

mCookie-WIFI(ESP) is a WIFI communication module, which can communicate with Core/Core+/CoreUSB through the serial port or connect with other WIFI devices and is a complete and system-in-itself wifi network resolution.

## Specification

- Communication method: Serial passthrough with the default serial port D2(RX), D3(TX);
- Power supply: +3.3V DC 100mA;
- Status indicator;
- SDIO 2.0, SPI and UART interface;
- 32-pin QFN sealed ;
- With RF switch, balun, LNA, 24 PA dBm, DCXO and power management unit (PMU) integrated;
- With RISC processor, on-chip memory and external memory interface integrated;
- With MAC/ baseband processor integrated;
- High quality service management;
- With I2S interface required by high fidelity audio applications;
- All internal power supply contains on-chip low dropout linear regulator;
- Proprietary spurious free clock generation architecture;
- With WEP, TKIP, AES, and WAPI engines integrated.

## Common AT Instruction

- All AT instructions are ended with "\r\n ". When debugging the AT commands, please pay attention to the choice of "\r\n".
- Common AT instruction:
  - AT+RST Restart the module;
  - AT+GMR Check the version information;
  - AT+CWMODE=3 Station and access point;
    - 1 Station Mode;
    - 2 AP Mode;
    - 3 AP and the Station.
  - AT+CWLAP WIFI SSID List;
  - AT+CWSMARTSTART=0 Start smart connection:
    - 0: Adopt AL-LINK technology;
    - 1: Adopt ESP-TOUCH;
    - 2: Adopt AIR-KISS.
  - AT+CWSMARTSTOP Stop the smart connection;

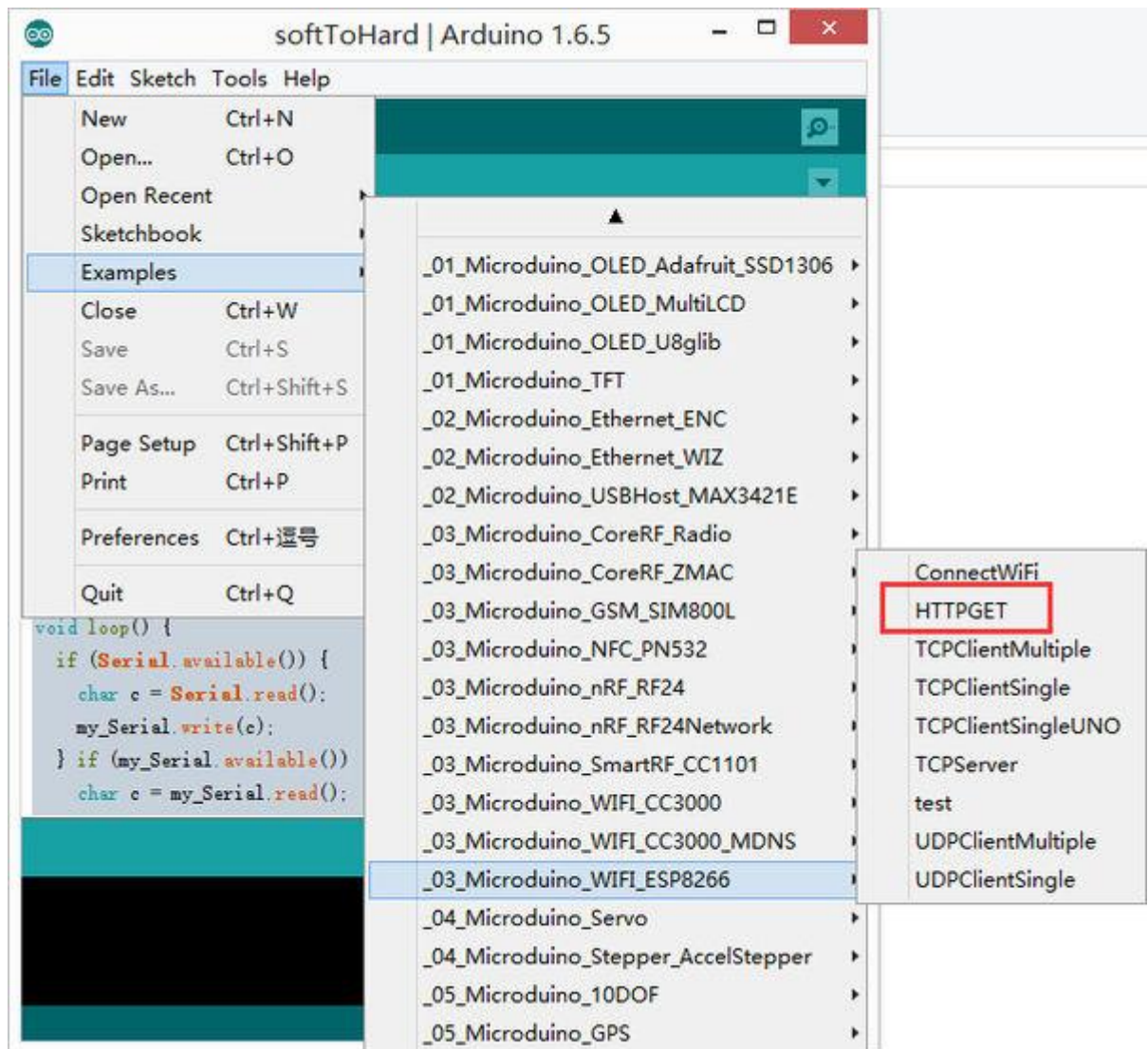
- AT+CWJAP="<access\_point\_name>","<password>" Join in a certain WIFI;
- AT+CIFSR Display the information of wifi;
- AT+CIPSTATUS Acquire the connection status;
- AT+CIPSTART=4,"TCP","baidu.com",80 Establish TCP/UDP connection and ports;
- AT+CIPCLOSE Close the connection of TCP/UDP(single connection);
- AT+CIPCLOSE=5 Close multiple connections;
- AT+CIPMUX=1 Start multiple connections.

