

TS20 TapShare

User Manual - English



[Important]

To download the latest version of Quick Start Guide, multilingual user manual, software, or driver, etc., please visit Lumens <https://www.MyLumens.com/support>

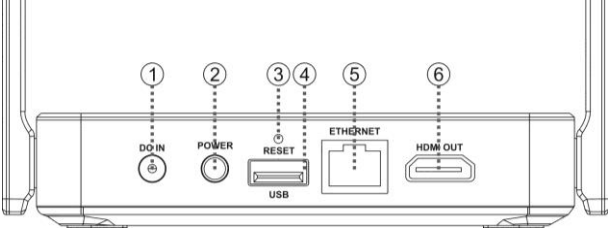
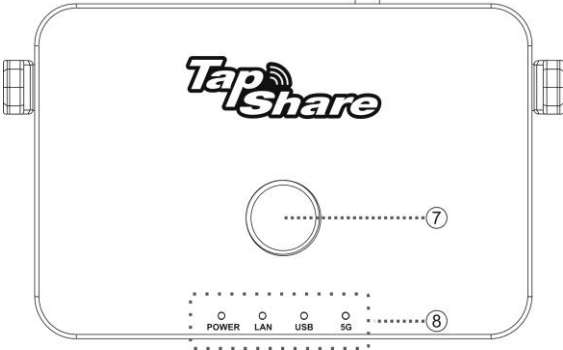
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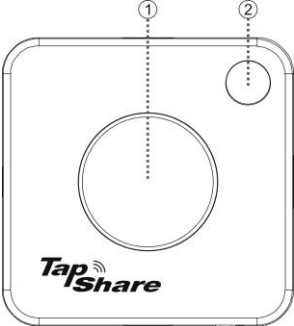
Chapter 1 Product Overview

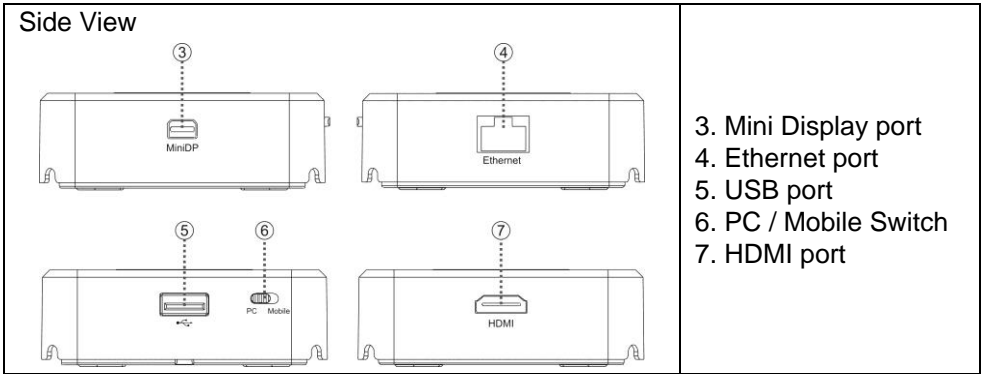
1.1 TapShare Overview

1.1.1 TapShare Box Product Description

<p>Top Area</p>  <p>The diagram shows the top area of the TapShare box with six numbered callouts: 1. DC IN (a circular port), 2. POWER (a circular power button), 3. RESET (a small square button), 4. USB (a USB-A port), 5. ETHERNET (an Ethernet port), and 6. HDMI OUT (an HDMI port).</p>	<ol style="list-style-type: none">1. DC IN2. Power Switch3. Reset Switch4. USB port5. Ethernet port6. HDMI output
<p>Back View</p>  <p>The diagram shows the back view of the TapShare box. It features the TapShare logo at the top. Below the logo is a large circular area labeled with a callout 7, which is the pairing button. At the bottom, there is a row of four indicator lights labeled POWER, LAN, USB, and SG, with a callout 8 pointing to the entire row.</p>	<ol style="list-style-type: none">7. Pairing Button (including indicator light)8. Status Light Indicator

1.1.2 TapShare Transmitter Product Description

<p>Top Area</p>  <p>The diagram shows the top area of the TapShare transmitter. It features the TapShare logo at the bottom. Above the logo is a large circular area labeled with a callout 1, which is the projection button. To the right of the projection button is a smaller circular area labeled with a callout 2, which is the control button.</p>	<ol style="list-style-type: none">1. Projection Button (including indicator light)2. Control Button (including indicator light)
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1.2 TapShare Transmitter Light Indicator Display Descriptions

