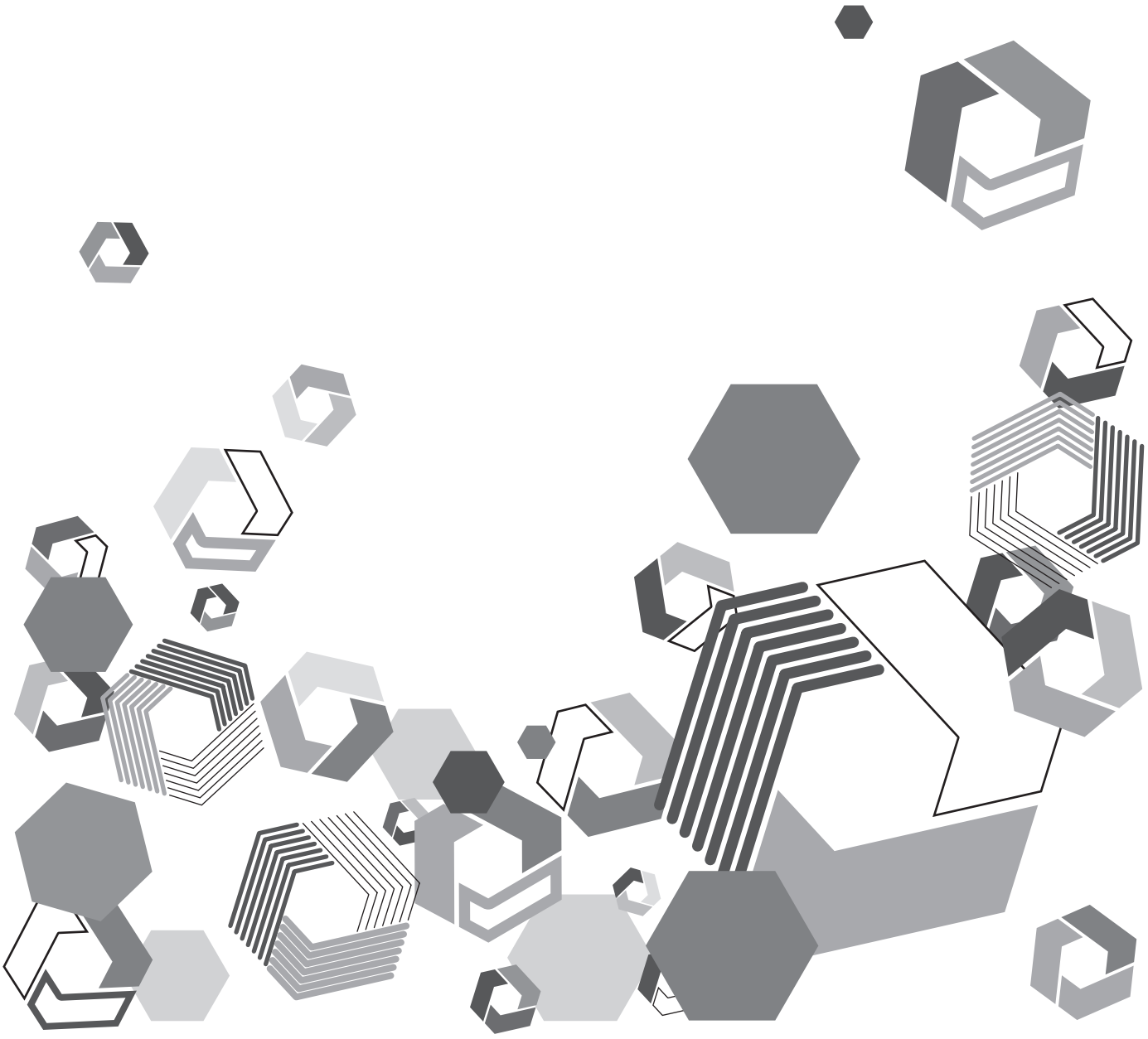
Panasonic

Instruction manual

Wearable Camera Liveviewer
AG-NAMS7W/AG-NAMS7A



W0621KZ0 -PB

DVQP2580ZA

Contents

Introduction **3**
Trademarks 3
Licenses 3
Information on software used with this application 3
Right of publicity 3
Copyright 3
About this manual 4
Terms in this manual 4
About the network settings 4
Usage precautions 4
Notice regarding security 5
About the Liveviewer **6**
Initial setup **6**
Registering the Liveviewer 6
Connecting to the camera (Windows) 8
Camera selection screen 8
Selecting cameras 9
Video display screen (Windows) **10**
Watching camera videos (Windows) **12**
Filming and setting the camera remotely (Windows) 13
Filming a video remotely 13
Taking still images remotely 14
Camera Settings 15
Shooting settings 15
Video transmission settings 17
Recording videos on the computer (Windows) 18
Recording a video being displayed 18
Saving still images from the video being displayed 20
Switching to multiple-screen display (Windows) 21
Creating display groups (Windows) 22
Selecting a display group 22
Deleting a display group 23
Sharing still images (sketch share) (Windows) 24
Viewer Settings (Windows) 26
General Setting 27
Device Registration Data 28
Connection Settings 29
Video transmission 29
Record settings to PC 29
Other 30
version 30
Content management (Windows) **31**
Recorded data window 31
Checking recorded data 32
Playing back recorded data (single-screen playback) 33
Playing back recorded data (4-screen playback) 35
Protecting files from accidental deletion (protection) 37
Deleting recorded data 37
Displaying recorded data in the explorer 38
Checking the recorded data information (properties) 38
Report data window 39
Importing data 40
Video display screen (Android) **42**
Watching camera videos (Android) **43**
Filming a video remotely (Android) 44
Sharing still images (sketch share) (Android) 45
Settings (Android) 46
Viewer App Settings 46
Camera App Settings 46
Other Tools 46
Help 46
Terms of Use 47
version 47
About this app 47

Introduction

Trademarks

- Microsoft and Windows are trademarks or registered trademarks of Microsoft Corporation in the United States and other countries.
- Android is a trademark of Google LLC.
- Screen pictures are used in conformity with the Microsoft Corporation guidelines.
- The other names, company names, and product names are trademarks or registered trademarks of their respective companies.

Licenses

- This application is licensed based on the AVC Patent Portfolio License. The application is not licensed for any use other than the personal uses indicated below as long as the purpose of such uses is not to make profits.
  - Recording of videos complying with the AVC standard (“AVC videos”)
  - Playback of AVC videos recorded by the user for personal and non-profitable purposes
  - Playback of AVC videos obtained from a third party who has acquired a license

See the website of the American company MPEG LA, LLC for more details (http://www.mpegla.com/).

Information on software used with this application

This application incorporates the following software:

- Wearable Camera Liveviewer (Windows® version)
  (1) Software developed independently by Panasonic Corporation
  (2) Software owned by a third party and licensed to Panasonic Corporation
  (3) Open-source software

The software categorized as (3) is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY, without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
See the license conditions listed in the attached text file “EULA.rtf” for more details.

This software is based in part on the work of the Independent JPEG Group.

- Wearable Camera Liveviewer (Android™ version)
  (1) Software developed independently by Panasonic Corporation
  (2) Software owned by a third party and licensed to Panasonic Corporation
  (3) Software licensed based on the GNU LESSER GENERAL PUBLIC LICENSE Version2.1 (LGPL V2.1).
  (4) Open-source software licensed based on conditions other than LGPL V2.1.

The software categorized as (3) to (4) is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY, without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
See the license conditions listed in [About this app] under [Setting] for more details.

For information on how to obtain the source codes, see the following website.
https://panasonic.biz/cns/sav/
Panasonic does not respond to inquiries regarding the content of the source codes obtained by the users.

Right of publicity

The user is responsible for the protection of the privacy and the right of publicity of the subject when using this application.

Copyright

Based on the copyright law, the pictures, video recordings, and audio recordings you have made by yourself can be used only for your personal enjoyment without the authorization of the right holder. Note that recording may be restricted even when the purpose is personal enjoyment.

About this manual

- This manual describes how to use the Android and Windows versions of the Wearable Camera Liveviewer taking the example of watching videos of USB cameras.
  Available functions are limited on the Android version. “(Windows)” or “(Android)” is indicated depending on the function.
- Panasonic Corporation shall not be liable for any damage caused as a result of the incorrect setting of the network configured to use this application. Panasonic Corporation shall not be liable for any damage caused by the use of this application.
- In this document, pages to be referred are indicated with (→00).
- The content of this manual is subject to change without notice.
- Unauthorized copying in whole or part of this document is prohibited.

Terms in this manual

- In this manual, the Wearable Camera Liveviewer that has been installed on a computer (Windows) or a tablet (Android) and for which initial setup has been performed is referred to as “Liveviewer”.
- In this manual, the USB camera or the wearable camera (AG-WN5K1 by Panasonic Corporation) connected to a tablet*2 to which Wearable Camera LiveCast*1 has been installed is referred to as “camera” when no more precise term is required.
  *1 AG-SWN7A or AG-SWN7W (Panasonic Corporation)
  *2 Tablet (Android or Windows)

About the network settings

- When the bandwidth of the network is degraded, the image/sound may not be output/recorded correctly or may be delayed.
- Depending on the signal, the data may be intercepted. It is highly recommended to use encryption at the wireless access point.
- Information may leak in case changes or modifications are made to the application. Do not make changes in or modify the application.
- When disposing of the computer or tablet to which this application has been installed or giving it to another person, it is recommended to delete the data saved on the storage media and uninstall the application.
- The network settings may differ depending on the corporate LAN and the service provider settings. Ask the network administrator regarding the network settings.
- The angle of view or the bit rate of the video being displayed or recorded may change automatically depending on the network conditions. The video may also freeze temporarily depending on the communication environment when displaying or recording the video.

Usage precautions

- Do not do the following when this application is running. Otherwise, troubles (data corruption, etc.) may occur.
  – Turning off or restarting the computer or the tablet
  – Changing the user or logging out
  – Disconnecting from the network
  – Using another piece of software (especially video recording or encoding software that uses lots of CPU resources and a large amount of memory)
- If this application cannot operate due to insufficient system resources, close the other software applications and then restart this application.

Notice regarding security

When using this application, you may encounter the following troubles.

- Leaking of the user's private information via this application.
- Illegal operation of this application by malicious third parties.
- Interference with or stopping of this application by malicious third parties.

Take the necessary security measures on the computer or the tablet.

- Limit the number of users that can log in and set up passwords.
- Use passwords that are hard to guess.
- Change the passwords periodically.
- Panasonic Corporation and its affiliate companies will not directly inquire as to a customer's password. Do not give your password in answers to any such direct inquiries.
- To prevent leakage of information when repairing, maintaining, disposing of, or giving the computer or tablet, delete the browsing history of the browsers and the passwords that have been saved.

Caution regarding security when using a wireless LAN product

The wireless LAN will communicate information between computers and mobile devices and the wireless access points using radio waves instead of a LAN cable. It also allows easy LAN connection as long as the device is within the range of the radio waves. However, radio waves can reach anywhere in their range regardless of obstacles (walls, etc.), so they may cause the following problems if the settings regarding security are not configured.

- Interception of communication content
  Malicious third parties may intercept the radio waves, and private information such as ID, passwords, credit card numbers, or the content of emails may be intercepted.
- Unauthorized invasion
  Malicious third parties may access a private or corporate network without authorization and steal private or classified information (leakage of information), release fraud information by impersonating a specific person (spoofing), rewrite and distribute the intercepted content (falsification), or destroy data or systems by spreading computer viruses (destruction), etc.

The wireless LAN adapter and the wireless access point have security mechanisms to deal with these problems. Therefore, using these mechanisms on the wireless LAN product before using the application will decrease the possibility that these problems occur.

Security settings may not be set up on the wireless LAN equipment at the time of purchase. To reduce the possibility that security problems occur, make sure to set up all the security settings on the wireless LAN equipment in accordance with the operating instructions of each wireless LAN device before using it. Note that the security mechanisms may be broken by special methods depending on the specifications of the wireless LAN.

It is recommended to fully understand the risks if the security settings are not set up and to set up these security settings under the judgment and responsibility of the user before using the application.

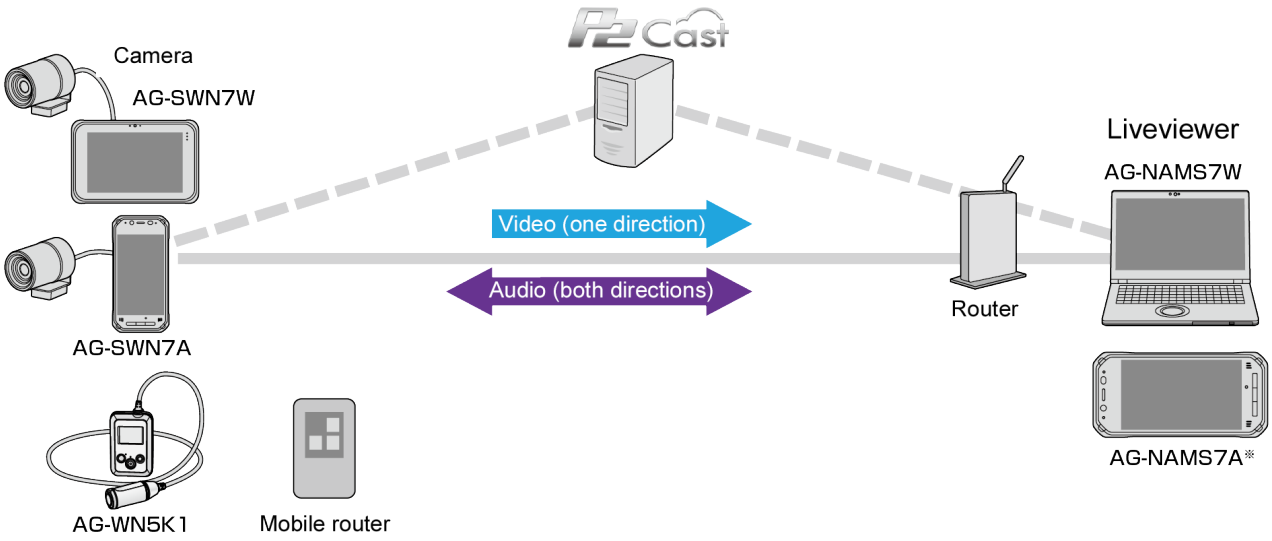
- Panasonic Corporation will offer no compensation for content not recorded in case of problems in the communication environment or failures of the hard disk (HDD).

Disclaimer

- Information recorded within the application may be modified, be lost or leaked in case of incorrect use, static electricity occurrence, accident, malfunction, repair, if data is saved in a shared folder or on a shared drive, or due to other causes. Panasonic Corporation shall not be liable for any direct or indirect damage caused by the modification or loss of information, including private information.

About the Liveviewer

By connecting a camera to a network, it is possible to display the video from the camera on a computer or a tablet. A single computer can display videos from up to 12 cameras.
The user can remotely operate the camera, record the camera videos on the computer, and manage data saved on the computer.



