<DIO>

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# Introduction

*This module configures our microcontroller pins direction ,values in both cases (Read/Write cases)*

*Enabling user to utilize these configuration in whatever applications he implements.*

## Document Scope

DIO description for further use.

## Goals and Objectives

This module helps user to read/write and to set direction for the digital I/O pins of the microcontroller.

## Context Diagram

*Add the* System *context* diagram *of the system here*

Figure 1 : System *context* diagram *of <DIO>*

|  |  |
| --- | --- |
| **Interface** | **Description** |
| *Buzzer* | *Connecting a buzzer on a digital i/o pins that when we write 1 to it, it fires an alarm in case of any temperature rises.* |

Table 1: Interfaces description

*Add the Control Flow Diagram of the system here*

Figure 2 : Control Flowdiagram

|  |  |  |
| --- | --- | --- |
| ***Description*** | ***Inputs*** | ***Return Value*** |
| Enabling features for using DIO component | N/A | N/A |
| Writing a value on a certain pin | Pin index  Value to be written | Error or ok message to the pin index range |

# Design Constraints

## Constraints on Initialization

Supports only atmega32 with 32 digital I/O pins only.

## Constraints on Inputs

One or zero values only.

## Constraints on Outputs

One or zero values only.

## Communication/Network Constraints

N/A

## Diagnostic Constraints

N/A