

The background features a complex network diagram with numerous nodes (small circles) connected by thin lines, forming a web-like structure. Some nodes are highlighted with larger circles or different colors (yellow, blue). There are also faint, larger geometric shapes like triangles and polygons scattered across the background.

IoT Application Development with ESP32 Using ESP-IDF

Hardware & Software Requirements

Develop a WLAN on the ESP32 and Connect to AWS IoT: Step by step programming in C Language

ESP32 DevKit

- DevKits from Espressif
 - Wrover DevKit → <https://docs.espressif.com/projects/espressif/en/latest/esp32/hw-reference/esp32/get-started-wrover-kit.html>
 - All Espressif DevKits → <https://www.espressif.com/en/products/devkits>

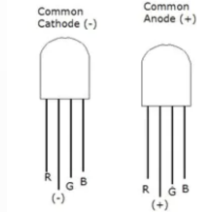
Other Components

- Other Hardware Components

- RGB LED → like this
for resistor values.

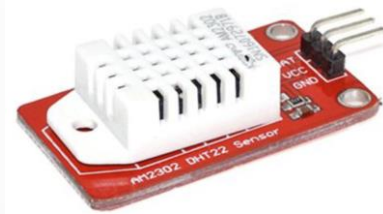


or this



, **be sure to check your datasheet**

- AM2302 DHT22 Sensor →



Temperature and Humidity Sensor.

- Jumper wires and a breadboard.

The background features a complex network of thin, light-colored lines and dots, forming various triangular shapes. Some triangles are filled with a very light yellow or green color, while others are just outlines. The overall effect is a subtle, geometric pattern that suggests a network or a complex system.

Software Requirements?

Eclipse ESP-IDF Plugin

- Available for Linux, MacOS, and Windows
 - Windows install demonstrated → I'm using Windows.
 - All-in-one installer available for Windows.
 - Installs the ESP-IDF, ESP-IDF Tools and Eclipse.
 - You can also install the Plugin into an existing Eclipse CDT installation.
 - Details here → <https://github.com/espressif/idf-eclipse-plugin>
- Other features of the plugin...
 - Creating a new Cmake IDF project.
 - Create ESP launch target with multi-chip support.
 - Compiling the project.
 - Flashing the project.
 - Debugging the project.
 - Viewing serial output.

The background features a complex network of thin, light-colored lines and dots, forming various triangular shapes and a larger, interconnected web-like structure. The lines are primarily in shades of light green and yellow, with some dots appearing as small circles. The overall effect is a subtle, geometric pattern that suggests a network or a mathematical structure.

Next: Course Structure