* Usable functions are limited to the following.
- Watching camera videos (→43)
- Filming a video remotely (→44)
- Still image sharing (→45)
- Settings (→46)

Perform the initial setup after installing the Liveviewer on the computer or tablet.

Initial setup

When starting the application for the first time after the installation, you will be required to register the devices and then select the cameras*1 to be able to use the Liveviewer.
*1 Not required with the Liveviewer (Android).
The explanations are given taking the operation on a computer as an example.

Preparation

- Connect the computer to a network.
- Connect a headset or a microphone and speakers/earphones (or headphones) to the computer.
- Obtain the following information from the P2 Cast administrator.
  - P2 Cast hostname
  - ID of the user who will log in to P2 Cast
  - Password of the login user
  - Nickname of the Liveviewer
- On the Windows display settings*2, set the display size to 100%.

*2 With the Liveviewer (Android), set the font size to the default setting in the display settings.

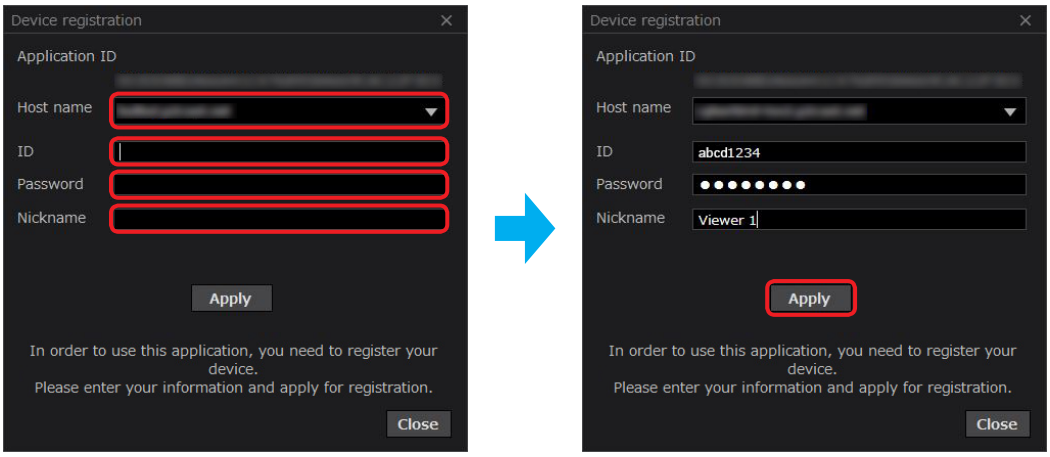
Registering the Liveviewer

1 Double-click on the desktop screen.
- The device registration screen, on which the application ID has been entered, appears.
  (The application ID is required to register the device to P2 cast.)
- The terms of use are displayed with the Liveviewer (Android).
  When you tap on [Agree], the confirmation screen to authorize access to the microphone and storage will appear, then tap [Agree]. The device registration screen is displayed.

2 Configure each setting* and click [Apply].

- The device registration processing screen is displayed.

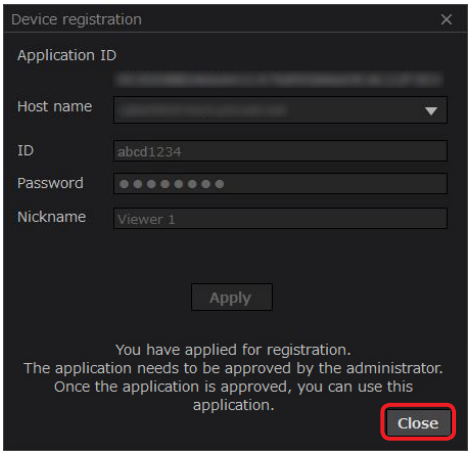
  * Click ▼ of [Host name] to display a list of hostnames, then select the hostname you have obtained.
    Enter the information you have obtained from the P2 Cast administrator in [ID], [Password], and [Nickname].



3 Click [Close].

- With the Liveviewer (Android), tap [Close application].
- The P2 Cast shortcut is created on the desktop screen*.

  * The shortcut is created on the home screen of the tablet with the Liveviewer (Android).
- The browser is launched and the P2 Cast login screen is displayed.
- The P2 Cast administrator accepts the device registration demand.
  The demand is accepted when a Liveviewer is registered in P2 Cast.



4 Request a device registration to the P2 Cast administrator in P2 Cast.

- See the P2 Cast instruction manual for the device registration procedure.

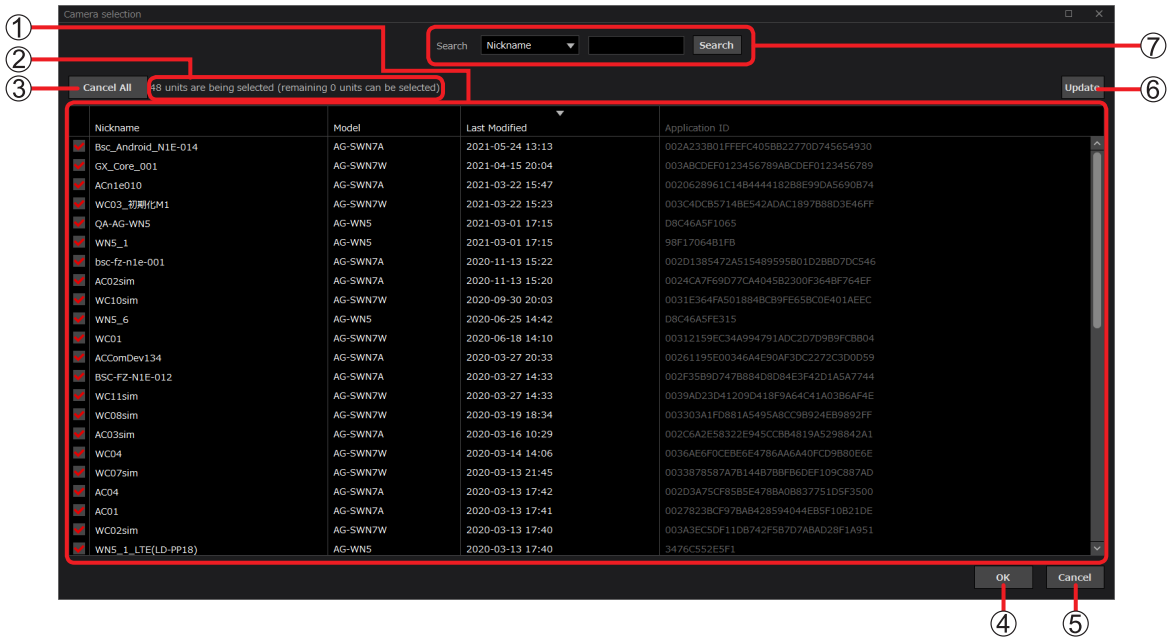
The device registration is complete.

- With Liveviewer (Windows), select a camera. (→8)
- With the Liveviewer (Android), the video display screen is displayed when the application is launched. (→42)

Connecting to the camera (Windows)

Select the cameras whose video you want to watch from the cameras registered to P2 Cast. (→9)
The camera selection screen is displayed when launching the application after the device registration for the Liveviewer has been completed.

Camera selection screen



① Camera list:

The cameras registered to P2 Cast are displayed. Up to 50 cameras are checked in the order of [Last Modified].

- [Checkboxes] : Selected cameras are indicated with ✓.
- [Nickname] : The nickname entered when the camera was registered*.
- [Model] : Displayed automatically when the camera is registered.
- [Last Modified] : Date and time when the camera was connected for the last time.
- [Application ID] : ID displayed when the camera has been registered*.

*See the instruction manual of the Wearable Camera LiveCast for more details.

② Camera selection information:

Displays the number of selected cameras and the remaining number of cameras that can be selected.

③ [Cancel All] button:

Unselects all the selected cameras.

④ [OK] button:

Displays the selected cameras on the video display screen. (→9)

⑤ [Cancel] button:

Closes the screen without saving the selection.

⑥ [Update] button:

Refreshes the camera list.

⑦ Search field:

Narrows the list of displayed cameras. (→9)

● **Note**

- Refer to the following if the cameras have not been registered.
  - LiveCast : “Initial setup” in the instruction manual of the Wearable Camera LiveCast
  - AG-WN5K1 : [Other] under [Viewer Settings] (→30)

Selecting cameras

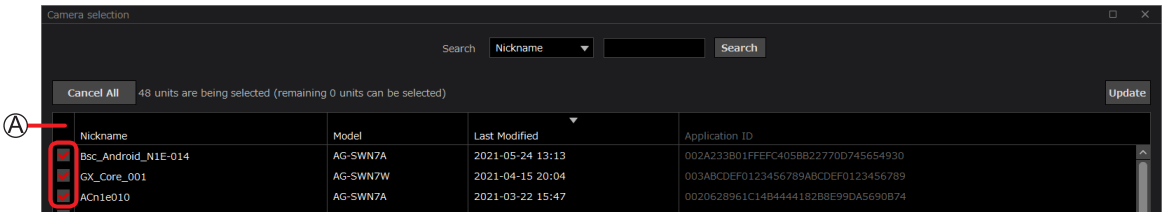
Up to 50 cameras can be selected.

Preparation

- Double-click on to launch the Liveviewer.

1 Check the cameras whose image you want to watch on the camera selection screen.

- If you do not want to select a camera with the ✓ , click ☑ to remove the ✓.
  - – You can change the display order by clicking Ⓐ, [Nickname], [Model], or [Last Modified].
  - – You can search for the cameras you want to select. (Explained below)



■ Search for cameras

Select a search category, enter a keyword and then click [Search] to narrow the displayed cameras.

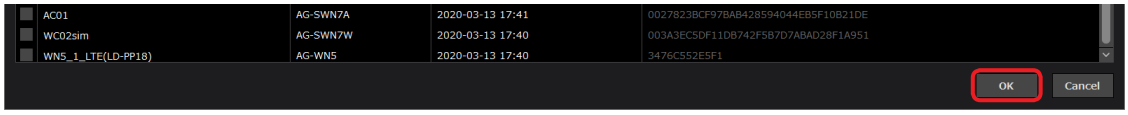
❶Search category : Click ▼ to select [Nickname] or [Model].

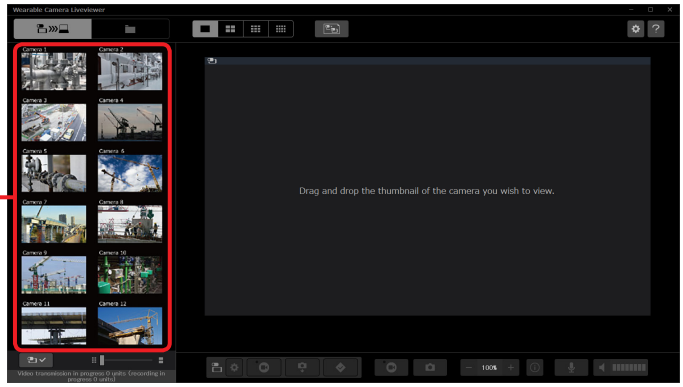
❷Keyword entry field : You can enter up to 64 full-width or half-width characters.

❸[Search] button : Click this button to display a list of cameras meeting the search conditions.

2 Click [OK].

- The initial setup is complete. The thumbnails for the selected cameras are displayed on the video display screen.





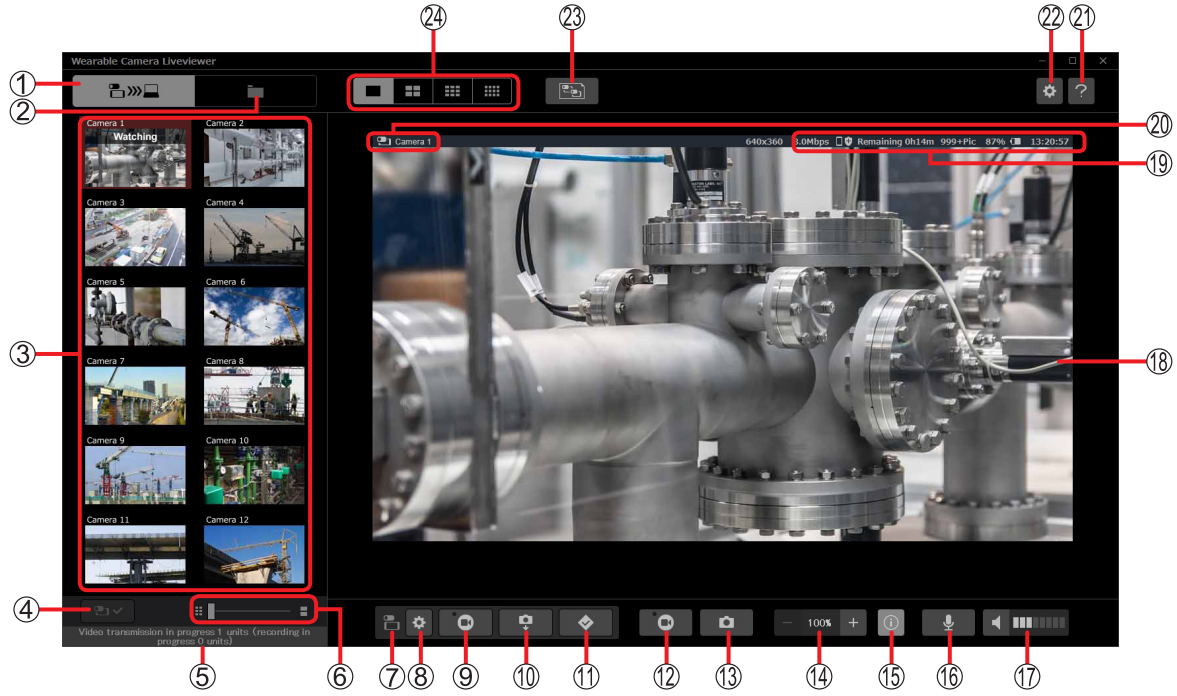
● **Note**

- You can select cameras even after the initial setup has been completed. (→12)
- If the cameras are not connected to the network, only the camera selection is available. The thumbnails for the selected cameras are not displayed on the video display screen.
- You can copy “C:/Users/user name/AppData/Roaming/Panasonic/WearableCameraLiveViewer/CameraListConfig.xml” to the following folder on the tablet (Android) to apply the camera selection of the Liveviewer (Windows) to the Liveviewer (Android).
  Internal storage/Android/data/com.panasonic.AG_NAMS7A/WearableCameraLiveViewer

Video display screen (Windows)

Example: Video display screen (single screen)

(See page 21 for information on the video display screen (multiple screens).



① Video display screen button

② Content management screen button

Displays the content management screen. (→31)

③ List of online cameras:

The thumbnails are refreshed periodically. The names of the cameras are displayed above the thumbnails.

