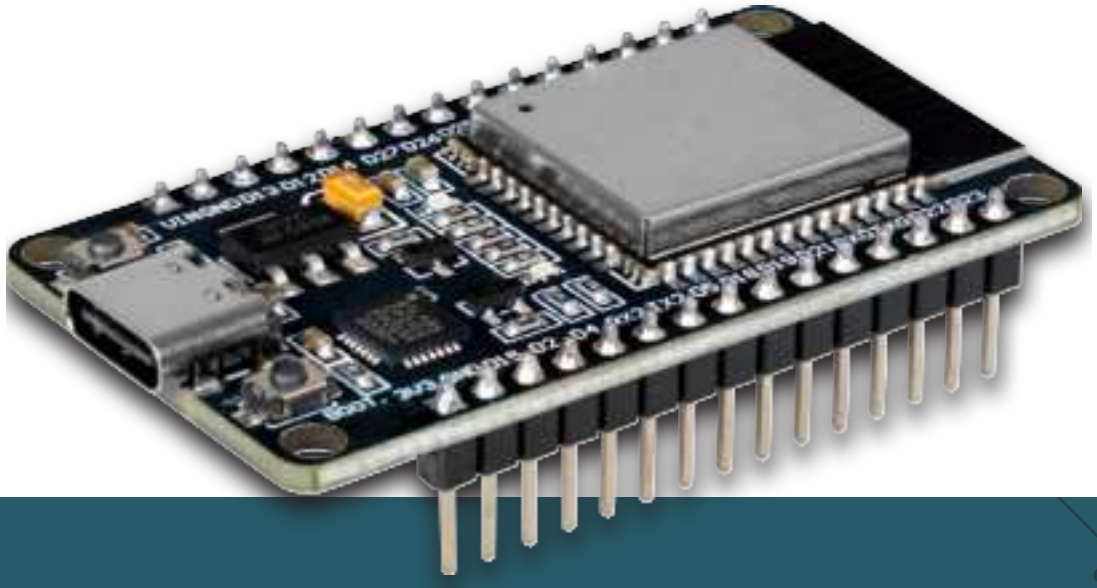


NODE MCU ESP32 USB-C

Microcontroller development board

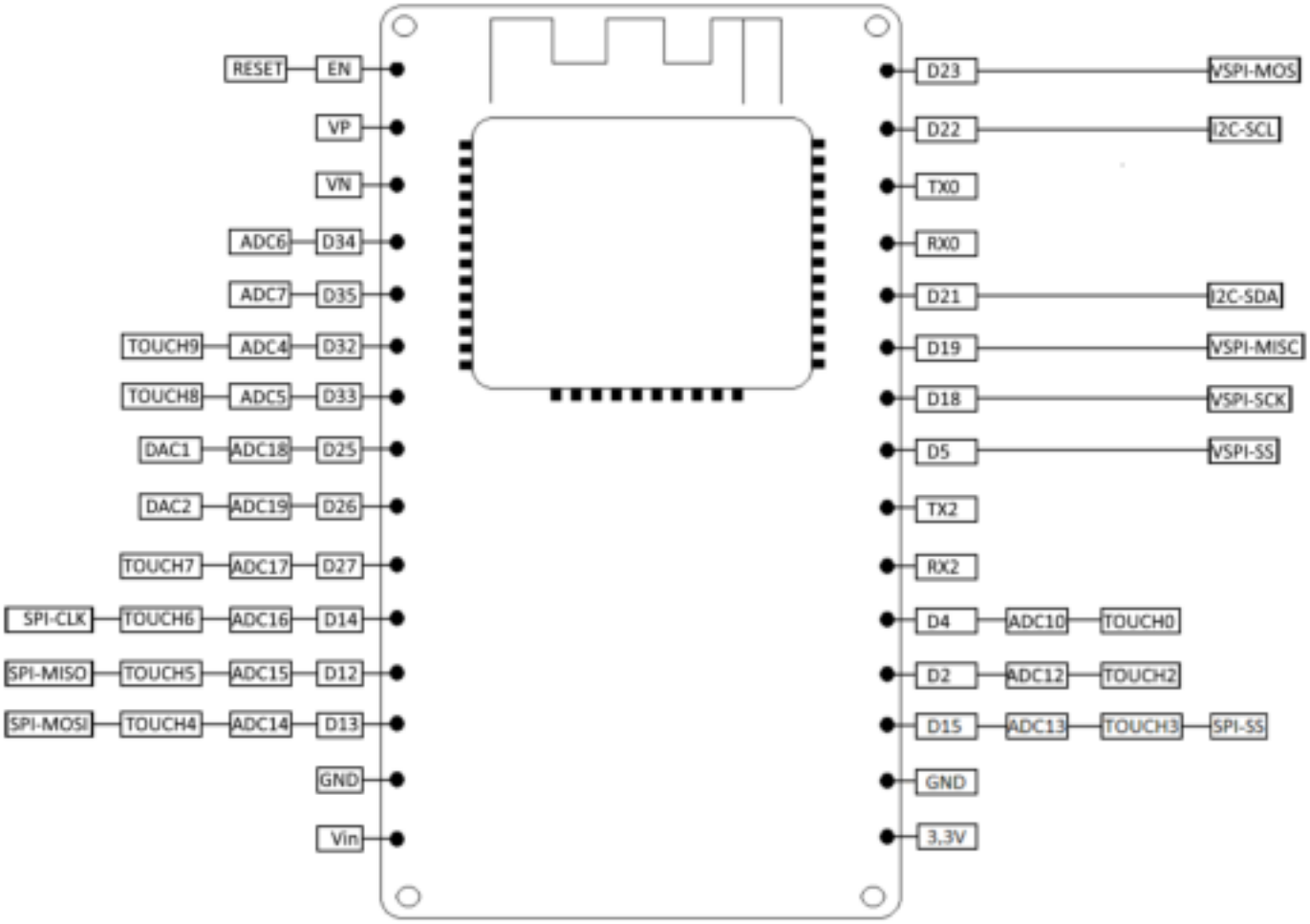
1. GENERAL INFORMATION

Dear customer,
thank you for purchasing our product. In the following we will show you what you need to bear in mind when commissioning and using.

Should you encounter any unexpected problems during use, please do not hesitate to contact us.

3. DEVICE OVERVIEW

The NodeMCU ESP32 module is a compact prototyping board and can be easily programmed via the Arduino IDE. It has 2.4 GHz dual-mode WiFi and a BT radio connection. Also integrated on the microcontroller development board are: 512 kB SRAM and 4 MB memory, 2x DAC, 15x ADC, 1x SPI, 1x I^2C, 2x UART. PWM is activated on every digital pin. An overview of the available pins can be found in the following illustration:



The input voltage via USB-C is 5 V ±5%.
The input voltage via Vin-Pin is 6 - 12 V.

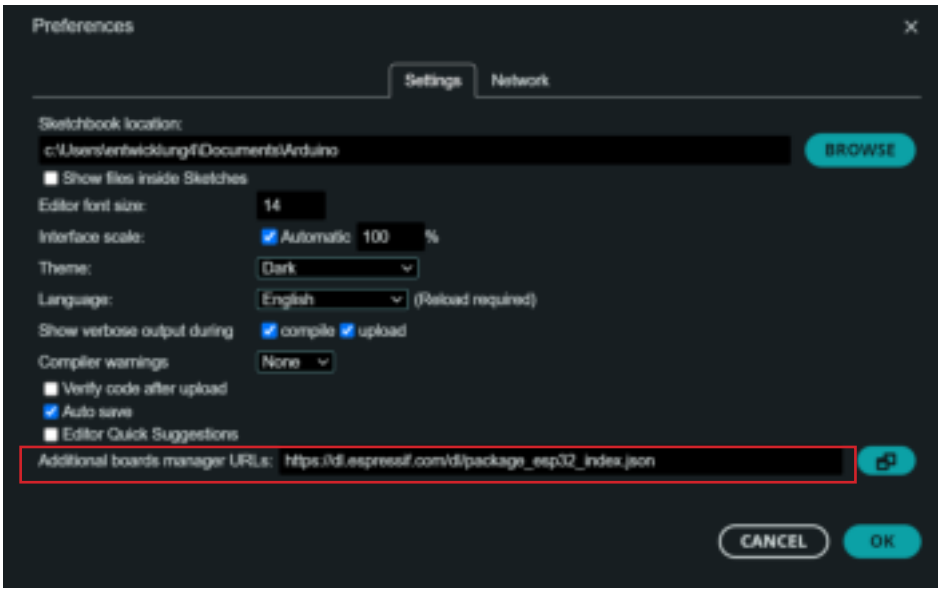
The logic level of the module is 3.3 V. Do not apply a higher voltage to the input pins.

4. INSTALLATION OF THE MODULE

If you have not yet installed the Arduino IDE on your computer, download and install it first.
If you have problems with the module driver later on, you can download the updated CP210x USB-UART drivers for your operating system here. After installing the development environment, you must add a new board administrator by following the steps below.

Go to **File** → **Preferences**

Add the following link to additional board manager URLs:
https://dl.espressif.com/dl/package_esp32_index.json
You can separate multiple URLs with a comma.



