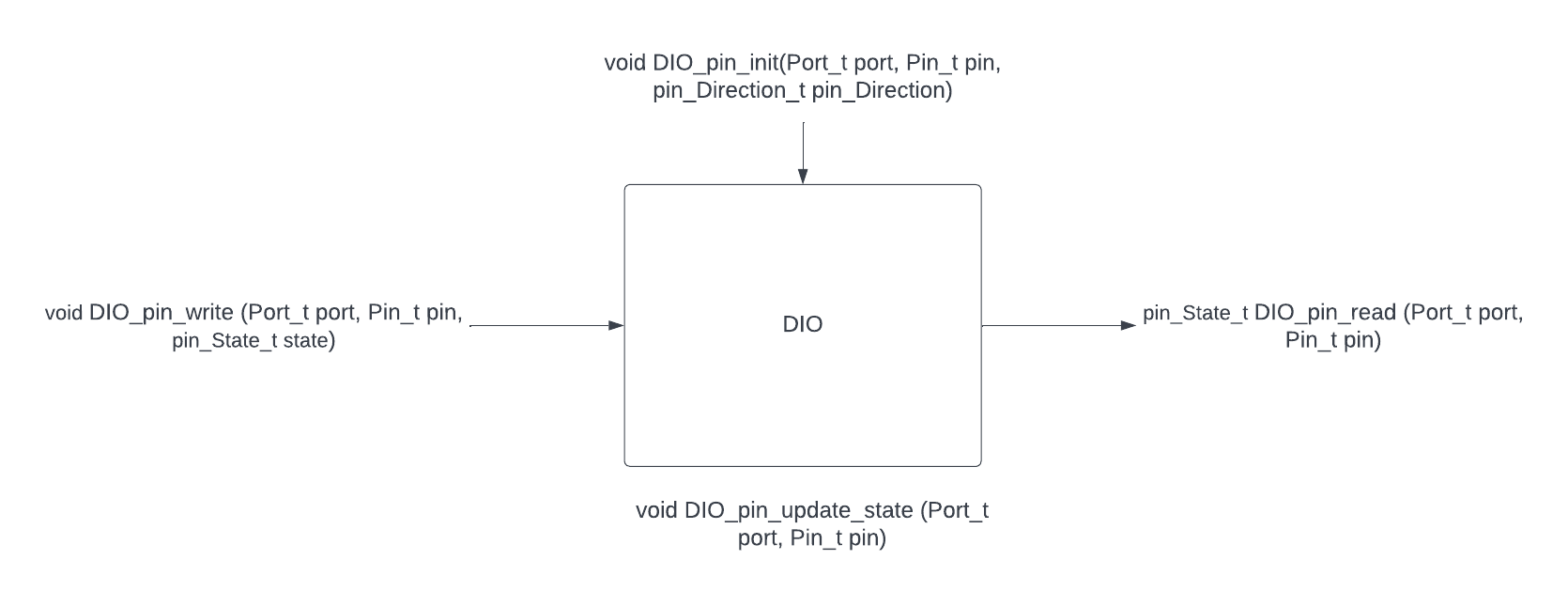
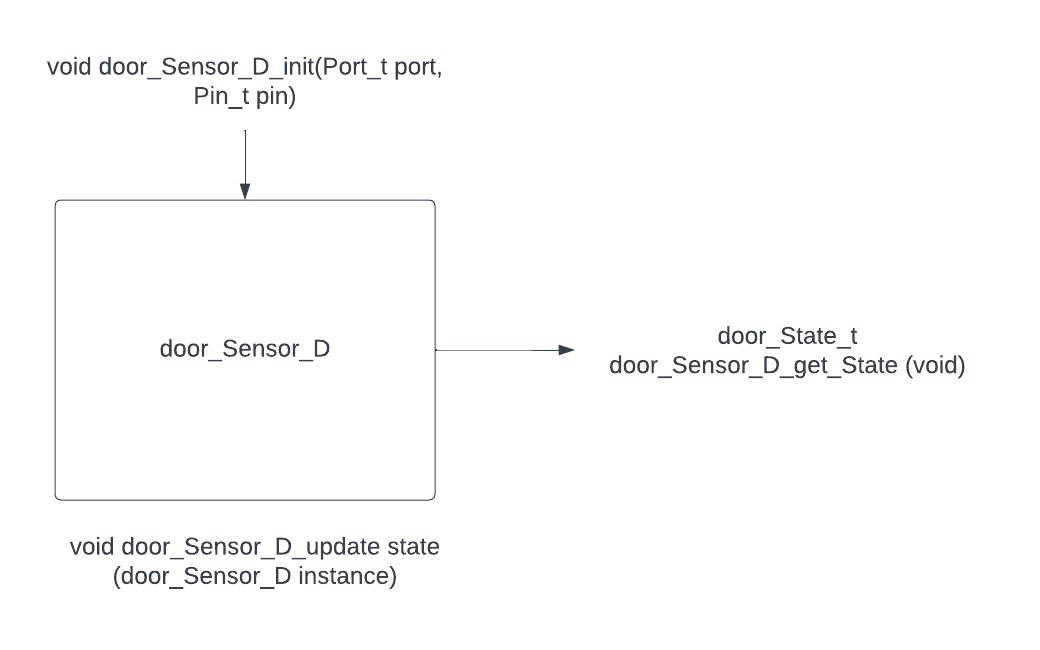
Static SW design

