Customer Requirements

**SpeedBumps ES**

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**Document Status:**

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| 1.0 | MMH | [26-9-2022] | * Initial Creation |
| 1.1 | MMH | [26-10-2022] | CR\_REV\_0001 , CR\_REV\_0002, CR\_REV\_0003 |
| 1.2 | MMH | [7-12-2022] | Requirements refactoring |

**Project Description:**

## Definition:

* The device detects speed bumps.

## Features:

* The device can capture images.
* ECU protection and maintenance.
* ECU will communicate with the mobile application via Bluetooth.

## Key Elements:

* The ECU shall connect to a camera that supports real-time capturing.
* The ECU shall monitor the battery’s voltage level.
* The ECU shall enable/disable power saving mode.
* The ECU shall monitor its heat level.
* ECU shall communicate with mobile app through BLE (Bluetooth Low Energy )‏.
* ECU shall send the detected bump information to the mobile app via Bluetooth.
* ECU shall notify the mobile app with battery issues (under/over voltage range )‏.
* ECU shall notify the mobile app when the ECU is over/under normal heat level‏.
* The ECU shall be connected to a DC fan to decrease heat

**Mapping Customer’s Requirements:**

|  |  |
| --- | --- |
| **ID Requirement** | **Covers** |
| PO\_SB\_ CR\_ES**\_001**-V1.1 | The ECU shall connect to a camera that supports real-time capturing |
| PO\_SB\_ CR\_ES**\_002**-V1.1 | The ECU shall monitor the battery’s voltage level. |
| PO\_SB\_ CR\_ES\_**003**-V1.0 | The ECU shall enable/disable power saving mode. |
| PO\_SB\_ CR\_ES**\_004**-V1.1 | The ECU shall monitor its heat level. |
| PO\_SB\_ CR\_ES\_**005**-V1.0 | ECU shall communicate with mobile app through BLE (Bluetooth Low Energy )‏. |
| PO\_SB\_ CR\_ES\_**006**-V1.0 | ECU shall send the detected bump information to the mobile app via Bluetooth. |
| PO\_SB\_ CR\_ES\_**007**-V1.0 | ECU shall notify the mobile app with battery issues (under/over voltage range )‏. |
| PO\_SB\_ CR\_ES\_**008**-V1.0 | ECU shall notify the mobile app when the ECU is over/under normal heat level‏. |
| PO\_SB\_ CR\_ES**\_009**-V1.1 | The ECU shall be connected to a DC fan to decrease heat |