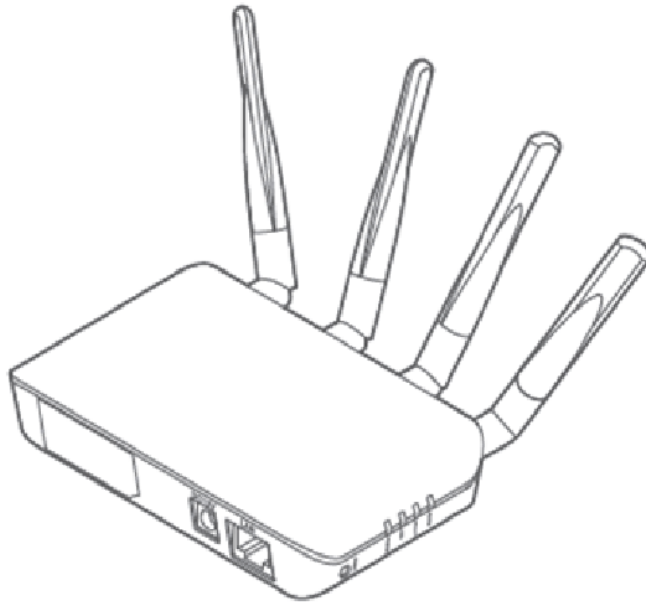


# **EVB-A100**

## **User Manual**

# **Wireless Video Bridge**



Make sure to read User Manual to use the product properly.

Keep User Manual where it is easily accessible for future reference, after reading it.

User Manual can keep installer and users safe and prevent property damage.

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#### Revision history

Versions	Dates	Description
v1.0.0	2016-05-24	Korean Manual
V10.1	2016-05-25	UI modification

# 1. Overview

---



EVB-A100(VB) is a product that plays as a bridge between Ethernet LAN or WLAN and a wireless network. This product is connected with the Tx (Client) device such as multiple IP cameras and uses Rx (Master) for monitoring from NVR or PC.

## 1.1 Functions and Features

### (1) Network function

Provides TCP/IP protocol.

Supports video, audio, alarm, voice data, and serial device data service.

If a web browser is installed, IE can be used for access as transmission is made possible through the TCP/IP network.

### (2) General applications

ATM machines, factories and banks that need network (digital) monitoring

Nursing and school services that need remote monitoring

Intelligent gate system or external device monitoring

Bridge and traffic system monitoring, river or wood monitoring to prevent natural disasters

### (3) Settings

EVB-A100 can be set to Rx or Tx. A Rx (Master) is combined with one or multiple Tx's (Client) to form a transmitter-receiver system.

Tx transmits data (image and voice data from IP camera) that come into the Ethernet LAN.

Rx receives wireless data from Tx and sends it to the Ethernet LAN port. NVR or PC can receive and process the data.



This product includes the latest WiFi technology - 802.11ac 5GHz.

## 2. Safety Precautions

### 2.1 Product Safety Precautions

To use the product properly, ensure user's safety and prevent property damage, please note the following safety precautions.

It is highly recommended that qualified specialists should install the product or provide services.

	<p>To prevent the user from injuries, the product should be installed in a safe way or store the product out of the reach of children.</p>
	<p><b>It may cause a light injury or property damage.</b></p> <ul style="list-style-type: none"> <li>● This product is not for outdoors use. Be careful about surroundings (water, humidity and temperature).</li> <li>● Be careful not shock the product. A shock may damage the product.</li> <li>● Make sure to use the DC adapter. Connecting the product to AC may give an electric shock to the product.</li> </ul>

### 2.2 User Precautions

- To install the product properly, read the manual fully before installation.
- The wireless communication regulations may be different per country. For details on the regulations and violation, contact your local government.
- For the improvement of the product, the product specifications may change without a prior notice.
- Due to product upgrades, the content of this manual may differ from the product.
- If the product does not operate properly, contact your seller. Do not disassemble the product on your own, as you may not claim the warranty service.

## 2.3 FCC and CE Conformance

### FCC compliance information

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.

Note: This equipment 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 radiate radio frequency energy and, if not installed and used 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.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

This appliance and its antenna must not be co-located or operation in conjunction with any other antenna or transmitter.

A minimum separation distance of 20 CM must be maintained between the antenna and the person for this appliance to satisfy the RF exposure requirements.

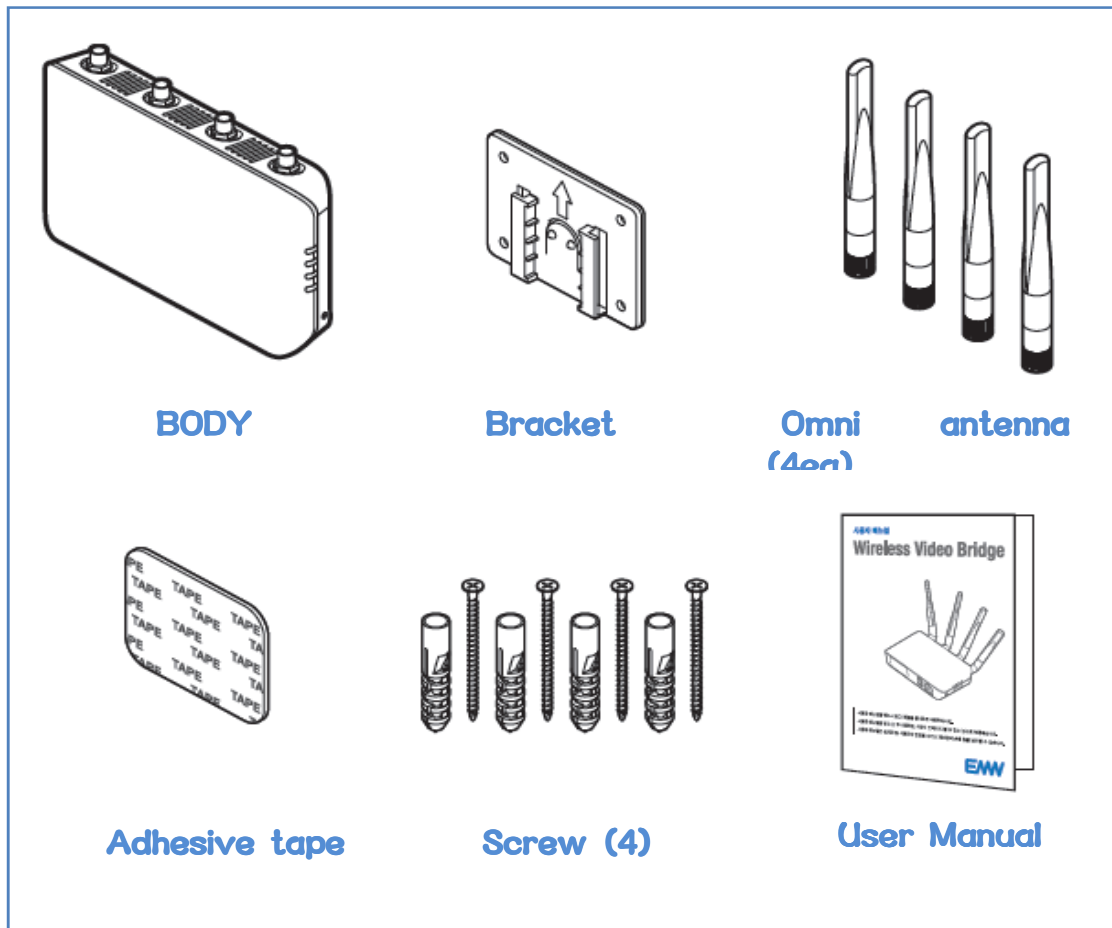
### EU Declaration of Conformity (CE)

This product is CE marked accordance to the provisions of the R&TTE Directive(1999/5/EC). Hereby, Superema Inc. declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. This device is Class 1 radio equipment under the European Radio and Telecommunications Terminal Equipment (R&TTE) Directive (1999/5/EC).

## 3. Product

### 3.1 Product Package

Wireless Video Bridge is composed of the followings:



The AC/DC power adapter and LAN cable are not included. A general power adapter may be used, but check the specifications of the adapter before using it.

### 3.2 Installation

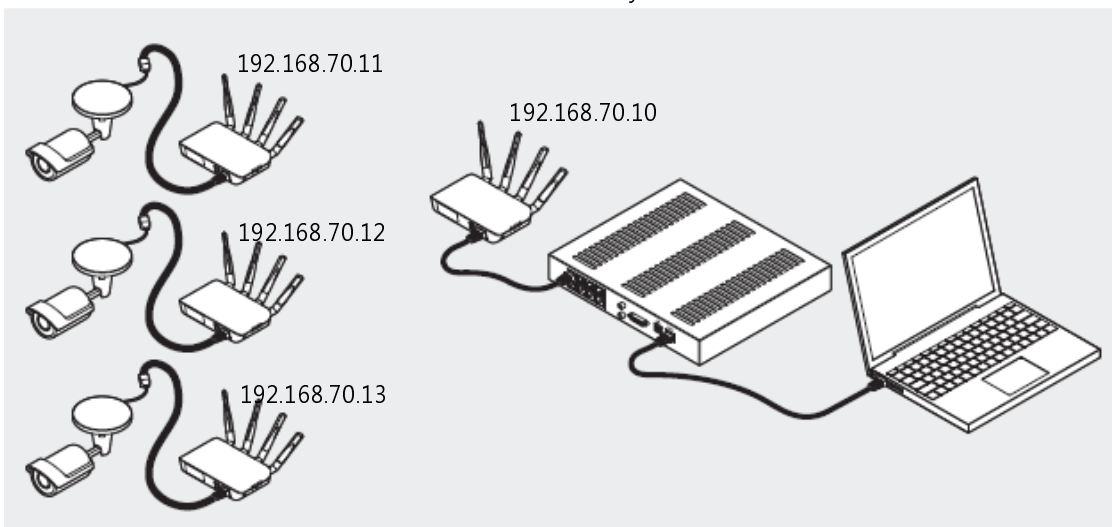
#### 3.2.1 Order of Installation

(1) A connection cable is needed.

