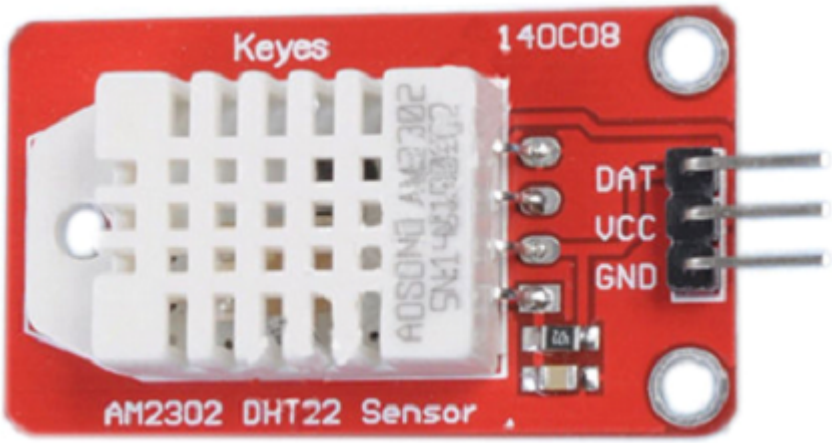
DHT22 temperature and humidity sensor library for Arduino

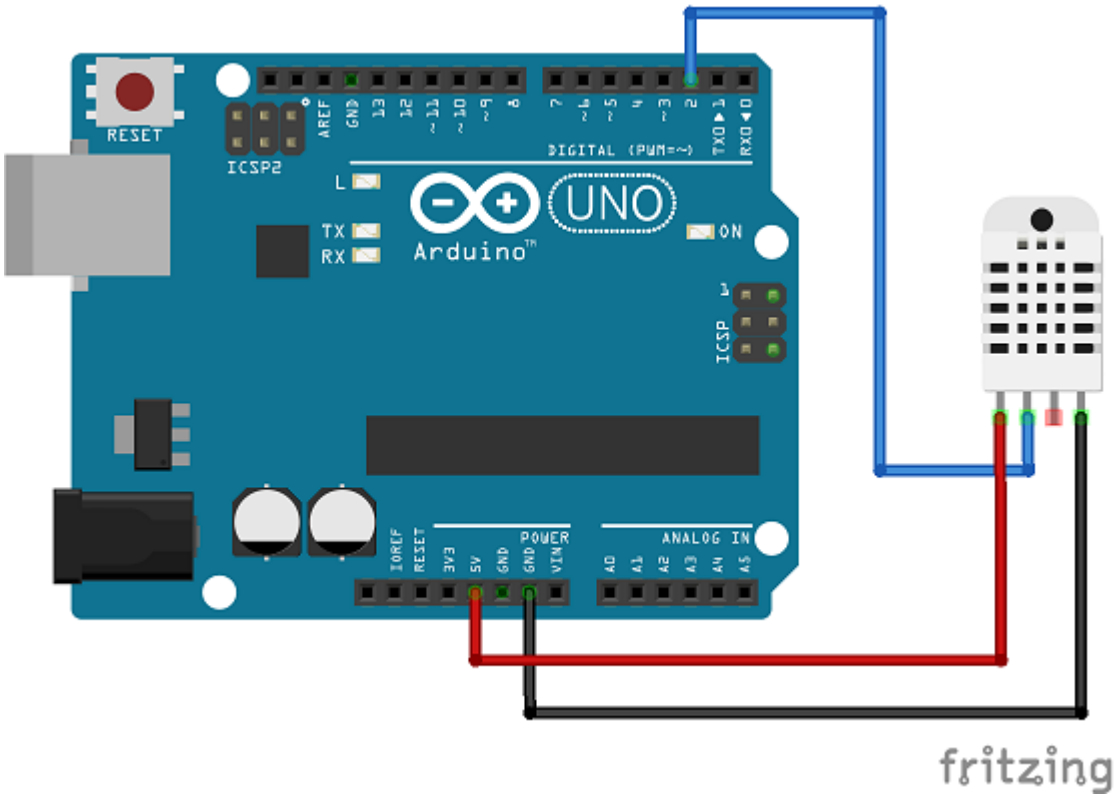
This is a AM2303 temperature and humidity sensor on a DHT22 breakout.



Library features

- Synchronous 16-bit temperature read
- Synchronous 16-bit humidity read

Hardware



Connection DHT22 - Arduino UNO

DHT22	Arduino UNO
GND	GND
VCC	5V (or 3.3V)
DAT	D2

Documentation

AM2303 datasheet

DHT22 datasheet

AM2303 specifications

- Voltage: 3.3 .. 5V
- Ultra-low power:
  - Typical 15uA dormancy
  - Typical 500uA measuring
- Single wire serial interface

- Humidity:
  - Range: 0 .. 99.9 %RH (Relative Humidity)
  - Resolution: 0.1 %RH
  - Accuracy: +/-2 %RH (at 25 degree celsius)
- Temperature:
  - Range: -40 .. +125 degree celsius
  - Resolution: 0.1 degree celsius
  - Accuracy: +/- 0.4 degree celsius
- Minimum read interval: 2000 ms

Examples

Examples | ErriezDH22:

- Example

Usage

Initialization

```
#include <DHT22.h>

// Connect DTH22 data pin to Arduino DIGITAL pin
#define DHT22_PIN   2

DHT22 sensor = DHT22(DHT22_PIN);

void setup()
{
    // Initialize serial port
    Serial.begin(115200);
    Serial.println(F("DHT22 temperature and humidity sensor example\n"));

    // Initialize sensor
    sensor.begin();
}
```

Read temperature and humidity

```
void loop()
{
  // Check minimum interval of 2000 ms between sensor reads
  if (sensor.available()) {
    // Read temperature from sensor
    int16_t temperature = sensor.readTemperature();

    // Read humidity from sensor
    int16_t humidity = sensor.readHumidity();
```

```
10
11      // Print temperature
12      Serial.print(F("Temperature: "));
13      Serial.print(temperature / 10);
14      Serial.print(F("."));
15      Serial.print(temperature % 10);
16      Serial.println(F(" *C"));
17
18      // Print humidity
19      Serial.print(F("Humidity: "));
20      Serial.print(humidity / 10);
21      Serial.print(F("."));
22      Serial.print(humidity % 10);
23      Serial.println(F(" %\n"));
24    }
25  }
```

Serial output

```
1  DHT22 temperature and humidity sensor example
2
3  Temperature: 17.7 *C
4  Humidity: 41.0 %
5
6  Temperature: 17.8 *C
7  Humidity: 41.1 %
8
9  ...
```