Status	Indicator Display	Indicator Status Descriptions
Pairing		<p>Pairing Pairing Indicator Light: Change from a flashing white light to a steady white light Projection Indicator Light: Change from a flashing red light to a steady white light Control Indicator light: Change from a flashing red light to no light</p>
No input signals		<p>Projection Indicator Light: No light means no input signal Control Indicator light: A steady green light indicates the unit is a host side A steady red light indicates the unit is a client side</p>
Connecting Devices		<p>Projection Indicator Light: When a red light stays lit, the system is in standby and can transmit the screen</p>
Projecting		<p>Projection Indicator Light: When a white light stays lit, the system is transmitting the screen</p>
Host Side A request for projection is received.		<p>Projection Indicator Light: When a red light stays lit, the system is in standby When a white light stays lit, the system is transmitting the screen Control Indicator light: A flashing green light means a request for projection is received</p>

1.3 TapShare Box main screen



1. TapShare Box SSID
2. TapShare Box wireless password
3. TapShare Box functions and connection status
4. TapShare Box IP address
5. TapShare Firmware Version

1.4 TapShare Icon Function Descriptions



Airplay icon

Airplay function is set in ENABLE status



Receiver connection status icon

The parenthesized number is the quantity paired with the receiver or connected with other network equipment



Network cable connection icon

Display of white background means that the network cable has been properly connected



Wireless connection icon

TapShare Box is connected to a 5G network and displays the name of the connected router



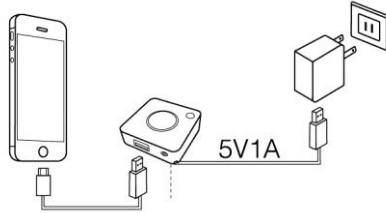
OTA firmware update icon

When this icon appears, it indicates that newer firmware is available and can be updated via OTA

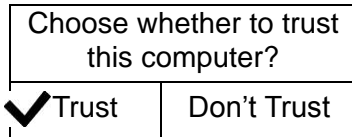
Chapter 2 Descriptions of Major Functions

2.1 I would like to project the screen

2.1.1 Connect the iPhone, iPad



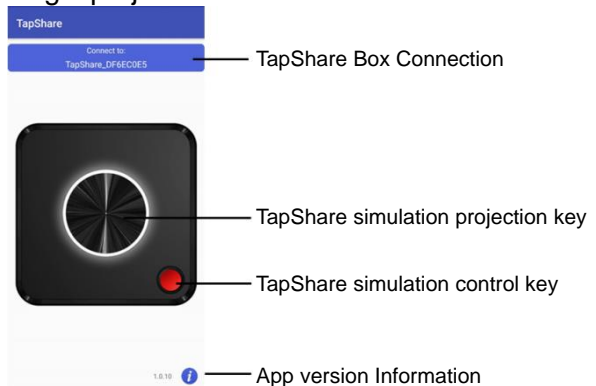
The screen prompts with **Switch to Mobile** Selections. Please click **"Trust"**



Press the projection key of the TapShare transmitter to project the screens.

2.1.2 Connect Android mobile phones, tablets.


1. Please visit Google Play Store to download TapShare App (name: TapShare)
2. Use a mobile phone to connect to TapShare Box via WIFI.
3. Select Tapshare App, click the TapShare transmitter projection key on the App to begin projection



[Remark] Due to the limitation of Android system, currently audio output of Android equipment is not supported

2.2 I would like to set up split screens

2.2.1 Modify the webpage settings of TapShare

1. For TapShare Box connection, connection and web page login methods, please refer to [2.6 Web Page Login](#)
2. Select **[Admin Setting]** from the top-left menu 
3. Go to **[Host Control]** and change **[Share Screen]** as **[On/Off]**
4. Click **[OK]** and wait for a reboot of TapShare Box


Once done, follow the steps on [2.1 I would like to project](#) or [2.3.2 How to project with Host Control mode](#) to operate

[Remark] Support up to 4 split screens at most

2.3 I would like to enable the host control feature

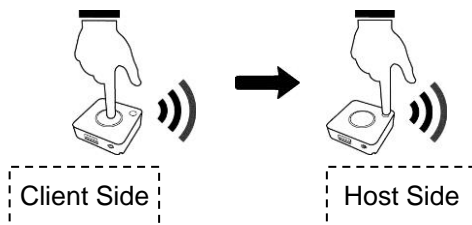
[Remark] To enable this feature, two or more TapShare transmitters are required and the projection from client side must be approved by the host side