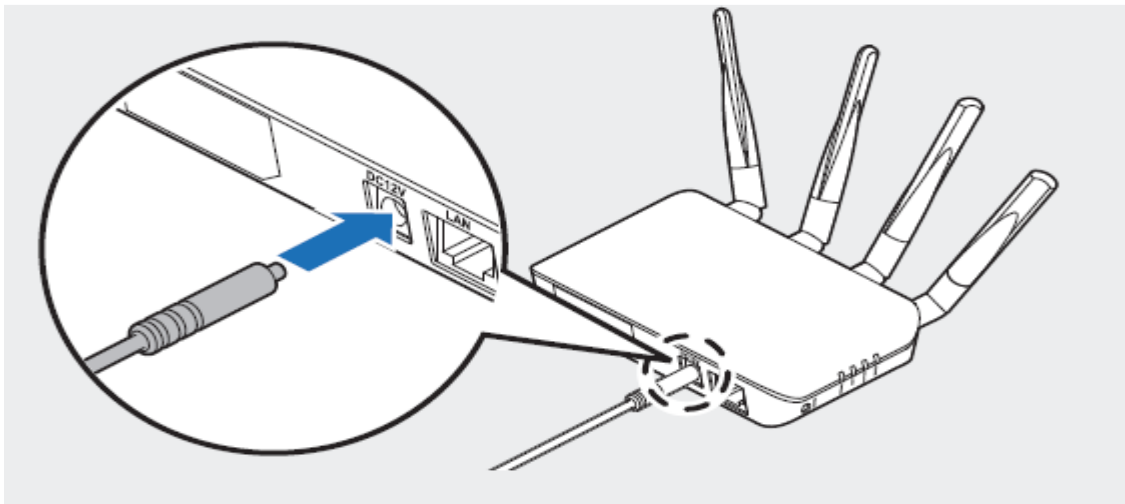
① Connect the antenna. Connect the cable and power for "èLAN.

This product, connected to multiple IP cameras and Tx (client), uses Rx (master) and NVR for monitoring on the monitor or PC.

Rx and NVR are connected by Ethernet (LAN cable). NVR and the monitor are connected by the VGA (D-Sub) or HDMI cable and NVR and PC by a LAN cable.

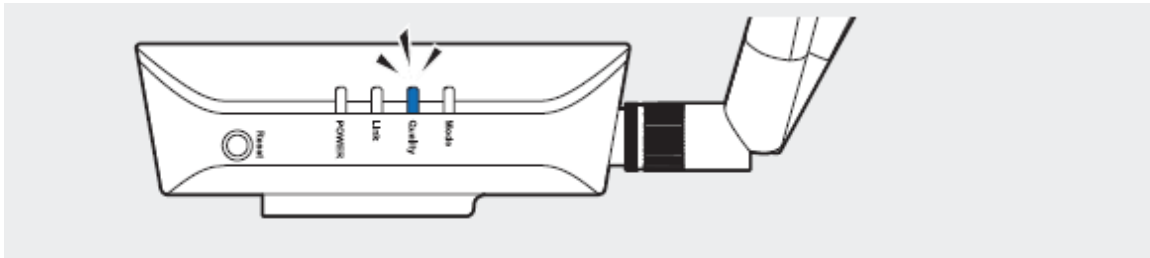


(2) Connect the 12V/1A power cable to Tx and Rx.



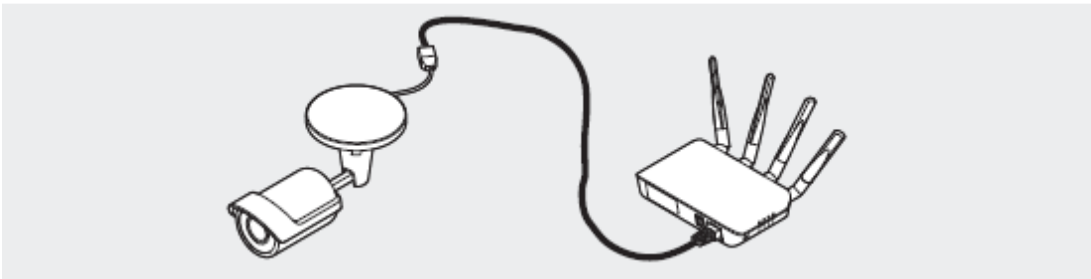


- (3) On Tx Web UI, the search function is selected, Tx's Quality LED is turned on.

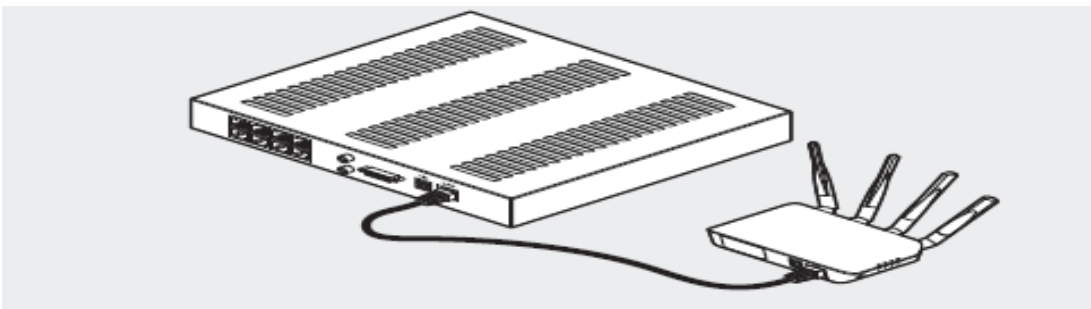


If Video Bridge's Tx or Rx setting is completed, Tx and Rx are automatically connected. If it is not set up, Tx and Rx are not automatically connected, though the power is only supplied. Quality LED keeps turned on until Rx's RSSI reception sensitivity is  $-85\text{dbm}$ . When the sensitivity becomes weaker, the LED begins to flash and then turns off when completely disconnected.

- (4) Install it in the way that the ventilated disk hole does not face towards the floor.  
 (5) Use the LAN cable to connect Tx with an IP camera.



- (6) Use the LAN cable to connect Rx with NVR.



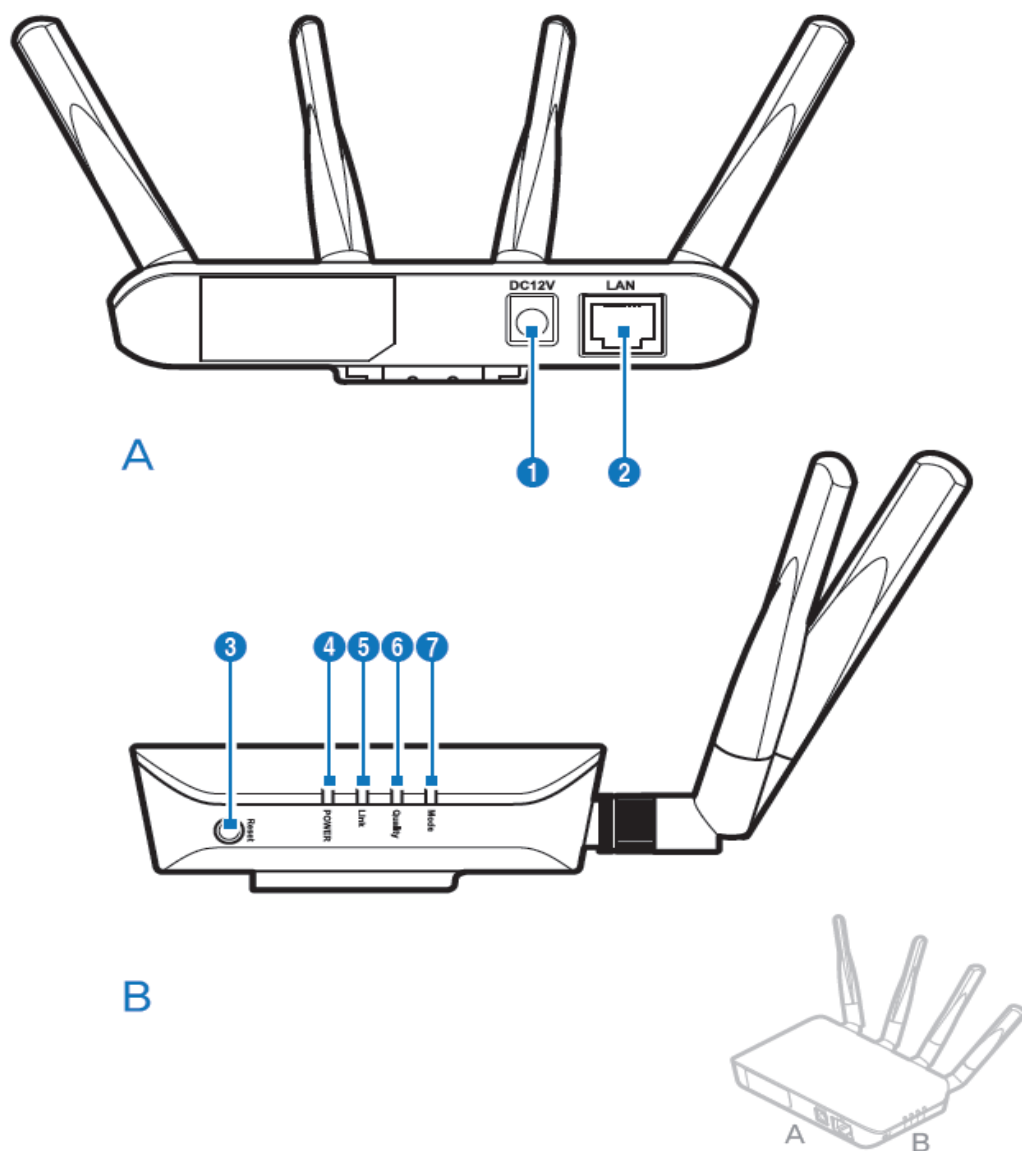
- (7) To change Rx settings, connect Rx with the PC and go the setting page on the Web to set up the Video Bridge environment.