## Documents

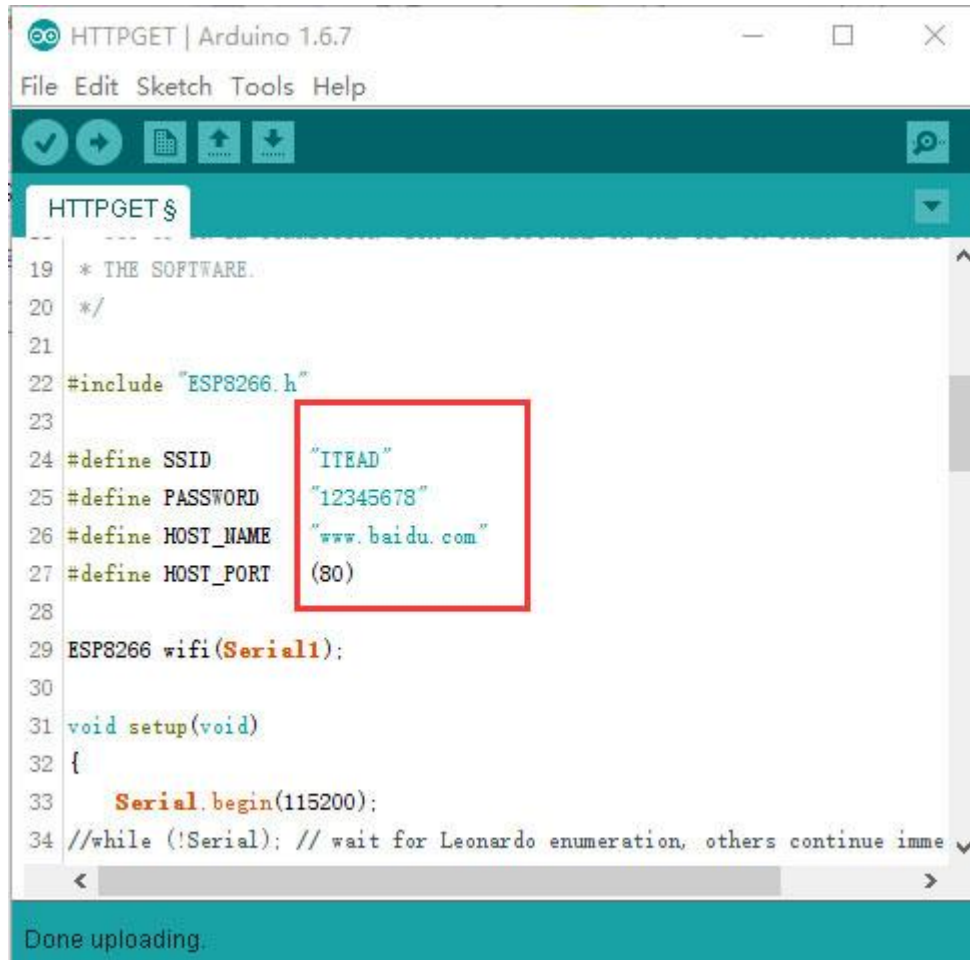
- AT command instruction: [File:ESP8266 AT Instruction Set CN v0.30.pdf](#)
- AT command instruction: [File:ESP8266 AT Instruction Set EN v0.30.pdf](#)
- AT command example: [File:ESP8266 AT Command Examples CN v0.5.pdf](#)
- AT command example: [File:ESP8266 AT Command Examples EN v0.5.pdf](#)

