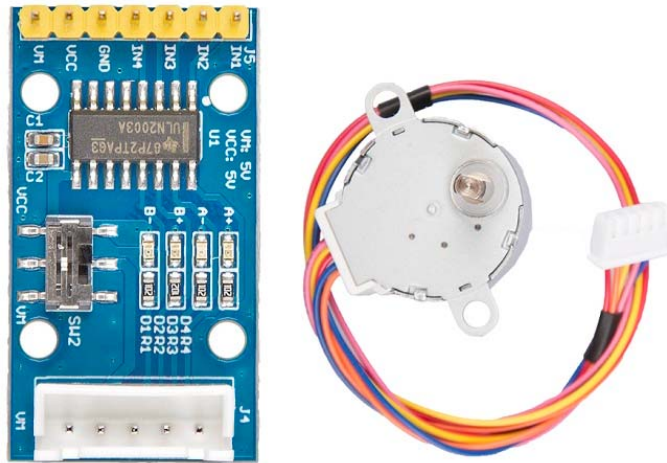


Gear Stepper Motor Driver Pack



The Gear Stepper Motor Driver Pack includes a stepper motor and a motor drive board. It's a four-phase eight-stepping stepper motor, and you can easily control this stepper motor via the drive board.

You can use this pack for position control.

Features

- Low noise
- Large torque
- Built-in gearbox

Specification

Item	Value
Operating Voltage	5V
Phase	4
Reduction ratio	1/64
Step Angle	5.625°/64
Diameter	28mm / Nema 11

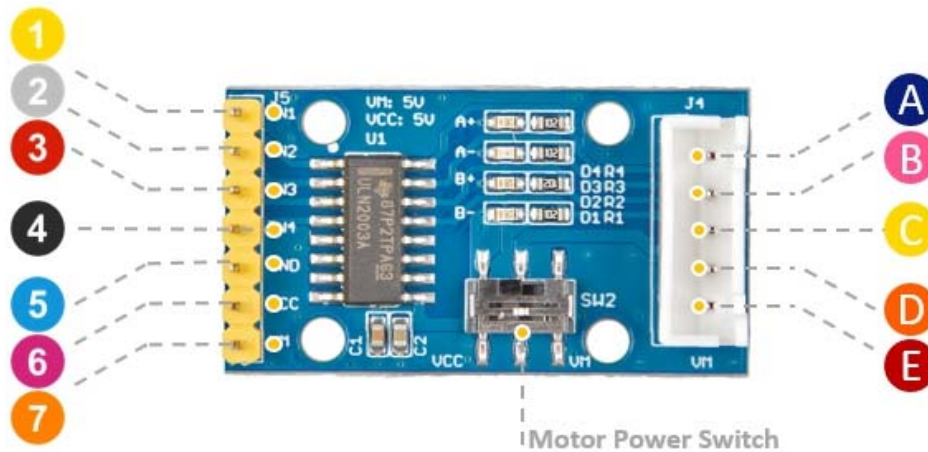
Item	Value
Idle In-traction Frequency	>500HZ
Idle Out-traction Frequency	>1000HZ
Resistance	21±7%
Noise	≤40dB
Drive mode	four-phase eight-stepping

