Thanks for you purchase our ultrasonic ranging module. Please read these instructions carefully before you use and keep them well after reading for future reference.

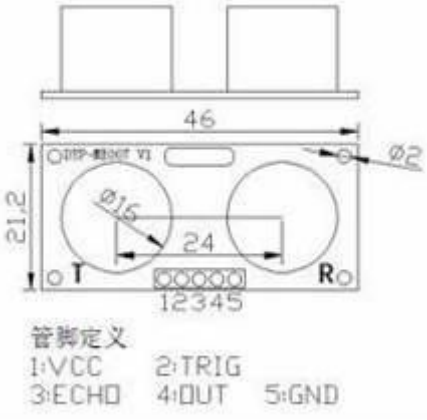
Ultrasonic Ranging Module

Instructions

Item#: DYP-ME007V1

Physical map:

Chart of structure:



SHENZHEN DYP SENSOR CO.,LTD.

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Website: http://www.dypsensor.com

Description:

DYP-ME007V1 Ultrasonic ranging module is a non-contact distance sensing module and having the feature of high performance and cost-effective. Measuring range is 0.02 ~ 5.00m, measurement accuracy is 1cm. When it works,it does not contact with the measured object directly,and it could show the results of measurement clearly.

Features:

1、Small size, easy to use;

2、Low voltage, low power consumption;

3、Wide measurement range;

4、High accuracy;

Applications:

1、Application in the occasions of waterproof;

2、Measuring the space between objects;

3、Programmable car obstacle avoidance;

4、Robot obstacle avoidance;

5、Teaching apparatus;

6、Security, industrial control;

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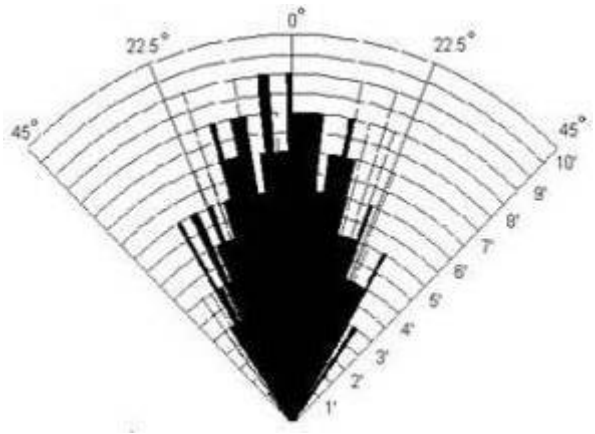
Electrical parameters:

TYPE	DYP-ME007Y-V1
Operating voltage	DC 5V
Operating current	10mA
Operating frequency	40KHz
Max distance	5m
Min distance	2cm
Input trigger signal	TTL pulse of 10us
Output echo signal	Output TTL level pulse width
Size	46*21*15mm

Detection angle:



Picture 3 is the detection angle range of ultrasonic ranging module,it could be received the best sense of distance in about 30° wide angle.

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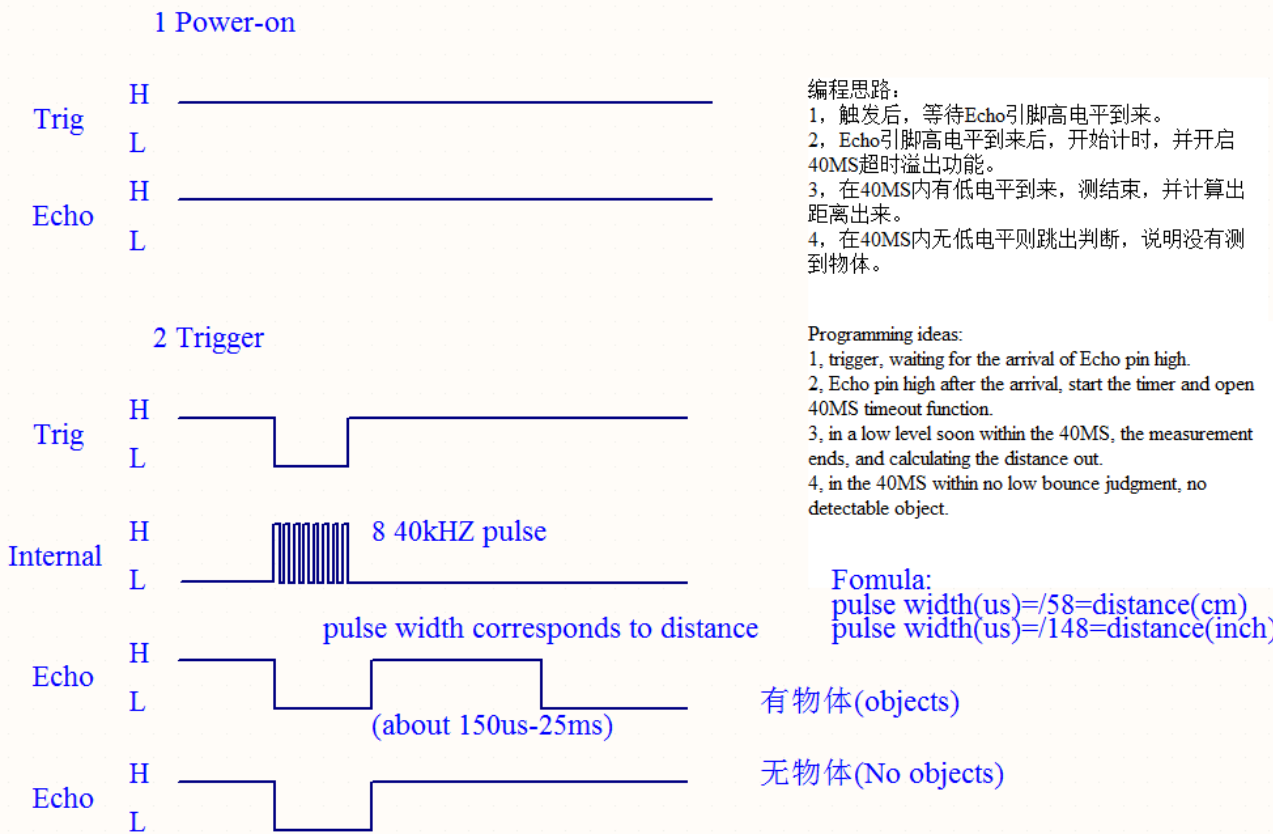
Timing diagram of module:



Usage of module:

This module occupied two IO ports in single-chip when in using. One of IO port is the port of trigger, the other one is the pin, which is the echo signal of PWM. When you write a program, you should set a high level trigger module in the pin of trigger, the time is about 10us. Meanwhile, the inside of module will send out 8 pieces of 40kHz cycle level and detect the echo, and is transformed into a signal of PWM in internal procedures, the signal is outputted from the pin of Echo. When we are using the module, it just need to read out the time of high level (T), which is a signal of PWM . And the user only need the speed of sound 340m/s when calculating the distance.

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