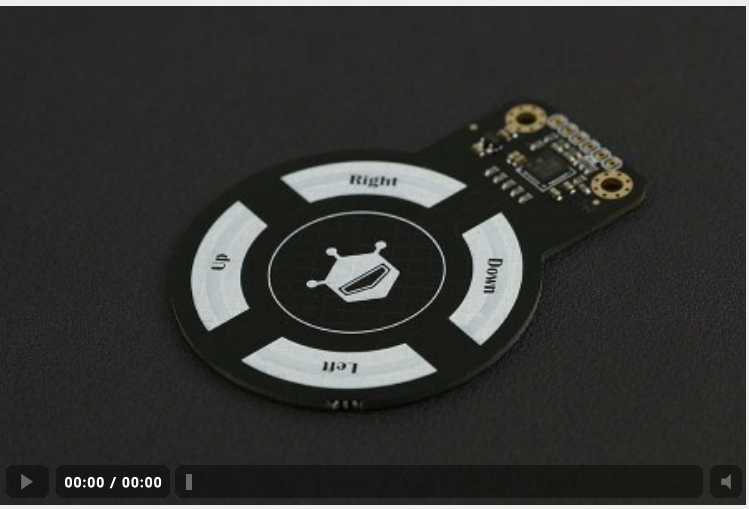
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3D Gesture Sensor (Mini) For Arduino

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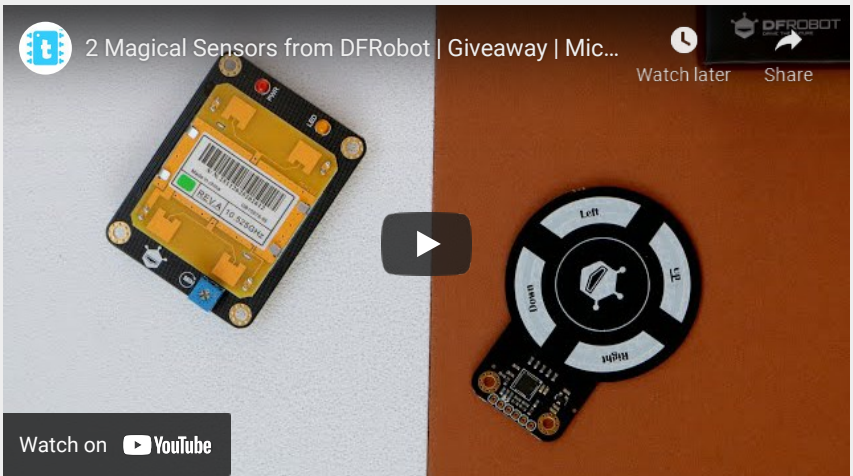
INTRODUCTION

The DFRobot 3D gesture sensor is an interactive sensor that integrates 3D gesture recognition and motion tracking. This gesture sensor can be used to detect clockwise/counterclockwise rotation and movement directions.

The gesture sensor is designed based on Microchip patent GestIC® technology, using electric near field sensing technology, including 3D gesture input sensing system and advanced 3D signal processing unit. The effective detection range is 0-10cm. This gesture sensor can be applied to various interactive projects.

3D Gesture Sensor (Mini)

2 Magical Sensors from DFRobot



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Arduino Password Unlock with 3D Gesture Sensor DFROBOT



3D Gesture Sensor Explained | Electric Near Field Sensing Technology | GestIC Technology



SPECIFICATION

- Operating Voltage: 3.3 - 5V
- Interface Type: I2C
- I2C Address: 0x42
- Gesture Detection Range: 5cm
- Distance Induction Range: 10cm
- Dimensions : 72 x 54 mm / 2.83 x 2.12"
- Operating Temperature: - 20 ℃ ~ + 85 ℃
- Spatial Resolution: 150 dpi

DOCUMENTS

- 3D Gesture Sensor wiki
- More Documents

SHIPPING LIST

- 3D Gesture Sensor mini x1
- XH2.54-6P pin header x1

TUTORIAL

Selection Guide for DFRobot Gestu...

Arduino Gravity

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REVIEW

Great, received in good conditions.

★★★★★

K Nantha. 20/06/2020

FAQ

32 Comments DFRobot Disqus' Privacy Policy Login

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n the discussion...

Petrus Jansen • 4 years ago

Hi, can the sensor be covered by 3mm wood and still be effective?

1 • Reply • Share ›

Manuel Bender ➔ Petrus Jansen • 3 years ago

Or with 2-3mm acrylic glass?

• Reply • Share ›

DFRobot Support Mod ➔ Manuel Bender • 3 years ago

It should work, since this sensor using electric near field sensing technology and acrylic doesn't affect the electric signal.

1 • Reply • Share ›

Tadeáš Miňha • 2 months ago

Hi, I bought this sensor, but I'm unable to get it to work. I'm using ESP32 (but I also tested ESP8266 and ATMEGA328P@3.3V). The problem is that MGC3130 is holding I2C pins up, thus communication is not working and the host MCU always receives NACK. Is it possible that MGC3130 itself is broken, I just unbox it, soldered headers, and went to test it.

I also tried another possible address for this chip and it sends NACK too.

I'm somewhat frustrated by it. This sensor isn't particularly cheap and it's not working out of the box.

Also, I would like to know why there is a difference between the published schematic on Github and the product itself. For example, R14-R17 are not 4K7 but 0 Ohms. Same for R7 which should be 10K but it's 0 Ohm. Is there a possibility of manufacturing error?

Wiki link is not working either for more than a year, based on comments.