Typical applications

- Desktop printers
- Plotters
- 3d printers
- CNC milling machines

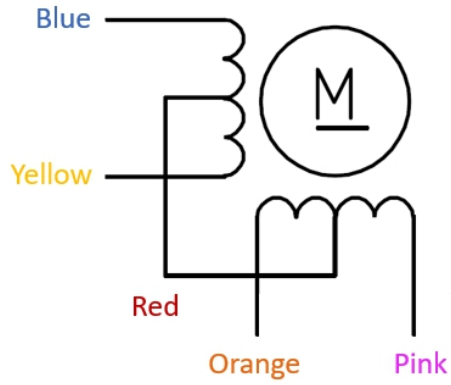
Hardware Overview

Pin Out



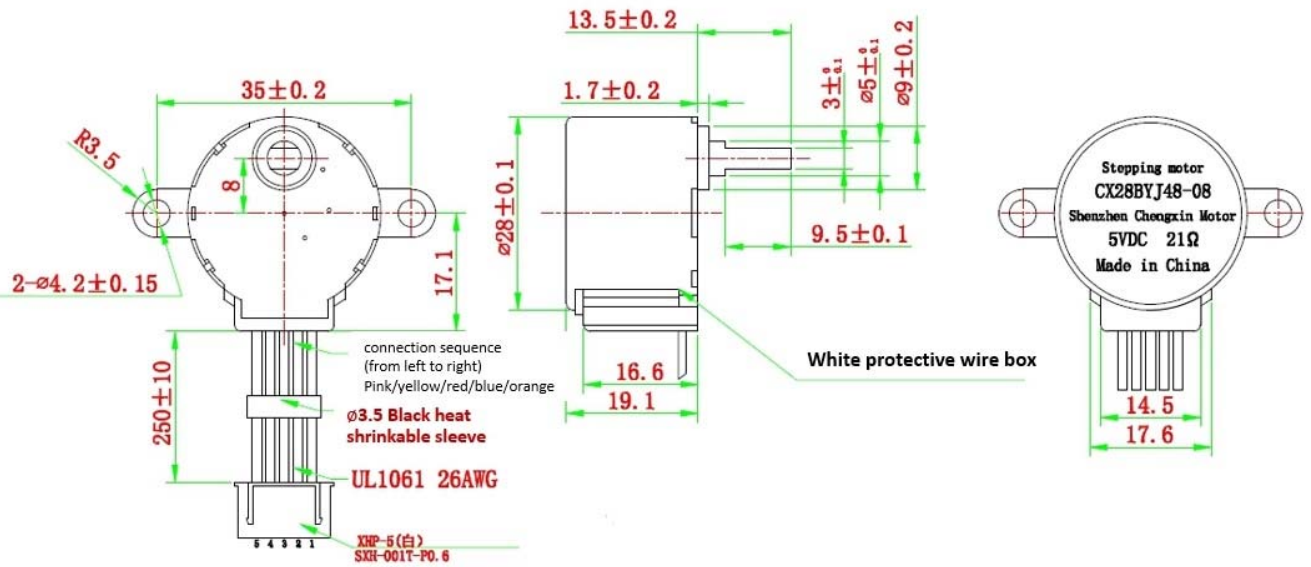
- 1 IN1: input 1 connect to phase 1
- 2 IN2: input 2 connect to phase 2
- 3 IN3: input 3 connect to phase 3
- 4 IN4: input 4 connect to phase 4
- 5 GND: connect this module to the system GND
- 6 VCC: we use 5v for this module
- 7 VM: optional power for Motor

- A connect D4 to Blue coil
- B connect D3 to Pink coil
- C connect D2 to Yellow coil
- D connect D1 to Orange coil
- E Connect Power switch pin to Red coil



Mechanical drawing

you can click it to see the original picture.



Platforms Supported

Arduino	Raspberry Pi	BeagleBone	Wio	LinkIt ONE

Caution

The platforms mentioned above as supported is/are an indication of the module's hardware or theoretical compatibility. We only provide software library or code examples for Arduino platform in most cases. It is not possible to provide software library / demo code for all possible MCU platforms. Hence, users have to write their own software library.

Getting Started

Play With Arduino

Hardware

Materials required

Seeeduino V4.2	Gear Stepper Motor Driver Pack	Female-Male jumpers
		

Note

1 Please plug the USB cable gently, otherwise you may damage the port. Please use the USB cable with 4 wires inside, the 2 wires cable can't transfer data. If you are not sure about the wire you have, you can click [here](#) to buy

2 To make the Gear-Stepper-Motor-Driver-Pack work with your Arduino, several Female-Male jumpers is also required. In case you do not have jumpers, you can click [here](#) to buy.

- **Step 1.** Connect the Gear Stepper Motor Driver Board to your seeedunio via jumpers.

