

# SKW92 EVB User Manual

## Revision History

Revision	Description	Approved	Date
V1.01	Initial Release	George	20170321

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## 1. Introduction

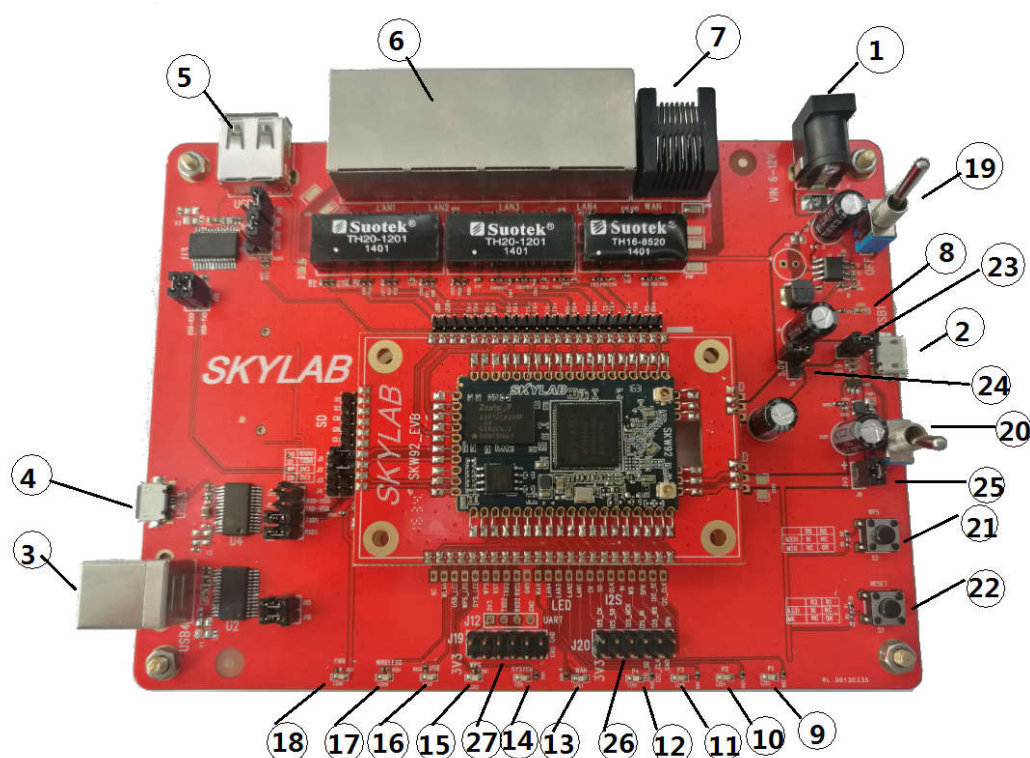
The SKW92 EVB offers a quick and easy way to evaluate the SKW92 module and the SKW92 is a 802.11n/ b/g WiFi router module.

The Evaluation Kit includes the following items:

1. One SKW92 module.
2. One SKW92 EVB.
3. One DC adapter with micro USB connector cable.
4. Two WiFi antenna.
5. This Manual.

## 2. EVB Details

This section describes the various interfaces and switch settings for the SKW92-EVB board.



## EVB Details

No.	Connector	Function Description
1	DC Power Connector	DC 6-15V Input
2	Micro USB Power Connector	USB DC 5V Input
3	USB Type-B Port	UART0:USB TO TTL
4	Micro USB Port	UART1:USB TO TTL
5	USB Type-A Port	USB Slave Device
6	RJ45 Port	LAN Port
7	RJ45 Port	WAN Port

No.	Function Description	No.	Function Description
8	5V Power LED	21	WPS Push Button
9--12	LAN LED	22	Reset Push Button
13	WAN LED		
14	System LED	23	USB 5V Header
15	WPS LED	24	Module 5V Header
16	USB Device LED	25	Module 3.3V Header
17	Wireless LED		
18	3.3V Power LED	26	I2S & I2C Header
		27	UART Header
19	5V Power Switch		
20	3.3V Power Switch		

## EVB Hardware Installation

Step 1: Insert the module to the EVK board.

