User’s Manual

DuraVision®
SGX0031

Streaming Gateway Box

Software Version 7.3

Important

Carefully read this User’s Manual and Setup Manual before use to use the monitor correctly.

- For the latest product information including the "User’s Manual," refer to our web site:
  www.eizoglobal.com

This product has been adjusted specifically for use in the region to which it was originally shipped.
If operated outside this region, the product may not perform as stated in the specifications.

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1 Introduction

This document explains camera (network camera) settings, system settings, and specifications.

1.1 Features

1.1.1 Streaming gateway function

- "Merge mode" for freely arranging and streaming video from multiple cameras
  This mode converts the live image screen display to RTSP or SRT protocols for streaming.
  Since images from multiple cameras are freely laid out and distributed as a single stream, network load can be reduced.
- "Relay mode" for streaming individual camera video
  This mode re-streams video received from individual cameras without processing it, using the RTSP or SRT protocol.
  This allows increasing the number of output streams without placing a distribution load on the cameras.

1.1.2 Communication with the cameras

- Can receive video images from a 4K camera (3840 x 2160 / 30 fps)
  - Supports H.265, H.264, and MJPEG compression formats.
  - Supports RTP, MPEG2-TS, and SRT transmission modes.
  - Can register a maximum of 48 cameras.
  - Allows a free layout of video images (3 Screens, 4 Screens, 9 Screens, 16 Screens, 32 Screens, 8 Screens, and Custom Screen) from multiple cameras.
  - Supports unicast and multicast communication methods.

1.1.3 Supports multiple types of cameras

- Compatible with ONVIF® Profile S
- Supports camera control using camera manufacturer specific protocols
  (When connecting AXIS and Panasonic/i-PRO cameras)
- Can receive video streams from streaming servers such as VMS (Video Management Software)

1.1.4 System management

- Can register cameras or set the live image screen using a web browser
- Can save and load settings data
  Can save or load the setting data a computer.

1.1.5 Event link function

- Event rules
  You can set actions to be executed as triggers for specific events.
- Schedule function
  You can set a schedule, such as turning the system off and on at a specified day/time.

1.1.6 Security

- Communication error detection
  Allows displaying of a red frame alert message on the live image screen within a few seconds when communication with cameras is lost.
- Lock function
  Disables front key operation.
- Network security protocols
  Supports protocols required for building high-level security systems including IEEE802.1X, SNMP, and LDAP.

1.1.7 Supports secure communication

- Utilizes SSL and TLS secure protocols.
  Communication between cameras and web pages is encrypted using SSL.
- Secure login via LDAP authentication is possible

1.1.8 Support

- A 2-year long-term warranty for 24-hour continuous use

1.2 Licenses

This product includes functions that become available by applying a paid license. The license types are as follows:

- Remote Operation Extension License

The license status can be checked on the settings screen after logging in (refer to 2.2 Displaying the Setting Screen [▶ 10]). Refer to "4.11 Registering a License [▶ 24]" for information on registering a license.

2 Displaying the Setting Screen

2.1 User Registration at Initial Startup

When starting this product for the first time, the initial setup wizard appears. Follow the on-screen instructions to configure each item.

1. Press the power button (⏻) on the front of the product to turn on the power.
   The power indicator flashes blue while the system is preparing to start. It takes about 1 minute to start up.
   Once the system starts, the power indicator turns blue.
2. Launch the web browser.
   It is recommended to use Microsoft Edge version 79 or later.
3. Enter the address to access the product.
   – https://<IP address of this product>
   – http://<IP address of this product>
   The default settings are as follows.
   – https://192.168.0.150/
   – http://192.168.0.150/
   The initial setup wizard appears.

Note

- Since communication via HTTP is not encrypted, there is a risk that data may be intercepted by a third party. To ensure secure communication, it is recommended to use HTTPS.
- When accessing via HTTPS, a warning may appear in the browser, but this is normal behavior. If a warning appears, click "Advanced Settings" or "More Information" and select "Access this site (not secure)." After logging in, register a "CA-Signed Certificate" so that the warning will no longer be displayed.
- When accessing via HTTP, a warning message appears. Check the content of the message and take the necessary action.

4. Follow the on-screen instructions to configure each item.
   – "Language" (Language [▶ 8])
   – "Time Zone" (Time Zone [▶ 8])
   – "Date Format" (Date Format [▶ 8])
   – "Time Format" (Time Format [▶ 8])
   – "Clock Mode" (Clock Mode [▶ 8])
   – "Date and Time" (Date and Time [▶ 8])
   – "User Level" (User Level [▶ 8])
   – "Username" (Username [▶ 8])
   – "Password" (Password [▶ 8])
   – "Confirm Password" (Confirm Password [▶ 8])
   – "IP Address" (IP Address [▶ 9])
   – "IP Address" (IP Address [▶ 9])
   – "Subnet Mask" (Subnet Mask [▶ 9])
   – "Gateway" (Gateway [▶ 9])
   – "Hostname" (Hostname [▶ 9])
   – "Protocol" (Protocol [▶ 9])
5. Click "Apply."
6. Click "OK" in the confirmation dialog box.

Language

Settings: "日本語" / "English" / "Deutsch"

Select the language.

Time Zone

Select the time zone.

Date Format

Settings: "yyyy/mm/dd" / "Mmm/dd/yyyy" / "dd/Mmm/yyyy" / "mm/dd/yyyy" / "dd/mm/yyyy" / "No Date Display"

Select the date display format.

Time Format

Settings: "24h" / "12h"

Select the time display format.

Clock Mode

Settings: "Auto (Sync with PC)" / "Manual"

Select the time setting method.

Date and Time

Set the current time.

User Level

Settings: "LIVE" / "CAMERA CONTROL" / "ADMIN"

Select the user level.

The user level cannot be selected when registering for the first time (fixed to "ADMIN").

Username

Enter a username. Set the username to meet the following conditions.

- 1-16 characters
- Alphanumeric characters and symbols only
- Does not contain the following characters: # & : " < > \

The following usernames cannot be set.

- "." / ".." / "auto-login"

Password

Enter a password. Set a password that is difficult for a third party to guess.

- 8 to 16 characters
- At least one uppercase and lowercase English letter
- At least one number
- Does not contain the character \

Confirm Password

Enter the same password again for confirmation.

IP Address

Settings: "DHCP" / "Manual"

Select the IP address setting method.

Note
• If a DHCP server is used, selecting "DHCP" sets the IP address automatically. The IP address assigned by DHCP is not displayed, so check it with a network scan tool.

IP Address

Settings: "0.0.0.1" – "255.255.255.254"

Set an IP address that is not used by other devices.

Note
• The default IP address is "192.168.0.150." When installing multiple units of this product, IP decoding boxes, or IP monitors, set unique IP addresses.

