

WizFi210 Quick Start Guide

(Version 1.0)

Purpose and Scope

This document describes the procedure to configure WizFi 210 Module in the following conditions

- AP: Using WPA Personal/TKIP Security Mode
- WizFi210: Using Fixed IP Address Mode
- Connection: Auto connect Mode (TCP/Server)



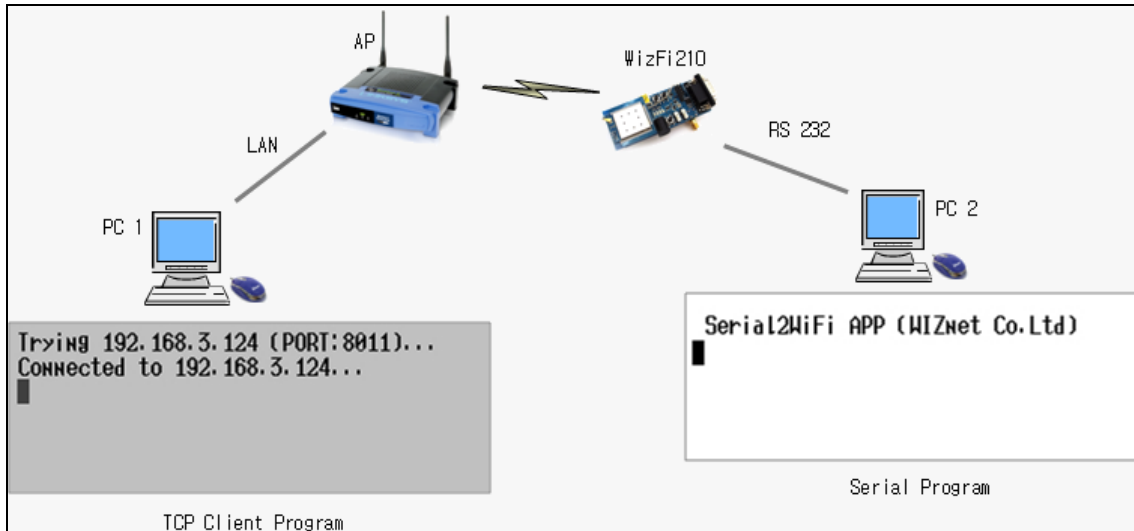
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Document Revision History

Date	Revision	Changes
2011-03-24	V1.0	Official Release

System Configuration



<AP> IEEE 802.11b/g/n Compatible

<WizFi210> Serial to WiFi Module

<PC 1> is connected to AP through wireless or wired network. In the <PC 1>, TCP Client is installed.

<PC 2> is connected to WizFi210 through serial. Serial program is installed in this <PC 2>

This document describes how to test “Serial to WiFi” of WizFi210. As shown in above figure, WizFi210 will transmit the serial data received from <PC 2> to the TCP Client of <PC 1> through wireless network.