2.3.1 Modify the webpage settings of TapShare

1. For TapShare Box connection, connection and web page login methods, please refer to [2.6 Web Page Login](#)
2. Select **[Admin Setting]** from the top-left menu 
3. Click **[Host Control]** and modify **[Requests Granted Automatically]** to **[Closed]**
4. Click **[OK]** and wait for a reboot of TapShare Box

2.3.2 How to project with Host Control mode

Press the TapShare transmitter projection key of the client side; then press the TapShare transmitter control key of the host side to project images.



[Remark]

Host Side: The control LED indicator is in green


Client Side: The control LED indicator is in red

2.3.3 Host Control mode instructions

Function	Action descriptions	
Approve projection request from client side	Host Side	Single click the control key
Approve full-screen projection request from client side	Client Side	Click and hold the projection key to send the request of projection
	Host Side	Single click the control key
Reject projection request from client side	Host Side	Double click the projection key
Close full-screen projection on client side	Host Side	Single click the projection key
Close projection on all clients	Host Side	Press and hold the projection key

2.4 I would like to stream content via AirPlay

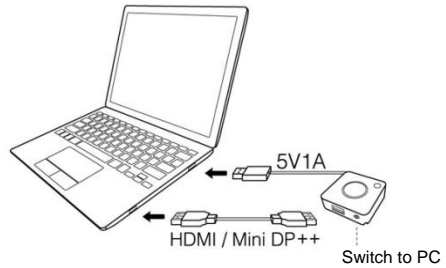
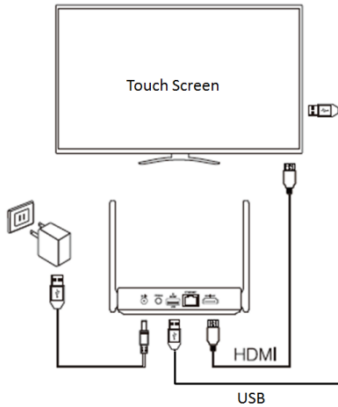
To use the Airplay output screens, please close the TapShare transmitter screen output and modify the TapShare Box setting.

1. For TapShare Box connection, connection and web page login methods, please refer to [2.6 Web Page Login](#)
2. Select **[Admin Setting]** from the top-left menu 
3. Select **[Airplay]** to make sure **[Airplay]** is set as **[On]**
[Remark] If **Airplay** is on, steps 2 to 3 can be skipped
4. Enable AirPlay on a mobile device and search for available AirPlay devices. Select "TapShare" from the list and the content will be streamed out after connecting

2.5 I would like to use return control to computer functions

When the TapShare Box is connected to a touch screen, please follow the following connection method to set up return control to computer functions

1. Connect the USB port of the touch screen to the USB port of TapShare Box
2. Connect the USB cable from TapShare transmitter to the computer and switch to PC side
3. Connect the HDMI or MiniDP port of the TapShare Transmitter to the computer
4. When the screen of only one computer is projected, users can operate the computer screen from the touch screen




[Remark] When multiple split screens are projected, the return control to computer functions is not supported

2.6 Log in to the web page

1. Go to Wi-Fi settings on a PC or mobile device and connect to TapShare Box. Please refer to the on-screen information for SSID and password



- Go to **[Settings]** on a mobile device and search for wireless network devices (e.g.: TapShare_DF6EC0E5)
 - Enter the Wi-Fi password (e.g.: 96825190)
2. When the web page is displayed, log in to 192.168.168.1 (default IP)
 3. Input the Admin Password (default password [000000]). For the initial login, the system will ask for password change. Please follow the instruction on the screen to modify the password. After the password is modified, please use the new password to log in again
 4. Touch the login icon at the upper-right corner ; input the password and log in to the web page management

2.7 I would like to update firmware

1. Please connect the TapShare Box to wired or wireless network first
2. Go to [Admin Setting] and select [Upgrade]
[Remark] If new version of firmware is available for download, then the screen will show the new version to be downloaded
3. Select the TapShare Box or transmitter to be upgraded
4. Click [Update] and wait for a reboot of the devices




