

## Remote Camera Tool

### Network Configuration File User's Manual

#### *Index*

- 1. About Network Configuration File*
- 2. Basic usage of Network Configuration File*
- 3. Format of Network Configuration File*
- 4. Launch Remote Camera Tool with loading a Network Configuration File*
- 5. Refresh command on Network Configuration File*
- 6. Changing shortcut key, Group ID and camera name on Device List Dialog*
- 7. Error List*

#### 1. About Network Configuration File

Normally Remote Camera Tool searches all available cameras on the local network and lists them on the device list when launching the software. And you need to input the IP address to connect to the cameras that are not found because of segmented networks. By using "Network Configuration File" feature you can make a IP addresses list of the cameras before you use Remote Camera Tool. Using this file, all cameras in the list are listed as the target devices of Remote Camera Tool. You don't have to input IP addresses one by one if the camera is not found, and connection status of the cameras is checked automatically when launching Remote Camera Tool. Also devices that are NOT listed in the file are not displayed on the device list. If all camera's IP addresses are fixed, this feature would improve your efficiency when launching your remote camera system.

This document explains the usage and file format of this Network Configuration File.

#### 2. Basic usage of Network Configuration File

Network Configuration File is a text file that enumerates all IP addresses of the cameras you use. The file name is arbitrary, and write one IP address in one line. To use your Network Configuration File, specify the full path name of the file as the command line parameter with specifying "-f".

Windows

```
> RemoteCameraTool.exe -f [Full path name of Network Configuration File]
```

Mac

> open RemoteCameraTool.app --args -f [Full path name of Network Configuration File]

For example, Network Configuration File "rct.conf" is stored in the user folder "RCT\_Taro",

*Ex.1) Launch Remote Camera Tool with Network Configuration File Windows*

> RemoteCameraTool.exe -f c:¥Users¥RCT\_Taro¥rct.conf

Mac

> open RemoteCameraToo.app --args -f /Users/RCT\_Taro/rct.conf

The most simple example of Network Configuration File is, writing only one IP address at the beginning of each line.

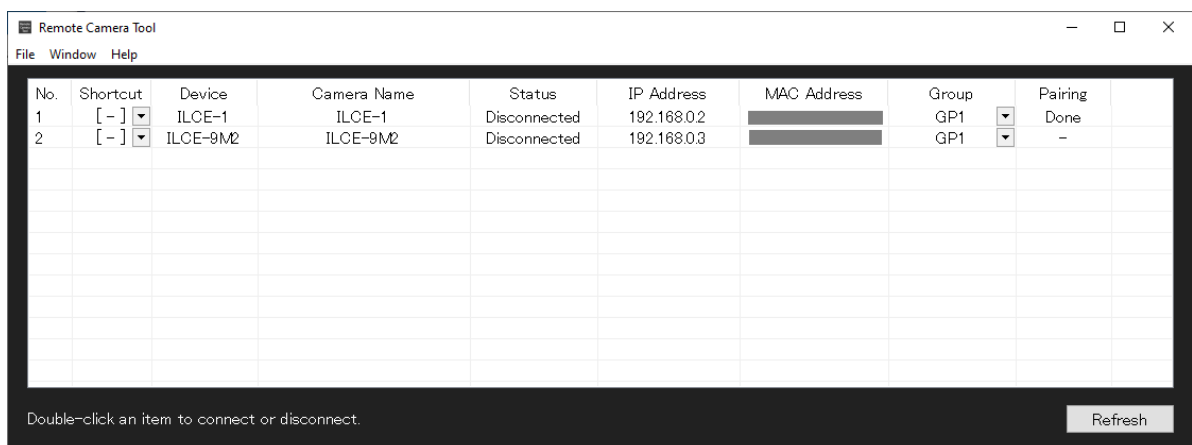
*Ex.2) Network Configuration File content*

192.168.0.2

192.168.0.3

At this Ex.2, Remote Camera Tool shows 2 cameras that have 192.168.0.2 and 192.168.0.3 as their IP addresses. Remote Camera Tool checks the connection status of those cameras and show the status of "Connected", "Disconnected" or "Unidentified". "Connected" means the camera is connected with Remote Camera Tool, "Disconnected" means the camera is connected on the network but not connected with Remote Camera Tool, and "Unidentified" means the camera is not detected at the specified IP address.

