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| PO3\_DGW  Customer System Requirements Specifications Document |
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# **Status Table**

|  |  |
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| PO3\_DGW\_CYRS | |
| *Version* | V0.5 |
| *Status* | Proposed |
| *Author* | Amr Ibrahim |
| *Last updated date* | 28/2/2020 |

# **Table of history**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Version* | | *Author* | *Date* | *Changes* |
| 0.0 | | Bassem Ezzat | January 24, 2020 | Creation of CYRS document |
| 0.1 | | Mohammed Elsayed | January 25, 2020 | Added further details to requirements based on SIQ answers |
| 0.2 | | Mariam El-Shakafi | January 30, 2020 | Updated REQ\_ PO3\_DGW\_CYRS\_07 |
| 0.3 | | Mohammed Elsayed | January 30, 2020 | Modified document to cover review points  (1 to 5) |
| 0.4 | Bassem Ezzat | | February 4, 2020 | Modified document to cover review points  (6 to 8) |
| 0.5 | Amr Ibrahim | | February 28, 2020 | Modified document to cover review points  (9 to 16) |

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# **Introduction**

* 1. Purpose

This document aims to clarify the CRS document and list a customer requirement specification to design a digital watch.

* 1. Document Abbreviation

|  |  |
| --- | --- |
| CYRS | Customer System Requirement Specifications |
| CRS | Customer Requirement Specifications |
| ERD | Entery relational digram |
| SIQ | Software interactive questionnaire |

* 1. Intended audience and reading suggestions

This project is a prototype for a digital watch, and it is applicable to be a commercial product. This has been implemented under the guidance of ITI’s trainers.

* 1. Project Scope

The purpose of this project is to create modern stunning digital watch.

* 1. References

|  |  |  |  |
| --- | --- | --- | --- |
| Ref. Number | Doc. Name | Version | Status |
| 1 | Digital watch CRS | 0.0 | Released |
| 2 | PO3\_DGW\_SIQ | 0.0 | Released |

1. Overall Description
   1. Product features

The major feature of the digital watch as listed below.

* Display time with 12 AM/PM format.
* Alarm to set according to user input.
* Stopwatch (Start, Stop).
* Three buttons to control the system:
  + MODE
  + FUNC1
  + FUNC2

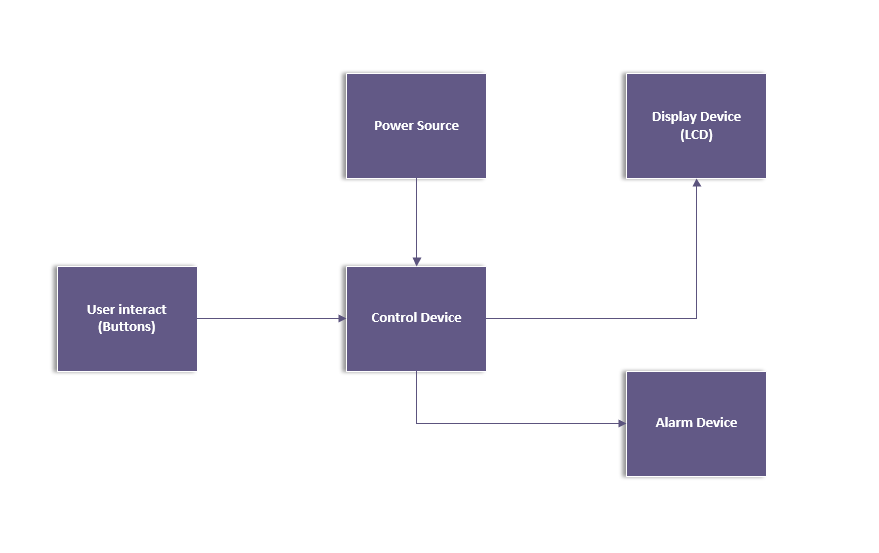


Figure 1. Overview block diagram

* 1. Operation environment

Operating environments for the digital watch are houses, offices, shops, and hotels.

* 1. Design and Implementation constraints
* Software layer design
* Hardware components selection

1. System Features
   1. Functional requirements
      1. REQ\_PO3\_DGW\_CYRS\_01\_V02

**#imp SW**

The user can navigate between three modes (Display time, Stopwatch and Alarm) using MODE button.

* + 1. REQ\_PO3\_DGW\_CYRS\_02\_V01

**#imp SW**

After adjusting the time in any mode and press MODE button, system should save and back to Display Time mode.

* + 1. REQ\_PO3\_DGW\_CYRS\_03\_V02

**#imp SW**

Display Time Mode:

The system displays time in HH: MM: SS AM/PM format (Display Time mode) when current mode is Stopwatch mode and mode is changed, or when system is powered.

* + 1. REQ\_PO3\_DGW\_CYRS\_04\_V01

**#imp SW**

Display Time Mode:

The system displays time in 12:00:00 AM when system is powered.