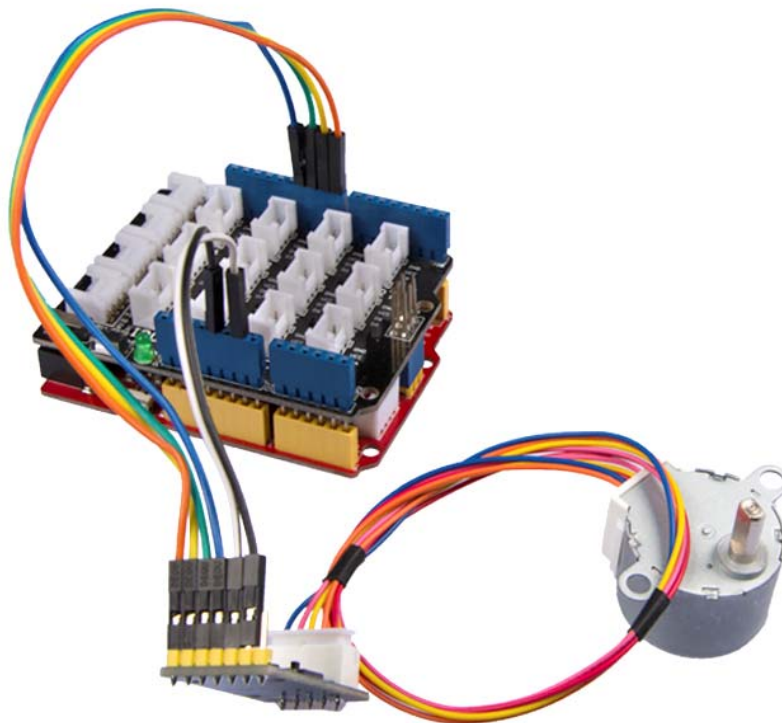
Seeeduino	Gear Stepper Motor Driver Board
Digital Pin 8	IN1
Digital Pin 9	IN2
Digital Pin 10	IN3
Digital Pin 11	IN4
GND	GND

Seeeduino	Gear Stepper Motor Driver Board
VCC_5V	VCC
VCC_5V	VM

Tip

You can connect the VM pin to VCC_5V or you can just do not use it as long as you choose the VCC in the switch.


- **Step 2.** Plug the stepper motor into the Gear Stepper Motor Driver Board.
- **Step 3.** Connect Seeeduino to PC via a USB cable.



Software

Attention

If this is the first time you work with Arduino, we strongly recommend you to see [Getting Started with Arduino](#) before the start.

- **Step 1.** Click the icon  in upper right corner of the code block to copy the following code into a new sketch in the Arduino IDE.

```
1 int pwm1=9;
2 int pwm2=10;
3 int ctr_a =9;
4 int ctr_b =8;
5 int ctr_c =11;
```

```

6 int ctr_d =10;
7 int sd =6;
8 int i=0;
9 int t=1500;
10
11 void setup()
12 {
13     //pinMode(sd,OUTPUT);
14     //pinMode(pwm1,OUTPUT);
15     //pinMode(pwm2,OUTPUT);
16     pinMode(ctr_a,OUTPUT);
17     pinMode(ctr_b,OUTPUT);
18     pinMode(ctr_c,OUTPUT);
19     pinMode(ctr_d,OUTPUT);
20     delay(1);
21     //digitalWrite(sd,HIGH);
22     //digitalWrite(pwm1,HIGH);
23     //digitalWrite(pwm2,HIGH);
24 //     digitalWrite(ctr_a,LOW);
25 //     digitalWrite(ctr_b,LOW);
26 //     digitalWrite(ctr_c,LOW);
27 //     digitalWrite(ctr_d,LOW);
28
29 }
30
31
32 void loop ()
33 {
34 //     for(i=1500;i>=1;i--)
35 //     {
36 //         digitalWrite(ctr_a,HIGH);//A
37 //         digitalWrite(ctr_b,LOW);
38 //         digitalWrite(ctr_c,LOW);
39 //         digitalWrite(ctr_d,LOW);
40 //         delay(t);
41 //         digitalWrite(ctr_a,HIGH);
42 //         digitalWrite(ctr_b,HIGH);//AB
43 //         digitalWrite(ctr_c,LOW);
44 //         digitalWrite(ctr_d,LOW);
45 //         delay(t);
46 //         digitalWrite(ctr_a,LOW);
47 //         digitalWrite(ctr_b,HIGH);//B
48 //         digitalWrite(ctr_c,LOW);
49 //         digitalWrite(ctr_d,LOW);
50 //         delay(t);
51 //         digitalWrite(ctr_a,LOW);
52 //         digitalWrite(ctr_b,HIGH);
53 //         digitalWrite(ctr_c,HIGH);//BC
54 //         digitalWrite(ctr_d,LOW);
55 //         delay(t);
56 //         digitalWrite(ctr_a,LOW);
57 //         digitalWrite(ctr_b,LOW);
58 //         digitalWrite(ctr_c,HIGH);//C
59 //         digitalWrite(ctr_d,LOW);
60 //         delay(t);
61 //         digitalWrite(ctr_a,LOW);
62 //         digitalWrite(ctr_b,LOW);

