# User's Manual Of S8266WIFI®,

## An Exp8266EX Debug and Downloading Toolkit

**May, 2015**

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# 1. Introduction

S8266WIFI® is a software toolkit presented by Anylinkin!® to facilitate the development and deployment of those modules based on ESP8266EX, a cost-effective, flexible, functional, high-performance 802.11 b/g/n WIFI SOC. Those developers and users who are either newbie expecting to get familiar with this SOC, or an in-depth developer who are looking forward to some entry to their customized usages, might find toolkit very helpful.

The toolkit provides some functions helpful for debug, development, and deployment to ESP8266 modules via the COM serial port. It is compatible with all the AT commands provided by the Espressif standard SDK. Besides, some additional functionalities are also provided, such as Power On/off the modules, Power Reboot the modules, Sleep the modules, On-Press-Program® (OPP®) the modules, RAM downloading the modules, Hexadecimal and ASCII mode switching, and etc. Meanwhile, abundant status report and debug information are also available, quite helpful for debug, development and deployment verification.

The latest software Toolkit could be downloaded at: http://pan.baidu.com/s/1pJv3bUN, and free of usage for some times and duration. Constant upgrading could be found here as well. And any suggestions or bug reports to the toolkit are quite welcome with an email to smart-iot@anylinkin.com and 1521340710@qq.com .

The document is a user manual to the software toolkit, S8266WIFI®.

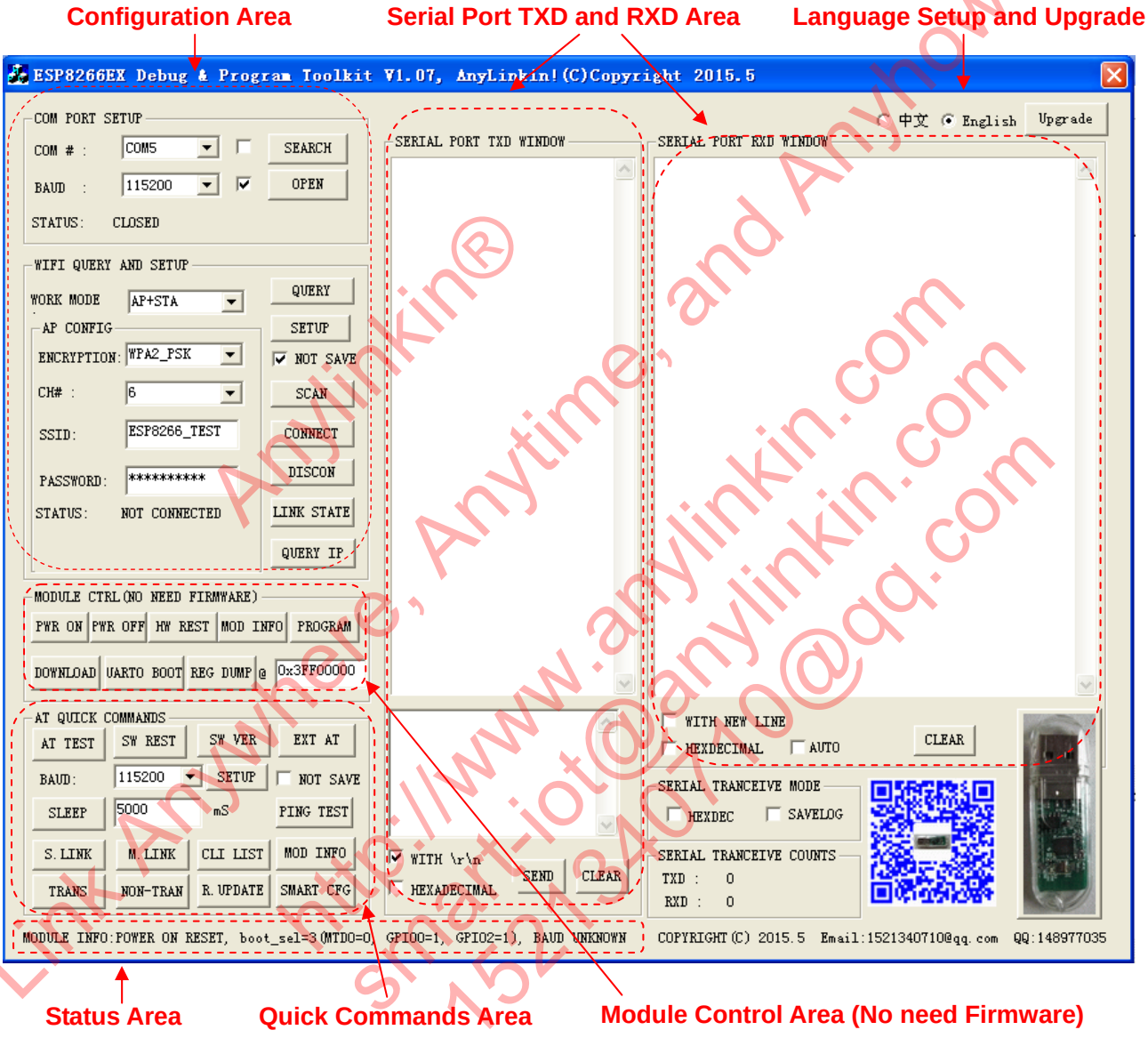
# 2. Features

The toolkit is quite useful for debugging, development and programming to an ESP8266EX WIFI module with below features:

1. Auto-Search the COM# and baud rate an ESP8266EX module attached, without any troubles due to forget or not know the baud rate of an attached Espressif module.
2. Adaptive Baud Rate matching with 74880bps supported, to avoid unread codes during bootstrap which is helpful for cause-locating and trouble-shooting.
3. Supporting COM# above 10 without any necessity to adjust the COM number from the computer side.
4. Capable of communicating both in Hexadecimal and normal ASCII mode.
5. Capable of recording the logs on UART RXD.
6. Support UART RXD display within auto mode. I.e. those data invisible in ASCII mode of your selection will be displayed as "\[hex value]".
7. Available with a quick launch to some frequently used AT commands.
8. Available with a capability to boot the ESP8266EX module from serial port.
9. Available with a flexible flash downloading interface, with On-Press-Program® (OPP®) capabilities, supporting various types of Flash Map and SPI configuration, more debug information output, GPIO selection for LED indicator, and downloading speed selection during flash programming.
10. Supporting various types of modules based on ESP8266EX SOC
11. Supporting various Windows Operation Systems.
12. Setting automatically saved and loaded
13. More to be found out.

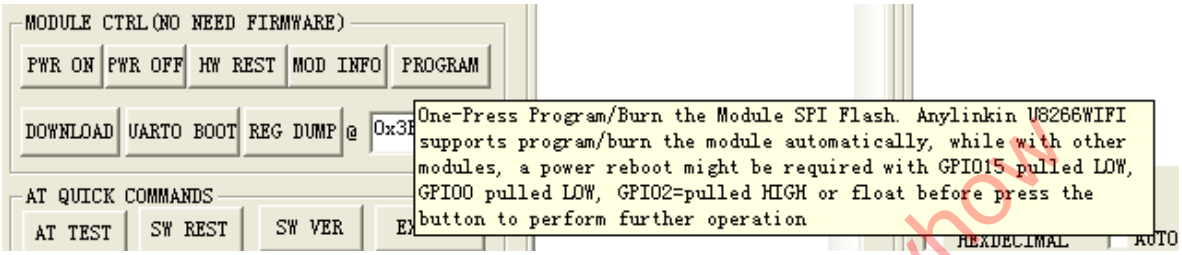
# 3. Detailed Descriptions

## 3.1 Main Window




There are four main areas in the main window, which are: (1) a configuration area to configure the serial port, WIFI mode and parameters, and modules, (2) module control area(No need firmware) to perform operations such as power on off, hardware reset, module info retrieval, program, ram download, boot from UART0, registers dump without any need of firmware. (3) a Quick Command Area to issue some frequently used AT commands, and (4) a Status Area to provide some information about the ESP8266EX modules.

There are tool tips for each button operation as well. Please see below as an example when the mouse moves onto the button PROGRAM.




## 3.2 First time to execute the software toolkit

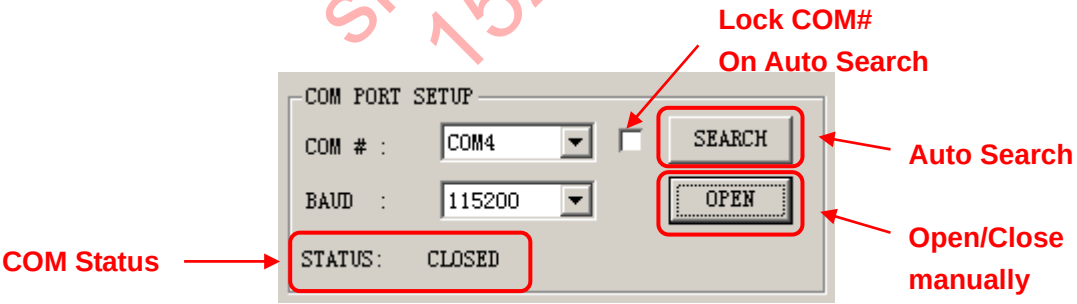
If it is the first time to open the software, there will be a message box displayed as below:


Just Press "CNACEL" if you don't expect to register it now, and the main windows will be launched and you will use the software in a trial manner. If you expect to register now, please jump to section 5.1 Registration for details.

