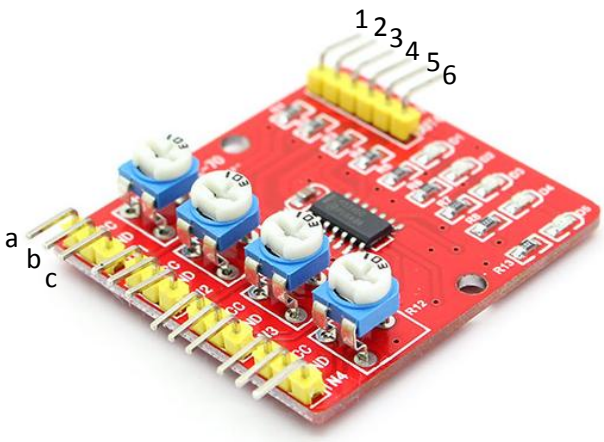
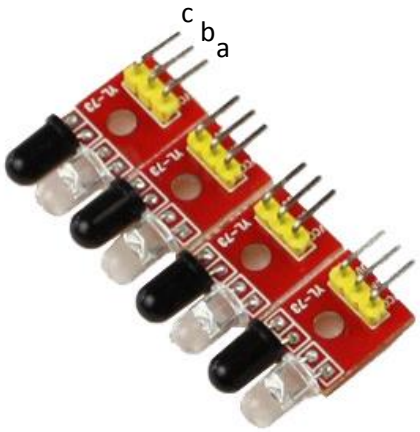
4-CHANNEL LINE TRACKER SENSOR

Specifications

- Operating voltage: DC 3.3V-5V
- Operating Current:>1A
- Operating temperature: -10 ℃ - +50 ℃
- Mounting Hole: M3 screws
- Detection distance: 1mm to 60cm adjustable
- Size: central control board:42mm x 38mm x 12mm
  small board: 25mm x 12mm x 12mm
- Output Interface: 6-wire (1234: signal output, +: positive supply -: ground)
- Output signal: TTL level

