

ESP32: Mesure de temperature

Liens Web

[ESP32 : DHT11/22](#)

[ESP32 : ServeurWeb1 DHT11/22](#)

[ESP32 : ServeurWeb2 DHT11/22](#)

[ESP32 : Objet connecté DGT11/22](#)

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[DHT11/22](#)

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Test en réel sur carte ESP32

Matériel

ESP32 TTGO LORA 32 V2.0

[Caracteristiques ESP32 TTGO LORA 32 V2.0](#)



DHT 22

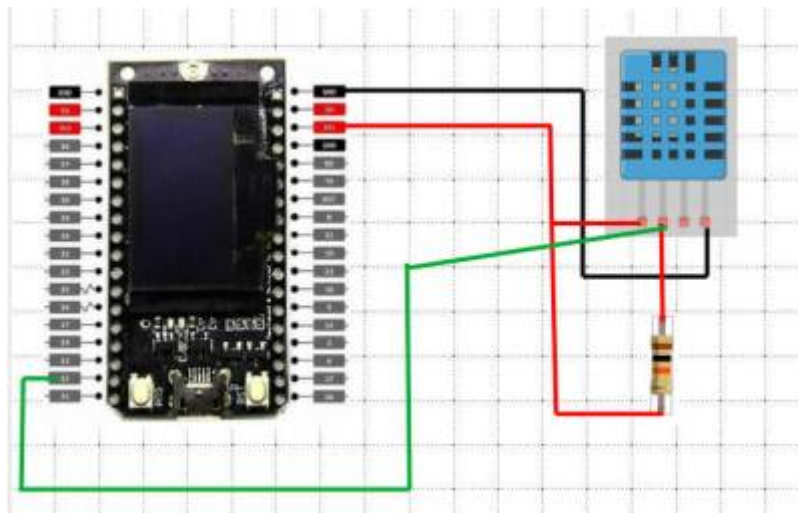
[Caractéristiques DHT22 PDF FR](#)



DHT22 Pinout
Pin 1: VCC (3V to 5.5V)
Pin 2: Data
Pin 3: Not Connected
Pin 4: Ground

