Grove – WizFi360

Grove - UART - WizFi360 is a serial transceiver module featuring the WizNet's WizFi360 Wi-Fi module. With integrated TCP/IP protocol stack, this module lets your micro-controller interact with Wi-Fi networks with only a few lines of code. Each WizFi360 module comes pre-programmed with an AT command set firmware, meaning you can send simple text commands to control the device.

Connectivity is provided via 2.4Ghz wireless connection, WizFi360 is compatible with IEEE802.11 b/g/n standards and supports SoftAP, Station and SoftAP+Station modes.
Version

<table>
<thead>
<tr>
<th>Product Version</th>
<th>Changes</th>
<th>Released Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grove-UART-WizFi360 V1.0</td>
<td>Initial</td>
<td>Oct 2022</td>
</tr>
</tbody>
</table>

Features

- WiFi 2.4G, 802.11 b/g/n
- Support Station / SoftAP / SoftAP+Station operation modes
- Support “Data pass-through” and “AT command data transfer” mode
- Support serial AT command configuration
- Support TCP Server / TCP Client / UDP operating mode
- Support configuration of operating channel 0 ~ 13
- Support auto 20MHz / 40MHz bandwidth
- Support WPA_PSK / WPA2_PSK encryption
- Serial port baud rate up from 600bps to 2Mbps with 16 common values
- Support up to 5 TCP / UDP links
- Obtaining IP address automatically from the DHCP server (Station mode)
- DHCP service for Wireless LAN clients (AP mode)
- Support DNS for communication with servers by domain name
- Support “Keep-Alive” to monitor TCP connection
- Support “Ping” for monitoring network status
- Built-in SNTP client for receiving the network time
- Support built-in unique MAC address and user configurable
- Grove compatible interface

Tip

More details about Grove module please refer to Grove System

Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Range/Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage</td>
<td>5 V</td>
</tr>
<tr>
<td>Interface Type</td>
<td>Serial</td>
</tr>
<tr>
<td>BaudRate</td>
<td>115200</td>
</tr>
<tr>
<td>Protocol</td>
<td>802.11b/g/n</td>
</tr>
</tbody>
</table>

Platforms Supported

Arduino

Getting Started

Note: If this the first time you work with Arduino, we firmly recommend you to see Getting started with Arduino before the start.

Play With Arduino
This sample gets the time from a Network Time Protocol (NTP) time server and prints on serial monitor.

**Hardware**

<table>
<thead>
<tr>
<th>Grove_WizFi360</th>
<th>Arduino Mega</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX(White)</td>
<td>18th pin</td>
</tr>
<tr>
<td>RX(Yellow)</td>
<td>19th pin</td>
</tr>
<tr>
<td>VIN(Red)</td>
<td>5V</td>
</tr>
<tr>
<td>GND(Black)</td>
<td>GND</td>
</tr>
</tbody>
</table>

- Connect Arduino Mega to PC via a USB cable.
- Copy the code into Arduino IDE and upload. If you do not know how to upload the code, please check [how to upload code](#).
//
Grove_WizFi360 example: NTP_Client

Get the time from a Network Time Protocol (NTP) time server

• Grove_WizFi360-TX: 18th pin of Arduino Mega  
• Grove_WizFi360-RX: 19th pin of Arduino Mega  
• Grove_WizFi360-GND: GND pin of Arduino Mega  
• Grove_WizFi360-VIN: 5V pin of Arduino Mega

This code is in the public domain.

/*/ 

/* Baudrate */
#define SERIAL_BAUDRATE 115200
#define SERIAL1_BAUDRATE 115200
#define DEBUG true

// Send AT Commands and print response
String sendData(String command, const int timeout, boolean debug)
{
  String response = "";
  Serial1.print(command);
  long int time = millis();
  while( (time+timeout) > millis())
  {
    while(Serial1.available())
    {
      char c = Serial1.read();
      response+=c;
    }
  }
  if(debug)
  {
    Serial.println(response);
  }
  return response;
}

void setup()
{
  Serial.begin(SERIAL_BAUDRATE);
  Serial1.begin(SERIAL1_BAUDRATE);
  sendData("AT+RST\r\n", 2000, DEBUG);
  sendData("AT\r\n", 1000, DEBUG);
```c
void loop() {
}
```

- Open the serial monitor, you can see as show below:

![Serial Monitor Output](image)

**Resources**

- [PDF] Grove_WizFi360_kicad_sch.pdf
- [KiCad] Grove_WizFi360 KiCad Files
- [Arduino Library] From Wiznet
- **AT Instruction Set**

**Projects**

- [https://www.hackster.io/amalmathewtech/grove-wizfi360-sntp-gpio-control-b644f8](https://www.hackster.io/amalmathewtech/grove-wizfi360-sntp-gpio-control-b644f8)