Thanks in advance

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see more

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DFRobot Support Mod ➔ Tadeáš Miňha • 2 months ago

Hi,
Sorry for the inconveniences. The link in the English wiki indeed isn't working. We will fix it asap. In the mean time, if you are in hurry, you could use this Chinese WIKI (you can use google chrome to auto translate).
Hope it helps for the time being. Thanks for understanding.

• Reply • Share ›

Ritesh T • a year ago

Hi,

the wiki link is broken.

• Reply • Share ›

DFRobot Support Mod ➔ Ritesh T • a year ago

Thank you for your reply.
I will notify our web technicians to update.

• Reply • Share ›

Chris C ➔ DFRobot Support • a year ago

Link is still broken.

• Reply • Share ›

Mikael • 2 years ago

Hi!
How many layers does this board has? Two or four layers?

• Reply • Share ›

DFRobot Support Mod ➔ Mikael • 2 years ago

It has two layers.

• Reply • Share ›

Mikael ➔ DFRobot Support • 2 years ago

Where do I can get the parametrization firmware to use in Aurea?

• Reply • Share ›

DFRobot Support Mod ➔ Mikael • 2 years ago

Sorry we do not have this firmware.

• Reply • Share ›

Mikael ➔ DFRobot Support • 2 years ago

But how do you guys could build this board and get it work without the parametrization firmware? The IC comes from factory without some definitions, for example what RX pin is the center electrode or up, down, left, right? (It could be any RX pin). And how could be possible to define the dimensions of the electrodes and calibrate it so the IC could identify correctly gesture?

• Reply • Share ›

DFRobot Support Mod ➔ Mikael • 2 years ago

This is the information we can provide for your reference.
http://www.dfrobot.com.cn/i...

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Mikael ➔ DFRobot Support • 2 years ago

I found it =)
3D FW Version 1.2.14 ID0000-2863

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Mikael ➔ DFRobot Support • 2 years ago

No! This is the information Microchip can provide to all users.
I was specific when I asked about the parametrization firmware (a .enz file genetrated when you calibrate the IC parameters according to your electrode desing).
Microchip also provide various parametrization file according Microchip's reference desing, wich differ from yours electrode desing.
But your desingns do not folow the default reference, thats the why I am asking about your parametrization firmware so I can use this sensor on my project.
Simple like that. I do not understand all that dificulty to provide correct information.
Any way ... thank you.

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문유성 • 2 years ago

Hi, I would like to change the I2c address for two gesture sensors .
Can be change the address?

Reply • Share ›

DFRobot Support Mod ➔ 문유성 • 2 years ago

No, it just has one I2C address.

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3Dgerbil • 3 years ago • edited

Hi, I need to connect the sensor at about 5 meters from the Arduino board:
- is that possible or is ti too far?
- if distance not too long, can I use normal flat cable or should I use shielded cable?

The sensor will be housed in a metal frame, with a hole above the sensor to let it detect the gestures (hole will be covered by 1mm plastic). Is there a minimum distance metal-sensor so to avoid interference in gesture detection?

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Rivandemo • 3 years ago

Hi, an other question: would it be possible to get the code of the video above, assuming it to run on an Arduino?

Thanks,
Richard

Reply • Share ›

DFRobot Support Mod ➔ Rivandemo • 3 years ago

The code of the video is just the servo move an angle after detecting the gesture movement. You can refer to the wiki code and the control of Servo.

Reply • Share ›

Rivandemo • 3 years ago

In my project i would like to identify the linear movements of the hand of a visitor, say following the axis of the sensor (e.g. from "Down/right" to "Left/Up" or maybe easier from "Down" to "Up" or "Right" to "Left"), moreover i'd like to know the speed of the hand, but this is optional. What is possible with the SEN0202? I didn't find the full doc about the Arduino library..
My purpose is to convert the movement into a new position of servo's controlling two laser showing lines on the ceiling of a church; the hand position would be delayed with a simple lag filter (to avoid the priest getting crazy ;-)))
Thank you for your help
Richard

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DFRobot Support Mod ➔ Rivandemo • 3 years ago

The library is here: https://github.com/DFRobot/... the sensor can only detect four directions and CCW/CW, and the movement of the hand should not be too fast.

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Yulia Shafira • 3 years ago

i have a project to indentificate hand gesture with Sensor.. can this 3d sensor make it?

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DFRobot Support Mod ➔ Yulia Shafira • 3 years ago

This sensor can only identify hand movement in two direction, cw and ccw direction

Reply • Share ›

Yulia Shafira ➔ DFRobot Support • 3 years ago

thanks for the information, can you give me a suggest about what sensor that can i use for my project?

Reply • Share ›

DFRobot Support Mod ➔ Yulia Shafira • 3 years ago

It is better to use camera to detect the hand gesture, camera can handle this well.

Reply • Share ›

Yulia Shafira ➔ DFRobot Support • 3 years ago

thanks i see, but my lecture just give me permissions to use sensor not camera :(, so maybe there's a sensor can detect hand gesture better than this?

Reply • Share ›

DFRobot Support Mod ➔ Yulia Shafira • 3 years ago

What kind of gesture do you want to do, if not using camera, the gesture is limited

Reply • Share ›

Yulia Shafira ➔ DFRobot Support • 3 years ago

what about sensor with MGC3030 Chip inside? can i use this? i just want to get data in X,Y,Z positions

Reply • Share ›

DFRobot Support Mod ➔ Yulia Shafira • 3 years ago • edited

It can't get XYZ position I think, to get the position of an object, it still need to use a camera, it's effective.

Reply • Share ›

Yulia Shafira ➔ DFRobot Support • 3 years ago

i see, thankyou verymuch for your explaining DFRobot *thumbs :)

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