Fig.1)



In this Network Configuration File, you can specify the shortcut key assign, Group ID assign and the camera name. Those parameters can be omitted, and default values are assigned in this case.

See next chapter to understand the format of Network Configuration File.

You can load a Network Configuration File by specifying it from the Remote Camera Tool menu.

1. Click File from the menu bar and click Network Configuration File Settings.
2. A setting screen appears. Select "List cameras referring to Network Configuration File", click [...] button, select a Network Configuration File you created and then click OK.

The above steps cause Remote Camera Tool to load a Network Configuration File when starting.

The app will also load the Network Configuration File when starting next time. To start it without loading the Network Configuration File, select "List cameras within the same network" on Network Configuration File Settings and click OK.

### 3. Format of Network Configuration File

#### 3.1.Character code and line feed

Network Configuration File must be a UTF-8 text file without BOM (before RCT4.1), after RCT4.2 both without BOM and with BOM are available. UTF-16 is not available. And all line feed code of CR, CRLF, LF are acceptable. Blank line is ignored.

#### 3.2.Comments

In a line, string after character '#' until line feed is ignored.

#### 3.3.Format of a line

Write camera IP address (v4) at the beginning of the line. (ex. "192.168.0.2")

One IP address is necessary and can't write plural IPs in one line. If you want to specify only IP address, feed the line just after the IP address.

Each line shows one camera, and the parameters can be described after the IP address. Before RCT4.1, you can use a comma ',' as the delimiter. After RCT4.2, you can use a comma ',' or a tab as the delimiter of each parameter. But you can not use comma and tab together in a Network Configuration File. The first detected delimiter is recognized as the delimiter of the file. A comma is used in this users manual, but you can use a tab similarly on RCT4.2 or later.

After IP address, write short cut key assignment, separating ','. It must be one of 1,2,3,...,9,0 or q,w,e,...,o,p. This can be omitted. In case of omission, default shortcut key is assigned.

After shortcut key assignment, write Group ID. It must be one of 1,2,3,4,5. Group ID can be omitted. In case of omission, default Group ID is assigned.

After the Group ID, write camera name. Before RCT4.1, the string must be enclosed in double quotes, or after RCT4.2 you can use the camera name

enclosing in double quotes or only the camera name without double quotes enclosure. Without double quotes enclosure, the string until the end of the line or until the comment descriptor (#) is used as the camera name. If the string is not written in UTF-8, an error is reported. Camera name can be omitted, and default camera name is used in case of omission.

### 3.4.Examples

Ex.3)

*192.168.0.2,1,1,"Camera No.1"*

This example specifies the camera of 192.168.0.2, assign short cut key 1, Group ID 1, and camera name "Camera No.1".

Ex.4)

*192.168.0.2,1*

This example specifies only shortcut key 1 to the camera 192.168.0.2. Default Group ID and default camera name are used.

Ex.5)

*192.168.0.2,,2*

This example specifies only Group ID 2 to the camera 192.168.0.2. Default shortcut key and default camera name are used.

Ex.6)

*192.168.0.2,,, "Left"*

This example specifies only the camera name to the camera of 192.168.0.2. Default shortcut key and default Group ID are used.

Ex.7)

*192.168.0.2,q,2,"Center" # Center camera*

String after comment identifier '#' is ignored.

Ex.8)

*# this line is comment.*

*192.168.100.2,1,1 #IP=192.168.100.2, shortcut=1, Group=1*

*192.168.100.3,2,1 #IP=192.168.100.3, shortcut=2, Group=1*

*192.168.100.4,5,2 #IP=192.168.100.4, shortcut=5, Group=2*

*192.168.100.5,6,2 #IP=192.168.100.5, shortcut=6, Group=2*

This is an example to list multiple cameras.

## 4. Launch Remote Camera Tool with loading a Network Configuration File

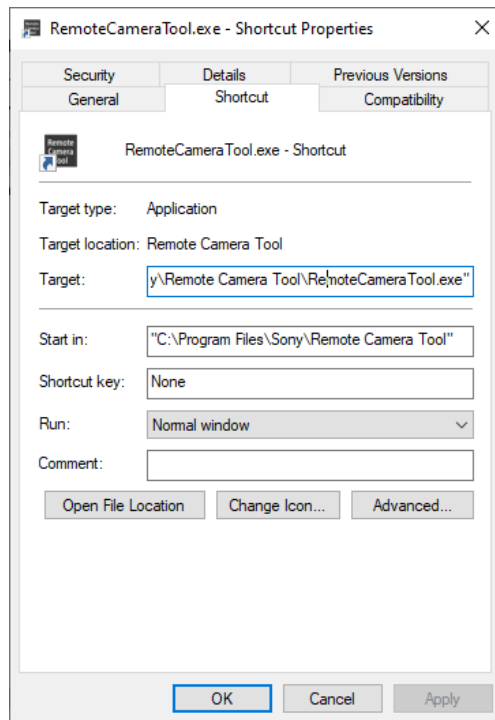
### 4.1.Launch from command line (Windows, Mac)

Launch Remote Camera Tool using command line parameter "-f" with the Network Configuration File path. See Ex.1.

#### 4.2. Write Network Configuration File parameter in the shortcut file (Windows)

On Windows, you can create a shortcut file to launch using a specified Network Configuration File.

Fig.2)



- 1) Right click on the installed RemoteCameraTool.exe and run "Create shortcut".
- 2) Open the property of the created shortcut file.
- 3) Add a string "-f [full path of the Network Configuration File]" after the string of "RemoteCameraTool.exe" in the Target.
- 4) click [OK].

You double clicking this shortcut file, Remote Camera Tool launches with loading the specified Network Configuration File.

#### 4.3. Create an application script to launch Remote Camera Tool with a Network Configuration File, using Automator (Mac)

On Mac, you can create an application script to launch Remote Camera Tool with a specific Network Configuration File using MacOS application "Automator".

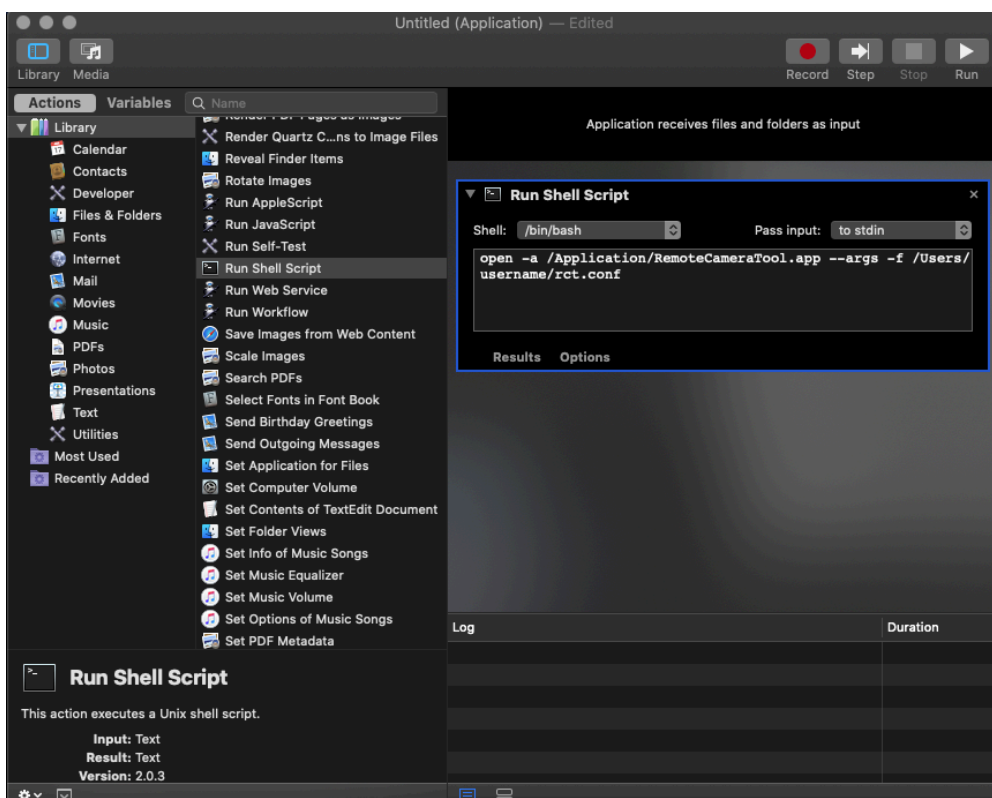
- 1) Launch Automator.
- 2) Create an Application.

