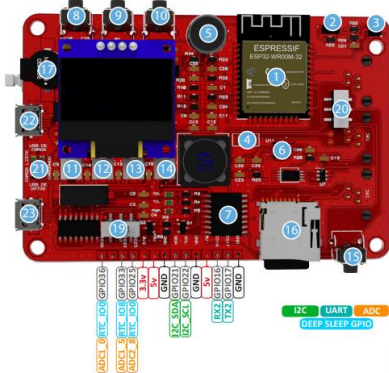


A General Description

Technical Specifications

Microcontroller	ESP32	Espressif
Clock	240MHz	
Connectivity	WIFI (802.11 b/g/n) Bluetooth v4.2	
Wifi range	30m inside - 90m outside	
Operating voltage	3.3V	
Supply voltage	5V	
Digital I/O pins	8	
Analog inputs	4	
RJ-9 connectors	3	

Weight: 55 gr Height: 60 mm Width: 90mm



1

- 1 ESP32: It is a microcontroller, the brain of the board
- 2 Light sensor TEMENT6000: GPIO39
- 3 Temperature/Humidity sensor. HTU21d: I2C Protocol
- 4 Vibration sensor TILT: GPIO14
- 5 Microphone: GPIO32
- 6 MPU6050 Accelerometer and Gyroscope: I2C Protocol
- 7 DS3231Real-Time Clock: I2C Protocol

- 8 9 10 Programmable buttons: GPIO0,GPIO15,GPIO13

- 11 12 13 14 Programmable RGB Neopixels: GPIO27

- 15 RESET Button

- 16 MicroSD card slot: SPI Protocol

- 17 Programmable passive buzzer: GPIO12

- 18 OLED screen 128x64 pixels: I2C Protocol

- 19 20 Slide selection switches:

- 19: IO36 pin usage selection
- 20: Voltage selection for RJ9 connector IO4

- 21 Battery charge indicators

- 22 MicroUSB charging

- 23 MicroUSB programming

A.1 Pinout diagram

Each pin has an identifying number to use within the code. Letters are used to indicate whether it's a digital (D) or analog (A) output, respectively.

4

- Upload the code to the board. For this you must click on the button **Upload** and wait a few seconds for the code to load
- Once the code is fully loaded, you will see the message **"Uploaded"** in the status bar.
- Restart the board by pressing the **Reset** button and click on the **Serial Monitor** icon.

- A window will open with the following message:



A.2.3 Download, Installation, and Configuration of the Block Programming Environment

The Block Programming Environment allows programming instructions to your module, in a practical and visual way.

- To use the Block Programming Environment you must download it from: <https://fanio.com.ar/descarga/FAN-BLOCK.exe>
- Run the program's installer and follow the installation steps
- Once installed you must initialize it. Click on "Board Manager"



- Look under Installed for the "Generic ESP32 WROOM" option, click Click on "Change Board" and confirm.



Finished! Now you can start programming your FANIO Module

A.2.4 Introduction to Block Programming

- **Programming Mode:** Changes the programming mode of Block to Code.
- **Board Manager:** Select the desired microcontroller program.
- **Package Manager**
- **Plugin Manager:** Select and download extensions, also for library programming

2



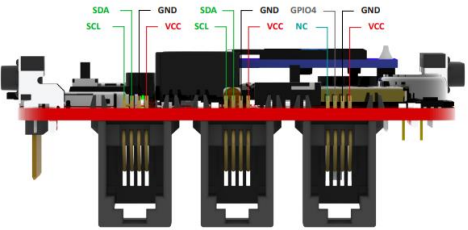
3

- 24 ON/OFF Button
- 25 GPIO4 Analog/Digi.
- 26 I2C.
- 27 I2C.

- 29 JST Connector for solar panel.

- 28 JST Connector for battery

- 30 3.7V 700mAh Li-Po battery



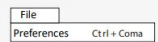
A.2 Programming Environments

An Integrated Development Environment (IDE) is a computer program for loading the compiled instructions, that is, translated into a machine language, in module memory.

A.2.1 Download, Installation and Configuration of the IDE Code

- Download from: <https://www.arduino.cc/en/software>
- Run the program's installer and follow the installation steps.

- After the installation is complete, you must initialize it. Go to the tab: File - Preferences



- In the "Additional Card URL Manager" box type: [https://dl.espressif.com/dl/package\\_esp32\\_index.json](https://dl.espressif.com/dl/package_esp32_index.json) and OK.

5

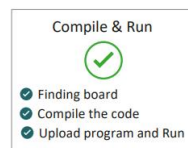
- **Example & Tutorials:** List code examples and tutorials
- **Setting:** Visually customize the programming environment.
- **Serial Monitor** Starts communication between NEOFAN EGOIOT and the computer.
- **New File**
- **Open File**
- **Save File:** Save the current project
- **Just Compile:** Compiles the project to search for errors
- **Compile and Run:** Compiles and uploads the project to board
- **Setup Board:** Select the COM and communication baud rate.

- To make your first program you must create the blocks equal to the next image

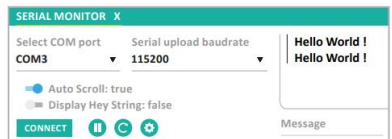


- Upload the block to NEOFAN EGOIOT board: for this you have to click on the **Compile and Run** button and wait a few seconds for the block is loaded.

When fully loaded, the following message will be displayed:



- Reset the board by pressing the **RESET** button and clicking the **Serial Monitor** icon. The following box will appear:



Additional Card URL Manager [https://dl.espressif.com/dl/package\\_esp32\\_index.json](https://dl.espressif.com/dl/package_esp32_index.json)

- Go to the Tab: Tools - Board - Board Manager.

- In the Board Manager dialog, type "esp32" by Espressif Systems and click on **Install**.



- Go to the Tab Tools - Board - ESP32 Arduino 1.0.6 and select the Module ESP32 Dev Module. Also, choose the corresponding COM Port.



A.2.2 Introduction to the IDE Code

The IDE Code is composed for

- 1) Verify
- 2) Load
- 3) New
- 4) Open
- 5) Save
- 6) Serial Monitor
- 7) Publisher
- 8) Notifications



- To make your first program you must type the following code

```
void setup(){
  Serial.begin(115200);
}

void loop(){
  Serial.println("Hola Mundo!");
  delay(5000);
}
```

This program will send a "Hello world" message through Serial communication every 5 seconds.