

# VR Media Connection

About VR Media Connection Plug-in  
(As of May 22, 2019)

## Summary

By using the VR Media Connection plug-in, head-mounted displays (HMD) such as Oculus Go and PlayStation® VR can be connected wirelessly to a RICOH THETA, and the data stored inside THETA can be enjoyed in full 360 degrees. Besides HMDs, other DLNA-enabled devices with a Media Player can view 360-degree media wirelessly from THETA.

It normally takes a long time to transfer data, especially videos, to a device such as a smartphone. The advantage of using VR Media Connection plug-in is that one can view content immediately after shooting. With some HMD models, by utilizing mirroring (cast function), people who are not wearing the HMD can view the same content simultaneously using a smartphone or tablet.

## Action Mode

VR Media Connection can be used with two types of connections, "AP mode" and "CL mode".

\* Depending on which type of HMD / DLNA-enabled device is being used, AP Mode may not be able to be used.

### Access Point mode (AP-mode)



### Client mode (CL-mode)



## AP Mode

This mode is handy when there is no Wi-Fi environment. HMD or DLNA-enabled devices connect directly to THETA. Connect to THETA by setting the THETA's SSID and password in the network connection setting of HMD or DLNA-enabled device.

## CL Mode

In this mode, THETA and HMD or DLNA-enabled devices are connected to the same Wi-Fi network. By connecting multiple THETAs running VR Media Connection on the same Wi-Fi network, it is possible to browse the media on multiple THETAs from one HMD or DLNA-enabled device. Conversely, a single THETA can be browsed from multiple HMD/DLNA-enabled devices simultaneously.

## Operating Environment Used in This Guide

- RICOH THETA V firmware above 3.00.1
- VR Media Connection plug-in version above 1.0.0
- The following HDM/DLNA-enabled devices are being tested, but there is no guarantee of their operation at this time
  - Oculus Go
  - Oculus Quest
  - PlayStation® 4 Pro, PlayStation® VR
  - EPSON MOVERIO BT-300 (using TV Suite for MOVERIO (free version))

- Lenovo Mirage Solo (using SKYBOX VR Video Player)
- VLC media player (Windows version / Mac version)

## How to Use THETA Plug-ins

### Preparation

- Install VR Media Connection plug-in in THETA

Refer to the plug-in installation how-to

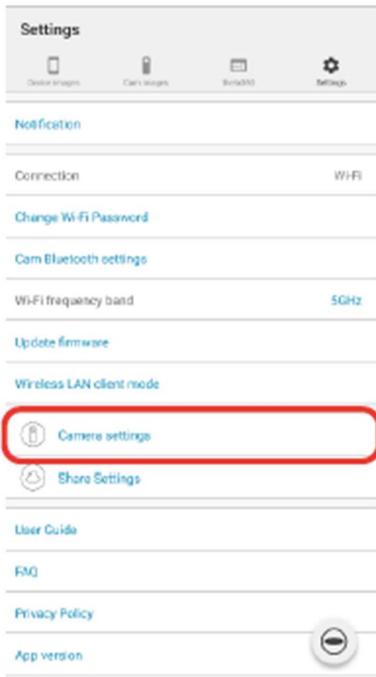
([https://theta360.com/en/ricoh\\_plugins/](https://theta360.com/en/ricoh_plugins/)) and install VR Media Connection plug-in from the download link below.

- VR Media Connection download link:

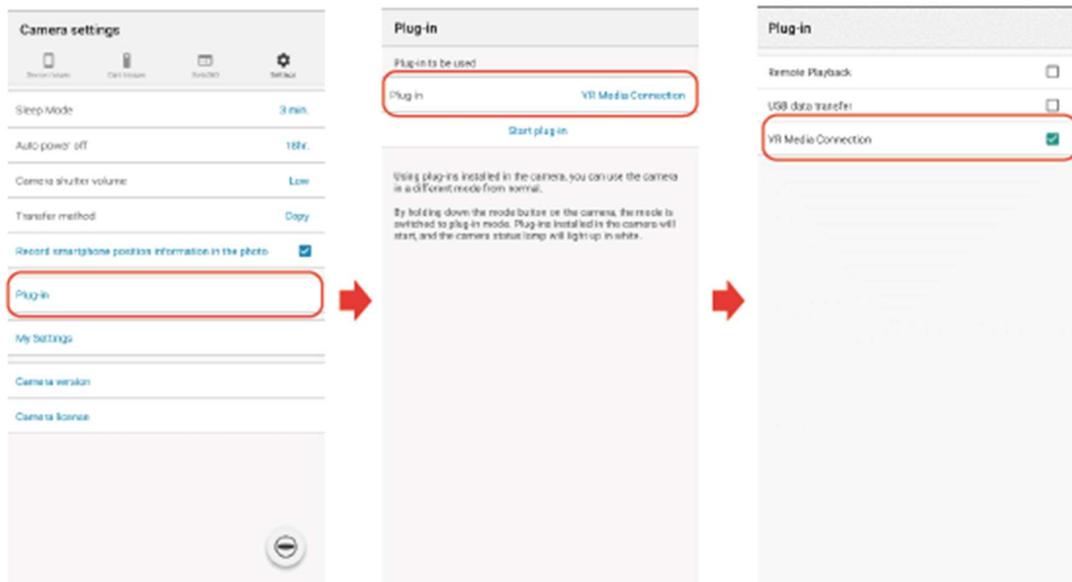
<https://pluginstore.theta360.com/plugins/com.theta360.vrmediaconnection/>