2.8 I would like to pair devices with pairing files

1. Prepare a blank USB flash drive and insert it to the USB port on TapShare Box
2. Log in TapShare Box webpage
3. Go to [Device Management] and select [Download Pairing File]
4. Download the pairing files for TapShare Box and save them onto the root directory of the USB flash drive
5. Switch TapShare Pod to Mobile, insert the USB flash drive to the USB port on TapShare Pod and then power on (powered by a USB port on devices other than TapShare Box)
6. When the LED indicators on TapShare Pod are changed from dual flashing red lights to solid white lights, the pairing is completed successfully

2.9 I would like to reset to the original setting

2.9.1 Operate via web pages

1. Select [Admin Setting] from the top-left menu 
2. Tap [Reset to Defaults] and select the equipment to be reset to defaults
[Remark] RX is receiver; TX is transmitter.

2.9.2 Use the keys to operate

Press and hold the Reset key on the back of the product unit (at least for 10 seconds) and wait about 1 minute for the product to completely reboot. All settings will be restored to the factory default status.

Chapter 3 Web Page Function Description

3.1 Web Interface Introduction



1. Login:
When logging in to the TapShare Box web page, the system will ask for password (initial password is 000000)
If the password is not input, users can only modify the basic settings of devices and network management and not the Administrator Settings
2. Function Menu: Conduct relevant device settings on the TapShare Box

Login

Username

Password

Default Admin:

Function Menu

×

>

>

>

>

3.2 Device Management



Function	Option	Description
Language	<ol style="list-style-type: none"> 1. English 2. Français 3. Deutsch 4. Español 5. 简体中文 6. 繁體中文 7. 日本語 8. 한국의 9. Italiano 10. Русский 11. Nederlands 12. Português 13. Türk 14. العربية 15. ไทย 16. فارسی 17. Auto 	Set up the language displayed in the receiver
Resolution	<ol style="list-style-type: none"> 1. 1280 x 720 50p 2. 1280 x 720 60p 3. 1920 x 1080 24p 4. 1920 x 1080 50p 5. 1920 x 1080 60p 6. 3840 x 2160 24p 7. 3840 x 2160 25p 8. 3840 x 2160 30p 9. 4096 x 2160 24p 10. Auto 	Set up the output resolution of the receiver
Maximum number of connections	<ol style="list-style-type: none"> 1. 4 users 2. 8 users 3. 16 users 4. 32 users 5. 64 users 	Set up the maximum number of connections of the TapShare transmitter
Android Audio Streaming	On/Off	Enable the audio streaming by Android App (Compatible with Android App 1.1.21 or later)
Download Pairing File	"File name"	This function can achieve the goal of pairing via downloaded pairing files. Please refer to 2.8 I would like to pair devices with pairing files. for the method

3.3 Network Management

Function	Option	Description
Scan 5G SSID and connect	Close after plugging in the network cable	1. Display when connecting to wired network 2. When not connecting to wired network, "Blank" is displayed Description: TS20 only supports 5G Router
Remember Wifi	On/Off	On: If the router to be connected has been set up, it will be connected automatically upon startup Off: The router previously set up will not be connected automatically upon startup

3.4 Admin Setting

Function	Option	Description
WIFI Channel	1. Country 2. Channel 3. Bandwidth	5G Wifi Channel Setting Set up the Wifi channel according to the country/region of residence
LAN IP Setting	1. Auto 2. IP address 3. Gateway 4. Subnet mask 5. DNS 1 6. DNS 2	If a wired network is used, DHCP or static IP can be set up here
SSID	1. New SSID 2. Mask SSID 3. Disable SSID	Set up the SSID name displayed in the receiver Mask SSID: After enabling, manually initiate SSID of the client side to search for the receiver Mask SSID: After enabling, the client side will not be able to scan the receiver
Password	1. Password 2. Mask password	Set the WIFI password of the receiver
My Screen	Select files	Set up the image displayed on the main screen of the receiver The image format for upload is restricted to the followings: Resolution: 1920 x 1080 File Size: < 3 MB Image Format: JPEG
Host Control	1. Requests granted automatically 2. Share Screen	Requests granted automatically On: Other transmitters can automatically project screens without the permission of the host transmitter Off: Other transmitters need the permission of the host transmitter when projecting screens Share Screen On: Display two split screens or four split screens Off: Single display mode (only one transmitter screen can be projected at a time) ※After the setting is modified, the receiver will reboot

