

NuMaker-PFM-M2351 WIFI Quick Start

Application Note for 32-bit NuMicro™ Family

Document Information

Abstract	This document describes how to use the WIFI sample code of NuMaker-M2351 board.
Apply to	NuMicro® M2351 Series. NuMaker-PFM-M2351 Board.

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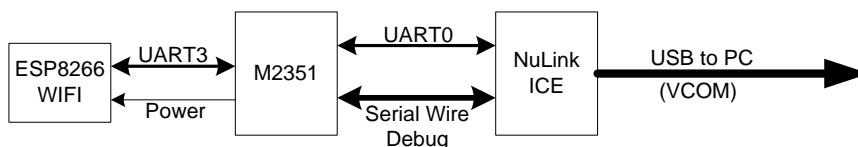
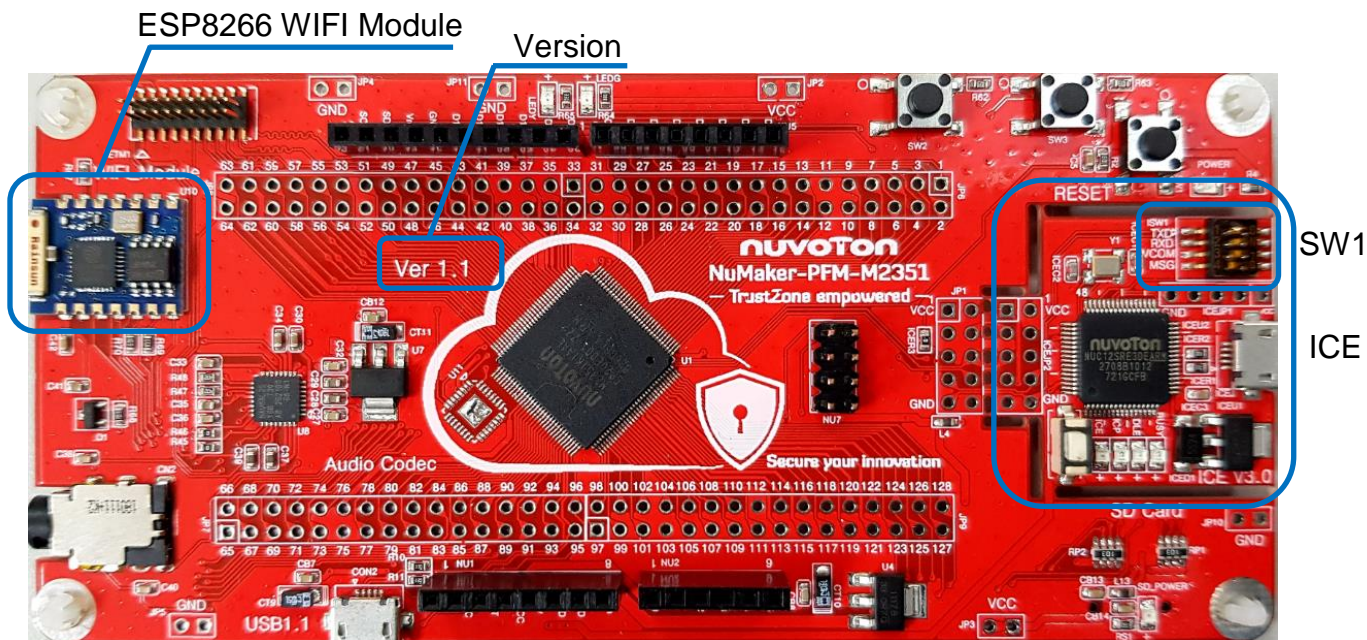
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1 Introduction

There is ESP8266 WIFI module on NuMaker-M2351 board for wireless connection. A sample code is provided in BSP to use this module. This document will introduce you how to use the sample code to demonstrate how to use the WIFI module on M2351.

2 Hardware connection

This document only could be applied to v1.1, v1.2 and v1.3. User can check the version mark on board to check the board version.

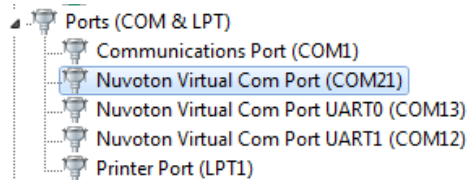


Block Diagram of *WiFi_bypass* sample code

The ESP8266 is connected to M2351 UART3 on board with PD7 to control module power on/off. The M2351 UART0 needs to connect to PC COM port to send command to ESP8266 by AT commands. The default baud rate is 115200 bps. ICE is used for debugging and downloading code. To enable the VCOM of ICE, user must set SW1 of ICE as:

- SW1.1 = ON
- SW1.2 = ON
- SW1.3 = ON
- SW1.4 = OFF

The VCOM of ICE is connected to UART0 on board. Therefore, by enabling VCOM of ICE, user could send AT commands by VCOM to ESP8266 directly.