Step 2: Connect the another LAN port into PC`s RJ45 port.

Step 3: Connect the WiFi antenna.

Step 4: Insert the DC adapter into the power-supply connector.

**Note: The DC adapter output: 5V±10% /1A**

## 3. Logging in to the module web

1) Connected SKW92 LAN port and PC`s RJ45 port;

2) Setup IP address;

Step 1: Right-click the “local connection. This pic is chinese version;



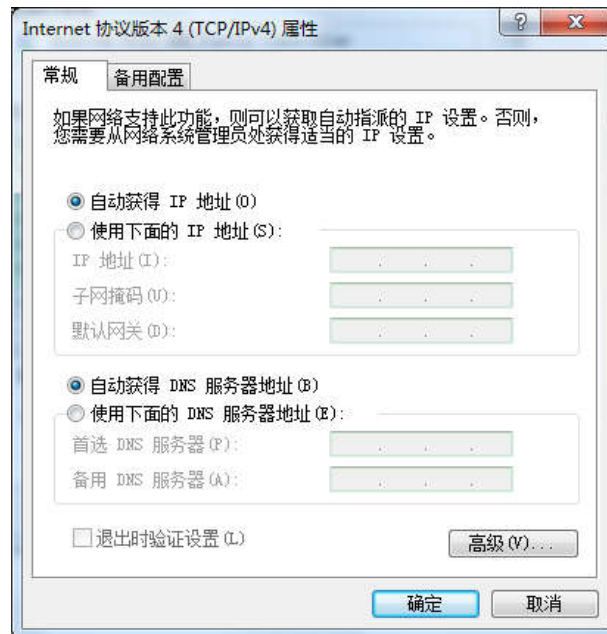
Step 2: Click “attribute”;



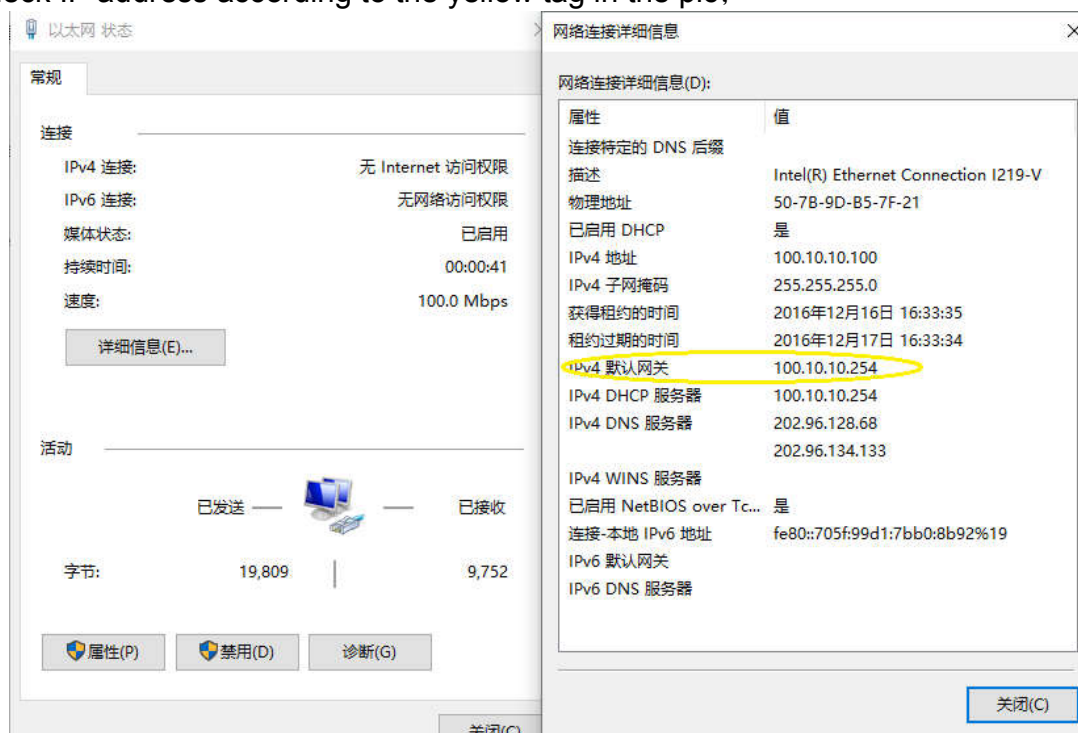
Step 3: Click “internet protocol(TCP/IP)”;