AirPlay	On/Off	Enable AirPlay functions to project the video and audio output of Apple equipment to the receiver ※After the setting is modified, the receiver will reboot
Administrator Password	1. New Password 2. Confirm Password	Change the administrator login password for the receiver ※To modify the items of Administrator settings, you must log in using the Administrator password
Screen saver	1. Off 2. 15 minutes 3. 30 minutes 4. 1 hour	Set the screen saver time. If the receiver is not operated during the saver time, close the screen When using the transmitter to project screens or log in the receiver web page, resume the screen display
WiFi enterprise	"Select files for upload"	Set digital signature authentication
Fixed Host	1. Dynamic (Auto) 2. Fixed IP 3. Fixed device	Dynamic (Auto) : The first device connected with TapShare Box is the host. Fixed IP : User can assign a fixed IP of device as host unit. Fixed device : User can select a specific device as host unit.
Upgrade	"Select the firmware version"	Confirm whether the current OTA server has the latest version  If the receiver connection status is  , it means newer versions are available for download
Restart	"Do you want to restart?"	Restart the receiver
Reset defaults	1. Reset RX 2. Reset TX 3. Reset RX+TX	Restore the receiver or transmitter to factory default settings

3.5 About

Display the receiver and transmitter equipment, connection, and version information

SSID : TapShare_NEW	Firmware Version : 1.3903.0
IP : 192.168.168.1	Internet IP : 192.168.4.56
MAC : AC:35:EE:56:60:07	LAN MAC : d0:c0:bf:c9:76:d3
5G WiFi Channel	
Country : America	
Channel : 36	
Bandwidth : 80	



3.6 Download Android apk

Using Android mobile devices to enter the receiver web page. After selecting Android apk for download, install TapShare App to simulate the actual transmitter in projecting screens. Please refer to [2.1.2 Connecting Android mobile phones, tablets](#) for operation methods

Chapter 4 Troubleshooting

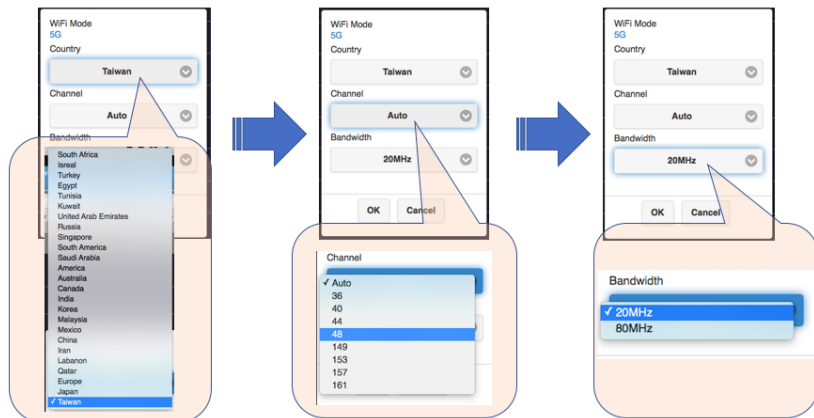
This Chapter describes questions frequently asked during the use of TapShare and suggests methods and solutions.

No.	Problems	Solutions
1	The TapShare transmitter is connected to the USB 2.0 port, but the system fails to start up (no light), or it powers on then off repeatedly.	TapShare transmitters require a USB with power delivery specification of 5 V 1 A. Connection to a USB 3.0 connection port or other USB power adapters is recommended, so that power supply is sufficient enough to start up a TapShare transmitter
2	When an Android mobile device is projecting to a 2-split screen or a 4-split screen, the screen of the Android mobile device in a vertical position is smaller than that of an iPhone. Why?	Currently, this is a known limitation and not the problem between a mobile device and TS20. This is normal. It's advised to place the mobile device in a horizontal position.
3	When an iPhone is connected to the TapShare transmitter, the time on the iPhone will be changed; the battery charge temporarily becomes 100%. Why?	This is normal for the current design. After the iOS cable is removed from the TapShare transmitter, it will return to the previous status.
4	TapShare transmitter cannot POWER ON when connecting to a laptop	<ol style="list-style-type: none">1. Please make sure if TapShare Pod is connected to a USB 3.0 port. If not, please reconnect to a USB 3.0 port2. If TapShare Pod is connected to a USB 3.0 port, please also connect your laptop to a power cord to have sufficient power
5	Cannot change image	Please make sure filenames meet the following requirements <ol style="list-style-type: none">1. 1920 x 1080 JPG file2. The file size is less than 3 MB