* **For ECU1 :**

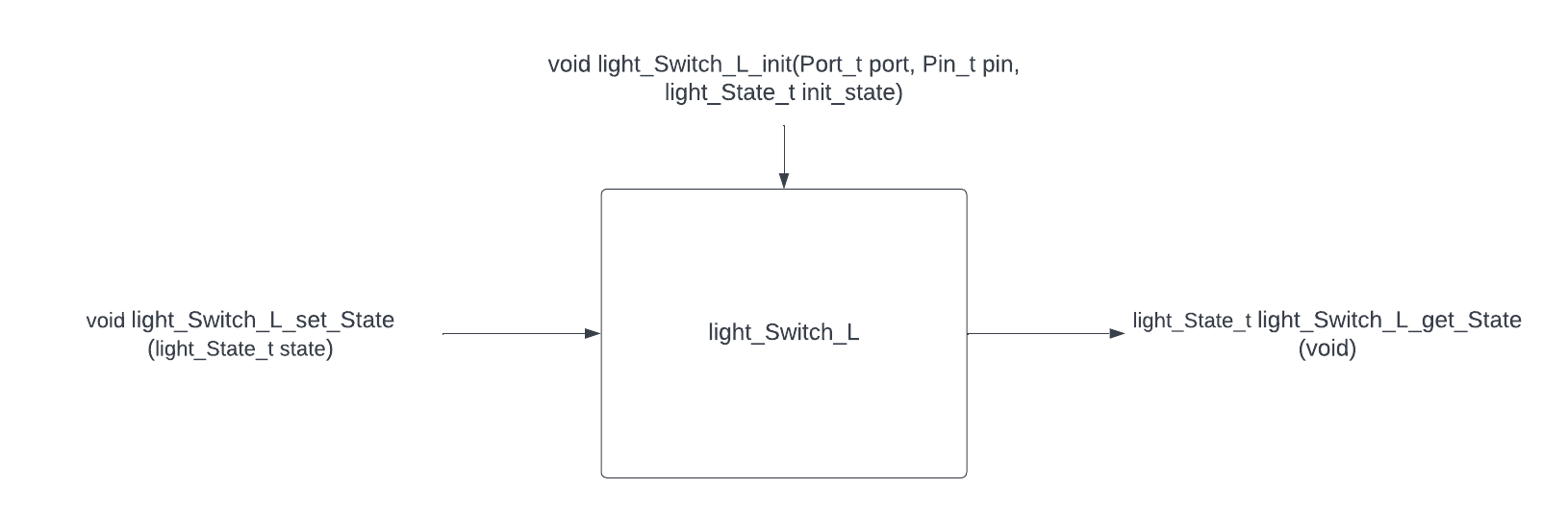
1. DIO :