3 WIFI Sample Code

The WIFI sample code is located at *bsp\SampleCodeNuMaker\WiFi_bypass*. It will bypass all data from ESP8266 to UART0.

When the sample code executes, it will enable the IO_LED on board to check whether code is running or not. Then, user can open VCOM of ICE in PC and send AT commands to check whether the WIFI module works or not.

Send AT+GMR:

```
Ai-Thinker Technology Co. Ltd.

invalid
AT+GMR
AT version:0.21.0.0
SDK version:0.9.5

OK
```

Send AT+RST:

```
OK
AT+RST

OK

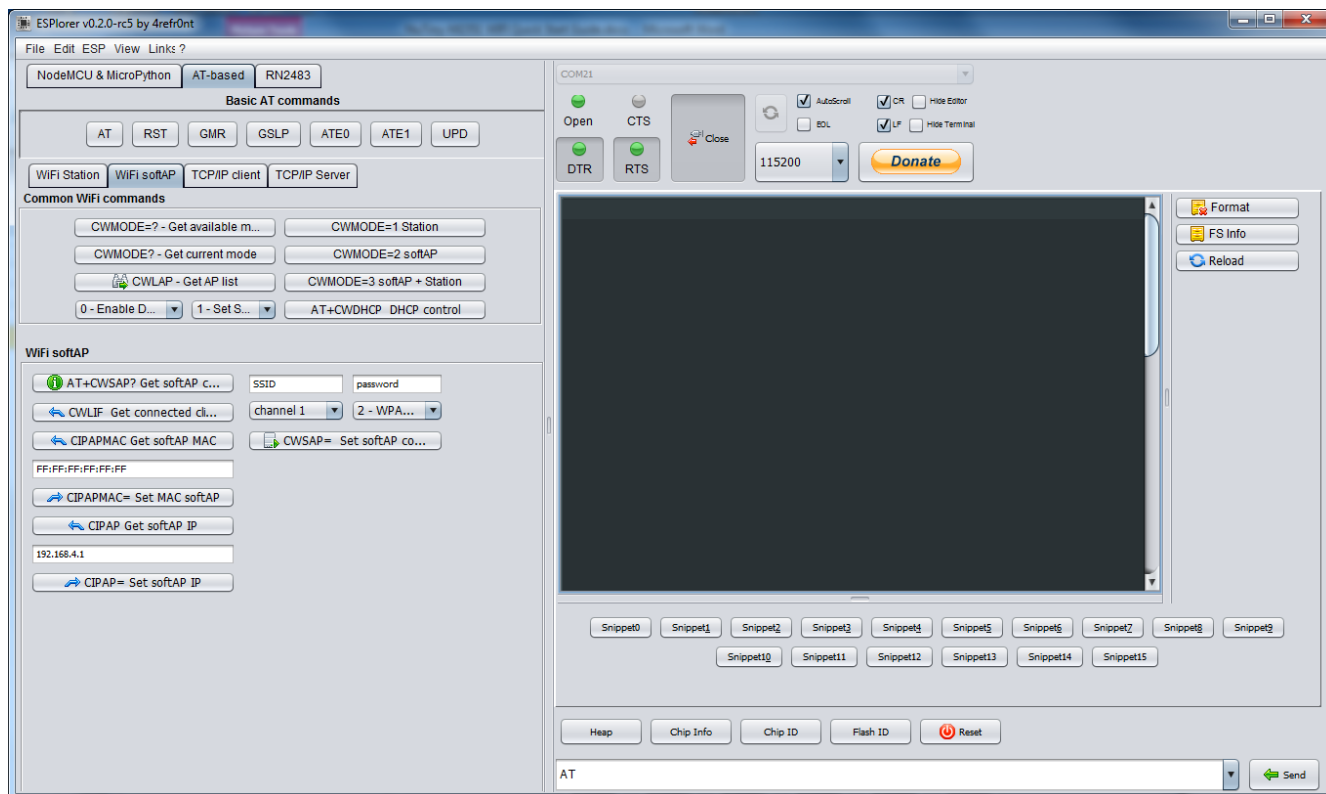
ets Jan 8 2013,rst cause:4, boot mode:(3,0)

wdt reset
load 0x40100000, len 816, room 16
tail 0
chksum 0x8d
load 0x3ffe8000, len 788, room 8
tail 12
chksum 0xcf
ho 0 tail 12 room 4
load 0x3ffe8314, len 288, room 12
tail 4
chksum 0xcf
csum 0xcf
```

4 ESPlorer

ESPlorer is a development tool for ESP8266. When the WIFI bypass sample executing, user can use ESPlorer to try the function of ESP8266, such as setting to station mode, softAP mode or get AP list. This could be helpful for development user's wireless applications on M2351.

For detail information of ESPlorer, please refer to <https://esp8266.ru/esplorer/>



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