

# **IMW-C870W**

**User Manual**

## Table of list

Chapter 1. Attention.....	4
Chapter 2. Introduction & Requirements.....	4
<i>Introduction of goods</i> .....	4
What is the IMW-C870W ? .....	4
System Requirements.....	4
Specification .....	4
Application.....	5
<i>The points of name &amp; Components list</i> .....	5
Components List in the package.....	5
Points of name & Function.....	5
Chapter 3. How to use the IMW-C870W.....	7
<i>Power ON/OFF</i> .....	7
<i>How to charge battery</i> .....	7
<i>Setting of the WiFi AP</i> .....	7
Setting with Window XP.....	7
Setting with Window 7 .....	8
Setting with Mac OS.....	8
<i>Setting of USB (RNDIS)</i> .....	9
Setting with Window XP.....	9
Setting with Window 7 .....	10
Chapter 4 Configuring CM .....	11
<i>Connect to Web CM (Web Connection Manager)</i> .....	11
Start CM .....	11

Input ID .....	11
<i>Description of Web User Interface</i> .....	12
Status .....	12
Device Setup .....	13
Setup Wizard .....	錯誤! 尚未定義書籤。
Windows Xp driver .....	錯誤! 尚未定義書籤。
Password .....	錯誤! 尚未定義書籤。
Device Time .....	錯誤! 尚未定義書籤。
Reset Device .....	錯誤! 尚未定義書籤。
Device Update .....	錯誤! 尚未定義書籤。
User upgrading .....	錯誤! 尚未定義書籤。
Wi-Fi Settings .....	錯誤! 尚未定義書籤。
Basic .....	錯誤! 尚未定義書籤。
Advanced .....	錯誤! 尚未定義書籤。
Advanced Settings .....	錯誤! 尚未定義書籤。
4G Information .....	錯誤! 尚未定義書籤。
Firewall .....	錯誤! 尚未定義書籤。
Router .....	錯誤! 尚未定義書籤。
System .....	錯誤! 尚未定義書籤。
Device Log .....	錯誤! 尚未定義書籤。
Help .....	錯誤! 尚未定義書籤。

# Chapter 1. Attention

- Don't use in high humidity place.
- Use in the clean place.
- Install on the safe place without dropping.
- Don't use and keep around electromagnetic waves.
- Don't put the goods on heavy things.
- Don't install and use in the Sun lights directly.
- Don't throw or dismantle the goods.
- Don't heat the goods and battery.
- Protect the goods from pets and children.
- Don't put the goods and battery in the water.
- Don't hold power adaptor in the wet hands.

# Chapter 2. Introduction & Requirements

## *Introduction of goods*

What is the IMW-C870W ?

- ⇒ IMW-C870W is a mobile WiMAX iPod4G Jacket Router device and a very inventive product for Portable Mobile WiMAX & WiFi Dual CPE(Customer Premises Equipment) enabling solution of the problem of lack in user terminals possible to use Mobile WiMAX service. When IMW-C870W is left in pocket or bag with its power on in the area where Mobile WiMAX service is available, user can make concurrent connection to many WiFi terminals by using WiFi transmitted by IMW-C870W , so it enables free use of wireless internet in any area.
- ⇒ IMW-C870W included WiFi AP support Mobile WiMAX Service through WiFi can be supported portable devices (Laptop, Desktop, PDA and Smart Phone etc.)

## System Requirements.

- ⇒ User's device will be installed WiFi (IEEE 802.11b/g) LAN Card or module.
- ⇒ The PC will be Installed USB port.

## Specification

	Items	Description
WiMAX	WiMAX Standard Compliance	IEEE 802.16e-2005
	Air Interface	Internal Antenna(0dBi)
	Max output Power	23dBm
WiFi	Network Standard	IEEE 802.11 b/g
	Frequency/Channels	2.4GHz/5Ch.
Power	Battery	Built-in Li-Ion(3.7V/1390mA)
	Adaptor	5V / 2A
Dimension / Weight		113.4.0mm(L)×63.3mm(W)×16.2mm(T)

## Application

All device including WiFi 802.11b/g such as;  
Personal computer (Desktop and Note PC)  
Smart Phone  
Tablet PC and iPad  
Game palyer

## *The points of name & Components list*

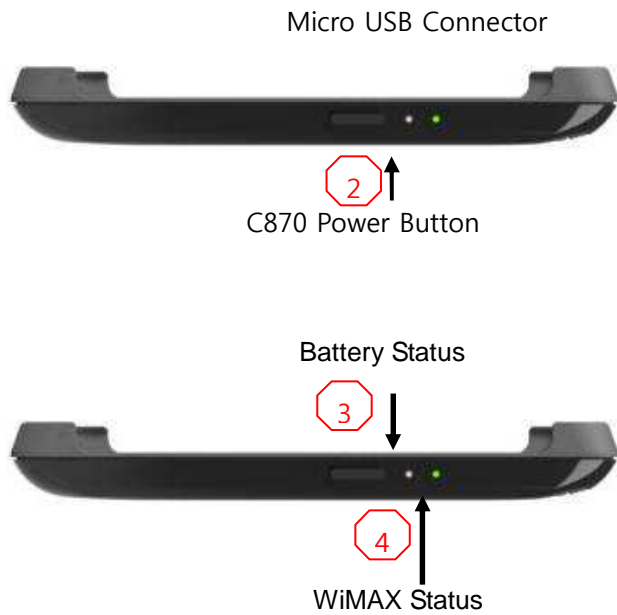
Components List in the package.



- ① IMW-C870W
- ② Adaptor [5V / 2A] (Optional)
- ③ User's Manual
- ④ Plug
- ⑤ USB Cable

## Points of name & Function





- ① USB Port : Battery charging and Tethered operation
- ② Power button  
Press : Power on & off
- ③ Battery Status : battery status and power (Color : Orange / Green / Red)
- ④ WiMAX Status: WiMAX Signal strength (Color : Orange / Green / Red)

#### LED Status Scenario

##### WiMAX Signal LED

Off	Power Off
Orange LED On and Off	Frequency scanning or ready
Red LED On and Off	Connecting with WiMAX network
Red LED On	WiMAX signal level 1
Orange LED On	WiMAX signal level 2 ~ 3
Green LED On	WiMAX signal level 4 ~ 5

##### Power LED

Remained battery (100% ~ 50%)	Green color
Remained battery (50% ~ 20%)	Orange color
Remained battery (20% ~ 0%)	Red color
Battery charging	Red color
Battery full charging	Green color

# Chapter 3. How to use the IMW-C870W

## Power ON/OFF

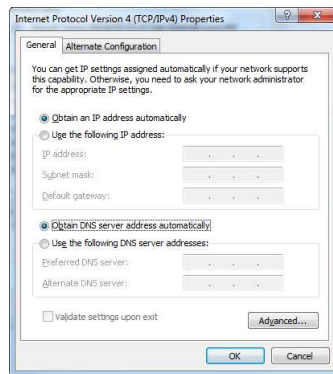
Power ON : Press the power switch for 3 Seconds.  
Power OFF : Press the power switch for 5 Seconds.