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| API | Reentrant  Or  Non-Reentrant | | Sync  Or  Async | | Recursion  Or  Non-Recursion | | Type |
| Void DIO\_pin\_init | Reentrant | | sync | | Non-Recursion | | Function |
| Description | Function responsible for initialize given pin configurations | | | | | | |
| Args | 1. Port\_t port : port which has pin to be configured 2. Pin\_t pin : pin to be configured 3. pin\_Direction\_t pin\_direction : the direction of the pin to be configured | | | | | | |
| Return | None | | | | | | |
| Void DIO\_pin\_write | Reentrant | sync | | Non-Recursion | | MACRO | |
| Description | Function responsible for write a value on given pin | | | | | | |
| Args | 1. Port\_t port : port which has pin to output on 2. Pin\_t pin : pin to write on 3. pin\_State\_t state : value to be written | | | | | | |
| Return | None | | | | | | |
| API | Reentrant  Or  Non-Reentrant | | Sync  Or  Async | | Recursion  Or  Non-Recursion | | Type |
| Void DIO\_pin\_read | Reentrant | | sync | | Non-Recursion | | MACRO |
| Description | Function responsible for read a value from a given pin | | | | | | |
| Args | 1. Port\_t port : port which has pin to be read 2. Pin\_t pin : pin to be read | | | | | | |
| Return | pin\_State\_t state : value to be read | | | | | | |
| Void DIO\_pin\_update\_state | Reentrant | sync | | Non-Recursion | | Function | |
| Description | Function responsible for updating value on given pin | | | | | | |
| Args | 1. Port\_t port : port which has pin to output on 2. Pin\_t pin : pin to write on | | | | | | |
| Return | None | | | | | | |

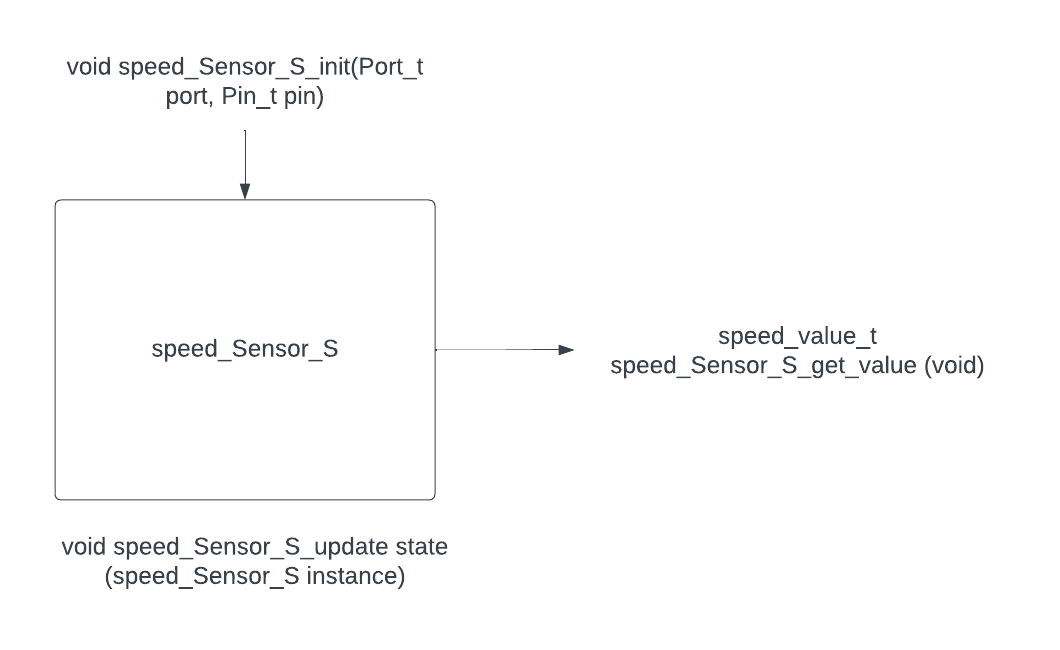
1. door\_Sensor\_D: 