Subnet Mask

Settings: "0.0.0.1" – "255.255.255.254"

Set the subnet mask.

Gateway

Settings: "0.0.0.1" – "255.255.255.254"

Set the default gateway.

If the environment does not have a default gateway, you do not need to set "Gateway." Keep the default setting or leave it blank.

Hostname

Settings: Alphanumeric, - (hyphen) (up to 63 characters)

If "DHCP" is selected in "IP Address," enter the host name to register with the DHCP server. The default setting is "[Product Name]-[MAC Address]." Automatic registration with DNS depends on the settings on the DHCP/DNS server side.

Protocol

Settings: "HTTPS" / "HTTP and HTTPS"

Select the communication protocol with the web server.

The web browser address for accessing this product varies depending on the selected protocol.

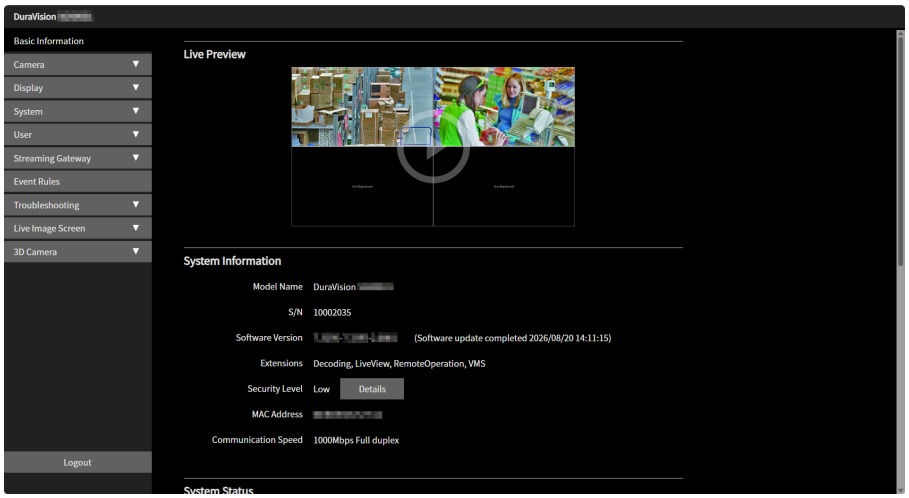
- "HTTPS": https://<IP address of this product>/
- "HTTP and HTTPS":
  https://<IP address of this product>/ or http://<IP address of this product>/

2.2 Displaying the Setting Screen

1. Press the power button (⏻) on the front of the product.
   While preparing to start, the power indicator blinks blue. It takes about 1 minute for the device to start up.
   When it starts up, the power indicator turns blue.
2. Launch the browser.
3. Enter the following address to access the site.
   Since communication via HTTP is not encrypted, there is a risk that data may be intercepted by a third party. We recommend using HTTPS to ensure secure communication.
   – https://<IP address of this product>
   – http://<IP address of this product>
   For the initial settings, the following applies:
   – https://192.168.0.150/
   – http://192.168.0.150/
4. Enter a username and a password.
5. Click "Sign in."
   The setting screen is displayed.

Note

- If the setting screen does not appear, try the following address.
  – https://<IP address of this product>/index.html
  – http://<IP address of this product>/index.html



3 Configuring the Streaming Gateway Function

Configure settings related to the streaming gateway function.

The streaming performance is as follows.

Communication band

- Received bandwidth: 100 Mbps
- Transmission bandwidth: 300 Mbps

Relay mode

Video input from camera		Streaming gateway streaming
Comm. Method	Maximum number of connections	Maximum number of connections (RTSP protocol)
RTP over RTSP	48	96

*Streaming via the SRT protocol supports one output stream for each input stream.

Merge mode

Video input from camera		Streaming gateway streaming
Comm. Method	Maximum number of connections	Maximum number of connections (RTSP protocol)
RTP over RTSP	32	32

*Streaming using the SRT protocol supports one stream output for each encoding setting.

Attention

- The values are provided for reference.
- If the streamed video is distorted, check the following points:
  - Reduce the number of video input streams from the camera. In Merge mode, you can reduce the number of streams by setting the "Suspend while in Background" function under "Live Image Screen" > "Advanced" to "Enabled" and stopping camera communication for pages that are not displayed.
  - Reduce the bit rate.

3.1 Set the Streaming Mode and Protocol

1. Select "Streaming Gateway" > "Streaming Gateway."
2. Set each item.
   – "Streaming Gateway" (Streaming Gateway [▶ 12])
   – "Protocol Settings" (Protocol Settings [▶ 12])
3. Click "Apply."

3.1.1 Streaming Gateway

Streaming mode

Settings: "Merge mode" / "Merge mode (Low Latency)"*1 / "Relay mode" / "Off"

*1 If the compression format is H.264, the "Profile" setting value is ignored.

Select the streaming mode.

- "Merge mode"
  Streams video from multiple cameras in a customized layout as a single stream. Up to two streaming settings can be configured.
- "Merge mode (Low Latency)"
  This mode minimizes delay in merge mode. It is suitable for operations requiring low latency, such as remote control. Only one streaming setting can be configured. Depending on the configured encoding values, the specified frame rate may not be achieved. In this case, lower the resolution or frame rate.
- "Relay mode"
  Re-streams video received from individual cameras using the RTSP or SRT protocol without processing. Streaming is performed without processing the video, so encoding settings cannot be configured.

3.1.2 Protocol Settings

RTSP - Username

Settings: Alphanumerics and symbols (up to 32 characters, excluding " ? / \ { | } ~ % : ` ,)

Enter the RTSP username.

Set according to your environment. You can set the username and password even if both fields are blank (you cannot set them if only one is blank). If both fields are left blank, streaming will be performed without authentication.

RTSP - Password

Settings: Alphanumerics and symbols (up to 32 characters, excluding " ? / \ { | } ~ % : ` ,)

Enter the RTSP password.

Set according to your environment. You can set the username and password even if both fields are blank (you cannot set them if only one is blank). If both fields are left blank, streaming will be performed without authentication.

RTSP - Port

Settings: "554" / "1024" – "65535"

Set the RTSP port number.

RTSP - RTP Packets Size

Settings: "400" – "1400"

Set the RTP packet size (unit: bytes).

SRT - Encryption

Settings: "None" / "AES-128" / "AES-192" / "AES-256"

Select the encryption method.

SRT - Passphrase

Settings: Alphanumeric characters and symbols (10 to 79 characters)

Set the passphrase.

Set according to your environment. You can set it to blank. If both fields are left blank, streaming will be performed without authentication.

SRT - TS Packets Count

Settings: "1" – "7"

Set the number of TS packets to be inserted into the SRT packets to be transmitted.