## 3.3 Configure Areas Operation

### 3.3.1 COM Serial Port Setup Area

In the left top side of the toolkit, there is the COM PORT SETUP area as below:

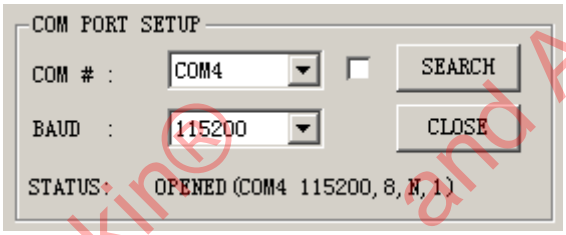



This area is to configure the COM Serial Port at the PC side. The COM number and baud rate should be consistent with that of an ESP8266EX module before the serial port could

communicate with the module.

#### 3.3.1.1 COM Serial Port Setup - Manually

Initially, the bottom button is displayed as "OPEN" and the status is displayed as "CLOSED". Press the pup-up button  of the "COM#" and the "BAUD" comb boxes respectively to select the right COM Port and set the right baud rate. Then press the "OPEN" Button  . Then the status will displayed as below:




And you may noticed that the status get changed to something like "OPENED (COM4 115200,8,N,1)", which is the current COM status and configuration you just did. Meanwhile, the bottom button is also changed to "CLOSE" which means that you could press it if you expect to close the serial port.

Now, you open the COM serial port. If the configuration you select here is consistent with that of the ESP8266EX module you attached to the COM port, then, you could start communicate with the module now.

#### 3.3.1.2 COM Serial Port Setup – Automatically Searching Module

It is required that the COM serial port setup should be consistent with that of the attached ESP8266EX module. However, you may have to check which COM port the module attached. Or you may forget or lost that configuration in the module, or you just bought a module but failed to know the current baud rate configuration of that module. Normally you may have to try different baud several times to guess out the baud rate of a module. It is time-consuming sometimes and also boring as well.

This toolkit provides a capability to automatically search out the COM port the module attached and the baud rate, and then complete the setup automatically. You just need to press the button "search"  with the module attached on the COM port. Then the toolkit will automatically be searched out the configuration for you.

This capability is compatible with any version of SDK firmware of AT commands.

#### 3.3.1.3 COM Serial Port Setup – Auto Searching Module with specified COM#

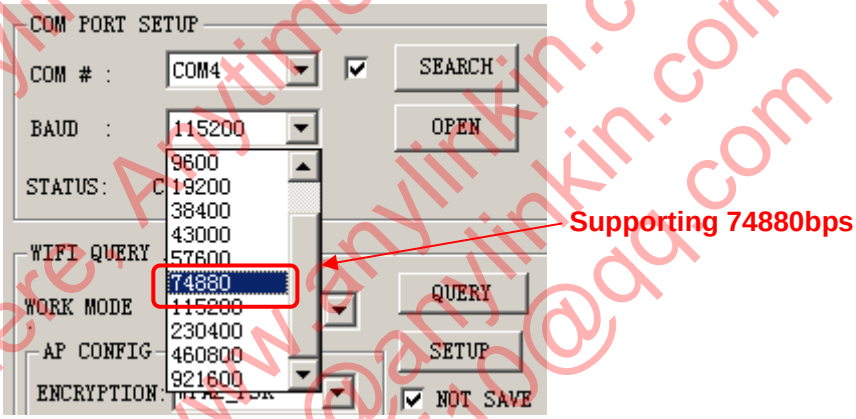
Often the number of the COM port number that the ESP8266EX module attached might be known and it is only necessary to search the baud rate without any need to

automatically search the port number so as to save the time of searching. Then the COM port number might be locked at a specified and fixed value during the auto search with the check box checked between the COM# combo box and SEARCH button. When the check box has been checked, only the baud rate will be searched with the fixed COM#.

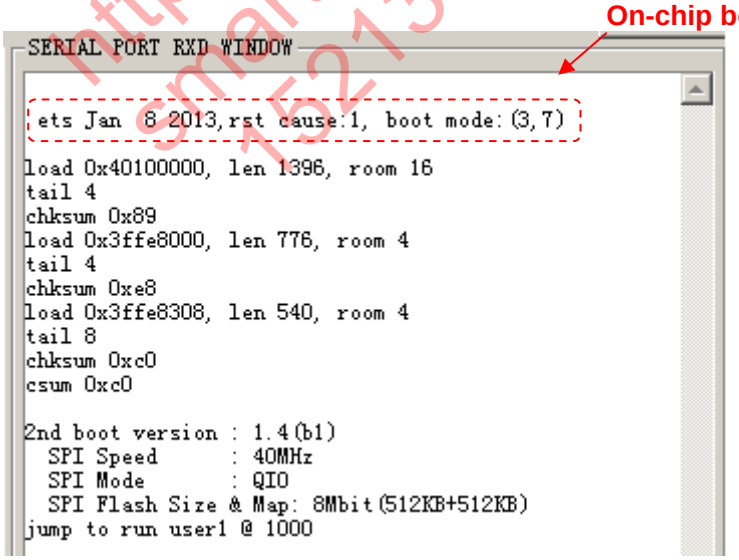
### 3.3.1.4 Baud Rate Support – 74880bps

The ESP8266EX normally outputs the boot-up information via its UART0 at a baud rate of 74880bps if the external oscillator has a frequency of 26MHz. Sometimes the boot-up info is quite important to debug why and how the module is of malfunction. Therefore a toolkit able to set up the COM port at 74880bps is quite necessary for ESP8266EX module debug. However, most COM serial port monitors do not support such a baud rate.

The toolkit does support to setup the COM serial port at a baud rate of 74880bps. Please see below, just press the pup-up button of the "BAUD" comb box and select 74880bps, and press OPEN/CLOSE button to open the COM serial port at 74880bps:



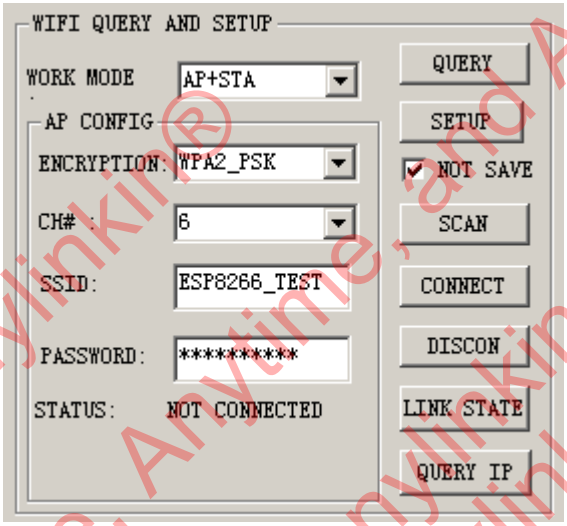

Then the COM serial port has been set up to communicate in 74880bps. Now if you power on reboot the module or reset the module via the nRESET pin, you will watch the boot-up information as below other than some unreadable codes



The on-chip boot-up information is quite important for some initial debug or trouble shooting to the module. **More details could be found in below section**

### 3.3.2 WIFI Query and Setup Area

This area, located in the middle left side of the toolkit, is to configure the WIFI parameters of at ESP8266EX module side. The query and setup will be achieved by sending corresponding AT commands. Therefore, the module should have a firmware with the support to the Espressif AT command set.