④ Camera selection button:

Used to select the camera you want to display. (→12)

⑤ Number of transferring and recording cameras:

- Video transmission in progress : Number of cameras whose video is being transferred to the Liveviewer.
  - – Number of cameras whose video is being displayed. (→12)
  - – Number of cameras whose video is being recorded to the computer. (→18)
- recording in progress : Number of cameras whose image is being recorded to the computer. (→18)

⑥ Thumbnail size adjustment bar:

Drag the bar to the right to enlarge the thumbnails or to the left to reduce them.

⑦ Camera operation button icons:

Icons of the buttons (⑧ to ⑪) used to remotely set and operate the cameras from the computer.

⑧ Camera setting button:

Used to change the camera settings from the computer. (→15)

⑨ Video filming button:

Used to film with the camera being displayed. (→13)

⑩ Still image capture button:

Captures a still image with the camera from a video being displayed and sends it to the computer. (→14)

⑪ Mark button:

- Sends instruction to the camera to add a mark to the video at the time the instruction was sent. (→13)
- Adds a mark to the video being recorded to the computer at the specified time. (→18)

⑫ Video recording button:

Records the video being displayed to the computer. (→18)

⑬ Still image save button:

Saves still images from the video being displayed to the computer. (→20)

⑭ **Zoom buttons:**

: zoom in, : zoom out. The magnification ratio is displayed between and .

Each click on a button changes the magnification ratio by 50% in the range of 100% to 500%.

You can also change the magnification ratio by rotating the scroll wheel while keeping the “Ctrl” key pressed.

⑮ **Info button:**

Hides the camera information displayed in ⑲. Click this button again to display the camera information again.

⑯ **Microphone button:**

: the sound is sent from the computer, : the sound is not sent

⑰ **Volume button:**

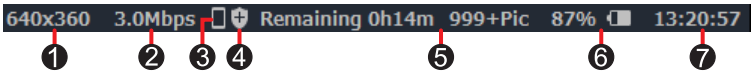
: the sound from the camera is output, : the sound from the camera is not output (the sound from the camera is displayed as .)

⑱ **Image display area:**

Displays the image from the camera. Images with an aspect ratio of 4:3 are displayed with black bars at the right and left.

⑲ **Camera information:**

Information of the camera indicated in ⑳.



❶ Resolution of the video being displayed.

❷ Bit rate of the video being displayed.

❸ Video save destination:

: saved to the microSD card, : saved to the internal storage*1

❹ Data scrambling*1:

: the signal is scrambled before being saved, no icon: the signal is not scrambled.

❺ Video: Remaining available time for filming. (h for hours and m for minutes) /

Still image: Remaining number of still images that can be taken ([999+] is displayed when more than 1000 images can be taken).

“Remaining -h-m -Pic” is displayed with AG-WN5K1 cameras.

❻ Battery level:

: More than 90% of the battery power remains.

: Between 50% and 90% of the battery power remains.

: Between 10% and 50% of the battery power remains.

(Blinking) : Less than 10% (tablets (Android)) or less than 13% (tablets (Windows)) of the battery power remains.

*1 : Charging

*2 : Connected to AC power supply.

Only the icon is displayed with AG-WN5K1 cameras.

❼ Timestamp*1: The current time

*1 Not displayed with AG-WN5K1 cameras.

*2 Not displayed with USB cameras.

⑳ **Camera name:**

Displays the name of the camera whose video is being transferred and the camera icon .

- is displayed when data processing, such as transfer of still images, is being performed on the camera.

㉑ **Help button:**

Displays operation explanations.

㉒ **Liveviewer settings button:**

Used to configure the Liveviewer. (→26)

㉓ **Display group button:**

Registers the screens currently being displayed as a group to be able to switch to the screens displayed at the time of registration just by selecting a display group. (→22)

㉔ **Screen switching buttons:**

Switches the number of screens displayed in the display area between 1, 4, 9, and 12. (→21)

● **Note**

- Move the mouse cursor onto a button to display explanations about the button.

Watching camera videos (Windows)

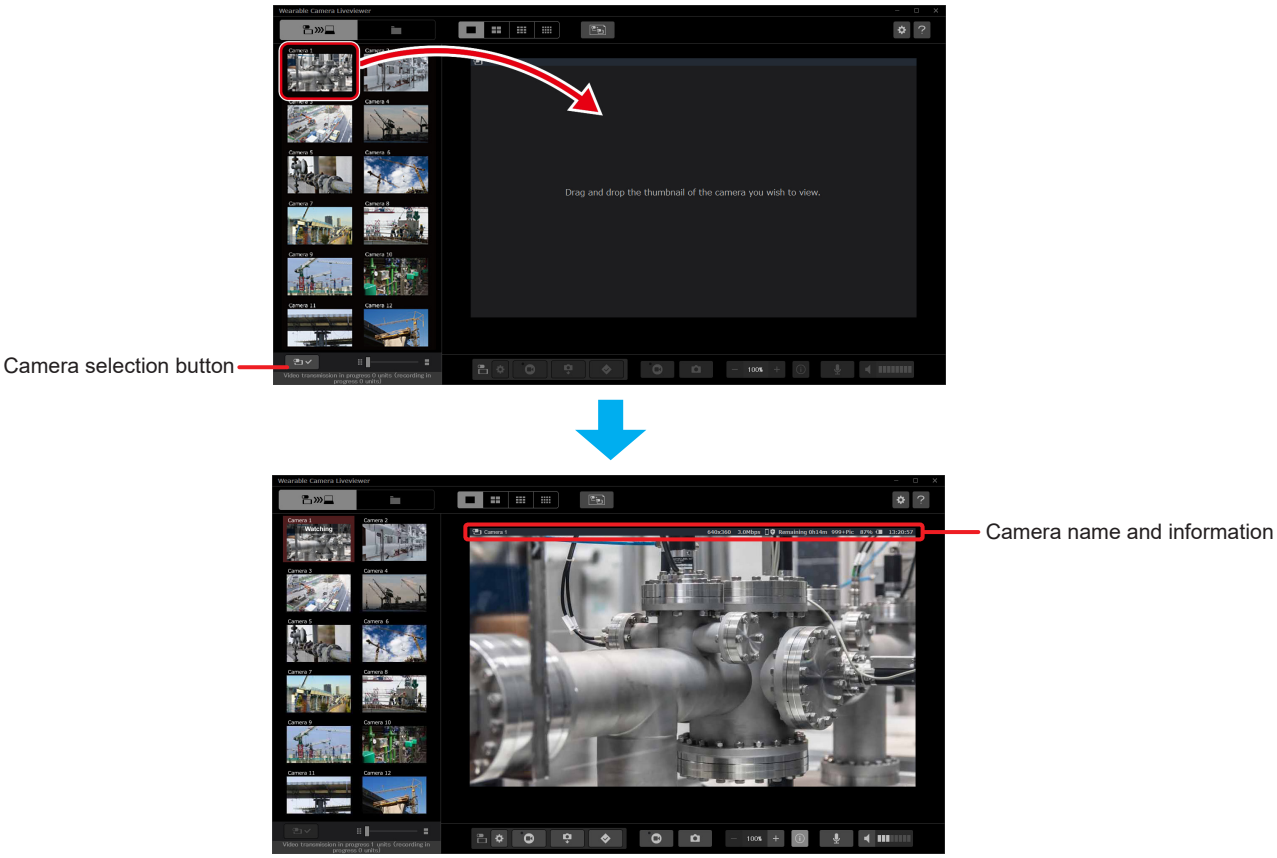
You can watch videos from the cameras on a computer.

Preparation

- Double-click to launch the Liveviewer.
- Check that the cameras are connected to the network.
  (A thumbnail of the camera image is displayed when a camera is connected to the network.)
- To add a camera, click the camera selection button. (→9)

1 Drag and drop the thumbnail of the camera you want to display.

- “Connecting XX%” is displayed on the thumbnail.
  When the connection is complete, the video from the camera is displayed in the display area and the camera name and information are displayed above the image.
  The thumbnail turns reddish brown and “Watching” is displayed.
- You can also display the video by clicking on the thumbnail.
- [■] is displayed on the thumbnail when the mouse cursor is placed onto a thumbnail with “Watching” displayed. Click this icon to cancel the connection.



Video display screen (single screen)

2 Click [■] on a thumbnail with “Watching” displayed to end the display of the video.

- [■] is displayed on the thumbnail when the mouse cursor is placed onto it. Click this icon to stop displaying the video.

● **Note**

- Do not disconnect the headset or microphone and speakers/earphones (or headphones) connected to the computer while a video is being displayed.
  Otherwise, a loud sound (noise) may be output.

Filming and setting the camera remotely (Windows)

You can remotely operate the camera from the computer to film videos and capture still images.

- Filming a video remotely : Make a video from a camera whose image is being displayed. (Explained below)
- Taking still images remotely : Take and save still images to a specified folder on the computer. (→14)
- Camera settings : Configure the shooting and the other settings of the camera. (→15)

Filming a video remotely

Operate the computer to save videos on the camera*.

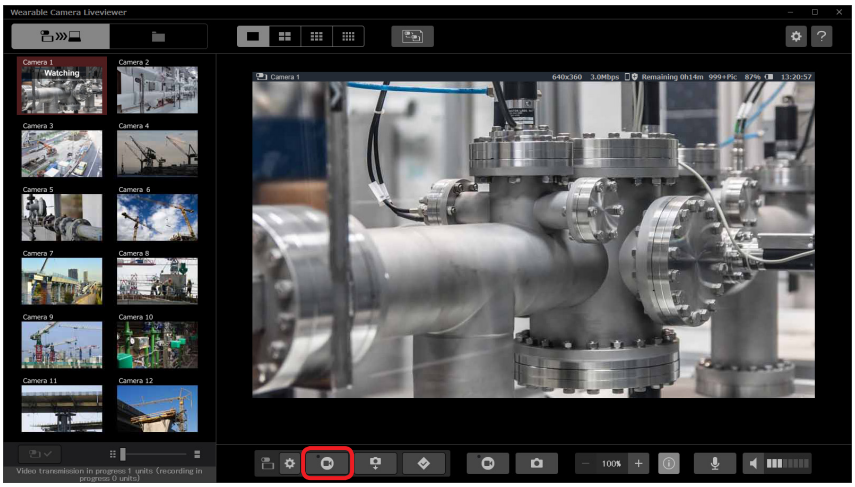
* The save destination can be either the internal storage of a tablet connected to a USB camera or a microSD card installed to the tablet.
The save destination can be selected on the camera. See the instruction manual of the Wearable Camera LiveCast for more details.
With AG-WN5K1 cameras, the videos are saved to a microSD card installed to the camera.

Preparation

- Display the video display screen (single screen). (→12)

1 **Click** .

- The button changes to and the camera starts filming.



● **Note**

- During filming, click to send an instruction to the camera to add a mark to the video at the time the instruction was sent.
  Click this icon when filming is stopped to start filming with the camera and add a mark at the beginning of the video.
- Marks cannot be added with AG-WN5K1 cameras.

2 **Click** .

- The button returns to and the filming is stopped.
  The video is saved to the camera.

● **Note**

- If filming is not possible, check the available space in the microSD card or the internal storage.
- Closing the Liveviewer does not stop the filming. To stop the filming, click or stop the filming operation directly on the camera.

Taking still images remotely

You can take still images while watching the video being displayed from the computer.
The still images taken on the camera are sent to the computer and saved to the specified folder.

Preparation

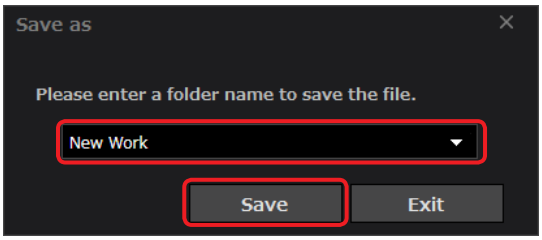
- Display the video display screen (single screen). (→12)

1 **Click** .

- A still image is taken and sent to the computer.
- The still image and a name entry window for the still image save folder are displayed.
  The still image is displayed for around 3 seconds at the bottom left of the display area.
  Create a new folder or select an existing folder to save the still image.

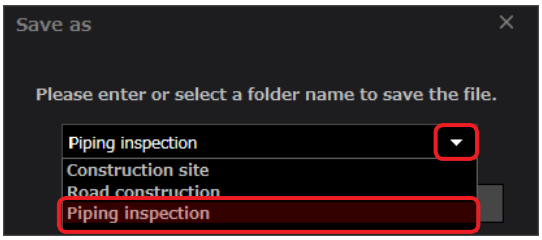
■ **New folder creation**

1 **Enter a folder name and click [Save].**

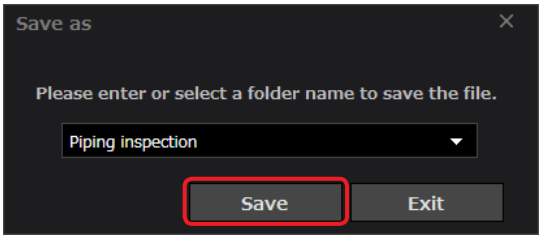


■ **Existing folder selection**

1 **Click ▼ and then click a folder.**



2 **Click [Save].**



● **Note**

- The still images saved to the computer may differ from the image displayed in the display area due to time lag that may occur depending on the network conditions.
- The still image may not be received depending on the network environment. In such a case, repeat the procedure from step **1**.

Camera Settings

Some of the camera settings (shooting settings and video transfer settings) can be configured from the computer while the camera video is being displayed.

Preparation

- Display the video display screen (single screen). (→12)

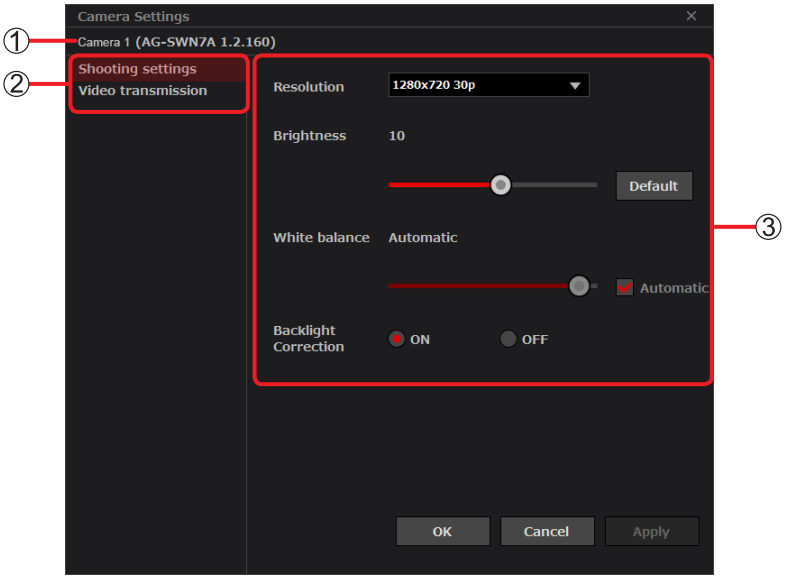
1 **Click** .

- The camera settings screen is displayed.

2 **Select a setting and configure the parameters.**

- For details on the configuration procedure, see Shooting settings (Explained below) and Video transmission settings (→17).

