

### Arduino Gear Motor with Wheel (12V, 128RPM, 85mm)

This is a DC gear motor with wheel combination that's commonly used in robotics and Arduino projects. Here's what you need to know:

#### Specifications

- **Voltage:** 12V DC
- **Speed:** 128 RPM (no load)
- **Wheel Diameter:** 85mm
- **Motor Type:** Brushed DC motor with gear reduction
- **Typical Applications:** Robot cars, small vehicles, automation projects



#### Arduino Connection Guide

To control this motor with Arduino, you'll need additional components:

#### Required Components

1. Motor driver (L298N, L293D, or similar)
2. 12V power supply (battery or adapter)
3. Arduino board (Uno, Nano, etc.)
4. Jumper wires

#### Wiring Example (using L298N)

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Motor + → L298N Motor A+

Motor - → L298N Motor A-

L298N IN1 → Arduino pin 5

L298N IN2 → Arduino pin 6

L298N 12V → 12V power supply +

L298N GND → 12V power supply - and Arduino GND

L298N 5V → Arduino 5V (optional)

Basic Arduino Code

arduino

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```
// Motor control pins
```

```
const int IN1 = 5;
```

```
const int IN2 = 6;
```

```
void setup() {
```

```
    pinMode(IN1, OUTPUT);
```

```
    pinMode(IN2, OUTPUT);
```

```
}
```

```
void loop() {
```

```
    // Rotate forward
```

```
    digitalWrite(IN1, HIGH);
```

```
    digitalWrite(IN2, LOW);
```

```
    delay(2000);
```

```
    // Stop
```

```
    digitalWrite(IN1, LOW);
```

```
    digitalWrite(IN2, LOW);
```

```
    delay(500);
```

```
// Rotate backward  
  
digitalWrite(IN1, LOW);  
  
digitalWrite(IN2, HIGH);  
  
delay(2000);  
  
  
// Stop  
  
digitalWrite(IN1, LOW);  
  
digitalWrite(IN2, LOW);  
  
delay(500);  
  
}
```

#### Performance Characteristics

- **Torque:** Approximately 5-10kg.cm (varies by specific model)
- **Current Draw:** ~300mA (no load), up to several amps under load
- **Wheel Material:** Typically rubber or silicone for good traction

#### Project Ideas

1. Line-following robot
2. Obstacle-avoiding vehicle
3. Remote-controlled car
4. Automated delivery cart