

Repeater
User Manual
PTI-7018N

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Trademarks

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CE Energy-Related Products Directive 2009/125/EC Information

Please ask the local distributor, supplier or importer below information:

The related information of Recycle or disposal.

The related information of spare parts issue.

Maintenance service

Please switch the power button to “AP OFF” when you do not use the function of AP router, in order to save electricity power.

RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

FCC Radiation Norm

This equipment has been tested and found to comply with limits for a Class B digital device pursuant to 47 CFR, Part 2 and Part 15 of the Federal Communication Commission (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 interferences that may cause undesired operations.

CE Radiation Norm

This equipment has been tested and found to comply with the limits of the European Council Directive 99/5/EC on the approximation of the law of the member states relating to EN 300 328 V1.7.1 (2006-10), EN 301 489-1 V1.8.1 (2008-04) and EN 301 489-17 V1.3.2 (2008-04) and EN 60950.

FCC & CE Compliance Statement

These limits are designed to provide reasonable protection against radio interference in a residential environment. This equipment can generate, use and radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment ON and OFF, the user is encouraged to try to reduce the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult a dealer or an experienced technician for assistance



CAUTION!

The Federal Communication Commission warns the user that changes or modifications to the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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Chapter 1 Introduction

Thank you for choosing the outstanding repeater. The repeater works with your wireless router to extend the wireless coverage.

To protect the data privacy, the repeater can encrypt wireless transmissions. Security features include Wi-Fi Protected Access 2 (WPA2) security, which encrypts data on your wireless networks. The Repeater support WPS feature..

1.1 Features

■ Functions

- Support Repeater.

■ Wireless

- IEEE 802.11b/g/n standards compliant.
- Support data rates up to 150Mbps (Auto-Rate Capable).
- Support WEP/WPA/WPA2 Encryption.
- Support WPS.

■ Ethernet Interface

- 1 Port Ethernet Interface compliant with IEEE 802.3x standards.
- Automatic MDI/MDIX crossover for 10/100 Base-T port.
- Auto-negotiation and speed-auto-sensing support.

■ Network Management

- Web-based Management
- Firmware upgrade via HTTP/TFTP
- System Log

1.2 System Requirement

Check and confirm that your system is with the following minimum requirements:

- Personal computer (PC/Notebook).
- Pentium III compatible processor and above.
- Wireless LAN card or IEEE 802.11b/g/n Wireless adaptor installed with TCP/IP protocol.
- 64 MB RAM or more.
- 50 MB of free disk space (Minimum).
- Internet Browser.
- CD-ROM Drive.

1.3 Package Contents

The Repeater package contains the following items:

- One Repeater
- One Quick Setup Guide

If any of the above items are damaged or missing, please contact your dealer immediately.

Chapter 2 Knowing The Repeater

2.1 LED Indicator

The Repeater's LED indicators display information about the device's status.



| | |
|--------|--|
| Green | Static: Repeater connect to root AP successfully |
| | Flashing : initial WPS |
| Orange | Flashing when repeater cannot link to root AP |
| Red | Repeater is booting |

2.2 Ports

The ports of the Repeater contain LAN Ethernet port, Reset Button and WPS button.

To “**Reset**” the repeater to factory defaults:

- Ensure that the device is powered on.
- Press the Reset button for more than 5 seconds and release. Wait for 60 seconds after release the Reset button. Do not power off the device during the reset process.
- The default settings are now restored after 60 seconds.

To setup **WPS** via WPS button:

- Press the WPS button and release.

2.3 Power ON/OFF

The Power ON/OFF Button of Repeater.



Chapter 3 Configuration

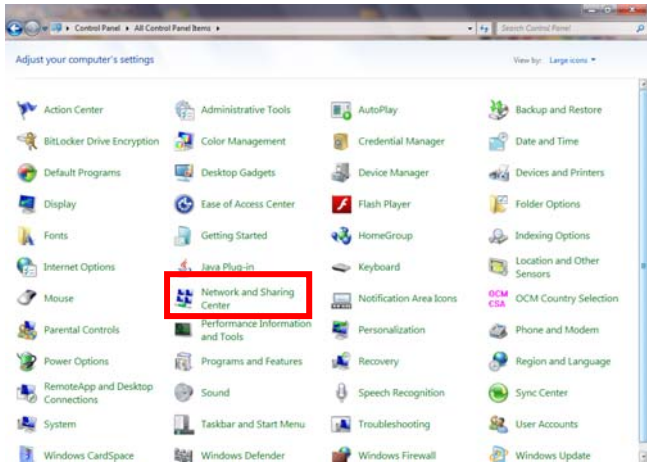
For your convenience, the web GUI allows you to configure Repeater using web browser.

This chapter will explain all the functions in this Web GUI.

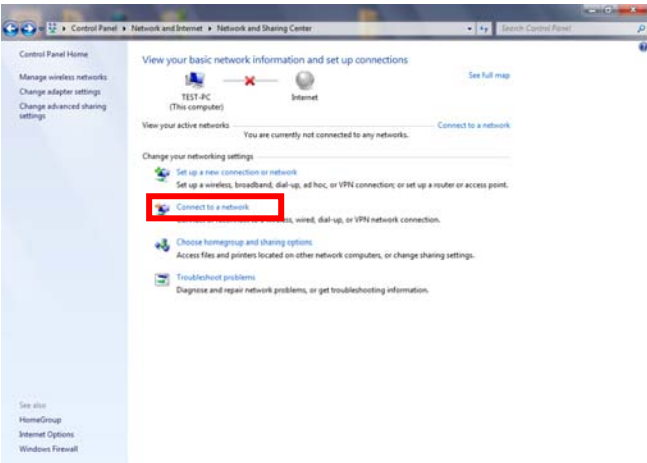
Please turn ON the wireless adapter of PC first.