Example: Setting screen of the USB camera



①**Camera information*** : Camera name (product number, version)
* With AG-WN5K1 cameras, only the camera name (product number) is displayed.

②**Camera settings** : Click a setting to select it.

③**Setting parameters** : You can configure the parameters of the setting selected in ②.

3 **Click [Apply].**

- The modified parameters are applied.

4 **Click [OK].**

- The settings are saved and the camera setting screen closes.

● **Note**

- Click [Cancel] to close the screen without saving the changes.

Shooting settings

You can change the settings related to shooting and filming.

■ **WAT-02U2D/WAT-03U2D**

[Resolution]: Used to switch the video quality. Click ▼ and select a setting.
(This setting cannot be changed while the camera is filming.)

- WAT-02U2D:1920×1080 30p / 1280×720 30p
- WAT-03U2D:1280×960 30p / 1280×720 30p

[Brightness]: Used to adjust the brightness of the image.
Adjust between -128 and 127 on the slider bar.
(Click [Default] to return the setting to the default value of the USB camera. The default value is WAT-02U2D:0 / WAT-03U2D:10.)

[White balance]: Configure this setting when the colors do not seem natural.
Automatic (Click ☐ and turn it into ☑ to automatically adjust the white balance.) /
Manual (Click ☑ and remove the ✓ to adjust between 2800 and 6500 on the slider bar.)

[Backlight Correction]: Makes the screen brighter to make it easier to see when exposed to light from the back of the subject.
ON / OFF

■ CX-WE100

[Resolution]: Used to switch the video quality. Click ▼ and select a setting.
(This setting cannot be changed while the camera is filming.)
1920×1080 30p / 1280×720 30p

[Maximum ISO sensitivity]: Used to set an upper limit for the ISO sensitivity.
6400 / 12800

[White balance]: Configure this setting when the colors do not seem natural.
Automatic / Sunny / Cloudy

[Shake correction]: Used to correct the movements of the image caused by vibrations and oscillations.
Maintain level / Lens optical axis center / OFF

■ AG-WN5K1

[View angle switching]*1 : Used to change the range of subjects displayed on the screen. Click ▼ and select a setting.
Wide / Standard / Narrow

[Time stamp]*1 : Used to display the date and time on the image.
ON / OFF

[White balance]*2, 3 : Configure this setting when the colors do not seem natural.
Click ▼ and select a setting.
AWB (Automatically adjust white balance.) / Sunny / Cloudy / Indoor 1 / Indoor 2 / Fluorescent light / User setting

[Backlight Correction]*2, 3 : Makes the screen brighter to make it easier to see when exposed to light from the back of the subject.
ON / OFF

[Color Night View]*1 : Used to take bright video in color even in dark places.
ON / OFF

[Shutter speed]*3 : Sets the shutter speed. Click ▼ and select a setting.
Auto / 1/250 / 1/500 / 1/1000 / 1/2000 / 1/4000

*1 Setting condition: When the shooting mode is set to normal mode.
*2 Setting condition: When the shooting mode is set to normal mode and [Color Night View] is set to [OFF].
*3 Setting condition: When the shooting mode is set to slow-motion mode.

Video transmission settings

You can change the video transfer settings.
When the display or a video from a camera starts, the settings of [Video transmission] (→29) in the Viewer settings are applied.

[Maximum resolution]: Set a maximum for the video resolution. Click ▼ and select a setting.
1920 [FHD] / 1280 [HD] / 640 [VGA] / 320 [QVGA]

[Maximum bit rate]: Set a maximum for the video bit rate. Click ▼ and select a setting.
10 Mbps / 5 Mbps / 3 Mbps / 1 Mbps / 512 kbps / 256 kbps

[priority of Image quality and motion]: Control the video prioritizing quality or motion.
[Image quality priority]: The quality (resolution) is prioritized over the motion (frame rate).
[Motion priority]: The motion (frame rate) is prioritized over the quality (resolution).

Recording videos on the computer (Windows)

You can record videos being displayed or still images (→20) from a video being displayed to the computer.

Precautions when recording to a computer

The recording may be suspended depending on factors such as the available space in the save destination and the communication environment.

For long recording, check the remaining space in the save destination and that the communication environment is stable.

Recording a video being displayed

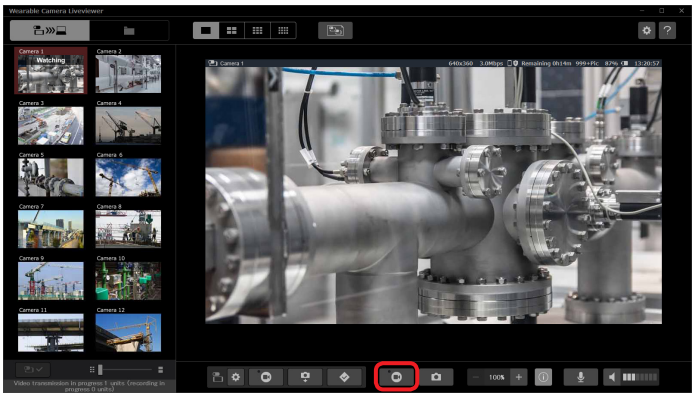
The videos being displayed can be saved to a specified folder in the mp4 format.

Preparation

- Display the video display screen (single screen). (→12)

1 Click .

- The video is recorded to the computer. The button changes to .
- When recording a video, the thumbnail turns reddish brown* and “Recording” is displayed.
  * When the video from a different camera is displayed during recording, only the frame of the thumbnail is reddish brown.
- A name entry window for the recorded video save folder is displayed.
  Create a new folder or select an existing folder.

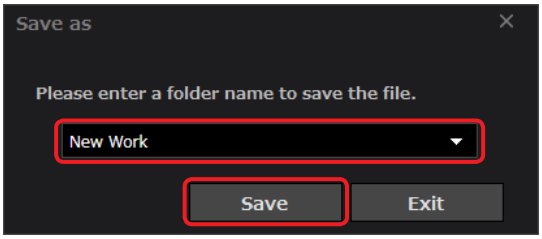


● **Note**

- Click during a recording to add a mark to the video at the time the icon was clicked.

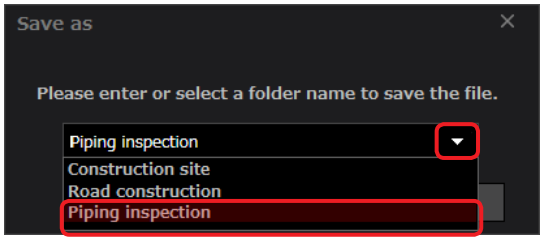
■ **New folder creation**

1 **Enter a folder name and click [Save].**

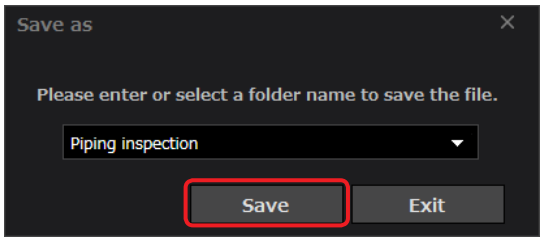


■ **Existing folder selection**

1 **Click ▼ and then click a folder.**



2 **Click [Save].**



2 Click .

- The recording to the computer stops and the video is saved to the folder. The button returns to .
- [■] is displayed on the thumbnail when the mouse cursor is placed onto a thumbnail with “Recording” displayed. The recording can also be stopped by clicking [■].

● **Note**

- Approximately 149 hours of video can be recorded to an HDD of 500 GB.
  (When recording the video from one camera with 1920 [FHD] or 1280 [HD] set for the max resolution and 10 Mbps for the max bit rate in the Video transmission settings.)
  The recording time under real usage conditions may vary depending on the subject and the communication environment.

Saving still images from the video being displayed

Parts of the videos being displayed can be saved to a specified folder as still images in the JPEG format.

Preparation

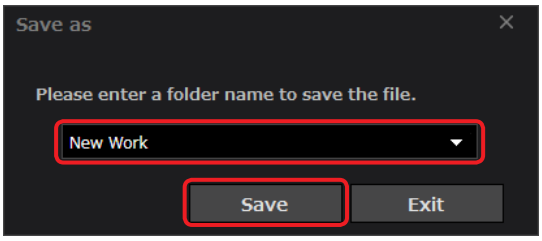
- Display the video display screen (single screen) (→12)

1 **Click** .

- A still image is captured from the video.
- The captured still image and a name entry window for the still image save folder are displayed.
  The still image is displayed for around 3 seconds at the bottom right of the display area.
  Create a new folder or select an existing folder to save the still image.

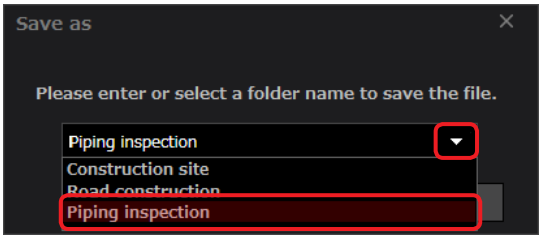
■ **New folder creation**

1 **Enter a folder name and click [Save].**

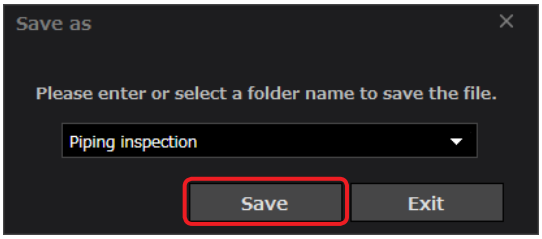


■ **Existing folder selection**

1 **Click ▼ and then click a folder.**



2 **Click [Save].**



Switching to multiple-screen display (Windows)

You can watch videos from multiple cameras on a single computer.
The display area can be divided into a multi-screen area composed of 4, 9 or 12 screens. The explanations are given for a 4-screen display.

Preparation

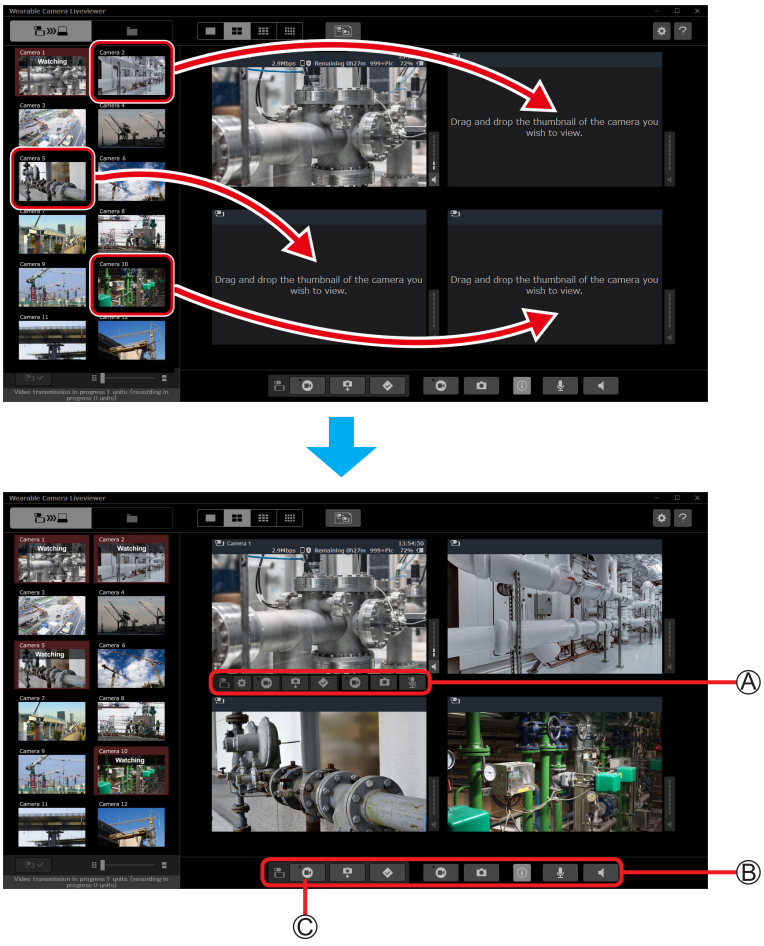
- Display the video display screen (single screen) (→12)

1 Click .

- The video currently displayed appears on the top left screen, while the other three screens are left black.
- You can click to display 9 screens or to display 12 screens.

2 Drag and drop the thumbnail of the camera you want to display into the desired screen location.

- The thumbnail you dragged and dropped turns reddish brown and “Watching” is displayed.
- You can click the thumbnail to change its position in order from the screen at the top left to the screen at the bottom right.



Video display screen (multiple screens)

● Note

- You cannot zoom in or out with multiple-screen display.
- The following information is not displayed.
  - Resolution
  - With 9-screen display: the remaining number of still images that can be taken
  - With 12-screen display: the remaining available time for filming and the remaining number of still images that can be taken
- Move the mouse cursor onto the multiple-screen to display the Ⓐ buttons.
  - The Ⓐ buttons are effective for the screen onto which the mouse cursor has been moved.
  - The sound volume of the screen onto which the mouse cursor has been moved is louder than the volume of the other screens.
- Ⓑ buttons are effective for all four screens.
  - For example, clicking (Ⓒ) will start filming with up to four cameras being displayed at once.

Creating display groups (Windows)

You can register the currently displayed screens into a group* to be able to switch to the screens displayed at the time of registration just by selecting a group.
Up to 50 display groups can be registered.
* You can also register a single screen. To do so, register a group after displaying a single screen.

Preparation

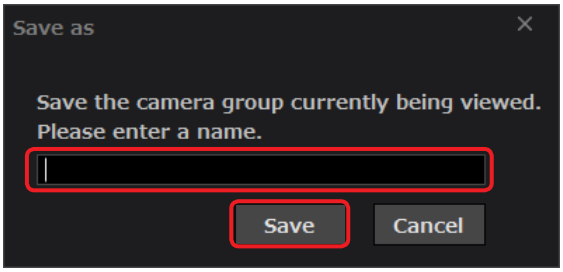
- Display the video display screen (single screen or multiple screens). (→12, 21)

1 Click and then click [Save as].

- An entry screen for the display group name is displayed.

2 Enter a group name and click [Save].

- After the registration, the group name and the number of cameras are displayed under [Recently used groups] and on the display group selection screen (→23).



Selecting a display group

Select a display group to display the videos from the registered cameras.