3.2 Configuring Streaming Settings

1. Select "Streaming Gateway" > "Streaming settings."
2. Click Edit ( ) for the camera you want to configure streaming settings.
3. Set each item.
   - "Camera Name" (Camera Name [▶ 13])
   - "Encode" (Encode [▶ 13])
   - "Protocol" (Protocol [▶ 13])
   - "IP Setting Method" (IP Setting Method [▶ 14])
   - "Port" (Port [▶ 14])
   - "MPEG2-TS" (MPEG2-TS [▶ 14])
4. Click "Apply."

Camera Name

When "Streaming mode" is set to "Merge mode" or "Merge mode (Low Latency)," "Live_View" is displayed.

When "Streaming mode" is set to "Relay mode," the same camera name as on the "Camera Registration" screen is displayed.

Encode

Settings: "Encoding Setting 1" / "Encoding Setting 2"

Select the encoding setting. For details on encoding settings, refer to 3.3 Configuring Encoding Settings [▶ 15].

Can be configured only when "Streaming mode" is set to "Merge mode" or "Merge mode (Low Latency)."

Protocol

Settings: "RTSP" / "SRT" / "RTP"

Select the protocol.

- "RTSP"
  A protocol widely used in surveillance cameras, etc. In most situations select this option.
- "SRT"
  Use when security or line quality is a priority. A license may be required when receiving on an IP decoding box/IP monitor, etc.
- "RTP"
  Delivers an RTP stream to the specified IP address and port.

IP Setting Method

Settings: "0.0.0.1" – "255.255.255.254" (excluding the multicast range "224.0.0.0" – "239.255.255.255")

Set the IP address.

Can be configured when "Protocol" is set to "RTP."

Port

Settings: "1024" – "65535"

Set the port number.

Can bet set if "Protocol" is "SRT" or "RTP."

MPEG2-TS

Settings: "1024" – "65535"

When retransmitting via MPEG2-TS over RTP, check "Enable."

Can bet set if "Protocol" is "RTSP."

3.3 Configuring Encoding Settings

1. Select "Streaming Gateway" > "Encoding Settings."
2. Set each item.
   - "Codec" (Codec [▶ 15])
   - "Resolution" (Resolution [▶ 15])
   - "Video Quality" (Video Quality [▶ 15])
   - "Frame Rate[1-60 fps]" (Frame Rate[1-60 fps] [▶ 15])
   - "Bitrate[256-16384 kbps]" (Bitrate[256-16384 kbps] [▶ 15])
   - "GOV Length[1-60]" (GOV Length[1-60] [▶ 15])
   - "Profile" (Profile [▶ 15])
3. Click "Apply."

Codec

Settings: "H.264" / "H.265"

Set the compression format.

Resolution

Settings: "2880x1620" / "2560x1600" / "1920x1080" / "1280x720" / "640x360"

Select the resolution.

Video Quality

Settings: "10" – "100" (in increments of 10)

Set the video quality.

Frame Rate[1-60 fps]

Settings: "1" – "60"

Set the frame rate (video image update interval).

Bitrate[256-16384 kbps]

Settings: "256" – "16384"

Set the bit rate.

GOV Length[1-60]

Settings: "1" – "60"

Set the I frame interval.

Profile

Settings: "Baseline" / "Main" / "High"

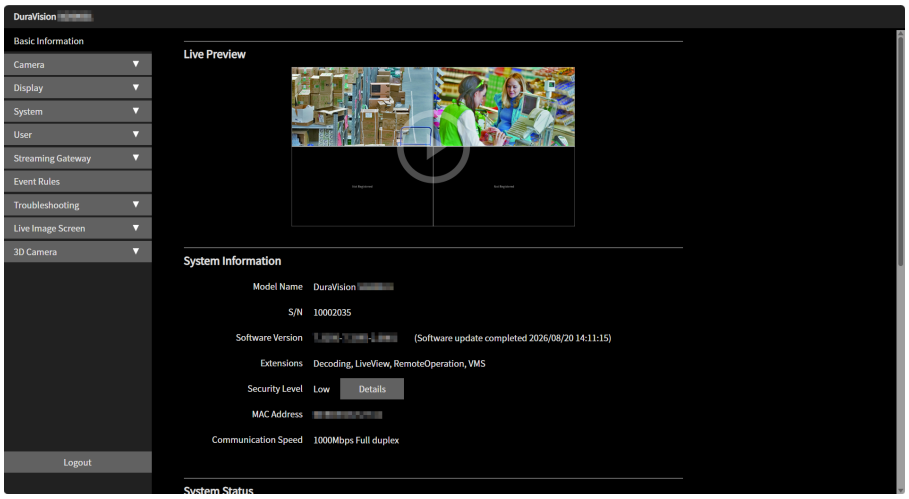
Select the profile. If "Codec" is "H.265," it is set to "Main."

4 System Settings

Perform settings for the date and time of the system, network settings, and maintenance.

4.1 Confirming the Basic Information

The current state of each setting for this product is displayed in a list.



Live preview

The current live image screen can be checked as a still image. Clicking the image opens the live streaming screen (6.10 Checking the Livestream View [▶ 59]).

System Information

- Model Name
- S/N (Serial number)
- Software Version
- Extensions
- Security Level (Security level [▶ 17])
- MAC Address
- Communication Speed

System Status

- Current Status
- Streaming Gateway

Network

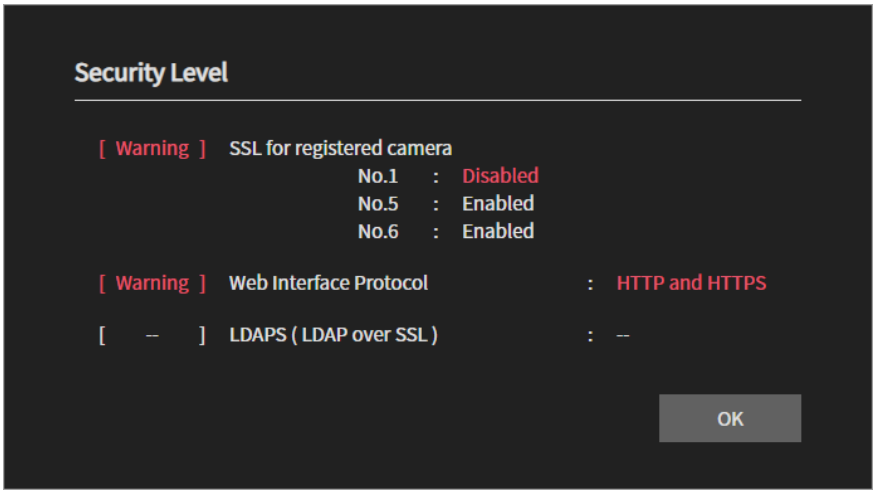
- IP Address
- IP Address
- Subnet Mask
- Gateway
- Hostname
- DNS
- Primary server address

- Secondary server address
- NTP
- Server Address

Security level

You can check whether this product is configured securely. If settings related to secure communication require attention, "Low" is displayed in "Security Level." If the settings are secure, "High" will be displayed.