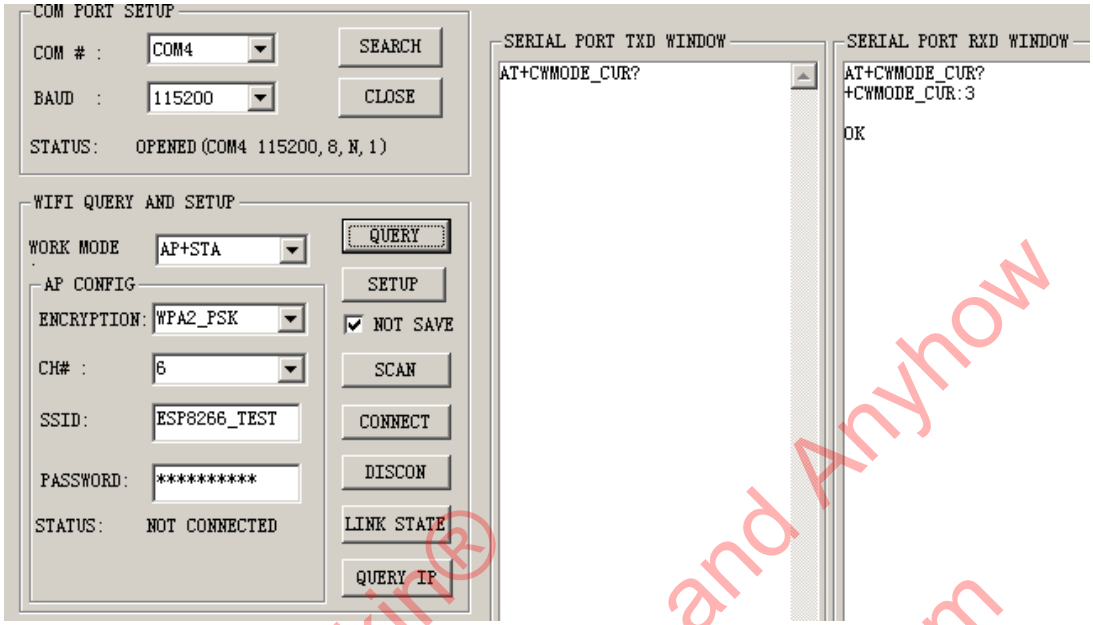



#### 3.3.2.1 Query WIFI mode

The ESP8266EX SOC supports three types of working mode which are STA (station), AP (access point) and STA+AP modes. Therefore a WIFI module based on ESP8266EX normally support the three working mode as well.

Just press the "QUERY" button 

, and the content of WORK MODE combo box will be changed to the current mode of the attached module. Meantime, you may find that there are some AT commands displayed in SERIAL PORT TXD WINDOW and SERIAL PORT RXD WINDOW as below.




The Espressif SDK AT command set support a manner either to save your setting or not. Here is a checkbox called NOT SAVED 

. Check it before pressing the "QUERY" button if you just expect to query the CURRENT mode value other than that is stored in FLASH. Or do not check it if you just expect to know the mode value that is stored in the FLASH which will be selected during boot-up initialization as a default.

Kindly noticed that in this example above the WIFI module works in STA mode. Therefore some of AP parameters are meaningless and grayed.

### 3.3.2.2 Setup WIFI mode

Just select the expected mode value from the popup of WORK MODE combo box, and then press the "SETUP" button 

, and the content of WORK MODE combo box will be set into the module. Meantime, you may find that there are some AT commands displayed in SERIAL PORT TXD WINDOW and SERIAL PORT RXD WINDOW similarly.

There are three modes could be set here.

If the STA mode is selected from the popup, the combo boxes of ENCRYPTION and CH# will be grayed since no need of such parameters for a station. And the press to SETUP button will just issue an AT command of "AT+CWMODE =1" or "AT+CWMODE_CUR=1", depends on whether you check the NO SAVE checkbox.

If the AP mode is selected from the popup, the combo boxes of ENCRYPTION and CH# will be selectable and the ENCTRPTION, CH#, SSID, and PASSWORD should be set as expected before you press the SETUP button. And two AT commands will be issued consequently. One is "AT+CWMODE=2" to set up the mode into AP manner, and the other is the "AT+CWSAP" command to set up the AP SSID, password, channel, and encryption method. Checkbox NOT SAVED will determine whether to save the setting into FLASH as

well. Check carefully the SERIAL PORT TXD WINDOW and SERIAL PORT RXD WINDOW to find more conceptive understanding here.

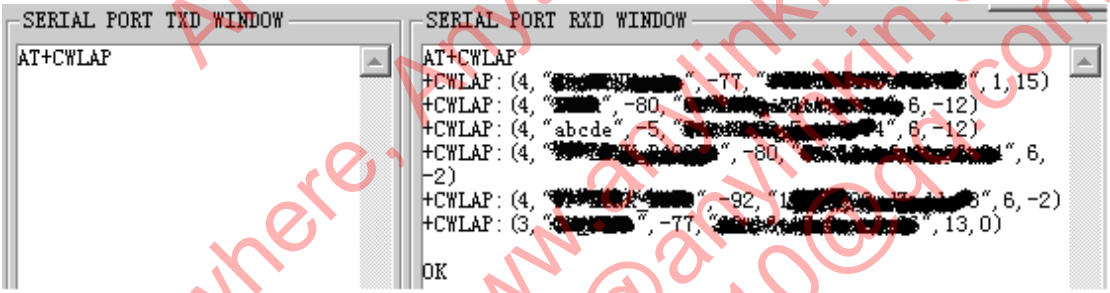
If the AP+STA mode selected from the popup, the combo boxes of ENCRYPTION and CH# will be active again. However they are meaningless and only an "AT+CWMODE =3" will be issued and the AP setting will not change. That is, if you set a mode into AP+STA mode, you should ensure the AP settings are set as expected before via AP mode setting. To do like this is just because most of the time the AP setting are not changed therefore, there is no additional "AT+CWSAP" command followed. But kindly remember that AP settings should be set as well when the module works in AP+STA mode.

#### 3.3.2.3 Scan WIFI AP Signals

This function is only available when the module works in STA or STA+AP mode. Therefore, the SCAN button 

will be grayed if the AP mode is selected.

Press the SCAN button. Then an AT command of "AT+CWLAP" will be issued and the signals scanned out will be displayed in the SERIAL PORT RXD WINDOW as below as an example:




Please check the Espressif document about the AT commands for explanation to the response of this command.

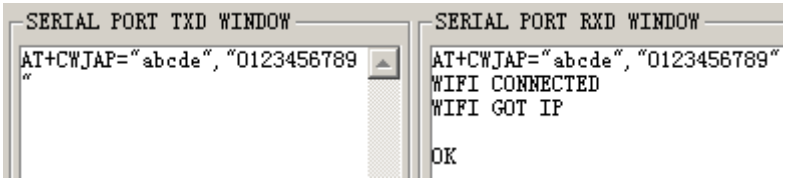
#### 3.3.2.4 Connect and Disconnect an AP

These two functions are only available when the module works in STA or STA+AP mode. Therefore, the CONNECT button 

and the DISCON button 

will be grayed if the AP mode is selected.

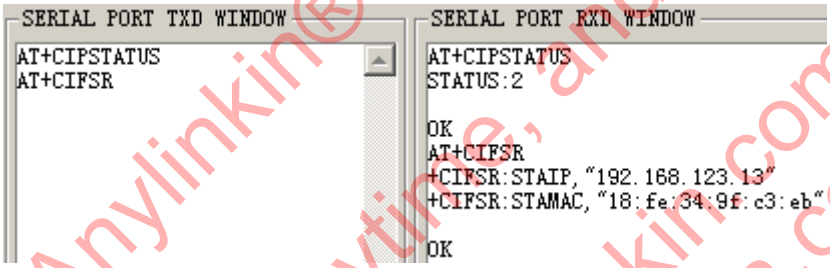
When to connect an AP signal, please input the correct values of AP signal in the edit boxes of SSID and PASSWORD at first. Then press the CONNECT button to connect the signal. You may see an AT command of "AT+CWJAP" is issued to connect the AP from the SERIAL PORT TXD WINDOW and the connection result will be displayed in the SERIAL PORT RXD WINDOW as below for an example:



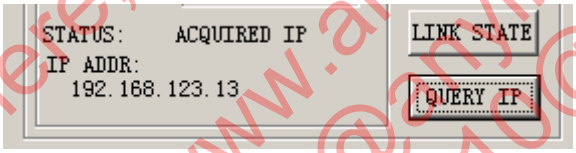

Press the button DISCON will issue the AT command of "AT+CWQAP" to disconnect the connection to the AP.

#### 3.3.2.5 Link status and Query IP

Press the LINK STATE button and QUERY IP button will get the link status and ip acquired as below for an example:

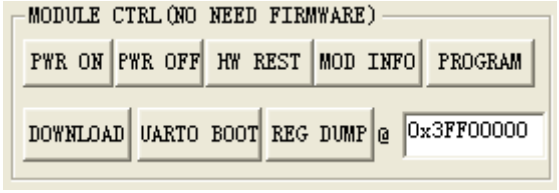



And the WIFI status will be displayed as below to indicate the current status and IP acquired as below for an example:




## 3.4 Module Control Area Operations

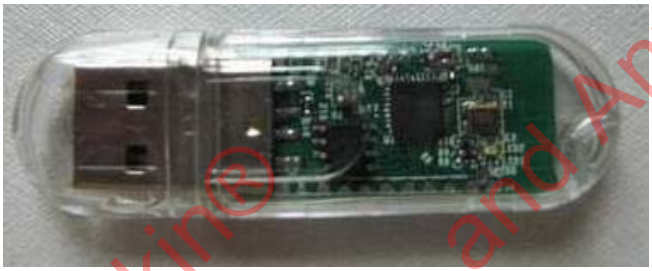
This area, located in the down middle left side of the toolkit, is to control the module without any need of firmware, just via the serial port. As per the operations here, Anylinkin® U8266WIFI Module hardware supports operations in an automatic manner, while other modules may not support automatically. For those modules, additional power reboot with with GPIO15 pulled LOW, GPIO0 pulled LOW, GPIO2=pulled HIGH or float might be required before performing these operations.



