1.2 | 03/05/20 | Mohamed Ibrahem | Adding table of references and updating table of requirements format and the configuration |
| 1.3 | 03/06/20 | May Alaa | Adding Coverage for the requirements |

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# Introduction

## 1.1 Project Description

The Electric Blender System is an appliance created by KENOVO. The electric blender system has 3 speeds that can be configured by the user with high safety to avoid system failure caused by unexpected voltage peaks.

## 1.2 Block diagram

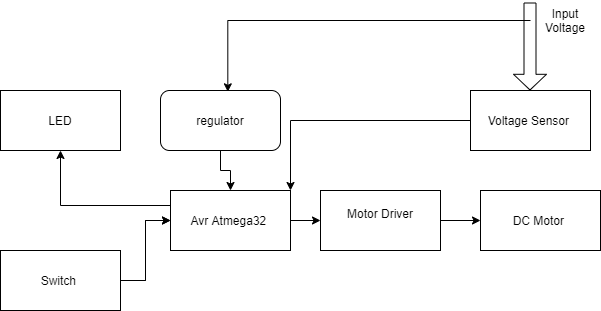


Figure 1 Block Diagram

# Software Context Diagram

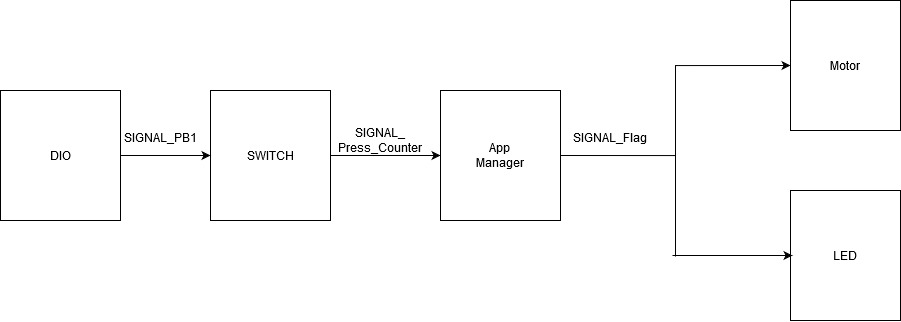


Figure 2 Software Context Diagram

# Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SWITCH** | | | | |
| Requirement ID | REQ\_PO2EBL\_CDD\_1\_V01 | | | |
| Covers | REQ\_PO2EBL\_GDD\_4\_V01  REQ\_PO2EBL\_GDD\_14\_V01 | | | |
| API | Parameters | | Return values | Description |
| Error\_S Switch\_Init(u8 Switch\_Ch\_No); | u8Switch\_Ch\_No: Denotes the Switch to be initialized | | Error\_S:Standard Error  OK: If execution happened successfully  NOK: If Execution failed | This API shall Initialize a switch given the switch’s channel number |
| Implementation | | | | |
|  | | | | |
| Requirement ID | | REQ\_PO2EBL\_CDD\_2\_V01 | | |
| Covers | | REQ\_PO2EBL\_GDD\_5\_V01  REQ\_PO2EBL\_GDD\_15\_V01 | | |
| API | | Parameters | Return values | Description |
| Error\_S Switch\_Read(u8 Switch\_Ch\_No); | u8 Switch\_Ch\_No: Denotes the Switch whose status is s to be read | | Error\_S:Standard Error  OK: If execution happened successfully  NOK: If Execution failed | This API shall read a switch’s status given the switch’s channel number |
| Implementation | | | | |
|  | | | | |

# Configurations

|  |  |
| --- | --- |
| Name | SWITCH\_CONFIG |
| Types | Structure |
| Element | SWITCH\_PORT  SWITCH\_PIN  SWITCH\_TYPE |
| Description | This structure contains the configuration parameters of the switch related to the port, pin and type. |

|  |  |
| --- | --- |
| Name | SWITCH\_PORT |
| Types | Macro |
| Range | ‘A’,’B’,’C’,’D’ |
| Description | This macro define the switch’s port. |

|  |  |
| --- | --- |
| Name | SWITCH\_PIN |
| Types | Macro |
| Range | 0-7 |
| Description | This macro define the switch’s pin. |

|  |  |
| --- | --- |
| Name | SWITCH\_TYPE |
| Types | Macro |
| Range | PULL\_UP ->1  PULL\_DOWN ->2 |
| Description | This macro define connection type from pull up or pull down. |

|  |  |
| --- | --- |
| Name | SWITCH\_STATE |
| Types | Enum |
| Range | SWITCH\_PRESSED  SWITCH\_NOT\_PRESSED |
| Description | This enum indicate the switch’s state . |

# Reference table:

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Version** | **Document** | **Status** |
| 1 | 2.2 | SRS | Released |
| 2 | 1.5 | GDD | Proposed |