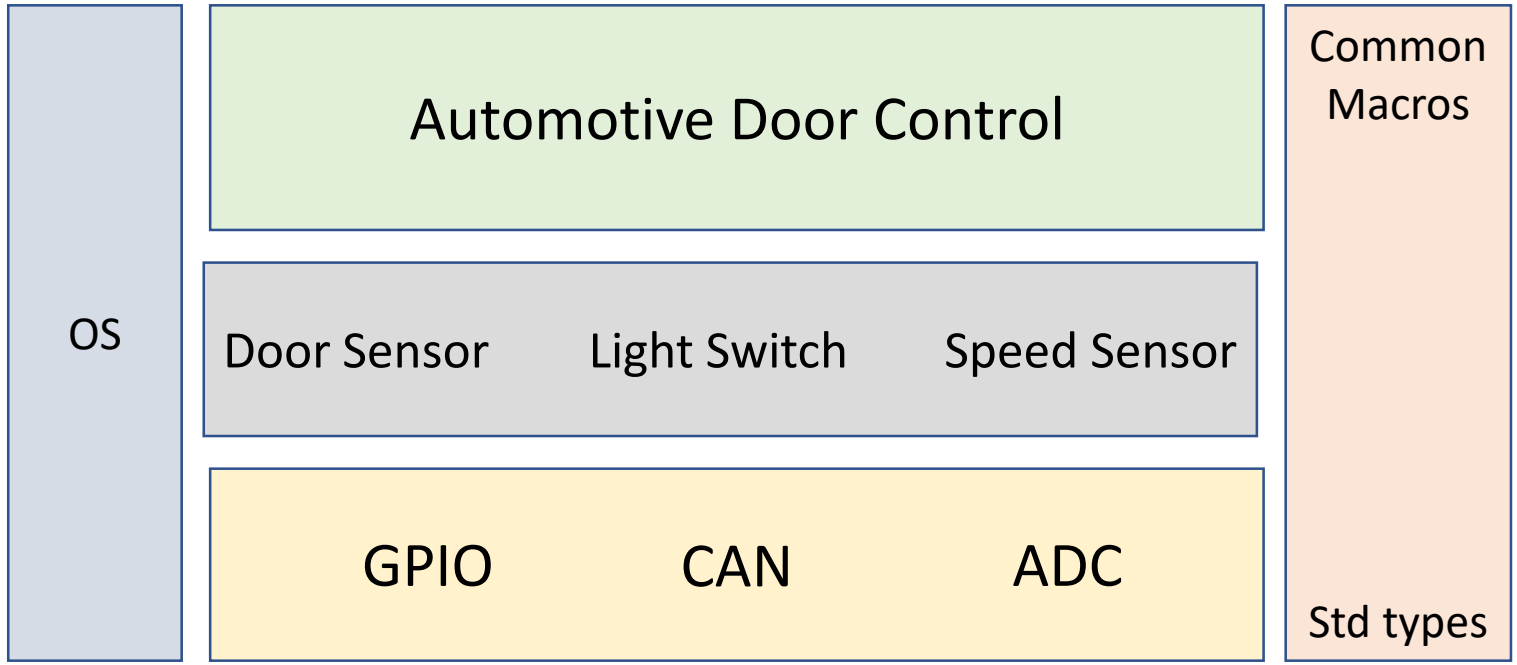
ECU 1


OS
Automotive Door Control
Door Sensor
Light Switch
Speed Sensor
GPIO
CAN
ADC
Common Macros
Std types

GPIO

API – Types

Gpio_ChannelType

Gpio_PortType

Gpio_LevelType

Gpio_PortLevelType

API - Functions

void GPIO_Init(const Gpio_ConfigType * ConfigPtr)

Gpio_LevelType GPIO_ReadChannel(Gpio_ChannelType ChannelID)

void GPIO_WriteChannel(Gpio_ChannelType ChannelID, Gpio_LevelType Level)

Gpio_LevelType GPIO_FlipChannel(Gpio_ChannelType ChannelID);

Gpio_PortLevelType GPIO_ReadPort(Gpio_PortType PortID)

void GPIO_WritePort(Gpio_PortType PortID, Gpio_PortLevelType Level)

Configurations

- PortPinMode
- PortPinLevelValue
- PortPinDirection
- PortPinInternalAttach

CAN

API – Types

Can_ConfigType “Structure”

API – Functions

void Can_Init(const Can_ConfigType* Config)

Std_ReturnType Can_SetBaudrate(uint8 Controller, uint16 BaudRateConfigID)

Std_ReturnType Can_SetControllerMode(uint8 Controller, Can_ControllerStateType Transition)

void Can_MainFunction_Write(void)

void Can_MainFunction_Read(void)

ADC

API – Types

ADC_ConfigType “Structure”

