

Unit Ultrasonic-IO

SKU:U098-B2



Description

Unit Ultrasonic-IO is a **GPIO** interface **ultrasonic distance measurement** sensor. The hardware uses the RCWL-9620 ultrasonic distance measurement single-chip combined with a 16 mm probe, capable of achieving precise distance measurement within the range of **2 cm-450 cm** (accuracy up to $\pm 2\%$). After the controller sends a trigger signal, the sensor outputs a pulse duration corresponding to the sound wave reflection time, and the distance can be calculated from this data. The IO control method gives this sensor an extremely fast response speed, making it very suitable for applications such as robot obstacle avoidance and liquid level detection.

Note: When measuring distances greater than 3.5m, the distance measurement data response will be slightly delayed.

Features

- RCWL-9620
- GPIO communication interface
- Range: 2cm-450cm
- Protective cover for more stable circuit operation
- Built-in temperature compensation to reduce the impact of probe temperature drift
- Supports UIFlow graphical programming

Includes

- 1 x Unit Ultrasonic-IO
- 1 x HY2.0-4P Grove cable (20cm)

Applications

- Robot obstacle avoidance
- Liquid level measurement
- Posture detection

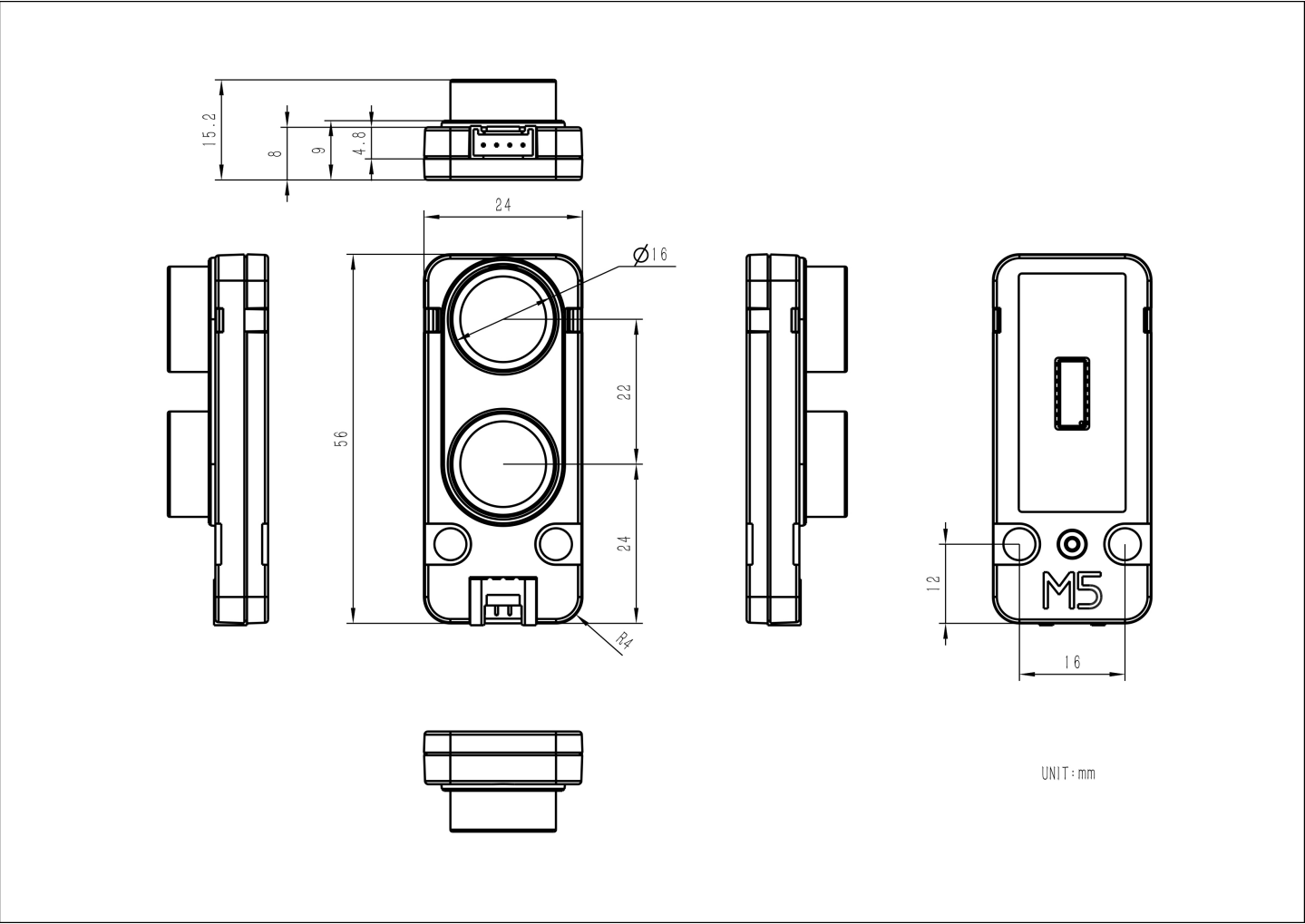
Specifications

Specification	Parameter
Ultrasonic Distance Chip	RCWL-9620
Range	2cm-450cm
Probe Specification	16mm
Receive/Transmit Frequency	40KHz
Receive Sensitivity	-65dB
Beam Angle	60°
Measurement Accuracy	±2%
Measurement Cycle	50ms
Operating Current	3mA
Product Size	56.0 x 24.0 x 15.2mm
Product Weight	11.8g
Package Size	75.0 x 46.0 x 36.0mm
Gross Weight	27.0g

PinMap

HY2.0-4P	Black	Red	Yellow	White
PORT.A	GND	5V	SDA	SCL

Model Size



Structure

- Unit Ultrasonic-IO Structure Files

Datasheets

- RCWL-9620 Datasheet

Softwares

Arduino

- Unit Ultrasonic-IO with M5Atom
- Unit Ultrasonic-IO with M5Core
- Unit Ultrasonic-IO with M5Core2
- Unit Ultrasonic-IO with M5StickC
- Unit Ultrasonic-IO with M5StickCPlus

UiFlow1

- [Unit Ultrasonic-IO UiFlow1 Docs](#)

UiFlow2

- [Unit Ultrasonic-IO UiFlow2 Docs](#)

| Video

- Unit Ultrasonic-IO Car Obstacle Avoidance

[sonic_i2c_gpio_video.mp4](#)