1. Select "Basic Information."
2. Check "Security Level." If you want to check the settings details, click "Details."
   The "Security Level" dialog box is displayed, and you can check the current settings for items related to secure communication.



SSL for registered camera

A list of the SSL settings of registered cameras is displayed. When SSL settings are enabled, "Enabled" is displayed; when disabled, "Disabled" is displayed, and for protocols where SSL settings cannot be configured, "--" is displayed.

If there is at least one camera displayed as "Disabled," it is considered to be in a state requiring attention ([Warning] is displayed). For information on the setting, refer to 5.2 Registering a Camera Manually [▶ 36].

Web Interface Protocol

If "Web Interface" > "Protocol" is set to "HTTPS," "OK" is displayed. If it is set to anything else, it is considered a state requiring attention ("Warning" is displayed). For information on the setting, refer to Protocol [▶ 20].

LDAPS (LDAPS over SSL)

If "LDAP" > "SSL" is enabled, "OK" is displayed. If it is disabled, it is considered a state requiring attention ("Warning" is displayed). For information on the setting, refer to SSL [▶ 67].

4.2 Performing Network Settings

You can configure network settings such as IP address, DNS, and NTP.

1. Select "System" > "Network."
2. Set each item.
   – "Network" (Network [▶ 18])
   – "DNS" (DNS [▶ 19])
   – "NTP" (NTP [▶ 19])
3. Click "Apply."

4.2.1 Network

IP Address

Settings: "DHCP" / "Manual"

Select the IP address setting method.

Note
• If a DHCP server is used, selecting "DHCP" sets the IP address automatically. The IP address assigned by DHCP is not displayed, so check it with a network scan tool.

IP Address

Settings: "0.0.0.1" – "255.255.255.254"

Set an IP address that is not used by other devices.

Note
• The default IP address is "192.168.0.150." When installing multiple units of this product, IP decoding boxes, or IP monitors, set unique IP addresses.

Subnet Mask

Settings: "0.0.0.1" to "255.255.255.254"

Set the subnet mask.

Gateway

Settings: "0.0.0.1" to "255.255.255.254"

Set the default gateway.

If your network environment does not have a gateway, you do not need to set "Gateway." Leave either as default setting or blank.

Hostname

Settings: Alphanumeric characters and hyphens (up to 63 characters)

If "DHCP" is selected in "IP Address," enter the host name to register with the DHCP server. The default setting is "[Product Name]-[MAC Address]." Automatic registration with DNS depends on the settings on the DHCP/DNS server side.

4.2.2 DNS

DNS

Settings: "Auto" / "Manual"

(Only when "Manual" is selected for "IP Address" under "Network") Set "DNS."

Primary Server Address

Settings: "0.0.0.1" to "255.255.255.254"

If "DNS" is set to "Manual," set the "Primary Server Address."

Secondary Server Address

Settings: "0.0.0.1" to "255.255.255.254"

If "DNS" is set to "Manual," set the "Secondary Server Address."

4.2.3 NTP

NTP

When using an NTP server, check "Enable."

Server Address

If "Enable" of NTP is checked, set the NTP server address.

Enter alphanumeric characters and symbols.

4.3 Configuring Communication Settings

The communication settings are used to configure the web interface function and detection of communication errors.

1. Select "System" > "Communication."
2. Set each item.
   – "Comm. Error Detection" (Comm. Error Detection [▶ 20])
   – "Protocol" (Protocol [▶ 20])
   – "HTTP Port" (HTTP Port [▶ 20])
   – "AUTH Method" (AUTH Method [▶ 20])
   – "HTTPS Port" (HTTPS Port [▶ 20])
3. Click "Apply."

Comm. Error Detection

Set the message display timing when video data reception stops.

- If "Enable" is checked
  Within several seconds after the reception of video image data stops, an alert message is displayed in a red box on the live image screen. When communication resumes, the alert is cleared and the video image is displayed again.
- If "Enable" is not checked
  When approx. 10 seconds have elapsed after the reception of video image data stops, a communication error message is displayed.

Protocol

Settings: "HTTP" / "HTTPS" / "HTTP and HTTPS"

Select the communication protocol with the web server.

The web browser address for accessing this product varies depending on the selected protocol.

- "HTTP": http://<IP address of this product>/
- "HTTPS": https://<IP address of this product>/
- "HTTP and HTTPS":
  https://<IP address of this product>/ or http://<IP address of this product>/

HTTP Port

Settings: "80" / "1024" to "65535"

Set the HTTP port of the web interface.

AUTH Method

Settings: "Digest authentication" / "BASIC authentication"

Set the authentication method of the web interface.

This cannot be set if "LDAP" is selected in "User Account" > "Type."

HTTPS Port

Settings: "443" / "1024" to "65535"

Set the HTTPS port of the web interface.

4.4 Setting the Date and Time

Attention

- Set the correct date. If the correct date is not set, secure communication may fail during certificate verification. When using SSL for camera communication or LDAP settings, or when using 802.1X, avoid leaving the power off for long periods or ensure the correct time is always set using NTP.
- When "NTP" in "Network" is enabled, the date and time cannot be set manually. To set them manually, disable "NTP" (refer to NTP [▶ 19]).
- If the product is disconnected from power for more than a week, the date and time will not be displayed accurately. In such cases, reset the date and time.

1. Select "System" > "Date and Time."
2. Set each item.
   – "Current Time" (Current Time [▶ 21])
   – "Date/Time Display Settings" (Date/Time Display Settings [▶ 21])
   – "Time Zone Settings" (Time Zone Settings [▶ 21])
   – "Clock Settings" (Clock Settings [▶ 21])
3. Click "Apply."

4.4.1 Current Time

Current Time

The current date and time of the product are displayed.

Current Time of PC

When "Sync with PC" is clicked, the current date and time of the computer is set on this product.

4.4.2 Date/Time Display Settings

Date Format

Settings: "yyyy/mm/dd" / "Mmm/dd/yyyy" / "dd/Mmm/yyyy" / "mm/dd/yyyy" / "dd/mm/yyyy" / "No Date Display"

Select the date display format.

Time Format

Settings: "24h" / "12h"

Select the time display format.

4.4.3 Time Zone Settings

Time Zone

Select the time zone.

4.4.4 Clock Settings

Date and Time

Set the current time.