## How to charge battery

The built-in battery can be charged from either USB cable or wall Charger (Optional)

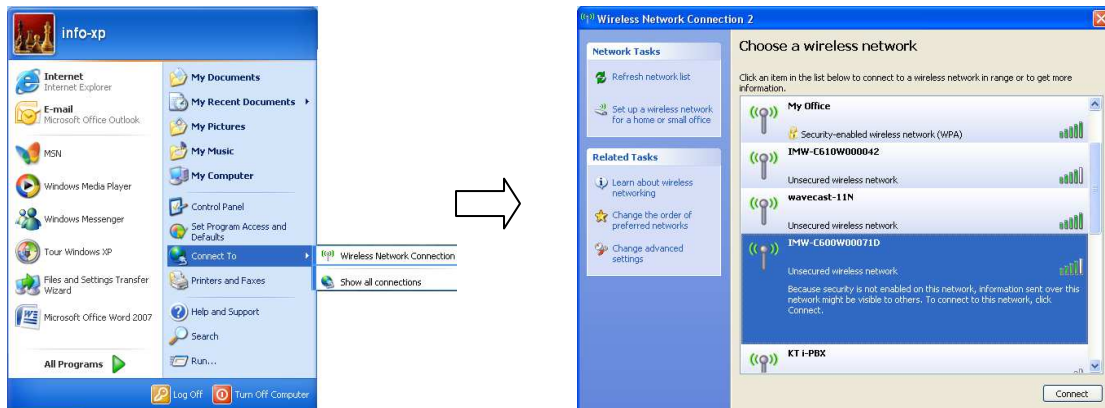
## Setting of the WiFi AP

Notice : Configuration of WiFi AP has to be set to "Obtain IP address and DNS sever address automatically".



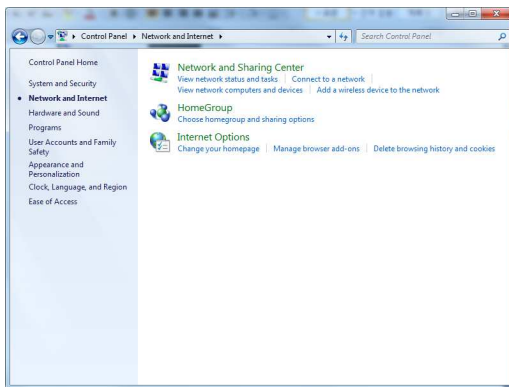
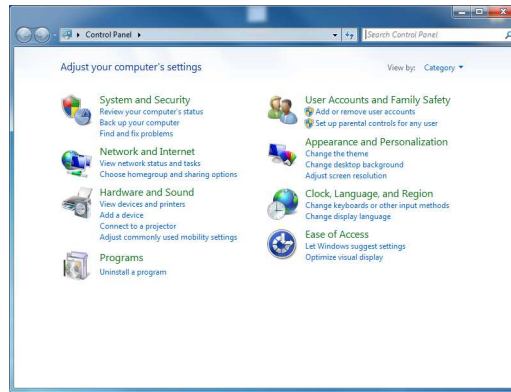
## Setting with Window XP

- <Start> → <Connect to> → <Wireless Network Connection> → Choose WiFi AP of IMW-C870W in the list



## Setting with Window 7

- <Start> → <Control Panel> → <Network and Internet> → <Connect to Network>  
→ Choose the WiFi AP of IMW-C870W in the list

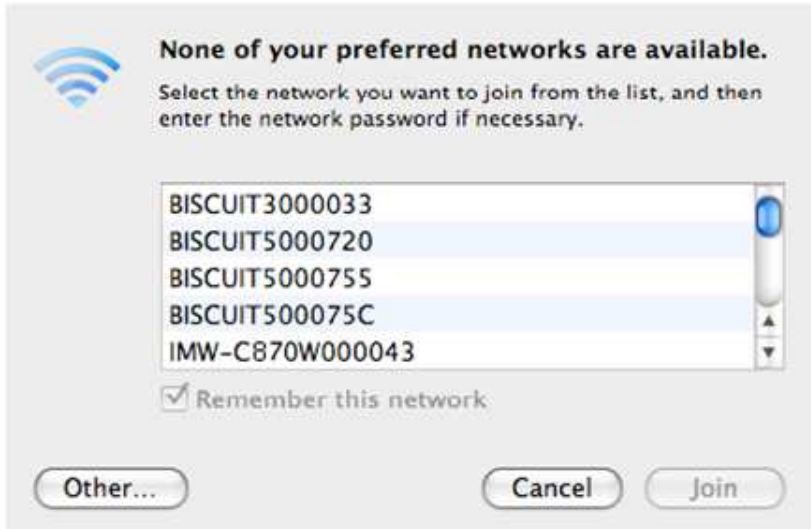


## Setting with Mac OS

- Click the wireless Icon on the menu → Choose the WiFi AP of IMW-C870W in the list







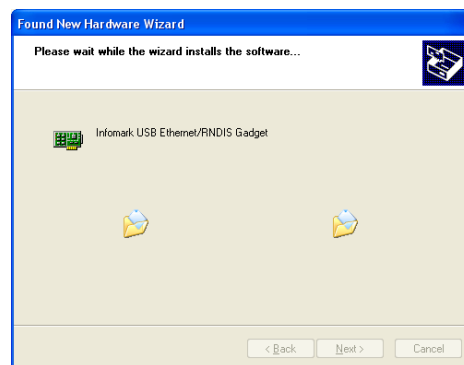
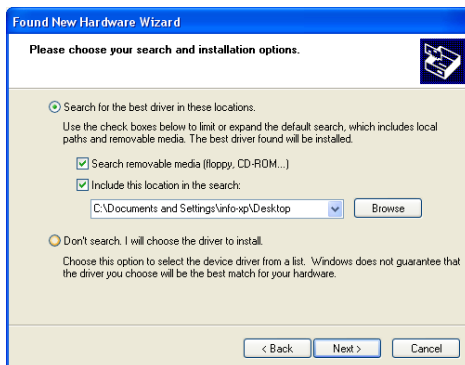
## Setting of USB (RNDIS)

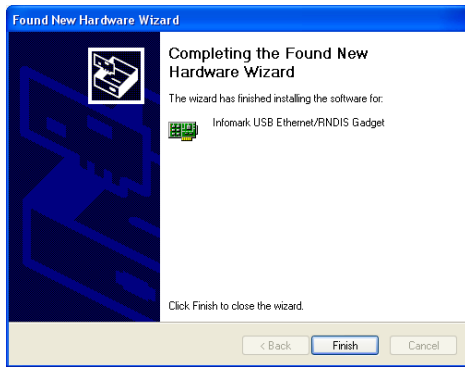
Notice :

1. Your PC connected to web server of IMW-C870W through WiFi.
2. Driver of RNDIS can download from web server of IMW-C870W .
3. Refer to USB Driver Page No. XX for download.

### Setting with Window XP

1. IMW-C870W should be connected with PC by USB cable.
2. Below is each step of RNDIS installation.

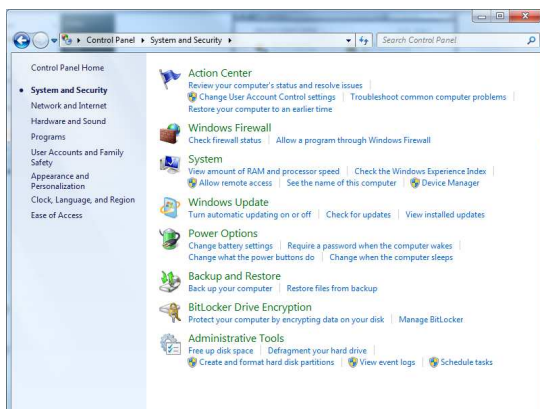
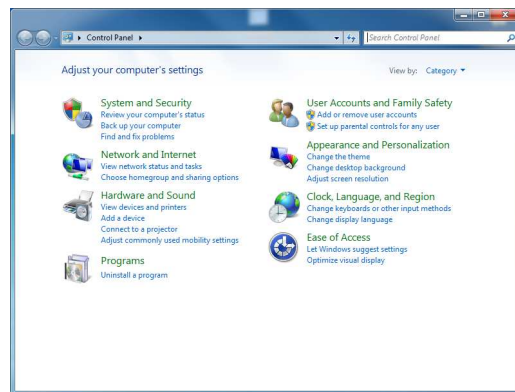




## Setting with Window 7

1. IMW-C870W should be connected with PC by USB cable.
2. Below is each step of RNDIS installation.

<Start> → <Control Panel> → <Network and Internet> → <Connect to Network>

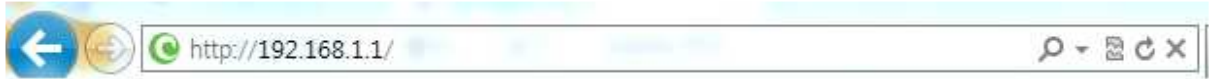


# Chapter 4 Configuring CM

## Connect to Web CM (Web Connection Manager)

### Start CM

- Use web browser to connect Web CM
- Type Address 192.168.1.1

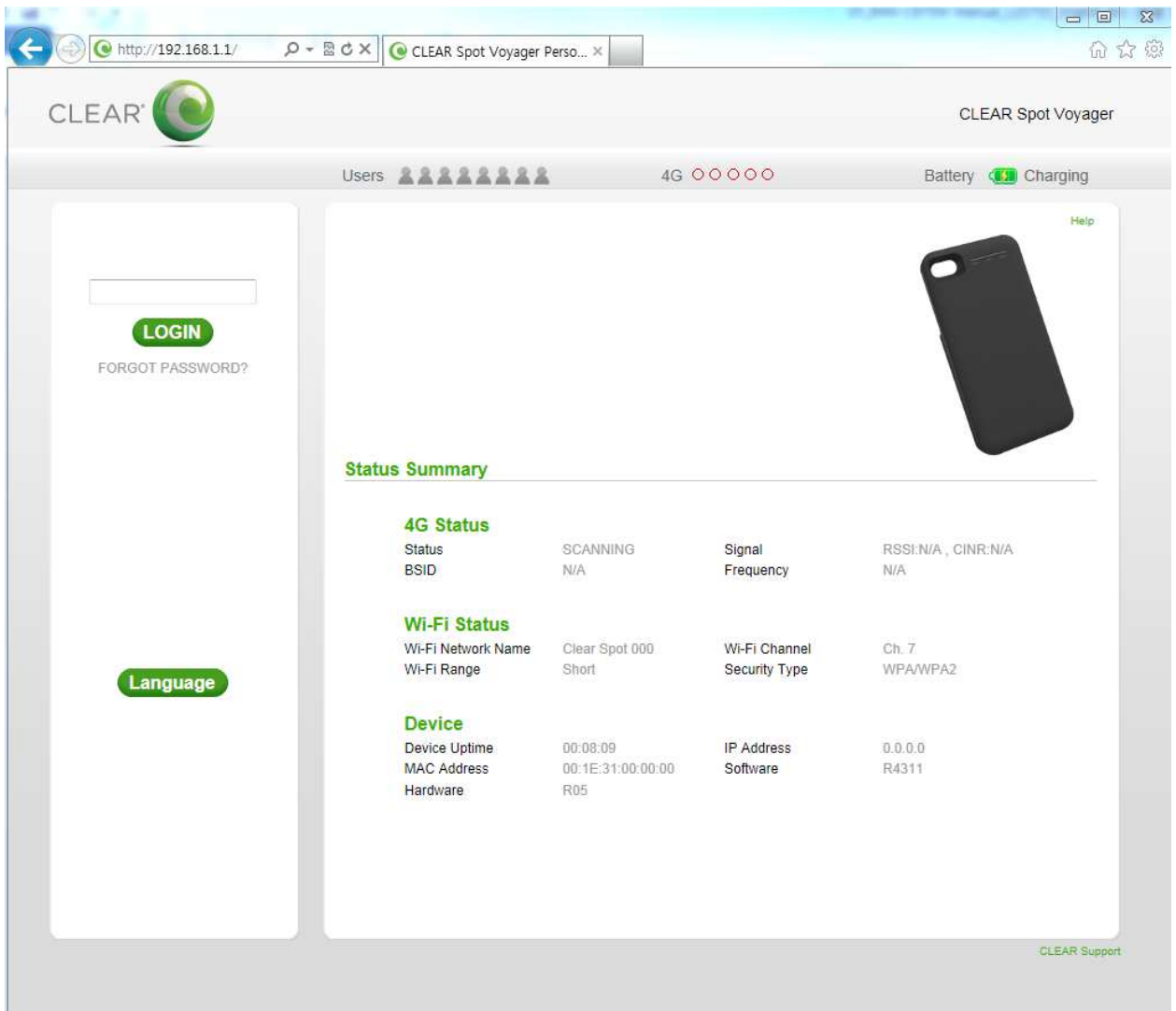


※ Microsoft Internet Explorer is recommended

### Input ID

- A Pop-up window will requests for specific ID to enter into Web CM

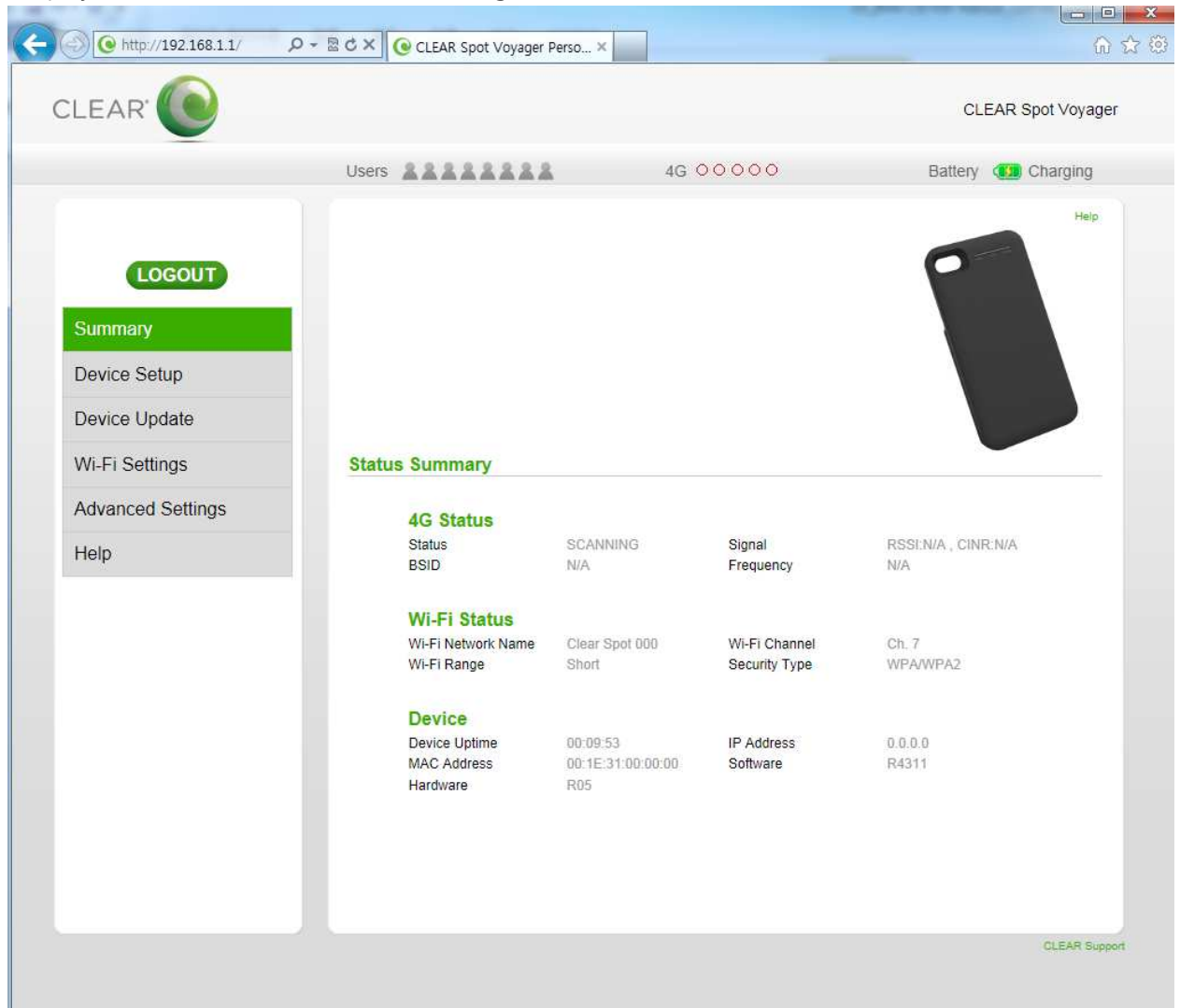
ID : admin



## ■ Description of Web User Interface

- **Status**

Display device information and basic configuration of device.



The screenshot displays the CLEAR Spot Voyager web interface. The browser address bar shows the URL `http://192.168.1.1/` and the page title is "CLEAR Spot Voyager Perso...". The interface features a top navigation bar with the CLEAR logo, the device name "CLEAR Spot Voyager", and status indicators for "Users" (6 icons), "4G" (5 signal strength icons), and "Battery" (charging icon).

A left sidebar contains a "LOGOUT" button and a menu with the following items: "Summary" (highlighted in green), "Device Setup", "Device Update", "Wi-Fi Settings", "Advanced Settings", and "Help".

The main content area is titled "Status Summary" and includes a "Help" link and an image of a black smartphone. Below this, there are three sections of status information:

- 4G Status**

Status	SCANNING	Signal	RSSI:N/A , CINR:N/A
BSID	N/A	Frequency	N/A
- Wi-Fi Status**

Wi-Fi Network Name	Clear Spot 000	Wi-Fi Channel	Ch. 7
Wi-Fi Range	Short	Security Type	WPA/WPA2
- Device**

Device Uptime	00:09:53	IP Address	0.0.0.0
MAC Address	00:1E:31:00:00:00	Software	R4311
Hardware	R05		

The bottom right corner of the interface displays "CLEAR Support".

## ■ Device Setup

- Setup Wizard

Setting Web CM Password, Time Zone and SSID/WPA security code

The screenshot shows a web browser window at <http://192.168.1.1/> displaying the CLEAR Spot Voyager management interface. The page title is "CLEAR Spot Voyager". The interface includes a sidebar on the left with a "LOGOUT" button and a menu with the following items: Summary (highlighted), Device Setup, Device Update, Wi-Fi Settings, Advanced Settings, and Help. The main content area features a "Status Summary" section with a "Help" link and an image of a smartphone. The status summary is organized into three sections:

- 4G Status**

Status	SCANNING	Signal	RSSI: N/A, CINR: N/A
BSID	N/A	Frequency	N/A
- Wi-Fi Status**

Wi-Fi Network Name	Clear Spot 000	Wi-Fi Channel	Ch. 7
Wi-Fi Range	Short	Security Type	WPA/WPA2
- Device**

Device Uptime	00:09:53	IP Address	0.0.0.0
MAC Address	00:1E:31:00:00:00	Software	R4311
Hardware	R05		

The bottom right corner of the page contains the text "CLEAR Support".

- **Windows XP driver**

The RNDIS driver can download on this page for Windows XP.

In case of Windows Vista and Windows 7, the driver is supported.

The screenshot shows a web browser window with the address bar displaying `http://192.168.1.1/` and a tab titled "CLEAR Spot Voyager Perso...". The browser window displays the CLEAR Spot Voyager web interface. At the top left is the CLEAR logo, and at the top right is the text "CLEAR Spot Voyager". Below the header, there is a status bar showing "Users" with six icons, "4G" with four signal strength indicators, and "Battery" with a charging icon and the text "Charging". The main content area is divided into two columns. The left column contains a "LOGOUT" button and a vertical menu with the following items: "Summary", "Device Setup" (highlighted in green), "Setup Wizard", "Windows XP Driver" (highlighted in green), "Password", "Device Time", "Reset Device", "Device Update", "Wi-Fi Settings", "Advanced Settings", and "Help". The right column features a large image of a black smartphone case with a "Help" link in the top right corner. Below the image, the heading "Windows XP Driver" is displayed. Underneath, the text "Install Windows XP Driver" is followed by a green "Download" button. At the bottom right of the page, the text "CLEAR Support" is visible.

- **Password**

The password can be changed.

The screenshot shows a web browser window with the URL `http://192.168.1.1/` and a tab titled "CLEAR Spot Voyager Perso...". The page header includes the CLEAR logo and "CLEAR Spot Voyager". A status bar shows "Users" with six icons, "4G" with four signal strength indicators, and "Battery" with a charging icon and the text "Charging".

The main content area is divided into a left sidebar and a main panel. The sidebar contains a "LOGOUT" button and a menu with the following items: Summary, Device Setup (highlighted in green), Setup Wizard, Windows XP Driver, Password (highlighted in green), Device Time, Reset Device, Device Update, Wi-Fi Settings, Advanced Settings, and Help.

The main panel features a "Help" link and an image of a black smartphone case. Below this is the "Admin Password" section, which includes the following text: "The administrative area allows you to configure your CLEAR Spot settings. The Admin Password prevents unauthorized access to your CLEAR Spot administrative area."

Under the heading "Change password", there are two input fields: "New Login Password" and "Confirm New Login Password". Below these fields are two buttons: "CANCEL" and "APPLY".

A note at the bottom of the section reads: "\*Note: If you wish to change your Wi-Fi password please see the Wi-Fi Settings pages."

The footer of the page contains the text "CLEAR Support".

- **Device Time**

Setting Time Zone.

The screenshot shows a web browser window with the URL <http://192.168.1.1/> and a tab titled "CLEAR Spot Voyager Perso...". The page header includes the CLEAR logo and the text "CLEAR Spot Voyager". Below the header, there are status indicators for "Users" (represented by icons), "4G" signal strength, and "Battery" (with a "Charging" indicator).

The main content area is divided into two columns. The left column contains a navigation menu with the following items: "LOGOUT", "Summary", "Device Setup" (highlighted in green), "Setup Wizard", "Windows XP Driver", "Password", "Device Time" (highlighted in green), "Reset Device", "Device Update", "Wi-Fi Settings", "Advanced Settings", and "Help".

The right column displays the "Device Time" settings page. At the top right of this section is a "Help" link and an image of a black smartphone. The main heading is "Device Time". Below it, a green instruction reads: "Set the time zone for your current location." The settings are as follows:

- Current Local Time: 05-22-2012 / 01:22:45
- Time Zone: Pacific Standard Time (dropdown menu)
- Adjust for Daylight Saving:  Enable

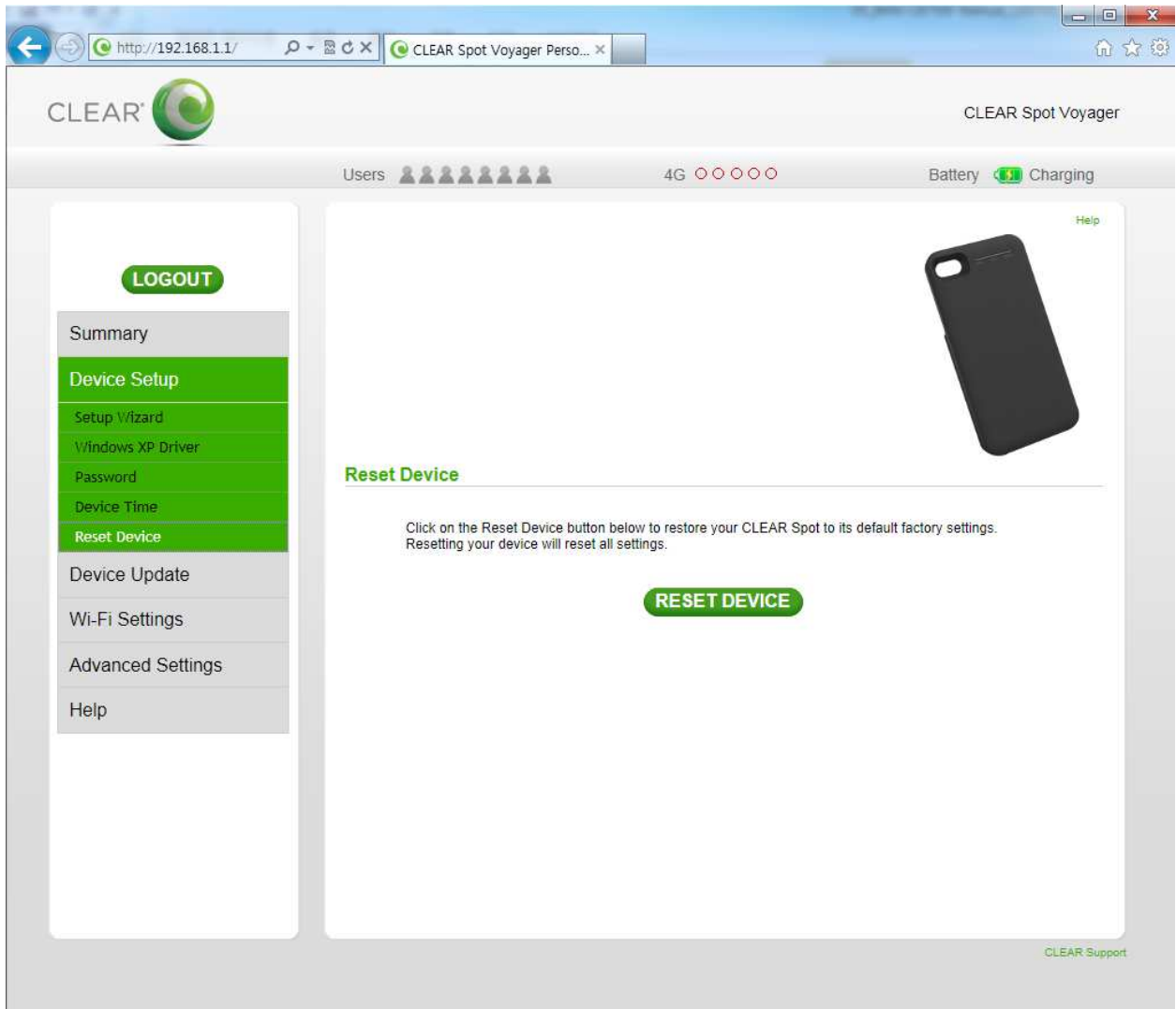
At the bottom of the settings area are two green buttons: "CANCEL" and "APPLY".

The footer of the page contains the text "CLEAR Support".



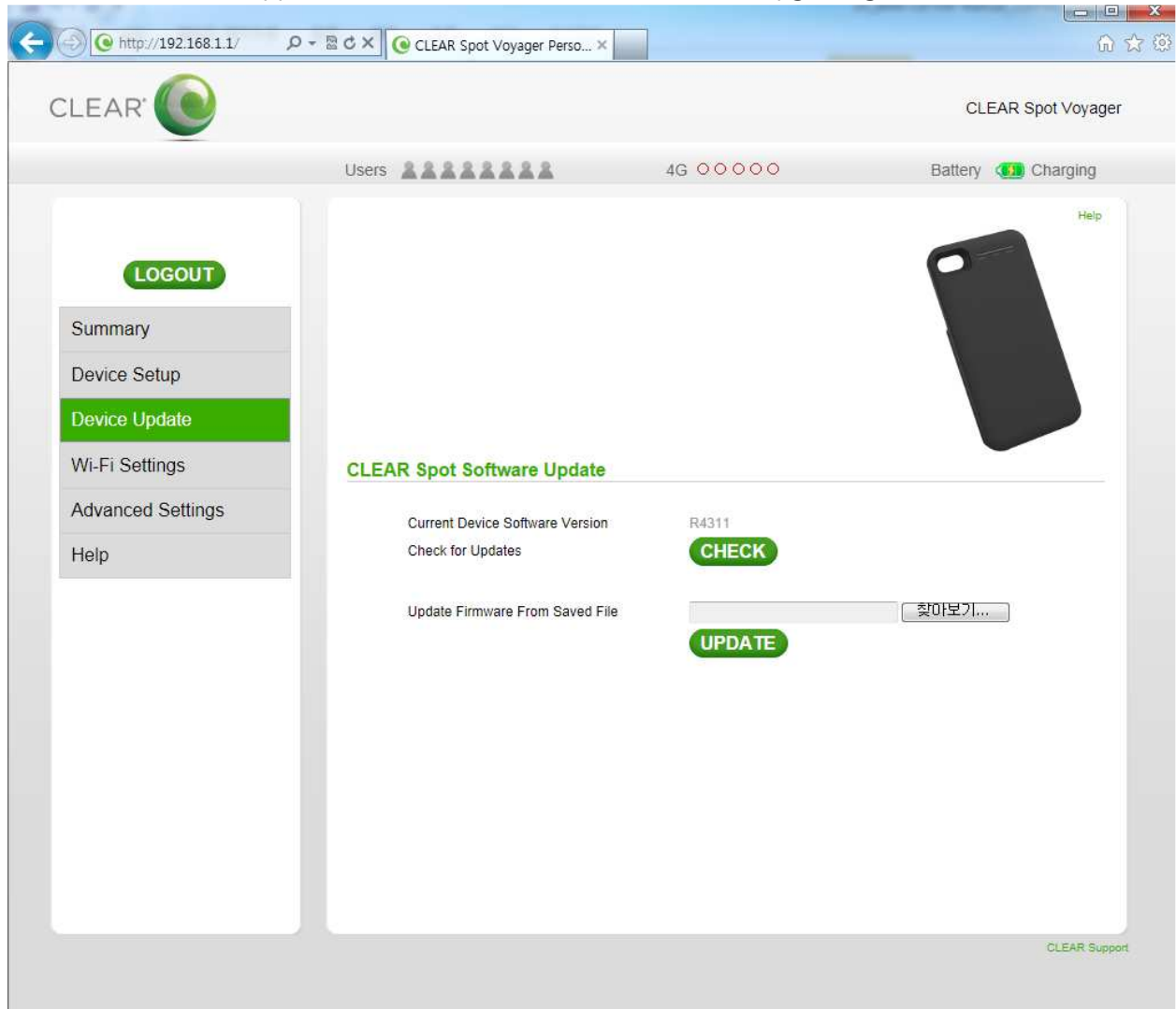
- **Reset Device**

If <RESET DEVICE> button is clicked, the device has to roll back to factory default configuration.



## ■ Device Update

The device supports to auto FOTA, manual FOTA and user upgrading



- **Auto FOTA upgrading**

In case that new firmware exists in FOTA server. This device check new firmware version and if there is new firmware in FOTA server, this device is going to be upgraded automatically.

The WiMAX LED is blinking with red color during upgrading.

- **Manual FOTA upgrading**

In case that new firmware exists in FOTA server. User can check and upgrade new firmware in FOTA server manually.

The WiMAX LED is blinking with red color during upgrading.



- **User upgrading**

In case that operator releases new firmware to end user, user can upgrade by himself

Update Firmware From Saved File

## ■ Wi-Fi Settings

- **Basic**

Set basic configuration of Wifi.

The screenshot shows a web browser window with the URL `http://192.168.1.1/`. The page title is "CLEAR Spot Voyager". The interface includes a navigation menu on the left with options: LOGOUT, Summary, Device Setup, Device Update, **Wi-Fi Settings** (highlighted), Basic, Advanced, Advanced Settings, and Help. The main content area is titled "Basic Wi-Fi Settings" and features a smartphone icon. The settings are as follows:

Enable Wi-Fi	<input checked="" type="checkbox"/>
Network Name(SSID)	<input type="text" value="IMW-C870W"/>
Authentication	<input type="text" value="WPA/WPA2-Mixed PSK"/>
Encryption	<input type="text" value="Auto"/>
Wi-Fi Password	<input type="text" value="31000000"/>

At the bottom of the settings area are two buttons: **CANCEL** and **APPLY**. The bottom right corner of the page contains the text "CLEAR Support".

- Network Name(SSID) : Set name of WiFi AP.
- Security method : Set security method for WiFi.

Network Name(SSID)	IMW-C870W
Authentication	WPA/WPA2-Mixed PSK

- The set configure should be saved after clicking <APPLY>button.

## ● Advanced

Setting WiFi configuration details.

The screenshot shows the CLEAR Spot Voyager web interface. The browser address bar displays <http://192.168.1.1/>. The page title is "CLEAR Spot Voyager". The interface includes a navigation menu on the left with a "LOGOUT" button and options: Summary, Device Setup, Device Update, Wi-Fi Settings (Basic, Advanced), Advanced Settings, and Help. The main content area is titled "Advanced Wi-Fi Settings" and features a "Help" link and an image of a smartphone. The settings are as follows:

- Broadcast SSID:
- Radio Channel: 7 [2.442 GHz]
- Working Mode: 802.11bg
- Wi-Fi Range: Short
- Access Control List: Deny

Buttons for "ADD", "CANCEL", and "APPLY" are visible at the bottom of the settings section. The bottom right corner of the page contains the text "CLEAR Support".

- Broadcast SSID : Show name of WiFi AP
- Radio Channel : WiFi channel can be changed
- Working Mode : WiFi mode can be changed
- Tx Power : The signal level of Wi-Fi can be changed
- Access Control List : Mac address filtering of WiFi client device