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| API | Reentrant  Or  Non-Reentrant | Sync  Or  Async | Recursion  Or  Non-Recursion | Type |
| Void door\_Sensor\_D\_init | Reentrant | sync | Non-Recursion | Function |
| Description | Function responsible for initialize door sensor configurations | | | |
| Args | 1. Port\_t port : port which has pin connected to the sensor 2. Pin\_t pin : pin connected to the sensor | | | |
| Return | None | | | |
| door\_State\_t door\_Sensor\_D\_get\_State | Reentrant | sync | Non-Recursion | MACRO |
| Description | Function responsible for getting sensor value | | | |
| Args | None | | | |
| Return | door\_State\_t sensor\_State : return the door state | | | |
| void door\_Sensor\_D\_update\_state | Non-Reentrant | sync | Non-Recursion | Function |
| Description | Function responsible for updating value on sensor | | | |
| Args | door\_Sensor\_D instance : instance of sensor model | | | |
| Return | None | | | |

1. light\_Switch\_L:

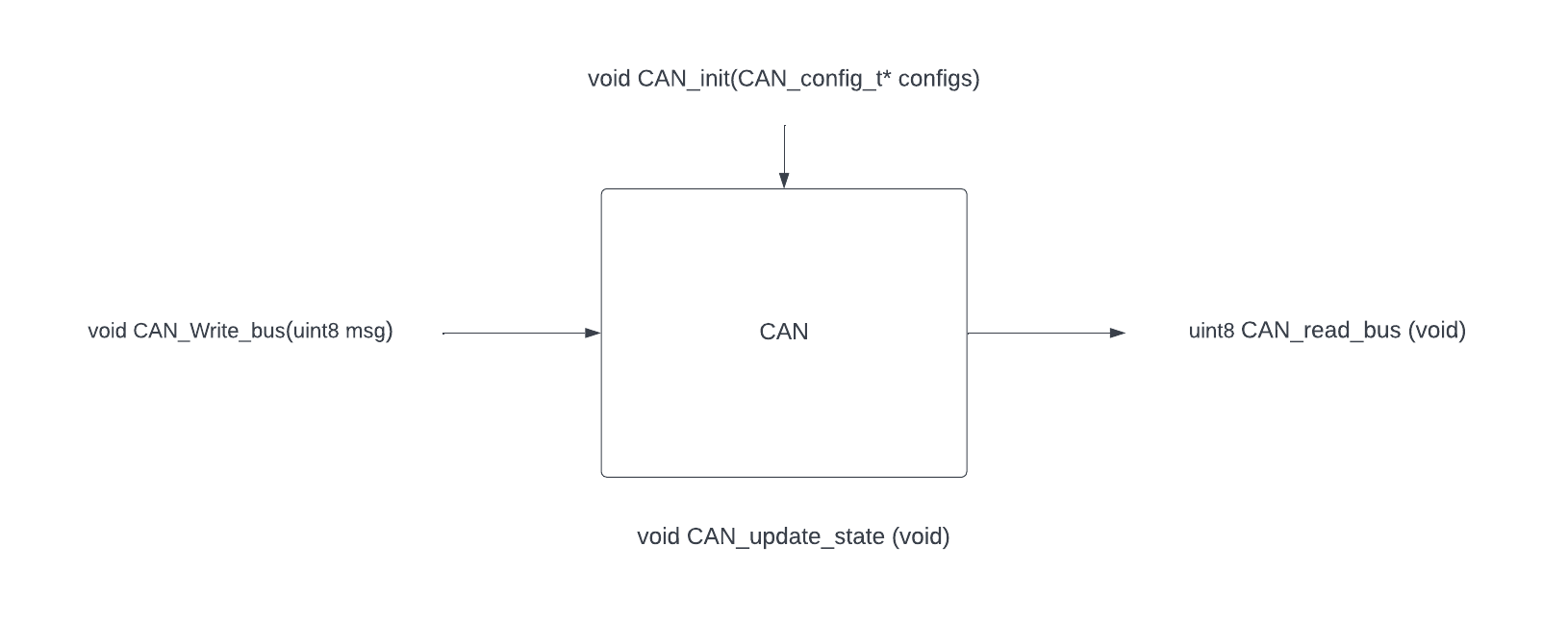
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| API | Reentrant  Or  Non-Reentrant | Sync  Or  Async | Recursion  Or  Non-Recursion | Type |
| Void light\_Switch\_L\_init | Reentrant | sync | Non-Recursion | Function |
| Description | Function responsible for initialize light switch configurations | | | |
| Args | 1. Port\_t port : port which has pin connected to the light switch 2. Pin\_t pin : pin connected to the light switch 3. light\_State\_t init\_state : initial state of light switch | | | |
| Return | None | | | |
| light\_State\_t light\_Switch\_L\_get\_State () | Reentrant | sync | Non-Recursion | MACRO |
| Description | Function responsible for getting light switch value | | | |
| Args | None | | | |
| Return | light\_State\_t light\_State : return the light switch state | | | |
| void light\_Switch\_L\_set\_State | Reentrant | sync | Non-Recursion | MACRO |
| Description | Function responsible for setting light switch state | | | |
| Args | light\_State\_t state : the light switch state to be set | | | |
| Return | None | | | |