ADC_Prescalar

ADC_RefVolatge

API – Functions

```
void ADC_Init(const ADC_ConfigType * Config_Ptr);
```

```
uint32 ADC_readChannel(uint8 CH_num);
```

GPT

API Types	
GPT_ConfigType	Structure Implemenation
GPT_ValueType	uint8

API Functions

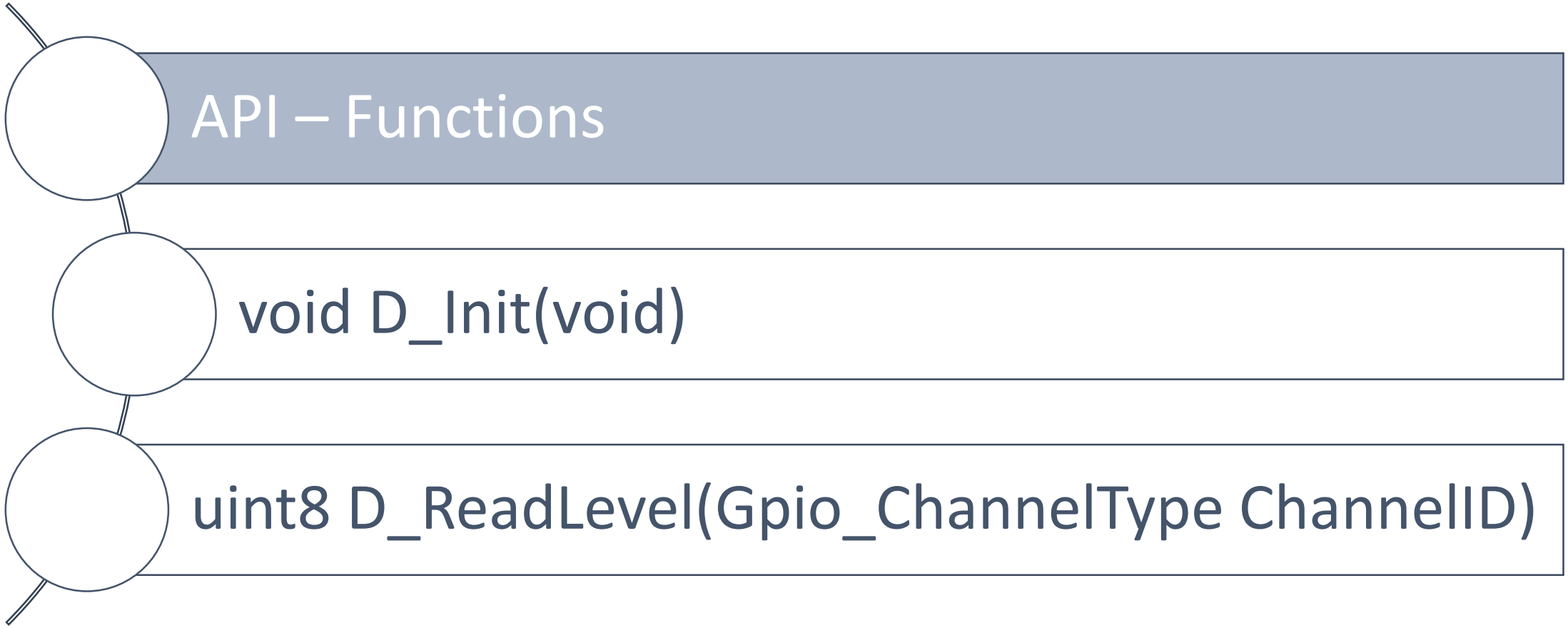
void Timer_Init(const GPT_ConfigType * Config_Ptr)

void Timer_Start(GPT_ValueType Value)

void Timer_Stop(GPT_ValueType Value)

Door Sensor

Must include “GPIO Driver”



Light Switch

Must include “GPIO Driver”

API – Functions

void L_Init(void)