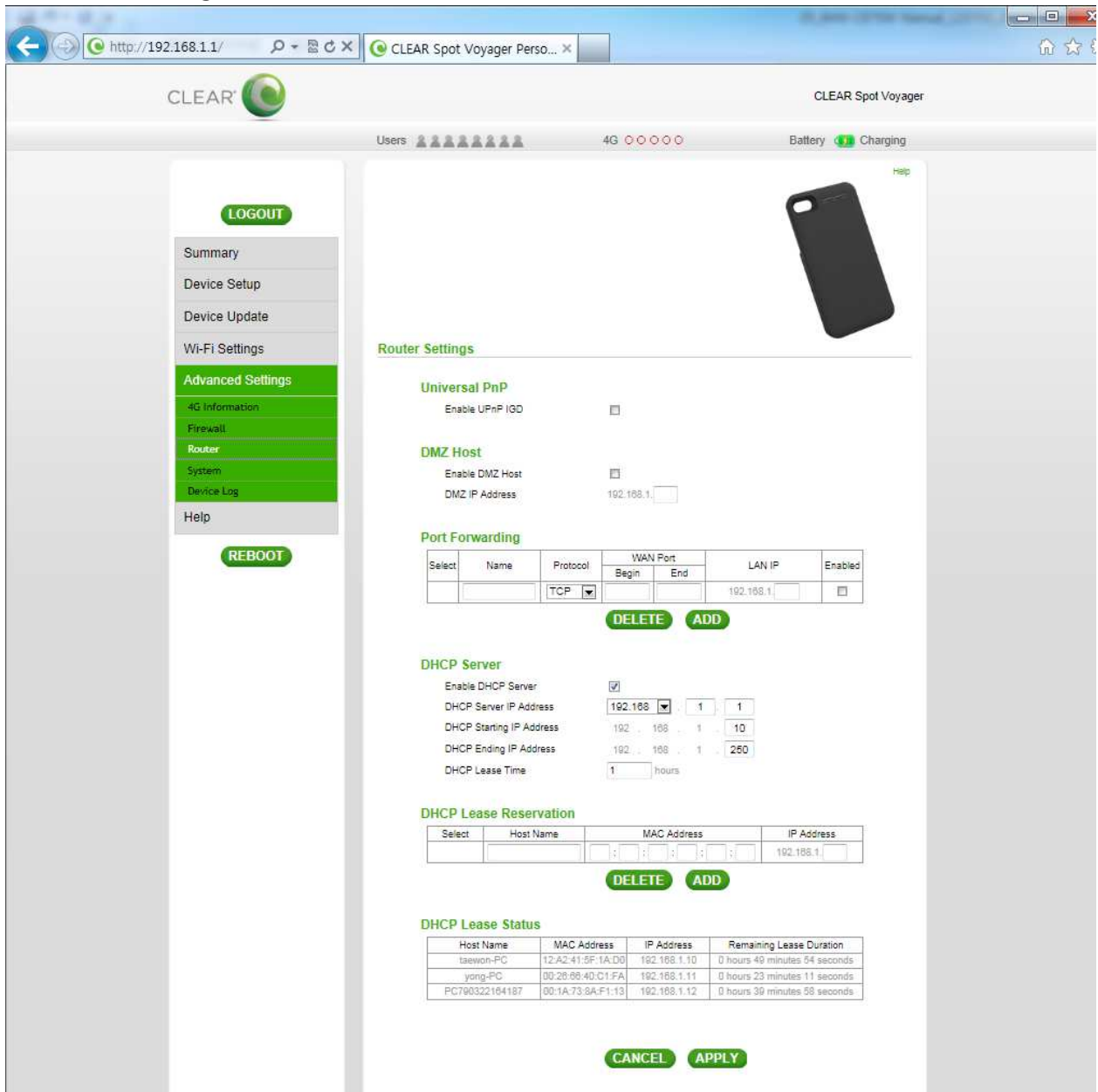
- **Firewall**

Setting the firewall

The screenshot shows a web browser window with the address bar displaying 'http://192.168.1.1/'. The browser tab is titled 'CLEAR Spot Voyager Perso...'. The page header includes the CLEAR logo and 'CLEAR Spot Voyager'. Below the header, there is a status bar with 'Users' (represented by icons), '4G' signal strength, and 'Battery Charging' status. The main content area is divided into a left sidebar and a main panel. The sidebar contains a 'LOGOUT' button at the top, followed by a list of settings: Summary, Device Setup, Device Update, Wi-Fi Settings, **Advanced Settings** (highlighted), 4G Information, **Firewall** (highlighted), Router, System, Device Log, and Help. At the bottom of the sidebar is a 'REBOOT' button. The main panel features a 'Firewall Settings' section with a 'Help' link and an image of a smartphone. Below the image, there is a heading 'Firewall Settings' and a paragraph: 'The Firewall authorizes internet access to your CLEAR Spot. Please refer to Help for information on the settings.' There are three settings: 'Enable Web Login from Internet' with an unchecked checkbox, 'Web Login Port from Internet' with a text input field containing '80', and 'Enable ping from Internet' with a checked checkbox. At the bottom of the settings are 'CANCEL' and 'APPLY' buttons. The footer of the page contains 'CLEAR Support'.

- Router

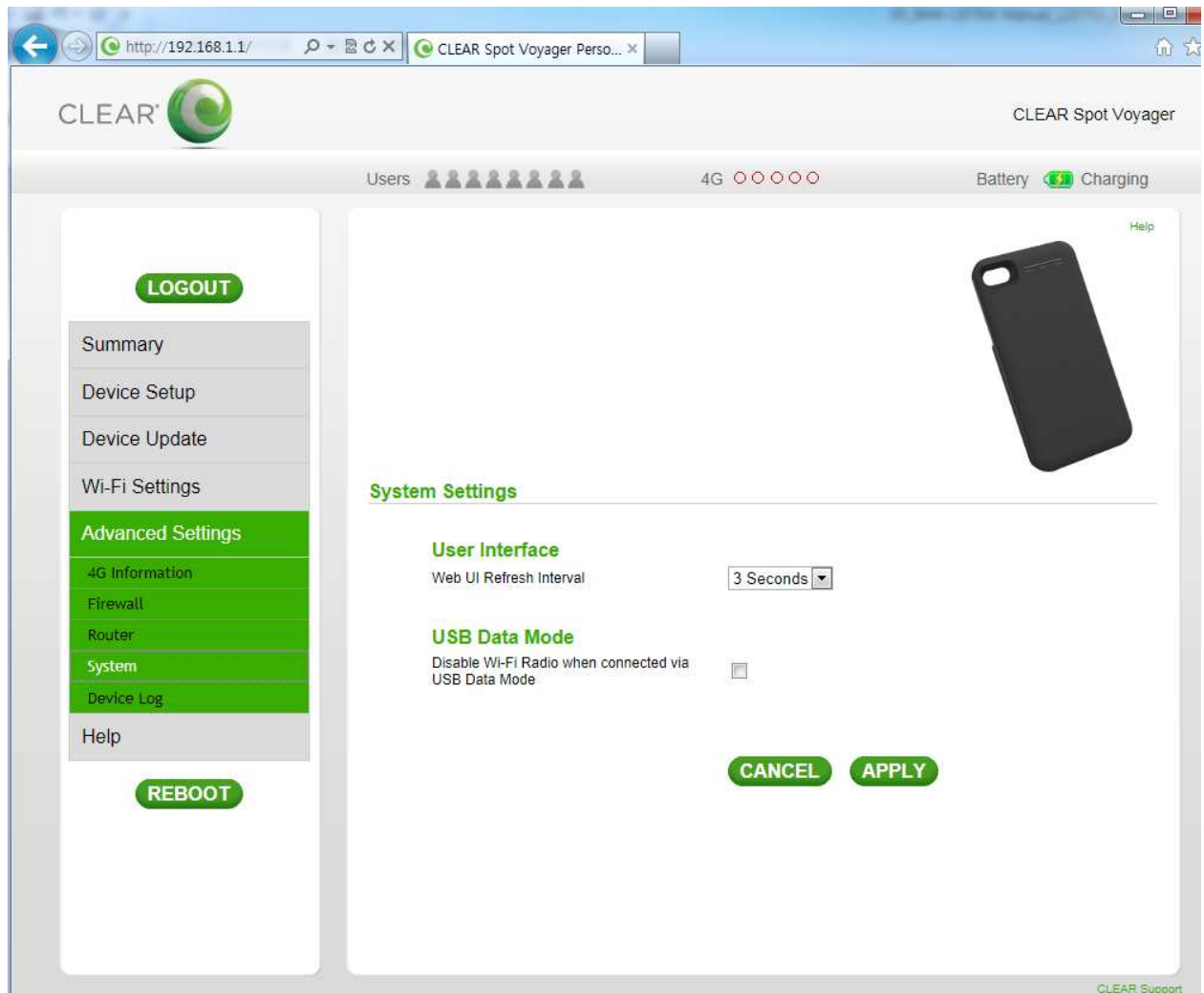
Setting additional functions of router.