Pin Configuration





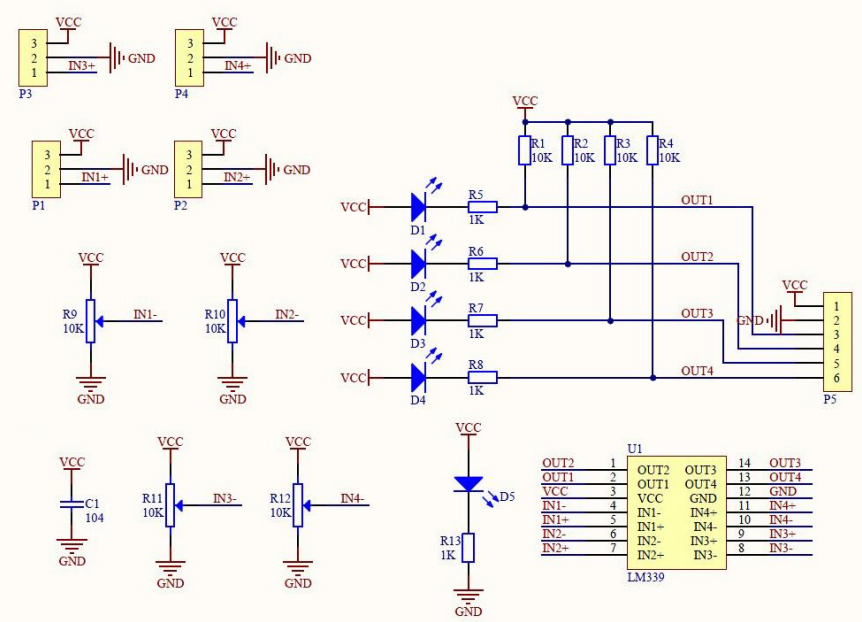
Control Module

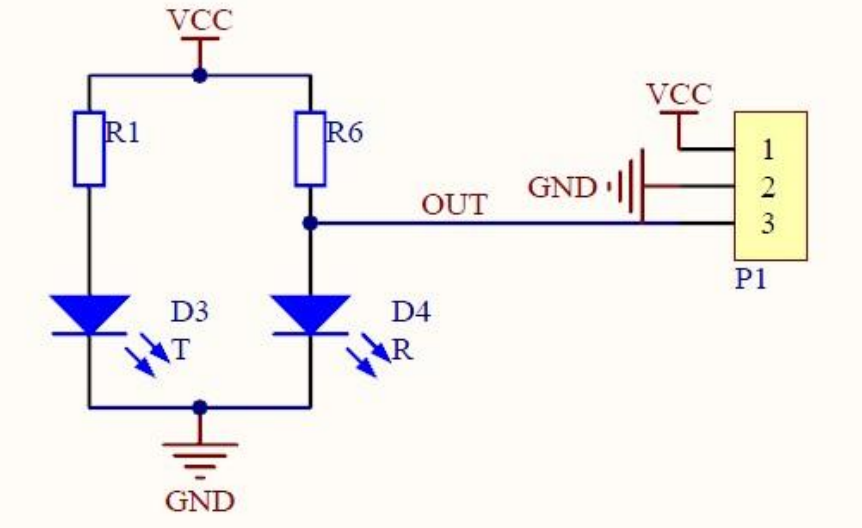
1. VCC: 3.3V-5V DC
2. GND: ground
3. OUT1: high/low output
4. OUT2: high/low output
5. OUT3: high/low output
6. OUT4: high/low output

Sensor Module

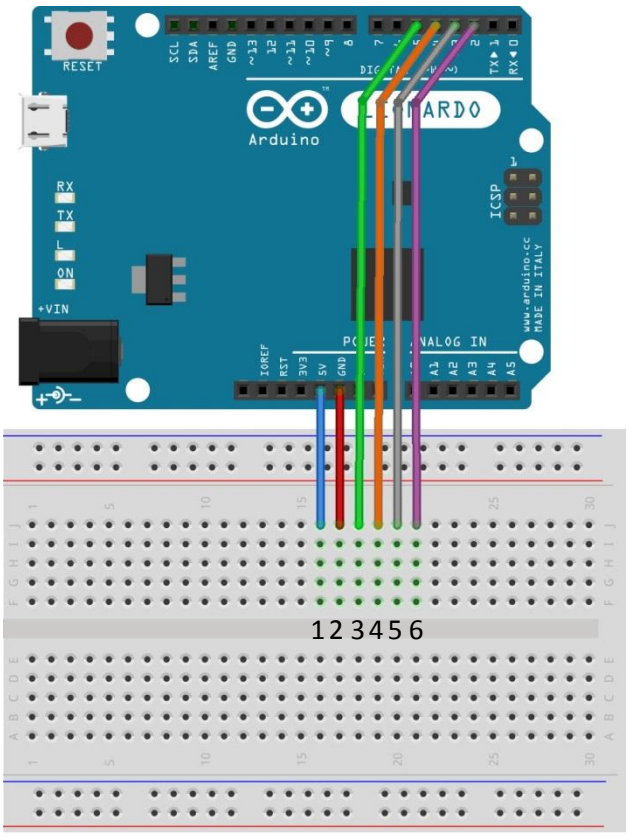
a. VCC-VCC
b. GND-GND
c. IN-OUT

Schematic Diagram





Wiring Diagram



Sample Sketch

```
void setup()
{
  Serial.begin(9600);
}
void loop()
{
  Serial.print(digitalRead(2));
  Serial.print(" ");
  Serial.print(digitalRead(3));
  Serial.print(" ");
  Serial.print(digitalRead(4));
  Serial.print(" ");
  Serial.println(digitalRead(5));
  delay(500);
}
```