Preparation

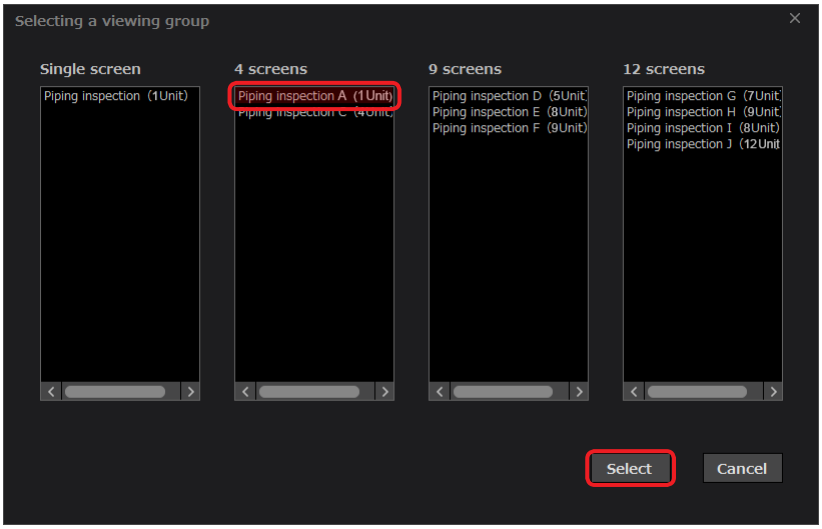
- Display the video display screen (single screen or multiple screens). (→12, 21)

1 Click and then click [Other].

- The display group selection screen, which is divided into categories depending on the number of screens, is displayed.

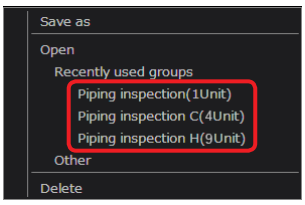
2 Click on a display group and click [Select].

- The display switches to the registered camera videos.



● **Note**

- Up to five recently created or selected display groups are displayed under [Recently used groups].
  You can also switch to a registered display by clicking a displayed group.



Deleting a display group

You can delete a registered group.

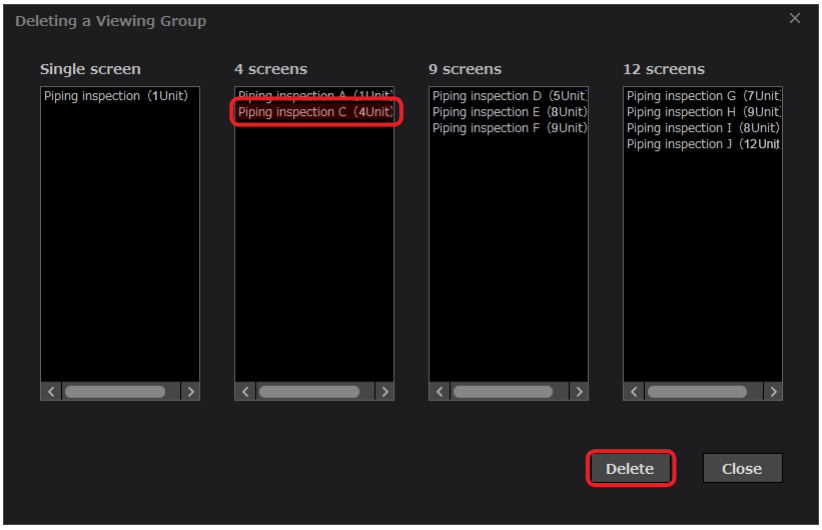
Preparation

- Display the video display screen (single screen or multiple screens). (→12, 21)

1 Click and then click [Delete].

- The deletion screen for display groups is displayed.

2 Click on the name of the group you want to delete and then click [Delete].



Sharing still images (sketch share) (Windows)

While a video is being displayed, you can share a still image selected on the camera* with the Liveviewer.
Select the still image you want to share on the camera to display it on the sketch share screen.
You are now able to draw shapes on the shared still image.

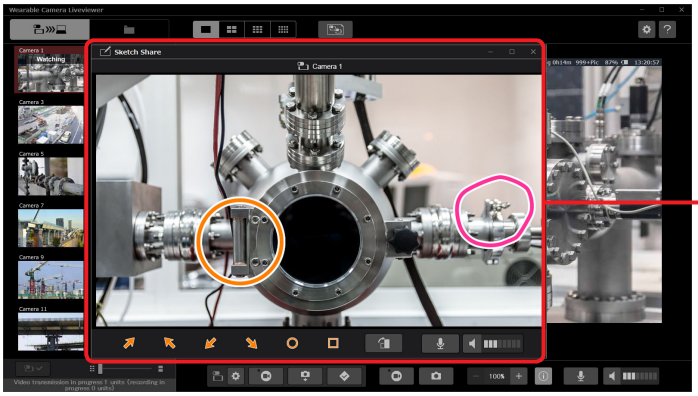
* The sketch share function is not available with AG-WN5K1 cameras.

Preparation

- Display the video display screen (single screen or multiple screens). (→12, 21)

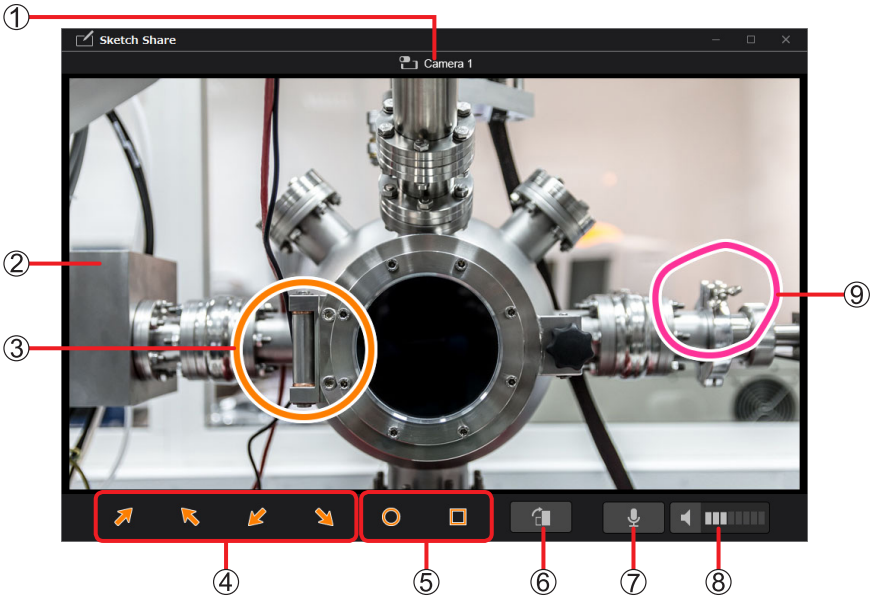
1 Wait for the sketch share instruction from the camera.

- When a still image is displayed on the camera, the sketch share screen is displayed in a different window.



2 Click on a graphic tool (④ or ⑤) and then click on the sketch share screen.

- The selected shape appears in orange and is also displayed on the sketch share screen on the camera side. The shapes drawn on the camera side are displayed in pink.
- You can click on a shape drawn on the Viewer and drag any of its corners to adjust the size of the shape.
- You can click the shape and press the “Delete” key to delete it.



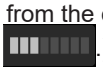
Sketch share screen

① Name of the camera whose image is displayed in the sketch share screen
② Still image being shared
③ Shape drawn on the Liveviewer (orange)
④ Arrow tools
⑤ Circle and square tools
⑥ Rotate the still image 90° clockwise

⑦ **Microphone button:**

: the sound is sent from the computer, : the sound is not sent

⑧ **Volume button:**

: the sound from the camera is output, : the sound from the camera is not output (the sound from the camera is displayed as  .)

⑨ **Shape drawn on the camera (pink)**

3 **Exit sketch share.**

- Click to display a confirmation screen to save the shared still image.
  Perform one of the following actions to close the sketch share screen.
  - Enter the name of the save destination folder or select a folder, and then click [Save].
  - Click [Exit].
- The confirmation screen is also displayed when sketch share is ended on the camera.

● **Note**

- Multiple sketch share screens open if still images from multiple cameras are shared while displaying the video display screen (multiple screens) **(→21)**.

Viewer Settings (Windows)

You can configure the Liveviewer settings.

Preparation

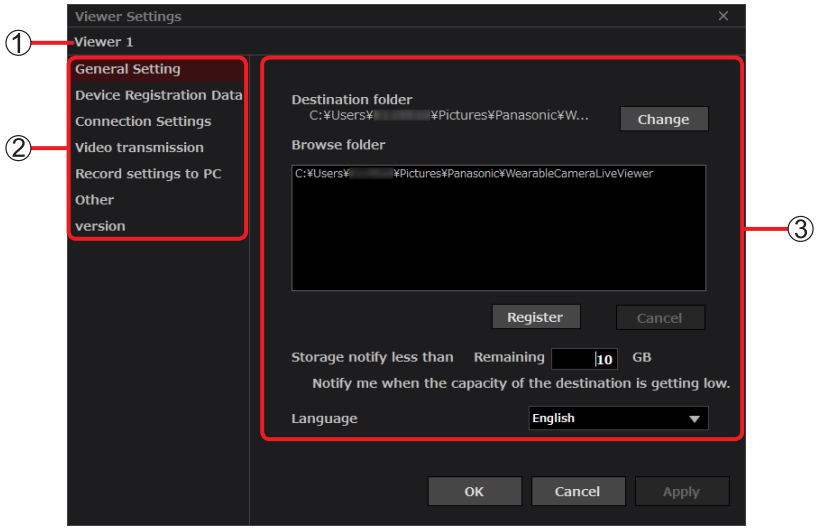
- Display the video display screen (single screen or multiple screens). (→12, 21)

1 **Click** .

- The Viewer settings screen is displayed.

2 **Select a setting and configure the parameters.**

- The General Setting, Connection Settings, Video transmission, and Record settings to PC can be configured. You can also check the device registration and version information.
  See page →27 to 30 for details on the setting and check procedures.



①**Liveviewer information** : Liveviewer name

②**Viewer settings** : Click a setting to select it.

③**Setting parameters** : You can configure the parameters of the setting selected in ②.

3 **Click [Apply].**

- The configured parameters are applied.

4 **Click [OK].**

- The settings are saved and the Viewer settings screen closes.

● **Note**

- Click [Cancel] to close the screen without saving the changes.

General Setting

You can configure the general settings of the Liveviewer, such as the data save destination.

[Destination folder]:

Folder used to save the videos recorded to the computer and the data imported from the camera (→40).

You can change the default save destination*.

* C:/Users/User name/Pictures/Panasonic/WearableCameraLiveViewer

1 Click [Change].

2 Select a save destination and click [OK].

- A folder with the application name is automatically created after you have configured a save destination.
- More precisely, the files are saved in the WearableCameraLiveViewer/20xx/xx/xx/ subfolder.
  - The folders with the date are created automatically when the data is recorded or imported to the computer.

● **Note**

- The save folder that has been set as the destination is automatically registered in the browse folders. (Explained below)

[Browse folder]:

Folders used to display the data on the content management screen (→31).

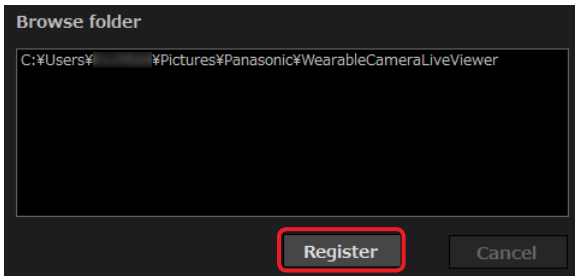
You can register and delete browse folders.

■ **Folder registration**

There are two methods to register a folder. Automatic registration does not require any operation.

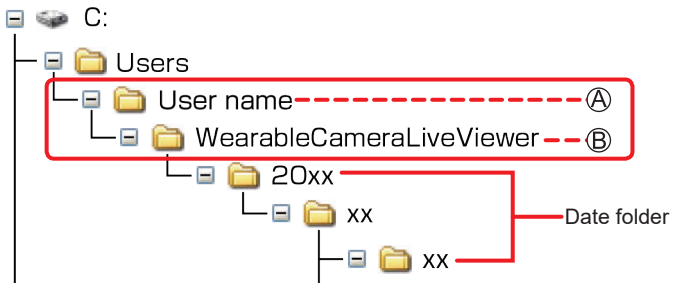
- Automatic registration: When the save folder is modified, it is automatically added to the browse folders.
- Manual registration: The specified folder is registered to the browse folders.

1 Click [Register].



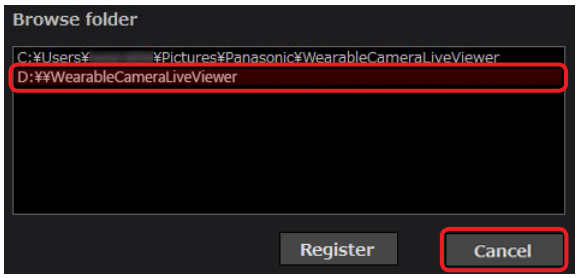
2 Select a browse folder and click [OK].

- The specified browse folder is either Ⓐ or Ⓑ in the example below.
  Ⓐ : Parent folder of the folder with the application name*
  Ⓑ : Folder with the application name*
  *Parent folder of the folders with the date



■ **Folder deletion**

1 **Click the path of the folder you do not need anymore and click [Cancel].**



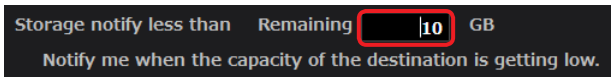
● **Note**

- The browse folder with the same path as the save folder cannot be deleted.

[Storage notify less than]:

1 **Enter a value (between 1 and 99) for the remaining space at which to send a notification.**

- A notification is sent when the space available for recording in the save destination reaches the set value. Click [Confirm] and follow the on-screen instructions.
- Default value: 10 GB



[Language]:

1 **Click▼and select [Japanese] or [English].**

- Default value: The default value is dependent on the PC's display language. The default value is [English] when set to a language other than Japanese.

2 **When a message requesting for restart is displayed, click [Restart].**

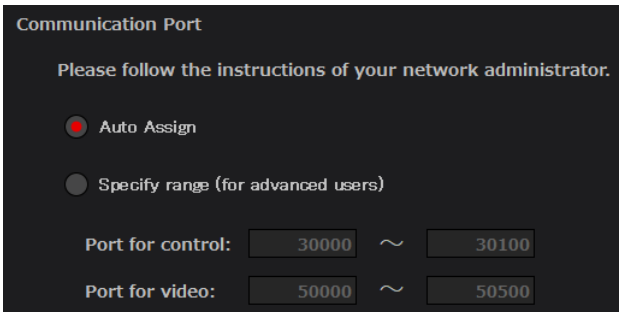
Device Registration Data

Used to check the application ID, the default P2 cast [Host name], the login user [ID] and [Password], and the Liveviewer [Nickname].

See “Initial setup” (→6) for more details.

Connection Settings

You can change the communication port in these settings if communication is not possible with the port number assigned automatically due to problems in the network environment. Configure the settings following the instructions of the network administrator.
Underlined settings are the default settings.

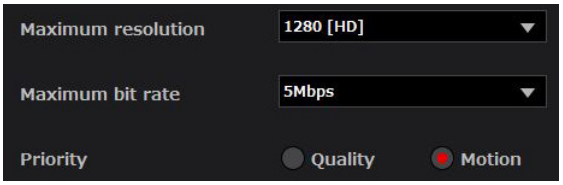


[Auto Assign]:
The port number is assigned automatically.