3.1 Setup Wireless Connection

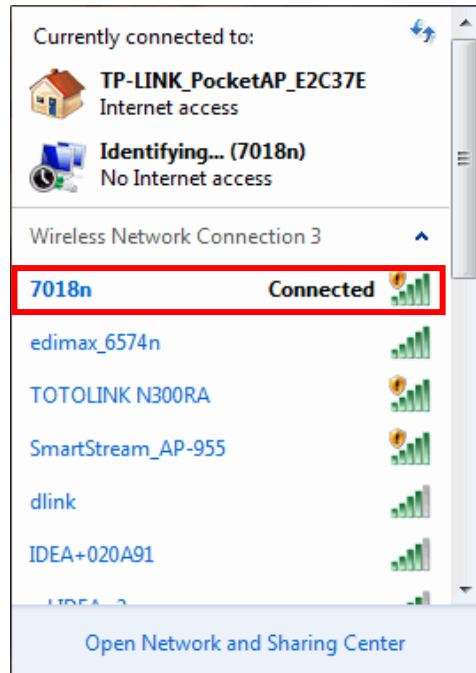
Step 1: Open Control Panel -> Network and Sharing Center.



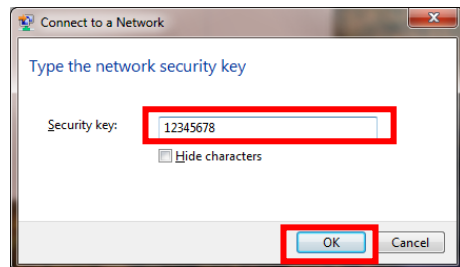
Step 2: Click on the **Connect to a network..**



Step 3: Choose 7018n to connect.



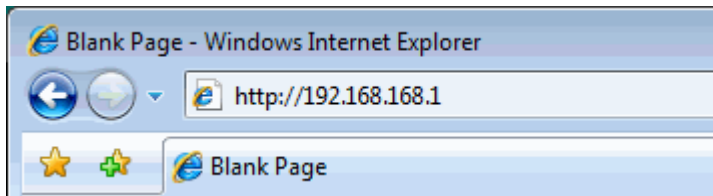
Step 4: Fill in Security Key "12345678", then press "OK"



3.2 Login

To access the Repeater configuration screens, follow the following steps will enable you to log into the Repeater.

1. Launch your web browser, and enter the Repeater's IP Address: **"10.10.10.254"** in the address field then press the **"Enter"** key to login.



2. Enter the default **User name: "admin"** and **Password: "admin"**. Then press **"OK"** to login.



3. Here is the Homepage.

Ralink mimoso bility

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

- Ralink
- Internet Settings
- Wireless Settings
- Administration

Select Language

English

[Status](#)
[Statistic](#)
[Management](#)

goahead
WEB SERVER™

3.3 Setup Repeater

3.3.1 Setup wireless connection through WPS button

If your root wireless router supports the WPS function through Push Button Configuration (PBC), you can setup a wireless connection between the repeater and the root wireless router by pressing the WPS button.

1. Press the WPS button of your root wireless router.
2. Press the WPS button of Repeater. The LED will start to blink. When the LED is static Green, it indicates that the Repeater connects to the root wireless router successfully.
3. Connect your Laptop or Mobile to the SSID of repeater and they will get the IP address from root wireless router.

3.3.2 Setup wireless connection through Web GUI

You could setup repeater mode and connect to root AP to extend wireless coverage.

1. Click Wireless Settings-> repeater mode. Click Scan network button first.

The screenshot shows the Ralink web interface. The top left has the Ralink logo and the top right has the 'mimo' logo. Below the logo is a navigation menu with 'repeater mode' selected. The main content area is titled 'Station Site Survey' and contains a table with columns for SSID, BSSID, Channel, Encryption, Mode, Signal, and Select. Below the table are 'Scan network' and 'Connect' buttons.

| Site Survey | | | | | | |
|--|-------|---------|------------|------|--------|--------|
| SSID | BSSID | Channel | Encryption | Mode | Signal | Select |
| <input type="button" value="Scan network"/> <input type="button" value="Connect"/> | | | | | | |