### 3.3 Installation Precautions.

Read the followings carefully to make the most of the functions of the product before installing the product. Use the product properly to protect the user safely and prevent property damage.

- Keep the place dry during installation.
- Do not install the product on a place subject to vibration or shock.
- Use the power that fits the device.

### 3.4 Names of Parts



## 3.4.1 Names of Parts

No	Names	Descriptions
①	DC12V	Connect the power.
②	LAN	Connect the Ethernet cable.
③	Reset	Press this button for 5 seconds to reboot and 10 seconds to reset the settings. Note: Pressing this button less than 1 second does not reboot.
④	Power	(LED) When the power is connected, it illuminates in blue.
⑤	Link	(LED) Indicates the status of wireless connection.
⑥	Quality	(LED) Indicates the safety of connection status.
⑦	Mode	(LED) Indicates Rx or Tx mode.

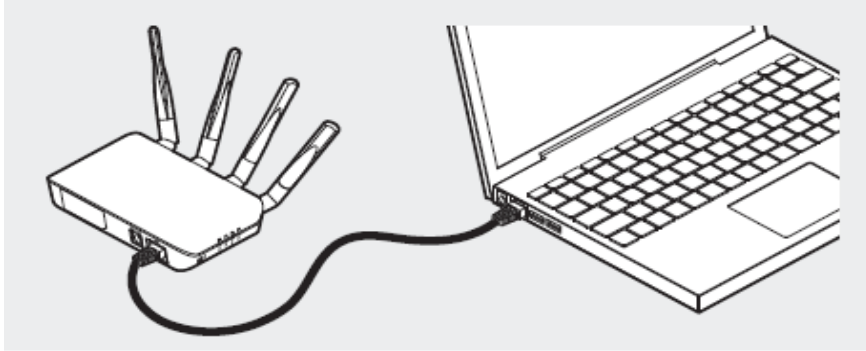
## 3.4.2 LED Status

LED	Status	Descriptions
Power	Blue light turned on	Power supplied
Link	Blue light turned on	Connected successfully
	Blue light flashes	Signal not connected
		Connected to WDS in Mode (Rx)
Quality	Blue light turned on	Signal normal
	Blue light flashes	Signal unstable
	Blue light turned off	Signal not connected
Mode (Tx)	LED turned off	Connected in Tx mode
Mode (Rx)	Blue light turned on	Connected in Rx mode

## 4. Connection through Web browser

### 4.1 Page connection

- (1) To make Video Bridge environment settings, use the LAN cable between Video Bridge and PC.



Use a web browser to make settings.

- Hardware requirements

Windows or Linux with a built-in web browser

- Software requirements

Provides a Web UI for the user to check the functions and change the settings.

Functions can be accessed through a web browser such as IE, Chrome or Firefox.

Open a web browser and enter the address into the address box.

Run as above to move to the log-in screen.

- Browser recommendations

IE 8 or later / Chrome v29 or higher

- (2) Use PC to change the IP address

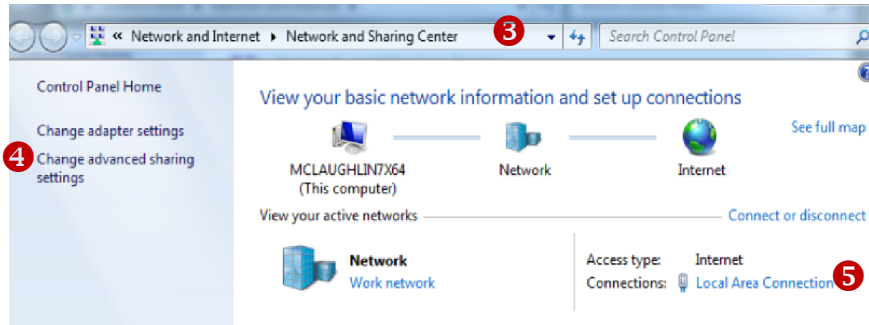
If you know the IP address of the device, you should change the PC's IP address to the Video Bridge IP address.

- 1) Check the PC's IP address.

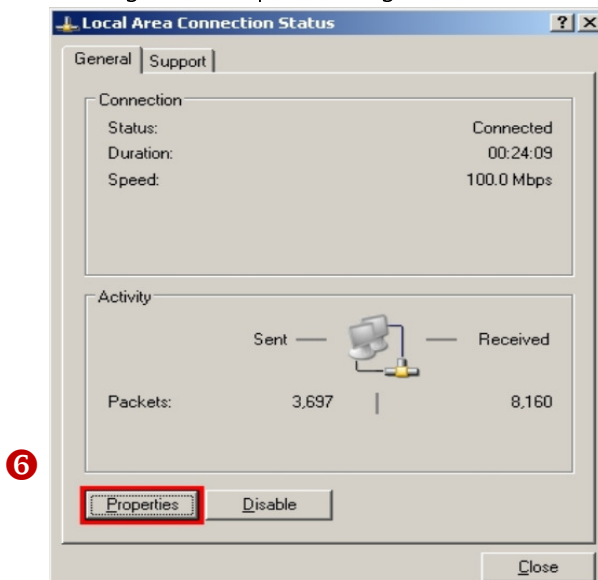
① [Start] -> ② [Control Panel] -> ③ [Network and Sharing] -> ④ [Change adapter settings] -> ⑤ [Local Area Connection] -> ⑥ Properties -> ⑦ Select Internet Protocol Version4 [TCP/IPv4] -> ⑧ [Properties]



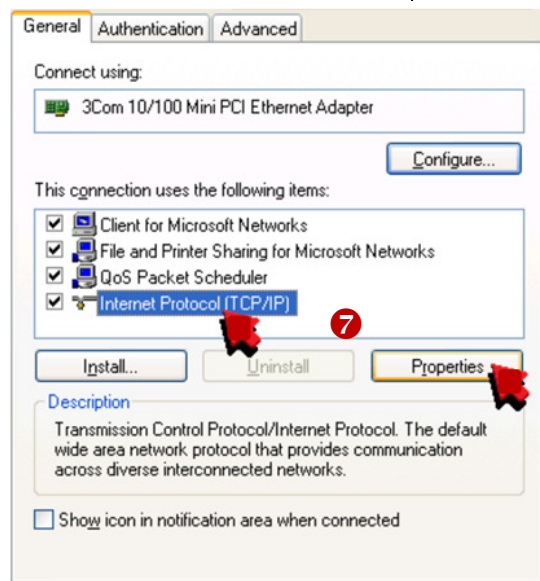
2) Select 'Network and Sharing Center'.

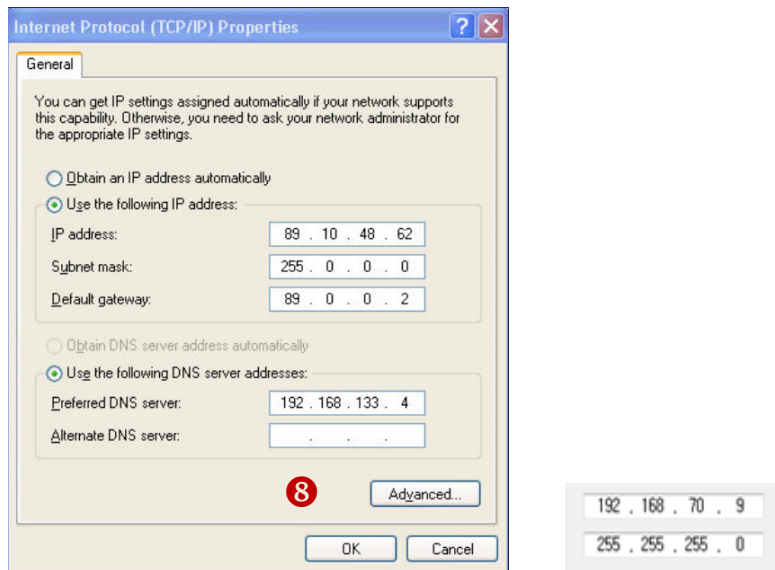


3) Change the adapter settings.



4) Select Local Area Connection Properties > TCP / IPv4 > Properties.

