



Installation instructions for  
the Wi-Fi module for  
**Ender 3, Ender 3 PRO, Ender 3**  
3D printers

# Before you **start...**

## **ATTENTION!**

In order to make the modifications presented in the manual it is necessary to have a SKR mini E3 motherboard. You must strictly follow the instructions in the manual. We have made every effort to ensure that the installation and start-up of the device goes smoothly. However, **we do not take any responsibility** for possible damage caused by improper modification.

The device presented in the description is an extension of **ESP 3D project**. The project is available on **GitHub pages**.

**Developed by the Garage Make Zone team.**

# Installation

## **WARNING!**

Install with the printer switched off.

### 1. The wires are arranged in plug in sequence:

**Red** - 5-12 VDC

**Blue** - GND

**White** - TX -> RX

**Black** - RX ->TX

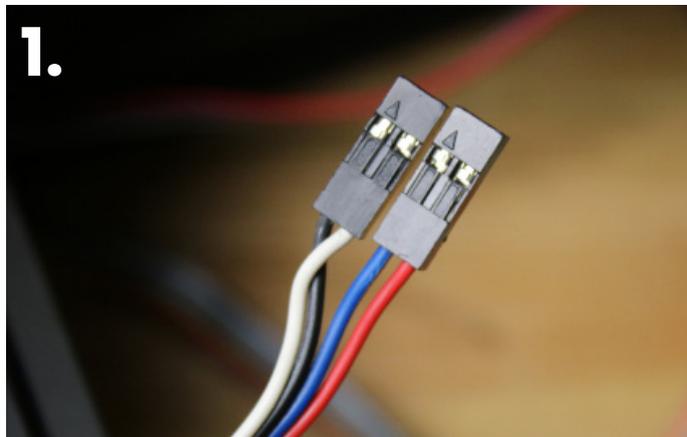
**NOTE:** Other color versions may appear, in which case wire colors should be read:

**Yellow** - 5-12 VDC

**Orange** - GND

**Red** - TX -> RX

**Brown** - RX ->TX



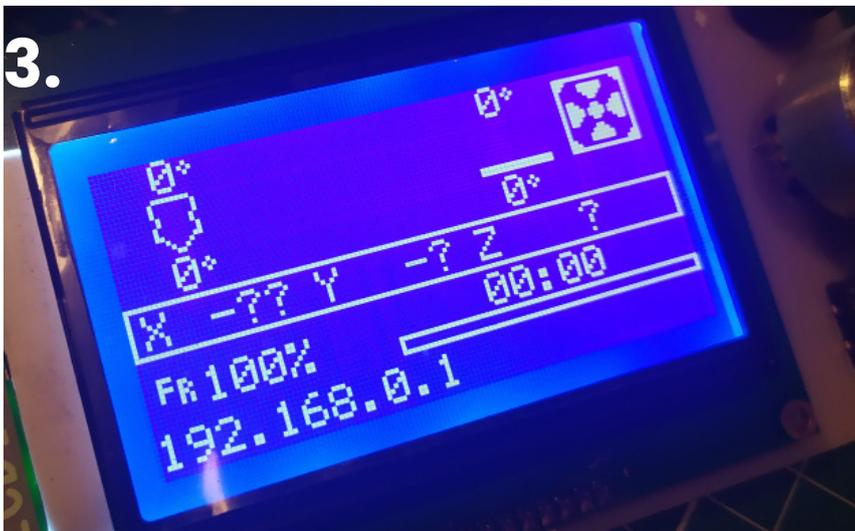
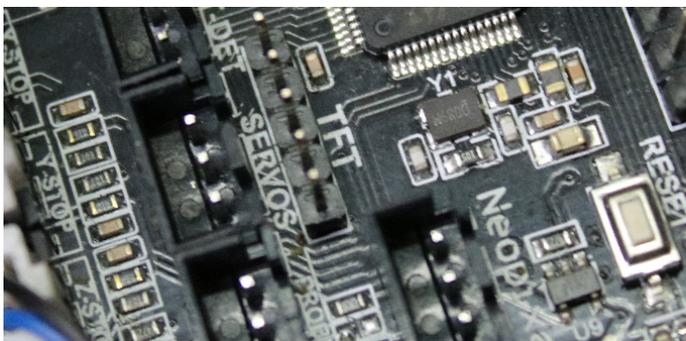
**Purple** - 5-12 VDC