## Development

- Test program
  - Use Microduino IDE-->  
example-->\_03\_microduino\_WiFi\_ESP8266-->HTTPGET program test is OK.



You can change the WIFI password where you set the SSID (WIFI name) and the password in the code.



```
HTTPGET | Arduino 1.6.7
File Edit Sketch Tools Help
HTTPGET $
19  * THE SOFTWARE.
20  */
21
22  #include "ESP8266.h"
23
24  #define SSID      "ITEAD"
25  #define PASSWORD  "12345678"
26  #define HOST_NAME "www.baidu.com"
27  #define HOST_PORT (80)
28
29  ESP8266 wifi(Serial1);
30
31  void setup(void)
32  {
33      Serial.begin(115200);
34  //while (!Serial); // wait for Leonardo enumeration, others continue imme
Done uploading.
```

- Download program
  - Stack together with Microduino-WiFi(ESP), Microduino-Core+ and Microduino-USBttl,

insert USB line into the Microduino-USBttl, other side of USB line insert into computer, start Arduino IDE, The above program is copied to the IDE, the tool (tools) -> Board (Board) is selected Microduino Core, and the tools (tools) -> Serial Port (Serial) select the corresponding serial number. After clicking the top left corner IDE ✓ button to compile the program, after the end of the compilation click -> button is programmed to the board;

- Open the serial monitor, set:"\r\n", "115200 baud".
- First of prompts is to show connect WiFi successful information
- If you see the following description you already visited Baidu Home website.

```
single ok
setup end
create tcp ok
Received: [HTTP/1.1 200 OK
Date: Thu, 20 Aug 2015 07:52:46 GMT
Content-Type: text/html
Content-Length: 14613
Last-Modified: Tue, 02 Sep 2014 08:55:13 GMT
Connection: Close
Vary: Accept-Encoding
Set-Cookie: BAIDUID=F1F412D2A6913E81AA006699603078C9:FG=1; expires=Thu, 31-1
Set-Cookie: BIDUPSID=F1F412D2A6913E81AA006699603078C9; expires=Thu, 31-Dec-0
Set-Cookie: PSTM=1440057166; expires=Thu, 31-Dec-37 23:55:55 GMT; max-age=2:
Set-Cookie: BDSVRIM=0; path=/
P3P: CP=" OTI DSP COR IVA OUR IND COM "
Server: BWS/1.1
X-UA-Compatible: IE=Edge, chrome=1
Pragma: no-cache
Cache-control: no-cache
BDPAGETYPE: 1
BDQID: 0xb0fee107000007f9
BDUSERID: 0
Accept-Ranges: bytes

]
release tcp err
```

Autoscroll    Both NL & CR    115200 baud

Serial

## FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The modular can be installed or integrated in mobile or fix devices only. This modular cannot be installed in any portable device, for example, USB dongle like transmitters is forbidden.

### FCC Radiation Exposure Statement

This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: 2AKMKMCBL53 Or Contains FCC ID: 2AKMKMCBL53"

When the module is installed inside another device, the user manual of the host must contain below warning statements;

