

GENERAL INFORMATION

The MOD_CH101 sensor module is designed for rapid integration of Chirp's CH-101 ultrasonic Time-of-Flight (ToF) range sensor into customer enclosures. It is especially useful for prototyping and small-scale production in applications that are not extremely space constrained. The module's electronic interface is via a standard 8-pin flat flex cable (FFC) connector. The module includes an acoustic housing that determines the CH-101 sensor's field-of-view. The MOD_CH101-03-01 sensor module includes an omnidirectional acoustic housing with a 0.7 mm diameter acoustic port and a 5.3 mm outer diameter.

DEVICE INFORMATION

PART NUMBER	PACKAGE	LID OPENING
MOD_CH101-03-01	8x8x3.57 PCBA	1-Hole

RoHS and Green-Compliant Package

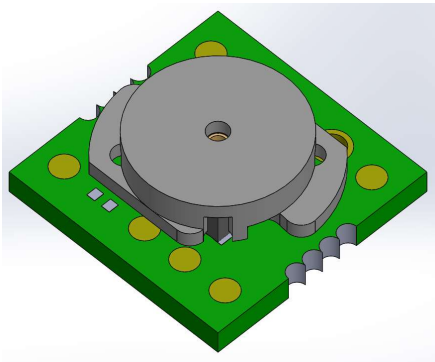


Figure 1. Front view of CH-101 sensor module with omnidirectional housing (P/N MOD_CH101-03-01)

APPLICATIONS

- Augmented and Virtual Reality
- Drones and Robotics
- Mobile and Computing Devices
- Obstacle avoidance
- Printers and Scanners
- Proximity sensing
- Presence detection: always-on sensing to lock/unlock and power on/off notebooks, tablets, white goods, etc.
- Smart Home

FEATURES

- Fast, accurate range-finding
 - Operating range from 4cm to 1.2m
 - Sample rate up to 100 samples/sec
 - 1.0 mm RMS range noise at 30 cm range
 - Programmable modes optimized for medium and short-range sensing applications
 - Customizable Field-of-View (FoV) up to 180°
 - Multi-object detection
 - Works in sunlight and any other lighting
 - Insensitive to object color, detects optically transparent surfaces like glass windows
- Easy to integrate
 - Single sensor for receive and transmit
 - Single 1.8V supply
 - I²C Fast-Mode compatible interface, data rates up to 400 kbps
 - Dedicated programmable range interrupt pin
 - Platform-independent software driver enables turnkey range-finding
- Miniature integrated module
 - Low-power micro-controller running advanced ultrasound firmware
 - Operating temperature range: -40 to 85°C
- Ultra-low supply current
 - 1 sample/s:
 - 13 μA (10 cm max range)
 - 15 μA (1.0 m max range)
 - 30 samples/s:
 - 33 μA (10 cm max range)
 - 130 μA (1.0 m max range)
- Host Interface: I²C at up to 400 kbps
- Single Supply voltage: 1.8V ±5%
- RoHS and Green compliant