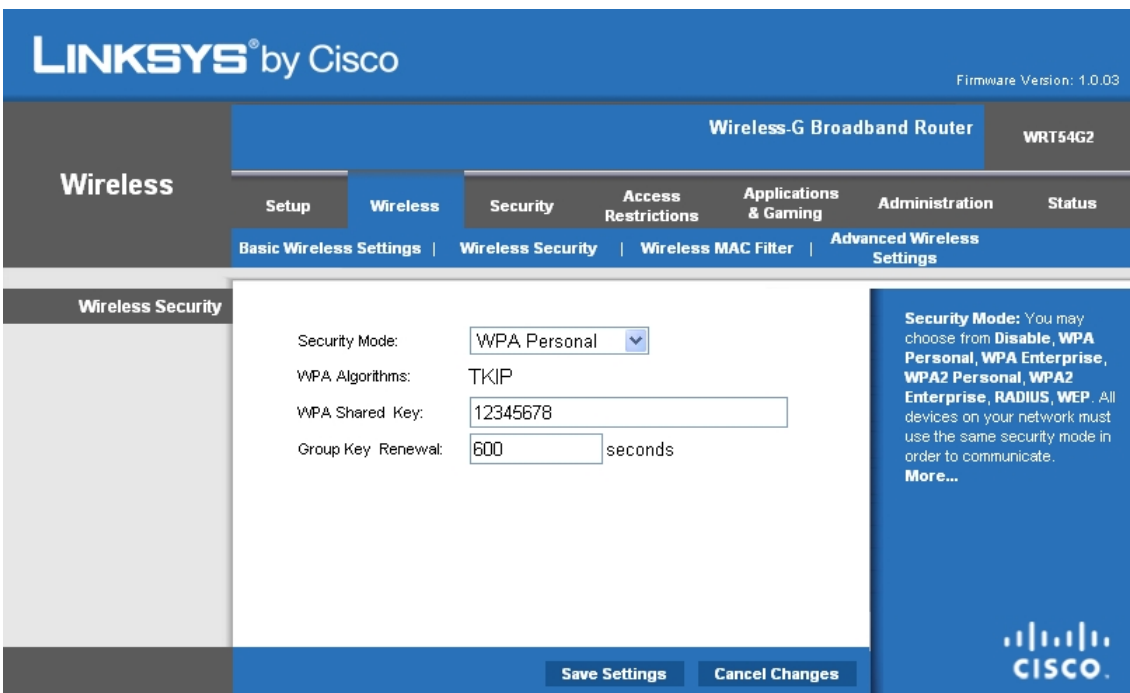
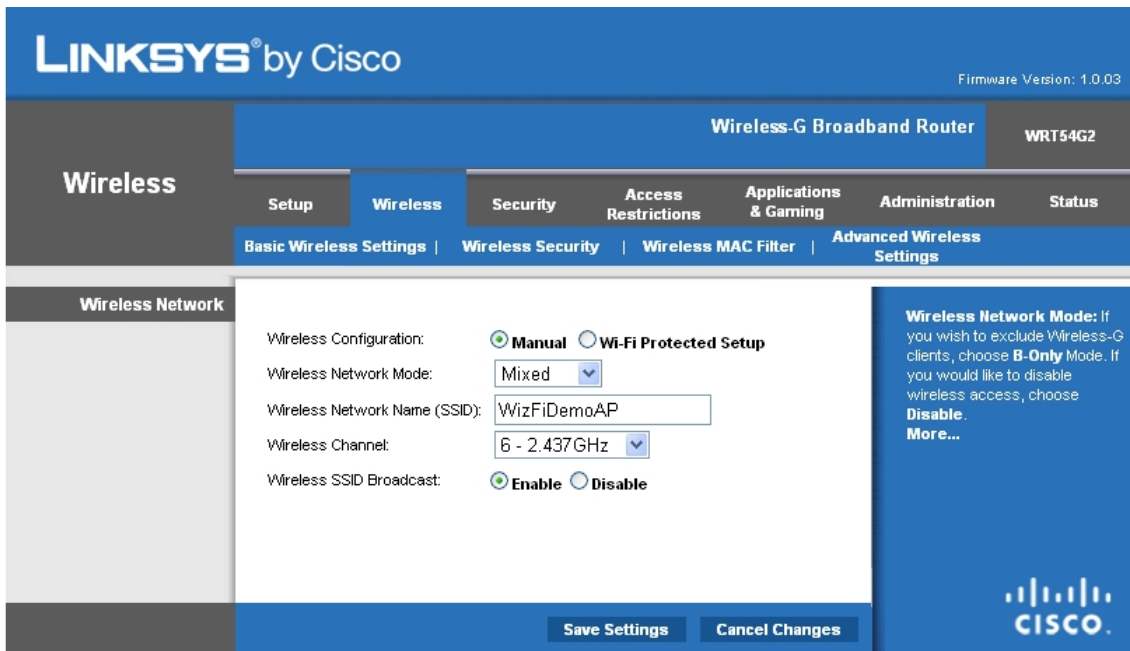
In this testing, the AP is supporting 802.11 b/g, and using WPA Personal/TKIP security method. WizFi210 is configured as fixed IP address and TCP/Server mode.

PC1 can communicate with WizFi210 using TCP Client program, and PC2 is connected to WizFi210 through serial terminal.

1. AP Configuration

The wireless configuration of AP(Model : Linksys WRT54G2) is as below.

- SSID : WizFiDemoAP
- Channel : 6
- Security : WPA Personal/TKIP
- WPA Shared Key : 12345678



2. Connecting <PC 1> and AP

Check the IP address of the <PC 1>.

If the <PC 1> is connected to AP through wireless network, check the IP address of the wireless adaptor. If it is connected through wired cable, check the IP address of the wired network adaptor.

