

# WizFi Shield Manual

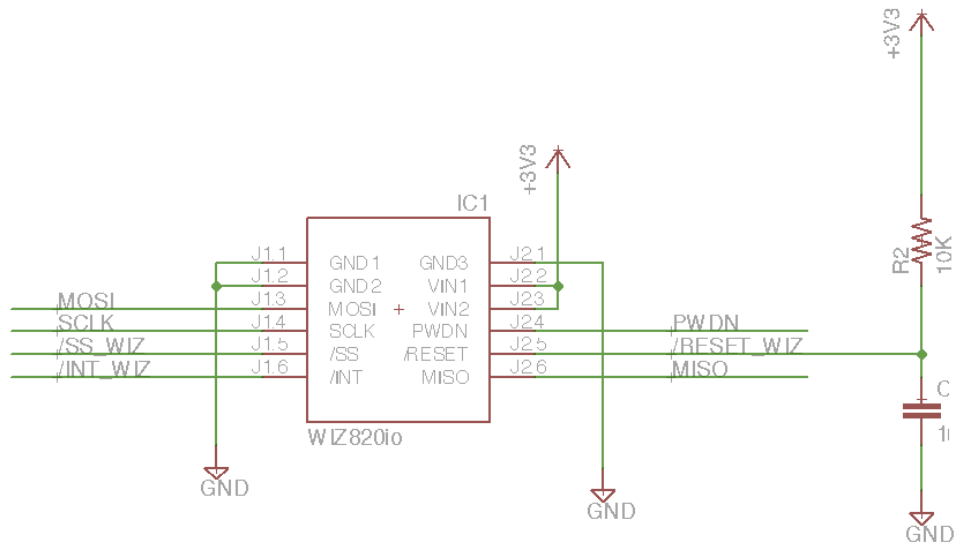
## Introduction

WizFi shield uses Wiz820io, WizFi210 module and supports the Ethernet and Wi-Fi connectivity simultaneously.

## 1. Hardware

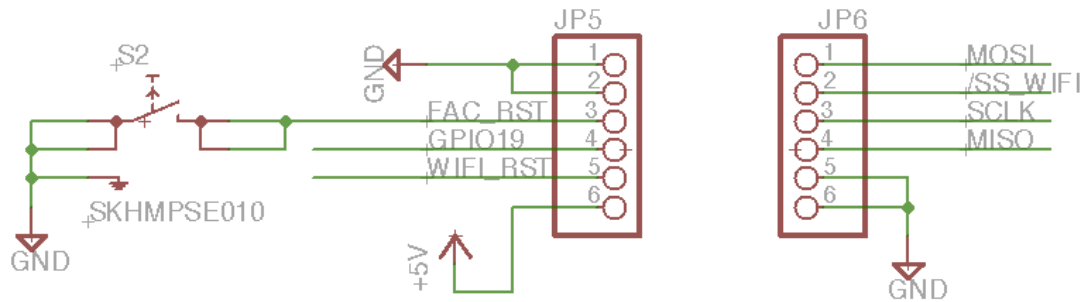
### a) Ethernet

- Wiz820io is connected with SPI signals.
- Other signals
  - /SS\_WIZ (Input): SPI slave chip select signal
  - /RESET\_WIZ (Input): H/W reset signal
  - PWDN (Input): Set power down mode
  - /INT\_WIZ (Output): Interrupt signal

