# MCAL APIs

## DIO APIs

DIO\_ERROR\_state\_t DIO\_init(const STR\_DIO\_config\_t \* configurations);

DIO\_ERROR\_state\_t DIO\_write(uint8\_t port,  ENU\_pins pin, uint8\_t data);

DIO\_ERROR\_state\_t DIO\_read(uint8\_t port, ENU\_pins pin, uint8\_t \* data);

DIO\_ERROR\_state\_t DIO\_toggle(uint8\_t port, ENU\_pins pin);

struct STR\_DIO\_config\_t{

    ENU\_pin pin\_no;

    uint8\_t port\_no;

    uint8\_t direction;

    uint8\_t resistor;

    uint8\_t initial\_value;

};

## PWM APIs

PWM\_ERROR\_state\_t PWM\_init(const STR\_PWM\_config\_t \* configurations);

PWM\_ERROR\_state\_t PWM\_start(

uint8\_t pwm\_no, ENU\_frequency\_t frequency,

ENU\_duty\_t dutyCycle

);

PWM\_ERROR\_state\_t PWM\_stop(uint8\_t pwm\_no);

struct STR\_PWM\_config\_t{

    uint8\_t pwm\_no;

    ENU\_frequency\_t frequency;

    ENU\_duty\_t duty\_cycle;

};

## TIMER APIs

TIMER\_ERROR\_state\_t TIMER\_init(const STR\_TIMER\_config\_t \*  configurations);

TIMER\_ERROR\_state\_t TIMER\_start(uint8\_t timer\_no, uint16\_t ticks);

TIMER\_ERROR\_state\_t TIMER\_read(uint8\_t timer\_no, uint8\_t \* value);

TIMER\_ERROR\_state\_t TIMER\_set(uint8\_t timer\_no, uint8\_t value);

TIMER\_ERROR\_state\_t TIMER\_checkStatus(uint8\_t timer\_no, uint8\_t \* status);

struct STR\_TIMER\_config\_t{

    uint8\_t timer\_no;

    uint8\_t clock\_source;

    uint8\_t mode;

    uint8\_t interrupt\_mode;

};

# ECUAL APIs

## Control Buttons APIs

BUTTON\_ERROR\_state\_t BUTTON\_init(void);

BUTTON\_ERROR\_state\_t BUTTON\_checkState(uint8\_t \* status);

BUTTON\_ERROR\_state\_t BUTTON\_update(void);

## Motor APIs

MOTOR\_ERROR\_state\_t MOTOR\_init(void);

MOTOR\_ERROR\_state\_t MOTOR\_setState((uint8\_t state);

# APP APIs

## Car Control Unit APIs

CAR\_ERROR\_state\_t CAR\_init(void);

CAR\_ERROR\_state\_t CAR\_update(void);