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

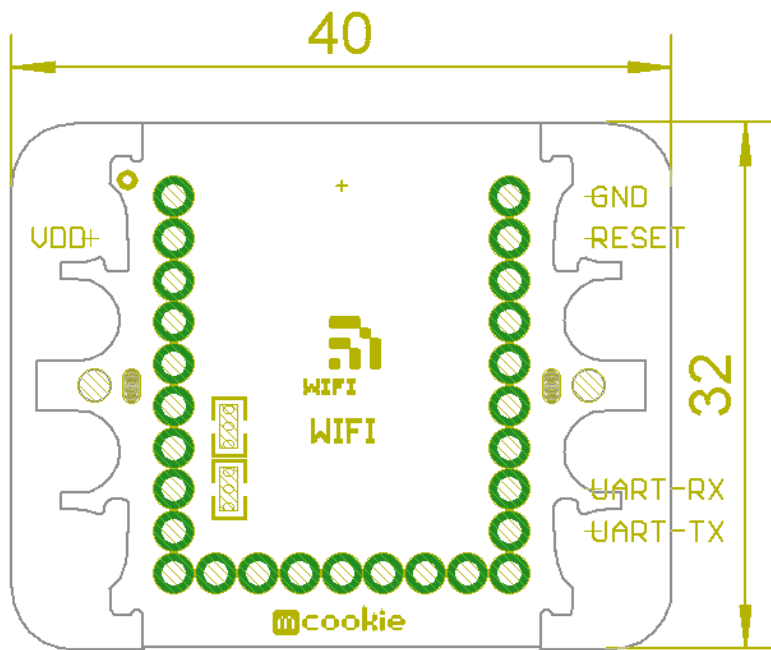
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product

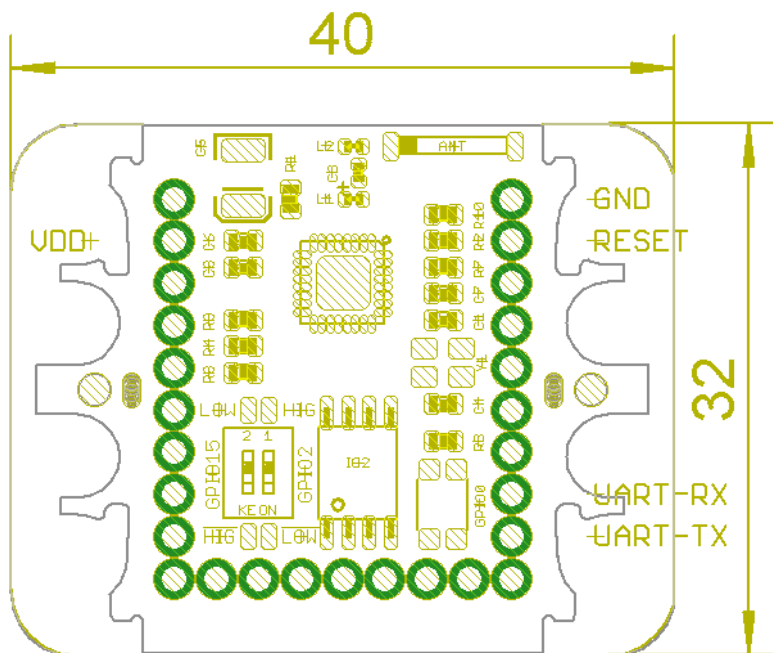
Any company of the host device which install this modular with limit modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C : 15.247 and 15.209 requirement, Only if the test result comply with FCC part 15C : 15.247 and 15.209 requirement, then the host can be sold legally.

MCBL53:

A side:

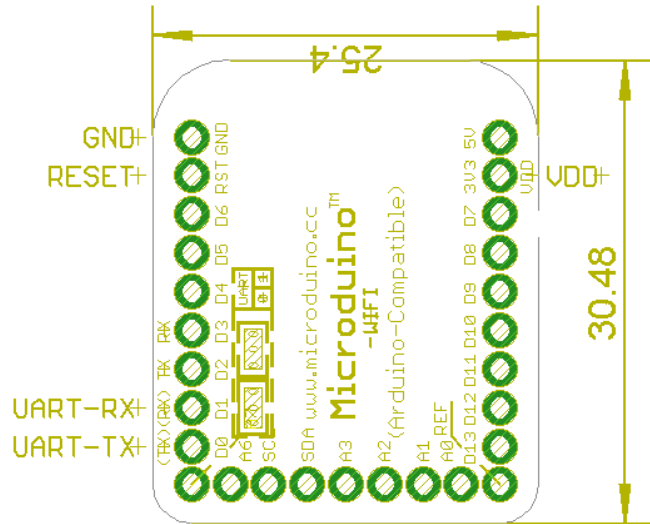


B side:



MDBL53:

A side:



B side:

