
Webcam video capture and streaming tool

VCapStream Ver.2.00

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1 Overview

This software provides the following features:

- Capture and display images from a web camera connected to a PC.
- Save the captured video and audio to a file.
- Play the saved video file.
- Transfer live images captured from a webcam to this app running on another PC.
- Receive and display live images transferred from this app running on another PC.
- Implemented videophone function that sends and receives images and audio in both directions.

2 Operating environment

Windows 10, Windows 11

3 Tools used

This software uses the following NuGet packages to implement functions for capturing and playing camera images, capturing and playing audio, and saving and playing video files.

- Accord.Video.DirectShow (Accord.NET-Framework) By: Accord.NET
Used for capturing images from a camera, obtaining camera information, and setting camera settings.
- Accord.Video.FFMPEG (Accord.NET-Framework) By: Accord.NET
Used for saving and playing video files.
The license terms for Accord.NET-Framework are described in Accord.NET-Framework-license.txt in the installation folder.
- NAudio By: Mark Heath & Contributors
Used for audio input from a microphone, audio output to speakers, and saving and playing audio files.
The NAudio license terms are described in NAudio-license.txt in the installation folder.
- FFmpeg (Used as an external program if installed)
Used to combine audio (wav) and video (mp4) files when saving a video, and to separate audio files from video files when playing a video.

4 File structure

When you unzip the archive, the following files will be generated:

setup.exe	setup program
VcapStream_Setup.msi	installer

5 Install

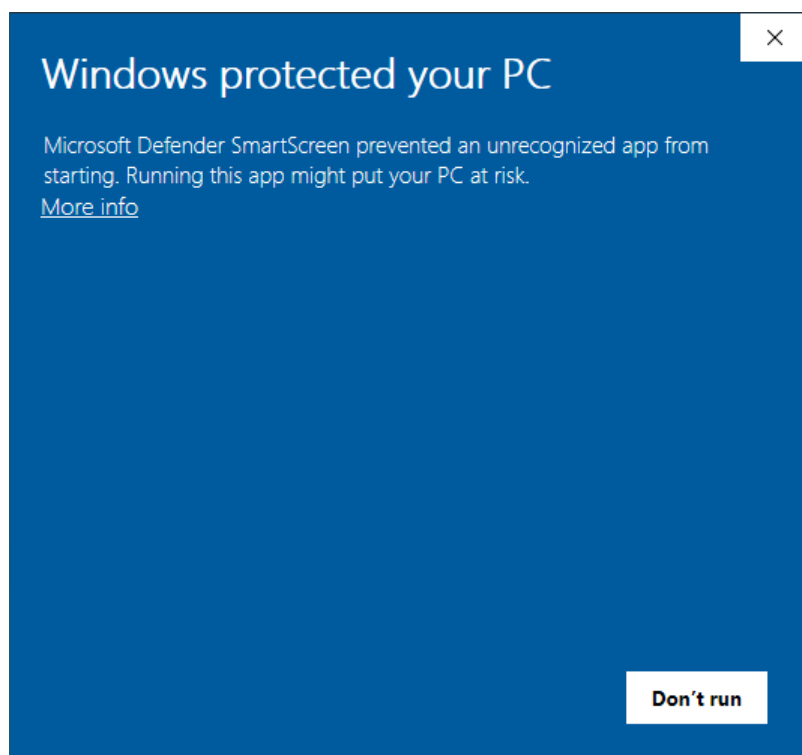
5.1 Installation of the Software

This software uses .NET Framework 4.7.2, so the necessary files will be downloaded from the .NET Framework download site during installation.

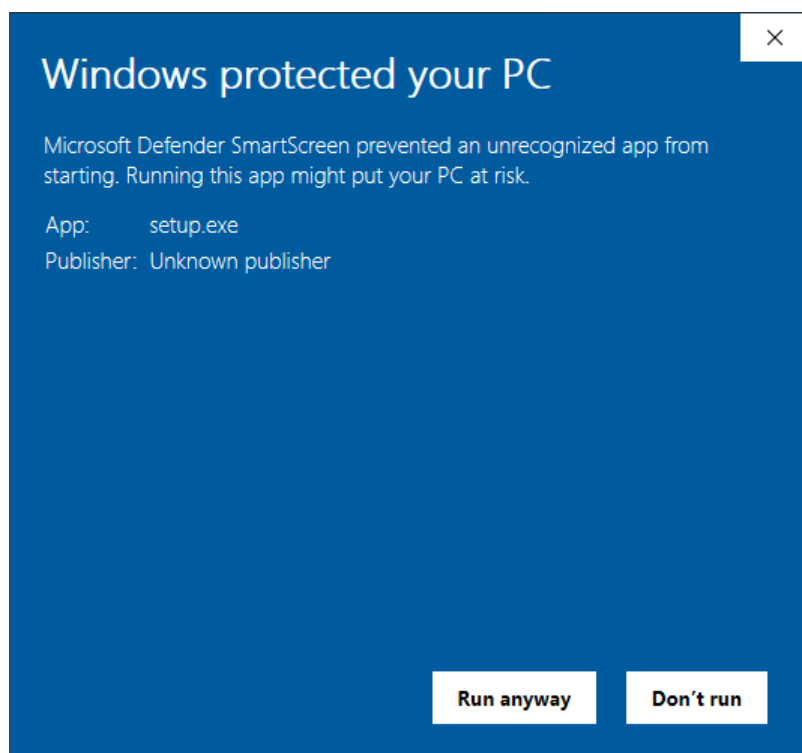
Therefore, when installing, please make sure you are in an environment with an internet connection and run setup.exe beforehand. (This does not apply if .NET Framework 4.7.2 is already installed.)

To begin the installation, unzip the software archive and run setup.exe.

Depending on the PC settings when you run Setup.exe, the warning below may be displayed.

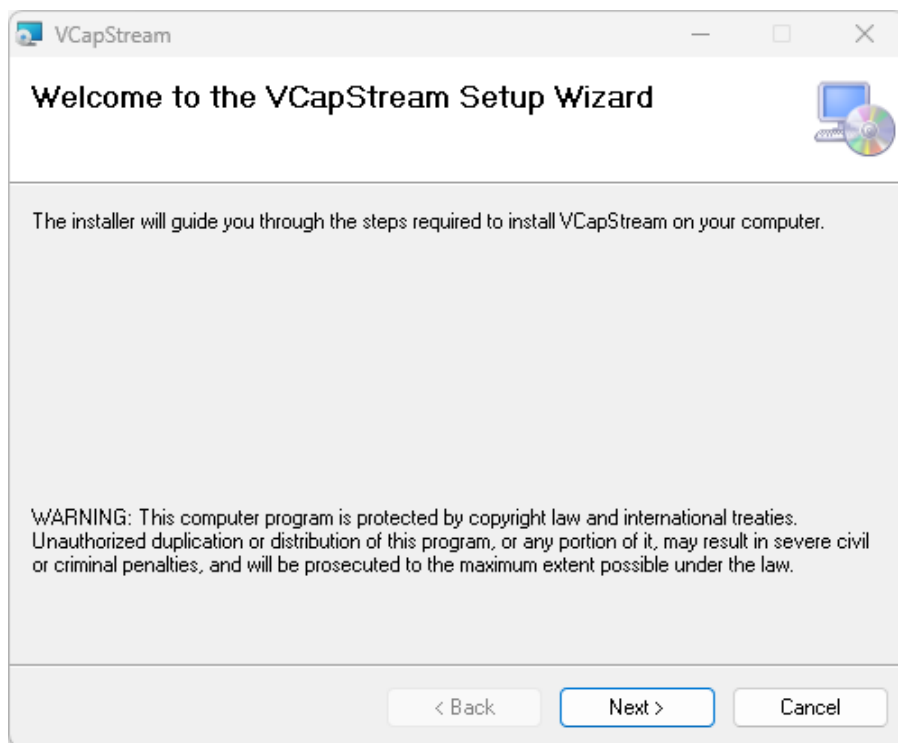


In that case, if you click on the "Detailed Information" section, the Run button will appear as shown below.

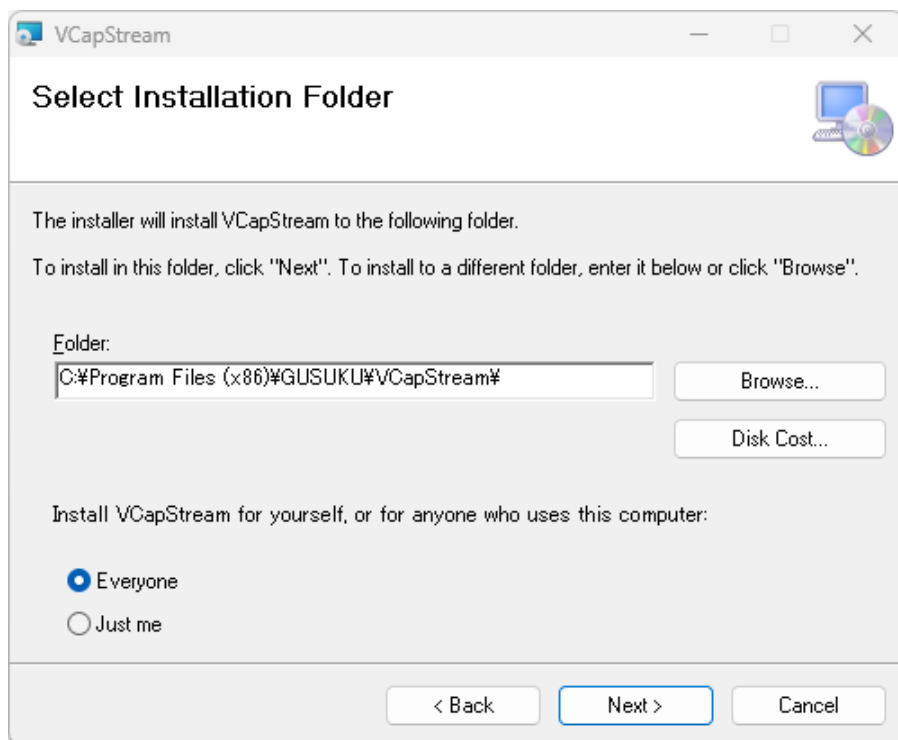


Click the Run button to launch the installer.

When the installer starts, the setup wizard window shown below will appear. Follow the instructions to proceed with the installation.

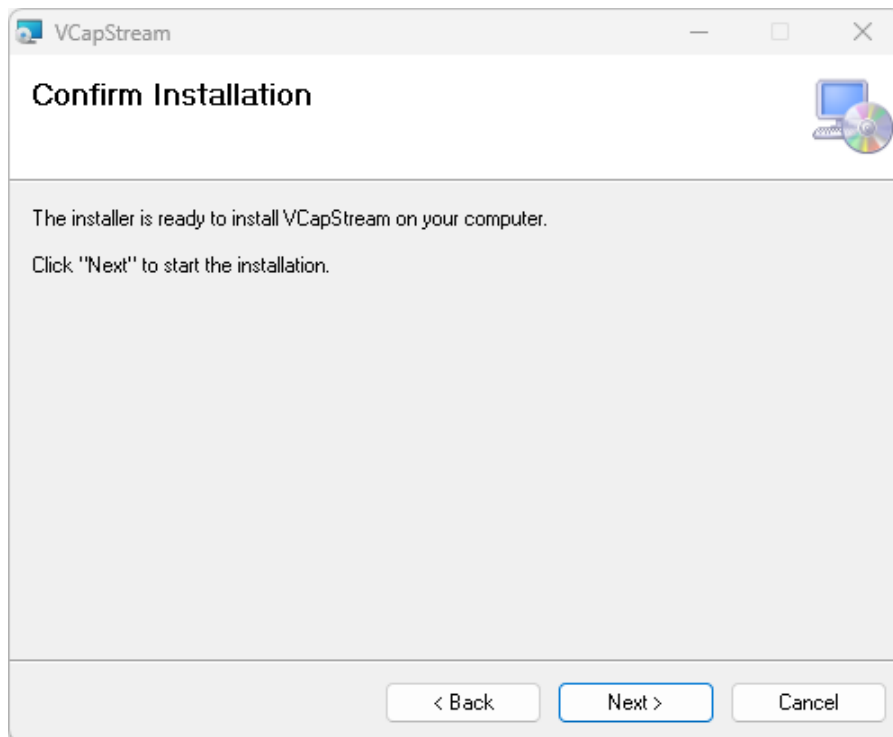


When you press the "Next" button, the "Select Installation Folder" window shown below will appear.

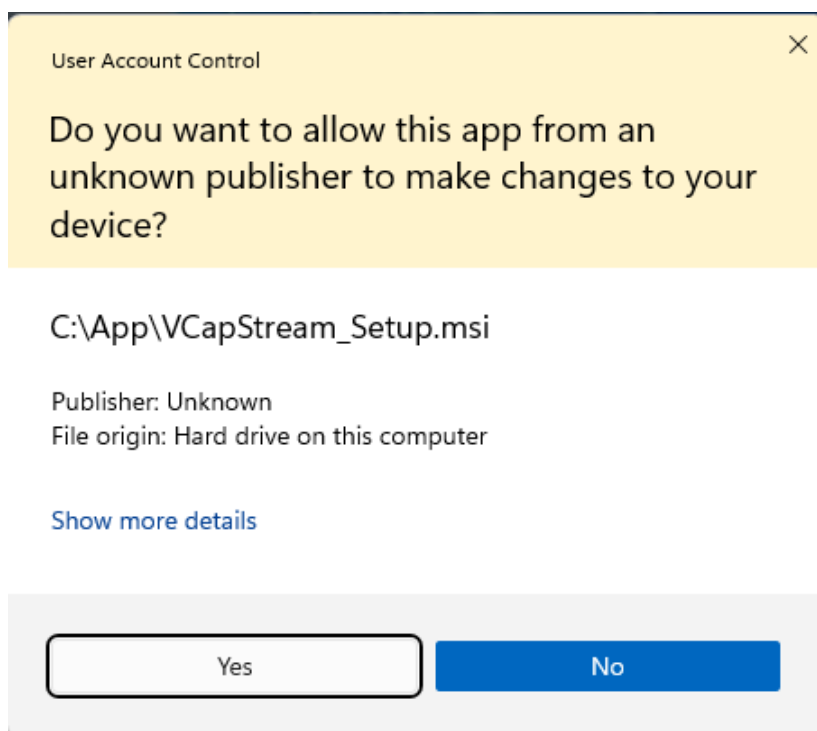


Once you have selected the installation folder and target users, click the "Next" button to proceed.

When you proceed, the following window will appear, so click the "Next" button to proceed.

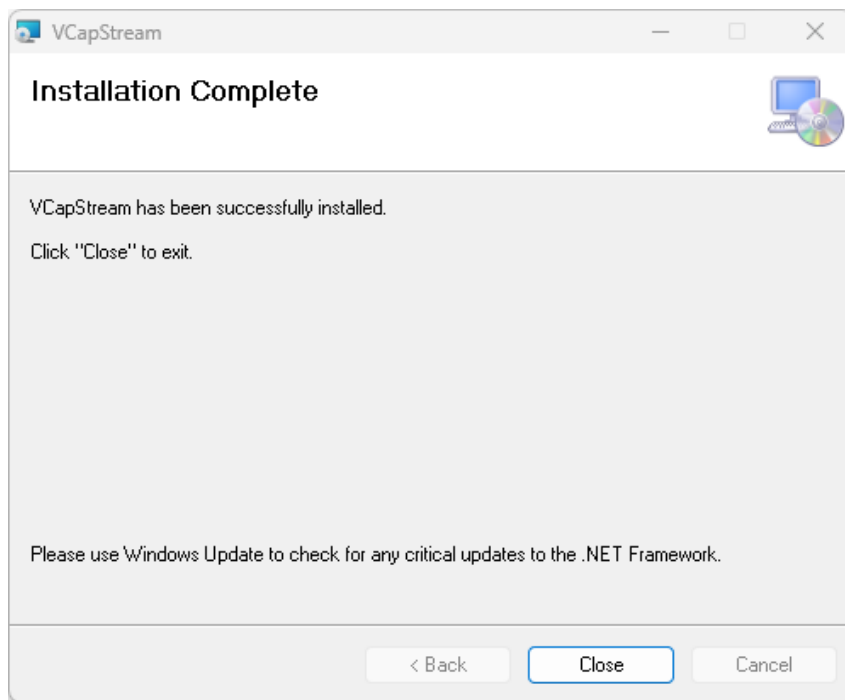


At this time, the warning below may be displayed, but click "Yes" to proceed.

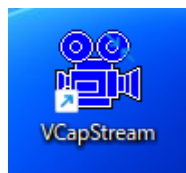


Clicking "No" will cancel the installation.

When the installation is complete, the following window will be displayed. Click the "Close" button to finish.



A VCapStream shortcut will be created on your desktop as shown below.



When registering to the Start menu, a VCapStream shortcut may be placed in All Programs, or a folder called GUSUKU may be created and a VCapStream shortcut may be placed in it.



Help files are available in Japanese and English as PDF files.

Help_en.pdf	English help file
Help_ja.pdf	Japanese help file

A brief program description is provided in the Readme file below.

Readme_en.txt	English version
Readme_ja.txt	Japanese version

5.2 Installing Ffmpeg

FFmpeg is not included in this program's installer.

To install FFmpeg, open a command prompt as an administrator and run the following command:

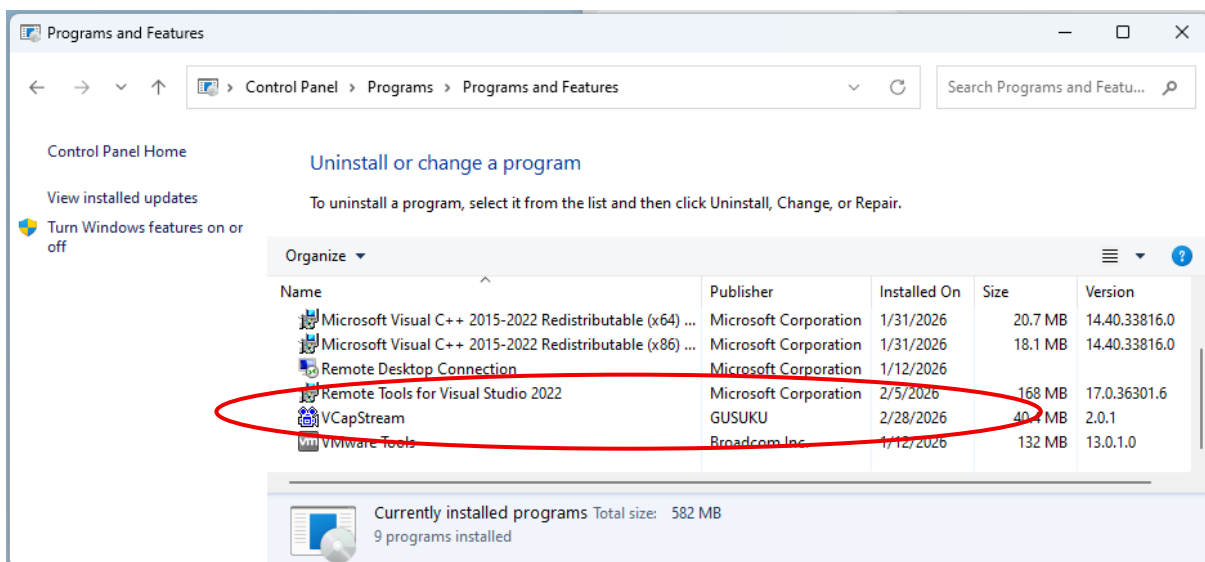
```
winget install --id=Gyan.FFmpeg -e
```

You must be connected to the Internet when running the above command.

6 Uninstall

Open the Control Panel and select "Uninstall a Program" if you are viewing by Category, or "Programs and Features" if you are viewing by Large or Small icons.

In the Programs and Features window, select VCapStream from the "Uninstall or change a program" list and uninstall it.



7 How to start

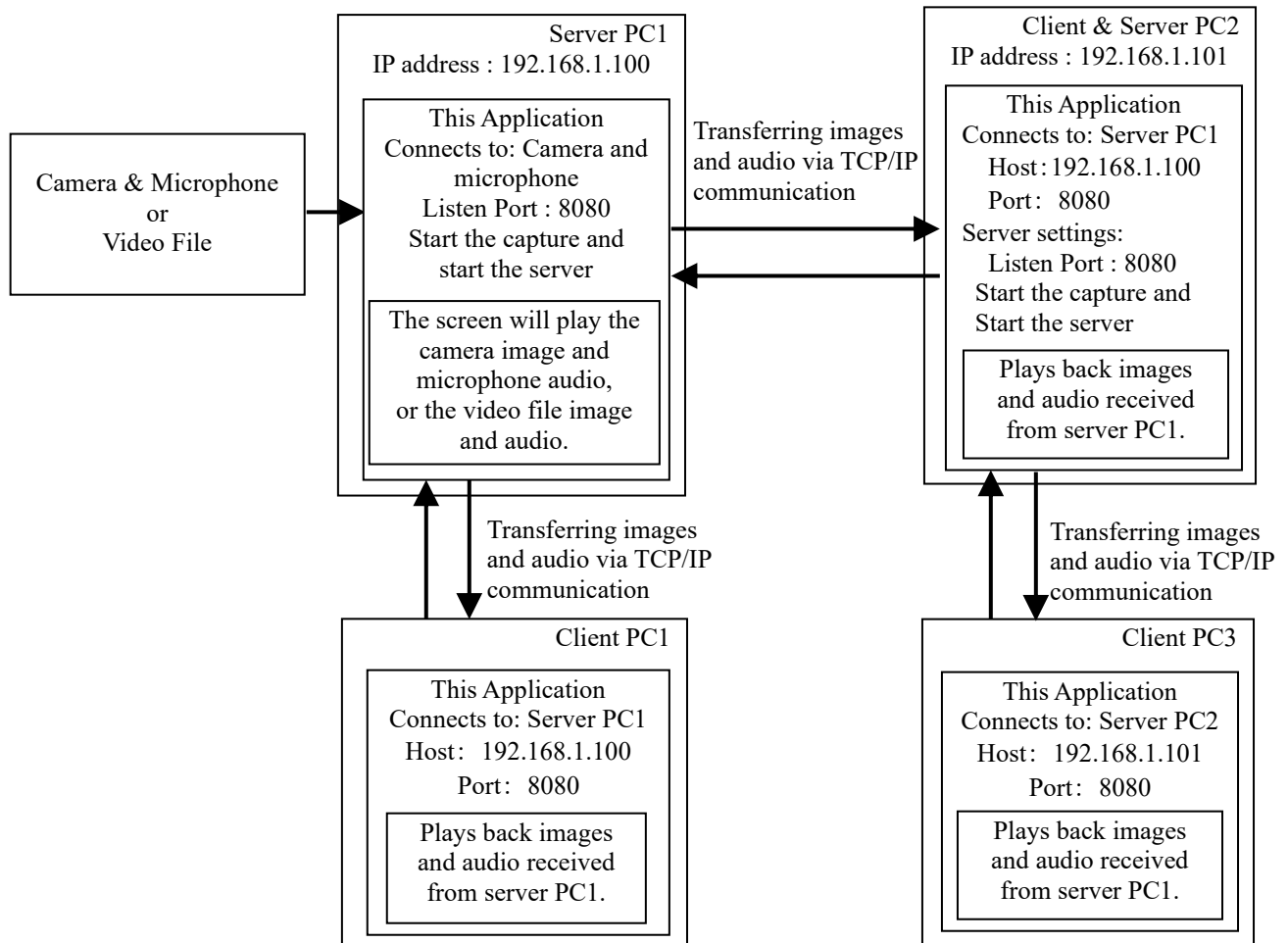
Select VCapStream from the All menu in the Windows Start menu and start it.

If you cannot find VCapStream in the Start menu, it may be in a group called GUSUKU. In that case, launch VCapStream in GUSUKU.

8 Connection Diagram

This application has the function of connecting to a webcam, capturing and displaying camera images, and also the function of starting a server function while capturing camera images, and streaming the captured images if a client connects.

The image below shows the connection when capturing and streaming camera images.

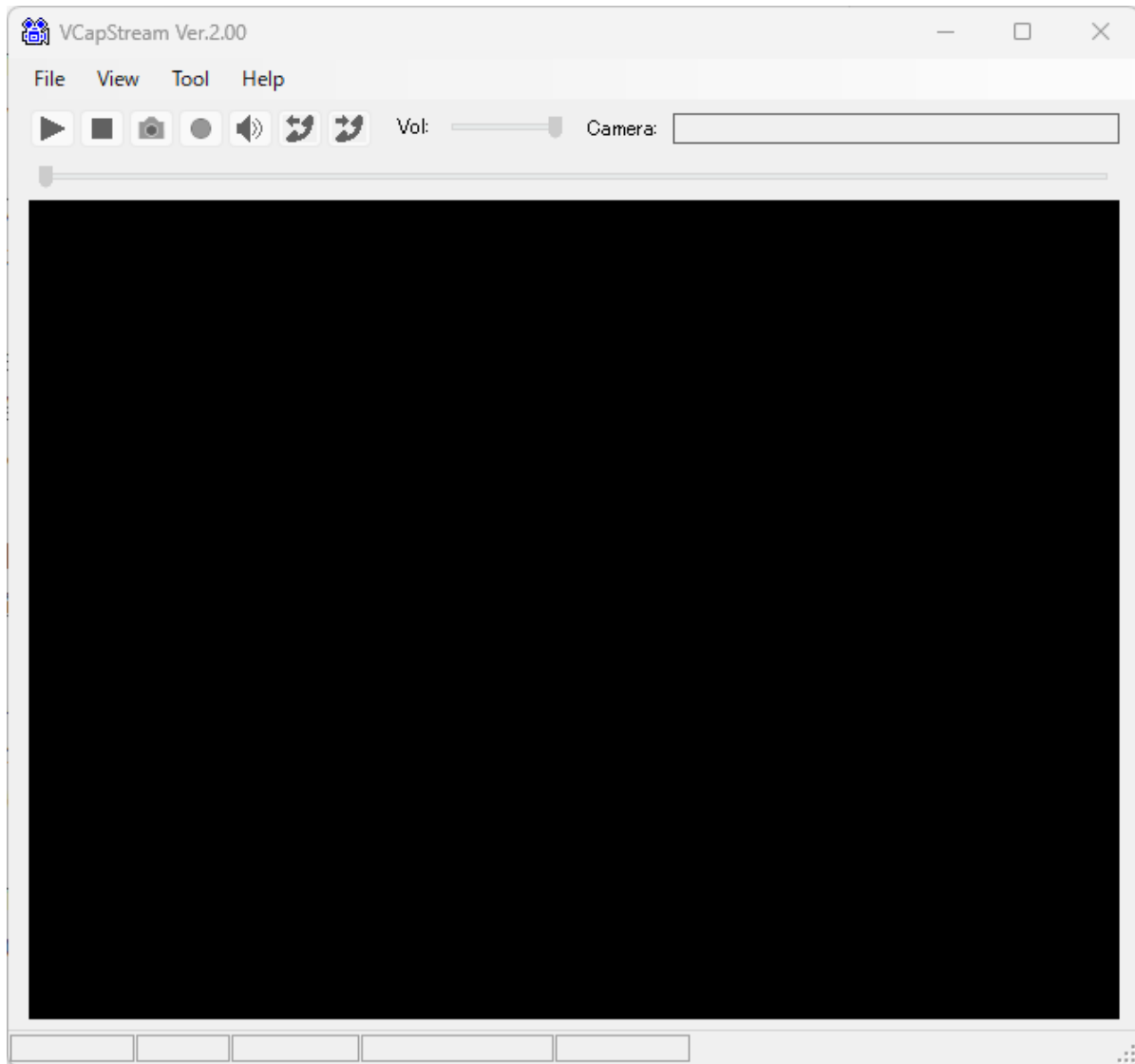


The server accepts connections from multiple clients, making it possible for connections like those shown in the diagram above for Server PC1.

A client can connect to a server and become a server at the same time, so it can relay images received from the server and send them to another client.

9 Screen Description

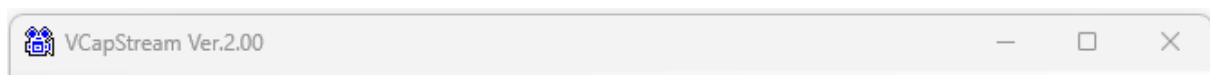
When you start VCapStream, the window below will appear.



The window shown above is explained below.

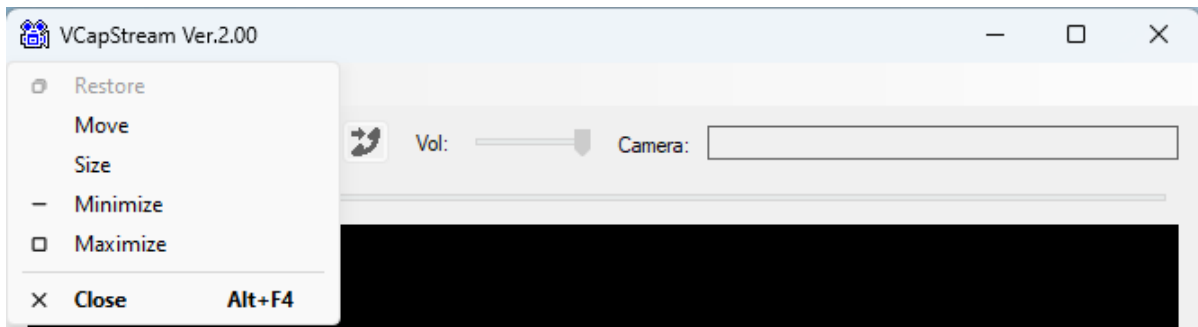
9.1 Title Bar

The title bar displays the application title and version number.



Pressing the " - ", "□", or "×" buttons on the right will perform the actions of "minimize", "maximize", or "exit application", respectively.

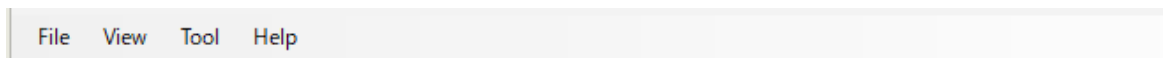
Click the icon on the left to display the system menu.



We will not explain the functions of the system menu as they are standard for Windows.

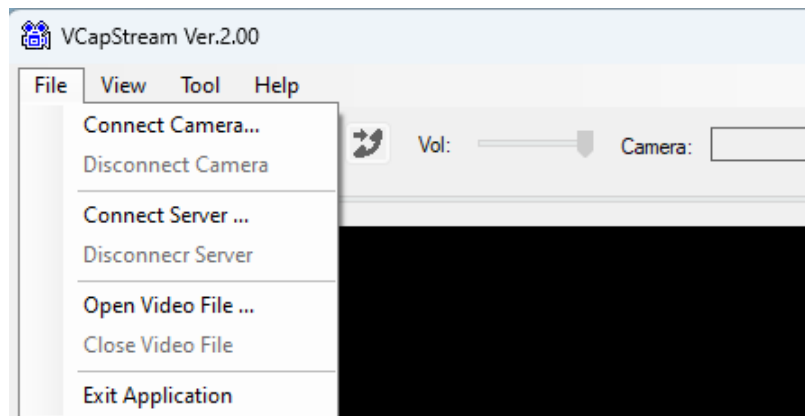
9.2 Menu Bar

The menu bar has three menu groups.



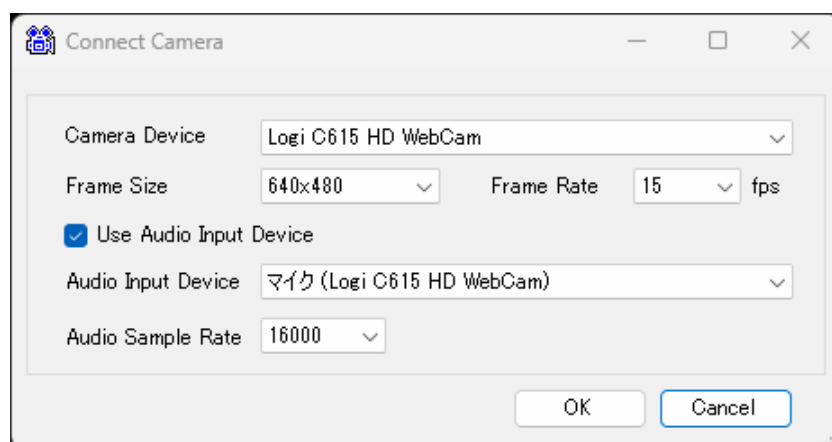
9.2.1 File menu

The File menu has the following items:

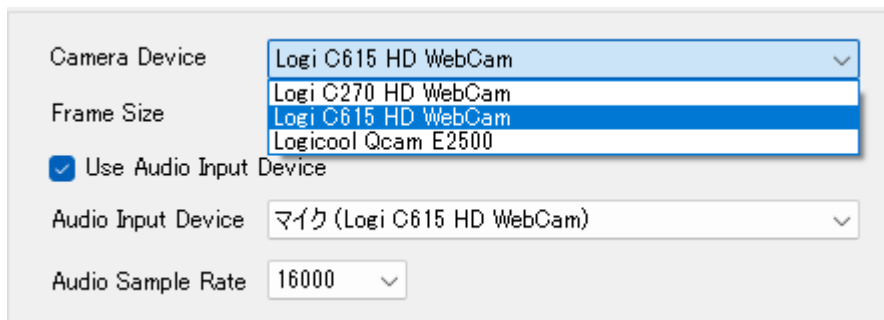


(1). Connect Camera

Display the "Camera Connection" dialog shown below and connect to the camera.



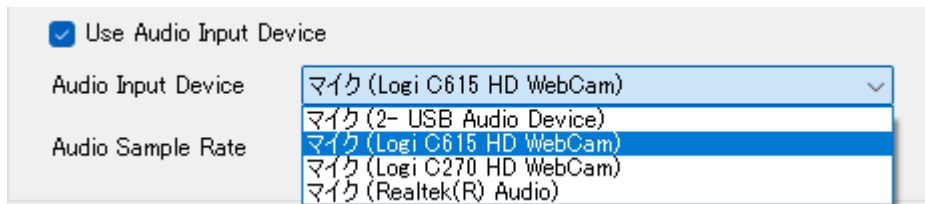
Select the camera to connect from the "Camera Device" combo box.



In the example above, when you open the combo box, four cameras are displayed, so select the camera you want to connect from there.

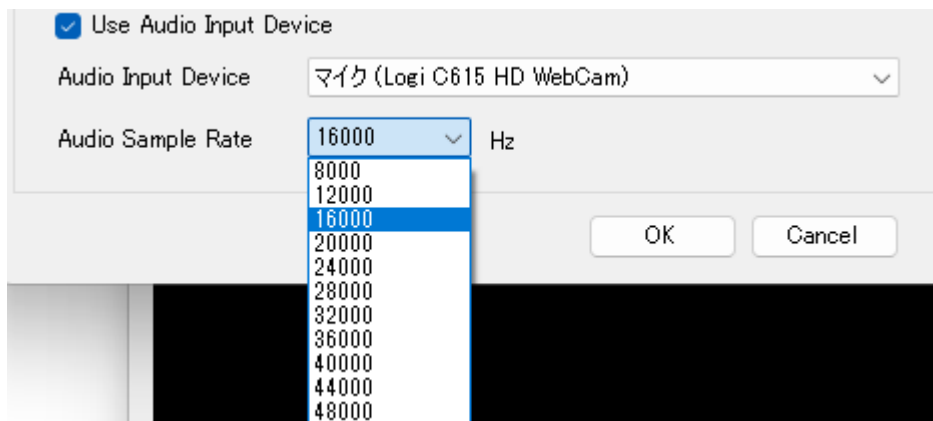
When "Use audio input device" is checked, you can capture audio input from the microphone along with the image.

When "Use audio input device" is checked, the "Audio input device" combo box will become selectable, so select the microphone device from there.



The input audio will also be available in the server function described below, and can be heard at the destination of the stream.

If you check "Use audio input device", you will also be able to select the "Audio sample rate" combo box.



The default audio sample rate is 16000 Hz, but if you select a value higher than that, the streaming audio may be interrupted.

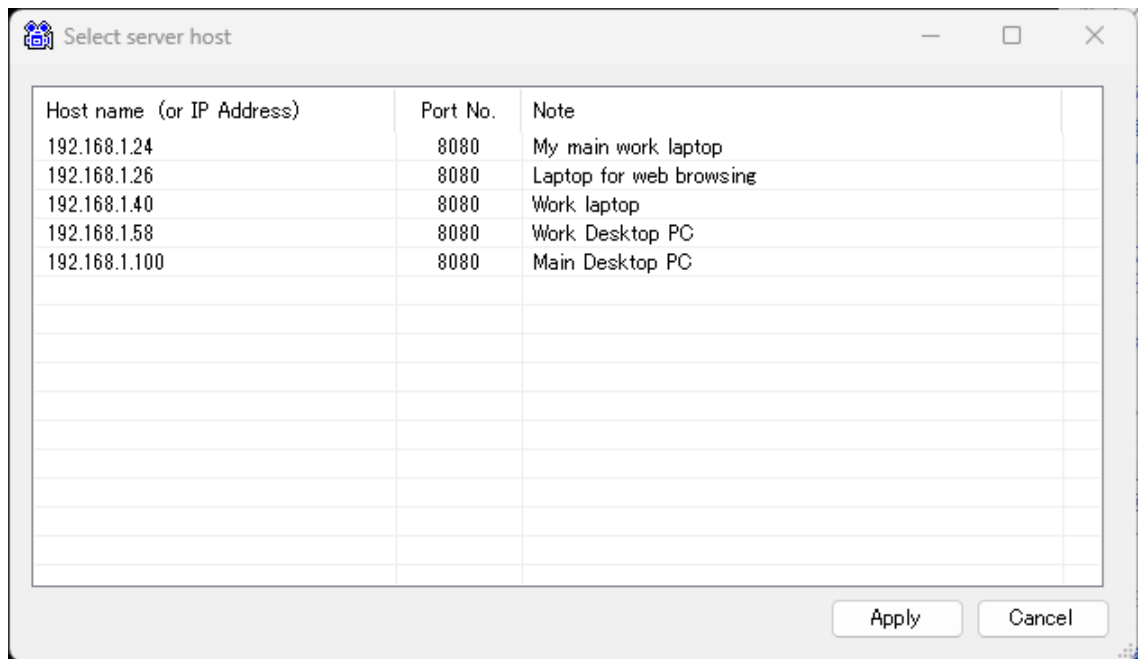
When the "Server" checkbox is checked, it will connect to a VCapStream running on another PC.

(2). Disconnect Camera

Disconnects from the connected camera.

(3). Connect Server

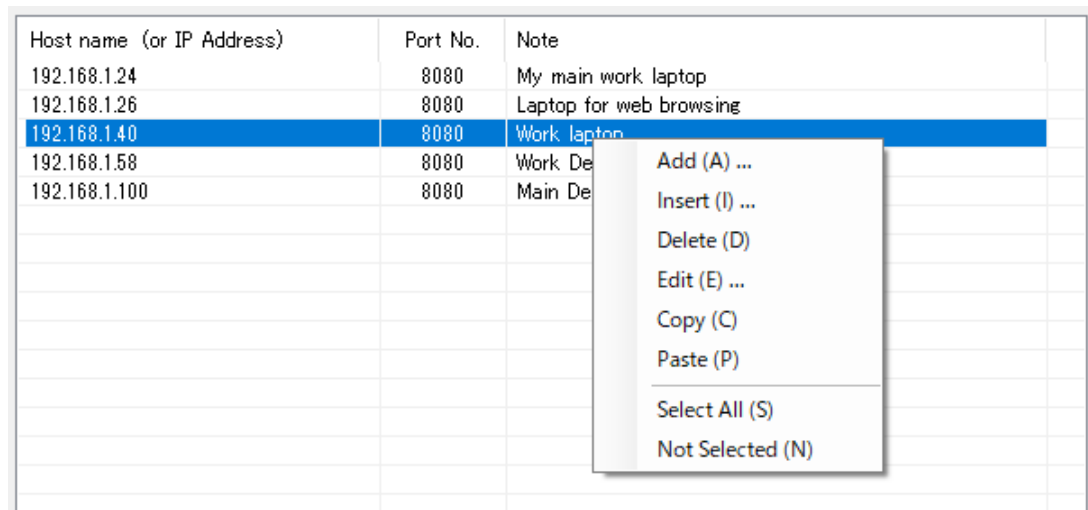
Display the "Server Connection" dialog shown below to connect to the server.



In the example shown above, the work laptop with IP address 192.168.1.40 is selected. Clicking the OK button connects to VCapStream, which is running on the PC with the selected IP address and has started its server function.

The VCapStream running on the selected PC must be connected to the camera and "Start Server" must be selected from the "Tools" menu.

Adding, deleting, or editing server information in the list is done using the context menu shown in the image below, which appears when you right-click with the mouse.