1. speed\_Sensor\_S:



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| API | Reentrant  Or  Non-Reentrant | Sync  Or  Async | Recursion  Or  Non-Recursion | Type |
| void speed\_Sensor\_S\_init | Reentrant | sync | Non-Recursion | Function |
| Description | Function responsible for initialize speed sensor configurations | | | |
| Args | 1. Port\_t port : port which has pin connected to the sensor 2. Pin\_t pin : pin connected to the sensor | | | |
| Return | None | | | |
| speed\_value\_t speed\_Sensor\_S\_get\_value | Reentrant | sync | Non-Recursion | MACRO |
| Description | Function responsible for getting sensor value | | | |
| Args | None | | | |
| Return | speed\_value\_t sensor\_Value: return the speed value | | | |
| void speed\_Sensor\_S\_update state | Non-Reentrant | sync | Non-Recursion | Function |
| Description | Function responsible for updating value on sensor | | | |
| Args | speed\_Sensor\_S instance : instance of sensor model | | | |
| Return | None | | | |

1. CAN:



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| API | Reentrant  Or  Non-Reentrant | Sync  Or  Async | Recursion  Or  Non-Recursion | Type |
| void CAN\_init | Reentrant | sync | Non-Recursion | Function |
| Description | Function responsible for initialize CAN configurations | | | |
| Args | 1. CAN\_config\_t\* configs : pointer to configurations of CAN | | | |
| Return | None | | | |
| void CAN\_Write\_bus | Reentrant | sync | Non-Recursion | MACRO |
| Description | Function responsible for send message on the CAN bus | | | |
| Args | uint8 msg : message to be sent. | | | |
| Return | None | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| API | Reentrant  Or  Non-Reentrant | Sync  Or  Async | Recursion  Or  Non-Recursion | Type |
| uint8 CAN\_read\_bus | Reentrant | sync | Non-Recursion | MACRO |
| Description | Function responsible for receiving message from CAN bus | | | |
| Args | None | | | |
| Return | uint8 received\_Msg : message to be received. | | | |
| void CAN\_update\_state | Non-Reentrant | sync | Non-Recursion | Function |
| Description | Function responsible for updating CAN bus value | | | |
| Args | None | | | |
| Return | None | | | |