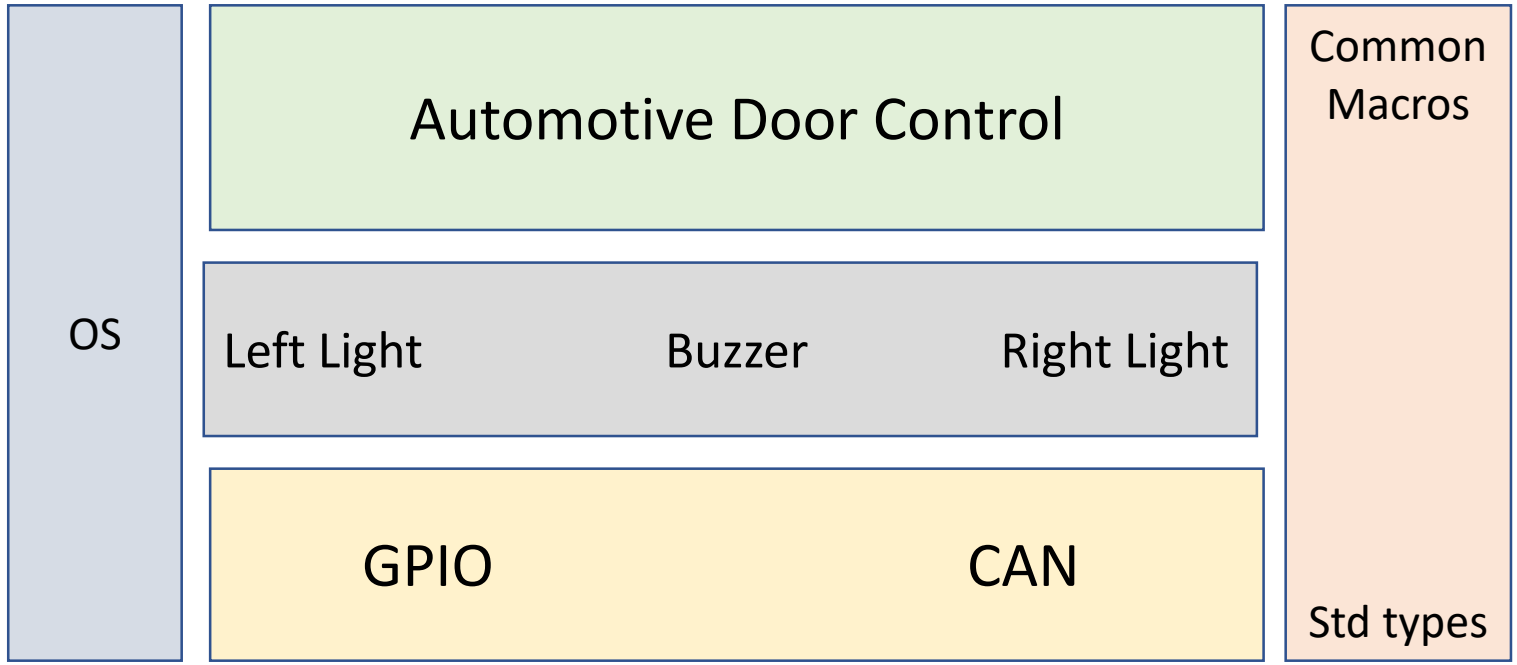
uint8 L_GetState(Gpio_ChannelType ChannelID)

Speed Sensor

Must include “ADC Driver”

- API – Functions
- void S_Init(void)
- uint8 S_ReadValue(uint8 ADC_Channel)

ECU 2


OS
Automotive Door Control
Left Light
Buzzer
Right Light
GPIO
CAN
Common Macros
Std types

GPIO

API – Types

Gpio_ChannelType

Gpio_PortType

Gpio_LevelType

Gpio_PortLevelType

API - Functions

void GPIO_Init(const Gpio_ConfigType * ConfigPtr)

Gpio_LevelType GPIO_ReadChannel(Gpio_ChannelType ChannelID)

void GPIO_WriteChannel(Gpio_ChannelType ChannelID, Gpio_LevelType Level)

Gpio_LevelType GPIO_FlipChannel(Gpio_ChannelType ChannelID);

Gpio_PortLevelType GPIO_ReadPort(Gpio_PortType PortID)

void GPIO_WritePort(Gpio_PortType PortID, Gpio_PortLevelType Level)

Configurations

- PortPinMode
- PortPinLevelValue
- PortPinDirection
- PortPinInternalAttach

CAN

API – Types

Can_ConfigType “Structure”

API – Functions

void Can_Init(const Can_ConfigType* Config)

Std_ReturnType Can_SetBaudrate(uint8 Controller, uint16 BaudRateConfigID)

Std_ReturnType Can_SetControllerMode(uint8 Controller, Can_ControllerStateType Transition)

void Can_MainFunction_Write(void)

void Can_MainFunction_Read(void)

GPT

API Types	
GPT_ConfigType	Structure Implemenation
GPT_ValueType	uint8

API Functions

void Timer_Init(const GPT_ConfigType * Config_Ptr)

void Timer_Start(GPT_ValueType Value)

void Timer_Stop(GPT_ValueType Value)

Left Light

Must include “GPIO Driver”

API – Functions

void LL_ON(Gpio_ChannelType ChannelID)

void LL_OFF(Gpio_ChannelType ChannelID)

Buzzer

Must include “GPIO Driver”

API – Functions

void B_ON(Gpio_ChannelType ChannelID)

void B_OFF(Gpio_ChannelType ChannelID)

Right Light

Must include “GPIO Driver”

- ***API – Functions***
- void RL_ON(Gpio_ChannelType ChannelID)
- void RL_OFF(Gpio_ChannelType ChannelID)