Adding, deleting, or editing server information is explained in the "Edit Server Information" dialog box, which is accessed via "Edit Server List" in the Tools menu.

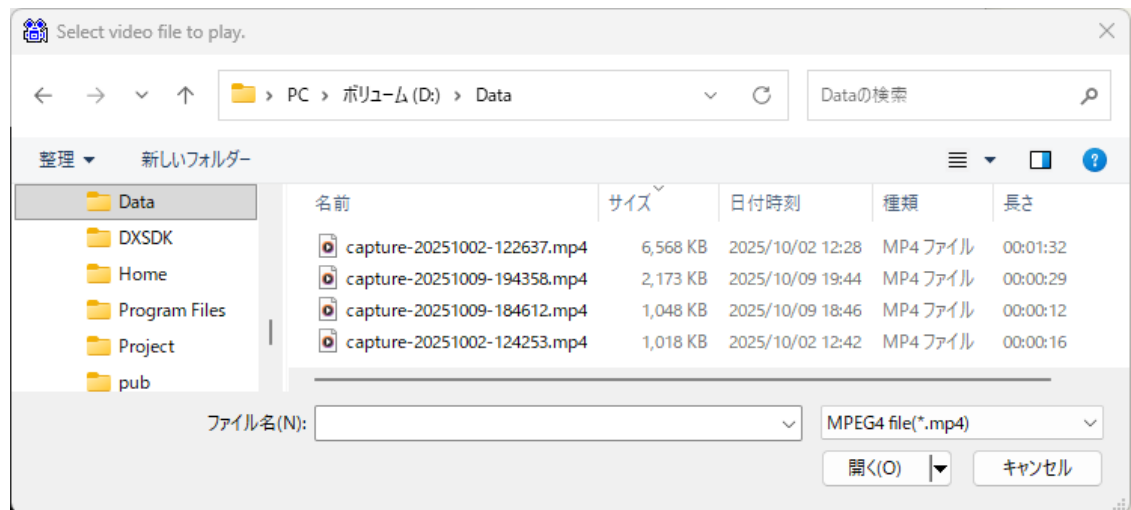
The port number in the "Server Host Selection" dialog box and the port number in the "Listening TCP Port" setting of the "Option Settings" dialog box, accessed from the "Tools" menu on the server side, must match. The server's port number is specified in the "Option Settings" dialog box accessed from the "Tools" menu. The server's VCapStream connection destination can be a different VCapStream server.

(4). Disconnect Server

Disconnects from the connected VCapStream server.

(5). Open Video File

To play the recorded video file, open the video file (MPEG4 file) in the file selection dialog.



If you did not use FFmpeg to combine and save the video and audio during recording, the video data (mp4) and audio data (wav) will be saved as separate files with different extensions.

Therefore, if there is a file with the same name as the video file but a wav extension, you will be asked if you want to use it as the audio data. Selecting OK will allow you to play the video with audio.

If there is no wav file with the same name as the video file, and FFmpeg is installed, an attempt will be made to extract the audio data from the video file and play it.

If the video file does not contain audio data, it will play without audio.

(6). Close Video File

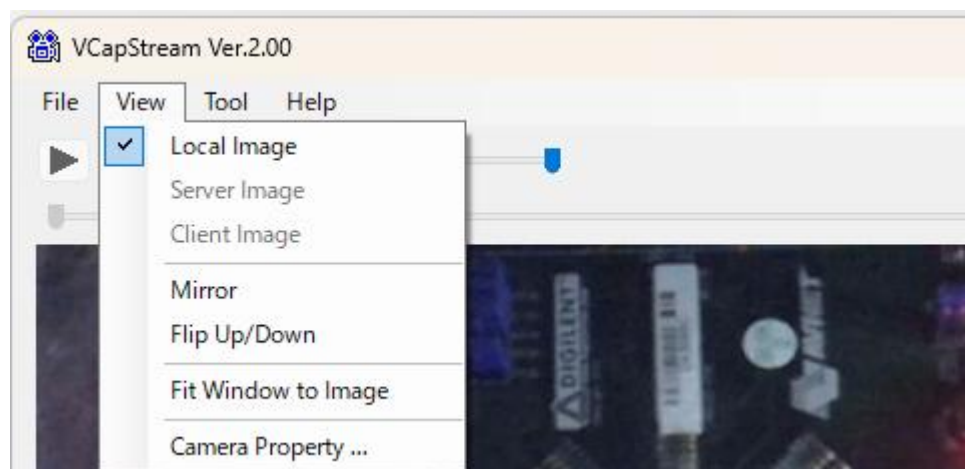
Closes an open video file.

(7). Exit Application

Quit the application.

9. 2. 2 View menu

The "View" menu has the following items:



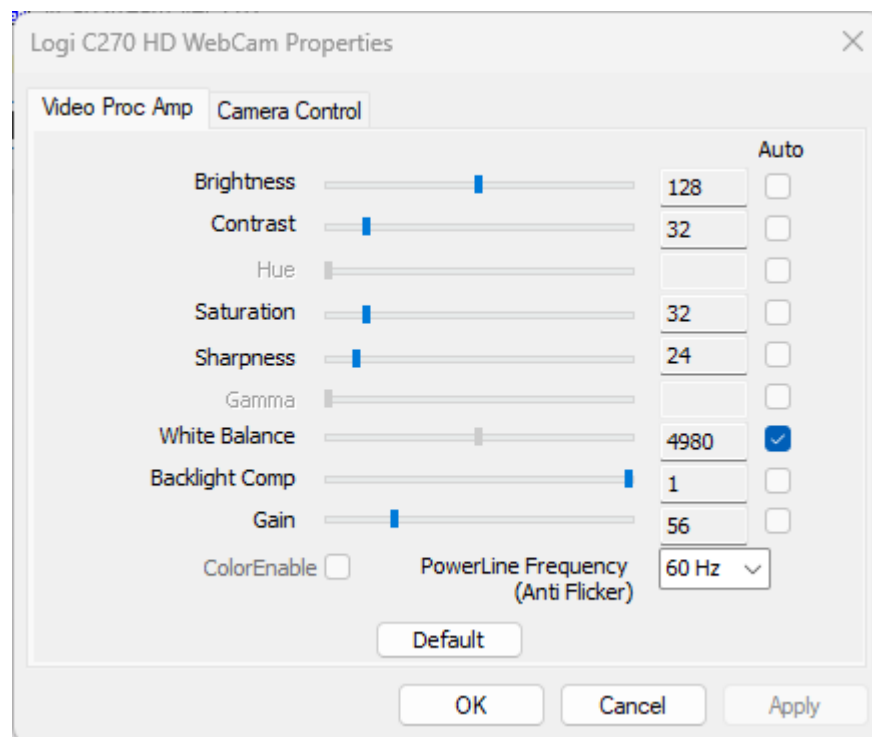
(1). Local Image

Displays the image from the local camera on the screen.

Plays audio from the local microphone, if available.

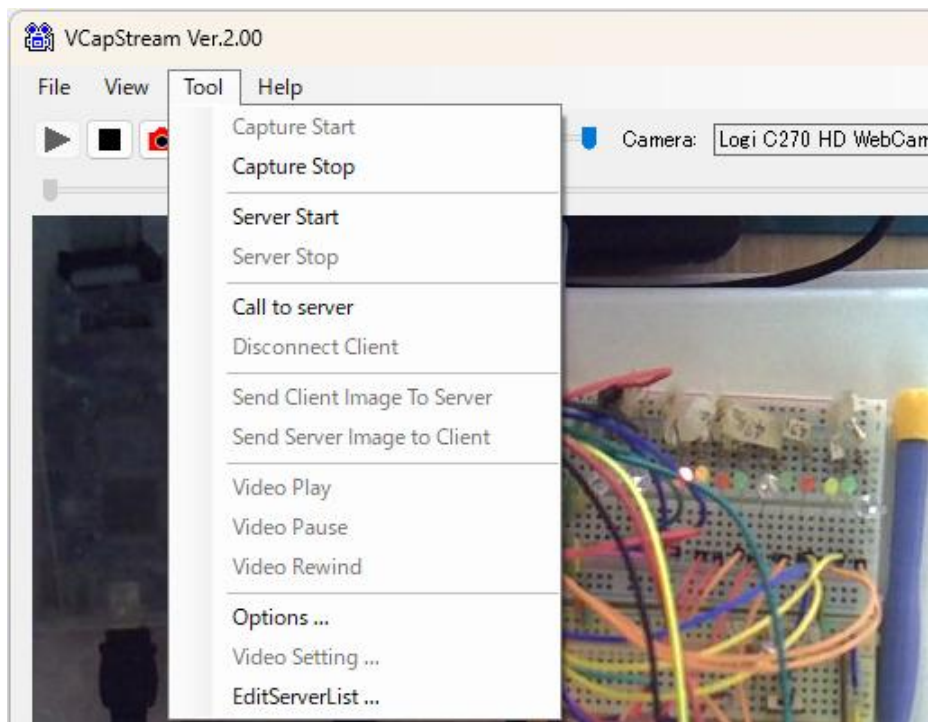
- (2). Server Image
Displays the image received from the server on the screen.
Plays audio received from the server, if available.
- (3). Client Image
Displays the image received from the client on the screen.
Plays audio received from the client, if available.
- (4). Mirror
Reverses the image horizontally.
- (5). Flip Up/Down
Flips the image upside down.
- (6). Fit Window to Image
Resize the window to fit the image size.
- (7). Video Property
Displays the properties dialog for the connected camera.

The properties dialog will vary depending on the camera, below is an example for the Logitech C270 HD WebCam.

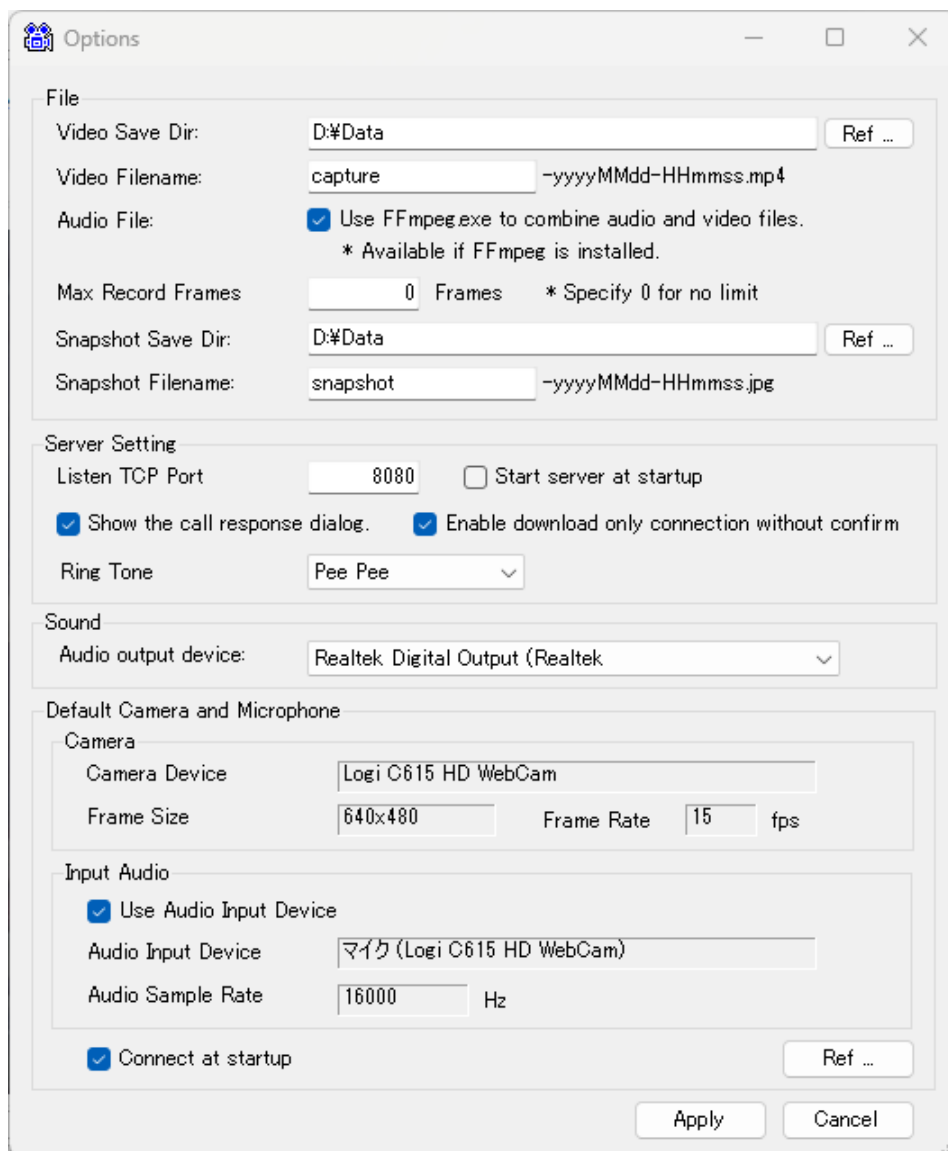


9. 2. 3 Tool menu

The Tool menu has the following items:

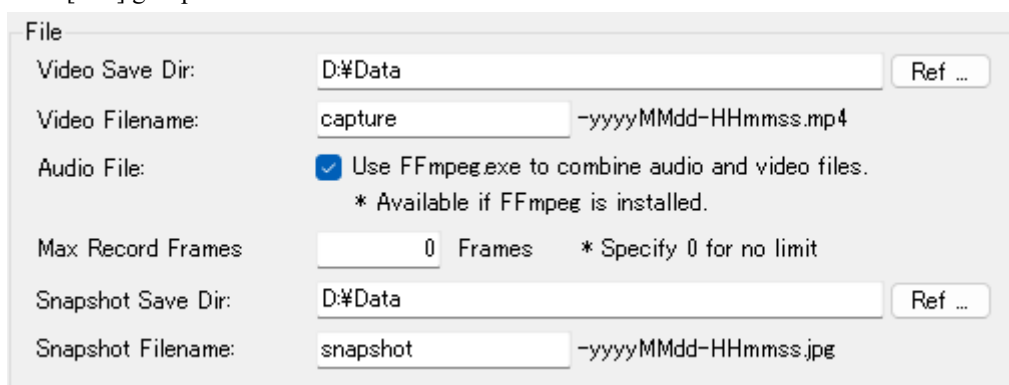


- (1). Capture Start
Starts capturing video from a camera or server.
- (2). Capture Stop
Stops capturing video from the camera or server.
- (3). Server Start
Start the video streaming server.
- (4). Server Stop
Stop the video streaming server.
- (5). Call to server
Connect to the server in call mode.
Send local video and audio to the server.
- (6). Disconnect Client
If a client is connected, the connection with the client will be disconnected.
- (7). Send Client Image To Server
When connecting to the server, the image received from the client is sent to the server.
- (8). Send Server Image to Client
When a client connects, the image received from the server is sent to the client.
- (9). Video Play
Starts playing the opened video file.
- (10). Video Pause
Stops playing an open video file.
- (11). Video Rewind
Returns the playback position to the beginning of the opened video file.
- (12). Options
The option setting dialog shown below will be displayed.