How to Test

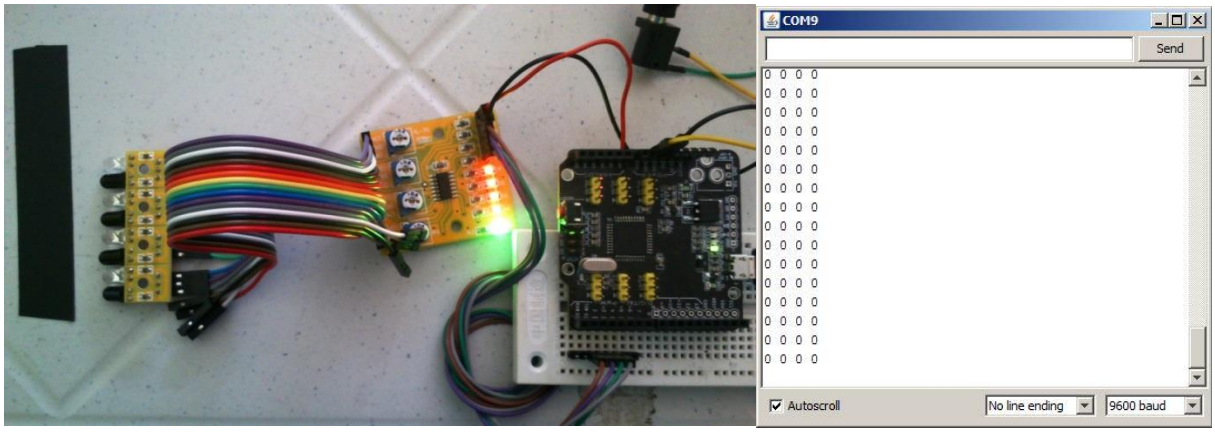
The components to be used are:

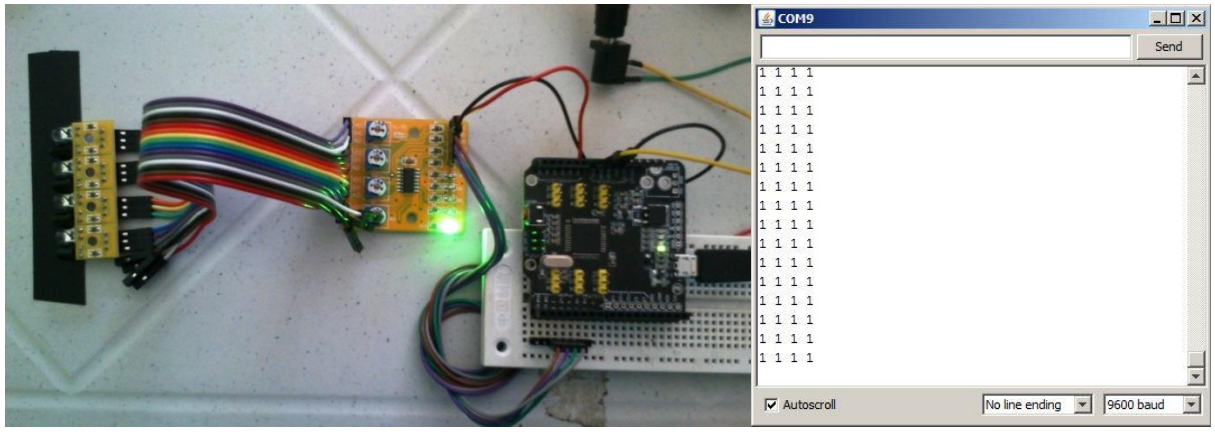
- microcontroller (any compatible arduino)
- 4-channel line tracker sensor
- Pin connectors
- Breadboard
- USB cable

1. Connect the 4-channel sensor module to the control module.
2. Connect the components based on the figure shown in the wiring diagram using pin connectors. VCC pin is connected to the 3.3V or 5V power supply, GND pin is connected to the GND, OUT1, OUT2, OUT3, and OUT4 pins are connected to the digital I/O pin. Pin number is based on the actual program code.
3. After hardware connection, insert the sample sketch into the Arduino IDE.
4. Using a USB cable, connect the ports from the microcontroller to the computer.
5. Upload the program.
6. See the results in the serial monitor.