```

```

63 //      digitalWrite(ctr_c,HIGH);//CD
64 //      digitalWrite(ctr_d,HIGH);
65 //      delay(t);
66 //      digitalWrite(ctr_a,LOW);
67 //      digitalWrite(ctr_b,LOW);
68 //      digitalWrite(ctr_c,LOW);//D
69 //      digitalWrite(ctr_d,HIGH);
70 //      delay(t);
71 //      digitalWrite(ctr_a,HIGH);
72 //      digitalWrite(ctr_b,LOW);
73 //      digitalWrite(ctr_c,LOW);//DA
74 //      digitalWrite(ctr_d,HIGH);
75 //      delay(t);
76 //
77 //    }
78 //      digitalWrite(ctr_a,LOW);
79 //      digitalWrite(ctr_b,LOW);
80 //      digitalWrite(ctr_c,LOW);
81 //      digitalWrite(ctr_d,LOW);
82 //
83 //
84 //
85 //      for(i=1500;i>=1;i--)
86 //      {
87 //
88 //          digitalWrite(ctr_d,HIGH);//D
89 //          delay(t);
90 //          digitalWrite(ctr_c,HIGH);//DC
91 //          delay(t);
92 //          digitalWrite(ctr_d,LOW);//C
93 //          delay(t);
94 //          digitalWrite(ctr_b,HIGH);//CB
95 //          delay(t);
96 //          digitalWrite(ctr_c,LOW);//B
97 //          delay(t);
98 //          digitalWrite(ctr_a,HIGH);//BA
99 //          delay(t);
100 //      digitalWrite(ctr_b,LOW);//A
101 //      delay(t);
102 //      digitalWrite(ctr_d,HIGH);//AD
103 //      delay(t);
104 //      digitalWrite(ctr_a,LOW);
105 //      digitalWrite(ctr_d,LOW);
106 //    }
107
108     for(i=1500;i>=1;i--)
109     {
110         digitalWrite(ctr_a,LOW);//A
111         digitalWrite(ctr_b,HIGH);
112         digitalWrite(ctr_c,HIGH);
113         digitalWrite(ctr_d,HIGH);
114         delayMicroseconds(t);
115         digitalWrite(ctr_a,LOW);
116         digitalWrite(ctr_b,LOW);//AB
117         digitalWrite(ctr_c,HIGH);
118         digitalWrite(ctr_d,HIGH);
119         delayMicroseconds(t);

```

```

120     digitalWrite(ctr_a,HIGH);
121     digitalWrite(ctr_b,LOW); //B
122     digitalWrite(ctr_c,HIGH);
123     digitalWrite(ctr_d,HIGH);
124     delayMicroseconds(t);
125     digitalWrite(ctr_a,HIGH);
126     digitalWrite(ctr_b,LOW);
127     digitalWrite(ctr_c,LOW); //BC
128     digitalWrite(ctr_d,HIGH);
129     delayMicroseconds(t);
130     digitalWrite(ctr_a,HIGH);
131     digitalWrite(ctr_b,HIGH);
132     digitalWrite(ctr_c,LOW); //C
133     digitalWrite(ctr_d,HIGH);
134     delayMicroseconds(t);
135     digitalWrite(ctr_a,HIGH);
136     digitalWrite(ctr_b,HIGH);
137     digitalWrite(ctr_c,LOW); //CD
138     digitalWrite(ctr_d,LOW);
139     delayMicroseconds(t);
140     digitalWrite(ctr_a,HIGH);
141     digitalWrite(ctr_b,HIGH);
142     digitalWrite(ctr_c,HIGH); //D
143     digitalWrite(ctr_d,LOW);
144     delayMicroseconds(t);
145     digitalWrite(ctr_a,LOW);
146     digitalWrite(ctr_b,HIGH);
147     digitalWrite(ctr_c,HIGH); //DA
148     digitalWrite(ctr_d,LOW);
149     delayMicroseconds(t);
150
151 }
152 //     digitalWrite(ctr_a,HIGH);
153 //     digitalWrite(ctr_b,HIGH);
154 //     digitalWrite(ctr_c,HIGH);
155 //     digitalWrite(ctr_d,HIGH);
156 //
157
158
159 //     for(i=1500;i>=1;i--)
160 //     {
161 //
162 //         digitalWrite(ctr_d,HIGH); //D
163 //         delay(t);
164 //         digitalWrite(ctr_c,HIGH); //DC
165 //         delay(t);
166 //         digitalWrite(ctr_d,LOW); //C
167 //         delay(t);
168 //         digitalWrite(ctr_b,HIGH); //CB
169 //         delay(t);
170 //         digitalWrite(ctr_c,LOW); //B
171 //         delay(t);
172 //         digitalWrite(ctr_a,HIGH); //BA
173 //         delay(t);
174 //         digitalWrite(ctr_b,LOW); //A
175 //         delay(t);
176 //         digitalWrite(ctr_d,HIGH); //AD