Now got to **Tools** → **Board** → **Board manager...**

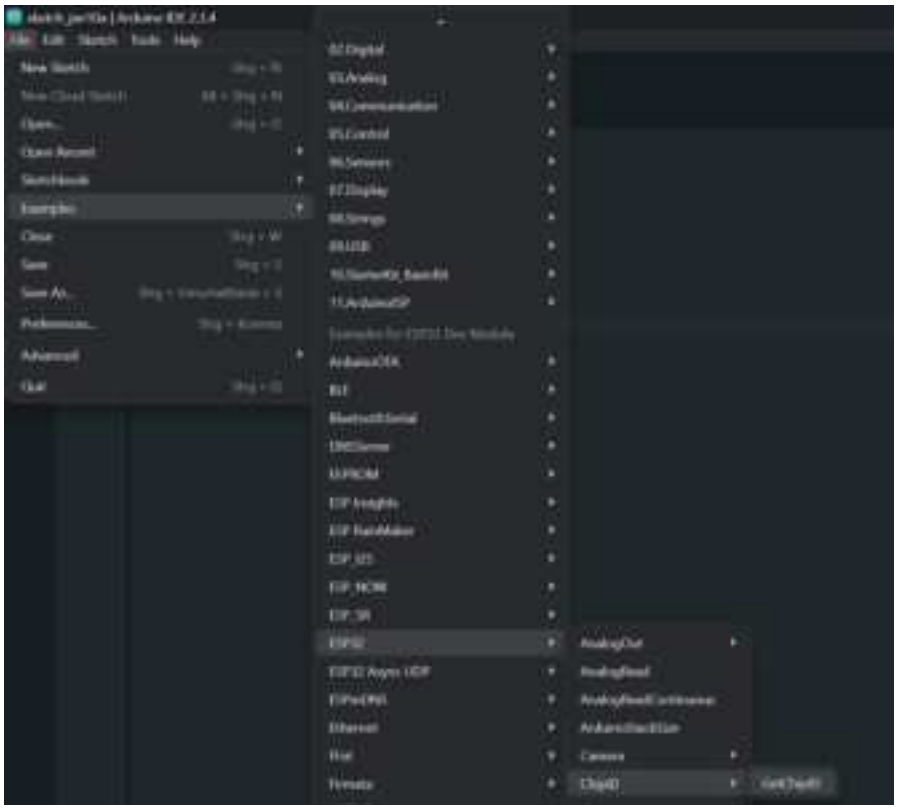
Enter esp32 in the search field and install **esp32 by Espressif Systems**.

The installation is now complete. You can now select the **ESP32 Dev Module** under **Tools** → **Board**.

Attention! After the initial installation, the baud rate may have changed to 921600. This may lead to problems. In this case, select baud rate 115200 to avoid potential problems.

4. USING THE MODULE

Your NodeMCU ESP32 is now ready for use. Simply connect it to your computer with a USB cable. The installed board manager already provides many examples to give you a quick insight into the module. The examples can be found in your Arduino IDE under **File → Examples → ESP32**. The quickest and easiest way to test your NodeMCU ESP32 is to retrieve the device number. Either copy the following code or use the **GetChipID** example from the Arduino IDE:



```
uint32_t chipId = 0;

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

void loop() {
  for (int i = 0; i < 17; i = i + 8) {
    chipId |= ((ESP.getEfuseMac() >> (40 - i)) & 0xff) << i;
  }

  Serial.printf("ESP32 Chip model = %s Rev %d\n", ESP.getChipModel(), ESP.getChipRevision());
  Serial.printf("This chip has %d cores\n", ESP.getChipCores());
  Serial.print("Chip ID: ");
  Serial.println(chipId);

  delay(3000);
}
```

Before uploading the code, make sure that you have selected the correct port and the correct board under Tools.

5. INFORMATION & TAKE-BACK OBLIGATIONS

Our information and take-back obligations under the German Electrical and Electronic Equipment Act (ElektroG)

Symbol on electrical and electronic equipment:
This crossed-out garbage can means that electrical and electronic appliances do not belong in household waste. You must hand in the old appliances at a collection point. Before handing them in, you must separate used batteries and accumulators that are not enclosed by the old appliance.

Return options:
As an end user, you can hand in your old appliance (which essentially fulfills the same function as the new appliance purchased from us) for disposal free of charge when purchasing a new appliance. Small appliances with no external dimensions greater than 25 cm can be disposed of in normal household quantities regardless of whether you have purchased a new appliance.

Possibility of return at our company location during opening hours:
SIMAC Electronics GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn

Return option in your area:
We will send you a parcel stamp with which you can return the device to us free of charge. To do so, please contact us by e-mail at Service@joy-it.net or by telephone.

Packaging information:
Please pack your old appliance securely for transportation. If you do not have suitable packaging material or do not wish to use your own, please contact us and we will send you suitable packaging.

6. SUPPORT

We are also there for you after your purchase. If you still have any questions or problems arise, we are also available by e-mail, telephone and ticket support system.

E-Mail: service@joy-it.net
Ticket-System: https://support.joy-it.net
Phone: +49 (0)2845 9360 - 50

For further information, please visit our website:
www.joy-it.net

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