### 3.4.1 Power On, Power Off, Hardware Reset the Module

These functionalities require hardware support and they are achieved by setting on and off the power supply via the hardware flow control of the USB-Serial chip on the ESP8266EX module.

The customized USB dongleU8266WIFI based on ESP8266EX SOC by Anylinkin® with the hardware support is available on eBay http://www.ebay.com/itm/282162857143.



### 3.4.2 On-Press® Module Info retrieval, Register Dump, Boot from Uart0, RAM Download, Program,

These functionalities are achieved by bringing the ESP8266EX into a UART boot-up mode. To bring about a UART boot-up, a low to high transient should be attached CHIP_EN pin, nRESET pin, or the power supply to generate a reset and ensure the GPIO0 is pulled down during the reset out. After reset out, the GPIO0 could be released and then send UART commands such as synchronization sequence and other UART boot commands etc.

These functionalities do not rely on the firmware but On-Press® will require hardware support to configure the reset and GPIO0 timing by the toolkit automatically. The customized USB dongle in the 3.4.1 Power On, Power Off, Hardware Reset the Module provides the support in hardware. Therefore, the users only need to just On-Press® the corresponding button by the toolkit without any manual switch, wire, or jumpers to complete all the work. So it is efficient for users to burn, debug and mass production.

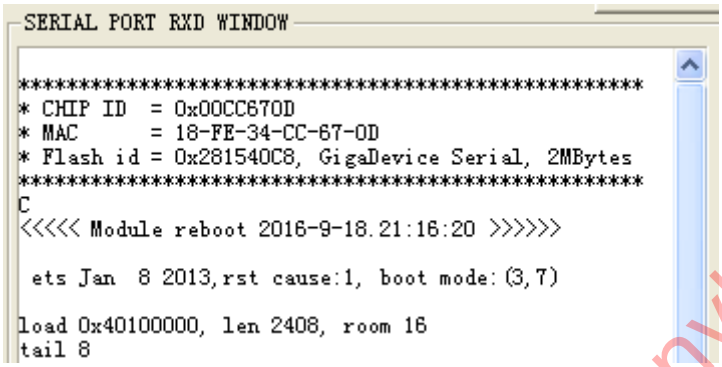
If the module does not provide such a hardware support, these functionalities could be implemented as well but require to pull down the GPIO0 and to provide a reset manually as did in many modules. So those modules other than the customized USB dongle above could use these three functionalities as well.

#### 3.4.2.1 Module Info Retrieval

Press the MOD INFO button 

in the Module Control Area, and wait some time around 3~5 seconds, there will come out the module info in the Serial Port RXD Area as

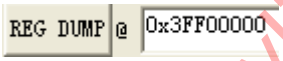
below as an example:




After that, there will be a hardware reboot so as to return normal boot mode.

### 3.4.2.2 Register Dump

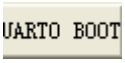
Input the start address to dump, and press the REG DUMP button




in the Module Control Area, and wait some time around 5~7 seconds, there will come out the registers dump data in the Serial Port RXD Area as below as an example:


After that, there will be a hardware reboot so as to return normal boot mode.

#### 3.4.2.3 Boot from UART0

Press the button UART0 BOOT 

will bring the module into UART0 boot mode, and perform a synchronization sequence, then wait the input to the serial port. Meanwhile the UART TXD and RXD get changed to hexadecimal automatically as well.

In this manner, UART0 boot command protocol could done without any need of firmware.

To exit the UART0 Boot mode, please hardware reset the module.

#### 3.4.2.4 RAM download and Flash Program

More details about these functionalities please see section 4. Download, Program and Boot from UART0 Windows.

## 3.5 Quick AT Commands Area

Quick commands Area contains a lot of frequently used AT commands. Relationship of these buttons and AT commands is listed as below.

| Buttons | AT Commands | Explanations | |
|---|---|---|---|
| AT TEST | AT | AT test Commands | Standard Espressif AT command |
| SW REST | AT+RST | Reset Command | Standard Espressif AT command |
| SW VER | AT+GMR | Get Firmware Version | Standard Espressif AT command |
| PING | AT+PING="www.baidu.com" | PING command used to test the link | Standard Espressif AT command |
| S.LINK | AT+CIPMUX=0 | Single Link mode | Standard Espressif AT command |
| M.LINK | AT+CIPMUX=1 | Multiple Link mode | Standard Espressif AT command |
| CLI LIST | AT+CWLIF | Client List | Standard Espressif AT command |
| TRANS | AT+CIPMODE=1 | Transparent Transmission mode | Standard Espressif AT command |
| NON-TRAN | AT+CIPMODE=0 | Non-transparent Transmission mode | Standard Espressif AT command |
| R.UPDATE | AT+CIUPDATE | Remote Upgrade | Standard Espressif AT command |

| | | | |
|---|---|---|---|
| SMART CFG | AT+CWSTARTSMART | Smart Configure | Standard Espressif AT command |
| MOD INFO | AT+MODULEINFO? | Get the module hardware and firmware information such as chip id, flash size, SDK version, and firmware info etc | Customized AT command |

### 3.5.1 Configure the baud rate of the module

Press the arrow button beside the combo box of BAUD to select the expected value, and either set true or not the check box of NOT SAVE NOT SAVE, and then press the button SETUP to configure the baud rate of the module.

This functionality is achieved by issue the AT command of "AT+UART" or "AT+UART_CUR" depending on whether to save the setting into the FLASH or not. Therefore, the functionality requires the module with firmware supporting Espressif AT Command set.

Meanwhile, the baud rate in the COM PORT SETUP will be set as well to keep consistent with the module baud rate.

### 3.5.2 Deep Sleep the module

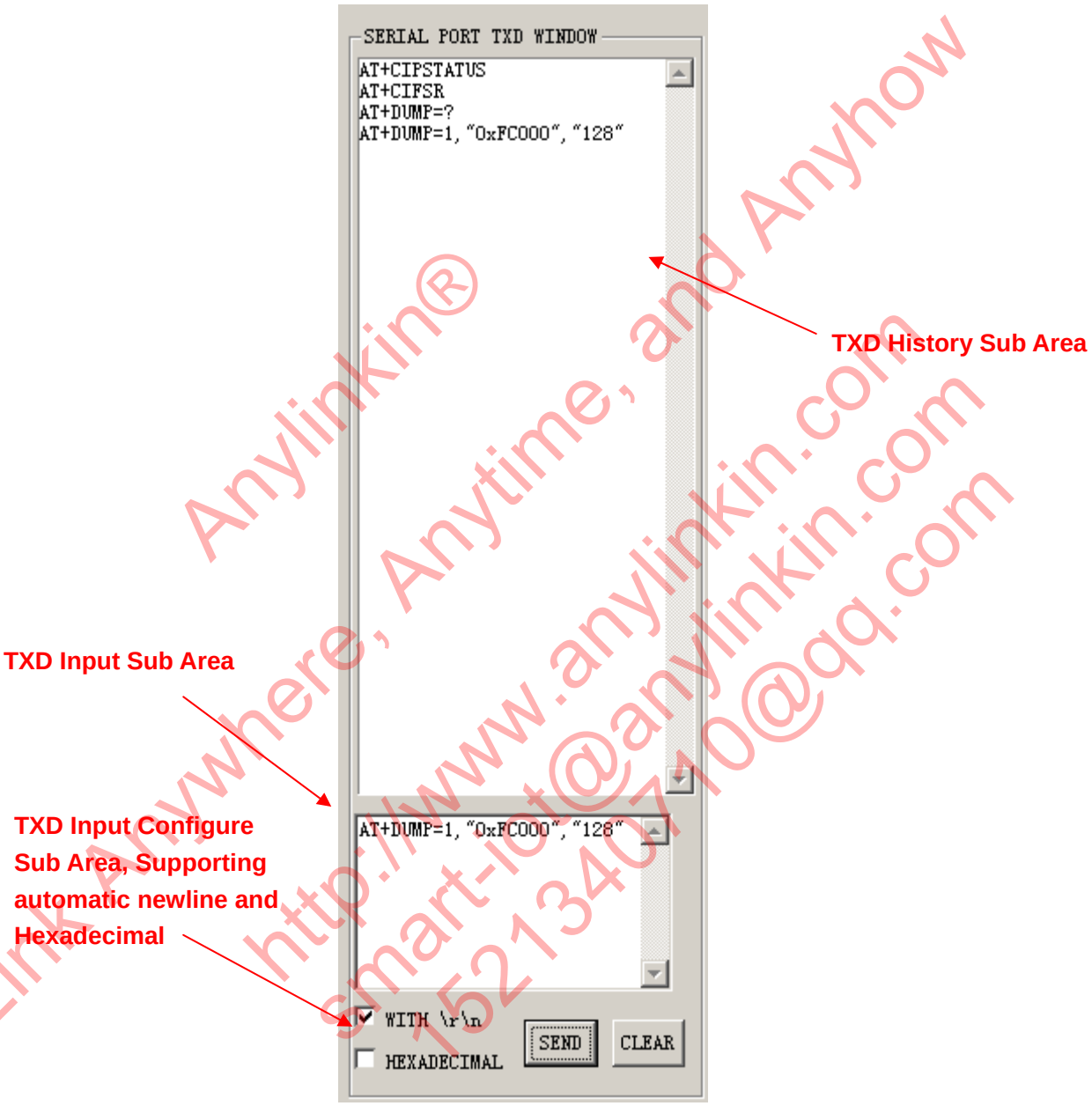
Input the sleep duration in the SLEEP edit box 5000 mS and then press the SLEEP button SLEEP, the module will go to sleep for the duration and then wakeup automatically upon timeout.

