Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

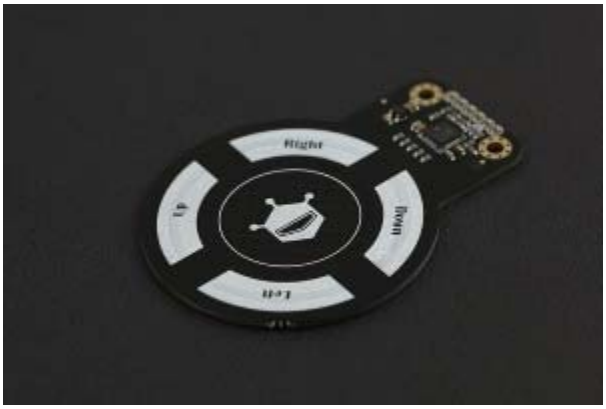
With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

3D Gesture Sensor Mini SKU: SEN0202



3D Gesture Sensor mini

Contents

Introduction

The DFRobot 3D gesture sensor is an interactive sensor that integrates 3D gesture recognition and motion tracking. This 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 sensor can be applied to various interactive projects.

Specification

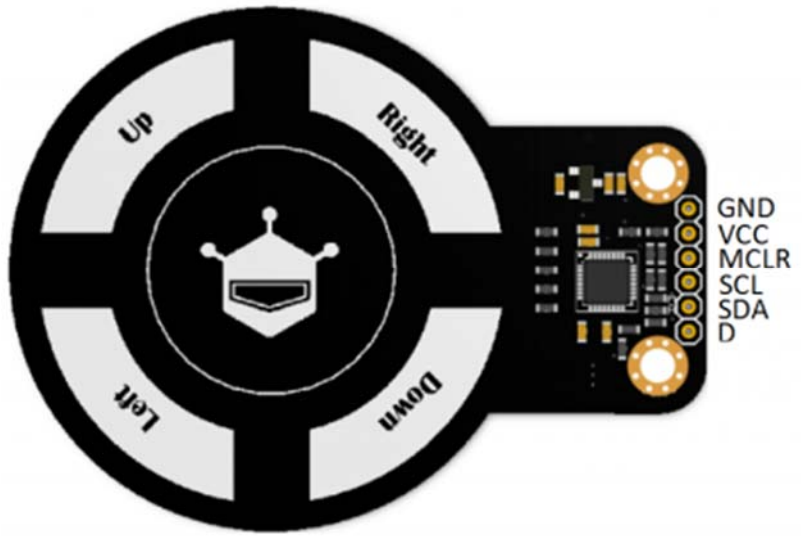
- Operating Voltage: 3.3 - 5V
- Interface Type: I2C
- I2C Address: 0x42

- 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

Board Overview

No.	Label	Description
1	GND	GND
2	VCC	VCC(5V)
3	MCLR	Sensor Reset(Low Level On)
4	SCL	I2C clock signal
5	SDA	I2C data signal
6	D	Digital IO

