

Ultrasonic HC-SR04 Ranging Sensor
ARD2-2020

- **Uses ultrasonic sound to detect objects**
- **Applications include obstacle avoidance for robotics**

Description

This Ultrasonic Sensor uses ultrasonic sound to detect objects from up to 4.5 metres away. It's ideal for obstacle avoidance on robotics projects. The module automatically sends eight 40kHz signals and detects whether there is a pulse signal back. If the module receives a signal, the duration of the HIGH output is the time between sending the ultrasonic signal and receiving it. The distance is then calculated by this duration multiplied by the velocity of sound (340m/s) divided by two.

Specifications

Operating Voltage	5VDC
Logic Voltage	3.3VDC or 5VDC
Precision	Up to 3mm
Field of View	15 degrees
Detection Distance	20mm to 4500mm
Operating Frequency	40kHz
Trigger Input Signal	10uS TTL Pulse
Weight	10g
Colour	Blue/Black
Static Current	Less than 2mA
Material	PCB
Type	Logic IC
Chipset	HC-SR04
Dimensions	45mm x 20mm x 13mm (LxWxH)

Pinout

Module	Arduino	Function
VCC	D2	Power Supply
Trig	D3	Output Pulse
Echo	D4	Input Pulse
Gnd	D5	Ground Connection