2. Select a root AP and click connect.

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

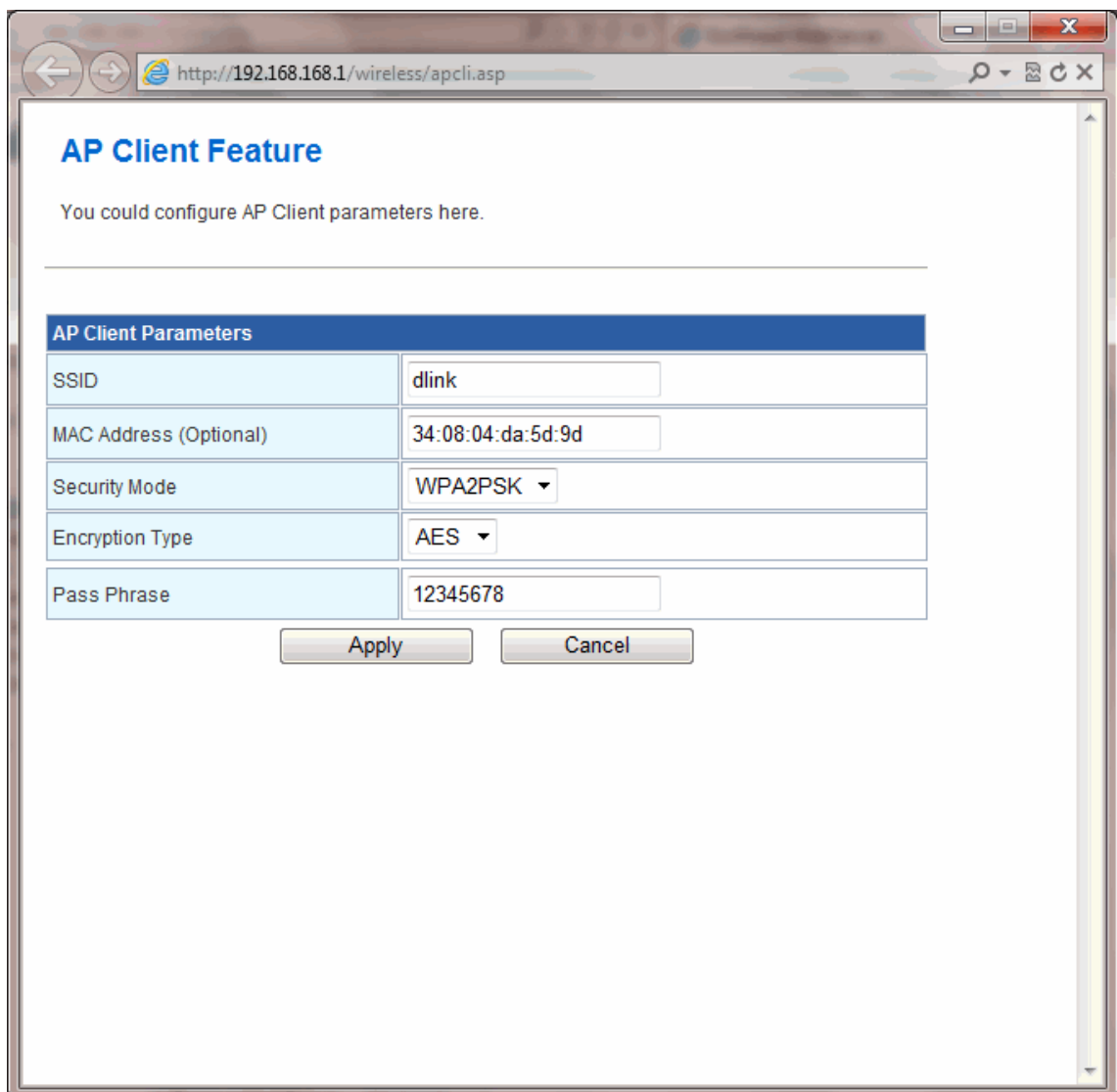
- Ralink
 - Internet Settings
 - Wireless Settings
 - Basic
 - Advanced
 - Security
 - WPS
 - repeater mode**
 - Station List
 - Statistics
 - Administration

Station Site Survey

Site survey page shows information of APs nearby. You may choose one of these APs connecting or adding it to profile.


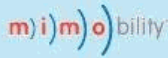
| Site Survey | | | | | | |
|--------------------|-------------------|---------|--------------------------|---------|--------|----------------------------------|
| SSID | BSSID | Channel | Encryption | Mode | Signal | Select |
| BCH_Express | d8:30:62:2f:97:ab | 2 | WPA2PSK/AES | 11b/g/n | 34 | <input type="radio"/> |
| edimax_6574n | 00:1f:1f:19:98:48 | 3 | WPA2PSK/AES | 11b/g/n | 76 | <input type="radio"/> |
| Pantek | 1c:af:f7:95:09:30 | 5 | WPA1PSK/WPA2PSK/TKIP/AES | 11b/g/n | 15 | <input type="radio"/> |
| Pantek | 1c:af:f7:95:09:31 | 5 | WPA1PSK/WPA2PSK/TKIP/AES | 11b/g/n | 15 | <input type="radio"/> |
| ZyXEL | 00:19:cb:1f:82:2c | 6 | WPA1PSK/WPA2PSK/TKIP/AES | 11b/g | 10 | <input type="radio"/> |
| dimobo | 00:50:7f:e0:7d:38 | 7 | WPA1PSK/WPA2PSK/TKIP/AES | 11b/g/n | 5 | <input type="radio"/> |
| SmartStream_AP-955 | 74:e5:43:89:3e:a4 | 8 | NONE | 11b/g/n | 65 | <input type="radio"/> |
| HDAM | ca:6c:87:cd:c9:e8 | 11 | WPAPSK/AES | 11b/g/n | 15 | <input type="radio"/> |
| BCH-All | 00:d0:41:ca:d9:a8 | 11 | WPA2PSK/AES | 11b/g/n | 39 | <input type="radio"/> |
| shirley | 00:1f:1f:a7:b6:ac | 11 | WEP | 11b/g/n | 20 | <input type="radio"/> |
| TOTOLINK | 78:44:76:dd:06:2c | 11 | NONE | 11b/g/n | 81 | <input type="radio"/> |
| dlink | 34:08:04:da:5d:9d | 11 | WPA1PSK/WPA2PSK/AES | 11b/g/n | 65 | <input checked="" type="radio"/> |

- Fill in the wireless password of root AP in Pass Phrase and click Apply.



3.4 LAN Setting

The Internet Settings configures the device the LAN IP address and DHCP server.

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

- Ralink
 - Internet Settings
 - LAN
 - DHCP clients
 - Wireless Settings
 - Administration



Local Area Network (LAN) Settings

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

| LAN Setup | |
|----------------------|---|
| IP Address | <input type="text" value="192.168.168.1"/> |
| Subnet Mask | <input type="text" value="255.255.255.0"/> |
| LAN 2 | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| LAN2 IP Address | <input type="text"/> |
| LAN2 Subnet Mask | <input type="text"/> |
| Default Gateway | <input type="text"/> |
| Primary DNS Server | <input type="text" value="168.95.1.1"/> |
| Secondary DNS Server | <input type="text" value="8.8.8.8"/> |
| MAC Address | <input type="text" value="00:13:64:70:18:01"/> |
| DHCP Type | <input type="text" value="Server"/> ▼ |
| Start IP Address | <input type="text" value="192.168.168.100"/> |
| End IP Address | <input type="text" value="192.168.168.200"/> |
| Subnet Mask | <input type="text" value="255.255.255.0"/> |
| Primary DNS Server | <input type="text" value="168.95.1.1"/> |
| Secondary DNS Server | <input type="text" value="8.8.8.8"/> |
| Default Gateway | <input type="text" value="192.168.168.1"/> |
| Lease Time | <input type="text" value="86400"/> |
| Statically Assigned | MAC: <input type="text"/> IP: <input type="text"/> |
| Statically Assigned | MAC: <input type="text"/> IP: <input type="text"/> |
| Statically Assigned | MAC: <input type="text"/> IP: <input type="text"/> |
| 802.1d Spanning Tree | <input type="text" value="Disable"/> ▼ |

3.4.1 Internet Settings – LAN

This page is used to configure the parameters for local area network which connects to the Repeater. Here you may change the setting for IP address, subnet mask, DHCP, etc..

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

- Ralink
 - Internet Settings
 - LAN
 - DHCP clients
 - Wireless Settings
 - Administration

Local Area Network (LAN) Settings

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

| LAN Setup | |
|----------------------|---|
| IP Address | <input type="text" value="192.168.168.1"/> |
| Subnet Mask | <input type="text" value="255.255.255.0"/> |
| LAN 2 | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| LAN2 IP Address | <input type="text"/> |
| LAN2 Subnet Mask | <input type="text"/> |
| Default Gateway | <input type="text"/> |
| Primary DNS Server | <input type="text" value="168.95.1.1"/> |
| Secondary DNS Server | <input type="text" value="8.8.8.8"/> |
| MAC Address | 00:13:64:70:18:01 |
| DHCP Type | Server <input type="button" value="v"/> |
| Start IP Address | <input type="text" value="192.168.168.100"/> |
| End IP Address | <input type="text" value="192.168.168.200"/> |
| Subnet Mask | <input type="text" value="255.255.255.0"/> |
| Primary DNS Server | <input type="text" value="168.95.1.1"/> |
| Secondary DNS Server | <input type="text" value="8.8.8.8"/> |
| Default Gateway | <input type="text" value="192.168.168.1"/> |
| Lease Time | <input type="text" value="86400"/> |
| Statically Assigned | MAC: <input type="text"/> IP: <input type="text"/> |
| Statically Assigned | MAC: <input type="text"/> IP: <input type="text"/> |
| Statically Assigned | MAC: <input type="text"/> IP: <input type="text"/> |
| 802.1d Spanning Tree | Disable <input type="button" value="v"/> |

Fields in this page:

| Field | Description |
|------------------|--|
| IP Address | The device's IP Address. |
| Subnet Mask | The device's Subnet Mask. |
| LAN2 | Enabled/Disabled 2 nd LAN networks. |
| LAN2 IP Address | LAN2 IP Address. |
| LAN2 Subnet Mask | LAN2 Subnet Mask. |

| | |
|----------------------|--|
| Default Gateway | The Default Gateway Address assigned to DHCP clients. |
| Primary DNS Server | The primary DNS Server Address assigned to DHCP clients. |
| Secondary DNS Server | The secondary DNS Server Address assigned to DHCP clients. |
| MAC Address | MAC Address of device. |
| DHCP Type | Server or Disable. If you already have a DHCP server on your network, then select Disable. |
| Start IP Address | The Start IP Address specifies the starting IP address of the range of address assigned by your device when it functions as a DHCP Server. |
| End IP Address | The End IP Address specifies the ending IP address of the range of address assigned by your device when it functions as a DHCP Server. |
| Subnet Mask | The Subnet Mask assigned to DHCP clients. |
| Lease Time | The Lease Time is the amount of time a network user will be allowed connection to the device with their current dynamic IP address. |
| Statically Assigned | Assign a Static IP address to a specified MAC address. |
| 802.1d Spanning Tree | Enabled/Disabled 802.1d Spanning Tree. |
| LLTD | Enabled/Disabled Link Layer Topology Discovery(LLTD). |
| IGMP Proxy | Enabled/Disabled IGMP Proxy. |
| Device Advertisement | Enabled/Disabled Device Advertisement. |
| PPPoE Relay | Enabled/Disabled PPPoE Relay. |

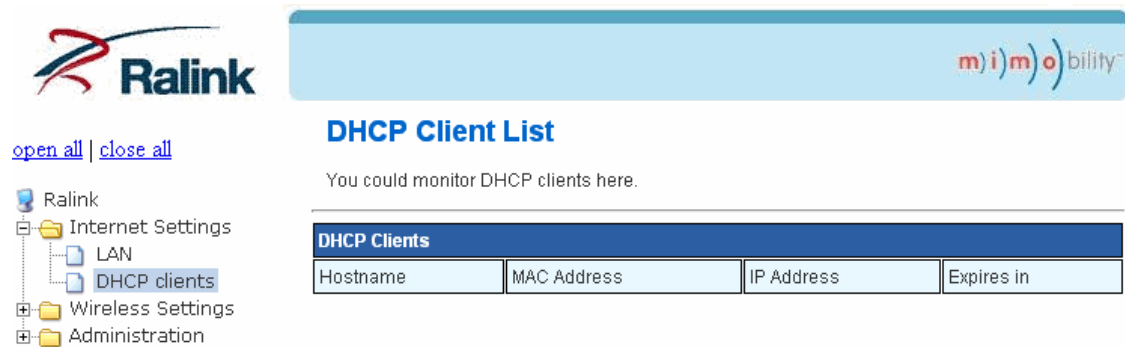
Function buttons in this page:

Apply

Click to save the setting to the configuration.

3.4.2 Internet Settings – DHCP clients

You may monitor DHCP clients here.



The screenshot shows the Ralink web interface. At the top left is the Ralink logo. At the top right is the 'mimo) bility' logo. Below the logo is a navigation menu with 'open all' and 'close all' links. The menu includes 'Internet Settings' (expanded), 'LAN', 'DHCP clients' (selected), 'Wireless Settings', and 'Administration'. The main content area is titled 'DHCP Client List' and contains the text 'You could monitor DHCP clients here.' Below this is a table with the following structure:

| DHCP Clients | | | |
|--------------|-------------|------------|------------|
| Hostname | MAC Address | IP Address | Expires in |

3.5 Wireless Settings

You can view Wireless Settings link in the left navigation bar. Following are the options available under Wireless Settings:

- Basic
- Advanced
- Security
- WPS
- Repeater mode
- Station List
- Statistics

3.5.1 Wireless Settings – Basic

To configure the wireless basic settings, click on the **Basic** link (Wireless Settings > Basic) in the left navigation bar. A screen is displayed as shown in following figure.

Basic Wireless Settings

You could configure the minimum number of Wireless settings for communication, such as Network Name (SSID) and Channel. The Access Point can be set simply with only the minimum setting items.

| Wireless Network | |
|-------------------------------|--|
| Driver Version | 2.5.0.0 |
| 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) | 7018n <input type="checkbox"/> Hidden <input type="checkbox"/> Isolated <input type="checkbox"/> |
| 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 | 00:13:64:70:18:02 |
| Frequency (Channel) | 2412MHz (Channel 1) |
| HT Physical Mode | |
| Operating Mode | <input checked="" type="radio"/> Mixed Mode <input type="radio"/> Green Field |
| Channel BandWidth | <input type="radio"/> 20 <input checked="" type="radio"/> 20/40 |
| Guard Interval | <input type="radio"/> Long <input checked="" type="radio"/> Auto |
| MCS | Auto |
| Reverse Direction Grant(RDG) | <input type="radio"/> Disable <input checked="" type="radio"/> Enable |
| Extension Channel | 2432MHz (Channel 5) |
| Space Time Block Coding(STBC) | <input type="radio"/> Disable <input checked="" type="radio"/> Enable |
| Aggregation MSDU(A-MSDU) | <input checked="" type="radio"/> Disable <input type="radio"/> Enable |
| Auto Block ACK | <input type="radio"/> Disable <input checked="" type="radio"/> Enable |
| Decline BA Request | <input checked="" type="radio"/> Disable <input type="radio"/> Enable |
| HT Disallow TKIP | <input type="radio"/> Disable <input checked="" type="radio"/> Enable |
| Other | |
| HT TxStream | 1 |
| HT RxStream | 1 |

Fields in this page:

| Field | Description |
|------------------|--|
| Wireless Network | |
| Radio On/Off | Click RADIO ON button to enable Radio. Click RADIO OFF button to disable Radio. |
| WiFi On/Off | Click WiFi ON button to enable WiFi. Click WiFi OFF button to disable WiFi. |
| Network Mode | From this drop-down menu, you can select the wireless standards running on your network. |

| | |
|------------------------------|---|
| | <ul style="list-style-type: none"> ● 11b/g mixed mode ● 11b only ● 11g only ● 11b/g/n mixed mode ● 11n only(2.4G) |
| Network Name(SSID) | The SSID(Service Set Identifier) is the network name shared by all devices in a wireless network. It is case-sensitive and must not exceed 32 keyboard characters. |
| Broadcast Network Name(SSID) | Enabled/Disabled SSID broadcast. When wireless clients survey the local area for wireless networks to associate with, they will detect the SSID broadcast by the device. To broadcast the device's SSID, keep Enabled . If you do not want to broadcast the device's SSID, then select Disabled . |
| AP isolation | Wireless Client isolation. Prevent one wireless client communicating with another wireless client. |
| MBSSID AP isolation | MBSSID wireless client isolation. Wireless client in SSID1 cannot communicate with wireless client in SSID2~7. |
| BSSID | Display device's BSSID. |
| Frequency (Channel) | Select the appropriate channel for your wireless network. |

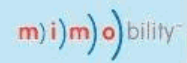
Function buttons in this page:

Apply

Click to save the setting to the configuration.

3.5.2 Wireless Settings – Advanced

This page allows advanced users who have sufficient knowledge of wireless LAN. These setting shall not be changed unless you know exactly what will happen for the changes you made on your device.



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

- Ralink
 - Internet Settings
 - Wireless Settings
 - Basic
 - Advanced**
 - Security
 - WPS
 - repeater mode
 - Station List
 - Statistics
 - Administration

Advanced Wireless Settings

Use the Advanced Setup page to make detailed settings for the Wireless. Advanced Setup includes items that are not available from the Basic Setup page, such as Beacon Interval, Control Tx Rates and Basic Data Rates.

| Advanced Wireless | |
|--------------------------------|---|
| BG Protection Mode | Auto <input type="button" value="v"/> |
| Beacon Interval | 100 ms (range 20 - 999, default 100) |
| Data Beacon Rate (DTIM) | 1 ms (range 1 - 255, default 1) |
| Fragment Threshold | 2346 (range 256 - 2346, default 2346) |
| RTS Threshold | 2347 (range 1 - 2347, default 2347) |
| TX Power | 100 (range 1 - 100, default 100) |
| Short Preamble | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| Short Slot | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| Tx Burst | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| Pkt_Aggregate | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| IEEE 802.11H Support | <input type="radio"/> Enable <input checked="" type="radio"/> Disable(only in A band) |
| Country Code | None <input type="button" value="v"/> |
| Wi-Fi Multimedia | |
| WMM Capable | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| APSD Capable | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| DLS Capable | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| WMM Parameters | <input type="button" value="WMM Configuration"/> |
| Multicast-to-Unicast Converter | |
| Multicast-to-Unicast | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |

Fields in this page:

| Field | Description |
|------------------------|--|
| Advanced Wireless | |
| BG Protection Mode | Auto/On/Off |
| Beacon Interval | The Beacon Interval value indicates the frequency interval of the beacon. Enter a value between 20 and 1024. A beacon is a packet broadcast by the device to synchronize the wireless network. The default is 100. |
| Data Beacon rate(DTIM) | A Delivery Traffic Indication Message(DTIM) is a kind of Traffic Indication Message(TIM) which informs the clients about the presence of buffered multicast/broadcast data on the access point The default is 1ms. |

| | |
|--------------------------------|--|
| Fragment Threshold | This value should remain at its default setting of 2346. It specifies the maximum size for a packet before data is fragmented into multiple packets. If you experience a high packet error rate, you may slightly increase the "Fragment Threshold" value within the value range of 256 to 2346. Setting this value too low may result in poor network performance. Only minor modifications of this value are recommended. |
| RTS Threshold | This value should remain at its default setting of 2347. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the preset "RTS threshold" size, the RTS/CTS mechanism will not be enabled. The AP sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission. |
| TX Power | The TX power of Device. The default is 100. |
| Short Preamble | The Preamble Type defines the length of the CRC block for communication between the AP and mobile wireless stations. Note that high network traffic areas should use the <i>short preamble</i> type. |
| Short Slot | Enable to reduce the guard interval time. |
| Tx Burst | Enable Tx Burst. |
| Pkt_Aggregate | Enable: Packet will be aggregated before be sent. |
| IEEE 802.11H Support | Enable IEEE 802.11H. |
| Country Code | Select your country for wireless region. |
| Wi-Fi Multimedia | |
| WMM Capable | Wi-Fi Multimedia (WMM) is a wireless Quality of Service feature that improves quality of audio, video, and voice applications by prioritizing wireless traffic. To use this feature, the wireless client devices in your network must support Wireless WMM. |
| APSD Capable | Enable/Disable APSD(Automatic Power Save Delivery) Capable. |
| DLS Capable | Enable/Disable DLS Capable. |
| WMM Parameters | Configure WMM parameters. |
| Multicast-to-Unicast Converter | |
| Multicast-to-Unicast | Enable to allow multicast traffic to pass through the Device from the Internet. |

Function buttons in this page:

Apply

Click to save the setting to the configuration.

3.5.3 Wireless Settings – Security

This screen allows you to setup the wireless security. Turn on WEP or WPA by using encryption keys could prevent any unauthorized access to your WLAN.

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 - Advanced
 - Security**
 - WPS
 - repeater mode
 - Station List
 - Statistics
 - Administration

Wireless Security/Encryption Settings

Setup the wireless security and encryption to prevent from unauthorized access and monitoring.

Select SSID

| | |
|-------------|-------|
| SSID choice | 7018n |
|-------------|-------|

"7018n"

| | |
|---------------|---------|
| Security Mode | Disable |
|---------------|---------|

Access Policy

| | |
|--------------------|---|
| Policy | Disable |
| Add a station Mac: | <input style="width: 100%;" type="text"/> |

Fields in this page:

| Field | Description |
|-------------------------|---|
| SSID choice | Select SSID which you will configure security. |
| Security Mode | Disable, OPEN, SHARED, WEP AUTO, WPA, WPA-PSK, WPA2, WPA2-PSK, WPAPSKWPA2PSK, WPA1WPA2, 802.1X. |
| WEP | WEP is a basic encryption method, which is not as secure as WPA. |
| | Input 5 or 13 characters of WEP key. Select a default key. |
| WPA-PSK | WPA Algorithms: TKIP or AES. |
| WPA2-PSK | Enter a Passphrase 8 to 63 characters. |
| WPA WPA2 WPA1WPA2 | If the 802.1X, WPA, WPA2 is selected at Security Mode, the port (default is 1812), IP address and shared secret of external RADIUS server are specified here. |
| Access Policy | |
| Policy | Disable/Allow/Reject |
| Add a station MAC | Fill in MAC address of a Station which you want to allow or reject. |

Function buttons in this page:

Apply

Click to save the setting to the configuration.

3.5.4 Wireless Settings – WPS

This page allows you to change the setting for WPS(Wi-Fi Protected Setup). Using this feature could let your wireless client automatically synchronize its setting and connect to the Device in a minute without any hassle.

The screenshot shows the Ralink web interface for configuring WPS. On the left is a navigation tree with 'WPS' selected. The main content area is titled 'Wi-Fi Protected Setup' and contains the following sections:

- WPS Config:** A table with 'WPS:' set to 'Enable' and an 'Apply' button.
- WPS Summary:** A table showing current status (Idle), configuration (Yes), SSID (7018n), auth mode (Open), encryp type (None), default key index (1), and AP PIN (73461784) with a 'Generate' button. A 'Reset OOB' button is also present.
- WPS Progress:** A table with 'WPS mode' set to 'PIN' (selected) and 'PBC' (unselected), and a 'PIN' input field. An 'Apply' button is at the bottom.
- WPS Status:** A table showing 'WSC: Idle' and a 'Cancel' button.

There are three methods available. Use the method that applies to the client device you are configuring.

Note: WPS configures one client device at a time. Repeat the instructions for each client device that supports WPS.