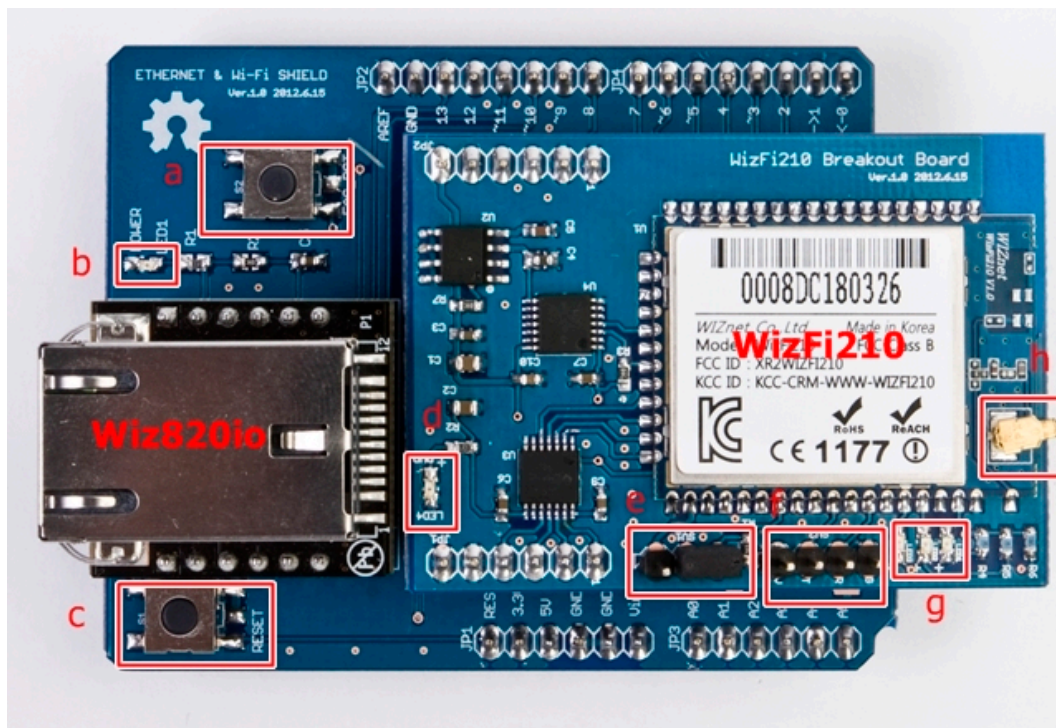


### b) Wi-Fi

- WizFi210 module is connected with SPI signals
- Other signals
  - /SS\_WIFI(Input): SPI slave chip select signal
  - FAC\_RST (Input): Factory reset
  - GPIO19 (Output): If this signal is high, indicate the data in the receive buffer in the WizFi210
  - WIFI\_RST (Input): Reset signal