4.5 Configuring the Language

1. Select "System" > "Language."
2. Set each item.
   – "Language" (Language [▶ 22])
3. Click "Apply."

Language

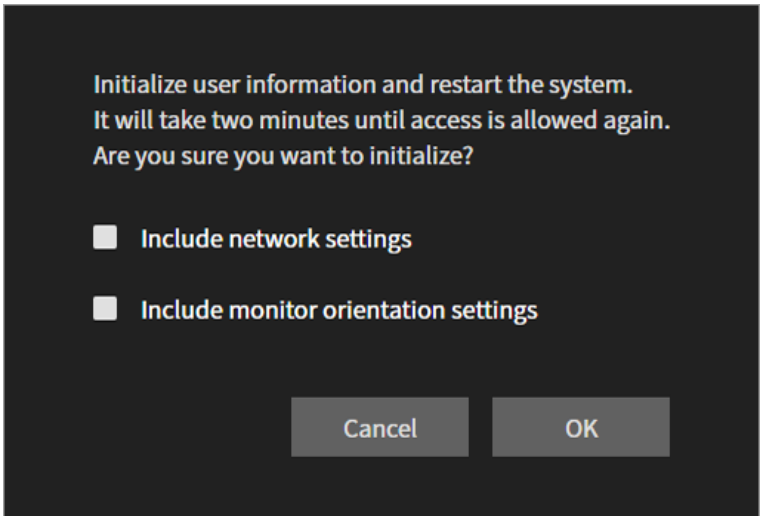
Settings: "日本語" / "English" / "Deutsch"

Select the language.

4.6 Initializing the System

Initializing the system will reset all settings to their default state except for system logs, operation logs, the current time, time zone settings, license activation information, and the software version.

1. Select "System" > "Maintenance."
2. Click "Factory Reset" > "Start."
3. If you want to include network settings as part of the initialization, check "Include network settings."



4. Click "OK."

4.7 Restarting the System

1. Select "System" > "Maintenance."
2. Click "Restart" > "Execute."
3. Click "OK."

4.8 Updating the Software

The software version can be upgraded. Please download the version update file from the EIZO website (www.eizoglobal.com) in advance. For stable operation of the system, it is recommended to use the latest software. It is not possible to revert to an older version.

1. Select "System" > "Maintenance."
2. Click "Software Update" > "File" > "Browse."
3. Select the software file (extension: duraup4).
4. Click "Start."
5. Click "OK" in the confirmation dialog box.
   The process starts.
   During processing, the power indicator flashes red. Do not turn off the power. It takes approximately 10 minutes to update the software.

4.9 Saving Settings Data

Settings data can be exported to a file. The exported file can be used to transfer settings data.

1. Select "System" > "Maintenance."
2. Click "Settings Data Migration" > "Settings Data" > "Save."
3. In the "Save Settings Data" dialog box, enter a password in "Password" to set a password for the file.
4. Click "OK."
5. Specify where to save the file.
   The settings data file is saved.

Attention

- Some of the settings cannot be saved.
- If you forget the password you specified when saving the file, you will not be able to load the settings file.

Note

- Saved file name: (product name)_Backup(save date and time).duraconf2

4.10 Loading System Settings Data

Load settings data from a file.

Attention
• Settings that use server certificates and client certificates cannot be loaded. • If the environment where settings data was saved is different from the environment where settings data is loaded with respect to network settings or communication settings, you may not be able to access this product from a web browser.

1. Select "System" > "Maintenance."
2. Click "Settings Data Migration" > "Settings Data" > "Load."
3. Select the settings data file and enter the password set for the file.
   Do not check "Network Settings."
4. Click "OK."
5. Click "OK" in the confirmation dialog box.
   The process starts.
   Close the browser and wait 2 minutes before accessing again.

4.11 Registering a License

If you register an extended functionality license, more features will be available.

1. Select "System" > "Maintenance."
2. Click "License Activation" > "Extensions" > "Activate."
3. Click "Browse" and select the license file (extension: duralic).
4. Click "OK."
   The process starts.
   Close the browser and wait 2 minutes before accessing again.

Note
• If you click "Deactivate," all additionally registered licenses will be deactivated.

4.12 Setting Event Rules

An event rule is a function that triggers a specific event to perform a specific action.

Note
• Up to 32 event rules can be set.

1. Select "Event Rules."
2. Click Edit ( ) on the number to which you want to register an event rule.
3. Set each item.
   – "Name" (Name [▶ 25])
   – "Status" (Status [▶ 25])
   – "Event" (Event [▶ 25])
   – "Action" (Action [▶ 27])
4. Click "OK."

Name

Settings: Any character (up to 32 characters)

Enter a name for the event rule.

Status

Check "Enable" to enable the event rule.

Event

Settings: "Alert request received"*1 / "Timer expired" / "Video output status change"*2 / "Auxiliary command"*2 / "System Startup" / "Network Link Up" / "Schedule" / "Stream error detected" / "Remote Control Event Button"*2

Select the actions to be executed when an event occurs. The items that can be configured vary depending on the event.

*1 Sending an alert display HTTP command from external device is required.

*2 This function is not supported by this product.

- "Alert request received"
  HTTP alert command was received.
  For more information, refer to When "Event" is selected for "Alert request received" [▶ 26].
- "Timer expired"
  Timer set in "Action" has expired.
  For more information, refer to When "Event" is selected for "Timer expired" [▶ 26].
- "System Startup"
  Main power was turned on.
- "Network Link Up"
  Network communication is enabled.
- "Schedule"
  The set day of the week and time arrived.
  For more information, refer to When "Event" is selected for "Schedule" [▶ 26].

- "Stream error detected"
  Data reception from the camera displayed on the live image screen stopped for a certain period of time.
  For more information, refer to When "Event" is selected for "Stream error detected" [▶ 26].

When "Event" is selected for "Alert request received"

Camera No.

Settings: "any" / "1" to "48"

Select the camera that will receive the alert.

Trigger Type

Settings: "any" / "On" / "Off"

Select when the event will occur.

Select "On" when setting the display alert as the trigger, and "Off" when setting to hide the alert as the trigger.

ID

Settings: "any" / "1" to "16"

Specify the ID[*1].

[*1] Can bet set if "Trigger Type" is "any" or "On."

When "Event" is selected for "Timer expired"

Timer No.

Settings: "1" to "8"

Select the timer number.

When "Event" is selected for "Schedule"

Execution time

Settings: "00:00" to "23:59"

Set the time.

Day of Week

Settings: "Mon." / "Tue." / "Wed." / "Thu." / "Fri." / "Sat." / "Sun."

Select the day of week. Multiple selections are possible.

When "Event" is selected for "Stream error detected"

Camera No.

Settings: "any" / "1" to "48"

Select the camera to be the detection target. if a stream error occurs for a camera that is both the detection target and currently not displayed on the live image screen, it will be detected when the corresponding camera is displayed on the live image screen.

Detection Sensitivity

Settings: "Low" / "High"

Set the time for determining a communication failure after reception of video data has stopped.