		<p>3. Filenames can be in English</p> <p>4. Filenames cannot contain spaces</p>
6	<p>The wired network icon on the TapShare Box page displays an exclamation mark (as shown in the following figure).</p> 	<p>When the symbol to the left appears, it indicates possible IP conflict or other network errors</p> <p>Please confirm whether the network is connected to the internet correctly</p> <p>Please confirm if the IP setting of TapShare Box is the same as other IP address settings within the Local Area Network (LAN)</p>
7	<p>The wireless network icon on the TapShare Box page displays an exclamation mark (as shown in the following figure).</p> 	<p>When the symbol to the left appears, it means possible Wi-Fi connection failure, invalid password and other errors</p> <p>Please try to connect the wireless network again</p>
8	<p>When there are more than two groups to more than three groups of TapShare in the same environment</p>	<p>Recommend that the wifi band be separated to avoid mutual interference.</p> <p>GO Admin Setting -> WIFI Channel setting, please refer the appendix 1</p>
9	<p>How to Improve TS20 Wi-Fi connection by changing the channel?</p>	<p>Basically the major reason of weak connection is that the Wi-Fi environment is too crowded with many devices. You can use an analysis tool to find a channel with fewer users firstly then change TapShare to the flexible channel by following these steps. Please refer the appendix 2</p>

Appendix 1

Go to the Admin Setting option -> select the WiFi Channel option -> Change the settings of each group of TS-20 in the following sequence.

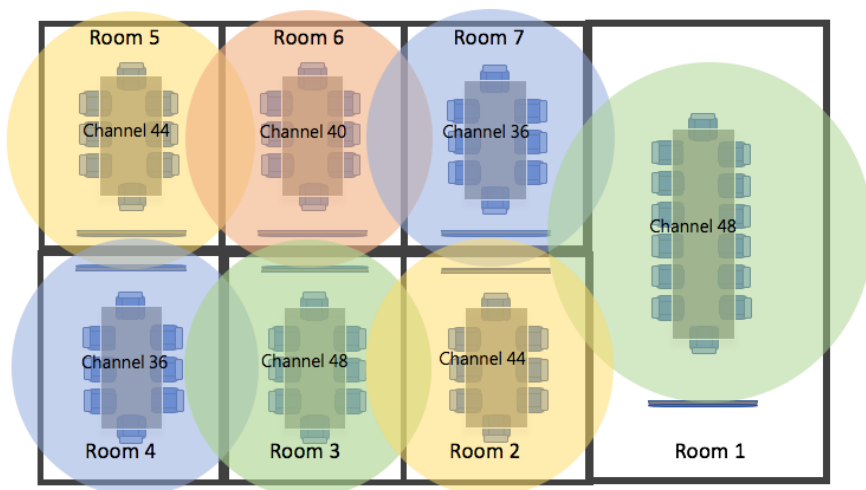


After select your country, the Channel will automatically shown the Channel support

For example Taiwan will support 36 / 40 / 44 / 48 / 149 / 153 / 157 and 161

Please select 20MHz for each TS-20

TS-20 wifi band recommended system diagram




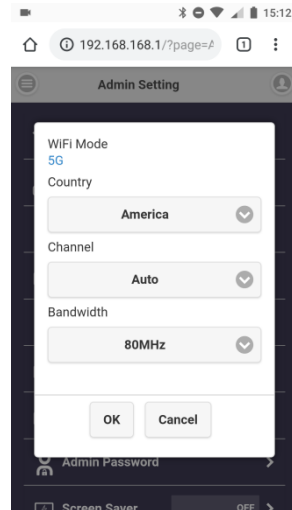
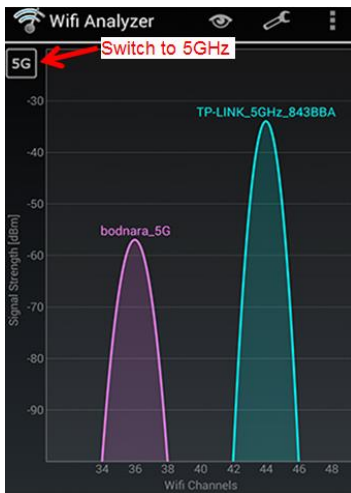
This picture is a reference. Channels used in each region will vary according to regional specifications.

Appendix 2

Using an analysis tool to find a channel with fewer users firstly then change TapShare to the flexible channel by following these steps.