- Set VR Media Connection plug-in as active plug-in

1. Start up THETA and press the Wi-Fi button for AP Mode. The wireless icon will blink blue.
2. Set THETA's SSID and password in the Wi-Fi connection settings on a smartphone, and connect THETA to the smartphone. When the smartphone is connected to THETA, the wireless icon will change from blinking to lit.
3. Open the RICOH THETA smartphone app and go to Settings.
4. Tap Camera Settings.



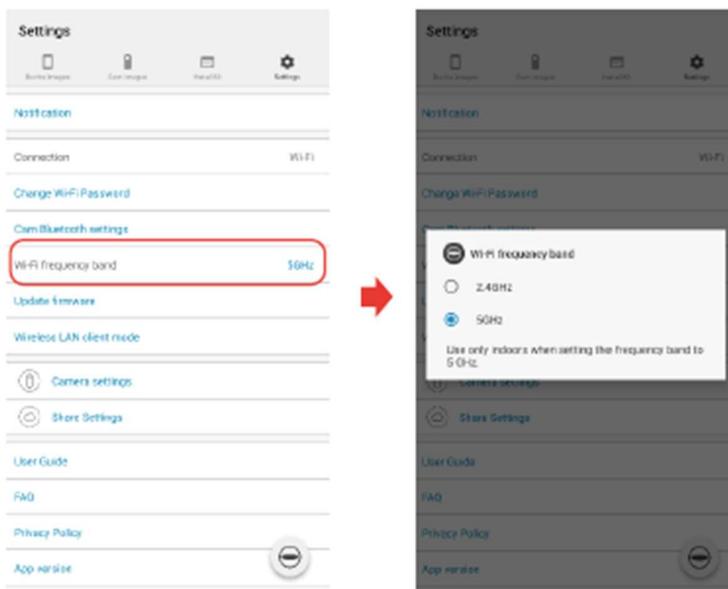
5. Tap Plug-in and confirm that VR Media Connection is the active plug-in. If VR Media Connection is not active, tap Plug-in, then select VR Media Connection from installed plug-in list.



# Setting the Wi-Fi Frequency Band of THETA

When using the VR Media Connection plug-in in AP Mode, setting THETA Wi-Fi frequency band to 5GHz is recommended. However, when setting the frequency band to 5GHz, use it indoors only. Different countries have different laws.

1. Connect THETA and smartphone.
2. Open RICOH THETA smartphone app and go to Settings.
3. Tap Wi-Fi frequency band and select 5GHz.



# Setting Wireless LAN Client Mode

These are the settings for Wi-Fi when connecting using CL Mode. It is recommended to connect using the 5GHz frequency band.

Reference video: <https://youtu.be/tkqyBNOWWIY>

1. Connect THETA and smartphone.
2. Open RICOH THETA smartphone app and go to Settings.
3. Tap Wireless LAN Client Mode.
4. Set the Wi-Fi SSID and password for (a) access point setting and (b) authentication setting.

# How to Use

## Steps for AP Mode



1. Startup THETA, press the Wi-Fi button, and switch to AP Mode. Wireless icon will blink blue.
2. Set THETA SSID and password from the Wi-Fi connection Settings on the HMD/DLNA-enabled device. The wireless icon will change from blinking to lit confirming THETA has been connected.
3. Press the Mode button on the side of THETA for 2 seconds and start up VR Media Connection.
4. Media on THETA can be viewed with the Media Player on the HMD/DLNA-enabled device.