In the option settings dialog, set the following items.

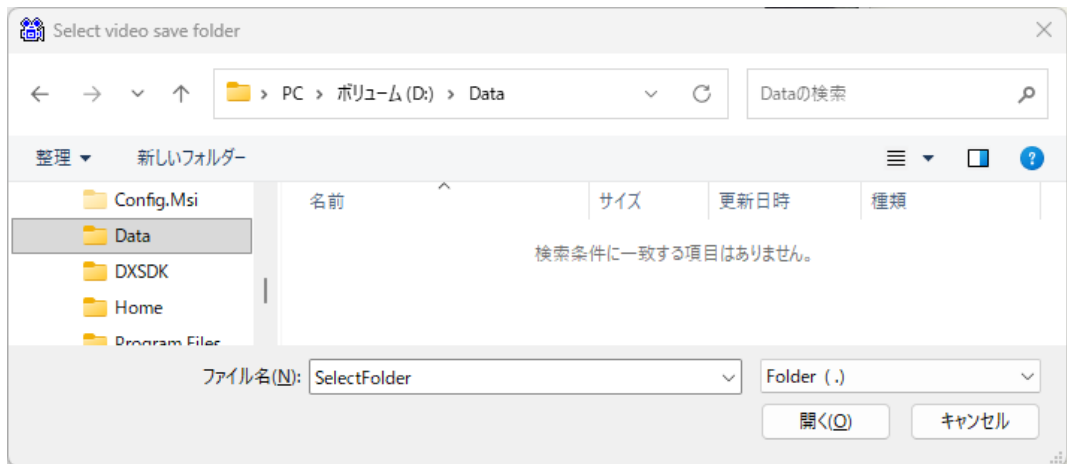
- [File] group



1. Video Save Dir.

Set the directory (folder) where you want to save the video files.

[Ref ...] button, the folder selection dialog shown below will be displayed. You can select the desired folder by opening it and pressing the Open button.



2. Video Filename

Set the file name when saving the video file.

The date and time will be added to the end of the file name you set for the saved file.

3. Audio File

If FFmpeg is installed, this option determines whether to merge audio files into video files.

If you check "Use Ffmpeg.exe to combine audio and video files", the audio data will be combined with the video file to create a single video file (mp4) with audio.

If this checkbox is not checked, or if it is checked but FFmpeg is not installed, the video file and audio file will be saved as separate files.

In that case, the file names will be the same, but the video file will have the mp4 extension and the audio file will have the wav extension.

4. Max Record Frames

Sets the maximum number of frames for a video file to be saved.

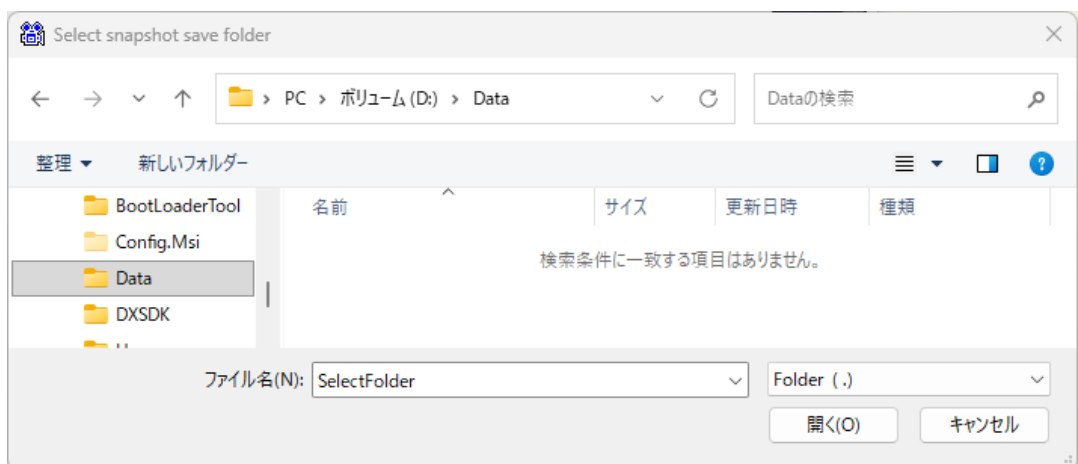
Recording will stop automatically when the specified number of frames is reached.

If the setting value is 0, recording will be performed without frame limit.

5. Snapshot Save Dir.

Set the directory where snapshot images are saved for capture images.

[Ref ...] button, the folder selection dialog shown below will be displayed. You can select the desired folder by opening it and pressing the Open button.

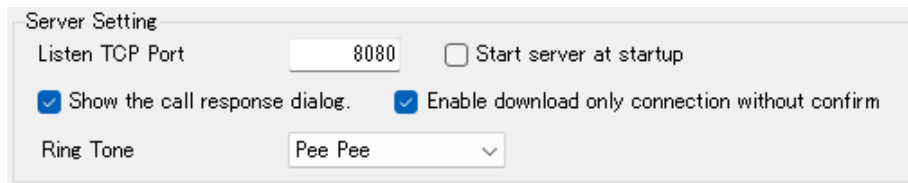


6. Snapshot Filename

Set the file name for saving the snapshot image of the captured image.

The date and time will be added to the end of the file name you set for the saved file.

● [Server Setting] group



The 'Server Setting' dialog box contains the following controls:

- Listen TCP Port:** A text input field with the value '8080'.
- Start server at startup:** An unchecked checkbox.
- Show the call response dialog:** A checked checkbox.
- Enable download only connection without confirm:** A checked checkbox.
- Ring Tone:** A dropdown menu currently showing 'Pee Pee'.

1. Listen TCP Port

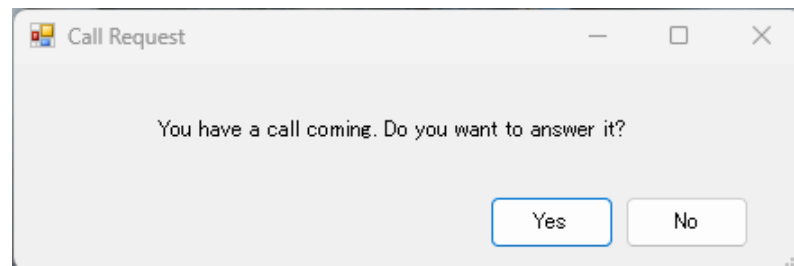
Specify the server's listening port number.

2. Start server at startup

Choose whether to start the server automatically upon startup.

3. Show the call response dialog.

When a call request is received from a client, the call response dialog shown in the diagram below will appear, allowing the user to choose whether to accept or reject the request.



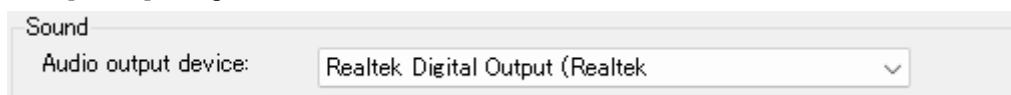
4. Enable download only connection without confirm.

Specifies whether to accept client-side download-only connections without a response dialog.

5. Ring Tone

Select the ringtone that appears when a response dialog is displayed in response to a call from a client.

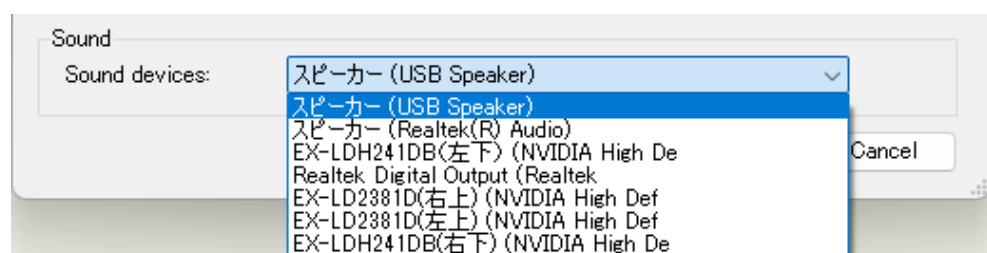
● [Sound] Group



The 'Sound' dialog box features a label 'Audio output device:' followed by a dropdown menu. The dropdown menu is currently set to 'Realtek Digital Output (Realtek'.

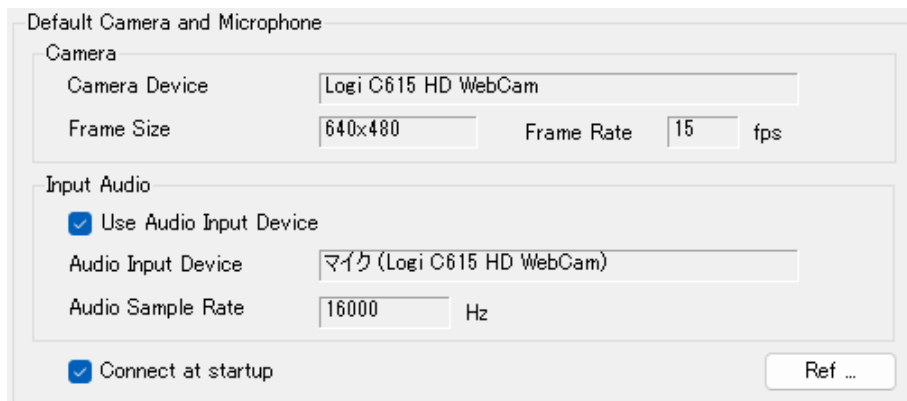
1. Sound Device

Select the speaker device for audio output from the combo box.



The combo box displays the currently connected speakers.

● [Default Camera ans Microphone] Group



1. Camera group

The information of the camera selected using the browse button will be displayed.

① Camera Device

Displays the device name of the selected default camera.

② Frame Size

Displays the frame size of the selected camera.

③ Frame Rate

Displays the frame rate of the selected camera.

2. Input Audio group

The information for the voice input device selected using the browse button will be displayed.

① Use Audio Input Device

Use the checkbox to specify whether to use the default voice input device.

② Audio Input Device

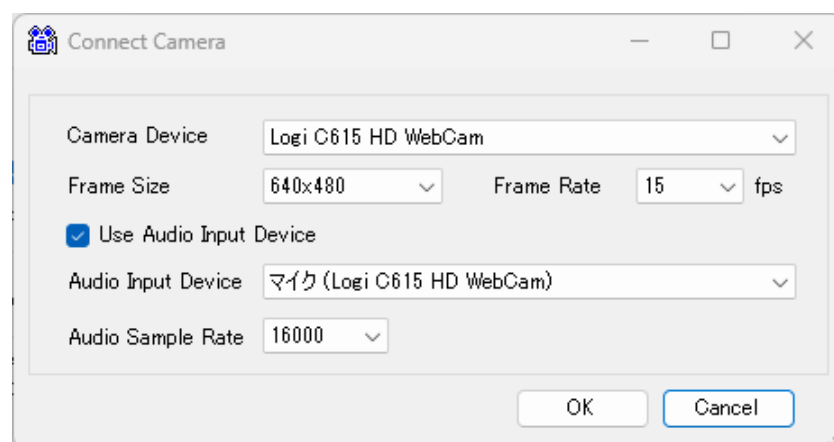
Displays the name of the selected default voice input device.

③ Audio Sample Rate

Displays the sample rate of the selected audio input device.

3. Ref button

Display the camera connection dialog shown in the diagram below and select the default camera.

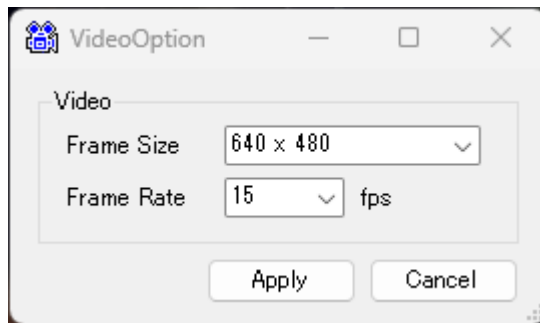


4. Connect at startup

Checking the "Connect at startup" checkbox will connect to the default camera device and start capturing when the program starts.

(13). Video Settings

Open the Video Options dialog shown below.