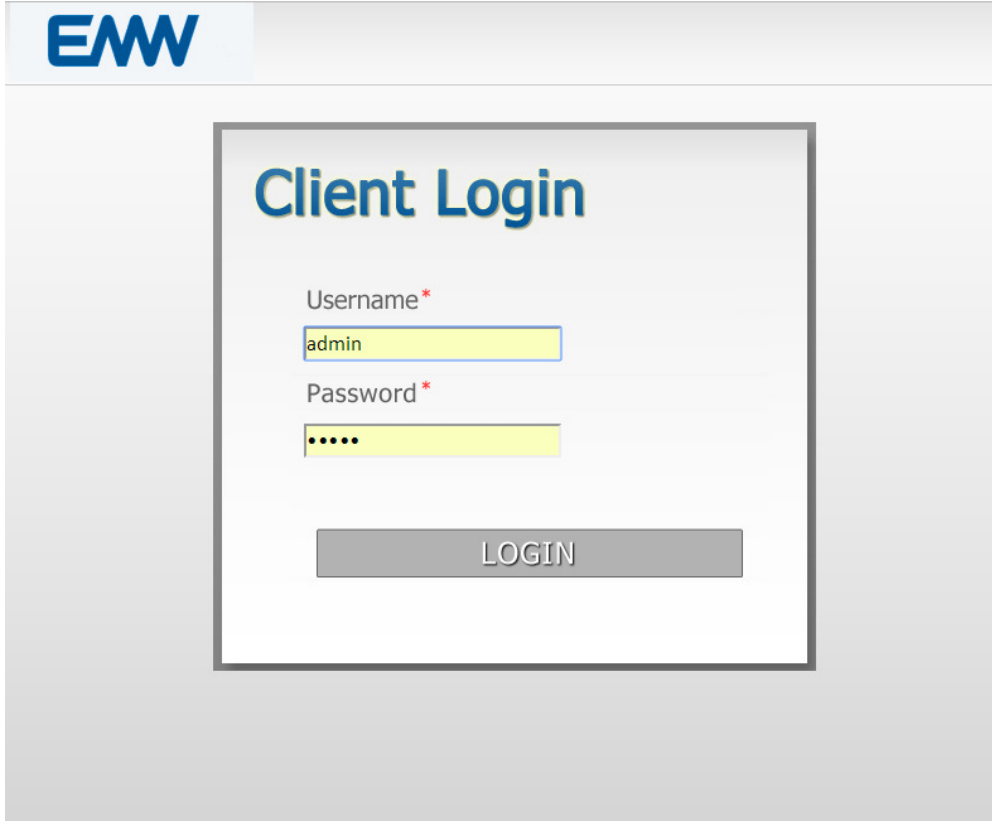




- 5) Change the IP address to the same IP address as the camera.
- 6) Select [Advanced] button at the bottom right and set up Subnet mask.  
Set the Client PC's IP address to the same address so that Tx (Client) and Rx (Master)

## 4.2 Login

- (1) On the PC, run your Internet browser and enter Video Bridge Server IP address into the address box.



The screenshot shows a web browser window displaying the EMW logo in the top left corner. The main content area is titled "Client Login" in a large blue font. Below the title, there are two input fields: "Username\*" and "Password\*". The "Username\*" field contains the text "admin". The "Password\*" field contains four dots. Below the input fields is a "LOGIN" button.

## 4.3 Login account

- (1) (Username :admin, Password : admin)

Enter the provided user name and password to log in.



If you are using Tx and Rx, setting should be different.

Before setting up the device, **make sure to go to Web UI and ensure that the device is correctly set up.**

#### 4.4 Web UI Screen per login account



The following screen is set up based on the Rx device.

The Tx device does not support [Status WDS](#), [Status MBSS](#).

Page	Admin (Rx)	Admin (Tx)
Status Device	√	√
Status Wireless.	√	√
Association table	√	√
Status Networking	√	√
Status WDS	√	
Status MBSS	√	
Status Wireless.	√	√
Config Networking	√	√
Tools Admin	√	√
System Reboot	√	√



## 5. Device Menu



Describes how to set up Rx and Tx devices and how to connect two devices.

### 5.1 How to connect Rx with PC

- Connect the power and LAN cable to Rx.
- Connect Rx's LAN cable to the PC's LAN port.
- Check the PC's IPv4 address.
- The PC should have the same IP address as Rx. Refer to Chapter 4.
- Enter the address of the product into the browser's address box and move to the login screen.
- Username / Password  
**Input admin/admin** account to log in.

### 5.2 Account type

If logged in with the admin account, Tx (client) does not support WDS & MBSS.

### 5.3 How to connect Tx with PC

- Connect the power and LAN cable to Tx.
- Connect Tx's LAN cable to the PC's LAN port.
- Check the PC's IPv4 address.
- The PC should have the same IP address as Tx. Refer to Chapter 4.
- Enter the address of the product into the browser's address box and move to the login screen.
- Username / Password  
**Input admin/admin** account to log in.

5.4 Status – Device



[Figure 5-4-1 ] Screen - **Device Status.**

Shows Device Status.

Status Device		
Menu	Descriptions	Options
Device Name	EMW Rx name	
Software Version	Software version	
Uptime	Device Uptime	hours : minutes
Device Mode	Shows Tx or Rx mode	

5.5 Status – Wireless

[Figure 5-5-1 ] Shows device's Wireless Status.

Status Wireless		
Menu	Descriptions	Options
Device Mode	Shows Tx mode / Rx Mode	
Wireless Band	System Band	802.11ac
Bandwidth	802.11ac standard Bandwidth	20 / 40 / 80 (80 MHz operating with 11ac)
Rx Mac Address (BSSID)	Mac address related to Wi-Fi System's BSSID	
Channel	5GHz channel bandwidth	36-48, 149-161
Associated Devices Count	Displays the information of the connected Tx	If a Rx is connected to Tx, "Associated" is displayed and if not, "Not Associated" is display.
RSSI	Reception sensitivity	
Packets Received Successfully:	Number of wireless data packets successfully received	
Bytes Received:	Number of total bytes received	
Packets Transmitted Successfully:	Number of wireless data packets successfully transmitted	
Bytes Transmitted:	Number of total bytes transmitted	

## 5.6 Status – Networking

**Status**

- Device
- Wireless
- Networking
- WDS
- MBSS

**Config**

- Wireless
- Networking

**Tools**

- Admin

**System**

- Reboot

### STATUS - NETWORKING

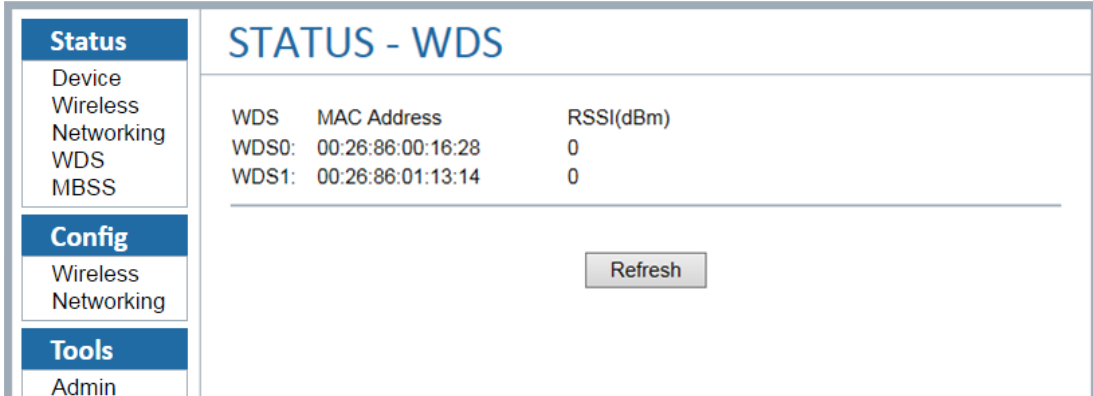
IP Address: 192.168.70.10  
 Netmask: 255.255.255.0  
 Ethernet MAC Address: 98:60:22:60:00:68  
 Wireless MAC Address: 98:60:22:60:00:69  
 BSSID: 98:60:22:60:00:69

Refresh

[Figure 5-6-1 ] Screen showing **Device's Networking Status**.

Status Networking	
Menu	Descriptions
IP Address	System's IP Address. IP address needed to login on Web UI. Can be changed when setting up network page
Netmask	Netmask of IP address
Ethernet MAC Address	Ethernet Interface's Mac Address complying with IEEE
Wireless MAC Address	WI-FI Interface MAC address complying with IEEE
BSSID	Currently connected WI-FI system's BSSID

5.7 Status – WDS (Rx Mode)

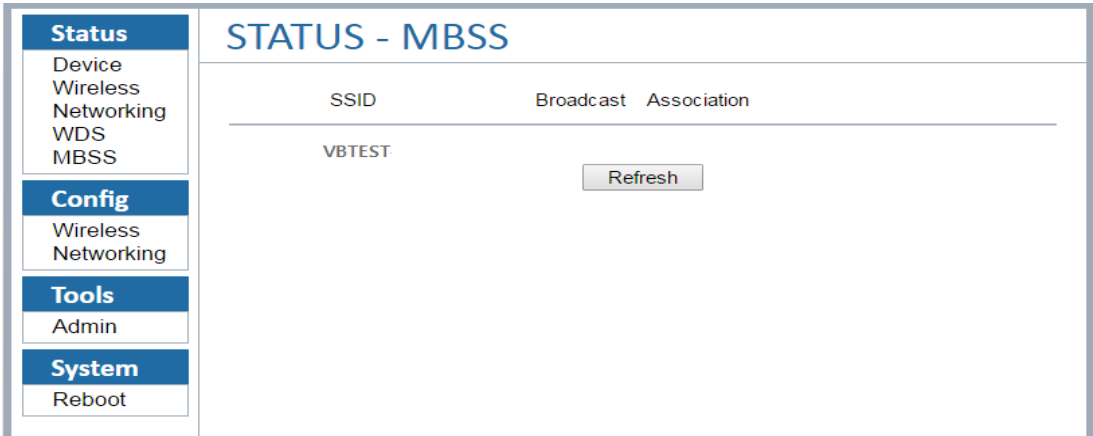


[ 그림 5-7-1 ] Screen Rx Device’s WDS Status

Shows the device’s WDS links status.

- Shows MAC address of WDS counterpart.
- Tx mode has nothing applicable.

5.8 Status – MBSS (Rx Mode)



[Figure 5-8-1] shows the information of the devices connecting to a certain Rx.

Displays device MBSS status. Tx Mode has nothing applicable.