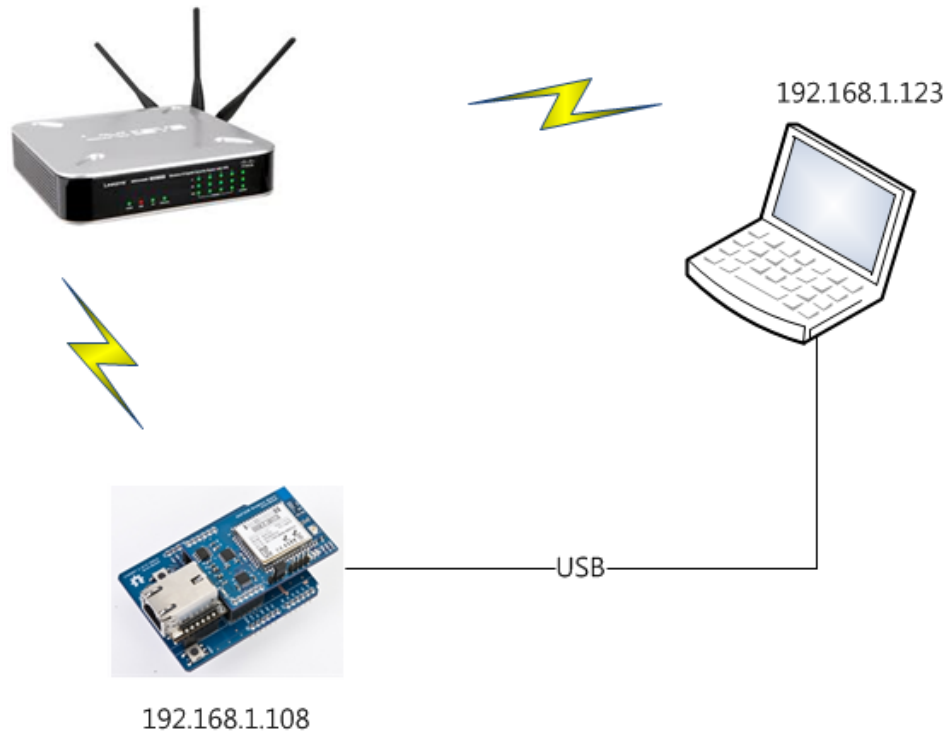
### c) Hardware description



H/W description	
a	WizFi210 Factory Reset button
b	Power LED
c	Reset button
d	Power LED of WizFi210
e	Pin header: Select Run mode or F/W update mode of WizFi210
f	Pin header : UART interface of WizFi210
g	LEDs: Indicate the operation of WizFi210
h	Antenna

## 2. How to test?

### a) Test environments



- WizFi Shield gets the IP address using DHCP and works as TCP server.
- Laptop connects to it. After the connection is established, the data between the laptop and WizFi shield is transparent.

The screenshot shows the test environment. On the left, a terminal window displays the output of the AT commands and the ping test. In the center, the Arduino IDE shows the code for the WizFi shield. On the right, the Castalia Socket Tester window shows the connection details and the transmission log.

```
AT+NDHCP=1
[OK] : Success
AT+NAUTO=1,1,,5000
[OK] : Success
AT+XDUM=0
[OK] : Success
ATA
  IP      SubNet    Gateway
192.168.1.108 255.255.255.0 192.168.1.1
[OK] : Success
Configuration OK
Wi-Fi Init Complete
[CONNECT 0 1 192.168.1.123 50745]
12345
Autoscroll No line ending 9600 baud
```

```
WizFi_Shield_Test $
Wifi_setup = true;
Serial.println("\r\nConfiguration OK");
}else {
  Wifi_setup = false;
  Serial.println("\r\nConfiguration fail");
}

boolean Setup_WiFi(void)
{
  byte Msgbuf[128];
  Serial.println("\r\n");
  sprintf(Msgbuf, "AT+NAUTO=1,1,,5000\r\n");
  Serial.print(Msgbuf);
  WizFi210_Write_Buf(Msgbuf, sizeof(Msgbuf));
  if (Check_OK(Msgbuf))
  else Serial.println("\r\n");

  // AT+NAUTO
  sprintf(Msgbuf, "AT+NAUTO=1,1,,5000\r\n");
  Serial.print(Msgbuf);
  WizFi210_Write_Buf(Msgbuf, sizeof(Msgbuf));
  if (Check_OK(Msgbuf))
  else Serial.println("\r\n");

  // AT+NAUTH
  sprintf(Msgbuf, "AT+NAUTH=1,1,,5000\r\n");
  Serial.print(Msgbuf);
  WizFi210_Write_Buf(Msgbuf, sizeof(Msgbuf));
  if (Check_OK(Msgbuf))
  else Serial.println("\r\n");
}
```

Castalia Socket Tester

My local IP Address: 192.168.1.123 Client Mode

Connect to IP Address: 192.168.1.108

Port: 5000

Data to send:

Transmission Log

Connected to IP = 192.168.1.108 on server port #5000

Sent: 12345

From socket (576) --> abcdefg

Done uploading.

avrduide done. Thank you.

### **3. Reference.**

- Arduino source code & schematics can be download from Wiznet Github  
[https://github.com/Wiznet/Arduino\\_WiFi\\_Shield](https://github.com/Wiznet/Arduino_WiFi_Shield)
- WizFi210 datasheet
- Wiz820io datasheet