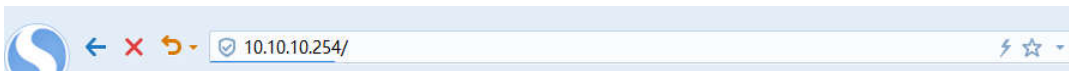
Step 4: IP address set as gain automatically;



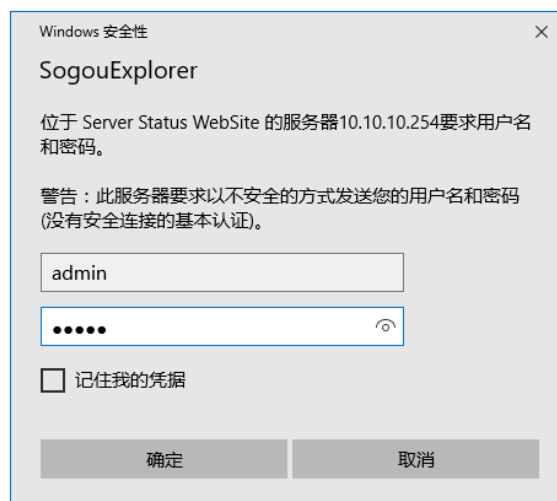
3) Check IP address according to the yellow tag in the pic;



4) Web browser address: “http: //10.10.10.254”;



5) User account: admin;  
Password: admin

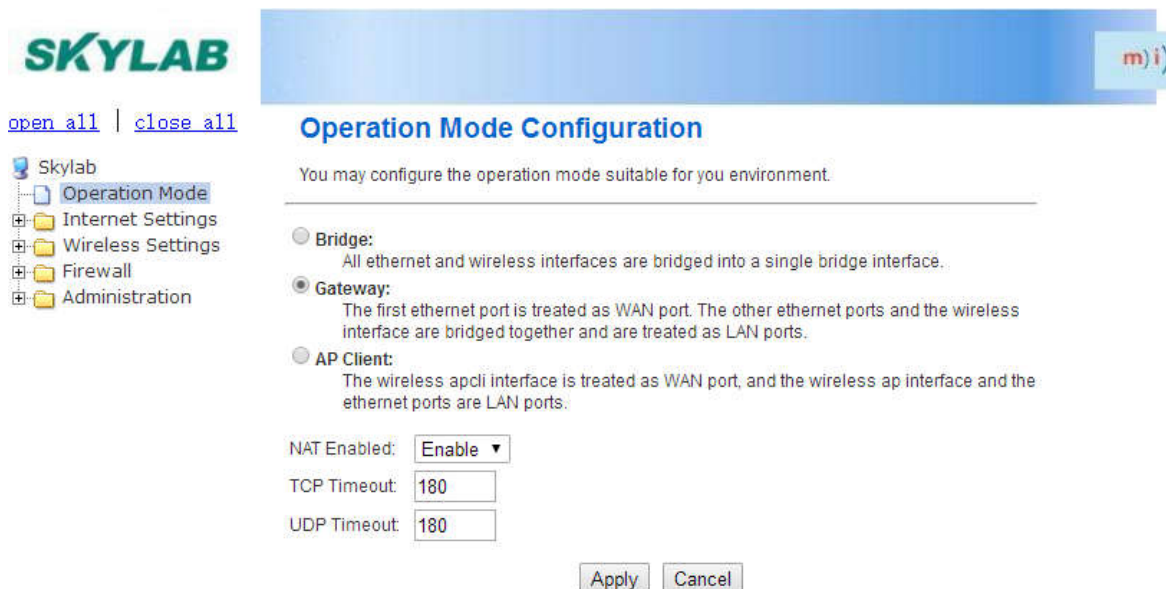


## 4. Setup Guide

a. Choose the language;



b. Choose Operation Mode;