Status MBSS		
Menu	Descriptions	Options
SSID	MBSS SSID	
Broadcast	Enable / disable SSID broadcast.	TRUE : SSID broadcast FALSE: Tx deices cannot scan SSID를 scan
Association	Number of connected Tx	>= Number of Tx connected to 0 Virtual Rx

5.9 Config – Wireless (Rx Mode)

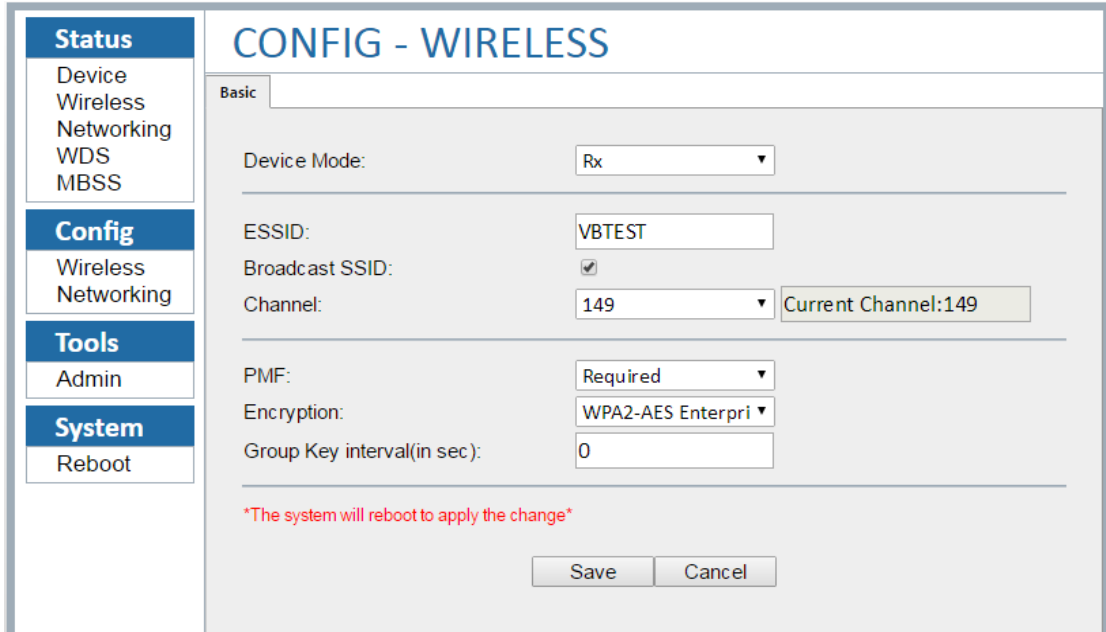


Figure [5.9.1] Shows Rx Device’s Wireless configuration information.

Describes the Tx / Rx Config Wireless screen.

Config Wireless Basic		
Menu	Descriptions	Options
Device Mode	Tx or Rx mode	Rx : receiver Tx: : transmitter Resets automatically when switched to Tx mode
ESSID	Rx’s SSID	Unique ID used to keep wireless connection
Broadcast SSID	Broadcast Settings	
Channel	Bandwidth that can use 5Ghz	36-48, 149-161 Supported frequency bandwidth Automatically set if “Auto” is selected Every frequency band is designated as a channel.
PMF	Protected Management Frames ( PMF ) service	Management frame protection technology for security of WLAN  There are three options. You can select encryption according to PMF settings [Disabled] / [Enabled] / [Required] [Disabled] NONE-OPEN mode [Enabled] NONE-OPEN /WPA2-AES/APA2-AES Enterprise [Required] NONE-OPEN/WPA2-AES-SHA256/ WPA2-AES Enterprise

Config Wireless Basic			
Menu	Descriptions	Options	
Encryption	Disabled	NONE_OPEN - Open Mode	
	Enabled	NONE-OPEN	Open mode
		WPA2-AES	Use AES signal algorithm Use Single Key - Use Passphrase value. Key changes per hour. Use by user or small business man
	Required	WPA2-AES Enterprise	802.1x Authentication Server is needed. Server sends the key to client and check the symmetric key after handshaking. Enterprise Security method. RADIUS authentication server is needed.
		NONE-OPEN	Open mode
		WPA2-AES-SHA256	Hash256 Key is used for AES security.
	Required	WPA2-AES Enterprise	802.1x Authentication Server is needed. Server sends the key to client and check the symmetric key after handshaking. Enterprise Security method. RADIUS authentication server is needed.
		WPA2-AES Enterprise	802.1x Authentication Server is needed. Server sends the key to client and check the symmetric key after handshaking. Enterprise Security method. RADIUS authentication server is needed.
	Passphrase	Password. The default is 12345678	
	Group Key interval	0 : Key changes every 3600 seconds.	

5.10 Config – Networking (Rx Mode)

**Status**

Device  
Wireless  
Networking  
WDS  
MBSS

**Config**

Wireless  
Networking

**Tools**

## CONFIG - NETWORKING

DHCP:  Static IP:

IP Address:

Netmask:

Ethernet MAC Address:

Wireless MAC Address:

BSSID:

Figure [5.10.1] Shows Rx Device’s Network information.

## 5.11 Tools - Admin

The screenshot shows a web interface titled "TOOLS - ADMIN". On the left is a navigation menu with four sections: "Status" (Device, Wireless, Networking, WDS, MBSS), "Config" (Wireless, Networking), "Tools" (Admin), and "System" (Reboot). The "Tools - Admin" section is active. The main content area contains a form with the following fields: "User Name:" with a text box containing "admin", "Old Passphrase:" with an empty text box, "New Passphrase:" with an empty text box, and "New Passphrase Again:" with an empty text box. Below the form is a "Save" button.

Figure [5.11.1] displays the screen where you can change password.

Tools Admin	
Menu	Descriptions
User Name	User Name logged in with
Old Passphrase	Password used for login
New Passphrase	Password to be changed
New Passphrase Again	Re-enter password to be changed



5.12 System-Reboot

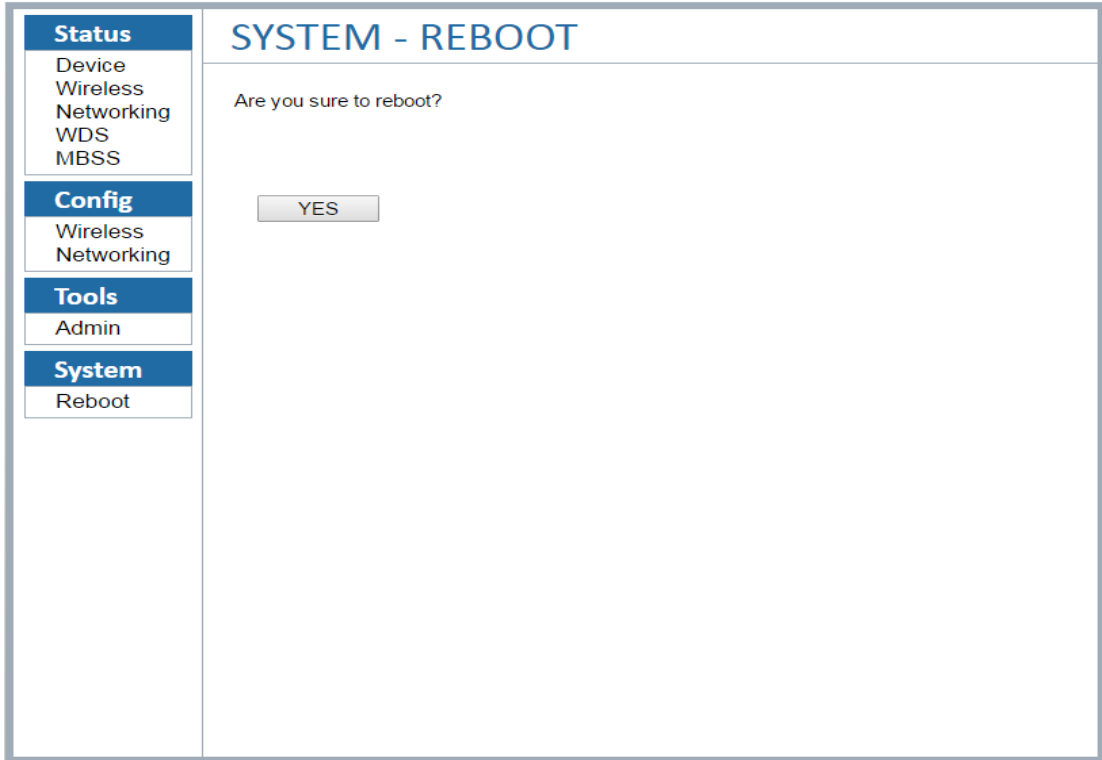


Figure [5.12.1] displays System Reboot screen.

System Reboot	
Menu	Descriptions
System Reboot	Reboot is required when settings are changed.

