**PO3DGW\_DIGITAL\_WATCH**

**SRS**

**Version 0.1**

**Draft**

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| --- | --- | --- |
| **Created by** | Amr Ibrahim | 26/01/2020 |
| **Checked by** | Ghada mohamed | 29/01/2020 |
| **Reviewed by** |  |  |

**Contents**

[**1 Introduction** 3](#_Toc31061629)

[1.1 Software Features 3](#_Toc31061630)

[**2 Functional Requirements:** 4](#_Toc31061631)

[2.1 Display Time Mode 4](#_Toc31061632)

[2.2 Adjust Time Mode 5](#_Toc31061633)

[2.3 Alarm Mode 6](#_Toc31061634)

[2.4 Stop Watch Mode 8](#_Toc31061635)

# **1 Introduction**

This section introduces the software requirements specification (SRS) for the Digital Watch.

## 1.1 Software Features

The major feature of the digital watch as listed below.

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

# **2 Functional Requirements:**

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| **Req ID** | Req\_P03DGW\_SRS\_DisplayTime\_001-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_01\_V01 | **Test Scope** | ITD |
| **Description** | The software shall enter Display Time mode in two cases:   * At Initialization * When (Current mode = Stopwatch mode & MODE button is pressed) | | |

## 2.1 Display Time Mode

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| **Req ID** | Req\_P03DGW\_SRS\_DisplayTime\_002-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_01\_V01 | **Test Scope** | ITD |
| **Description** | The software shall display the time on LCD in HH:MM:SS AM/PM format. | | |

## 2.2 Adjust Time Mode

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| **Req ID** | Req\_P03DGW\_SRS\_AdjustTime\_001-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_02\_V01 | **Test Scope** | ITD |
| **Description** | To adjust (minutes) the software shall:   * Take input from FUNC1 button once, so the minutes digits will start blinking to indicate that it can be modified using FUNC2 button. * Take input from FUNC2 button, each signal will increase the minutes by 1. * If minutes digits > 59, the SW will reset the digits to 00. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_AdjustTime\_002-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_02\_V01 | **Test Scope** | ITD |
| **Description** | To adjust (hours) the software shall:   * Take input from FUNC1 button twice, so the hours digits will start blinking to indicate that it can be modified using FUNC2 button. * Take input from FUNC2 button, each signal will increase the hours by 1. * If hours digits > 12, the SW will reset the digits to 00. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_AdjustTime\_003-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_02\_V01 | **Test Scope** | ITD |
| **Description** | To adjust (AM/PM) the software shall:   * Take input from FUNC1 button once, so the formats will start blinking to indicate that it can be modified using FUNC2 button. * Take input from FUNC2 button, each signal will change the format. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_AdjustTime\_004-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_02\_V01 | **Test Scope** | ITD |
| **Description** | To apply adjustments, the SW take input from FUNC1 button for a fourth time then enter Display Time Mode. | | |

## 2.3 Alarm Mode

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| **Req ID** | Req\_P03DGW\_SRS\_AlarmMode\_001-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_03\_V01 | **Test Scope** | ITD |
| **Description** | The software shall enter Alarm mode:  - when current mode = (Display Time mode &MODE button is pressed). | | |

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| **Req ID** | Req\_P03DGW\_SRS\_AlarmMode\_002-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_04\_V01 | **Test Scope** | ITD |
| **Description** | To adjust alarm time (minutes) the software shall:   * Take input from FUNC1 button once, so the minutes digits will start blinking to indicate that it can be modified using FUNC2 button. * Take input from FUNC2 button, each signal will increase the minutes by 1. * If minutes digits > 59, the SW will reset the digits to 00. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_AlarmMode\_003-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_04\_V01 | **Test Scope** | ITD |
| **Description** | To adjust alarm time (hours) the software shall:   * Take input from FUNC1 button twice, so the hours digits will start blinking to indicate that it can be modified using FUNC2 button. * Take input from FUNC2 button, each signal will increase the hours by 1. * If hours digits > 12, the SW will reset the digits to 00. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_AlarmMode\_004-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_04\_V01 | **Test Scope** | ITD |
| **Description** | To adjust alarm (AM/PM) the software shall:   * Take input from FUNC1 button once, so the formats will start blinking to indicate that it can be modified using FUNC2 button. * Take input from FUNC2 button, each signal will change the format. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_AlarmMode\_005-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_04\_V01 | **Test Scope** | ITD |
| **Description** | To Set Alarm, the SW take input from FUNC1 button for a fourth time then enter Display Time Mode. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_AlarmMode\_006-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_05\_V01 | **Test Scope** | ITD |
| **Description** | The software shall enter Stopwatch mode: when current mode is Alarm mode and software take input from MODE button. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_AlarmMode\_007-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_05\_V01 | **Test Scope** | ITD |
| **Description** | The software shall display 00:00:00. | | |

## 2.4 Stop Watch Mode

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| **Req ID** | Req\_P03DGW\_SRS\_StopWatchMode\_001-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_06\_V01 | **Test Scope** | ITD |
| **Description** | The software shall enter Stopwatch mode: when current mode is Alarm mode and software take input from MODE button. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_StopWatchMode\_002-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_06\_V01 | **Test Scope** | ITD |
| **Description** | The software shall display 00:00:00. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_StopWatchMode\_003-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_07\_V01 | **Test Scope** | ITD |
| **Description** | The software shall start counting when software take input from FUNC1 button in Stopwatch mode initial state. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_StopWatchMode\_004-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_08\_V01 | **Test Scope** | ITD |
| **Description** | The software shall stop counting when software take input from FUNC1 button in Stopwatch mode running state. | | |

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| **Req ID** | Req\_P03DGW\_SRS\_StopWatchMode\_005-V01 | | |
| **Covers** | FUNC\_PO3\_DGW\_CYRS\_09\_V01 | **Test Scope** | ITD |
| **Description** | The software shall reset counter to 00:00:00 when software take input from FUNC2 button in Stopwatch mode. | | |