Branchement

ESP32 Lora32 V2 + DHT22



Programmes

[ESP32_Temperature_serveur_Web.ino](#)

```
/*  
*****  
Rui Santos  
Complete project details at https://randomnerdtutorials.com  
*/
```

```
*****/  
  
// Import required libraries  
#include "WiFi.h"  
#include "ESPAsyncWebServer.h"  
#include <Adafruit_Sensor.h>  
#include <DHT.h>  
  
// Replace with your network credentials  
const char* ssid = "xxxxxxxxxxxx";  
const char* password = "xxxxxxxxxxxx";  
  
#define DHTPIN 13    // Digital pin connected to the DHT sensor  
  
// Uncomment the type of sensor in use:  
//#define DHTTYPE    DHT11    // DHT 11  
#define DHTTYPE    DHT22    // DHT 22 (AM2302)  
//#define DHTTYPE    DHT21    // DHT 21 (AM2301)  
  
DHT dht(DHTPIN, DHTTYPE);  
  
// Create AsyncWebServer object on port 80  
AsyncWebServer server(80);  
  
String readDHTTemperature() {  
    // Sensor readings may also be up to 2 seconds 'old' (its a very slow  
    // sensor)  
    // Read temperature as Celsius (the default)  
    float t = dht.readTemperature();  
    // Read temperature as Fahrenheit (isFahrenheit = true)  
    //float t = dht.readTemperature(true);  
    // Check if any reads failed and exit early (to try again).  
    if (isnan(t)) {  
        Serial.println("Failed to read from DHT sensor!");  
        return "--";  
    }  
    else {  
        Serial.println(t);  
        return String(t);  
    }  
}  
  
String readDHTHumidity() {  
    // Sensor readings may also be up to 2 seconds 'old' (its a very slow  
    // sensor)  
    float h = dht.readHumidity();  
    if (isnan(h)) {  
        Serial.println("Failed to read from DHT sensor!");  
        return "--";  
    }  
    else {
```

```
    Serial.println(h);
    return String(h);
  }
}

const char index_html[] PROGMEM = R"rawliteral(
<!DOCTYPE HTML><html>
<head>
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
href="https://use.fontawesome.com/releases/v5.7.2/css/all.css"
integrity="sha384-
fnm0CqbTlWIlj8LyTjo7m0UStjsKC4p0pQbqyi7RrhN7udi9RwhKkMHpvLbHG9Sr"
crossorigin="anonymous">
  <style>
    html {
      font-family: Arial;
      display: inline-block;
      margin: 0px auto;
      text-align: center;
    }
    h2 { font-size: 3.0rem; }
    p { font-size: 3.0rem; }
    .units { font-size: 1.2rem; }
    .dht-labels{
      font-size: 1.5rem;
      vertical-align:middle;
      padding-bottom: 15px;
    }
  </style>
</head>
<body>
  <h2>ESP32 Serveur DHT 22</h2>
  <p>
    <i class="fas fa-thermometer-half" style="color:#059e8a;"></i>
    <span class="dht-labels">Temperature</span>
    <span id="temperature">%TEMPERATURE%</span>
    <sup class="units">&deg;C</sup>
  </p>
  <p>
    <i class="fas fa-tint" style="color:#00add6;"></i>
    <span class="dht-labels">Humidite</span>
    <span id="humidity">%HUMIDITY%</span>
    <sup class="units">&percnt;</sup>
  </p>
</body>
<script>
setInterval(function ( ) {
  var xhttp = new XMLHttpRequest();
  xhttp.onreadystatechange = function() {
```

```

        if (this.readyState == 4 && this.status == 200) {
            document.getElementById("temperature").innerHTML =
this.responseText;
        }
    };
    xhttp.open("GET", "/temperature", true);
    xhttp.send();
}, 10000 ) ;

setInterval(function ( ) {
    var xhttp = new XMLHttpRequest();
    xhttp.onreadystatechange = function() {
        if (this.readyState == 4 && this.status == 200) {
            document.getElementById("humidity").innerHTML =
this.responseText;
        }
    };
    xhttp.open("GET", "/humidity", true);
    xhttp.send();
}, 10000 ) ;
</script>
</html>rawliteral";

// Replaces placeholder with DHT values
String processor(const String& var){
    //Serial.println(var);
    if(var == "TEMPERATURE"){
        return readDHTTemperature();
    }
    else if(var == "HUMIDITY"){
        return readDHTHumidity();
    }
    return String();
}

void setup(){
    // Serial port for debugging purposes
    Serial.begin(115200);

    dht.begin();

    // Connect to Wi-Fi
    WiFi.begin(ssid, password);
    while (WiFi.status() != WL_CONNECTED) {
        delay(1000);
        Serial.println("Connecting to WiFi..");
    }

    // Print ESP32 Local IP Address
    Serial.println(WiFi.localIP());

```

```
// Route for root / web page
server.on("/", HTTP_GET, [](AsyncWebServerRequest *request){
    request->send_P(200, "text/html", index_html, processor);
});
server.on("/temperature", HTTP_GET, [](AsyncWebServerRequest
*request){
    request->send_P(200, "text/plain", readDHTTemperature().c_str());
});
server.on("/humidity", HTTP_GET, [](AsyncWebServerRequest *request){
    request->send_P(200, "text/plain", readDHTHumidity().c_str());
});

// Start server
server.begin();
}

void loop(){

}
```

From:
<https://magenealogie.chanterie37.fr/www/fablab37110/> - Castel'Lab le Fablab MJC de Château-Renault

Permanent link:
<https://magenealogie.chanterie37.fr/www/fablab37110/doku.php?id=start:arduino:esp32:temperature&rev=1615894488>

Last update: **2023/01/27 16:08**