**Grey** - GND

**White** - TX -> RX

**Black** - RX ->TX

### 2. Plug the connector into the TFT socket on the motherboard.



### 3. Connect power supply

After starting the printer's operating system, the LCD will display the address  
**IP: 192.168.0.1**

# Network configuration

## 1. Open the Internet access menu



## 2. Select the 3D Printer network



## 3. Enter the password: **12345678**

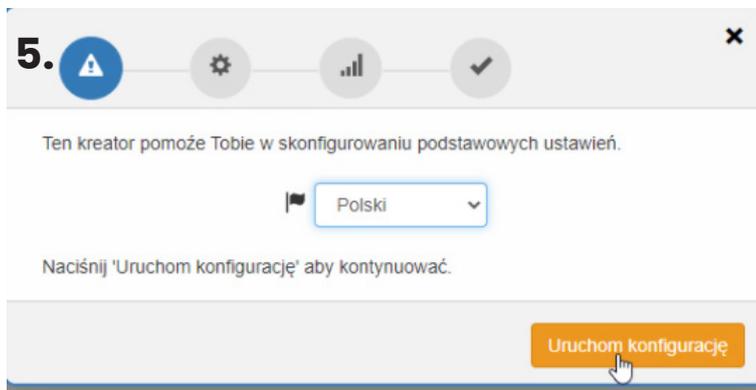
## 4. You will be automatically redirected to the configuration page.

If the redirection does not take place automatically, enter the following address in the web browser: **192.168.0.1** Confirm with the **ENTER** key

