

Ultrasonic_Module

Module Responsibility :

- Generate a trigger pulse on the **TRIG** pin.
- Receive the echo signal from the **ECHO** pin.
- Measure the echo pulse duration.
- Convert the measured time into a distance value (in **cm** or **m**).

Output :

- Provide the distance to the upper layer
- Distance Range:
 - Minimum: 2 cm
 - Maximum: 400 cm

Module Design

<<block>>

Ultrasonic_Sensor

<<Parameters>>

```
- typedef struct
{
  char trig_pin
  char echo_pin
} Ultrasonic_Config_t
```

<<Function>>

```
~ Ultrasonic_Init (Ultrasonic_Config_t* config) : void
~Ultrasonic_Main (float * Distance ) : void
```