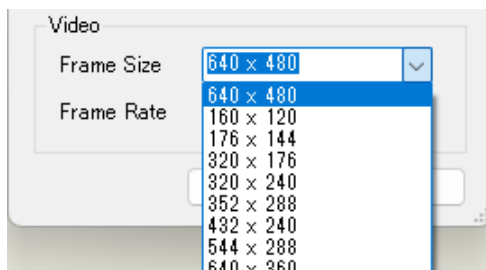


In the Video Option dialog, set the following items:

- [Video] Group

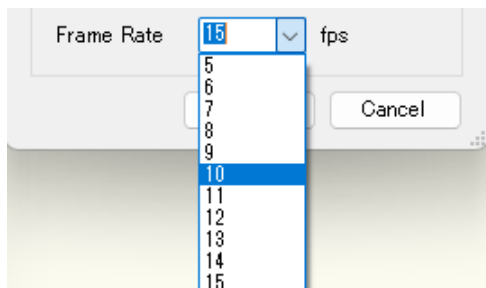
1. Frame Size

Sets the size of the image captured by the camera.



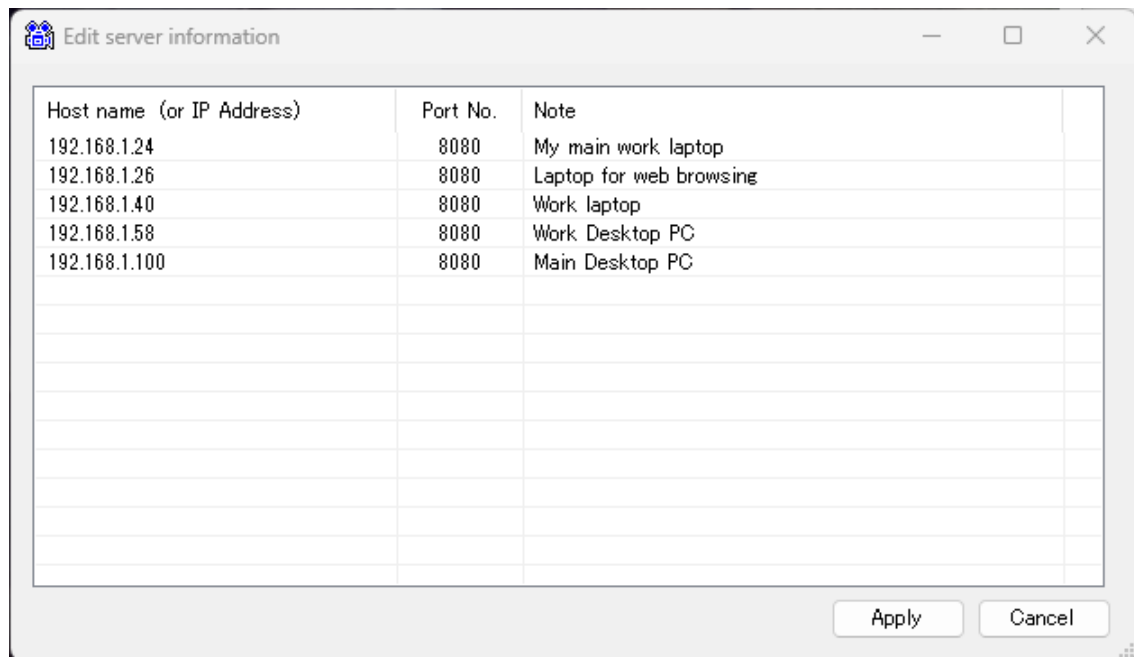
2. Video Filename

Set the frame rate for video captured by the camera.

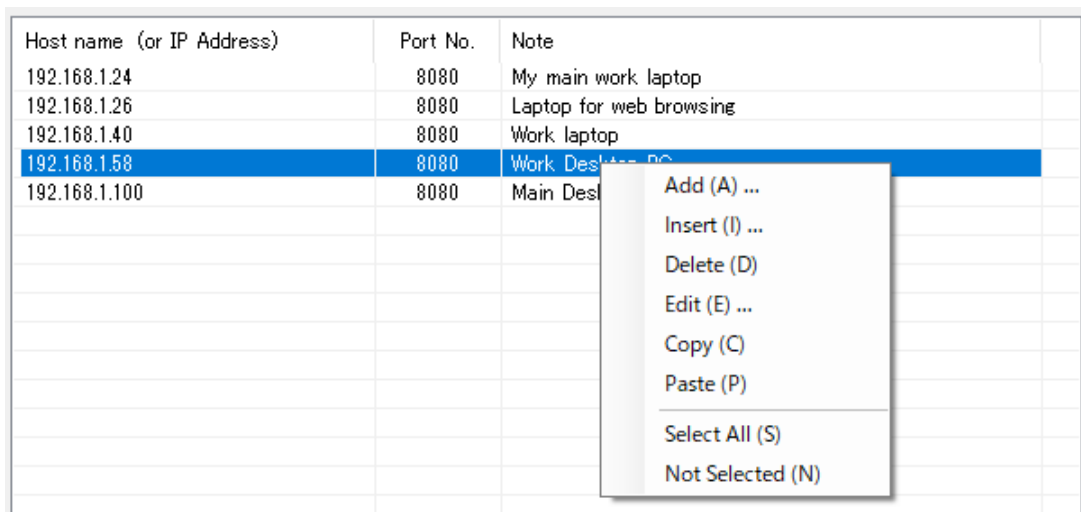


(14). Edit Server List

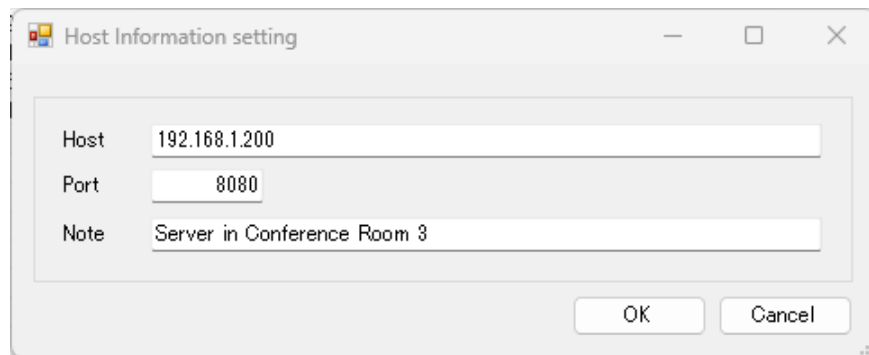
Open the "Edit Server Information" dialog box shown in the image below.



1. Host name (or IP Address)
Set the IP address or hostname to identify the server host.
2. Port No.
Set the server's listening port number.
3. Note
Set memo information about the server host.
4. Apply button
The edited content will be written to the settings file and the dialog box will be closed.
5. Cancel button
Discard the edited content and close the dialog box.
6. Context Menu
Right-clicking on an item in the list will display the context menu shown in the image below.



- ① Add
Open the host information settings dialog shown in the diagram below, configure the host information to be added, and add it to the last line.



② Insert

Open the host information settings dialog, configure the host information to be inserted, and insert it before the selected row.

③ Delete

Deletes the host information for the selected row.

④ Edit

The host information settings dialog box opens with the host information for the selected row set, and the edited results are reflected in the selected row.

⑤ Copy

This copies the data from the selected row in the list to the clipboard as text data.

⑥ Paste

This inserts the host information data copied to the clipboard before the selected row in the list. If there is no selected row, it will be pasted in addition.

⑦ Select All

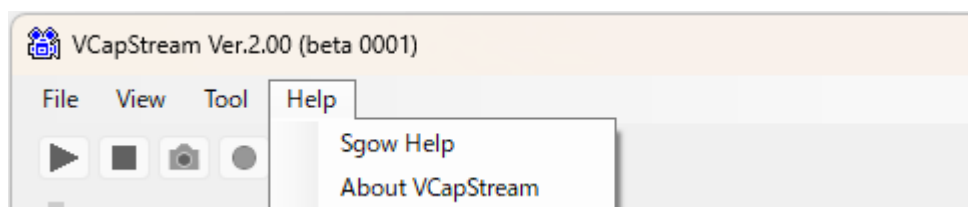
Select all rows in the list.

⑧ Not Selected

This deselects the item in the list.

9. 2. 4 Help menu

The Help menu has the following items:

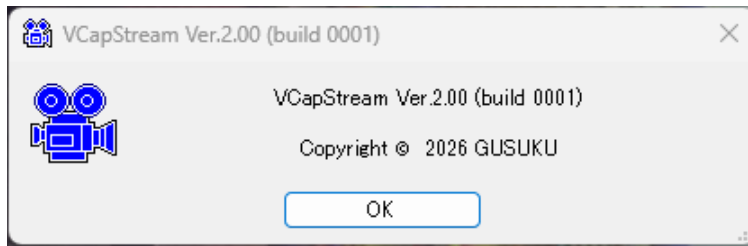


(1). Show Help

Opens the help file in PDF format (This file).

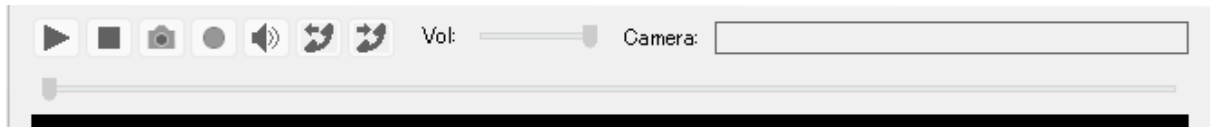
(2). About VCapStream

Displays the version of this application.

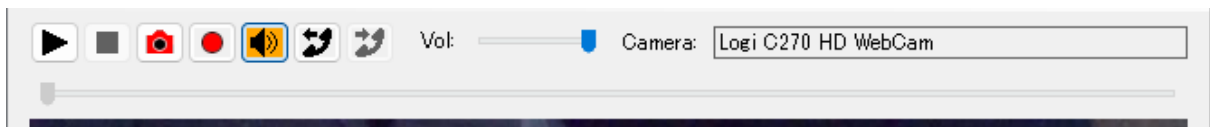


9.3 Control Area

The control area contains controls for capturing and playing video files.



The control area becomes operational when you connect to a camera or VCapStream server or open a video file.



The control area contains the following controls:

- (1). [Start] button

Starts capturing from a camera or playing a video file.



- (2). [Stop] button

Stops capturing from the camera or playing a video file.



- (3). [Snapshot] button

Saves a snapshot image of the video being captured from the camera or server in JPEG format.



- (4). [Record] button

Turn on the "Record" button and then press the "Start" button to save the captured image to a video file.



(OFF state)

When the "Record" button is on, the background color will turn orange.



(ON state)

The video file will be saved in the folder you specified in the options settings.

- (5). [Sound] button

Switches the audio playback on the speaker ON/OFF.



(OFF state)

When the "Sound" button is ON, the background color will turn orange.



(ON state)

(6). Server call button

Displays the server host selection dialog and connects to the server in call mode.

In call mode, the server's video and audio are sent to you, and simultaneously, your video and audio are sent to the connected server.

(Same function as the Server Call button in the Tools menu)



(OFF state)

The background color will turn orange when you connect to the server.



(ON state)

When using call mode, the load is heavy, so we recommend reducing the frame rate of both images to around 10fps.

(7). Client Disconnect Button (Displays Client Connection Status)

This indicates the client's connection status.

When connected, pressing this button will disconnect the currently connected client.



(Client is not connected)

When the client is connected, the background color will turn orange.

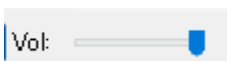


(Client connected)

When the client disconnects during a call, the camera image switches to the local camera view.

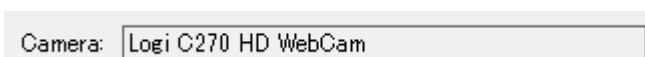
(8). Audio volume adjustment trackbar

Adjust the volume of the audio being played.



(9). Display of connected camera information

This displays information about the camera currently used to input the image being displayed.

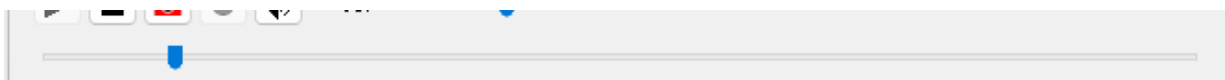


If you are connected to a server and displaying images from the server, the server's IP address will be displayed.



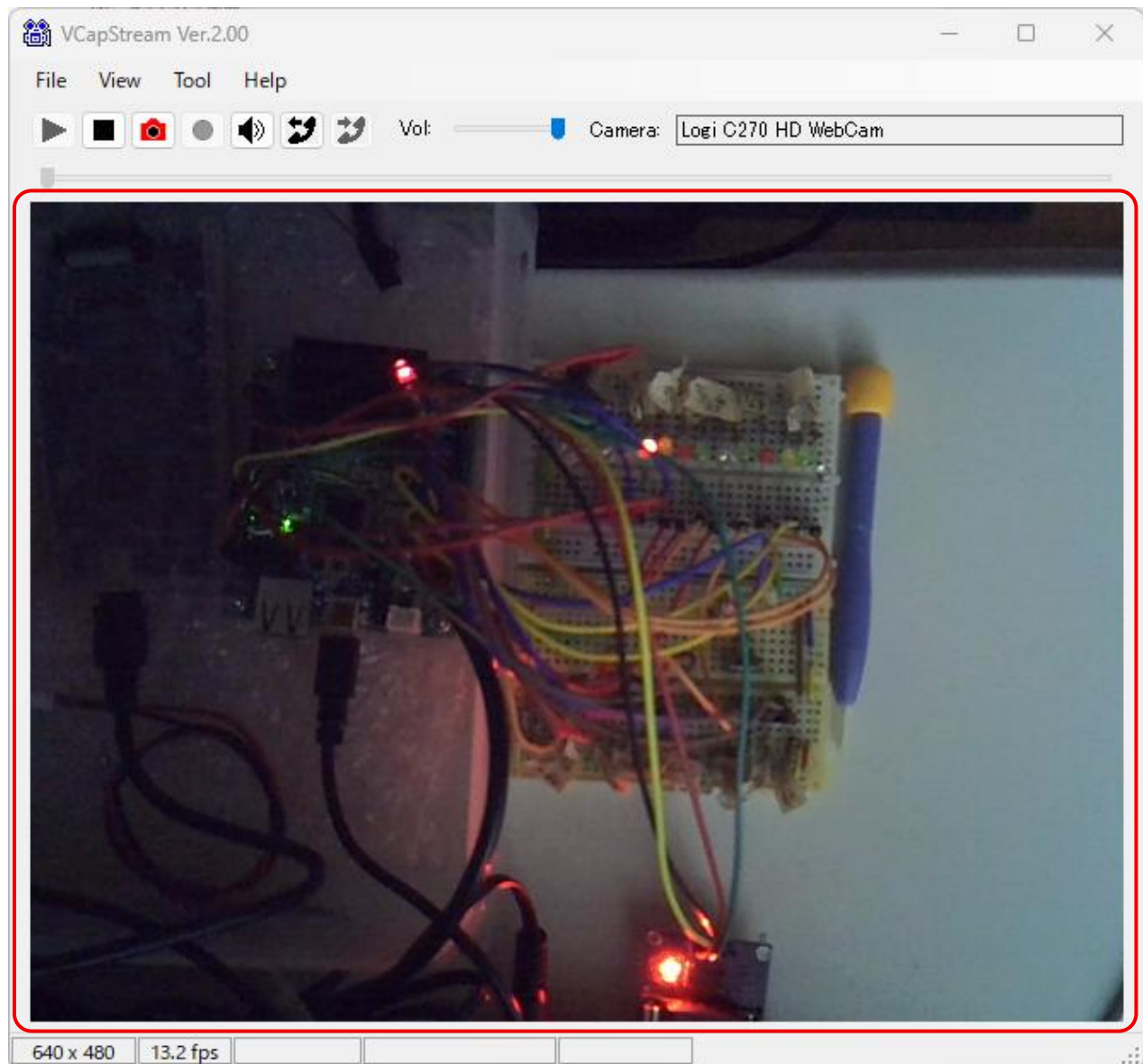
(10). Video playback position change track bar

Drag the knob or click the mouse button on the track bar to move the playback position of the open video file.