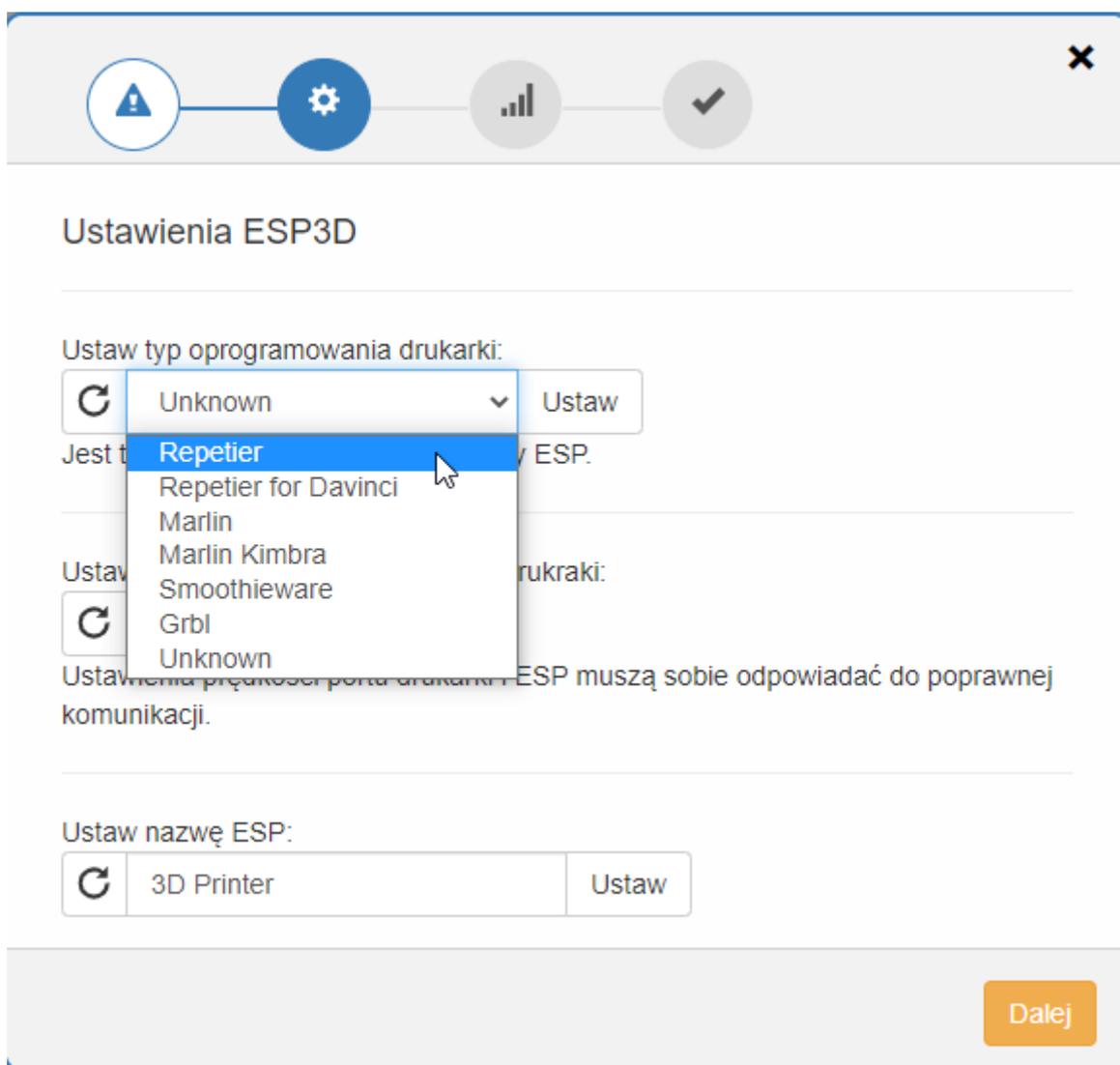
## 5. Select the language of use, run the configuration.

## 6. Choose the type of firmware installed in the printer.

If the Ender printer has factory firmware, choose **Repetier**. If the software was changed, set the type of software currently loaded on board (usually Marlin)



6.