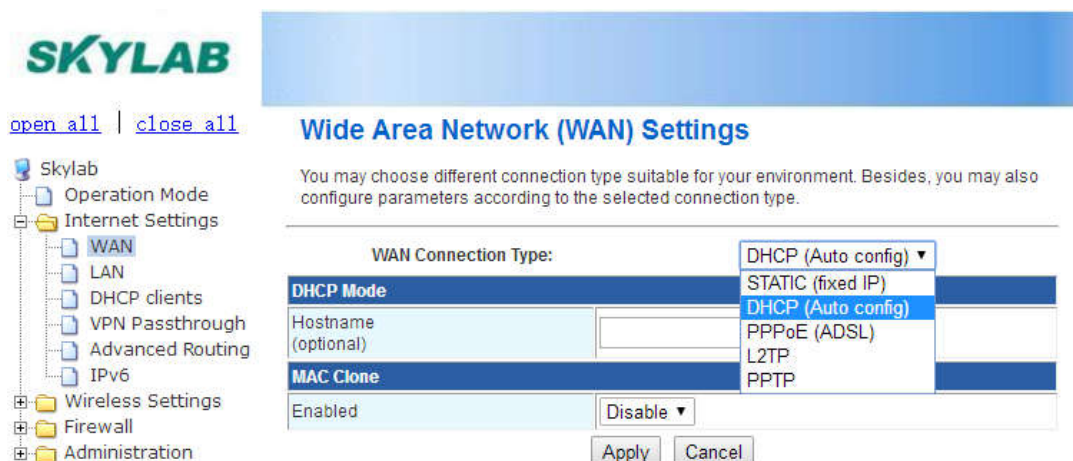


Three Operation Mode:

- 1) Gateway
- 2) AP Client
- 3) Bridge

## 1).Setup “Gateway Mode”

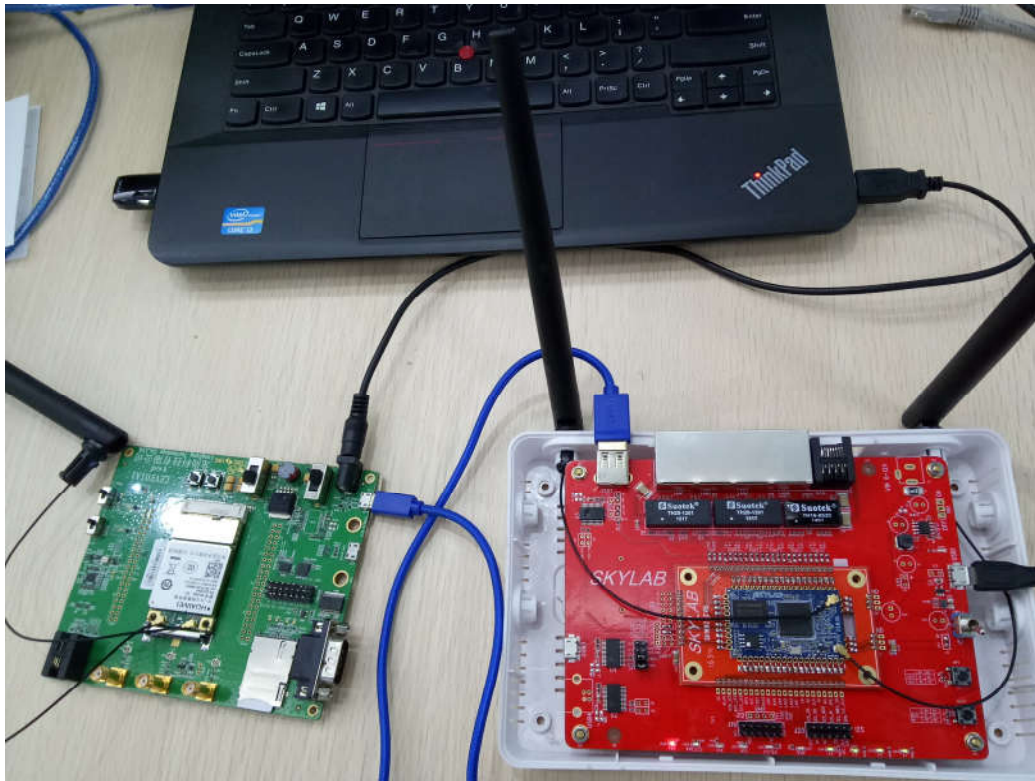
- A. Choose Gateway in the mode setting;
- B. Network setting as“WAN”;



- C. There are ADSL、L2TP、PPTP、3G these ways to connect to WAN in“WAN connected mode”, The following is 3G mode;

①SKW92 module connect to 3G module;

Use USB line to connect SKW92\_EVB and 3G\_EVB;



②Set the WAN online mode to 3G, then select the 3G modem (by default);

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[open all](#) | [close all](#)

**Wide Area Network (WAN) Settings**

You may choose different connection type suitable for your environment. Besides, you may also configure parameters according to the selected connection type.

**WAN Settings**

- Internet Settings
  - WAN**
  - LAN
  - DHCP clients
  - VPN Passthrough
  - Advanced Routing
  - IPv6
- Wireless Settings
- NAT Settings
- USB App.
- Storage
- Administration

**WANLAN interface:** Wan Interface Mode

**WAN Connection Type:** 3G

**3G Mode**

APN	
PIN	
Dial Number	
Username	
Password	
USB 3G modem	AutoDetect

**MAC Clone**

Enabled Disable

③Through the 3G network connection:

In the above table is filled with operators to provide the corresponding APN, PIN, Dial, Number, USB and 3G card support models are as follows, only supports the following models, if there are other models need support, please contact our technical support;

AutoDetect
NU MU-Q101
HUAWEI E169
BandLuxe C270
OPTION ICON 225
DATANG M5731
MobilePeak-Titan
ZTE-CEM630

SKW92 module supports 3G routing internet access function, the 3G card inserted into the 3G module \_EVB, power on the network to complete the connection automatically, to get to the server IP after the state shows the following icon, you can use 3G traffic;

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Skylab

- Operation Mode
- Internet Settings
  - WAN
  - LAN
  - DHCP clients
  - VPN Passthrough
  - Advanced Routing
  - IPv6
- Wireless Settings
  - Basic
  - Advanced
  - Security
  - WDS
  - WPS
  - AP Client
  - Station List
  - Statistics
- NAT Settings
- USB App.
- Storage
- Administration