* + 1. REQ\_PO3\_DGW\_CYRS\_05\_V02

**#imp SW**

Adjust Time:

In Display Time mode, FUNC1 button is used to select between adjusting hours, minutes, and AM/PM.

* + 1. REQ\_PO3\_DGW\_CYRS\_06\_V02

**#imp SW**

In Display Time mode, when hours’ field is selected, FUNC2 button is used to increment hours.

* + 1. REQ\_PO3\_DGW\_CYRS\_07\_V01

**#imp SW**

In Display Time mode, user can increment hour’s field up to 12 then return to 01.

* + 1. REQ\_PO3\_DGW\_CYRS\_08\_V02

**#imp SW**

In Display Time mode, when minutes’ field is selected, FUNC2 button is used to increment minutes.

* + 1. REQ\_PO3\_DGW\_CYRS\_09\_V01

**#imp SW**

In Display Time mode, user can increment minute’s field up to 59 then return to 00.

* + 1. REQ\_PO3\_DGW\_CYRS\_10\_V02

**#imp SW**

In Display Time mode, when second’s field is selected, FUNC2 button is used to increment seconds.

* + 1. REQ\_PO3\_DGW\_CYRS\_11\_V01

**#imp SW**

In Display Time mode, the user can increment second’s field up to 59 then return to 00.

* + 1. REQ\_PO3\_DGW\_CYRS\_12\_V02

**#imp SW**

In Display Time mode, when AM/PM field is selected, FUNC2 button is used to change between both.

* + 1. REQ\_PO3\_DGW\_CYRS\_13\_V03

**#imp SW**

In Display Time mode, to apply adjustments, press FUNC1 button for confirming the modification of time.

* + 1. REQ\_PO3\_DGW\_CYRS\_14\_V02

**#imp SW**

Alarm Mode:

The system shows the current time in HH:MM:SS AM/PM format until Alarm time is reached (Alarm mode) when current mode is Display Time mode and mode is changed.

* + 1. REQ\_PO3\_DGW\_CYRS\_15\_V03

**#imp SW**

Set Alarm:

In Alarm mode, FUNC1 button is used to select between adjusting hours, minutes, AM/PM, enable and disable for alarm time.

* + 1. REQ\_PO3\_DGW\_CYRS\_16\_V01

**#imp SW**

In Alarm mode, when hours’ field is selected, FUNC2 button is used to increment hours.

* + 1. REQ\_PO3\_DGW\_CYRS\_17\_V01

**#imp SW**

In Display Time mode, user can increment hour’s field up to 12 then return to 01.

* + 1. REQ\_PO3\_DGW\_CYRS\_18\_V01

**#imp SW**

In Alarm mode, when minute’s field is selected, FUNC2 button is used to increment minutes.

* + 1. REQ\_PO3\_DGW\_CYRS\_19\_V01

**#imp SW**

In Alarm mode, user can increment minute’s field up to 59 then return to 00.

* + 1. REQ\_PO3\_DGW\_CYRS\_20\_V01

**#imp SW**

In Alarm mode, when second’s field is selected, FUNC2 button is used to increment seconds.

* + 1. REQ\_PO3\_DGW\_CYRS\_21\_V01

**#imp SW**

In Alarm mode, the user can increment second’s field up to 59 then return to 00.

* + 1. REQ\_PO3\_DGW\_CYRS\_22\_V01

**#imp SW**

In Alarm mode, when AM/PM field is selected, FUNC2 button is used to change between both.

* + 1. REQ\_PO3\_DGW\_CYRS\_23\_V01

**#imp SW**

In Alarm mode, to apply adjustments, press FUNC1 button for confirming the modification of alarm.

* + 1. REQ\_PO3\_DGW\_CYRS\_24\_V01

**#imp SW**

When alarm is reached user should stop alarm by press FUNC2 button or system will stop alarm after 30 sec.

* + 1. REQ\_PO3\_DGW\_CYRS\_25\_V01

**#imp SW**

Buzzer:

In Alarm mode, the Buzzer is triggered with notification when alarm time is reached.

* + 1. REQ\_PO3\_DGW\_CYRS\_26\_V01

**#imp SW**

In Alarm mode, the user stops buzzer alarm with FUNC2 button.

* + 1. REQ\_PO3\_DGW\_CYRS\_27\_V01

**#imp SW**

Stopwatch Mode:

The system displays a counter with initial value of 00:00:00 (Stopwatch mode) when current mode is Alarm mode and MODE is changed.

* + 1. REQ\_PO3\_DGW\_CYRS\_28\_V01

**#imp SW**

In Stopwatch mode, FUNC1 button is used to start counting every second if system was in paused state.

3.1.29. REQ\_PO3\_DGW\_CYRS\_29\_V01

**#imp SW**

In Stopwatch mode, FUNC1 button is used to stop counting if system was in running state.

* + 1. REQ\_PO3\_DGW\_CYRS\_30\_V01

**#imp SW**

In Stopwatch mode, FUNC2 button is used to reset counter to 00:00:00.