[Specify range (for advanced users)]:
Enter the upper limit and lower limit for [Port for control] and [Port for video].
Delete the values and enter values in the range of 30000 to 65535. The ranges should not overlap.

Video transmission

You can configure the settings used when video transfer starts from a camera.
Underlined settings are the default settings.



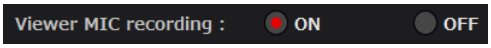
[Maximum resolution]:
Set a maximum for the video resolution. Click ▼ and select a setting.
1920 [FHD] / 1280 [HD] / 640 [VGA] / 320 [QVGA]

[Maximum bit rate]:
Set a maximum for the video bit rate. Click ▼ and select a setting.
10 Mbps / 5 Mbps / 3 Mbps / 1 Mbps / 512 kbps / 256 kbps

[Priority]:
Limit the video prioritizing quality or motion.
[Quality]: The quality (resolution) is prioritized over the motion (frame rate).
[Motion]: The motion (frame rate) is prioritized over the quality (resolution).

Record settings to PC

You can choose whether or not to record the sound from the computer when recording a video being displayed to the computer.
Underlined settings are the default settings.



[ON]:
The sound from the computer is recorded.
[OFF]:
The sound from the computer is not recorded.

Other

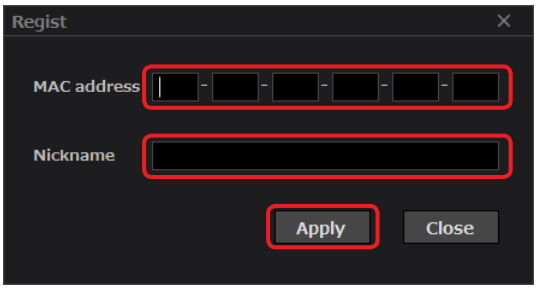
With AG-WN5K1 cameras, it is possible to make demands for device registration from the Liveviewer.

1 Click [Regist].

- The new registration screen is displayed.

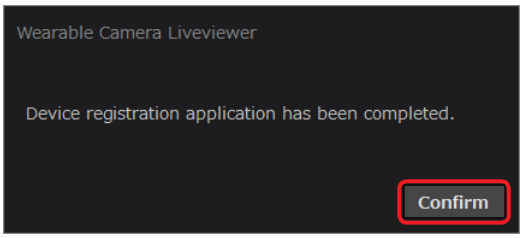
2 Enter the MAC address and the nickname of the camera and click [Apply].

- See the AG-WN5K1 manual for details on how to check the MAC address.
- Enter a nickname of a maximum of 64 characters.
- A message confirming that the registration demand has been completed is displayed.



3 Click [Confirm].

- The device registration demand will have to be accepted by the P2 Cast administrator.
  Registration demands for AG-WN5K1 cameras made on P2 Cast are accepted.



4 Request a device registration to the P2 Cast administrator in P2 Cast.

- See the P2 Cast instruction manual for the device registration procedure.
- After the registration has been accepted on P2 Cast, you can copy the LicenseFile.bin file*2, which has been created when registering a camera in the Multi Viewer Software AG-NAMS5*1 (from Panasonic Corporation), to the folder below to be able to display videos from AG-WN5K1 cameras.
  C:/ProgramData/Panasonic/MultiViewerSoftware

*1 Refer to the AG-NAMS5 manual.

*2 The LicenseFile.ssl file is required with the Liveviewer (Android). Use the tool provided by Panasonic Corporation to convert the LicenseFile.bin file and copy the file to the folder below.
Internal storage/Panasonic/MultiViewerSoftware

version

Displays the product number and version of the Liveviewer.

Content management (Windows)

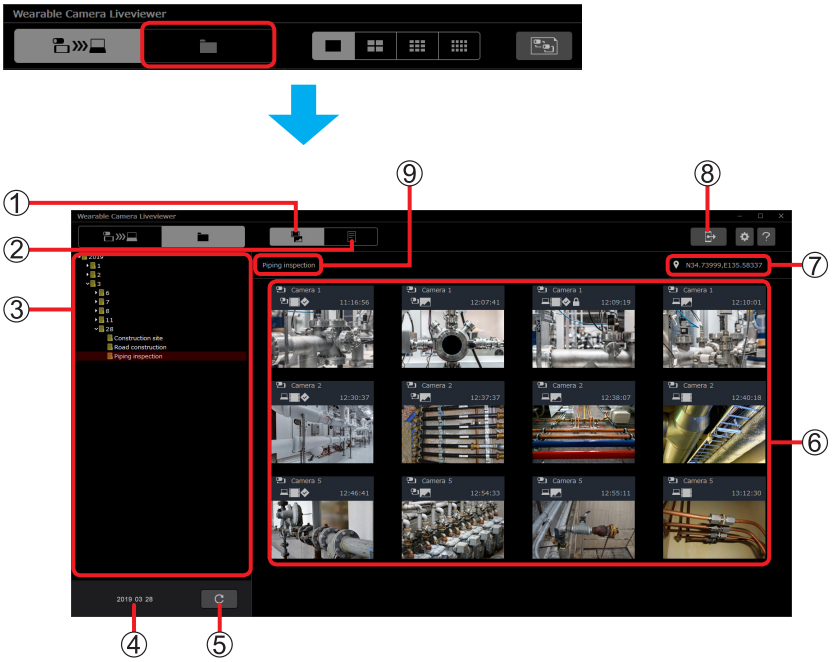
The content management screen is made of the recorded data and the report data windows.

- Recorded data window : In this window, you can check the videos and still images recorded to the computer or imported from the cameras (→40).
- Report data window : In this window, you can check report data imported from the cameras. (→39)

Recorded data window

1 **Click [redacted].**

- The recorded data window is displayed. The thumbnails of the files in the previously checked folder are displayed.



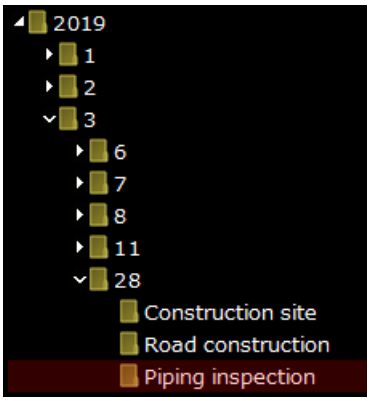
Recorded data window

①Recorded data window button

②Report data window button

③Folder area:

- The folders and subfolders with the date are displayed.



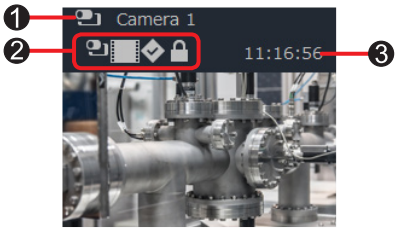
④Date of the selected folder

⑤Refresh button:

- Refreshes the screen display.

⑥ **Thumbnails of the videos and the still images:**

- The thumbnails are displayed in chronological order from the file recorded (started) first.
- The size of the thumbnails cannot be changed.



❶ Camera icon and name of the camera used for the recording

❷ Icons added to the file

: Video imported from the camera (→40)

: Still image imported from the camera (→40)

: Video recorded to the computer (→18)

: Still image received from the camera (→14) and still image recorded to the computer (→20)

: File with a mark

: Protected file (→37)

❸ Filming start time (video)/Shoot time (still image)

⑦ **Recorded data location information:**

- Displays the valid location information of the data saved in the selected folder.
- "--- ---" is displayed when there is no location information.

⑧ **Import button:**

- Used to import data saved on the camera to the computer. (→40)

⑨ **Name of the selected folder**

Checking recorded data

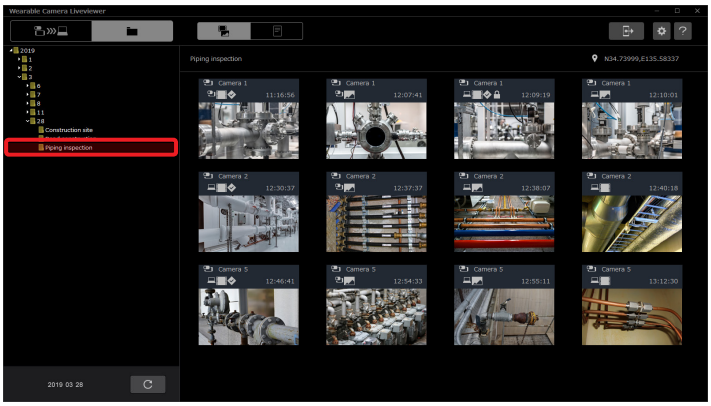
You can select a folder and check a video or a still image.

1 Click [redacted].

- The recorded data window is displayed.

2 Select the folder that contains the file you want to check.

- The thumbnails of the files in the selected folder are displayed.



Recorded data window

● **Note**

- Right-click on a thumbnail to perform an action such as playback or deletion.

Playing back recorded data (single-screen playback)

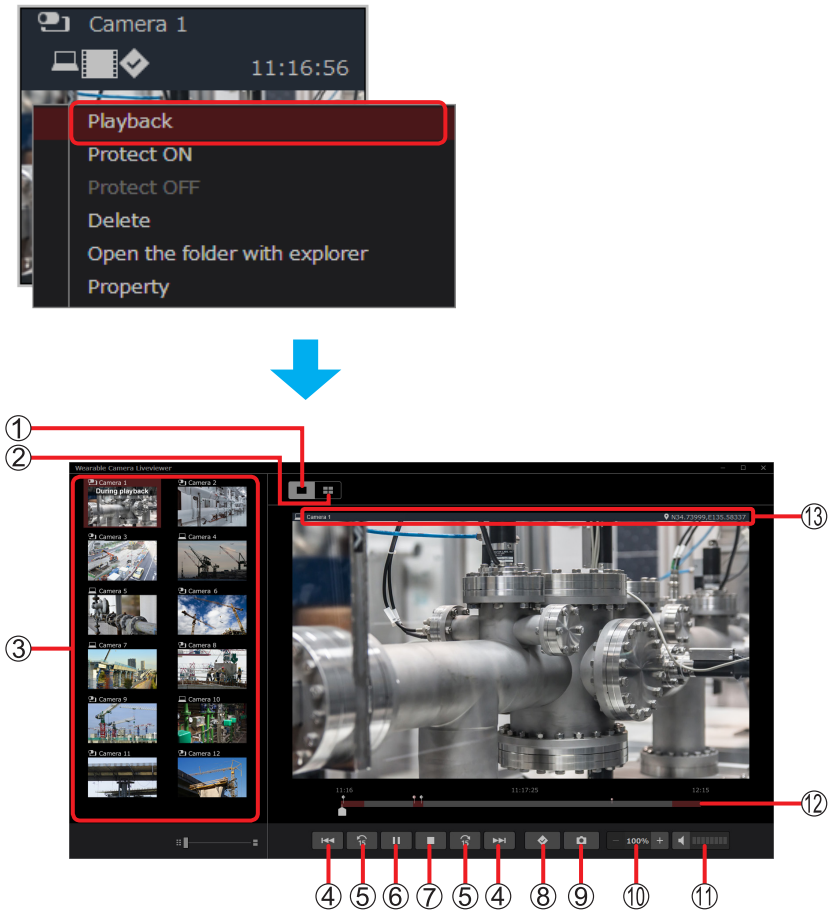
You can play back one day of data recorded from a camera.

Preparation

- On the recorded data window, select the folder that contains the file you want to play back. (→32)

1 Right-click on the thumbnail of the file you want to play back and then click [Playback].

- The playback screen opens in a different window and one day of recorded data from the camera is played back. The playback is suspended when a still image is displayed.
  The selected thumbnail turns reddish brown and “During playback” is displayed.
- You can also double-click on a thumbnail to start the playback.



① Single-screen playback button

② 4-screen playback button:

- Files with the same date and time recorded from multiple cameras can be played back at the same time. (→35)

③ List of cameras with files saved in the same folder as the selected thumbnail:

- Thumbnails of the videos and still images recorded first the same day are displayed.
- The following icons are displayed at the left of the camera name.
  : Video or still image taken on the camera.
  : Video or still image recorded to the computer.

④ Skip buttons : Used to return to the previous mark or go to the next mark location (gray ◆), return or go to the next still image, or return to the start of a video and pause the video.

- Clicking ▶▶| when a still image captured at the same time as the video is displayed pauses the video on the scene that directly comes after the still image.

⑤ 15-sec skip buttons : Used to return 15 seconds before or go 15 seconds further within the file.

- The playback is paused when the skip destination is one of the following.
  – A still image recorded at the same time as the video
  – The end of the video
- These buttons cannot be clicked when a still image is being displayed.

⑥ **Pause button** : Click this button during playback to pause it.
- During a pause, the button changes to [▶]. Click on it to resume the playback.
- This button cannot be clicked when a still image is being displayed.

⑦ **Stop button** : The slider returns to the start time of the filming of the day, and the playback of all files stops.

⑧ **Mark button** : Used to add a mark (◆ (grey) or ● (pink)) to the video or the still image being displayed.
- You can click on a mark location to delete the mark.

⑨ **Still image save button** : Saves a frame of the video as a still image.

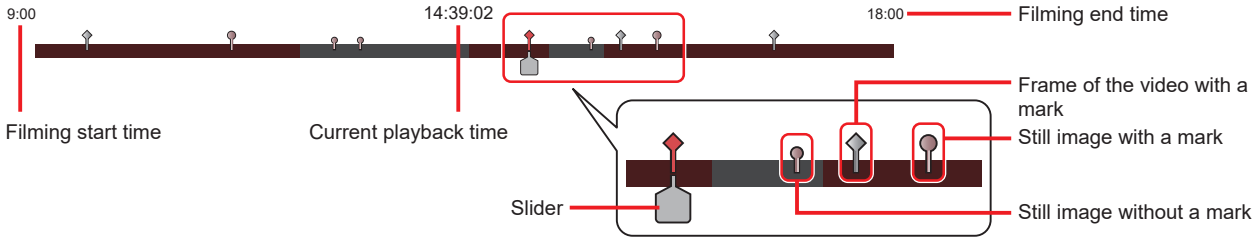
⑩ **Zoom buttons** : [+]: zoom in, [−]: zoom out. The magnification ratio is displayed between [−] and [+].

Each click on a button changes the magnification ratio by 50% in the range of 100% to 500%.

You can also change the magnification ratio by rotating the scroll wheel while keeping the “Ctrl” key pressed.

⑪ **Volume button** : [🔊]: the sound from the camera is output, [🔇]: the sound from the camera is not output (the sound from the camera is displayed as [▮▮▯▯▯▯].)

⑫ **Seek bar** : The sections of the seek bar where a video has been filmed are shown in reddish brown, while the sections where no video has been filmed are shown in gray. The playback time is displayed on the position of the slider.
- Drag the slider to adjust the playback position.
- When the slider reaches a mark ◆ (gray) or ● (pink), the mark changes to ◆ (red) or ● (red), respectively.



● **Note**
- When the playback screen is switched or when a different thumbnail is played back, the playback may start from the middle of the seek bar.