Testing Results

The serial monitor shows the results upon moving the line tracker sensor in a white background to a black line. The sensor module has a HIGH output when subjected to the black line.

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1 1 1 1
1 1 1 1
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1 1 1 1
1 1 1 1
1 1 1 1
1 1 1 1
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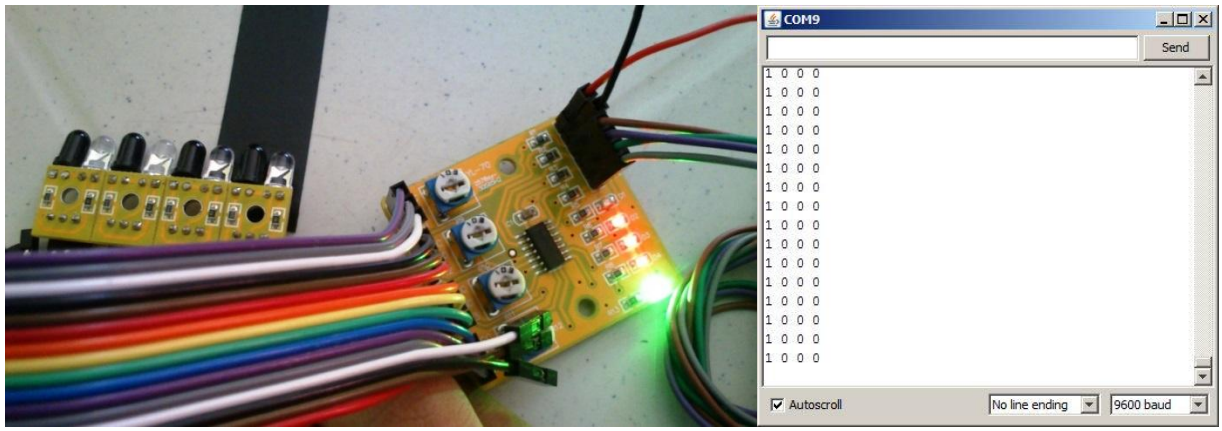
1 1 1 1
1 1 1 1
1 1 1 1
1 1 1 1
Autoscroll
No line ending