9.4 Display Area

It displays captured images from the camera, received images from the server, and playback images of video files.



The image above shows the screen while an image is being captured from the camera.

If you change the window size, the image size in the display area will be enlarged or reduced to fit the window size.

9.5 Status bar

The status bar displays various information.



The information displayed in the above image is explained below.

(1). Image size

Displays the pixel size of the captured image or video file in width x height format.

(2). Frame rate

Displays the frame rate of the captured image or video in fps (frames per second).

(3). Elapsed time

The time elapsed since the start of capture or playback

(4). Frame Counter

When capturing, the number of frames captured from the start is displayed.

When playing a video file, the current frame position and total number of frames are displayed.

(5). Display Server

Displays the type of image to be served when the server starts.

Local Server: Provides images from a local camera

Remote Server: Provides images received from a server

10 Server and client connection procedures

This section explains the steps for communication between two PCs acting as a server and a client.

There are two communication methods for communication between the client and the server:

- (1). Connect to the server via the File menu

This communication method involves the client receiving and displaying images and audio from the connected server, but not sending client images or audio back to the server.

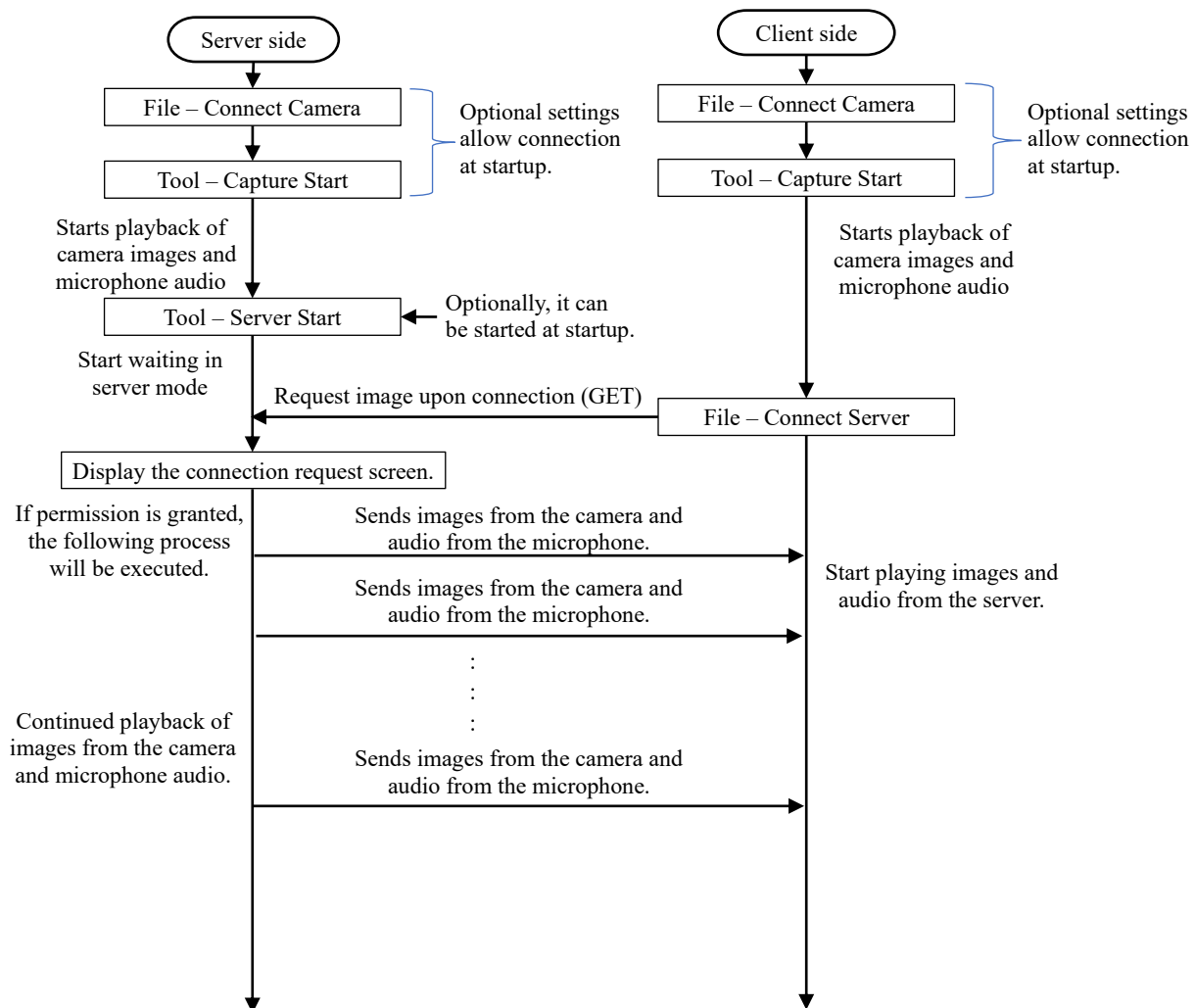
- (2). Calling the server from the Tools menu

This method involves the client receiving and displaying/playing images and audio from the connected server, while simultaneously sending images and audio from the client to the server for display and playback.

The operation sequences of the two methods are illustrated below.

10.1 When connecting to a server and receiving the server's image and audio.

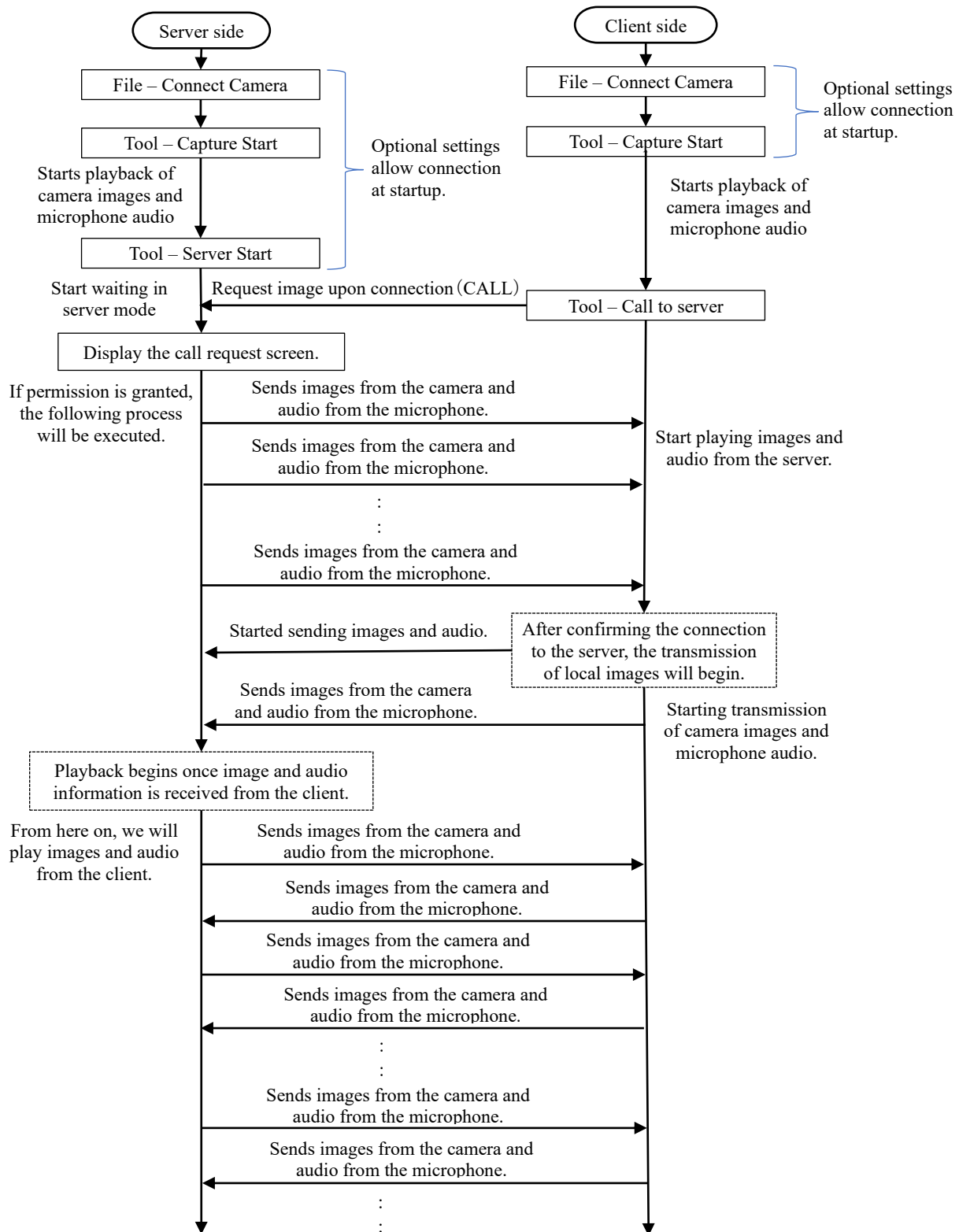
In the sequence below, server-side operations are shown on the left and client-side operations are shown on the right.



Once you can receive images from the server, you can switch between displaying images received from the server and images from your own camera by switching between local images and server images in the display menu.

10.2 When performing mutual communication via server calls.

In the sequence below, server-side operations are shown on the left and client-side operations are shown on the right.



Once two-way communication has been established, you can switch between displaying the image received from the other party and the image from your own camera by switching between local image, server image, and client image in the display menu.

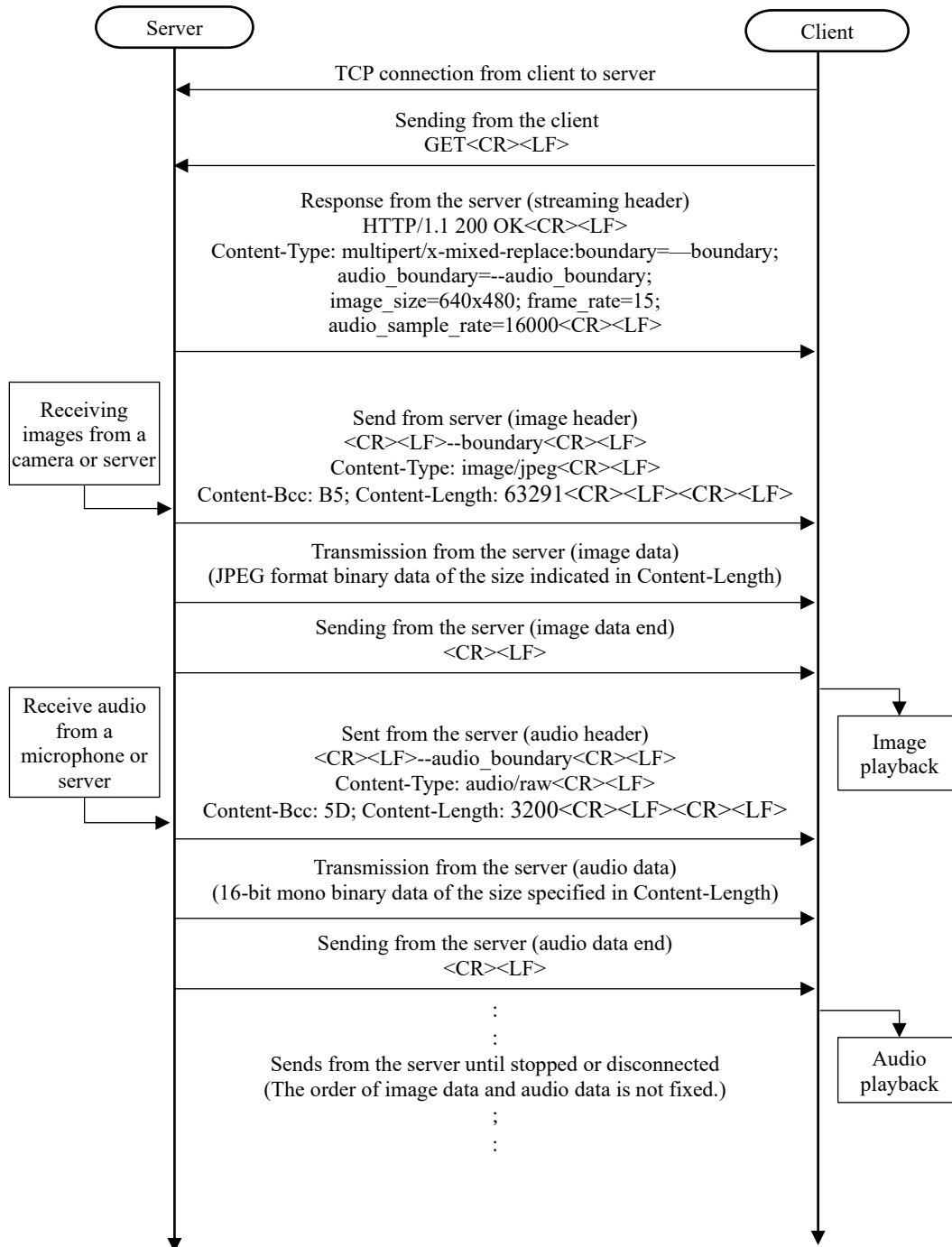
11 Streaming Formats

Video and audio are transmitted over a single TCP/IP port.