## Steps for CL Mode

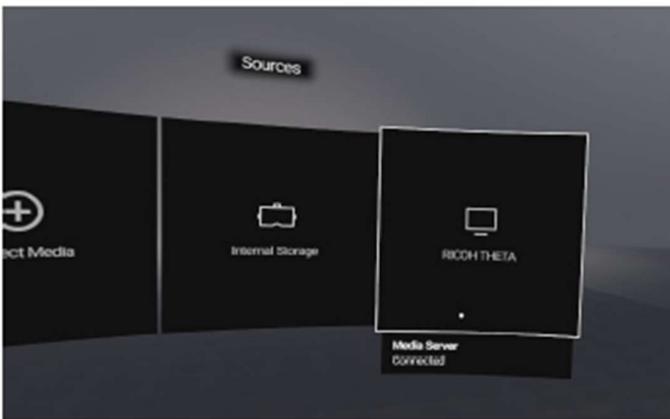


1. Startup THETA, press the Wi-Fi button, and switch to CL Mode. Wireless icon will blink green. The wireless icon will change from blinking to lit confirming THETA has been connected to Wi-Fi.
2. With HMD/DLNA-enabled device's Wi-Fi connection setting, set SSID and password, which are the same as THETA's.
3. Press the Mode button on the side of THETA for 2 seconds and start up VR Media Connection.
4. Media on THETA can be viewed with the Media Player on the HMD/DLNA-enabled device.

## Operating Method on the Side of HMD/DLNA-Enabled Device

1. When VR Media Connection is started up, RICOH THETA will be displayed in the Media Player on the HMD/DLNA-enabled device.

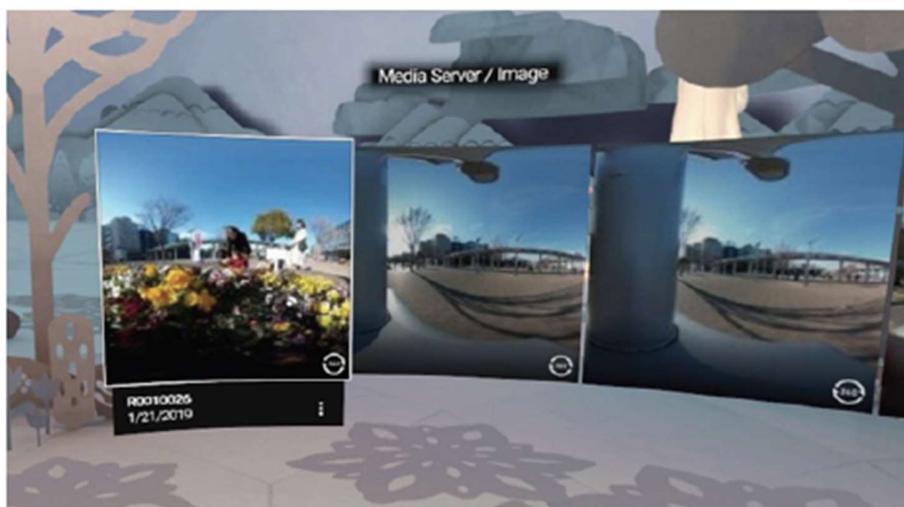
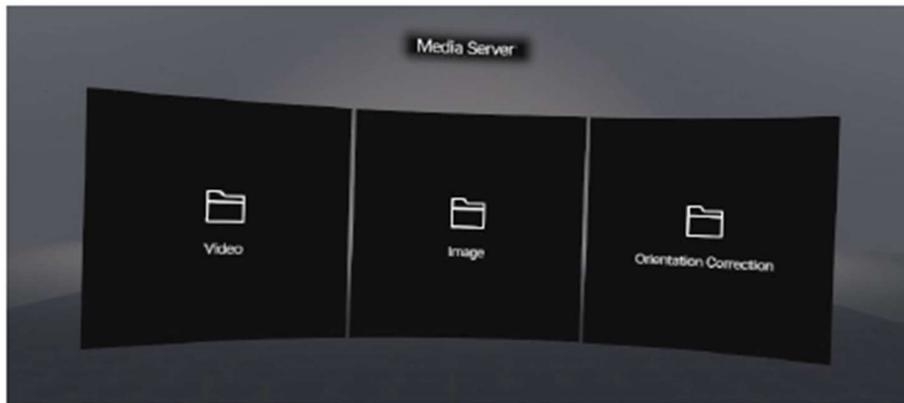
Example: In Oculus Go, RICOH THETA will be displayed in the Oculus Gallery app.



2. When RICOH THETA is selected, Video, Image, and Orientation Correction folders are displayed. When each folder is selected, a list of data will be displayed.

\* When using the Orientation Correction folder, details are explained below in the Execute / Browse Video Conversion for Orientation Correction / Stitching Processing section.

Example: Below are Oculus Go display screens.



3. Data can be browsed by choosing thumbnails.

4. Depending on the DLNA-enabled device, data can be downloaded.

\* Downloading is not possible while using AP Mode in Oculus Go.