9600 baud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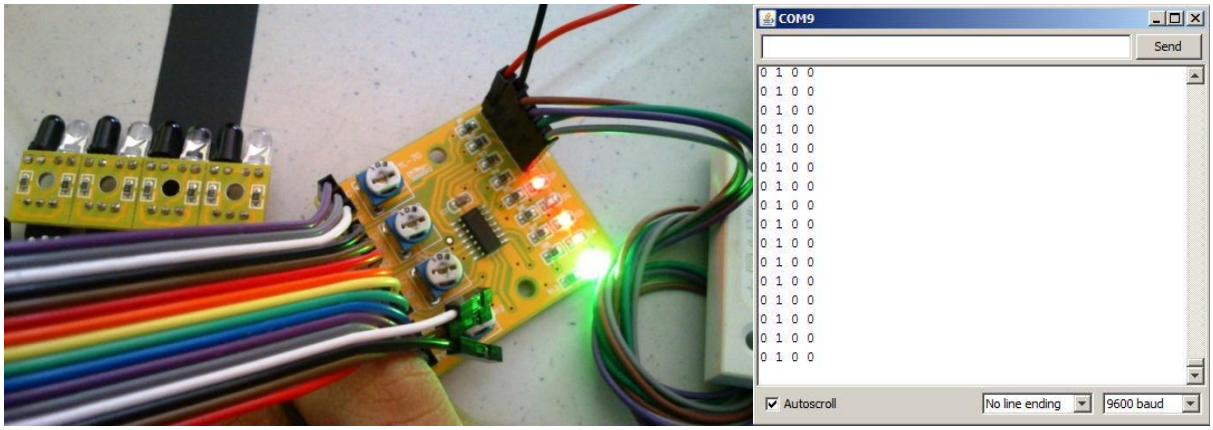
Autoscroll
No line ending
9600 baud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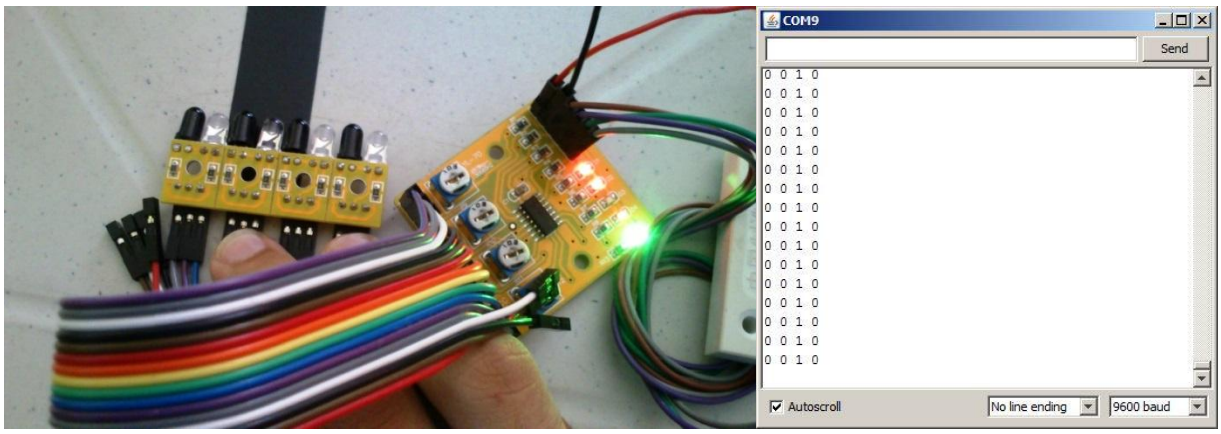
Autoscroll
No line ending
9600 baud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Autoscroll
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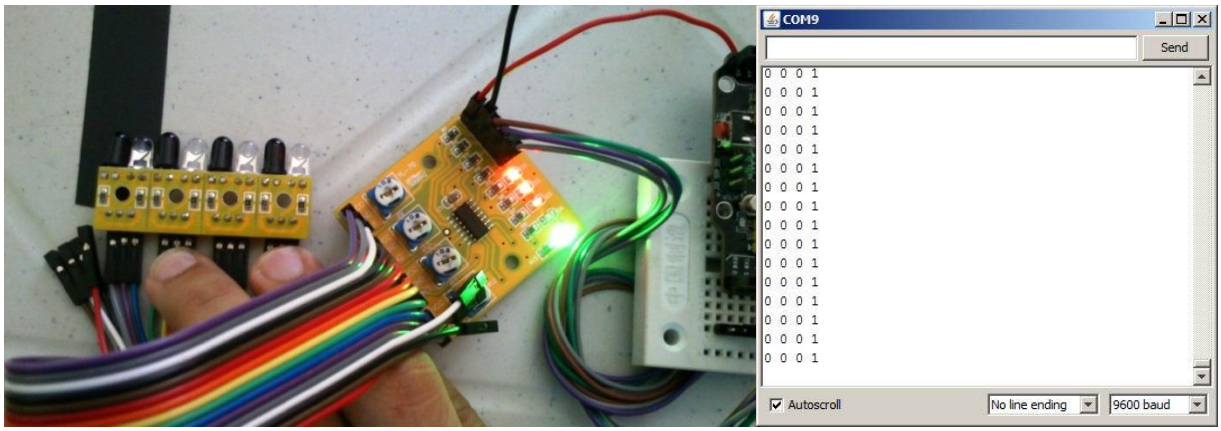
COM9
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Autoscroll
No line ending
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