Table of Contents

1. AT commands controlled WiFi module 2

1. AT commands controlled WiFi module

The STM32WB55 microcontroller does not have the WiFi module built-in. There isn't also any additional WiFi-enabling element on the Nucleo board. The laboratory stand is equipped with a module based on ESP32-C3 SoC - super mini. It works as a WiFi modem connected with a UART port controlled with AT commands. It is connected to the hardware serial port lines RxD and TxD available at pins PC_0 and PC_1 respectively. To use it the HardwaSerial class object must be created.

```
// Serial port configuration (Constructor uses STM port numbering)
HardwareSerial WiFiSerial(PC_0, PC_1, NC, NC);
```



HardwareSerial class object constructor uses STM-like pin numbering, not Arduino numbering. Pins for RxD and TxD lines are specified. Because no hardware flow control is used the lines RTS and CTS remain unconnected.

In the setup function, the serial port should be opened and the bitrate specified.

```
// WiFiSerial is a hardware port for ESP32-C3 WiFi modem
WiFiSerial.begin(115200);
```



ESP32-C3 working as a WiFi modem uses 115200 bps and 8N1 frame format (8 bits of data, no parity control, one stop bit).

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