# Connecting a RICOH THETA Camera to Your Computer or Mobile Phone

Camera Connection Setup

Connect RICOH THETA to computer with Wi-Fi in access point (AP) mode. The THETA will be at 192.168.1.1.

Ideally, you have two network interfaces. For example, an inexpensive Wi-Fi USB adapter will work fine.

The network interface for your Internet router or hotspot must not be a 192.168.1.1 or will interfere with the THETA IP address.
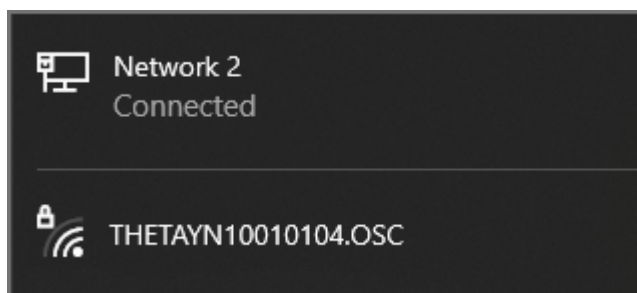
The password is the numbers only. In the example above, the password is 10010104.

If you cannot connect your computer to the camera, refer to the troubleshooting section.
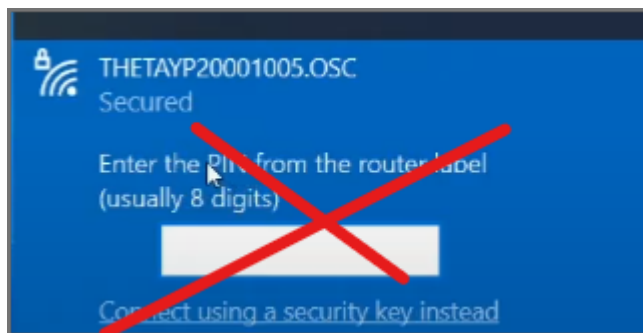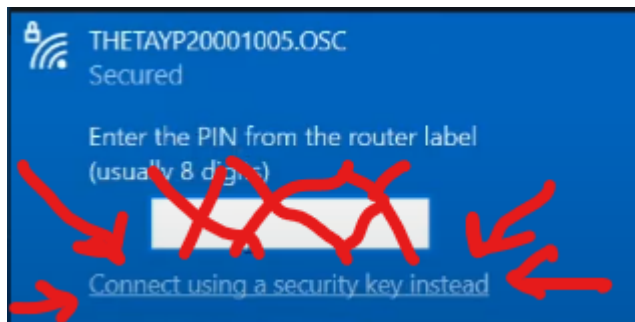
Troubleshooting

Cannot Connect on Windows

See this video for more information.

[Connecting to RICOH THETA cameras in Access Point mode](https://oppkey.github.io/oppkey_theta_atk/)

Use a security key, not the PIN.

Click on the link that says, *Connect using a security key instead*.

No connection to camera

```
> .\opptheta_windows_0.3.0.exe info
***********************
Command failed.  First check if the camera is
connected with Wi-Fi.  Try pinging the camera.
In access point mode, the camera is always at 192.168.1.1
verify that you do not have your home or office router on that same
```

Test with ping.

```
> ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.179: Destination host unreachable.
Reply from 192.168.1.179: Destination host unreachable.

Ping statistics for 192.168.1.1:
    Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
Control-C
```

If ping fails, the camera is likely not connected to your computer.

If the camera is connected, you will see a response as follows:

```
> ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=4ms TTL=64
Reply from 192.168.1.1: bytes=32 time=3ms TTL=64
Reply from 192.168.1.1: bytes=32 time=2ms TTL=64
Reply from 192.168.1.1: bytes=32 time=3ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 4ms, Average = 3ms
PS C:\Users\craig\Documents\Development\ricoh\oppkey_theta>
```

If the camera is connected and you cannot run `./opptheta info` then test the connection with a web browser to 'http://192.168.1.1/osc/info'.

If you are still not getting a response from `opptheta`, then try curl.

```
$ curl http://192.168.1.1/osc/info
{"api":
["/osc/info","/osc/state","/osc/checkForUpdates","/osc/commands/execute","/osc/com
mands/status"],"apiLevel":
[2],"_bluetoothMacAddress":"58:38:79:03:0C:47","endpoints":
{"httpPort":80,"httpUpdatesPort":80},"firmwareVersion":"2.01.0","gps":false,"gyro"
:true,"manufacturer":"RICOH","model":"RICOH THETA
Z1","serialNumber":"10010104","supportUrl":"https://theta360.com/en/support/","upt
ime":9673,"_wlanMacAddress":"58:38:79:03:17:06"}
```

Mac OS

macOS provides security for third-party developer apps. Depending on your settings, you made need to allow opptheta to run on your system.

Download opptheta. Use Terminal to run opptheta from the command line.

Use `./opptheta --help` or `./opptheta command --help` to see options.

If you have a permissions issue, use

`chmod +x opptheta_mac_0.3.0`

If macOS blocks usage, go to System Preferences, Security & Privacy. You may need to click the lock icon to make changes. In the section under "Allow apps downloaded from" you should see "'opptheta_mac_0.3.0' was blocked from use because it is not from an identified developer." Click the Allow Anyway button.

Allow apps downloaded from:

○ App Store

◉ App Store and identified developers

"opptheta_mac_0.3.0" was blocked from use because it is not from an identified developer.

Allow Anyway