

# ESP32: Mesure de temperature

## Liens Web

[ESP32 : DHT11/22](#)

[ESP32 : ServeurWeb1 DHT11/22](#)

[ESP32 : ServeurWeb2 DHT11/22](#)

[ESP32 : Objet connecté DGT11/22](#)

[ESP32 PicoKit : DHT22](#)

[ESP32 : Librairie DHT22](#)

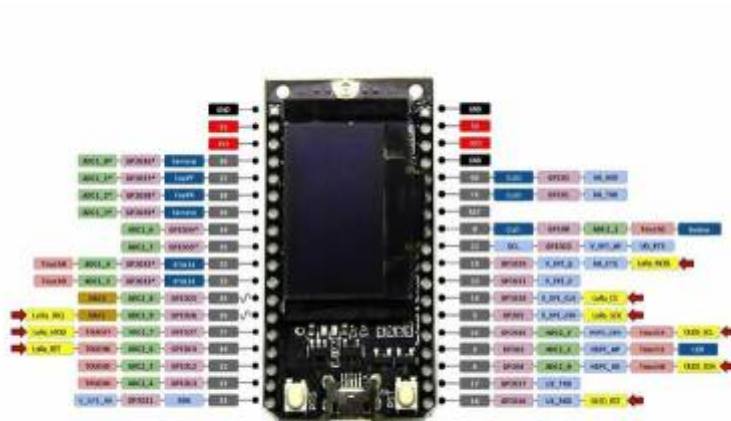
[DHT11/22](#)

[ARduino : DHT11/22](#)

## Test en réel sur carte ESP32

### Matériel

#### ESP32 TTGO LORA 32 V2.0

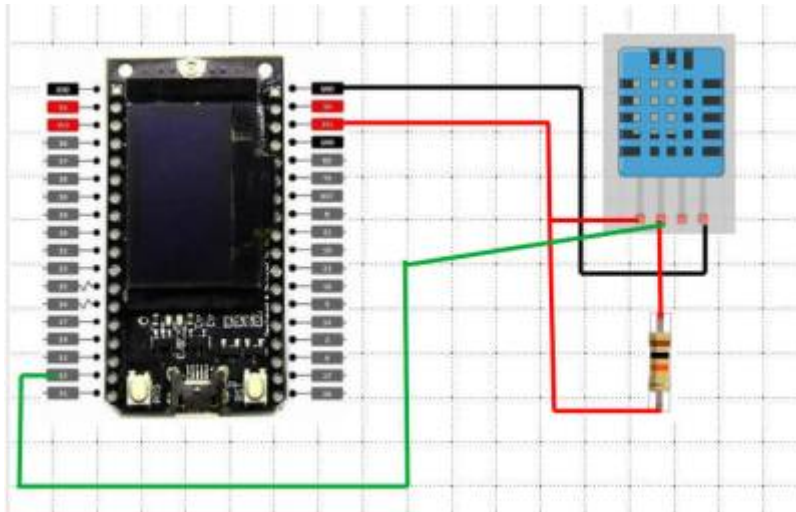


### DHT 22

[Caractéristiques DHT22 PDF FR](#)

### 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 = "xxxxxxxxxxxxxxxx";  
  
#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">&percent;</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(){
}
```

Last update: 2023/01/27 16:08 start:arduino:esp32:temperature https://magenealogie.chanterie37.fr/www/fablab37110/doku.php?id=start:arduino:esp32:temperature&rev=1615894083

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=1615894083>

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