5.13 How to connect Rx with Tx (Tx Mode)

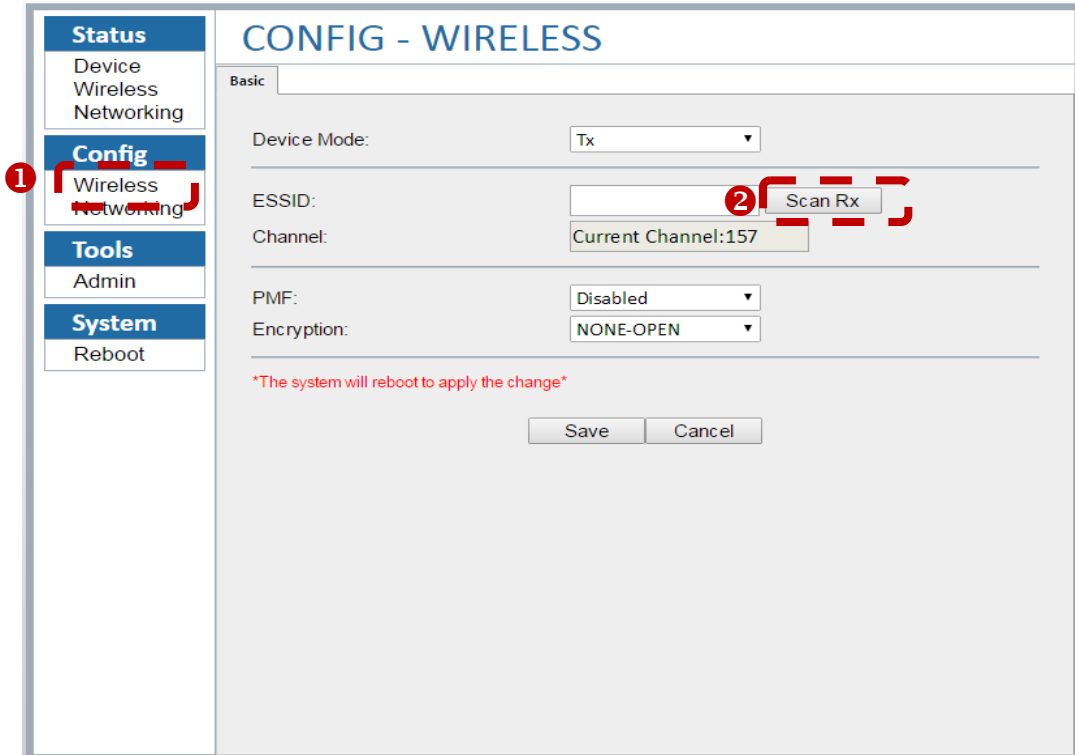
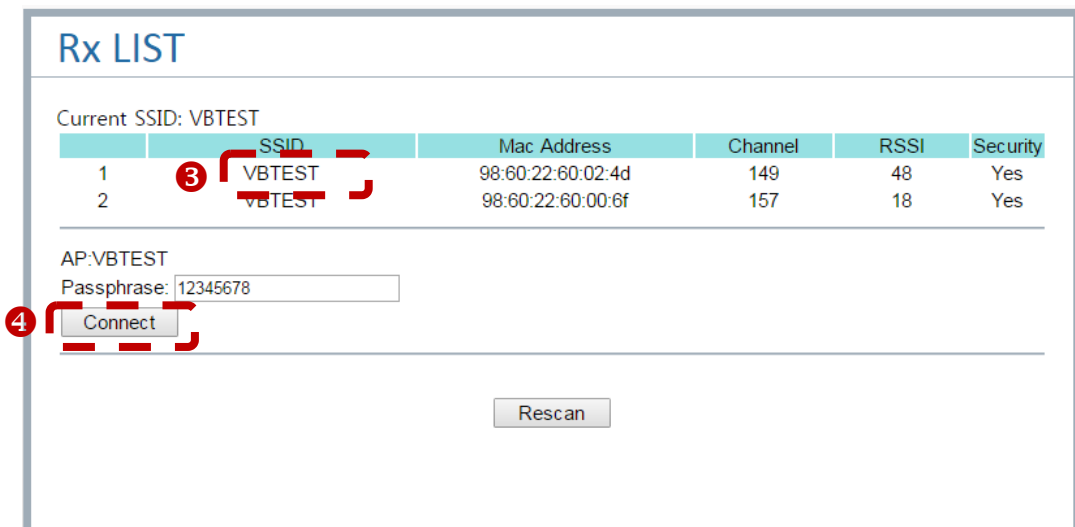


Figure [5.13.1] shows how Tx is connected to Rx.

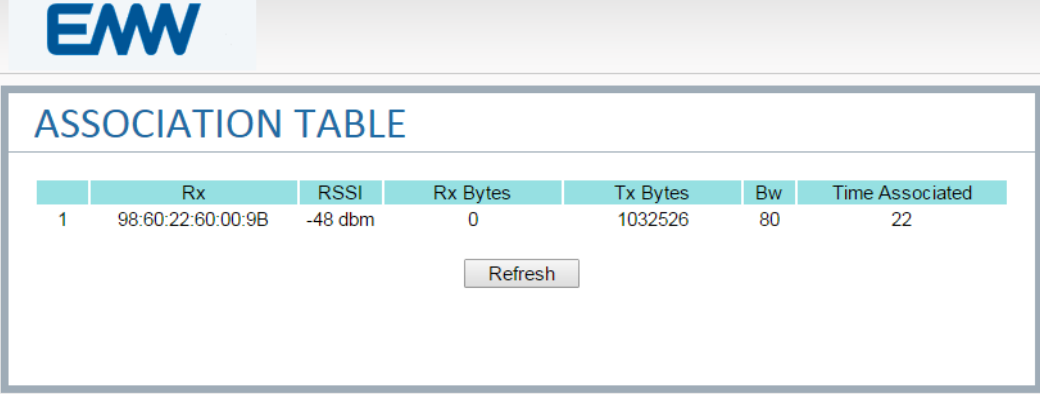
[Setting order]

- ① Run Config Wireless menu.
- ② Press Scan Rx button.
- ③ Select the name of SSID to be connected from Rx LIST and enter Passphrase.
- ④ Press the Connect button. Once connection is established, Rx List is closed.



[How to check connection]

- 1 Check Status > Wireless menu.
- 2 Press Association button to display the information on the connected Rx.



The screenshot shows the EMW logo at the top left. Below it is a section titled "ASSOCIATION TABLE". This section contains a table with the following data:

	Rx	RSSI	Rx Bytes	Tx Bytes	Bw	Time Associated
1	98:60:22:60:00:9B	-48 dbm	0	1032526	80	22

Below the table is a "Refresh" button.

Figure [5.13.2] is the association table that shows the Rx information on Tx device.

## 6. Change Settings

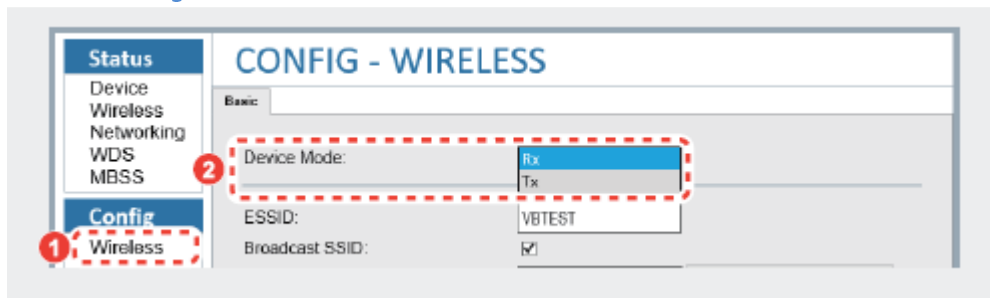


Change settings and press [\[Save\]](#) button at the bottom to the changed settings. Click [\[ System > Reboot \]](#) to start reboot.

### 6.1 Change Tx / Rx settings

You should select Tx or Rx according to your purpose of use.

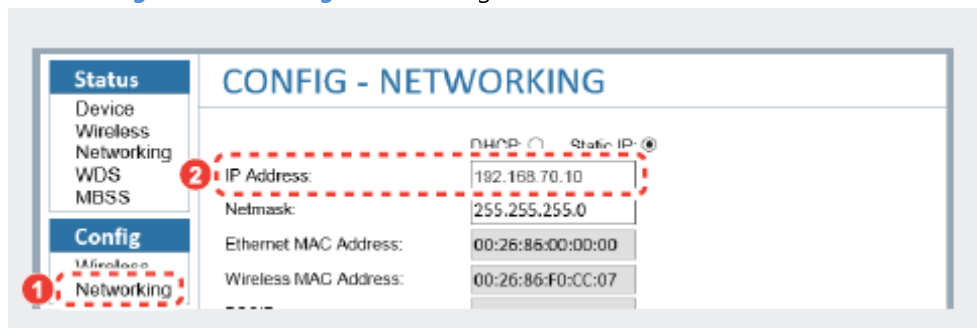
Go to [\[ Config > Wireless > Device Mode \]](#) and select Tx or Rx.



### 6.2 Change Tx / Rx settings

To connect Video Bridge to the installed Rx-Tx network, you should use a different IP address from the one used in the network to change the address.

Click [\[ Config > Networking \]](#) and change [\[IP Address\]](#) to another address.



### 6.3 Change Channel

For channel option, it is recommended that **Auto** should be selected.

To change the channel, click [ [Config > Wireless > Channel](#) ] and select a desired option.



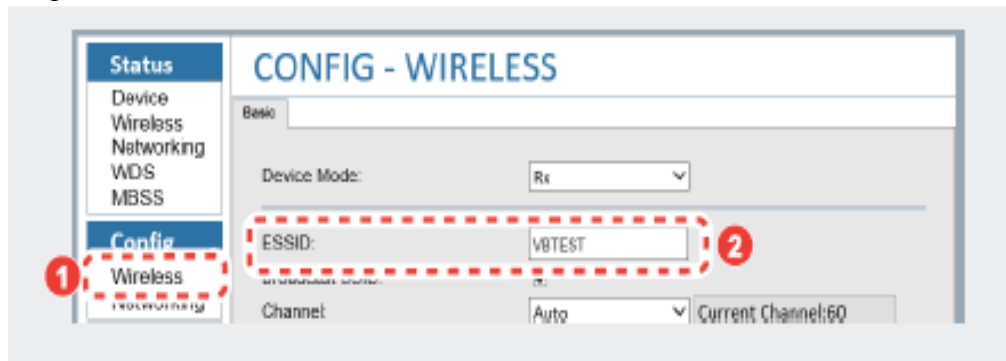
### 6.4 Change Rx ESSID

For Rx, change ESSID. For Tx, click [ [Scan Rx](#) ] button and change ESSID.