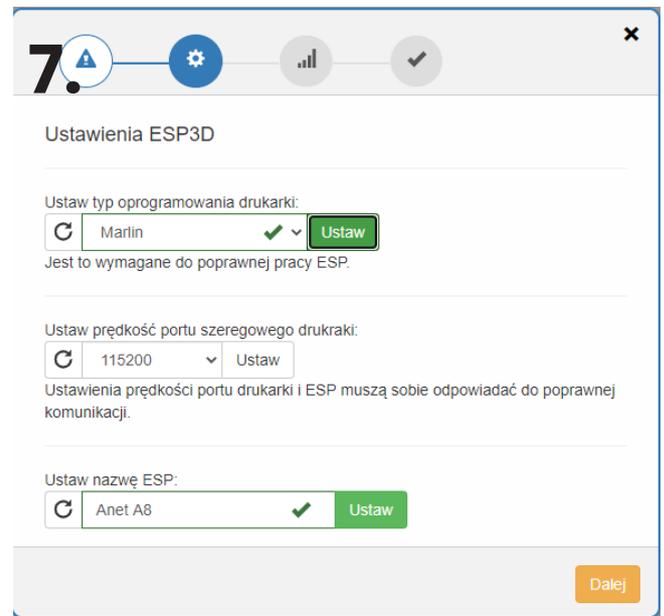


**7. Baud rate set at the same we use when connecting via USB (usually **115200**)**

**8. The name of the ESP set arbitrarily in the example „Ender” – press „**NEXT**”**

**9. There are only two *AP* and *STA* operating modes.**

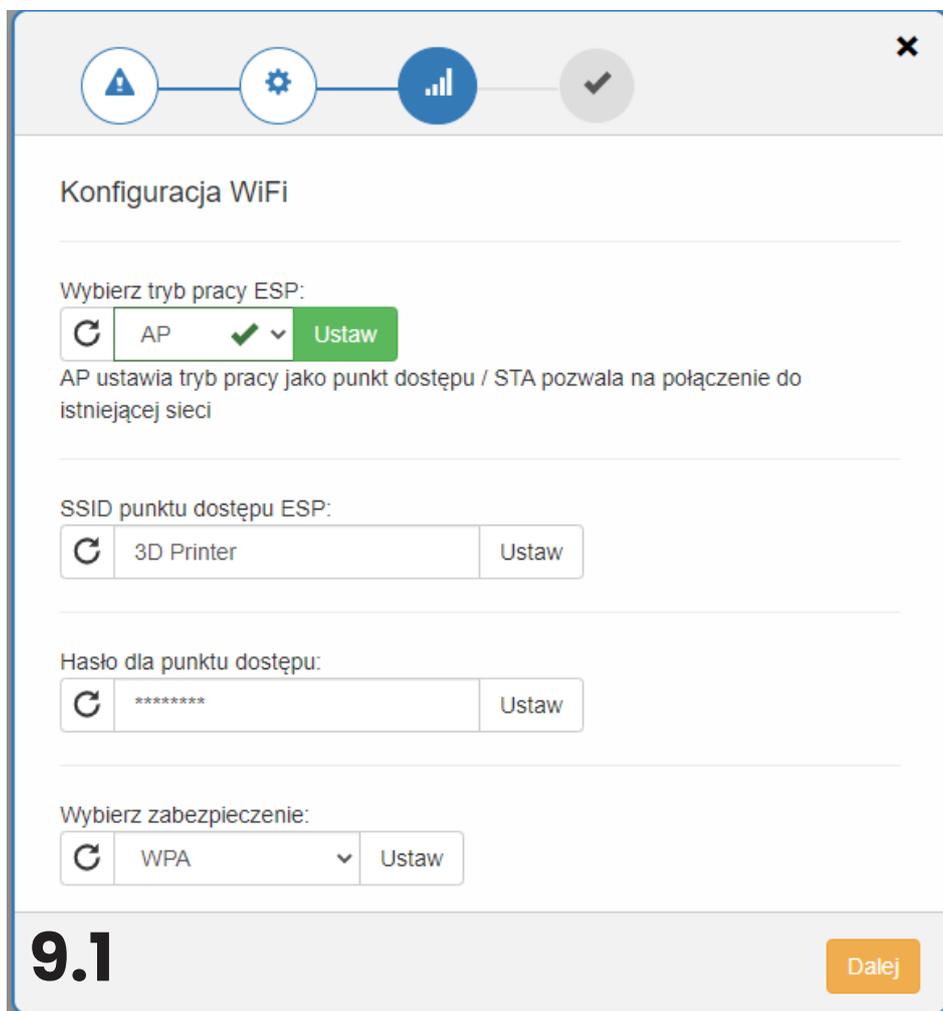
**9.1 AP mode** creates its own wireless network. If you choose this type of connection, the printer will not be visible in our home WI-FI network. In this case, you will need to connect to the 3D Printer network. The configuration of this network is limited to entering a new access password.



The screenshot shows a settings window titled "Ustawienia ESP3D". At the top, there is a progress bar with four icons: a warning triangle, a gear, a signal strength indicator, and a checkmark. The first icon is highlighted with a blue circle and the number "7.". Below the progress bar, the settings are as follows:

- Ustaw typ oprogramowania drukarki:** A dropdown menu is set to "Marlin" with a green checkmark and a green "Ustaw" button.
- Ustaw prędkość portu szeregowego drukarki:** A dropdown menu is set to "115200" with a green checkmark and a green "Ustaw" button.
- Ustaw nazwę ESP:** A dropdown menu is set to "Anet A8" with a green checkmark and a green "Ustaw" button.