11.1 Streaming Sequences

The sequence for connecting from the client to the server and sending video and audio from the server to the client is as follows:

(The <CR><LF> below represent the line break codes 0x0d and 0x0a in hexadecimal.)



11.2 Incoming requests from clients

When a client connects to a server, it sends the following receive request to the server and waits for a response:

```
GET<CR><LF>
```

11.3 Streaming Headers

Upon receiving an incoming request from a client, the server sends the following message to the client:

- When audio data is included, image size is 640x480, frame rate is 15 fps, and audio sample rate is 16000Hz.

(The second line is wrapped for page convenience, but it is actually one line.)

```
HTTP/1.1 200 OK<CR><LF>
```

```
Content-Type: multipart/x-mixed-replace; boundary=--boundary; audio_boundary=--audio_boundary;  
image_size=640x480; frame_rate=15; audio_sample_rate=16000<CR><LF>
```

- When the image size is 640x480, frame rate 15fps without audio data

(The second line is wrapped for page size, but it is actually one line.)

```
HTTP/1.1 200 OK<CR><LF>
```

```
Content-Type: multipart/x-mixed-replace; boundary=--boundary; audio_boundary=--audio_boundary;  
image_size=640x480; frame_rate=15<CR><LF>
```

11.4 Image Data

When the server receives an image from a camera or another server, it sends the image data in the following format:

```
<CR><LF>
```

```
--boundary<CR><LF>
```

```
Content-Type: image/jpeg<CR><LF>
```

```
Content-Bcc: F5; Content-Length: 63291<CR><LF>
```

```
<CR><LF>
```

Image data (jpeg format data of the size specified by Content-Length is sent in binary format)

```
<CR><LF>
```

The image data checksum is the F5 part of Content-Bcc: F5, which is the value obtained by XORing the image data byte by byte from the beginning to the end.

When the client receives the --boundary line, it determines that this is the start of the image data and continues to receive the data that follows in order. After receiving the image data length and checksum, it imports the image data after the blank line, calculates the checksum, and if they match, converts the image data into an image and imports it.

If the checksum calculation does not match, it is discarded.

11.5 Audio Data

When the server receives audio data from a microphone or another server, it sends the audio data in the following format:

<CR><LF>

--audio_boundary<CR><LF>

Content-Type: audio/raw<CR><LF>

Content-Bcc: B4; Content-Length: 3200<CR><LF>

<CR><LF>

Audio data (16-bit audio data of the size specified by Content-Length is sent in binary format)

<CR><LF>

The audio data checksum is the B4 part of Content-Bcc: B4, which is the value obtained by XORing the audio data byte by byte from the beginning to the end.

When the client receives the --audio_boundary line, it determines that this is the start of audio data and receives the data that follows in order. After receiving the audio data length and checksum, it takes in the audio data after the blank line, calculates the checksum, and if it matches, takes in the audio data.

If the checksum calculation does not match, it discards it as noise.

11.6 Server calls from the client

When transmitting local camera images and audio data from a client to a server, the transmission procedure is the same as for streaming sequences from a server to a client.

(1). Connection request from the client

When the client connects to the server, it sends the following call request to the server and waits for a response.

CALL<CR><LF>

(2). A streaming header is sent to the server at the start of transmission.

Once the connection to the server is established, the client-side video and audio formats are sent in the streaming header.

The header format is the same as the streaming header sent from the server.

(3). When receiving images from the camera, image data is sent to the server.

The image data format is the same as the image data sent from the server.

(4). When receiving audio from the microphone, audio data is sent to the server.

The audio data format is the same as the audio data sent from the server.

12 Data Files

This software can save three types of files: video files, audio files, and snapshot files.

Each type of file is explained below.

12.1 Video files

When you start capturing with the recording button in the control area turned on, the video file will be saved to the folder specified in the "Video save folder" option settings.

Video files are saved in MPEG4 format with the file extension mp4.

The video file name will be the name specified in "Video file name" followed by "-yyyyMMdd-HHmmss.mp4".

Example: (If recording starts at 13:45:30 on February 1, 2026, the result will be as follows.)

capture-20160201-134530.mp4

If you have checked "Use FFmpeg.exe to combine audio into video files" in the audio file settings, video files will be saved with audio if there is audio input.

However, saving video files with audio can only be done if FFmpeg is installed in the environment running this app and ffmpeg.exe is executable.

12.2 Audio files

If FFmpeg is not installed or "Use FFmpeg.exe to combine audio into video file" is not checked, the audio data will be saved as a separate file in the same folder as the video file.

The audio data file will have the same name as the video file, only with the wav extension.

Example: (If the file name setting is capture and recording started at 1:45:30 PM on February 1, 2026)

capture-20160201-134530.wav

12.3 Snapshot files

If you click the Snapshot button in the Control Area while capturing, the snapshot file will be saved in JPEG format in the "Snapshot Save Folder" specified in the Options settings, with a .jpg extension.

The file name will be in the format "-yyyyMMdd-HHmmss.jpg" appended to the name specified in "Snapshot File Name".

Example: (File name setting is snapshot and recording started at 13:45:30 on February 1, 2026)

snapshot-20160201-134530.jpg

12.4 Storage conditions for video and audio files

The conditions under which video and audio files are saved are explained below.

(1). If FFmpeg is not installed.

The option setting "Use FFmpeg.exe to combine audio into video file" does not have any effect.

- If you have enabled "Use audio input device" in the connection dialog
capture-20160201-134530.mp4 video file (no sound)
capture-20160201-134530.wav audio file
- If "Use audio input device" is not enabled in the connection dialog

capture-20160201-134530.mp4 video file (no sound)

(2). If FFmpeg is installed:

If you check "Use FFmpeg.exe to combine audio into video file" in the options settings

- If you have enabled "Use audio input device" in the connection dialog

capture-20160201-134530.mp4 Video file with audio

- If "Use audio input device" is not enabled in the connection dialog

capture-20160201-134530.mp4 video file (no sound)

If you do not check the option "Use FFmpeg.exe to combine audio into video file"

- If you have enabled "Use audio input device" in the connection dialog

capture-20160201-134530.mp4 video file (no sound)

capture-20160201-134530.wav audio file

- If "Use audio input device" is not enabled in the connection dialog

capture-20160201-134530.mp4 video file (no sound)

13 Configuration file(VCapStream.ini)

A settings file named VCapStream.ini is automatically generated.

The VCapStream.ini file attempts to save it in the folder where the application is installed, but if the application is installed in a system-protected folder such as "C:\Program Files" or "C:\Program Files (x86)", the file cannot be written to by the application, so VCapStream.ini is saved in the application settings folder.

In most cases, it is created in the folder indicated by the following path:

•C:\ProgramData\GUSUKU\VCapStream

The items in VCapStream.ini are explained below.

[SETTING]	Settings section
LANG=	Automatic language selection (default)
//LANG=ja	Force language to Japanese
//LANG=en	Force language to English
[LOCAL_SRC]	Local Device Settings
CAMERA_NAME=Logi C270 HD WebCam	The name of the last connected camera
FRAME_WIDTH=640	Frame size (width)
FRAME_HEIGHT=480	Frame size (vertical)
FRAME_RATE=15	frame rate (fps)
AUDIO_INPUT_ENABLE=True	Microphone input availability (True/False)
AUDIO_INPUT_NAME=Microphone (Logi C270 HD WebCam)	Microphone device name
AUDIO_SAMPLE_RATE=16000	Audio sampling rate
[REMOTE_SRC]	Server connection settings
SERVER_NAME=192.168.1.26	The host name/IP address of the last connected server
SERVER_PORT=8080	TCP port number of the last connected server
[OPTION]	Optional settings
VIDEO_DIR=D:\Data	Path to the folder where video files are saved
VIDEO_FILE_NAME = Capture	video file name
REC_FRAME_COUNT=0	Maximum number of frames to save (0 = no limit)
MERGE_AUDIO_TO_VIDEO=True	Use FFmpeg to merge audio into a video file
SNAPSHOT_DIR=D:\Data	Path to the snapshot storage folder
SNAPSHOT_FILE_NAME=snapshot	Snapshot save file name
LISTEN_PORT=8080	TCP port number to listen on when the server is running
START_SERVER_AT_STARTUP=True	Start the server automatically when the computer boots up.
SHOW_CALL_RESPONSE=True	Display permission request screen when called.
ENABLE_DOWN_ONLY_CONNECT=True	Enable server connections without permission
RING_TONE=1	Types of ringtones

(0-4: 0 = No ringtone)

0 = No ringtone

1 = Beep-beep (intermittent sounds of the same pitch)

2 = Peep-peep (repeating high and low tones)

3 = Pipopipo (short repetitions of high and low tones)

4 = Piropiro (even shorter repetitions of high and low tones)

AUDIO_OUTPUT_NAME=Speaker (USB Speaker)

Audio output (speaker) device name

DFLT_CAMERA_NAME=Logi C615 HD WebCam

Default camera name

DFLT_FRAME_WIDTH=640

Default camera frame width

DFLT_FRAME_HEIGHT=480

Default camera frame height

DFLT_FRAME_RATE=15

Default camera frame rate

DFLT_AUDIO_INPUT_NAME=Logi C615 HD WebCam

Default microphone name

DFLT_AUDIO_SAMPLE_RATE=16000

Default audio sample rate

DFLT_AUDIO_INPUT_ENABLE=True

Default microphone input availability

CONNECT_AT_STARTUP=True

Connects camera and microphone upon startup.

[HOSTS]

Host information settings

HOST_000=192.168.1.24,8080,My main work laptop

Host 0's IP address, port, and description

HOST_001=192.168.1.26,8080, Laptop for web browsing

Host 1's IP address, port, and description

HOST_002=192.168.1.40,8080, Work laptop

Host 2's IP address, port, and description

HOST_003=192.168.1.58,8080, Work Desktop PC

Host 3's IP address, port, and description

HOST_004=192.168.1.100,8080, Main Desktop PC

Host 4's IP address, port, and description

:

:

:

14 [Update history]

Ver.1.00 2026/01/13

- Initial Release

Ver.1.01 2026/01/31

- Added a checksum to the transferred data.
- If FFmpeg is installed, it will launch ffmpeg as an external program to combine the audio and video and save them into a single file.
- Fixed a bug where audio from the server could not be saved to the video file.
- Added audio input sample rate setting.
- Added streaming header items (image size, audio sample rate, etc.).

Ver.1.02 build 0001 2026/02/01

- Changed the way to check whether FFmpeg is executable.
- Updated the Help file (added installation instructions, data file explanations, and stream data explanations)

Ver.1.02 build 0003 2026/02/05

- Fixed an issue where the image display area on the initial screen was incorrectly sized in some environments.
- Fixed the sound button to be disabled if the stream does not contain audio.
- Changed the window size to adjust when connecting to a server.

Ver.2.00 beta 0001 2026/03/04

- It is now possible to simultaneously select camera and microphone connections and server connections.
- At the same time as receiving video with audio from the server, it is now possible to send video with audio from a camera and microphone connected to a PC to the server.
- The server side can now play audio and images from the client.
- It is now possible to send and receive video with audio in both directions.
- It is now possible to switch the object being played on the display screen .(Server screen, client screen, image from my camera)

Ver.2.00 build 0001 2026/06/01

- Added a feature to connect to the default camera and microphone upon startup.
- A server calling function has been added.
- The operation of the two-way communication system has been simplified.
- A server selection list has been added.
- A feature to play a ringtone has been added.

15 [Acknowledgments]

We would like to thank the following people who provided us with the NuGet packages used in this program.

- Accord.Video.DirectShow Created by: Accord.NET

Used for capturing images from the camera, obtaining camera information, camera settings, etc.

- Accord.Video.FFMPEG Created by: Accord.NET

Used for saving and playing video files.

- NAudio Created by: Mark Heath & Contributors

Used for audio input from the microphone, audio output to speakers, and for saving and playing audio files.

If FFmpeg is installed, this program will combine audio and video when saving a video file to create a video file with audio (mp4).

Thank you for providing these useful libraries.

16 [Terms of use]

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This software uses the following NuGet packages.

Copyright information for each package is provided in the license information for each package.

- Accord.NET Framework (Accord , Accord.Video , Accord.Video.DirectShow , Accord.Video.FFMPEG)

The license information for this package is available in Accord.NET-Framework-license.txt.

- NAudio

The license information for this package is available in NAudio-license.txt.

17 [contact address]

GUSUKU

root@gusuku.org

[Website]

<https://www.gusuku.org/>

[Software release site]

<https://www.gusuku.org/software>