- "Low"
  If reception of video data stops for about 10 seconds, it determines that communication has failed.
- "High"
  If reception of video data stops for several seconds, it determines that communication has failed.

Action

Settings: "Notification" / "Power Management" / "Start a timer" / "SNMP Trap"

Select the action you want to take when the event occurs. The items that can be configured vary depending on the action.

- "Notification" (When "Action" is selected for "Notification" [▸ 27])
- "Power Management" (When "Action" is selected for "Power Management" [▸ 28])
- "Start a timer" (When "Action" is selected for "Start a timer" [▸ 28])
- "SNMP Trap" (When "Action" is selected for "SNMP Trap" [▸ 28])

When "Action" is selected for "Notification"

Protocol

Settings: "HTTP" / "HTTPS"

Select the communication protocol.

Method

Settings: "GET" / "PUT" / "POST"

Select the method to be used for the request.

URL

Settings: Alphanumerics and symbols (up to 255 characters)

Enter the URL of the notification destination.

Username

Settings: Alphanumerics and symbols (up to 32 characters)

Enter the username for accessing the URL.

Password

Settings: Alphanumerics and symbols (up to 32 characters)

Enter the password for accessing the URL.

Certificate Validation

If you want to validate the server certificate, check "Enable." *1

*1 Displayed only when HTTPS is selected.

Request Body (JSON)

Settings: Alphanumerics and symbols (up to 4096 characters)

If "Method" is "PUT" or "POST," enter the request body in JSON format to be sent.

Test

Settings: "Execute"

Run a test to check whether the configured URL can be accessed.

Note
• If an API involving a restart is specified in the URL, the notification is executed normally, but the result is displayed as "Failure" because no response is returned due to the restart. This does not affect the actual action.

When "Action" is selected for "Power Management"

Power Status

Settings: "On" / "Quick Shutdown" / "Restart"

Select the power status.

When "Action" is selected for "Start a timer"

Timer No.

Settings: "1" to "8"

Select the timer number.

Duration - Minute

Settings: "0" to "60"

Set "Minute."

Duration - Second

Settings: "0" to "59"

Set "Second."

When "Action" is selected for "SNMP Trap"

Set the SNMP "Trap Address" and "Trap Community" in advance.

Trap Name

Settings: Unicode printable characters (up to 128 characters)

Enter the trap name.

Trap Message

Settings: Unicode printable characters (up to 128 characters)

Enter the trap message.

Test

Settings: "Execute"

Perform the SNMP trap send test.

4.13 Registering a Server Certificate

A server certificate is used when accessing this product from a web browser via HTTPS.

Attention
• A Certificate Signing Request (CSR) cannot be created with this product.

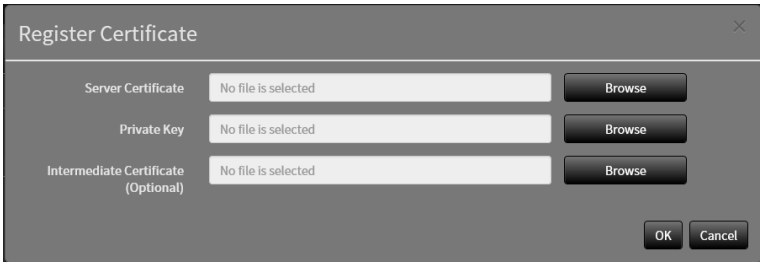
1. Select "System" > "Certificate."
2. Select the certificate type from the "Server Certificate" > "Type" list box.
   – "Self-Signed Certificate" (Self-Signed Certificate [▶ 29])
   – "CA-Signed Certificate" (CA-Signed Certificate [▶ 29])
3. Click "Apply."

Self-Signed Certificate

Click "Self-Signed Certificate" under "Update," renew the certificate, and then select it.

CA-Signed Certificate

Click "Register" under "CA-Signed Certificate," register the certificate, and then select it. Registration of information issued from the certifying body is required for registration.



4.14 Registering a Root Certificate

The root certificate is used in the following situations:

- HTTPS connection to a camera
- IEEE 802.1X authentication
- LDAPS connection to LDAP server

Attention
• A root certificate is not pre-installed in this product.

1. Select "System" > "Certificate."
2. Click "Root Certificate" > "Register."
3. Click "Browse" and select the root certificate.
4. Click "OK."

4.15 Setting IEEE 802.1X Authentication

Note
• This product operates using EAPOL version 2 (IEEE802.1X-2004).

1. Select "System" > "802.1X."
2. Set each item.
   – "Authentication" (Authentication [▶ 30])
   – "Certificate Validation" (Certificate Validation [▶ 30])
   – "Identity" (Identity [▶ 30])
3. Click "Apply."

Authentication

Settings: "Off" / "EAP-TLS" / "EAP-PEAP"

Select the authentication method.

If "Authentication" is "EAP-TLS"

In "Client Certificate," click "Register" and set each field.

Client Certificate

Specify the client certificate.

Private Key

Specify the private key.

If "Authentication" is "EAP-PEAP"

In "Client Certificate," click "Register" and set each field.

Password

Settings: Alphanumerics and symbols (up to 32 characters)

Enter a password.

Certificate Validation

If you want to validate the server certificate, check "Certificate Validation" > "Enable." The root certificate of the authentication server must be registered in "System" > "Certificate" > "Root Certificate" of this product.

Identity

Settings: Alphanumerics and symbols (up to 32 characters)

Enter the username.

4.16 Setting the Product SNMP

You can obtain information via SNMP and set SNMP traps as an event rule action.

1. Select "System" > "SNMP."
2. Select a version from the "Version" list box.
3. If "Version" is "v1 & v2c," set each item.
   - "Read Community" (Read Community [▸ 31])
   - "Trap Address" (Trap Address [▸ 31])
   - "Trap Community" (Trap Community [▸ 31])
4. Click "Apply."

Attention

- If the "Read Community" is blank, information cannot be obtained by SNMP.
- If "Trap Address" and "Trap Community" are blank, SNMP traps for event rules will not work.

Read Community

Settings: Alphanumerics and symbols (up to 32 characters)

Enter the read community.

Trap Address

Settings: "0.0.0.1" to "255.255.255.254"

Enter the SNMP trap notification destination address of the event rule.