This functionality will require both hardware and firmware support. In hardware the GPIO16 pin should wired to nRESET pin or CHIP_EN pin so that the transient output from GPIO16 pin upon timeout could bring about a RESET or CHIP_EN transient signal to wakeup the SOC from sleep. In firmware an AT command should be added to support sleep. Please contact with us via the email 1521340710@qq.com if you feel interested in the sample source code of sleep implementation.

The customized USB dongle in the 3.4.1 Power On, Power Off, Hardware Reset the Module provides the supports both in hardware and firmware.

## 3.6 Serial Port TXD and RXD Windows

### 3.5.1 Serial Port TXD Window



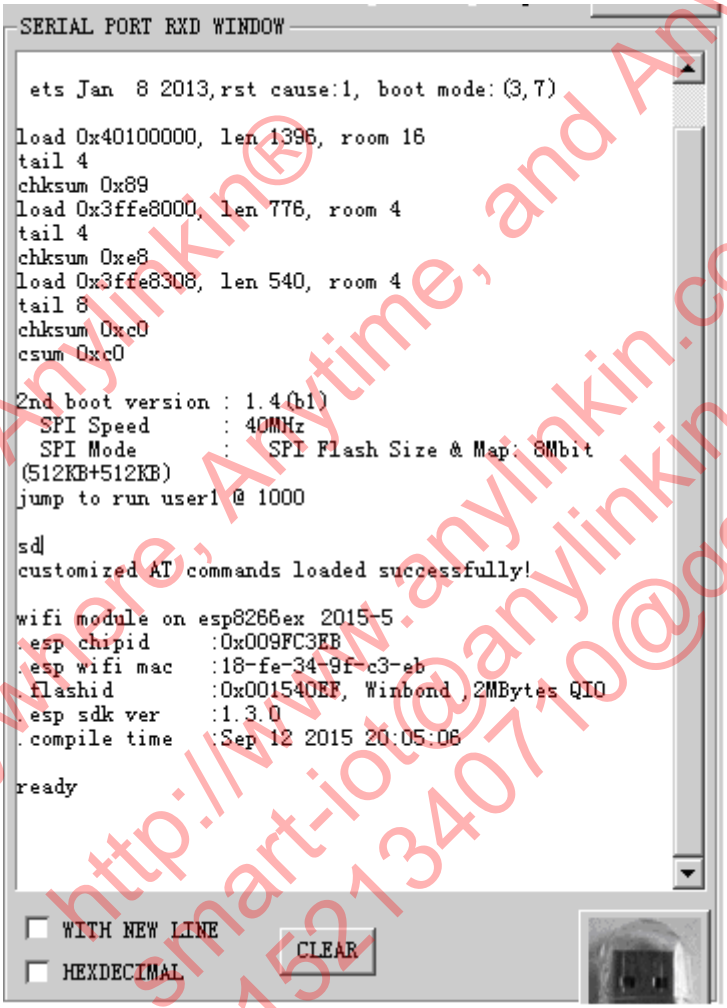



Serial Port TXD Windows includes three sub areas as above picture. TXD History Sub Area records the TXD data history. And TXD Input Sub Area could be used to input some TXD data either in Hexadecimal mode or ASCII mode, either with new line or not.

#### 3.5.1.1 Feature1: Sending with New Line Addition or not

#### 3.5.1.2 Feature1: Sending in ASCII or Hexadecimal format

### 3.5.2 Serial Port RXD Window




#### 3.5.2.1 Feature1: Displaying Unreadable codes by Adaptive Baud Rate Dynamic

For some reason, the bootloader and user codes are not always using a same baud rate during a power on reset or a reset caused by extern nRESET pin. Therefore, unread able codes will be observed during these reboot.

The software uses a kind of algorithm called Adaptive Baud Rate Dynamic, or ABRD®, which will adjust the baud rate at PC side adaptively to the module baud. So there is no unreadable codes since they are all readable, as displayed in above picture upon a power

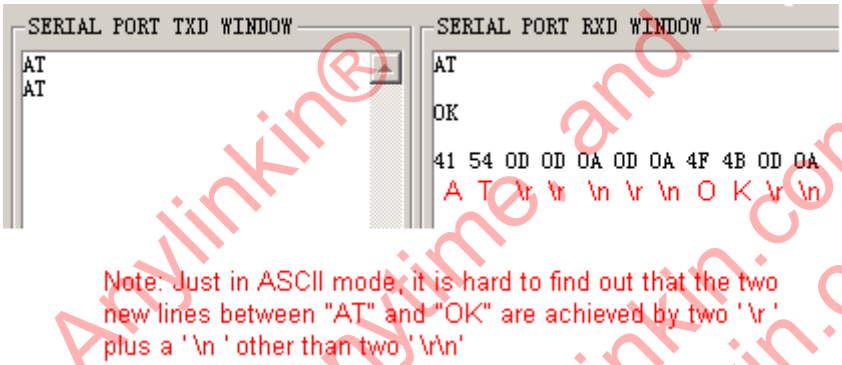
on reboot, and all information are readable.

#### 3.5.2.2 Feature2: Displaying with New Line Insertion Automatically

Sometimes a differentiation of response batches is quite important. New Line could be inserted during display.

#### 3.5.2.3 Feature3: Displaying in ASCII or Hexadecimal mode

Sometimes communications are performed in hexadecimal. Sometimes, some un readable control chars needs to be read out. Therefore a Hexadecimal display is necessary as supported by the toolkit.




Note: Just in ASCII mode, it is hard to find out that the two new lines between "AT" and "OK" are achieved by two '\r' plus a '\n' other than two '\r\n'

# 4. Download, Program and Boot from UART0 Windows

## 4.1 Downloading Image to RAM Directly

Not flexibly Available Now.