#### Change Rx ESSID

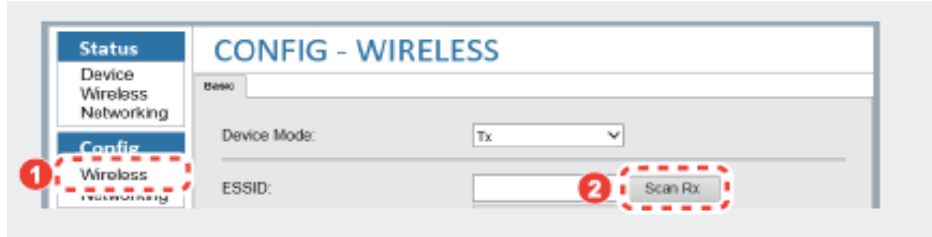
While connected to the Rx device, select [ [Config > Wireless](#) ].

Change [ [ESSID](#) ] to a new unique name.

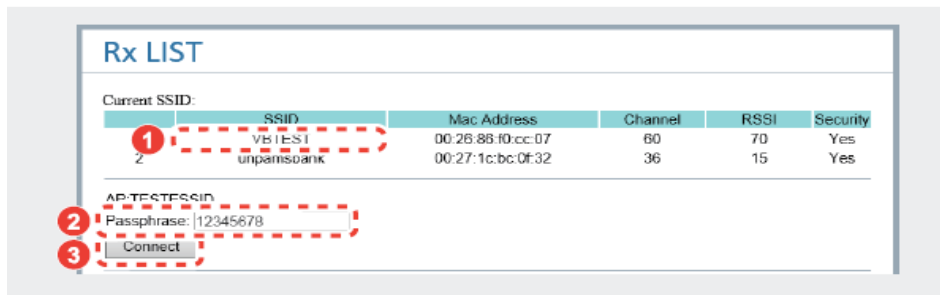


## 6.5 Change Tx ESSID

While being connected to the Rx device, select [\[Config > Wireless\]](#) Click [\[Scan Rx\]](#) button to search for connected Rx's (Master).

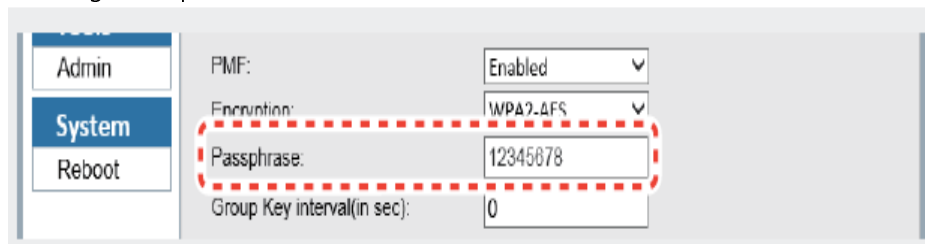


Select one of Rx's and enters Passphrase for the selected Rx. Click [\[Connect\]](#) button to connect the selected Rx and ESSID is changed.



## 6.6 Change Passphrase

To change Passphrase for ESSID, click [\[Config > Wireless\]](#) and clear [\[Passphrase\]](#) box and change Passphrase.



## 6.7 Menu

- Status: Displays the device's Tx and Rx information, SW version, and Uptime.
- Config: Displays Wireless and networking information.
- Tools: Allows entering commands in the Command input box or provides the reboot function.
- System: Allows changing SW upgrades menu and settings and forced reboot.

## 6.8 Tools - Admin

The screenshot shows a web interface titled "TOOLS - ADMIN". On the left is a navigation menu with four sections: "Status" (Device, Wireless, Networking, WDS, MBSS), "Config" (Wireless, Networking), "Tools" (Admin), and "System" (Reboot). The "Tools - Admin" section is active. The main content area contains a form with the following fields: "User Name:" with a text box containing "admin", "Old Passphrase:" with an empty text box, "New Passphrase:" with an empty text box, and "New Passphrase Again:" with an empty text box. Below the form is a "Save" button.

Figure [6.8.1] displays the screen where you can change password.

Tools Admin	
Menu	Descriptions
User Name	User Name currently logged in with
Old Passphrase	Password used for login
New Passphrase	Password to be changed
New Passphrase Again	Re-enter the changed password

## 6.9 System-Reboot

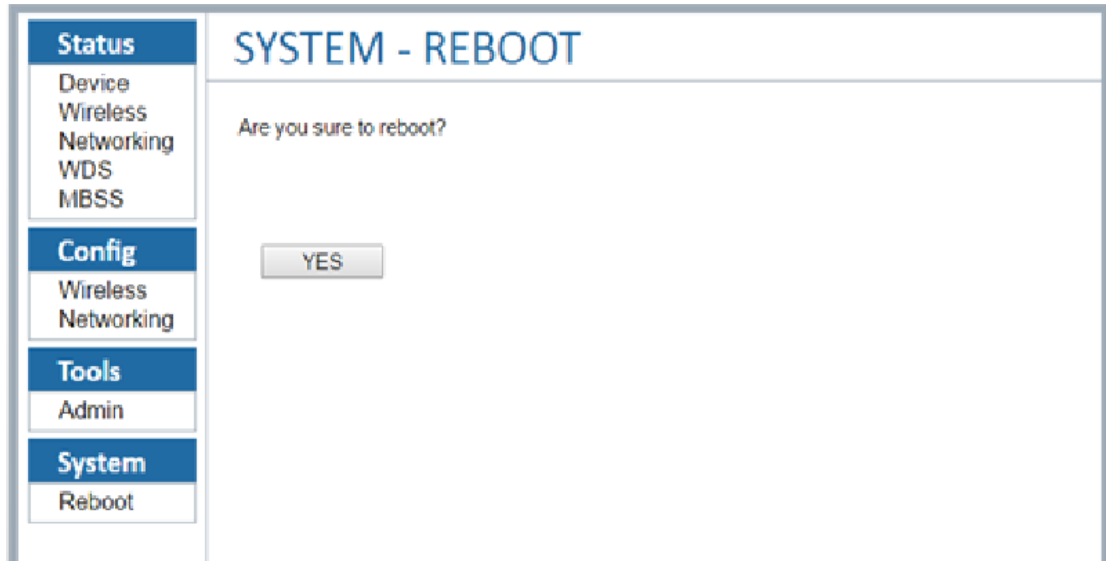


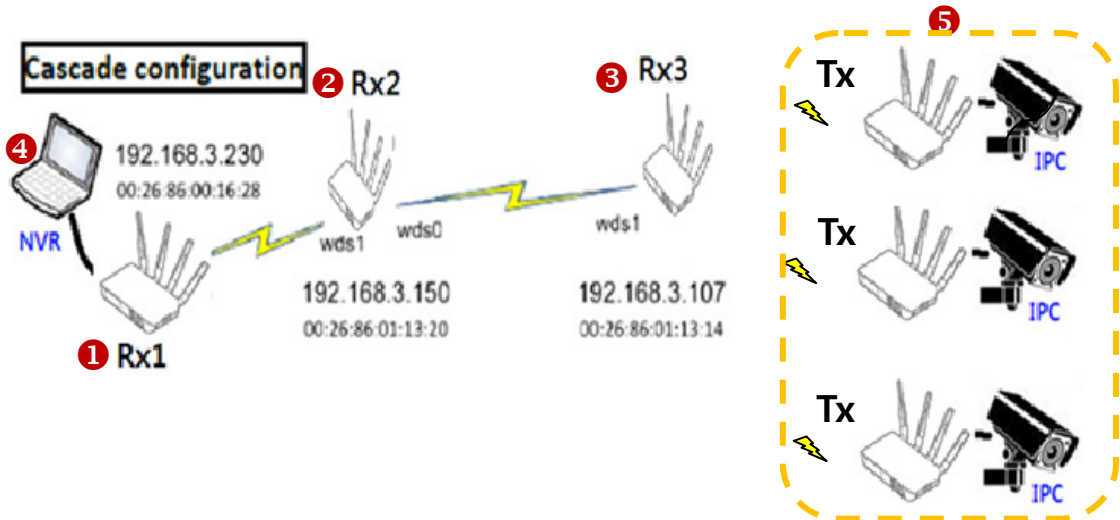
Figure [6.9.1] displays System Reboot screen.

System Reboot	
Menu	Descriptions
System Reboot	Reboot needed to apply the settings.



## 7. How to set up and check WDS ( Rx Mode)

### 7.1 WDS function: Adds a Rx to expand the wireless coverage. (Repeater)



### 7.2 Details of Tx / Rx setting

	Rx1	Rx2	Rx3
Channel	116	116	116
region	none	none	none
bandwidth	80M	80M	80M
br0 IP	192.168.3.230	192.168.3.150	192.168.3.107
wifi0 MAC	00:26:86:00:16:28	00:26:86:01:13:20	00:26:86:01:13:14
eth0 MAC	00:26:86:00:03:45	00:26:86:01:03:20	00:26:86:01:03:14
SSID	12345678	12345678	12345678
Beamforming	On	On	On
TX Rate	Auto	Auto	Auto

### 7.3 Order of WDS Setup

A WDS device is set to Rx mode.

For each Rx device, register the neighboring MAC address.

- 1** Rx1: On WDS Table, set Rx2's MAC Address.
- 2** Rx2: On WDS Table, set Rx1's and Rx3's MAC Addresses.
- 3** Rx3: On WDS Table, set R2's MAC Addresses.
- 4** NVR : Use the Ethernet cable to connect NVR with Rx1.

All interface (eth0 + wifi0 + wd0..) equipment is grouped as a local bridge (br0).

- 5** IP Camera and Tx: Use the Ethernet Cable to connect the camera with the Tx device.

And find and connect a correct Rx device with the Tx device.

Go to Web UI [[Config-> Wireless->Search Rx](#)] and find and connect Rx with Tx.

If Password input box opens, enter the passphrase of Rx.