Trap Community

Settings: Alphanumerics and symbols (up to 32 characters)

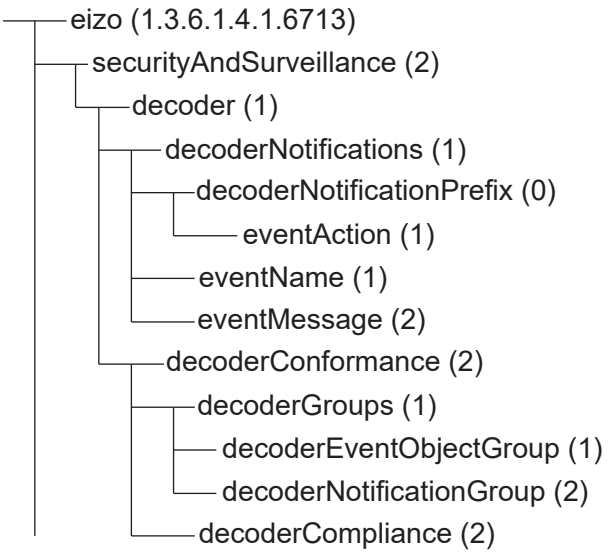
Enter the trap community.

4.16.1 EIZO MIB Structure

When using SNMP with this product, the following modules must be imported into the SNMP manager. Please download the MIB file from the EIZO website (www.eizoglobal.com) in advance.

- EIZO-ROOT-MIB
- EIZO-SECURITY-MIB
- EIZO-DECODER-MIB

MIB Tree



Name	OID	TYPE	SYNTAX	MAX-ACCESS	Description
eventAction	.6713.2.1.1.0.1	NOTIFICATION-TYPE	-	-	Trap when executing actions
eventName	.6713.2.1.1.1	OBJECT-TYPE	SnmpAdminString	accessibleformotify	Event name defined in the event rule
eventMessage	.6713.2.1.1.2	OBJECT-TYPE	SnmpAdminString	accessibleformotify	Event message defined in the event rule

4.17 Setting an IP Address Filter

Limit the IP address of computers that can access the system.

Attention
• If the IP address filter is not set up correctly, it will not be possible to access this product. • If "IP Address Filter" is "On," the camera will not be found when performing a camera search. • Even when "IP Address Filter" is "On," communication for receiving camera images is not restricted.

1. Select "System" > "IP Address Filter."
2. Set each item.
   – "IP Address Filter" (IP Address Filter [▸ 33])
   – "Permitted IP Address Settings" (Permitted IP Address Settings [▸ 33])
3. Click "Apply."

IP Address Filter

If an IP address filter is used, check "Enable."

Permitted IP Address Settings

Settings: "0.0.0.1" to "255.255.255.254 / 32"

Enter the IP address of the computer you want to allow access to. When specifying an IP address as a range, enter it in CIDR notation.

4.18 Saving Logs

Save operation logs and system logs.

Use these logs to check the current or past conditions of the system or to find out the cause of a problem when it occurs.

1. Select "Troubleshooting" > "Log."
2. Click "Save" for the items you want to save in the log.

4.19 Saving Basic Information

Displays basic information of this product. You can use this to check the current settings of the system and find the cause of a problem when it occurs.

1. Select "Troubleshooting" > "Log."
2. Click "Basic Information" > "Save."

4.20 Confirming the Camera Connection

You can check the connection status of the network camera.

1. Select "Troubleshooting" > "Network Connection Status."
2. From the "Camera Name" list box, select the camera.
3. Click "ping" or "traceroute" for "Execute."
   The connection status is displayed.

4.21 Confirming the Network Connection Status

1. Select "Troubleshooting" > "Network Connection Status."
   The current communication bandwidth (sending, receiving) is displayed.
2. Select "Current Status."
   The connection status is displayed.

Note
• Select "Reconnect" to reset the network status. The connection status is not displayed.

4.22 Configuring Other Settings

1. Select "System" > "Hardware."
2. Set each item.
   – "Key Lock" (Key Lock [▶ 34])
   – "Power Indicator" (Power Indicator [▶ 34])
3. Click "Apply."

Key Lock

If you want to lock the button operations on the front of the product, check "Enable."

Power Indicator

To turn on the power indicator (blue) during normal operations, check "Enable."

4.23 Linking with a Qognify VMS

This product can be controlled directly from Qognify VMS (Video Management Software).

For more information, refer to the User's Manual for Video Wall Integration for Qognify. The User's Manual for Video Wall Integration for Qognify can be downloaded from the EIZO web site (www.eizoglobal.com).

5 Managing Cameras

This section describes the procedure for registering cameras, configuring functions, and applying them to the system.

5.1 Registering a Camera Using Auto Discovery

Cameras connected to the network can be automatically detected and registered.

Attention

- The following cameras and video encoders must be registered manually (refer to 5.2 Registering a Camera Manually [▶ 36]).
  - Cameras that cannot be discovered automatically
    - Cameras on different subnets cannot be discovered automatically.
    - Some cameras can be set to deny auto discovery or allow auto discovery only for a certain period of time after the camera is turned on.
  - Fisheye/panoramic cameras with multiple video streams
  - Video encoder with multiple cameras connected

1. Select "Camera" > "Camera Registration."
2. Click "Camera Auto Discovery."
3. Set each item.
   - "Protocol" (Protocol [▶ 35])
   - "User Name" (User Name [▶ 35])
   - "Password" (Password [▶ 35])
4. Click "OK."
   A list of detected cameras is displayed.
   Whether a camera can be automatically detected depends on the camera and network. Cameras that do not appear in the list must be registered manually.
5. Check the camera to register, and select "Add."
6. Click "Apply."
7. Click "OK" in the confirmation dialog box.

Protocol

Select the protocol to control the camera.

- "ONVIF"[*1]
  ONVIF Profile S compatible cameras
- "AXIS"
  Axis cameras (VAPIX®)
- "Panasonic/i-PRO"
  Panasonic/i-Pro cameras

[*1] When "Protocol" is set to "ONVIF," the "Media Type" will be "Media1."

User Name

Enter the username of the camera. A user with administrative privileges is required.

Password

Enter the password for the camera.

5.2 Registering a Camera Manually

The following cameras and video encoders must be registered manually.

- Cameras that cannot be automatically detected
- Fisheye/panoramic cameras with multiple and different video streams
  - Register multiple fisheye/panoramic cameras with the same IP address and specify the streams to be displayed.
- Video encoder with multiple cameras connected
  - Register multiple video encoders with the same IP address and specify the streams to be displayed. For Panasonic/i-PRO video encoders that support multiple channels, specify the camera to be displayed in "Channel."

Attention
• Cameras must be connected to the network even when registering them manually.

1. Select "Camera" > "Camera Registration."
2. Check the position number to register, and click the edit icon ( ).
3. Set each item.
   The displayed items vary depending on the protocol. First, select "Protocol" (refer to Protocol [▶ 36]).
   - Common items (Common items [▶ 36])
   - "ONVIF" (ONVIF [▶ 37])
   - "AXIS" (AXIS [▶ 38])
   - "Panasonic/i-PRO" (Panasonic/i-PRO [▶ 39])
   - "EIZO Streaming Gateway" (EIZO Streaming Gateway [▶ 40])
   - "DirectUri" (DirectUri [▶ 41])
   - "SRT" (SRT [▶ 42])
   - "Still Image File" (Still Image File [▶ 43])
   - "Qognify" (Qognify [▶ 43])
4. Click "OK."
5. Click "Apply."