### Access Point Status

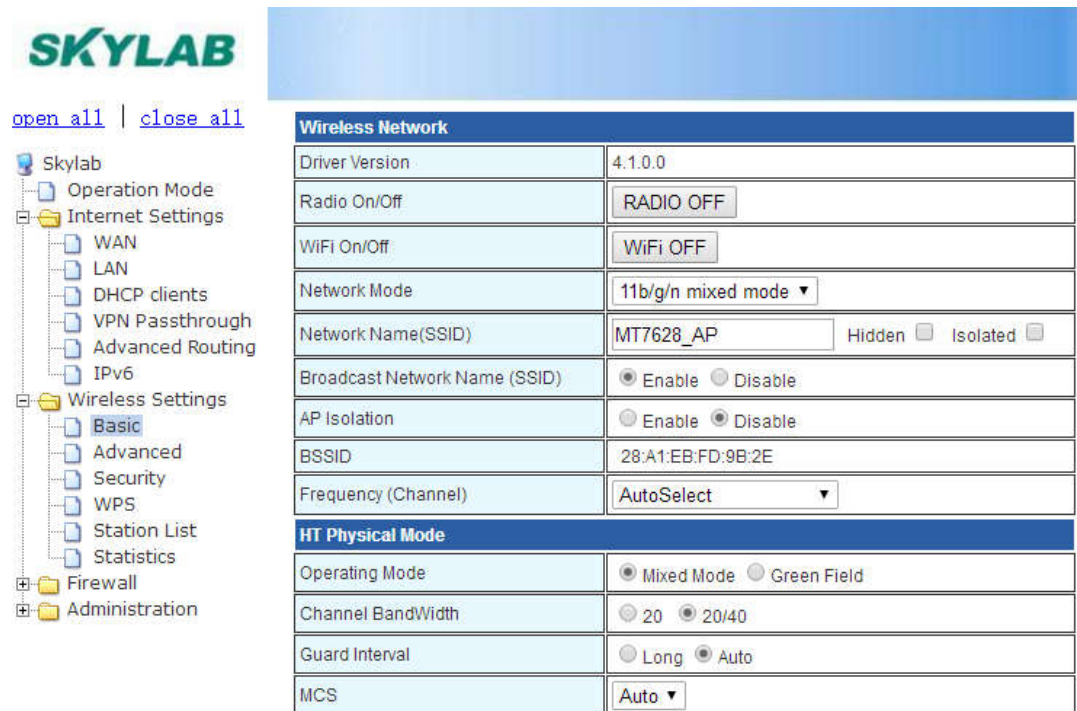
Let's take a look at the status of Ralink SoC Platform.

System Info	
SDK Version	4.2.0.0 (Feb 16 2017)
System Up Time	11 mins, 48 secs
System Platform	MT7620 embedded switch
Operation Mode	AP Client Mode

Internet Configurations	
Connected Type	3G
WAN IP Address	
Subnet Mask	
Default Gateway	
Primary Domain Name Server	192.168.43.1
Secondary Domain Name Server	192.168.43.1
MAC Address	28:A1:EB:76:06:3D

Local Network	
Local IP Address	10.10.10.254
Local Netmask	255.255.255.0
MAC Address	28:A1:EB:76:06:3C

## D. Wireless Network Setting;



**SKYLAB**

[open all](#) | [close all](#)

- Skylab
  - Operation Mode
  - Internet Settings
    - WAN
    - LAN
    - DHCP clients
    - VPN Passthrough
    - Advanced Routing
    - IPv6
  - Wireless Settings
    - Basic**
    - Advanced
    - Security
    - WPS
    - Station List
    - Statistics
  - Firewall
  - Administration

Wireless Network	
Driver Version	4.1.0.0
Radio On/Off	<input type="button" value="RADIO OFF"/>
WiFi On/Off	<input type="button" value="WiFi OFF"/>
Network Mode	11b/g/n mixed mode ▼
Network Name(SSID)	MT7628_AP <input type="checkbox"/> Hidden <input type="checkbox"/> Isolated
Broadcast Network Name (SSID)	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
AP Isolation	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
BSSID	28:A1:EB:FD:9B:2E
Frequency (Channel)	AutoSelect ▼
HT Physical Mode	
Operating Mode	<input checked="" type="radio"/> Mixed Mode <input type="radio"/> Green Field
Channel Band/Width	<input type="radio"/> 20 <input checked="" type="radio"/> 20/40
Guard Interval	<input type="radio"/> Long <input checked="" type="radio"/> Auto
MCS	Auto ▼

## 2).Setup “AP Client Mode”

### Operation Mode Configuration

You may configure the operation mode suitable for you environment.

- ☐ **Bridge:**  
All ethernet and wireless interfaces are bridged into a single bridge interface.
- ☐ **Gateway:**  
The first ethernet port is treated as WAN port. The other ethernet ports and the wireless interface are bridged together and are treated as LAN ports.
- ☒ **AP Client:**  
The wireless apcli interface is treated as WAN port, and the wireless ap interface and the ethernet ports are LAN ports.