**7.4 How to set up WDS on Web UI screen**

7.4.1 On the Rx1 device's Web UI, enter the Rx2's MAC Address (uppercase) and save it.

**CONFIG - WDS**

WDS	MAC Address	Passphrase	VLAN
<input checked="" type="checkbox"/> WDS0:	00:26:86:01:13:20		
<input type="checkbox"/> WDS1:			
<input type="checkbox"/> WDS2:			
<input type="checkbox"/> WDS3:			
<input type="checkbox"/> WDS4:			
<input type="checkbox"/> WDS5:			
<input type="checkbox"/> WDS6:			
<input type="checkbox"/> WDS7:			

7.4.2 On the Rx2 device's Web UI, enter the Rx1's and Rx3's MAC Addresses (uppercase) and save them.

**CONFIG - WDS**

WDS	MAC Address	Passphrase	VLAN
<input checked="" type="checkbox"/> WDS0:	00:26:86:00:16:28		
<input checked="" type="checkbox"/> WDS1:	00:26:86:01:13:14		
<input type="checkbox"/> WDS2:			
<input type="checkbox"/> WDS3:			
<input type="checkbox"/> WDS4:			
<input type="checkbox"/> WDS5:			
<input type="checkbox"/> WDS6:			
<input type="checkbox"/> WDS7:			

7.4.3 On the Rx3 device's Web UI, enter the Rx2's MAC Address (uppercase) and save it.

**CONFIG - WDS**

WDS	MAC Address	Passphrase	VLAN
<input checked="" type="checkbox"/> WDS0:	00:26:86:01:13:20		
<input type="checkbox"/> WDS1:			
<input type="checkbox"/> WDS2:			
<input type="checkbox"/> WDS3:			
<input type="checkbox"/> WDS4:			
<input type="checkbox"/> WDS5:			
<input type="checkbox"/> WDS6:			
<input type="checkbox"/> WDS7:			

7.4.4 On Rx1, Rx2, Rx3 Web UI, go to [\[Status > Wireless\]](#) and check if the same channel is used.

<b>Status</b>	<b>STATUS - WIRELESS</b>
Device	
Wireless	
Networking	
WDS	
MBSS	
<b>Config</b>	
Wireless	
MAC Filter	
Networking	
WDS	
MBSS	
<b>Tools</b>	
Log	

Wifi Interface:	wifi0(00:26:86:F0:C
Device Mode:	<b>Rx</b>
Wireless Band:	802.11ac
Bandwidth:	80 MHz
AP Mac Address (BSSID):	00:26:86:F0:CC:3B
<u>Channel:</u>	<u>116</u>
Associated Devices Count:	15 <a href="#">Association Table</a>
Packets Received Successfully:	8755794
Bytes Received:	1317469618
Packets Transmitted Successfully:	4696831
Bytes Transmitted:	401480548

## 8. Fault diagnosis and measures

The followings are the measures to be taken when a problem occurs while using Video Bridge. If the problem is not cured, please contact the customer center.



If the device needs to reset the settings, press the Reset button on the side of the product for more than 10 seconds.

Faults	Symptoms	Measures
<b>The product does not operate.</b>	Power LED is turned off.	Power may be unplugged. Check if the power cord is properly connected.
	Tx's Mode LED is turned on, or Power LED is turned off.	Mode LED may be turn off or on which is selected, Tx or Rx mode. Go to [Config]>[Wireless] of Web UI and check if mode is selected Tx or Rx.
<b>Tx is not connected with Rx.</b>	Link LED flashes or is turned off.	The connection between Tx and Rx lost wireless connection or unstable. Check the power and the settings of Tx and Rx.
<b>Video is lagging or blank</b>	Quality LED flashes or is turned off.	Check if the four antenna are all correctly connected. Check it from the nearest location first.

## 9. Terminology

<b>Rx(Master)</b>	Rx is a receiver which connects wired and wireless connectivity.
<b>Tx (Client)</b>	A transmitter is connected to a receiver.
<b>SCS</b>	Smart Channel Selection
<b>VSP</b>	Video Stream Protection
<b>RSSI</b>	Received Signal Strength Indication
<b>Wi-Fi</b>	A mark for WECA to check linking between wireless products. The name is originated from "Wireless Fidelity". WECA carries out an elaborate test and grants a Wi-Fi logo to a product that satisfies the linking standards.
<b>Wireless Bridge</b>	Tx (Client) or Rx ( Master) that uses a wireless network to connect between two different wired networks.
<b>Association</b>	Has a table that controls the packet route between Rx and Tx Maintains Rx and Tx.
<b>SSID</b>	Service Set Identifier SSID is a unique identifier of 32 bytes length added to the header of a packet transmitted through a WLAN. It is used like a password when Tx connects to BSS (basic service set). Rx or Tx must the same SSID. A Tx that does not know the unique of a certain BSS cannot access the BSS.
<b>WEP</b>	WEP (Wired Equivalent Privacy): An encryption standards prepared by IEEE 802.11 for WLAN security. There are various types of application developed to use encryption keys to strength security.
<b>Bandwidth</b>	Refers to the difference between the highest and lowest frequencies of a signal usable in a network. It means, commonly, the highest transmission speed or a capacity to transmit information and uses 'bps' its unit.
<b>DHCP</b>	DHCP allows the network administrator to manage and allocate IP addresses and to send new IP addresses when the computer connects to a different location of the network.
<b>Static IP</b>	Can use fixed IP addresses. There is no need for the administrator to allocate IP addresses.
<b>802.11ac</b>	802.11ac operates at 5G Hz's V10.1 frequency bandwidth.
<b>PHY</b>	The lowest sub layer of the physical layer and a block for connection with the outside. It changes a protocol layer into a physical layer.
<b>WDS</b>	Wireless Distribution System WDS forms a wireless network between Rx's to provide the larger support range of wireless network than when one Rx is used.
<b>BSS</b>	Base Service Set Refer to a minimal size of WLAN formed based on a Rx if a wire network consists of multiple wireless Rx's in the infrastructure mode.

<b>MBSS</b>	Multiple BSS
<b>AES</b>	Advanced Encryption Standard
<b>CCMP</b>	Counter Mode Encryption With CBC-MAC Protocol
<b>EAP</b>	Extensible Authentication Protocol
<b>ESS</b>	Extended Service Set Refers to a WLAN that consists of multiple Rxs.
<b>FAST</b>	Flexible Authentication via Secure Tunneling
<b>IV</b>	Initialization Vector
<b>PEAP</b>	Protected EAP
<b>PSK</b>	Pre-Shared Key
<b>TKI</b>	Temporal Key Integrity Protocol
<b>TLS</b>	Transport Layer Protocol
<b>WPA</b>	WiFi Protected Access WIFI security Protogoras WEP -> WPA - WPA2 Wi-Fi Protected Access (WPA, WPA2 ) is an authentication program carried out under the monitoring of Wi-Fi Alliance. It is a security protocol that indicates that the network equipment satisfies the security protocol established by Wi-Fi Alliance. WPA indicates that the existing LAN card operation complies with the expansion protocol standards completely and WPA2 mark indicates that the relevant device does the same.
<b>WPS</b>	WiFi Protected Setup Press the WPS buttons of the wireless Rx and wireless device (during the 120 seconds of waiting time) to establish connection without entering password: there are PBC, PIN, and NFC type.
<b>PMF</b>	Protected Management Frames Protects the frame.
<b>RADIUS</b>	Remote Authentication Dial-in User Service
<b>NSS</b>	Number of Spatial Streams
<b>DTIM</b>	Delivery traffic indication message
<b>Short GI</b>	Short Guard Interval The guard interval is a waiting time between sending data continuously in a wireless network to reduce the impact of data. For 802.11 a/g, it is 800 nsec, but for 802.11n, it is set to 400n sec so that the sub carrier can be used to compensate for the reduced guard interval to make the total throughput to reach 72Mbps. Reducing the guard is provided as a optional when a WLAN is established as interval needs agreement between the transmission and reception ends.
<b>OFDM</b>	Orthogonal Frequency Division Multiplexing
<b>MIMO</b>	Multi Input Multi Output MIMO is a multi I/O technology. The wireless quality depends on how far the signal is and which route the signal is received. MIMO uses multiple antennas to receive signals coming in along multiple paths (multipath) and operate data and recover them to original signals. 802.11g/b/g uses a single antenna or SISO (Single Input Output).
<b>Passphrase</b>	It is used instead of password to mean that the password should long enough.

## 10. Specification Table

Item	Specificaions
Model	EVB-A100
Frequency Range	5GHz (5.150 ~ 5.250, 5.735 ~ 5.835 GHz)
Wi-Fi	IEEE 802.11ac
Modulation	OFDM
Bandwidth	20MHz / 40MHz / 80MHz
RF Communications	4x4 MIMO
Data Rates(PHY)	1.7 Gbps Max
Channel Avoidance	Dynamic Smart Channel
Beamforming	Universal Beamforming Supported
Simultaneous Channels	128CH Max (Full HD)
Output (Per Chain)	21dBm@5GHz
Antenna	2dBi
IP	IPv4 / IPv6
Security	WPA2 / AES
Ethernet	Gigabit Etherne Portt 10/100/1000 Base-T
Protocol	TCP/ UDP / DHCP
LED	Power / Link / Quality / Mode
RESET	Supported
Power Supply	DC12V / 1A
Power Consumption	7W (Max)
Operation Temperature	Operating : -20°C to 70°C, Storage : -30°C to 85°C
Dimensions	135mm x 82mm x 24.8
Humidity	Operating:5% to 95% (non-condensing)
Weight(Body)	200g
IP	Product's default IP addresses: Tx( Client ) : 192.168.70.11 Rx( Master ) : 192.168.70.10

	For IP address, go to WebUI and change Config
Weight	250g
Certification	KC, FCC, CE

## 11. Customer services

If a fault occurs during the use of product, you have the right to claim the warranty service for one year of your purchase, except the case where the faults is caused by the user or by force majeure accidents.



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