- **WPS button** Use this method if your client device has a WPS button.
 - a. Click or press the **WPS** button on the client device.
 - b. Click the **WPS** button on the Device's WPS button.

The WPS LED flashes for two minutes during the WPS process and lights up when the WPS process is successful.

- **Enter Client Device PIN on Device** Use this method if your client device has a WPS PIN (Personal Identification Number).
 - a. Enter the PIN from the client device in the field on the Device's WPS setup screen.
 - b. Click the **Apply** button on the Device's WPS setup screen.

- **Enter Device PIN on Client Device** Use this method if your client device asks for the Device's PIN.
 - a. On the client device, enter the PIN listed on the Device's WPS setup screen.
 - b. Refer to your client device or its documentation for further instructions.

3.5.5 Wireless Settings – repeater mode

You could setup repeater mode and connect to root AP to extend wireless coverage.

1. Click Scan network button first.

The screenshot shows the Ralink web interface. On the left is a navigation tree with 'repeater mode' selected. The main content area is titled 'Station Site Survey' and contains a table with the following headers: SSID, BSSID, Channel, Encryption, Mode, Signal, and Select. Below the table are two buttons: 'Scan network' and 'Connect'. The 'Scan network' button is highlighted, indicating it has been clicked.

2. Select a root AP and click connect.

The screenshot shows the Ralink web interface after a scan. The 'Station Site Survey' table is populated with the following data:

| SSID | BSSID | Channel | Encryption | Mode | Signal | Select |
|--------------------|-------------------|---------|--------------------------|---------|--------|----------------------------------|
| BCH_Express | d8:30:62:2f:97:ab | 2 | WPA2PSK/AES | 11b/g/n | 34 | <input type="radio"/> |
| edimax_6574n | 00:1f:1f:19:98:48 | 3 | WPA2PSK/AES | 11b/g/n | 76 | <input type="radio"/> |
| Pantek | 1c:af:f7:95:09:30 | 5 | WPA1PSK/WPA2PSK/TKIP/AES | 11b/g/n | 15 | <input type="radio"/> |
| Pantek | 1c:af:f7:95:09:31 | 5 | WPA1PSK/WPA2PSK/TKIP/AES | 11b/g/n | 15 | <input type="radio"/> |
| ZyXEL | 00:19:cb:1f:82:2c | 6 | WPA1PSK/WPA2PSK/TKIP/AES | 11b/g | 10 | <input type="radio"/> |
| dimobo | 00:50:7f:e0:7d:38 | 7 | WPA1PSK/WPA2PSK/TKIP/AES | 11b/g/n | 5 | <input type="radio"/> |
| SmartStream_AP-955 | 74:e5:43:89:3e:a4 | 8 | NONE | 11b/g/n | 65 | <input type="radio"/> |
| HDAM | ca:6c:87:cd:c9:e8 | 11 | WPAPSK/AES | 11b/g/n | 15 | <input type="radio"/> |
| BCH-All | 00:d0:41:ca:d9:a8 | 11 | WPA2PSK/AES | 11b/g/n | 39 | <input type="radio"/> |
| shirley | 00:1f:1fa7:b6:ac | 11 | WEP | 11b/g/n | 20 | <input type="radio"/> |
| TOTOLINK | 78:44:76:dd:06:2c | 11 | NONE | 11b/g/n | 81 | <input type="radio"/> |
| dlink | 34:08:04:da:5d:9d | 11 | WPA1PSK/WPA2PSK/AES | 11b/g/n | 65 | <input checked="" type="radio"/> |

Below the table are two buttons: 'Scan network' and 'Connect'. The 'Connect' button is highlighted, indicating it has been clicked.

3. Fill in the wireless password of root AP in Pass Phrase and click Apply.

AP Client Feature

You could configure AP Client parameters here.

| AP Client Parameters | |
|------------------------|-------------------|
| SSID | dlink |
| MAC Address (Optional) | 34:08:04:da:5d:9d |
| Security Mode | WPA2PSK |
| Encryption Type | AES |
| Pass Phrase | 12345678 |

Apply Cancel

3.5.6 Wireless Settings – Station List

You could monitor stations which associated to the Device here.

The screenshot shows the Ralink web interface. On the left is a navigation tree with 'Station List' selected. The main content area is titled 'Station List' and contains a table for 'Wireless Network' parameters.

Station List

You could monitor stations which associated to this AP here.

| Wireless Network | | | | | | | |
|-------------------|-----|-----|--------|-----|-----|-----|------|
| MAC Address | Aid | PSM | MimoPS | MCS | BW | SGI | STBC |
| 00:13:64:00:00:28 | 2 | 0 | 3 | 7 | 40M | 1 | 0 |

3.5.7 Wireless Settings – Statistics

You could monitor wireless TX and RX statistics here.

The screenshot shows the Ralink web interface. On the left is a navigation tree with 'Statistics' selected. The main content area is titled 'AP Wireless Statistics' and contains tables for 'Transmit Statistics', 'Receive Statistics', and 'SNR'.

AP Wireless Statistics

Wireless TX and RX Statistics

| Transmit Statistics | |
|------------------------------|----------------|
| Tx Success | 1470 |
| Tx Retry Count | 87, PER=5.6% |
| Tx Fail after retry | 0, PLR=0.0e+00 |
| RTS Successfully Receive CTS | 0 |
| RTS Fail To Receive CTS | 0 |

| Receive Statistics | |
|--------------------------------|------------------|
| Frames Received Successfully | 7178 |
| Frames Received With CRC Error | 13335, PER=65.0% |

| SNR | |
|-----|--------------|
| SNR | 13, n/a, n/a |

3.6 Administration

The **Administration** page allows you to manage your device.