At the bottom right of the window, there is an orange "Dalej" button.



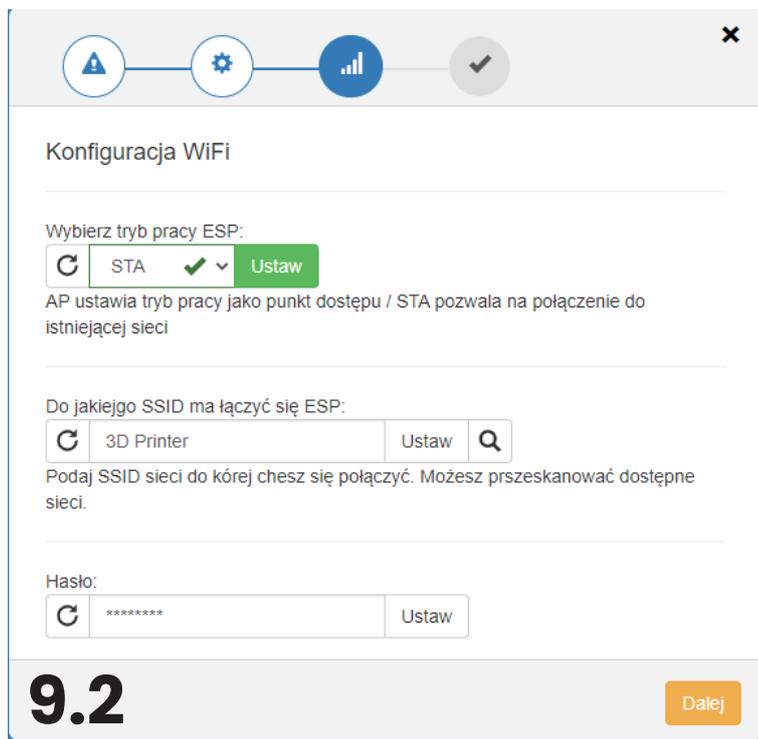
The screenshot shows a settings window titled "Konfiguracja WiFi". At the top, there is a progress bar with four icons: a warning triangle, a gear, a signal strength indicator, and a checkmark. The third icon is highlighted with a blue circle. Below the progress bar, the settings are as follows:

- Wybierz tryb pracy ESP:** A dropdown menu is set to "AP" with a green checkmark and a green "Ustaw" button.
- SSID punktu dostępu ESP:** A text input field contains "3D Printer" and a green "Ustaw" button.
- Hasło dla punktu dostępu:** A text input field contains "\*\*\*\*\*" and a green "Ustaw" button.
- Wybierz zabezpieczenie:** A dropdown menu is set to "WPA" with a green checkmark and a green "Ustaw" button.

At the bottom left of the window, there is a large "9.1" label, and at the bottom right, there is an orange "Dalej" button.

## 9.2 STA mode

allows you to connect the printer to your home wireless network.



The screenshot shows a configuration window titled "Konfiguracja WiFi". At the top, there is a progress bar with four icons: a warning triangle, a gear, a signal strength indicator, and a checkmark. The first three icons are in blue circles, and the fourth is in a grey circle. Below the progress bar, the text "Konfiguracja WiFi" is displayed. Underneath, there is a section "Wybierz tryb pracy ESP:" with a dropdown menu showing "STA" and a green "Ustaw" button. Below this, there is a text field for "Do jakiego SSID ma łączyć się ESP:" containing "3D Printer" and a "Ustaw" button. At the bottom, there is a "Hasło:" field with a masked password "\*\*\*\*\*" and a "Ustaw" button. A large "9.2" is displayed in the bottom left corner, and a "Dalej" button is in the bottom right corner.