```

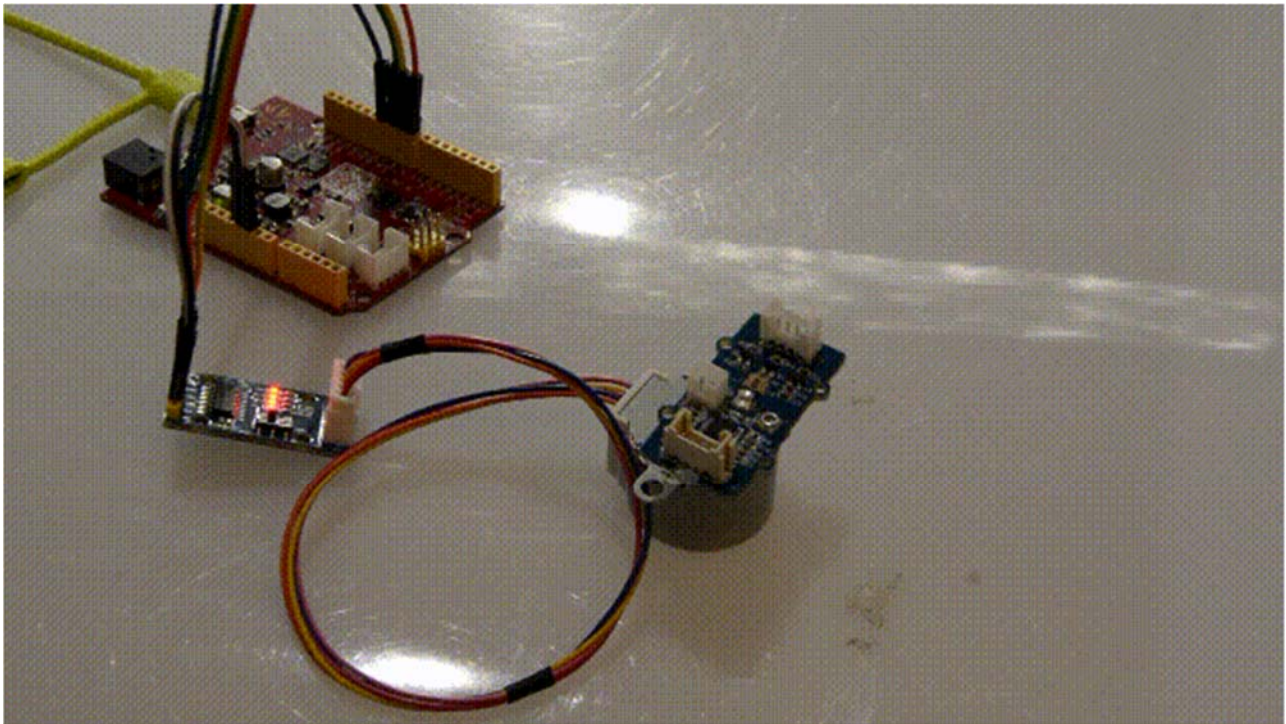


```
177 //      delay(t);
178 //      digitalWrite(ctr_a,LOW);
179 //      digitalWrite(ctr_d,LOW);
180 //    }
181
182
183 }
```

- **Step 2.** Upload the demo. If you do not know how to upload the code, please check [How to upload code](#).

Success

If every thing goes well, you can see the motor run:



Tech Support

Please do not hesitate to submit the issue into our [forum](#)