You can view Administration link in the left navigation bar. Following are the options available under Management:

- Management
- Upload Firmware
- Settings Management
- Status
- Statistics
- System Command
- System Log

3.6.1 Administration – System Management

You may configure administrator account and password.

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System Management

You may configure administrator account and password, NTP settings, and Dynamic DNS settings here.

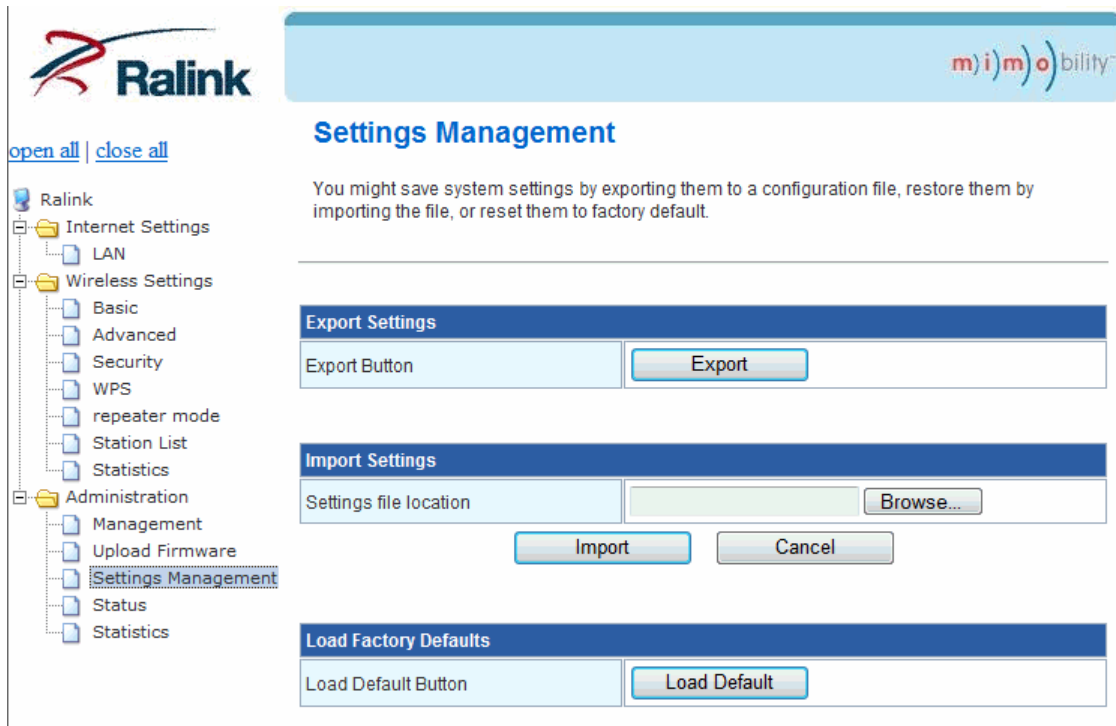
| Administrator Settings | |
|------------------------|--|
| Account | <input type="text" value="admin"/> |
| Password | <input type="password" value="....."/> |
| WatchDog | <input type="radio"/> Enable <input type="radio"/> Disable |

3.6.2 Administration – Upload Firmware

The Upgrade Firmware screen allows you to upgrade the Device's firmware. Do not upgrade the firmware unless you are experiencing problems with the Device or the new firmware has a feature you want to use.

3.6.3 Administration – Settings Management

You might save system settings by exporting them to a configuration file, restore them by importing the file, or reset them to factory default.



Fields in this page:

| Field | Description |
|------------------------|---|
| Export Settings | |
| Export Button | Press Export button to export a configuration. |
| Import Settings | |
| Settings file location | Click Browse button to select a configuration file then click Import button to import a configuration file. |
| Load Factory Defaults | |
| Load Default Button | Click Load Default button to reset to factory default. |

3.6.4 Administration – Status

The Status screen displays information about the Device and its current settings.

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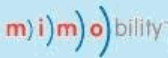
Access Point Status

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

| System Info | |
|------------------|------------------------|
| SDK Version | 3.6.0.0 (Sep 14 2012) |
| System Up Time | 3 mins, 52 secs |
| System Platform | RT5350 embedded switch |
| Operation Mode | Repeater Mode |
| Local Network | |
| Local IP Address | 192.168.168.1 |
| Local Netmask | 255.255.255.0 |
| MAC Address | 00:13:64:70:18:01 |

3.6.5 Administration – Statistics

Check all statistics for Memory, LAN and All interfaces.

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Statistic

Take a look at the Ralink SoC statistics

| Memory | |
|-----------------|----------|
| Memory total: | 13816 kB |
| Memory left: | 1100 kB |
| LAN | |
| LAN Rx packets: | 1229 |
| LAN Rx bytes: | 132965 |
| LAN Tx packets: | 1276 |
| LAN Tx bytes: | 893459 |
| All interfaces | |
| Name | eth2 |
| Rx Packet | 0 |
| Rx Byte | 0 |
| Tx Packet | 383 |
| Tx Byte | 75161 |
| Name | lo |
| Rx Packet | 14 |
| Rx Byte | 2253 |
| Tx Packet | 14 |
| Tx Byte | 2253 |
| Name | ra0 |
| Rx Packet | 13831 |
| Rx Byte | 3259000 |
| Tx Packet | 2763 |
| Tx Byte | 1250942 |
| Name | eth2.1 |
| Rx Packet | 0 |
| Rx Byte | 0 |
| Tx Packet | 5 |
| Tx Byte | 410 |
| Name | eth2.2 |
| Rx Packet | 0 |
| Rx Byte | 0 |
| Tx Packet | 6 |
| Tx Byte | 492 |
| Name | br0 |