## 4.2 Program Image to SPI Flash

### 4.2.1 Launch the Program Window

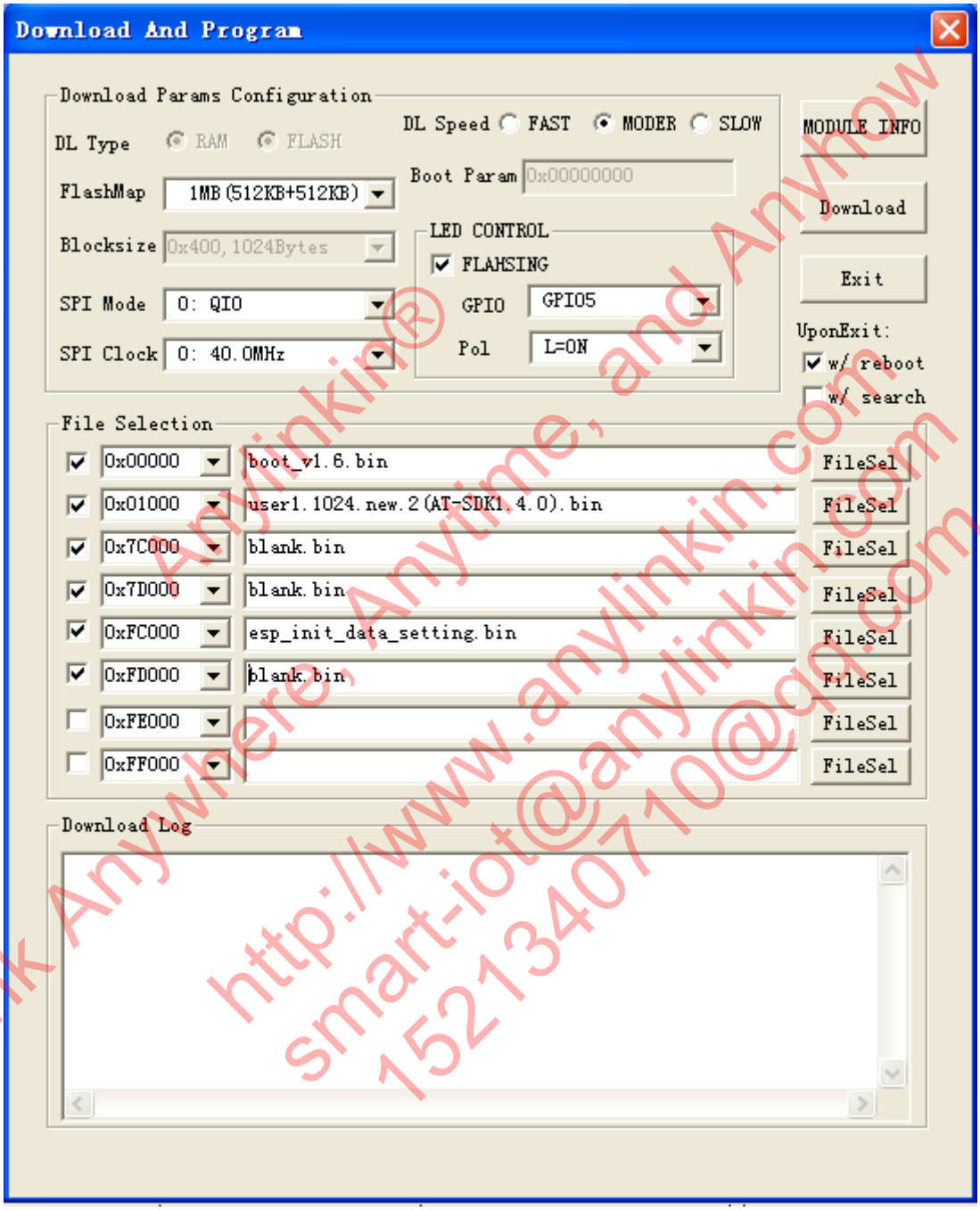
If you are using a customized USB dongle in the 3.4.1 Power On, Power Off, Hardware Reset the Module, just press the PROGRAM button 

in module setup area as described in 3.4 Module Control Areas Operation. Then, the program window will be launched. NO NEED OF ANY ADDITIONAL JUMPER OR WIRING. IT IS A TRUE ONE PRESS PROGRAMMING, OPP®.

If you are using some other modules, you may have to pull down the GPIO0, and then power on reset or reset via nRESET pin the module, and then press the PROGRAM button. That is, you may have to bring the module into UART0 boot manually for flash burning.

## 4.2.2 Program Window and Features

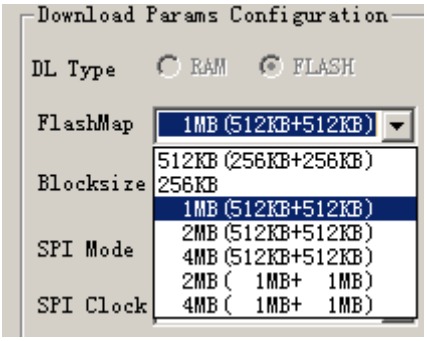
### 4.2.2.1 Program Window Snapshot




### 4.2.2.2 Download Parameters Configuration : FlashMap, SPIMode, SPIClock

These configurations will be burned into the Flash Boot area during programming. A correct configuration is quite important for a successfully programming.

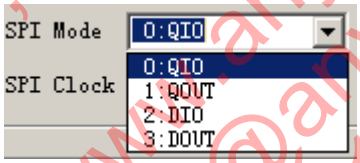
Select correct item from the **FlashMap** Combo Box like below:




Kindly noticed that it is not to select definitely the real flash size. It is just the image map mode when you compile to generate the image. That is, even your module has a Flash of 2MBytes, you may still burn a 1Mbytes image into it. Then please select 1MB type here. Please refer to Espressif Document *<<2A-Espressif IOT SDK User Manual>> section 5 Flash Map* for more detail. A mismatched selection with your compilation may bring about a failure boot-up.

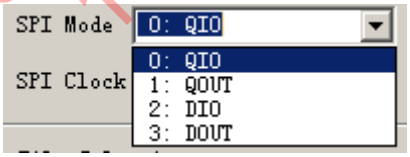
An interesting feature is that, when you change the Flash Map selection here, the default addresses list to burn the files, mainly for those configurations areas such as 0xFC000 etc, will be changed automatically as well upon the Flash Map selections. Therefore, you don't have to change the values as well

Select correct item from the **SPI Mode** Combo Box as below:




Kindly noticed that the selection will be burned into the boot area of the Flash during programming and the ESP8266EX will use the burned value to configure the SPI bus during boot up. Therefore, if you expect release some SPI pins for GPIO functions, please select mode values other than QIO here. Otherwise, please use QIO as your compilation default.

Select correct item from the **SPI Clock** Combo Box as below:

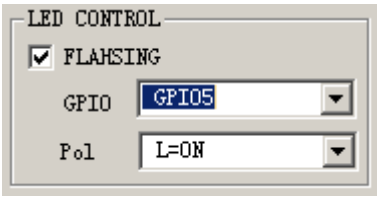



Kindly noticed that the selection will be burned into the boot area of the Flash during programming and the ESP8266EX will use the burned value to configure the SPI bus during boot up. Therefore, if your module hardware are not in good layout with the SPI Flash bus, or you expect to ensure more timing abundance, you could select a lower frequency here. And after burning, the ESP8266 will access the SPI Flash in that lower

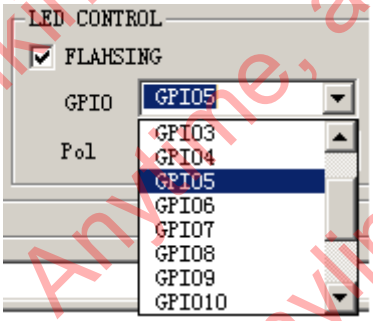
frequency. Otherwise, please use 40MHz as your compilation default.

#### 4.2.2.3 Download Parameters Configuration : LED Indicator Selection

This is just an optional feature in order to give some better user interface during programming. If you specify the LED selection and LED level here, the LED on your module will be flashing during the program.




Select correct item from the **LED Sel** Combo Box as below, which specify the GPIO Number to control the LED:




And select correct item from the **LED Level** Combo Box as below, which specify the GPIO Level light on the LED:


An "L=ON" means that an output of '0' on the GPIO will light on the LED. While An "H=ON" means that an output of '1' on the GPIO will light on the LED. Please specify it according to your module hardware.

And enable or disable the Led Flashing by setting true or not the FLASHING checkbox 

.

#### 4.2.2.4 Download Speed Selection

Some hardware modules have a quite good quality by design and could support a fast speed serial communication to save the time consumption during programming while some others might be not and have to burn the flash in a slow speed for stability and success of programming. Downloading Speed could be selected from below radios:

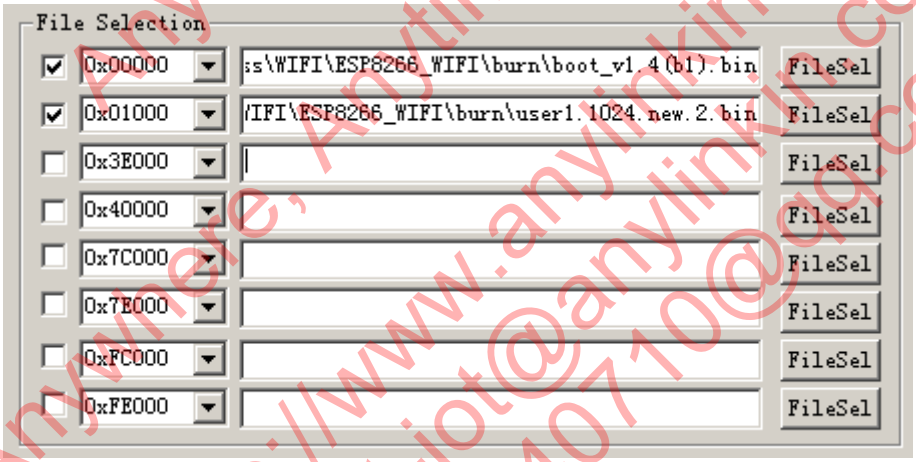
#### 4.2.2.5 Download Parameters Configuration : Boot Param

#### 4.2.2.6 Actions upon Download Dialog Exit

Options of UponExit are available with "w/ reboot" and "w/ search" to additional reset the module and automatically search the module baud rate when exiting the download dialog.