⑬ **Name of the camera whose video is being played back and filming location information**

2 **Click [■].**
- The slider returns to the start time of the filming of the day, and the playback of all files stops.

Playing back recorded data (4-screen playback)

Files with the same date and time recorded from multiple cameras can be played back at the same time. Explanations are given for when all the four screens are used for playback.

Preparation

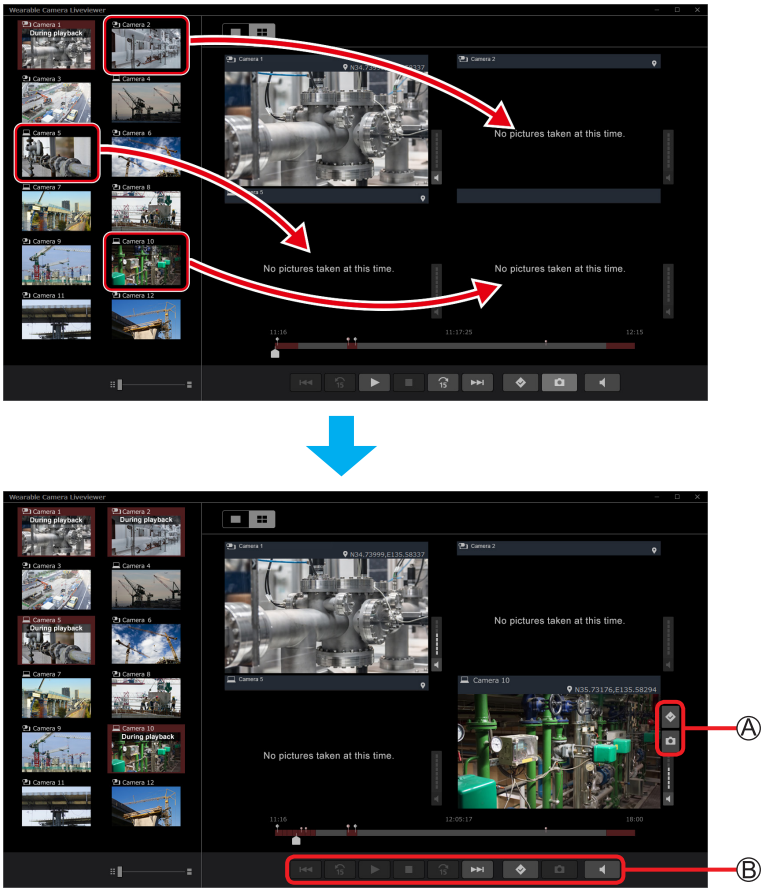
- Play a file on one screen. (→33)

1 **Click** .

- The file being played back appears on the top left screen, while the other three screens are left black.

2 **Drag and drop the thumbnail of the file you want to play into the desired screen location.**

- The thumbnail turns reddish brown, “During playback” is displayed on it, and the data filmed with the camera is played back.
- The seek bar for 4-screen playback combines the seek bars of the four cameras (→36).
- You can click the thumbnails to place them in order from the screen at the top left to the screen at the bottom right and start the playback.



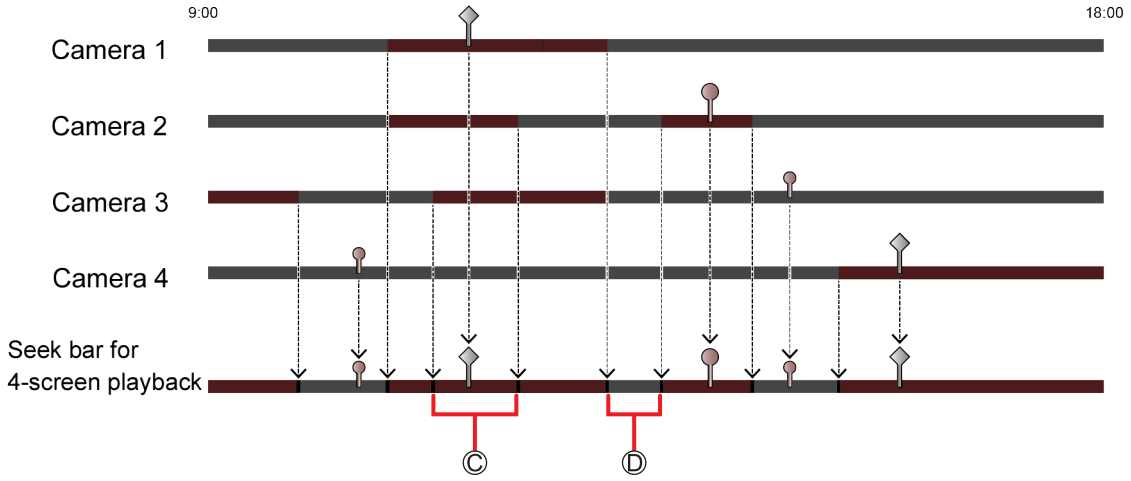
● **Note**

- You cannot zoom in or out during 4-screen playback.
- When returning to single-screen playback, the screen displayed is the screen at the top left in 4-screen playback.
- Move the mouse cursor onto any of the four screens to display the Ⓐ buttons.
  - The Ⓐ buttons are effective for the screen onto which the mouse cursor has been moved.
  - The sound volume of the screen onto which the mouse cursor has been moved is louder than the volume of the other screens.
- Ⓑ buttons are effective for all four screens.
  - Click to save up to four still images to the folder that has been created.

■ **Seek bar**

Example: The cameras 1 to 4 have filmed from 9:00 to 18:00 (9:00 am to 6 pm).

- The three following colors are displayed on the seek bar. The explanations specific to the example are given in the brackets.
  Reddish brown:Sections where any of the cameras has filmed (Ⓒ: Recorded data from cameras 1 to 3 is being played back.)
  Gray :Sections where none of the cameras has filmed (Ⓓ: There is no data to play back on all four screens (black screens are displayed).)
  Black : Separations in videos
- The positions of still images and marks added to the recorded data from cameras 1 to 4 are also displayed.



3 **Click [■].**

- The slider returns to the start time of the filming of the day, and the playback of all files stops.

Protecting files from accidental deletion (protection)

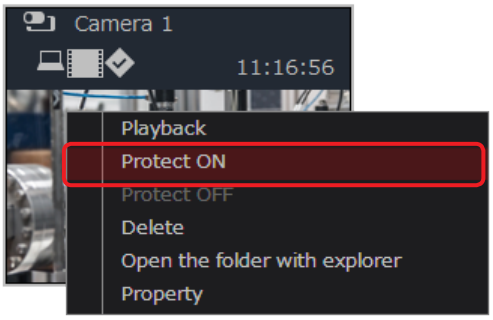
Each file can be protected against accidental deletion.

Preparation

- On the recorded data window, select the folder that contains the file you want to protect. (→32)

1 Right-click on the thumbnail of the file you want to protect and then click [Protect ON].

- is displayed on the thumbnail.
- Multiple files can be protected at once by clicking on multiple thumbnails while keeping the “Ctrl” key pressed before performing the action in step 1.



● **Note**

- To remove the protection, right-click on a protected thumbnail and click [Protect OFF].
- Protected files cannot be deleted from the Liveviewer. Remove the protection to delete them.

Deleting recorded data

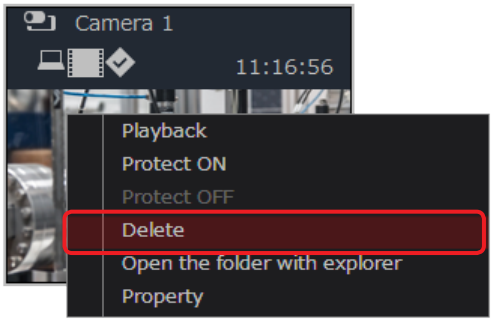
Data can be deleted.

Preparation

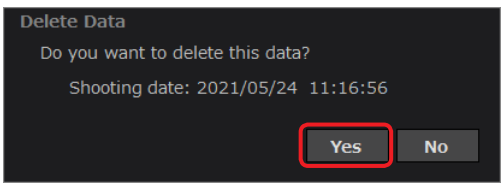
- On the recorded data window, select the folder that contains the file you want to delete. (→32)

1 Right-click on the thumbnail of the file you want to delete and then click [Delete].

- Multiple files can be deleted at once by clicking on multiple thumbnails while keeping the “Ctrl” key pressed before performing the action in step 1.



2 Click [Yes].



● **Note**

- Deleted files cannot be restored.

Displaying recorded data in the explorer

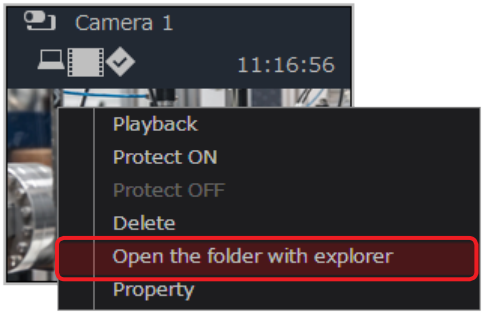
Recorded data in a folder can be displayed in the explorer.

Preparation

- On the recorded data window, select the folder that contains the file you want to display. (→32)

1 Right-click on the thumbnail of the file you want to display and then click [Open the folder with explorer].

- The explorer is launched and the recorded data inside the folder is displayed.



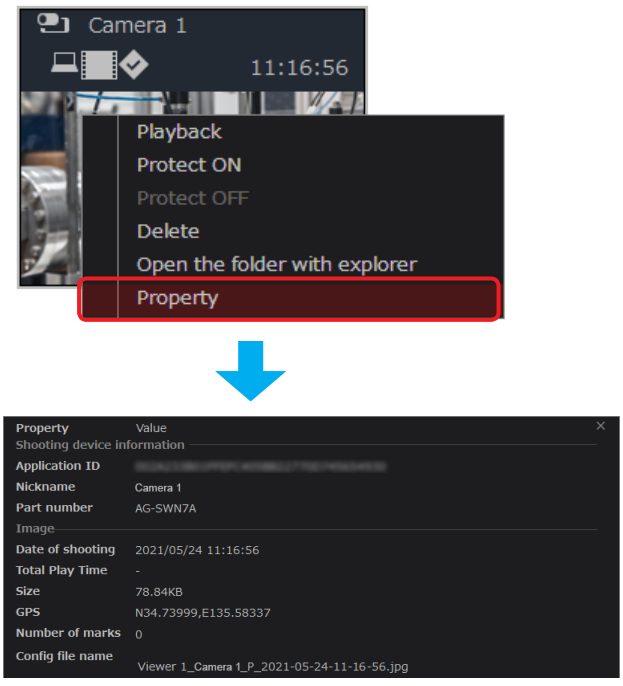
Checking the recorded data information (properties)

You can check the details of the recorded data (product number of the camera, recorded date, etc.).

Preparation

- On the recorded data window, select the folder that contains the file for which you want to check the information. (→32)

1 Right-click on the thumbnail of the file for which you want to check the information and then click [Property].



● **Note**

- When a video or still image taken from an AG-WN5K1 camera has been imported, the four pieces of information are displayed as follows.
  - Application ID : -
  - Nickname : The volume ID of the microSD card inserted into the camera.
  - GPS : "--- ---" is displayed for files saved in newly created folders.
    The location information saved in the management file inside the folder is displayed for files saved in existing folders.
  - Number of marks : 0

Report data window

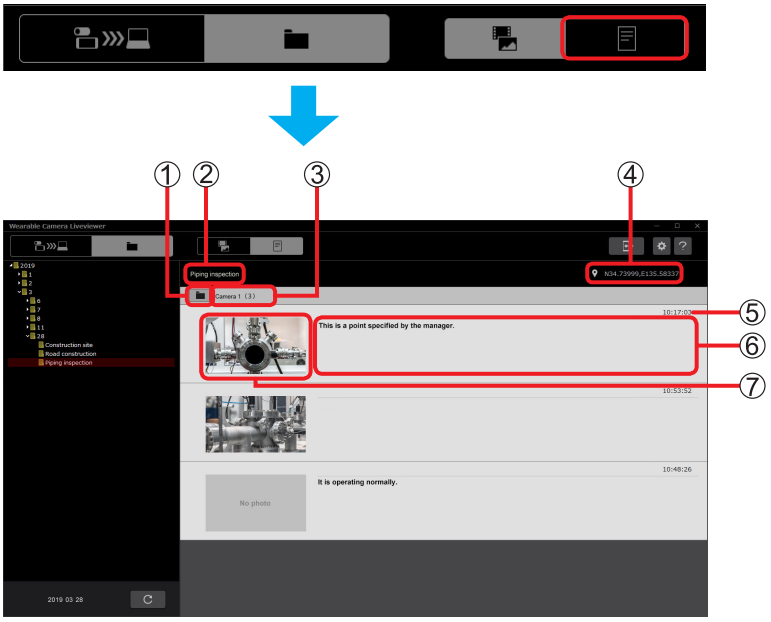
In this window, you can check the report data imported from the camera* (→40).
The report data is created on the camera. See the instruction manual of the Wearable Camera LiveCast for more details.
* It is not possible to check the report data with AG-WN5K1 cameras.

Preparation

- On the recorded data window, select the folder that contains the file for which you want to check the information. (→32)

1 **Click** [ ].

- The report data window is displayed.



Report data window

①Explorer launch button:
- Click this button to launch the explorer and display the data inside the folder.

②Name of the selected folder

③Name of the camera where the reports have been created and number of reports

④Recorded data location information

⑤Still image shooting time:
- When there is no still image attached, the creation time of the text memo is displayed.

⑥Text memo added to the report

⑦Still image attached to the report:
- The size of the thumbnails cannot be changed.
- “No photo” is displayed when no still image has been attached.

● **Note**
- Reports with no memo input are displayed with still images only, and reports with no still image attachments are displayed with only a memo.

Importing data

Videos, still images, and report data saved in a camera can be imported into a computer.

Preparation

- Display the recorded data window. (→31)

1 Insert the microSD card into the computer.

- It may be necessary to use a dedicated adapter.

● **Note**

- With tablets (Android), you can also import data by connecting it to the computer using a commercially available USB cable*.