- Universal PnP : Set the port number for UPnP connection.  
This device should be restarted after changing configuration.
- VPN Passthrough : Set VPN Passthrough.  
This device should be restarted after changing configuration.
- DMZ Host : Set IP address of device for DMZ function.
- Port Forwarding : Set range of port number and protocol(UDP/TCP/BOTH).
- DHCP Server : Chang DHCP server of local network.
- DHCP Lease Reservation : Fix IP address base on a MAC address.
- DHCP Lease Status : Indicate current status of DHCP Lease Reservation.

- **System**

Setting system configuration of device.



- User Interface : Change refresh interval of WebUI from 1 sec to 5sec.



- **Device Log**

The device log can be shown and download on the PC.

The screenshot displays the CLEAR Spot Voyager web interface. On the left is a navigation menu with buttons for LOGOUT, REBOOT, and various settings. The main area shows the 'Device Log' section with an 'EXPORT' button and filter options. The log content is as follows:

```
<14>May 22 01:41:57 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2557000,2557000,10000) , I
<14>May 22 01:41:58 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2624000,2624000,10000) , I
<14>May 22 01:41:58 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2693000,2693000,10000) , I
<14>May 22 01:41:58 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2679000,2679000,10000) , I
<14>May 22 01:41:58 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2501000,2501000,10000) , I
<14>May 22 01:42:00 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2577000,2577000,10000) , I
<14>May 22 01:42:01 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2689000,2689000,10000) , I
<14>May 22 01:42:02 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2623000,2623000,10000) , I
<14>May 22 01:42:04 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2501000,2689000,500) , BW
<14>May 22 01:42:04 auto_cm[446]: No network is found
<14>May 22 01:42:21 auto_cm[503]: WIMAX_SCAN_REPORT
<14>May 22 01:43:53 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2488500,2687500,250) , BW
<14>May 22 01:43:53 auto_cm[446]: No network is found
<14>May 22 01:47:24 auto_cm[503]: WIMAX_SCAN_COMPLETE ( found )
<14>May 22 01:47:24 auto_cm[446]: No network is found
<14>May 22 01:47:24 auto_cm[446]: Connection failed. (2/3) delay=2
<14>May 22 01:47:24 /usr/sbin/wimax[446]: HCI not handled Cmd2
<14>May 22 01:47:26 auto_cm[446]: Trying to connect to a wimax network
<14>May 22 01:47:26 auto_cm[503]: WIMAX_SCAN_START
<14>May 22 01:47:26 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2508500,2528500,10000) , I
<14>May 22 01:47:27 auto_cm[503]: WIMAX_SCAN_REPORT
<14>May 22 01:47:27 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2541500,2561500,10000) , I
<14>May 22 01:47:27 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2630500,2650500,10000) , I
<14>May 22 01:47:28 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2663500,2683500,10000) , I
<14>May 22 01:47:29 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2625000,2645000,10000) , I
<14>May 22 01:47:30 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2647000,2667000,10000) , I
<14>May 22 01:47:31 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2578000,2608000,5000) , BW
<14>May 22 01:47:33 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2513000,2513000,10000) , I
<14>May 22 01:47:33 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2687000,2687000,10000) , I
<14>May 22 01:47:33 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2624000,2624000,10000) , I
<14>May 22 01:47:33 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2695000,2695000,10000) , I
<14>May 22 01:47:34 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2679000,2679000,10000) , I
<14>May 22 01:47:34 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2501000,2501000,10000) , I
<14>May 22 01:47:38 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2577000,2577000,10000) , I
<14>May 22 01:47:37 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2623000,2623000,10000) , I
<14>May 22 01:47:39 auto_cm[503]: SCAN_CHANNEL_PLAN ( Freq:(2501000,2689000,500) , BW
<14>May 22 01:47:39 auto_cm[446]: No network is found
<14>May 22 01:47:55 auto_cm[503]: WIMAX_SCAN_REPORT
```

# ■ Help

Provide device information, Regulatory, Glossary, Online Support and Important Information.

The screenshot shows a web browser window with the URL <http://192.168.1.1/> and a tab titled "CLEAR Spot Voyager Perso...". The page header includes the CLEAR logo and the text "CLEAR Spot Voyager". Below the header, there are status indicators for "Users" (represented by icons), "4G" (with signal strength icons), and "Battery" (with a charging icon).

The main content area is divided into two columns. The left column contains a "LOGOUT" button and a vertical menu with the following items: Summary, Device Setup, Device Update, Wi-Fi Settings, Advanced Settings, **Help** (highlighted), About, Regulatory, Glossary, Online Support, and Important Information. The right column features a "Help" link and an image of a black smartphone case. Below the image is the section "About your CLEAR Spot" which includes an "Information" table and a "GPL Source Link" section.

Information			
Product Name	CLEAR Spot Voyager	Hardware	R05
Model ID	IMW-C870W	Software	R4311
Wi-Fi MAC Address	00:1E:31:80:00:00	4G MAC Address	00:1E:31:00:00:00

**GPL Source Link**

GPL v2 <http://www.infomark.co.kr/oss/gplv2.html>  
LGPL <http://www.infomark.co.kr/oss/lgpl.html>

## Federal Communication Commission Interference Statement

- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
  
- This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiated 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 can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - ◆ Reorient or relocate the receiving antenna.
  - ◆ Increase the separation between the equipment and receiver.
  - ◆ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - ◆ Consult the dealer or an experienced radio/TV technician for help.

### **FCC Caution:**

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

**Note:** The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

### ► **RF Exposure Information (SAR)**

This device meets the government's requirements for exposure to radio waves.

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for wireless device employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg. \*Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

The highest SAR value for the model device as reported to the FCC when tested for use at worn on the body, as described in this user guide, is 1.134 W/kg (Body-worn measurements differ among device models, depending upon available accessories and FCC requirements.)

While there may be differences between the SAR levels of various devices and at various positions, they all meet the government requirement.

The FCC has granted an Equipment Authorization for this model device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model device is on file with the FCC and can be found under the Display Grant section of [www.fcc.gov/oet/ea/fccid](http://www.fcc.gov/oet/ea/fccid) after searching on FCC ID: **YCO-IMW-C870W**.

For body worn operation, this device has been tested and meets the FCC RF exposure guidelines for use with an accessory that contains no metal and be positioned a minimum of 1 cm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.