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**PO3\_DGW\_Digital watch**

**(CYRS)**

**DOCUMENT HISTORY**

Table 1 Document History including Version, Description, Author, Date and Status

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| --- | --- | --- | --- | --- | --- |
| **Document name** | **Version** | **Description of Change** | **Author** | **Date of last update** | **Status** |
| CYRS Document | 1.0 | - Initial creation of the document. | Mostafa Nader  Hammam Mazen | 22/1/2020 | Draft |
| 1.1 | - Updated the block diagram.  - Added two hardware requirements.  - Modified the project description. | Mostafa Nader  Hammam Mazen | 23/1/2020 | Draft |
| 1.2 | - Updated cover page by adding a logo  - Added #SW and #HW. | Mostafa Nader  Hammam Mazen | 23/1/2020 | Proposed |
| 1.3 | - All requirements updated with system level prospective.  - Req\_ PO3\_DGW\_CYRS\_04\_V01 & Req\_ PO3\_DGW\_CYRS\_08\_V01 are updated according to the SIQ document  - Document History table updated | Mostafa Nader  Hammam Mazen | 25/1/2020 | Proposed |

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# INTRODUCTION

Digital watches are common now a days, digital watches show the time as numbers, e.g., 10:55 Am instead of a shorthand pointing towards the number 10 and a long hand pointing towards the number 11. The digits are usually shown as a [seven-segment display](https://en.wikipedia.org/wiki/Seven-segment_display) or a LCD display. Sometimes this digital watches includes some extra features besides displaying the time in numbers format, e.g., lighting the display, stopwatch, alarm and more other features depending on the manufacturer.

## Project Description

This project will reference a Digital-Watch including several implemented features e.g. displaying a digital format of the current time to the user, setting alarm times that triggers a buzzer when the time hits the set time, stop watch that helps the user to count time according to his requirements and in this document “Customer Requirement Specifications (CYRS) document” the basic CRS requirements will be specified into software and hardware more detailed requirements.

# METHODOLOGY

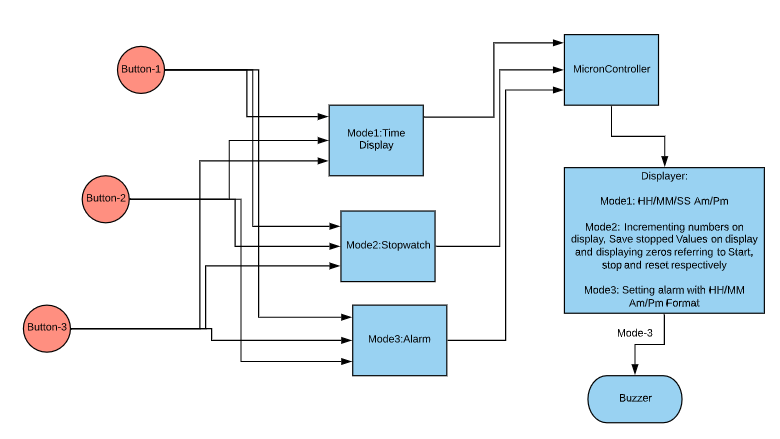


Figure 1 Digital-Watch High Level Block Diagram

# REQUIREMENTS

## Req\_ PO3\_DGW\_CYRS\_01\_V01 #SW

{

The System shall display the current time in this format (HH/MM/SS Am/Pm) on a displayer if the displaying time mode is chosen

}

## Req\_ PO3\_DGW\_CYRS\_02\_V01 #HW

{

The System shall include a displayer to be able to display the chosen mode interface according to the user’s choice

}

## Req\_ PO3\_DGW\_CYRS\_03\_V01 #HW

{

The System shall include a buzzer to notify the user when the alarm’s time hit

}

## Req\_ PO3\_DGW\_CYRS\_04\_V01.1 #SW

{

The System shall take an input time from the user and notifies the user with a buzzer for 1 min. or till the user presses a certain button when the set alarm time arrives

}

## Req\_ PO3\_DGW\_CYRS\_05\_V01 #SW

{

The System shall start incrementing its display numbers referring to real time seconds, minutes and hours if the Stopwatch mode is chosen

}

## Req\_ PO3\_DGW\_CYRS\_06\_V01 #SW

{

The System shall display save its last values and display it to the user if the Stopwatch mode is chosen

}

## Req\_ PO3\_DGW\_CYRS\_07\_V01 #SW

{

The System shall reset every value on the screen to zeros and stops if the Stopwatch mode is chosen

}

## Req\_ PO3\_DGW\_CYRS\_08\_V01.1 #HW

{

The System shall include three buttons, the first button switches between the three modes (Displaying time, Stopwatch, Alarm), while the second button Adjusts/Select for hours minutes in the Watch/Alarm modes and Starts/Pause in the Stopwatch mode and the third button increments the hours or minutes in the Watch/Alarm modes and Resets the value in the Stopwatch mode

}

Table 2 CYRS Requirements referring to CRS requirements

|  |  |
| --- | --- |
| **CYRS REQUIREMENT** | **CRS REQUIREMENT** |
| Req\_ PO3\_DGW\_CYRS\_01\_V01 | Display the time with 12 AM/PM format |
| Req\_ PO3\_DGW\_CYRS\_02\_V01 | Display the time with 12 AM/PM format |
| Req\_ PO3\_DGW\_CYRS\_03\_V01 | Alarm to be set as per the input |
| Req\_ PO3\_DGW\_CYRS\_04\_V01.1 | Alarm to be set as per the input |
| Req\_ PO3\_DGW\_CYRS\_05\_V01 | Stopwatch with “start, stop, and Reset” |
| Req\_ PO3\_DGW\_CYRS\_06\_V01 | Stopwatch with “start, stop, and Reset” |
| Req\_ PO3\_DGW\_CYRS\_07\_V01 | Stopwatch with “start, stop, and Reset” |
| Req\_ PO3\_DGW\_CYRS\_08\_V01.1 | The user can control the Digital watch with only 3 buttons |