Fig.3)



- 3) Select "Run Shell Script" from Action list.
- 4) Input following strings as the Shell Script to run.  
"open -a /Application/RemoteCameraTool.app --args -f [Full file path of Network Configuration File]"

Fig.4)



5) Save the script as a proper name.app.

Executing the created .app, Remote Camera Tool launches with loading the specified Network Configuration File.

#### 5. Refresh command on Network Configuration File

Launching Remote Camera Tool with Network Configuration File, Refresh command action on Device List Dialog is different from that without Network Configuration File. Although Without Network Configuration File, Remote Camera Tool searches the cameras on the local network and update their status, with Network Configuration File, it checks the camera connection status on the list and update the status to "Connected", "Disconnected" and "Unidentified".

If you want to connect to a new camera, please add the Ip address of the camera into the Network Configuration File and restart Remote Camera Tool.

#### 6. Changing shortcut key, Group ID and camera name on Device List Dialog

When you change the short cut key, Group ID or camera name on Device List Dialog with Network Configuration File environment, those changes are not reflected into the Network Configuration File. To preserve those changes, please update the Network Configuration File and restart Remote Camera Tool.

#### 7. Error List

Code	Error Case	Description
<b>Unknown Error</b>		
1	Unknown error	Reason of the error is unknown. (For example, there is no other error but RCT couldn't get the device list from the network configuration file.)
<b>File IO Error</b>		
1001	Invalid file path	Path is empty or incomplete.
1002	File does not exist	File not found.
1003	Invalid file type	File is not text file.
1004	Can not open file	Can not access the file or read error.
1005	File is empty	File has no input (not even a white space).
1007	File does not have any valid input	File does not have any valid information, it only has white spaces or comments.
<b>Network Configuration File: IP Address/Port Number Error</b>		
2001	Invalid IP address	Could not parse a valid IP address. (For example, 192..10.)
2002	Duplicate IP address	Same IP address is found in multiple lines.
2003	Invalid Port number	Could not find 2 valid port numbers.

2004	Duplicate Port number	Port numbers should be unique, both port numbers of a camera is same or same IP address and port number is found for multiple cameras.
<b>Network Configuration File: Other Option Description Error</b>		
3001	Invalid shortcut key	Input doesn't match the predefined shortcut keys.
3002	Duplicate shortcut key	Same shortcut key is found for multiple cameras.
3003	Invalid Group	Input doesn't match with predefined group numbers.
3005	Camera name is too long	Inputed Camera name is too long.
<b>defaultsettings.conf: Setting Error</b>		
4001	Invalid default settings	If input line doesn't match the defined format (<Key>=<value>).
4002	Invalid setting key	If the key of the setting is invalid. (i.e. The key doesn't match the predefined keys.)
4003	Invalid setting value	If the value of the setting is invalid. (For example, value of DefaultLiveViewProtocol is not "ptpip" or "http".)
4004	Duplicate setting	If the key of a setting is defined multiple times in the file.