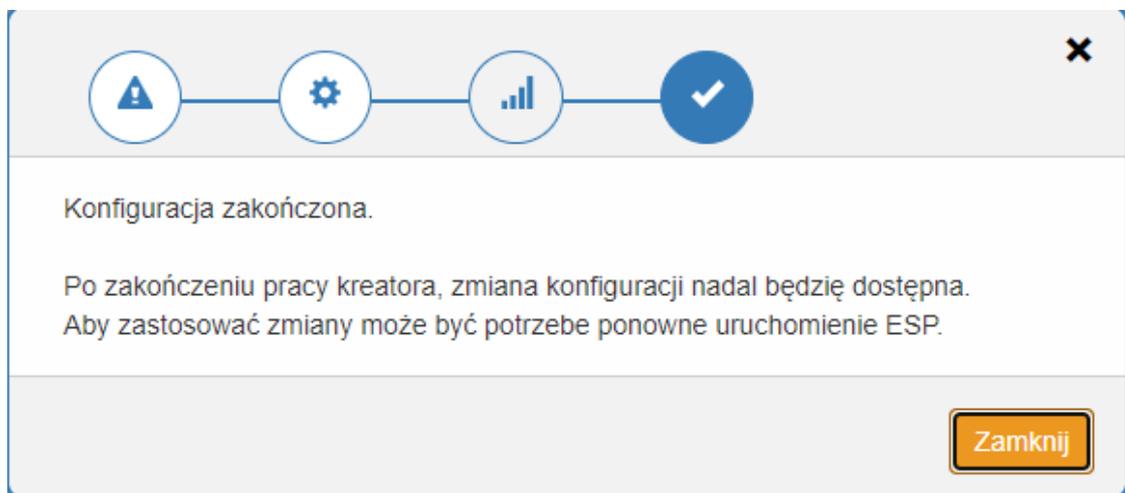
Press the magnifying glass icon, select your home wireless network from the list of available networks.

Click „**Set**”.

In the „**Password**” field, enter the key of your home wireless network.

Click „**Set**”.

Click “**Next**”



The screenshot shows a completion screen titled "Konfiguracja zakończona.". At the top, the progress bar now has four icons, all in blue circles, indicating that the configuration is complete. Below the progress bar, the text "Konfiguracja zakończona." is displayed. Underneath, there is a text field for "Do jakiego SSID ma łączyć się ESP:" containing "3D Printer" and a "Ustaw" button. At the bottom, there is a "Hasło:" field with a masked password "\*\*\*\*\*" and a "Ustaw" button. A large "9.2" is displayed in the bottom left corner, and a "Zamknij" button is in the bottom right corner.

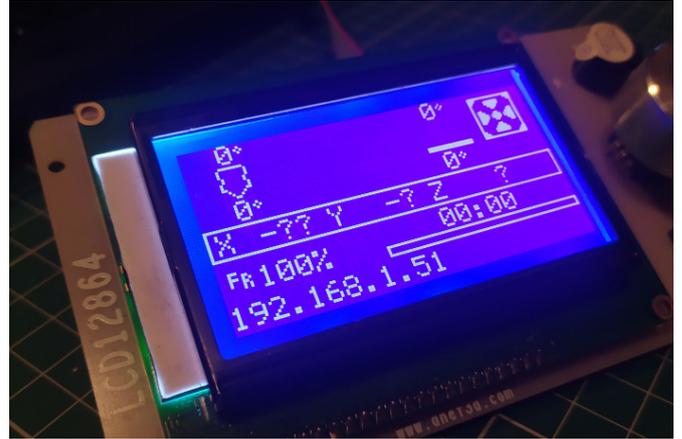
The system will inform you that the **configuration is complete**.

## 10. Restart the 3D printer

by disconnecting the device from the power source for about 30 seconds. After restarting the printer, the LCD will show that the **connection establishing is in progress**.



The established connection will be confirmed with the IP address obtained from the local DHCP server.



## 11. Connect the computer to the home wireless network.

## 12. Enter the IP address from the display into the browser to gain access to the printer control