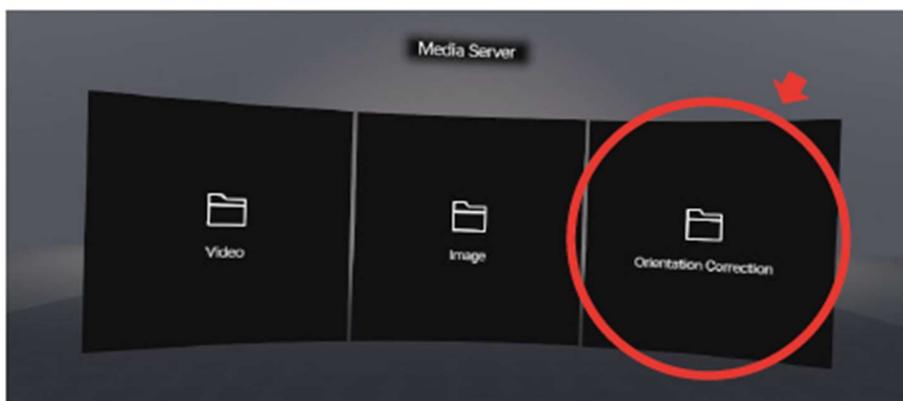


## Execute / Browse Video Conversion for Orientation Correction / Stitching Processing

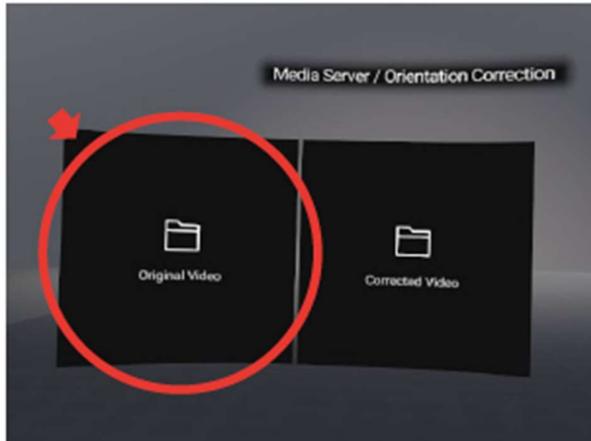
When RICOH THETA is selected in Media Player on an HMD/DLNA-enabled device, Video, Image, and Orientation Correction folders are displayed.

Although the list of videos is displayed under the Video folder, orientation has not been corrected yet. Also, Dual Fisheye formatted videos (video before stitching has been completed) are not displayed on the list. In order to browse for data with orientation correction or stitching already finished, the following technique is used.

1. From the Media Player on the HMD/DLNA-enabled device select RICOH THETA, then select the Orientation Correction folder.



2. Select Original Video folder.

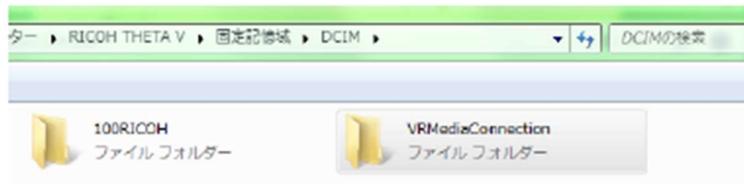


3. From thumbnails, select which video to correct orientation or to process stitching.
4. The conversion process will take place. "Processing..." is displayed during conversion. When finished, "Ready for watching..." will be displayed and THETA will sound the end of conversion process.

\* The conversion process is not performed if the remaining storage capacity is low or if the THETA battery level is low.

5. Return to the RICOH THETA level, and select the Corrected Video folder in the Orientation Correction folder again.
6. Select thumbnails and browse.

\* A folder named VRMediaConnection will be created, and converted videos will be stored in it.



\* Depending on the HMD / DLNA-enabled device, converted videos may not replay normally or replay may be slow.

## Delete Orientation Correction / Stitching Processing of Converted Videos and Disable Video Conversion

If video conversion is enabled, disable it with following steps.

1. Press shutter button for 2 seconds until you hear an audio confirmation from THETA.
2. The VRMediaConnection folder and data under it will be deleted.
3. The Orientation Correction folder and data under it will be deleted from the Media Player on the HMD/DLNA-enabled device.

## Activate Video Conversion Including Orientation Correction and Stitching Processing

If the video function is disabled, enable it with following steps.

1. Press shutter button for 2 seconds until you hear an audio confirmation from THETA.
2. From the Media Player on the HMD/DLNA-enabled device, confirm that the Orientation Correction folder is once again displayed.

## Ending the Plug-in

1. Press the Mode button for 2 seconds and the plug-in will end.

## Mirroring Operation Method

The data displayed in the HMD can be mirrored to such devices as smartphones, depending on the model of HMD used.

\* Mirroring operation method using Oculus Go (as of May 2019):

<https://support.oculus.com/1053142614872870/>

### IMPORTANT POINT

Although the orientation correction of a video reduces the shaking of an image, please be careful of nausea when viewing content with an HMD. It is recommended that, whenever possible, THETA be fixed when shooting a video to eliminate the need for orientation correction.