INTRODUCTION

DFRobot's latest generation of digital DHT11 Temperature and Humidity sensor is as powerful as it used to be but easier to use. This DHT11 Arduino temperature and humidity sensor has a full range temperature compensation, low power consumption, long-term stability and calibrated digital signal. A high-performance 8-bit microcontroller is integrated in the sensor with calibration-coefficient saved in OTP memory to provide accurate temperature readings.
To ease the difficulty of using this sensor, a Gravity Interface is adapted to allow plug & play. The Arduino IO expansion shield is the best match for this sensor connecting to your Arduino. As this sensor can work at 3.3V which make it compatible with Raspberry Pi, Intel Edison, Joule and Curie.

**Temperature Sensor Tutorial: Type Selection of Temperature Sensors**

Is it difficult for you to choose a temperature sensor from the maker market that is full of different kinds? Therefore, we have prepared a guide of temperature sensors that compatible with Arduino for your reference.

- Gravity: i2C BMP280 Barometer Sensor
- Gravity: Analog LM35 Temperature Sensor For Arduino
- Waterproof DS18B20 Sensor Kit
- Gravity: DS18B20 Temperature Sensor (Arduino Compatible)
- Gravity: Non-contact IR Temperature Sensor for Arduino
- Infrared Thermometer Module
- Gravity: SHT1x Humidity and Temperature Sensor
- Gravity: DHT11 Temperature Humidity Sensor for Arduino
- DHT22 Temperature and Humidity Sensor

**FEATURES**

- Standard assembling struct (two 3mm holes with multiple of 5cm as interval).
- Icons to simply illustrate sensor function.
- High quality connector.
- Immersion gold surface.

**SPECIFICATION**

- Wider voltage range: 3.3V to 5V
- Temperature range: -50°C to 50°C error of ±2°C
- Humidity: 20-90% RH ±5% RH error
- Interface: Digital

**DOCUMENTS**

- Wiki (Gravity: DHT11 Temperature Humidity Sensor For Arduino)
- Arduino Sample Code
- Arduino library
- DataSheet
- Technical review by D-Robotics

**SHIPPING LIST**

- DHT11 Temperature and Humidity Sensor x1

**PROJECTS**

- [Xhouse project by Maurice](#)

**Project 1. DFRobot AutoEco System takes care of your garden.**

By following this project it will help to grow a vegetable garden, and automate some other processes in our house along the way. List of basic hardware to setup an AutoEco Sys:

- Romeo - an Arduino Robot Control Board with Motor Driver
- X-Board
- Light Sensor
- Gas Sensor
- Motion Sensor
- Temperature&Humidity Sensor
- Waterproof temperature sensor

**Project 2. Hyduino - Automated Hydroponics with an Arduino**

Hydroponics is growing plants without the use of a traditional dirt medium by using a nutrient rich water solution. This is especially great for those people that that have limited areas in their backyard to grow in.

Hardware list:

- Arduino Mega 2560
- Peristaltic Pumps (2)
- Regular Pump
- pH Electrode Probe and Connection to Arduino
- pH Up/Down Solution
- 5V Relay Modules for Arduino
- 12V Solenoid Valve
- DHT11 or DHT21 or DHT22 Humidity/Temperature Sensor
- Photosensitive Sensor for Arduino
- Breadboard
- Various Wires
- Grow Lights (mine are LED)
**3.2" TFT LCD Shield + Touch Screen** (usually has an SD card reader on the back of it)
- Water Level Sensor Float Switch
- I2C RTC DS1307 AT24C32 Real Time Clock Module
- 9V and 12V Power Supplies
- Hydroponics Pots (I'm using 10 - 3" pots for this)
- 1" PVC Pipe and Fittings + Drain Pipe and Fittings

### REVIEW

**RPLIDAR Tutorial Review**  
4 comments  • 3 months ago  
TechnoMasterDude  
Are those cheaper and better new versions already out? Or are we still in that waiting period?  
Thanks.

**LoRa Radio Module - 868MHz**  
2 comments  • 5 months ago  
DFRobot Support  
In the open area, the distance could be 3~5 Km.

**TF Mini LiDAR(ToF) Laser Range Sensor**  
3 comments  • 2 months ago  
tweeksdisqus  
If you guys want someone to evaluate this and do a writ up.. let me know!

**Raspberry Pi 3 Model B plus - DFRobot**  
6 comments  • 2 months ago  
DFRobot Support  
They are still in stock now.

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**SHA256systems**  
a month ago  
Hello, can you please explain how to connect it to a raspberry pi 3?  
As i have searched through internet usually the 3 pins are separated, the connector in this case has the 3 pins connected together

**DFRobot Support**  
You can use three male-female jumper wires to connect the wire pins to Rpi.

**Ian**  
2 years ago  
Hi, I am testing this sensor and keep receiving CHECK_SUM_ERROR. Can i have the solution to solve it?

**DFRobot Support**  
Hi, what's your power supply? it requires a standard 5V voltage

**Philippe GRANGIER**  
2 years ago  
Comme ce capteur peut fonctionner à 3.3V qui le rendent compatible avec Raspberry Pi, intel edison, joule et curie  
As this sensor can work at 3.3V which make it compatible with Raspberry Pi, intel edison, joule and curie  
5V or 3.3V???????

**DFRobot Support**  
Hi, It is better to post your question and problem on the forum, and some connection photo will be very helpful.

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### ALSO ON DFRobot

**Gravity: Analog Ambient Light Sensor For Arduino**

**Gravity: Analog Soil Moisture Sensor For Arduino**

**DHT22 Temperature and Humidity Sensor**

**Analog Sensor Cable For Arduino (10 Pack)**