For Android:

- Step 1** – Download  [Wifi Analyzer](#) (Android) from Google Play
- Step 2** – Please open the Wifi Analyzer and switch the bandwidth to 5GHz then you will see the 5G wireless networks that are competing for bandwidth in your area.



Now you can Change TapShare TS20's channel to the one which less or not used by other users.

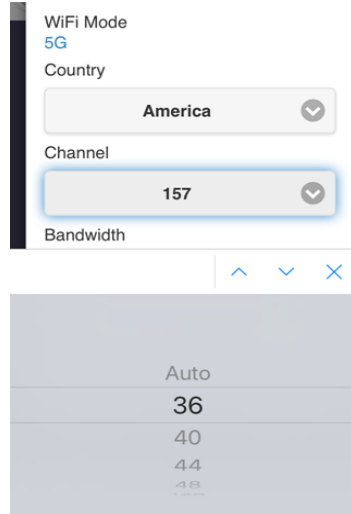
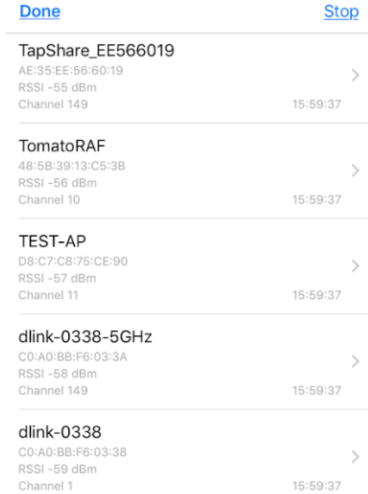
- Step 3** – Visit 192.168.168.1 to change TapShare's channel setting.
- Step 4** – Click "Menu" > "Admin Setting" > "Wi-Fi Channel" and pick a channel which has fewer users.

<Note>The default setting for the TapShare TS20 is "Auto".

For iOS:

- Step 1** – Download [AirPort Utility](#) from App Store.
- Step 2** – After downloading AirPort Utility from App Store, you can open the "Settings" on your iPhone or iPad and scroll down to AirPort Utility

section and Enable “Wi-Fi Scanner” by tapping the slide button.



Step 3 – Please turn on the AirPort Utility application and press “Wi-Fi Scan” to check the current Wi-Fi 5GHz environment.

Now you can change TapShare TS20’s channel to the one which less or not used by other users.

Step 4 – Visit 192.168.168.1 to change TapShare’s channel setting.

Step 5 – Click “Menu” > “Admin Setting” > “Wi-Fi Channel” and pick a channel which has fewer users.

<Note> The default setting for the TapShare TS20 is “Auto”.

※ For questions about the installation, please scan the following QR Code. A support person will be assigned to assist you.



SERVICE

Relevant law and regulation descriptions

FCC Statement

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 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.

RF exposure warning

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. & This device and its antenna(s) must not be co-located or conjunction with any other antenna or transmitter.

This Wireless LAN radio device has been evaluated under FCC Bulletin OET 65 and found compliant to the requirements as set forth in CFR 47 Sections 2.1091, 2.1093, and 15.247 (b) (4) addressing RF Exposure from radio frequency devices. The radiated output power of this Wireless LAN device is far below the FCC radio frequency exposure limits. Nevertheless, this device shall be used in such a manner that the potential for human contact during normal operation is minimized.

When nearby persons has to be kept to ensure RF exposure compliance, in order to comply with RF exposure limits established in the ANSI C95.1 standards, the distance between the antennas and the user should not be less than 20 cm.

Caution

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

■ EN55022 (CE Radiation) Warning

This product is intended for use in a commercial, industrial, or educational environment. It is not intended for residential use.

Operating Frequency	5180 MHz ~ 5240 MHz / 5745 MHz ~ 5805 MHz
Number of Channel	CH36~CH48, CH149~CH161
CHANNEL OF SPACING	10 M
RF OUTPUT POWER	13 dBm (max: 802.11a/CCK)
MODULATION TYPE	QAM/QPSK/BPSK/CCK/DSSS
DUTY CYCLE	10%
MODE OF OPERATION	DUPLEX
BIT RATE OF TRANSMISSION	6/9/12/18/24/36/48/54 Mbps
ANTENNA TYPE	Dipole antenna
ANTENNA GAIN	4 dBi
TEMPERATURE RANGE	0 ~ 40°C