Customer Requirements Specification

**SAG Glasses**

**ــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــ**

**Table of Contents**

Document Status:………………………………………………………………...1 Document History:………………………………………………………………..1 Reference Document:…………………………………………………………....2 Project Description:……………………………………………………………....3

**Document Status:**

|  |  |  |
| --- | --- | --- |
| **Name** | PO\_SAG\_CRS\_Glasses | |
| **Version** | V1.4 | |
| **Status** | Proposed | |
| **Author** | Jana Muhammed | |
| **Date** | [20-11-2022] | |
| **Team Approval** | Reham | Approved |
| **Mentor Approval** |  |  |
| **Final Approval** |  |  |

**Document History:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Author** | **Date** | **Change** |
| 1.0 | Reham Essam | [28/9/2022] | * Initial Creation |
| 1.1 | Jana Muhammed | [11/11/2022] | * Edit CRS Requirements * Edit Key Elements |

|  |  |  |  |
| --- | --- | --- | --- |
| 1.2 | Jana Muhammed | [13/11/2022] | * Edit CRS Requirements * Edit system context |
| 1.3 | Omnia Muhammed | [17/11/2022] | * CRS\_REVIEW\_001 * CRS\_REVIEW\_002 * CRS\_REVIEW\_003 * CRS\_REVIEW\_004 * CRS\_REVIEW\_005 |
| 1.4 | Jana Muhammed | [20-11-2022] | * CRS\_REVIEW\_001 * CRS\_REVIEW\_002 * CRS\_REVIEW\_003 |

**Reference Document:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref.number** | **Doc.Name** | **Version** | **Status** |
| 1 | PO\_SAG\_CR\_Glasses | V1.2 | Released |

**Project Description:**

Definition:

The Design of the project is The Glasses closed around the head, between the two lenses of the Glasses there is a camera, on the right hand there is a power button , flash and mic , on the left side there are three buttons and a speaker.

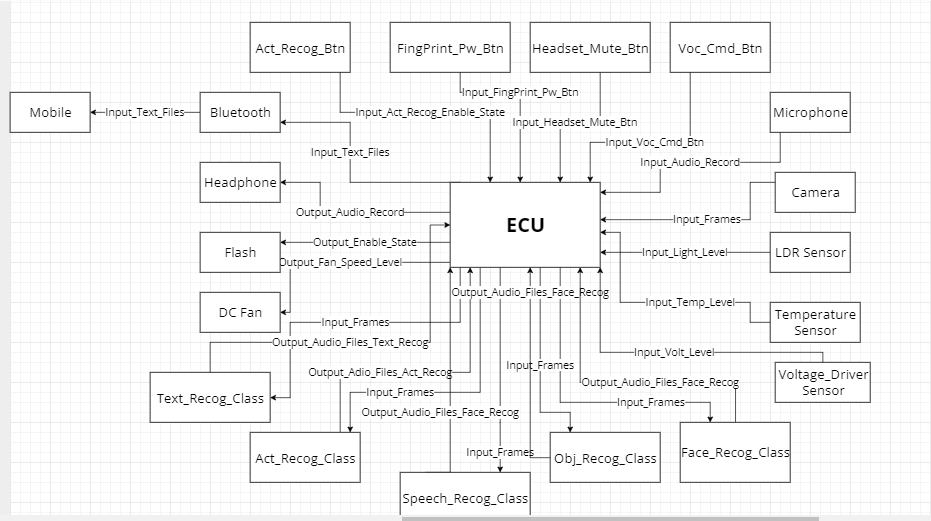
Features:

* Glasses’ features can be controlled by the user through buttons.
* Glasses have two modes (Day mode - Night mode).
* Glasses can capture images.
* Glasses support the voice command.
* Glasses can speak.
* ECU protection and maintenance.
* The glasses use Bluetooth to connect to the mobile application.‏

Key Elements:

* The Glasses shall have a button to turn it on/off.
* The Glasses shall have a button to control the headphone sound.
* The Glasses shall have a button to enable/disable image caption feature.
* The Glasses shall have a button to enable/disable voice commands.
* The Glasses shall detect the night/day mode using LDR.
* The Glasses shall have a camera that supports real-time capturing.
* The Glasses shall have a microphone through which it receives voice commands.
* The Glasses shall have headphones to play any audio.
* The Glasses shall keep tracking voltage and temperature level.
* The Glasses shall decrease heat using a DC fan.
* Each pair of glasses has external low energy bluetooth.
* Each pair of glasses has a unique Bluetooth ID, which it uses to connect to the mobile application.‏

System Context:



CRS Requirements:

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***001***-V1.4 | **Covers** | PO\_SAG\_CR\_Glasses\_***001***-V1.1 |
| **Description** | The user shall press the “Fingprint\_Pw\_Btn” to turn on and verify his fingerprint. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***002***-V1.4 | **Covers** | PO\_SAG\_CR\_Glasses\_***001***-V1.1 |
| **Description** | If the glasses were turned on, the user shall press the “Fingprint\_Pw\_Btn” to turn off the glasses and it will shut down after his confirmation. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***003***-V1.4 | **Covers** | PO\_SAG\_CR\_Glasses\_***002***-V1.1 |
| **Description** | If the headphones sound were unmuted, the user shall press the ”Headset\_Mute\_Btn” to mute it. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***004***-V1.4 | **Covers** | PO\_SAG\_CR\_Glasses\_***003***-V1.1 |
| **Description** | If the action recognition feature is disabled, The user shall press the “Act\_Recog\_Btn” to enable it. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***005***-V1.4 | **Covers** | PO\_SAG\_CR\_Glasses\_***004***-V1.1 |
| **Description** | If the voice command feature is disabled, The user shall press the”Voc\_Cmd\_Btn” button to enable it.‏ | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***006***-V1.4 | **Covers** | PO\_SAG\_CR\_Glasses\_***007***-V1.0 |
| **Description** | After enabling the “Voc\_Cmd\_Btn”, the microphone is activated to receive audio records. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***007***-V1.4 | **Covers** | PO\_SAG\_CR\_Glasses\_***005***-V1.1 |
| **Description** | The ECU shall read the Light\_Level from the LDR sensor . | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***008***-V1.1 | **Covers** | PO\_SAG\_CR\_Glasses\_***005***-V1.1 |
| **Description** | Based on the Light\_Level, the ECU determines the day/night mode . | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***009***-V1.4 | **Covers** | PO\_SAG\_CR\_Glasses\_***005***-V1.1 |
| **Description** | If the mode is night mode, the ECU turns on the flash else the ECU will keep the flash turned off. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***010***-V1.0 | **Covers** | PO\_SAG\_CR\_Glasses\_***008***-V1.2 |
| **Description** | The ECU plays audio records through headphones. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***011***-V1.0 | **Covers** | PO\_SAG\_CR\_Glasses\_***000***-V1.0 |
| **Description** | The ECU shall read the Volt\_Level from the voltage sensor. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***012***-V1.0 | **Covers** | PO\_SAG\_CR\_Glasses\_***000***-V1.0 |
| **Description** | Based on the Volt\_Level the ECU determines whether the battery needs to be charged or not. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***013***-V1.0 | **Covers** | PO\_SAG\_CR\_Glasses\_***000***-V1.0 |
| **Description** | If the battery needs to be charged, the ECU will send an alert through the headphones. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***014***-V1.0 | **Covers** | PO\_SAG\_CR\_Glasses\_***000***-V1.0 |
| **Description** | If the battery wasn’t charged after this alert, the ECU will send another alert through the speaker. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***015***-V1.4 | **Covers** | PO\_SAG\_CR\_Glasses\_***009***-V1.1 |
| **Description** | The ECU will read the Temp\_Level through the temperature sensor. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***016***-V1.0 | **Covers** | PO\_SAG\_CR\_Glasses\_***009***-V1.1 |
| **Description** | Based on the Temp\_level, the ECU will turn on the DC fan with specific Fan\_Speed\_Level. | | |

nh

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO\_SAG\_CRS\_Glasses\_***017***-V1.0 | **Covers** | PO\_SAG\_CR\_Glasses\_***000***-V1.1 |
| **Description** | The ECU will send the voice commands as text files to the bluetooth to be applied on the user’s mobile. | | |

nhh

jj

jj