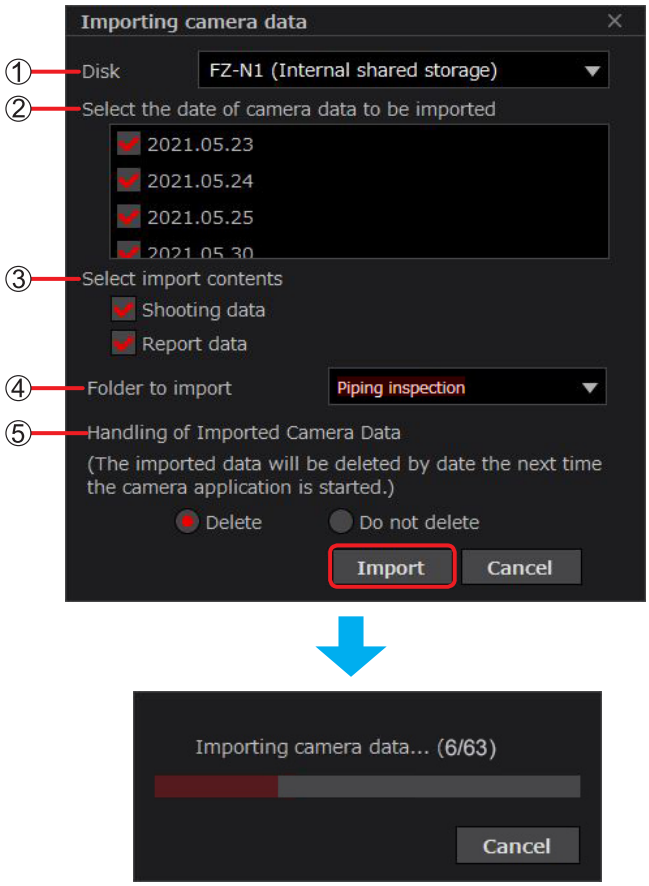
  * It may be necessary to select the USB function on the tablet.

2 Click .

- The camera data import screen is displayed.

3 Configure the settings and click [Import].

- When [Delete] is selected in ⑤, a message indicating that the imported data will be deleted the next time the camera will be turned on is displayed after clicking [Import]. Click [OK]. The import starts after you clicked the button.
- The progress window is displayed. A completion window appears when the import is complete.
  To suspend the import, click [Cancel] on the progress window, and then click [Confirm].



Import progress window

①**[Disk]:**

Click ▼ to display the devices other than the CD drive.
Select a connected device.

②**[Select the date of camera data to be imported]:**

The dates of the data available for import are displayed.
Remove the ✓ for the date you do not want to import.

③ **[Select import contents]*:**

Remove the ✓ for the data you do not want to import.

[Shooting data] : Video and still image data

[Report data] : Report data created on the camera

④ **[Folder to import]:**

Click ▼ to display the subfolders located under the folder with the dates selected in ②.

- Enter a new name to create a new folder and import the data into it.

⑤ **[Handling of Imported Camera Data]*:**

Select whether or not to delete the data on the camera after importing it into the computer.

Data taken with AG-WN5K1 cameras cannot be deleted.

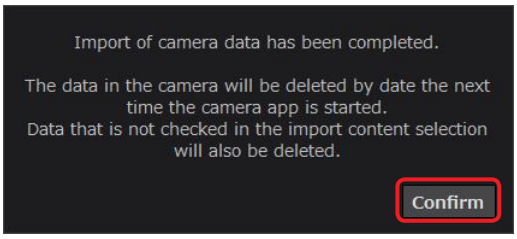
[Delete] : A message indicating that the imported data will be deleted the next time the camera will be turned on is displayed. Click [OK].
When the camera is turned on after the import, a confirmation message regarding the imported data deletion is displayed.
See the instruction manual of the Wearable Camera LiveCast for more details.

[Do not delete] : The data deletion confirmation message will not be displayed.

* This cannot be selected when only recording data with AG-WN5K1 cameras is saved in the microSD card.

4 **Click [Confirm].**

- The display returns to the recorded data window.

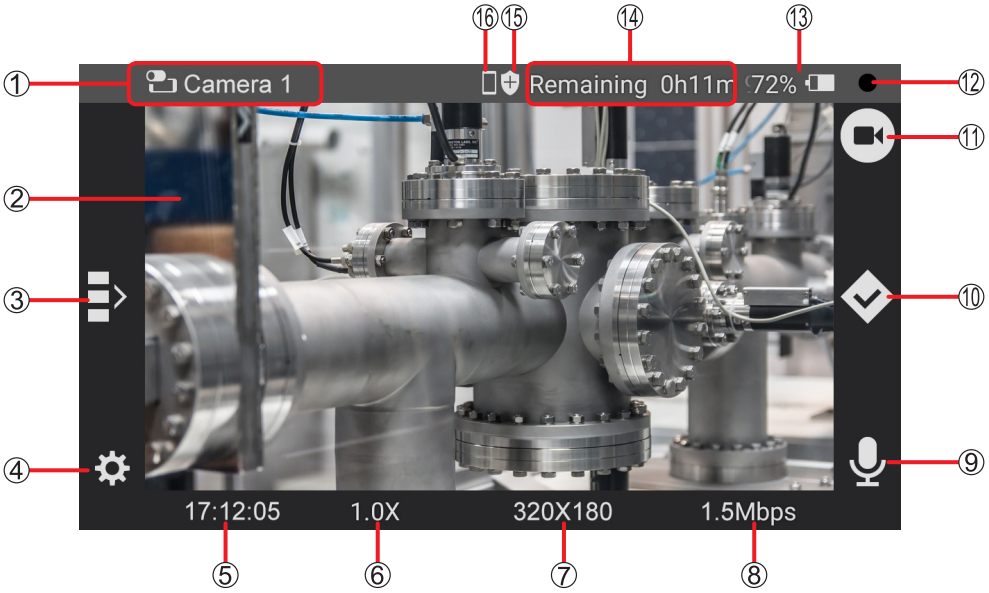


● **Note**

- If you have selected [Do not delete] for ⑤ in step **3**, “Import of camera data has been completed.” is displayed.

Video display screen (Android)

The displayed items and buttons are the same as on the video display screen (Windows) (→10) except for ③. ① and ⑫ to ⑯ are information about the camera.



① **Camera icon and name**

② **Image display area:** Displays the image from the camera. Images with an aspect ratio of 4:3 are displayed with black bars at the right and left.

③ **Display buttons for the online camera list:** Tap a button to display the camera videos as thumbnails.

④ **Liveviewer settings button**

⑤ **Timestamp**[*1]**:** The current time

⑥ **Magnification ratio:** You can change the magnification ratio (x1.0 to x5.0) by pinching in or out.

⑦ **Resolution of the video being displayed**

⑧ **Bit rate of the video being displayed**

⑨ **Microphone button:**

: the sound is sent from the tablet, : the sound is not sent

⑩ **Mark button**

⑪ **Video filming button**

⑫ **Filming status display:** ● (red): filming, ● (black): filming is stopped

⑬ **Battery level:**

: More than 90% of the battery power remains.

: Between 50% and 90% of the battery power remains.

: Between 10% and 50% of the battery power remains.

(Blinking) : Less than 10% (tablets (Android)) or less than 13% (tablets (Windows)) of the battery power remains.

[*1] : Charging

[*2] : Connected to AC power supply.

Only the icon is displayed with AG-WN5K1 cameras.

⑭ **Video: Remaining available time for filming.** (h for hour, m for minutes)/
Still image: Remaining number of still images that can be taken ([999+] is displayed when more than 1000 images can be taken). “Remaining -h-m -Pic” is displayed with AG-WN5K1 cameras.

⑮ **Scrambling**[*1]**:**

: the signal is scrambled before being saved, no icon: the signal is not scrambled.

⑯ **Video save destination:**

: saved to the microSD card, : saved to the internal storage[*1]

[*1] Not displayed with AG-WN5K1 cameras.

[*2] Not displayed with USB cameras.

● **Note**

- The sound from the camera can be adjusted with the volume buttons of the tablet.

Watching camera videos (Android)

You can watch videos from the cameras on a tablet.

Preparation

- On the home screen, tap to launch the Liveviewer.
- With AG-WN5K1 cameras, register the device from [Other Tools] under [Setting]. (→46)

1 Tap the thumbnail of the video you want to display.

- “Connecting XX%” is displayed in the display area.
  When the connection is complete, the video from the camera is displayed in the display area and the camera name and information are displayed above the image.
- The thumbnail being displayed turns reddish brown.
- When the thumbnails are displayed, you can swipe up and down to check the other thumbnails.

Video display screen

2 To end the display, tap (return button) twice to close the application.

Filming a video remotely (Android)

Operate the tablet to film a video with the camera*.

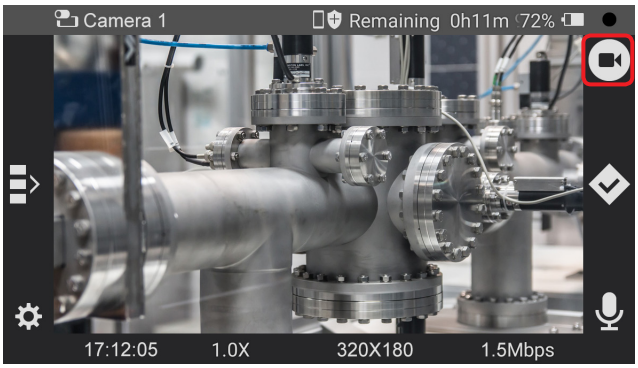
* The save destination can be either the internal storage of a tablet connected to a USB camera or a microSD card installed to the tablet. The save destination can be selected on the camera. See the instruction manual of the Wearable Camera LiveCast for more details. With AG-WN5K1 cameras, the videos are saved to a microSD card installed to the camera.

Preparation

- Display the video display screen. (→43)

1 **Tap** .

- The button changes to , the filming status changes to ● (red), and the camera starts filming.

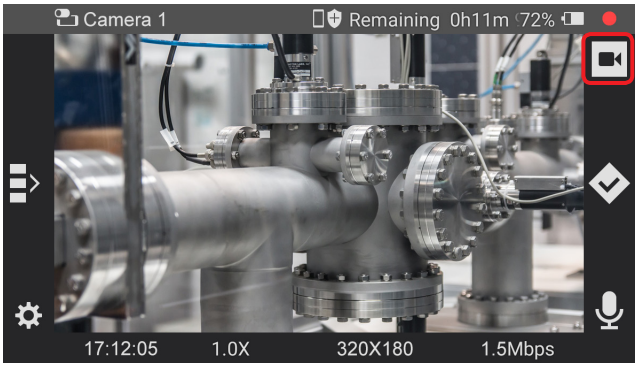


● **Note**

- During filming, tap to send an instruction to the camera to add a mark to the video at the time the instruction was sent.
  Tap this icon when filming is stopped to start filming with the camera and add a mark at the beginning of the video.
- Marks cannot be added with AG-WN5K1 cameras.

2 **Tap** .

The button returns to , the filming status changes to ● (black), and the filming stops.
The video is saved to the camera.



● **Note**

- If filming is not possible, check the available space in the microSD card or the internal storage.
- Closing the Liveviewer does not stop the filming. Tap to stop filming, or stop the filming from the camera.

Sharing still images (sketch share) (Android)

While a video is being displayed, you can share a still image selected on the camera* with the Liveviewer.
Select the still image you want to share on the camera to display it on the sketch share screen.
You are now able to draw shapes on the shared still image.

* The sketch share function is not available with AG-WN5K1 cameras.

Preparation

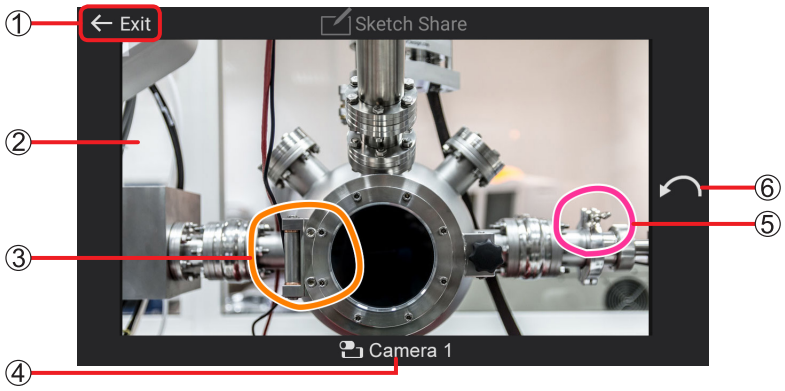
- Display the video display screen. (→43)

1 Wait for the sketch share instruction from the camera.

- The sketch share screen is displayed when a still image is displayed on the camera.

2 Draw a shape on the sketch share screen.

- The drawn shape appears in orange and is also displayed on the sketch share screen on the camera side. The shapes drawn on the camera side are displayed in pink.



Sketch share screen

① End button

② Still image being shared

③ Shape drawn on the Liveviewer (orange)

④ Name of the camera whose image is displayed on the sketch share screen

⑤ Shape drawn on the camera (pink)

⑥ Sketch cancel button

Erases the previously drawn sketch.

3 Exit sketch share.

- Tap Exit to return to the video display screen.
- You can also end sketch share from the camera to return to the video display screen.

Settings (Android)

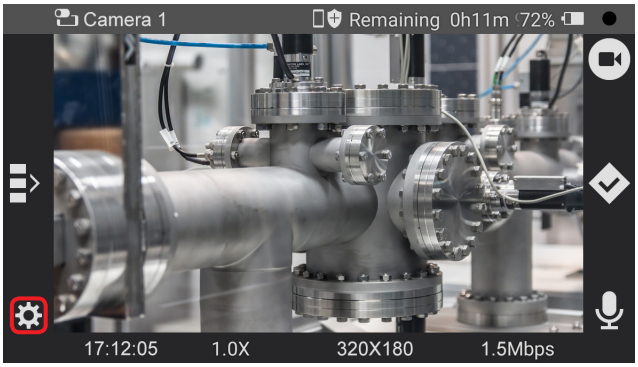
You can configure the Liveviewer settings and modify the camera settings.

Preparation

- Display the video display screen. (→43)

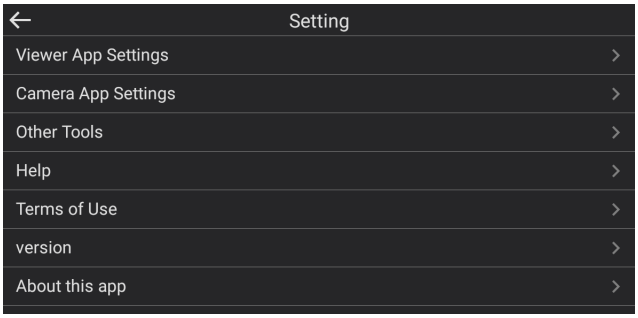
1 **Tap** .

- The settings screen is displayed.



2 **Select a setting and configure the parameters.**

- [Device Registration Data] under [Viewer App Settings], [Help], [Terms of Use], [version], and [About this app] can only be checked.



Viewer App Settings

You can check the device registration information and configure the connection and video transfer settings.
The procedures to check and configure the setting are the same as for “Device Registration Data” (→28), “Connection Settings” (→29), and “Video transmission” (→29) under “Viewer Settings (Windows)”.

Camera App Settings

Used to configure the shooting settings.
The configuration procedure is the same as for “Camera Settings” under “Shooting settings” (→15).

Other Tools

With AG-WN5K1 cameras, camera registration is requested from the Liveviewer.
The settings after tapping [Registration of AG-WN5] are the same as the steps **2** to **4** of “Other” under “Viewer Settings (Windows)” (→30).

Help

Displays operation explanations.

Terms of Use

Displays the software usage agreement.

version

Displays the product number and version of the Liveviewer.

About this app

Displays the open-source license.

Panasonic Corporation
Website: http://www.panasonic.com

© 2021 Panasonic Corporation