Below is showing the IP address of the PC is configured as '192.168.3.199'

```
C:\#>ipconfig

Windows IP Configuration

Ethernet adapter 로컬 영역 연결:

    Connection-specific DNS Suffix . . :
    IP Address. . . . . : 192.168.3.199
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.3.1
```

3. Connecting <PC 2> and WizFi210

Connect the <PC 2> and WizFi210 using serial cable and supply the power. You can see following message in the serial terminal program. Depending on the version of firmware, the following message may not be available.

Configure the serial port of the <PC 2> as (115200bps, 8 bit, none parity, 1 stop bit)

```
Serial2WiFi APP (WIZnet Co.Ltd)
█
```

At the serial terminal program, if you input "AT" and <ENTER>, you can see the "OK" message.

```
Serial2WiFi APP (WIZnet Co.Ltd)
AT
[OK]
█
```

When "OK" message is displayed, WizFi210 enters into AT command mode in which AT command set can be used. If "OK" message is not displayed, check if there is any problem in power supply or serial cable, and try again.

4. Using WizFi210 at the AT Command mode

```
AT+WPA=12345678
[OK]
AT+NDHCP=0
[OK]
AT+NSET=192.168.3.124,255.255.255.0,192.168.3.1
[OK]
AT+WAUTO=0,WizFiDemoAP,,6
[OK]
AT+NAUTO=1,1,,8011
[OK]
ATA
  IP           SubNet       Gateway
192.168.3.124: 255.255.255.0: 192.168.3.1
[OK]
█
```

(1) AT+WPA=12345678

This command sets WPA Passphrase as "12345678"

(2) AT+NDHCP=0

This command sets WizFi210 as using fixed IP address (not DHCP). When the IP address is acquired by DHCP, the command "AT+NDHCP=1" is used.

(3) AT+NSET=192.168.3.123,255.255.255.0,192.168.3.1

This command sets the module with IP address (192.168.3.123), Subnet Mast (255.255.255.0), and Gateway Address (192.168.3.1).

(4) AT+WAUTO=0,WizFiDemoAP,,6

This command sets the AP's Mode (0:Infrastructure), SSID("WizFiDemoAP"), BSSID(Default) and Channel Number (6)

(5) AT+NAUTO=1,1,,8011

This command sets WizFi210 with Server(1), TCP(1) and Port number (8011).

Destination IP address is not required.

(<Type>,<Protocol>,<Destination IP>,<Destination Port>)

(6) ATA

This command initializes auto connection. If you input the command, WizFi210 initializes auto connection by using the parameters configured by AT+WAUTO and AT+NAUTO.

When the connection is successfully established, WizFi210 returns "OK" with IP address, Subnet Mask and Gateway address. If the connection is failed, "ERROR" is returned. After connection is established, WizFi210 enters into data communication mode.

If WizFi210 is already connected to wireless network, you can use the ATA2 commands. ATA commands start from AP Association, but ATA2 commands start from auto connection using already connected AP Association.

5. Data Communication Test

- (1) <ATA> command returns "OK".

```
ATA
IP          SubNet      Gateway
192.168.3.124: 255.255.255.0: 192.168.3.1
[OK]
█
```

- (2) Connect <WizFi210> to the TCP Client program of <PC 1>.

```
ATA
IP          SubNet      Gateway
192.168.3.124: 255.255.255.0: 192.168.3.1
[OK]
█
```

<PC2> Serial Terminal Program

```
Trying 192.168.3.124 (PORT:8011)...
Connected to 192.168.3.124...
```

<PC1> TCP Client Program

- (3) Input characters at the <PC 1> and send them to the network.

```
ATA
IP          SubNet      Gateway
192.168.3.124: 255.255.255.0: 192.168.3.1
[OK]
This data is from <PC 1>█
```

```
Trying 192.168.3.124 (PORT:8011)...
Connected to 192.168.3.124...
```

Input characters. This data is from <PC 1>.

- (4) Input characters at the <PC 2> and send them to the serial.

```
ATA
IP          SubNet      Gateway
192.168.3.124: 255.255.255.0: 192.168.3.1
[OK]
This data is from <PC 1>█
```

Input characters. This data is from <PC 2>.

```
Trying 192.168.3.124 (PORT:8011)...
Connected to 192.168.3.124...
This data is from <PC 2>.
```

- (5) Close the connection with WizFi210 by finishing the TCP Client program of <PC 1>.

```
ATA
IP          SubNet      Gateway
192.168.3.124: 255.255.255.0: 192.168.3.1
[OK]
This data is from <PC 1>█
```