Sensor address：0X42



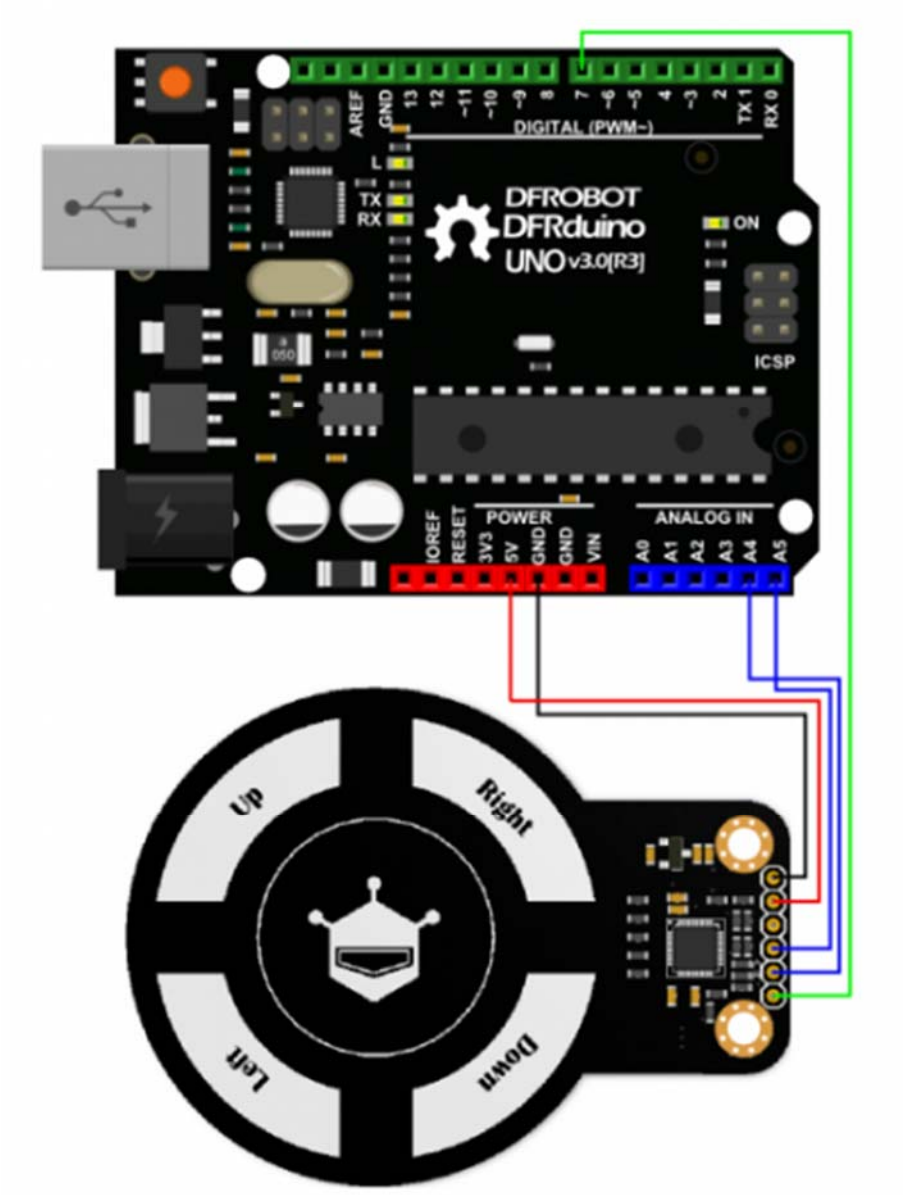
Tutorial

Requirements

- **Hardware**
  DFRduino UNO x 1
  3D Gesture Sensor Mini x1
  Dupont jumper wires

- **Software**
  Arduino IDE Click to download Arduino IDE
  https://www.arduino.cc/en/Main/Software

Connection Diagram



3D Gesture Sensor mini

Sample Code

Click to download the library sample and library(Github). How to intall libraries?

https://github.com/DFRobot/DFRobot_Gesture

This code will recognize the direction of gestures: up, down, left, right, clockwise and counterclockwise

```
#include <DFRobot_Gesture.h>
#include <Wire.h>

int testPin= 7;
unsigned char cmd;

DFRobot_Gesture myGesture;

void setup()
{
  Wire.begin();        // join i2c bus (address optional for master)
  Serial.begin(9600);  // start serial for output
 pinMode(testPin, INPUT);
 Serial.write("3D Gesture sensor is now running....\r\n");
}

void loop()
{
  if(digitalRead(testPin)==0)
  {
   myGesture.I2C1_MasterRead(md.buf,26,0x42); //The address is:0x42
   cmd = myGesture.mgcProcMsg();     //process the message
          if(cmd != GI_NOGESTURE )
            {
```

```
                switch(cmd)
                {
                    case GI_FLICK_R:
                      Serial.println("RIGHT");
                        break;
                    case GI_FLICK_L:
                        Serial.println("LEFT");
                        break;
                    case GI_FLICK_D:
                     Serial.println("DOWN");
                        break;
                    case GI_FLICK_U:
                       Serial.println("UP");
                        break;
                    case GI_AIRWHEEL_CW://Clockwise in circles
                     Serial.println("CW");
                        break;
                    case GI_AIRWHEEL_CCW://Counterclockwise circles
                       Serial.println("CCW");
                        break;

                    default: break;
                }
            }
  }
 else  {};
}
```

Results

Use your hand to move up and down or clockwise and counterclockwise, the serial port will output the corresponding string.

FAQ

For more questions or interesting projects, you can **Visit the forum**