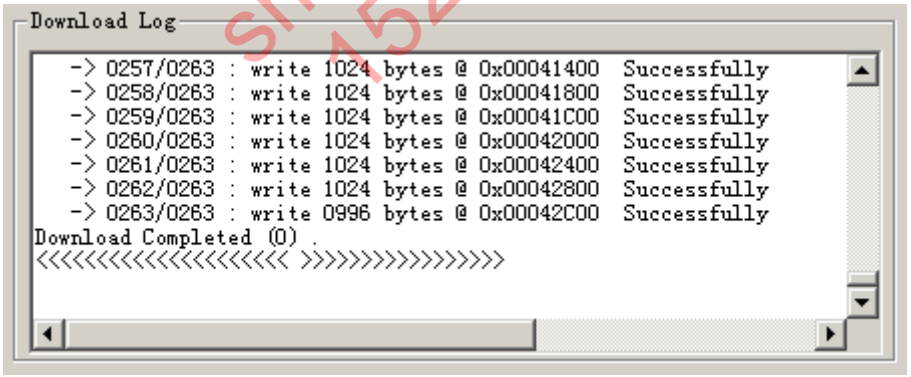

The "w/ reboot" option will bring about a hardware reset to the module upon exiting which will require a hardware design support. The customized USB dongle in the 3.4.1 Power On, Power Off, Hardware Reset the Module, provides the support in hardware. The "w/ search" option will bring about a automatic baud rate search upon exiting, which will be helpful if the burn has changed the baud rate of module.

#### 4.2.2.7 Bin File Selections




Press the FileSel button to select the files to be burn at corresponding address.

#### 4.2.2.8 Downloading Log Window




The Downloading Log Window records the logs during the programming, and gives

information for failure debug with error codes, flash info, etc provided.

#### 4.2.2.9 Flash Programming Procedure

Step 1: Setup Download Params Configure Area

Step 2: Select files to be burned from File Selection Area

Setp 3: Press Button Download 

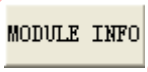
to burn files

Step 4: Observe the Downloading Log area to wait the burning finish

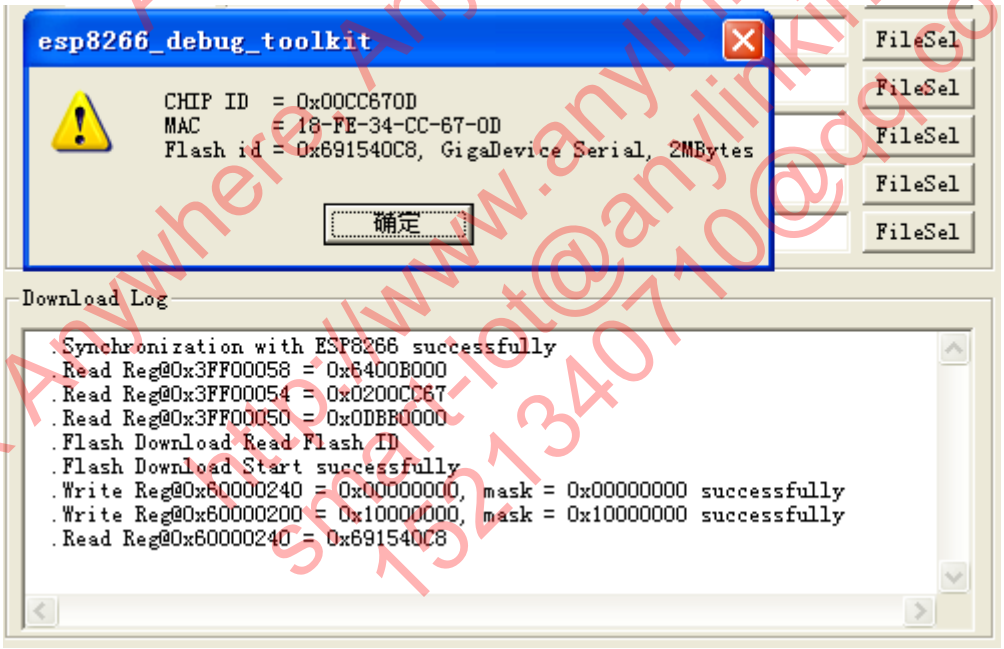
Step 5: Press Button Exit 

to exit the programming windows.

#### 4.2.2.10 Additional functions to check the module MAC and Flash info

Press the button MODULE INFO 

will bring about a synchronization process and then readout the CHIP ID or MAC address and the Flash info without modifying the flash content as below:




The MAC address is deprived from chip id of the ESP8266EX by adding "18 FE 34" de facto. That is, the chip id of this example of is "00 CC 67 0D".

The Flash ID and size are the real information from the external flash other value from Flash Map byte. This functionality might be helpful to some requirements to know the real size of the flash on a module.

## 4.3 Boot from UART0

Sometimes, it is necessary to just boot from UART0 other than Flash for some debug purpose. Press the button BOOT FROM UART0 

to bring module into UART0 boot mode. And then you could try UART0 BOOT COMMANDS from the SERIAL PORT TXD WINDOW and SERIAL PORT HXD WINDOW in hexadecimal mode.

If you are using a customized USB dongle in the 3.4.1 Power On, Power Off, Hardware Reset the Module, just press the PROGRAM button 

in module setup area as described in 3.4 Module Control Areas Operation. Then, the program window will be launched. NO NEED ANY ADDITIONAL JUMPER OR WIRING.

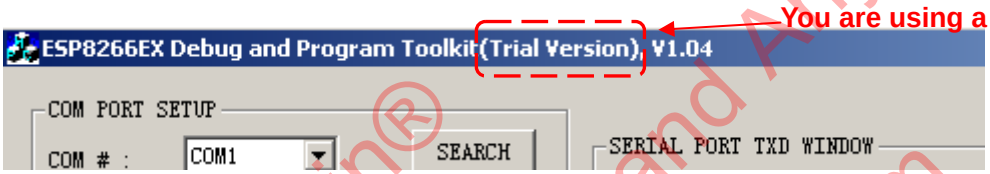
If you are using some other modules, you may have to pull down the GPIO0, and then power on reset or reset via nRESET pin the module, and then press the PROGRAM button. That is, you may have to bring the module into UART0 boot manually for flash burning.

# 5. Registration and Purchase

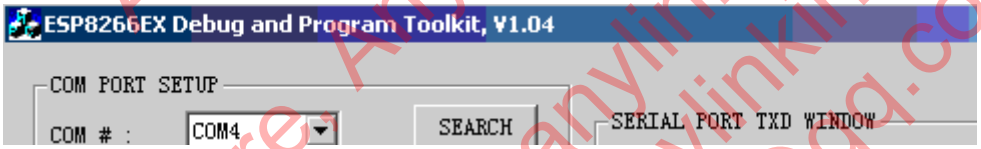
## 5.1 Registration

### 5.1.1 Trial and Registered Versions

Initially you are using a trial version if you do not register it as below:




If you feel interested with the software toolkit and expected to use it within a registered one, you could purchase the registration code and perform the registration. After registered, the "(Trial Version)" will not present any more as below:




### 5.1.2 Registration Procedure

**Step 1：Download the toolkit software and evaluate it carefully. Only after you think it deserves your purchase, then go to following steps.**

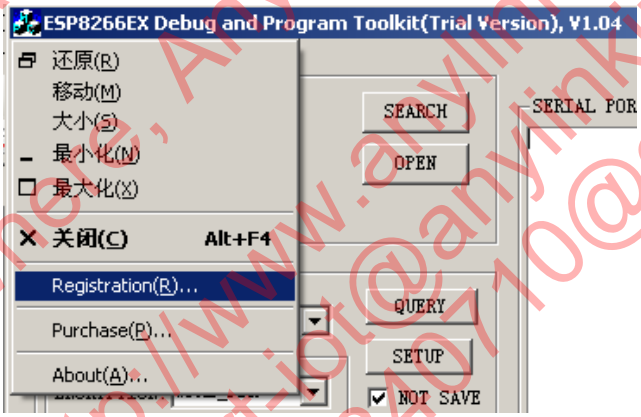
**Toolkit Software Download Address：http://pan.baidu.com/s/1pJy3bUN**

If it is the first time to open the software, there will be a message box displayed as below:

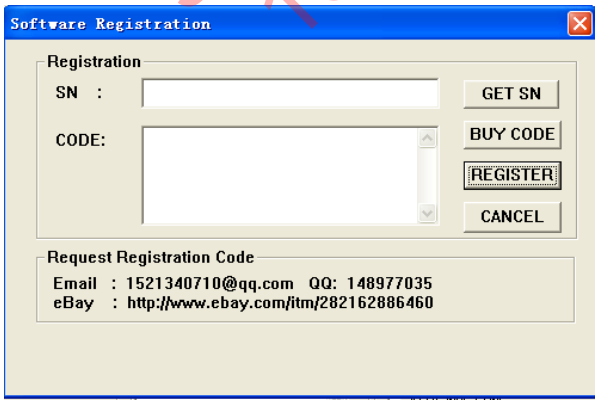

Just Press "CNACEL" if don't expect to register it now, and the main windows will be launched and you will use the software in a trial manner.