NAT Enabled:

TCP Timeout:

UDP Timeout:

- A. First setting IP of AP router and SKW92:  
Outer default AP router IP address is 192.1681.1.1;  
SKW92 use the own IP address, 192.168.2.254;

[open all](#) | [close all](#)

Ralink

- Wizard
- Operation Mode
- Internet Settings
  - WAN
  - LAN**
  - DHCP clients
  - Advanced Routing
  - IPv6
- Wireless Settings
  - Basic
  - Advanced
  - Security
  - WPS
  - Station List
  - Statistics
- Firewall
- Storage
- Administration

### Local Area Network (LAN) Settings

You may enable/disable networking functions and configure their parameters as your wish.

LAN Setup	
Hostname	ralink
IP Address	192.168.2.254
Subnet Mask	255.255.255.0
LAN 2	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
LAN2 IP Address	
LAN2 Subnet Mask	
MAC Address	00:0C:43:30:50:58
DHCP Type	Server ▼
Start IP Address	192.168.2.100
End IP Address	192.168.2.200
Subnet Mask	255.255.255.0
Primary DNS Server	168.95.1.1
Secondary DNS Server	8.8.8.8
Default Gateway	192.168.2.254

- B. Click“AP Client”—>“Scan”;

You could configure AP Client parameters here.

Ralink

- Operation Mode
- Internet Settings
- Wireless Settings
  - Basic
  - Advanced
  - Security
  - WPS
  - AP Client**
  - Station List
  - Statistics
- Firewall

AP Client Parameters	
SSID	MT7621_AP
MAC Address (Optional)	a0:20:14:03:21:50
Security Mode	OPEN ▼
Encryption Type	None ▼

Apply
Cancel
**SCAN**



C. Select AP, click“Apply”;

open all | close all

**AP Client Feature**  
You could configure AP Client parameters here.

**AP Client Parameters**

SSID	MT7621_AP
MAC Address (Optional)	a0:20:14:03:21:50
Security Mode	OPEN
Encryption Type	None

Apply Cancel SCAN

**Site Survey**

Ch	SSID	BSSID	Security	Signal(%)	W-Moe	ExtCh	NT
1	ChinaNet-ze5b	68:1a:b2:4e:61:e8	WPA1PSKWPA2PSK/AES	29	11b/g/n	NONE	In
1	Adslid	14:da:e9:53:35:e8	WPA2PSK/AES	10	11b/g/n	NONE	In
1	888888	5c:63:bf:7:b9:9a	WPA2PSK/TKIP	24	11b/g	NONE	In
1	ITV-A35r	38:e5:95:b4:be:5d	WPA1PSKWPA2PSK/TKIPAES	5	11b/g/n	NONE	In
1	NORMAN	00:23:cd:7d:e3:86	WEP	10	11b/g	NONE	In
2	TP-LINK_720N	6c:e8:73:ec:0c:1e	WPA1PSKWPA2PSK/TKIPAES	29	11b/g/n	ABOVE	In
6	MT7621_AP	a0:20:14:03:21:50	NONE	81	11b/g/n	ABOVE	In
6	Synnex-SZ2	d0:57:4c:28:df:58	WPA1PSKWPA2PSK/TKIPAES	100	11b/g	NONE	In
9	HY-CG	40:16:9f:5c:92:60	WPA1PSKWPA2PSK/AES	50	11b/g/n	NONE	In
11	360WiFi-EC4E	00:70:36:05:ec:4e	WPA1PSKWPA2PSK/AES	34	11b/g/n	BELOW	In
11	0x4A4347E68DB7E7A880E699BAE883	04:5fa7:07:01:c1	WPA1PSKWPA2PSK/AES	39	11b/g/n	BELOW	In

D. Modify the wireless channel, make it the same as the channel of the AP;

Wireless Settings

Basic

Advanced

Security

WPS

AP Client

Station List

Statistics

MBSSID AP Isolation ☐ Enable ☒ Disable

BSSID 00:0C:43:30:50:58

Frequency (Channel) 2437MHz (Channel 6)

**HT Physical Mode**

Operating Mode ☒ Mixed Mode ☐ Green Field

Channel BandWidth ☐ 20 ☒ 20/40

Note: AP Router and AP client set to the same channel.

## 5. Contact Information

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