## Step 2: Launch the Registration Window

If the trail counts and period have not exceeded the trail permission and you may still open the software main window, then Click on the small ICON  on the top right corn of the toolkit. And a popup menu will come out as below:




Click the Menu Item "Registration", and a dialog window will be launched as below. This is the Registration Window.



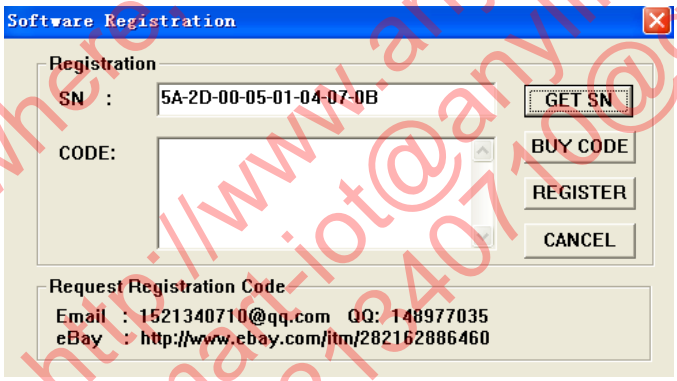
If the trail counts and period have exceeded the trail permission and you may not open the software main window but a message box will be launched asking you to purchase the registration code as below:


Press the OK button and the Registration Window above will be launched as well.

## Step 3: Extract the Toolkit Serial number

In the Registration Window, press the button GET SN  , and a serial number will be displayed as below:






In the above example, the Toolkit Serial Number is 5A-2D-00-05-01-04-07-0B.

The Toolkit Serial Number you get depends on the software and computer you are using. So different toolkit on different computer may be with different serial number.

Copy the Serial Number and keep it.

## Step 4: Purchase the registration code

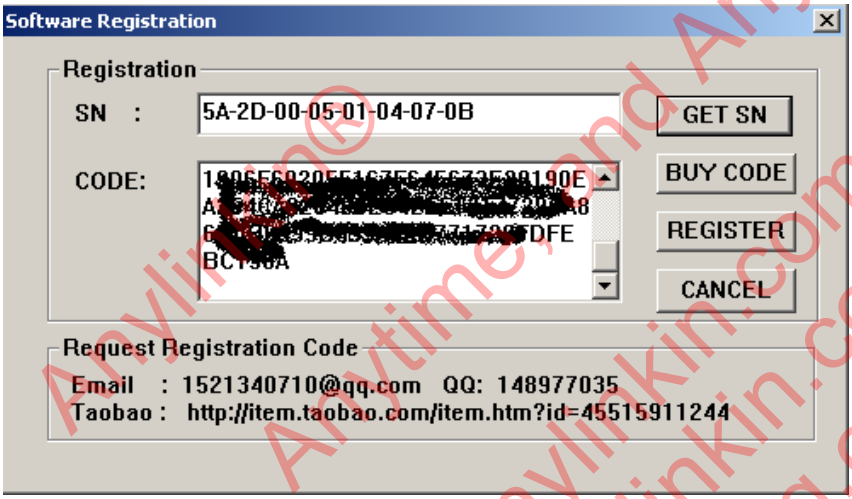
Press the button BUY CODE  and you will be guided to a purchase E-Shop.

Then you can place an order with the Toolkit Serial Number you get in the last Step 3. Also remember to provide an email address to receive the registration code.

A registration code will be generated upon your serial number and email to you.

## Step 5: Register the toolkit with the received registration code

Copy the register code you received and paste it to the code edit box as below:

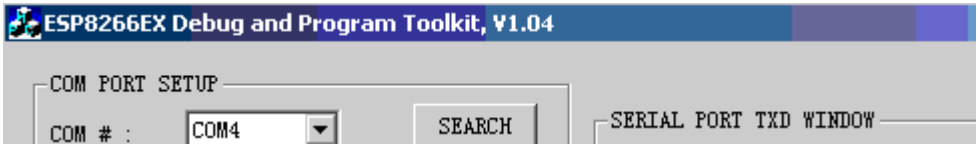



Kindly reminded that during your pasting, please do not add any additional characters such as Enter New Line or etc.

And then press the button REGISTER  to register the software.

If registered successfully, a popup message box will be displayed as below:


And congratulations you have registered the software successfully! And there is no "trial version" any more in the toolkit caption as below




However, if below popup message box will be displayed


It indicates that your registration is failed. Please send the message info to the email box you received the registration code for debug.

## 5.2 Purchase Modules

We have provided some modules based on ESP8266EX SOC with careful consideration to maximize the features of the SOC and to convenience the users' development and deployment. If you feel interested with these modules, you could purchase from the toolkit, or be navigated to a website for detailed description of these modules.

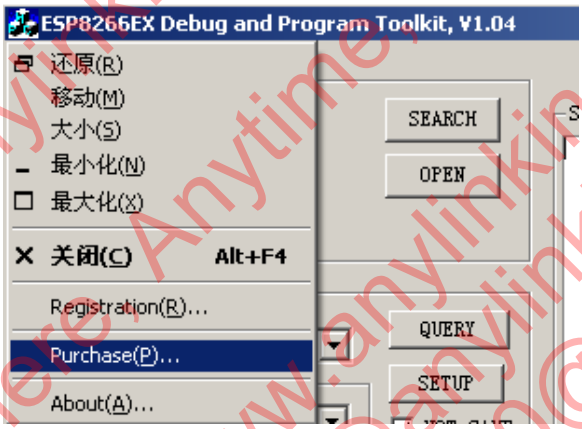
### 5.2.1 Launch the Purchase Window

There are two ways to launch the purchase window

**Method 1**: Press the BMP button on the right bottom of the main window, and the

Purchase Window will be launched.

**Method 2**: Click on the small ICON  on the top right corn of the toolkit. And a popup menu will come out as below:




Click the Menu Item "Purchase", and a dialog window will be launched as below. This is the Purchase Window.


Currently there are two types of ESP8266EX Modules available. One is USB Dongle type which provides a USB host interface, and another is SIP connector type which provides two SIP connectors of UART TTL host interface and some GPIO extensions.

Press Button BUY  and you will be navigated to an E-Shop for order.

# 6. Other Functions

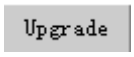
## 6.1 Language Switching between Chinese and English

There are two radios on the top right of main windows as below


Language could be switched between Chinese and English via the two raidios.

## 6.2 Toolkit Updating Check

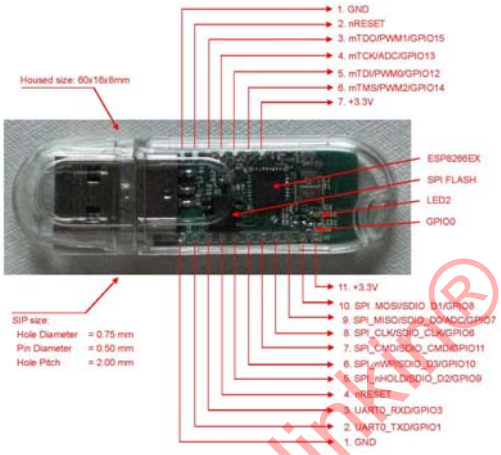
There is a button on the top right of main windows as below



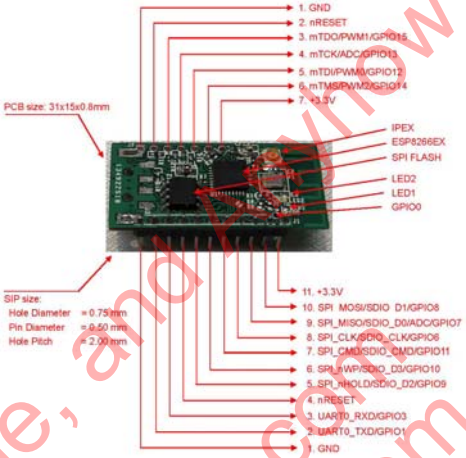

Press it and you will be navigated to a download address to check whether there is a new version for downloading.

**Welcome** to use the customized One-Press-Programming USB WIFI modules and the debug and download toolkit, which bring about much conveniences redevelopment and burning. Modules could be purchased from the below URLs and more detailed specifications could be provided upon request.

**ESP8266EX Module, USB Connector**




**ESP8266EX Module, SIP Connector**




**Purchase @ eBay**

http://www.ebay.com/itm/282162857143

http://www.ebay.com/itm/282162896341

**Purchase @ Taobao**

http://item.taobao.com/item.htm?id=522160552246

http://item.taobao.com/item.htm?id=522158628730