5.2.1 Common items

Protocol

Settings: "ONVIF" / "AXIS" / "Panasonic/i-PRO" / "EIZO Streaming Gateway" / "DirectUri" / "SRT" / "Still Image File" / "Qognify"

Select the protocol used to control the camera.

- "ONVIF"
  ONVIF Profile S-compliant cameras
- "AXIS"
  Axis cameras (VAPIX)
- "Panasonic/i-PRO"
  Panasonic / i-PRO cameras
- "EIZO Streaming Gateway"
  Select when connecting to a product with the streaming gateway function enabled.
- "DirectUri"
  Select when connecting to an RTSP stream URI (URI starting with rtsp://) or RTP stream URI (URI starting with rtp://).

- "SRT"
  Select when connecting to an SRT stream URI.
- "Still Image File"
  Select when specifying an uploaded still image.
- "Qognify"
  Select when integrating with Qognify VMS.

Camera Name

Settings: Any character (up to 100 characters)

Enter the camera name. If you want to insert a line break in the camera name, enter \n at the position where you want the line to break.

Enter "IP Address," "Port," "Username," "Password" and click "Obtain Camera Name" to get the camera name from the camera.

5.2.2 ONVIF

IP Address

Settings: "0.0.0.1" – "255.255.255.254"

Enter the IP address of the camera.

Click "Ping" to perform a connection test on the camera.

Port

Settings: "1" – "65535"

Enter the port number of the camera.

The typical port number is "80" ("443" if SSL is enabled).

SSL

Configures secure settings.

The camera must have a server certificate set up.

Since communication via HTTP is not encrypted, there is a risk that data may be intercepted by a third party. To ensure secure communication, it is recommended to use SSL (HTTPS).

Certificate Validation

Performs certificate validation during SSL communication.

The camera's root certificate must be registered in "Certificate" > "Root Certificate."

Username

Settings: Alphanumeric characters and symbols (up to 32 characters)

Enter the username of the camera. A user with administrative privileges is required.

Password

Settings: Alphanumeric characters and symbols (up to 32 characters)

Enter the password for the camera.

Media Type

Settings: "Media1" / "Media2"

Select the media type.

- "Media1" (default setting)
  Select to connect to H.264 and MJPEG streams.
- "Media2"
  Select to connect to H.265 and H.264 streams. The camera must comply with both ONVIF Profile S and ONVIF Profile T.

Media Profile

Settings: Depends on the camera

Specify the stream to connect to by selecting a media profile. Click "Obtain Profile" to get a list of profiles from the camera.

Transmission Mode

Settings: "Unicast" / "Multicast"

Select the transmission mode

Comm. Method

Settings: "RTP over UDP" / "RTP over RTSP"

Select the communication method for camera video images.

5.2.3 AXIS

IP Address

Settings: "0.0.0.1" – "255.255.255.254"

Enter the IP address of the camera.

Click "Ping" to perform a connection test on the camera.

Port

Settings: "1" – "65535"

Enter the port number of the camera.

The typical port number is "80" ("443" if SSL is enabled).

SSL

Configures secure settings.

The camera must have a server certificate set up.

Since communication via HTTP is not encrypted, there is a risk that data may be intercepted by a third party. To ensure secure communication, it is recommended to use SSL (HTTPS).

Certificate Validation

Performs certificate validation during SSL communication.

The camera's root certificate must be registered in "Certificate" > "Root Certificate."

Username

Settings: Alphanumeric characters and symbols (up to 32 characters)

Enter the username of the camera. A user with administrative privileges is required.

Password

Settings: Alphanumeric characters and symbols (up to 32 characters)

Enter the password for the camera.

Video Stream

Settings: Depends on the camera

Select the view area for the stream. Click "Obtain Stream" to get a list of view areas from the camera.

The view area is used to stream a portion of the entire image. Refer to the User's Manual of the camera for details.

Stream Profile

Settings: Depends on the camera

Specify the stream to connect to by selecting a stream profile. Click "Obtain Profile" to get a list of profiles from the camera.

If no profile is registered on the camera, this product will automatically register the "EIZO_Profile" profile to the camera.

Transmission Mode

Settings: "Unicast" / "Multicast"

Select the transmission mode

Comm. Method

Settings: "RTP over UDP" / "RTP over RTSP"

Select the communication method for camera video images.

5.2.4 Panasonic/i-PRO

Unicast/Multicast cannot be set from this product. Change the transmission mode on the camera.

IP Address

Settings: "0.0.0.1" – "255.255.255.254"

Enter the IP address of the camera.

Click "Ping" to perform a connection test on the camera.

Port

Settings: "1" – "65535"

Enter the port number of the camera.

The typical port number is "80" ("443" if SSL is enabled).

SSL

Configures secure settings.

The camera must have a server certificate set up.

Since communication via HTTP is not encrypted, there is a risk that data may be intercepted by a third party. To ensure secure communication, it is recommended to use SSL (HTTPS).

Certificate Validation

Performs certificate validation during SSL communication.

The camera's root certificate must be registered in "Certificate" > "Root Certificate."

Username

Settings: Alphanumeric characters and symbols (up to 32 characters)

Enter the username of the camera. A user with administrative privileges is required.

Password

Settings: Alphanumeric characters and symbols (up to 32 characters)

Enter the password for the camera.

Stream

Settings: "1" / "2" / "3" / "4"

Select the stream to connect to.

Channel

Settings: "1" / "2" / "3" / "4"

Select a stream channel.

Comm. Method

Settings: "RTP over UDP" / "RTP over RTSP"

Select the communication method for camera video images.

5.2.5 EIZO Streaming Gateway

IP Address

Settings: "0.0.0.1" – "255.255.255.254"

Enter the IP address of the Streaming Gateway.

Click "Ping" to perform a connection test.

Port

Settings: "1" – "65535"

Enter the port number of the Streaming Gateway.

If "Protocol" is set to "EIZO Streaming Gateway," enter the access port of the Streaming Gateway web server (default: "80," or "443" if SSL is enabled).

SSL

Ensures secure communication.

A server certificate must be configured on the Streaming Gateway.

Since communication via HTTP is not encrypted, there is a risk that data may be intercepted by a third party. To ensure secure communication, it is recommended to use SSL (HTTPS).

Certificate Validation

Performs certificate validation during SSL communication.

The root certificate for the Streaming Gateway must be registered in "Certificate" > "Root Certificate."

Username

Settings: Alphanumerics and symbols (up to 32 characters)

Enter the user name of the Streaming Gateway. A user with administrative privileges is required.

Password

Settings: Alphanumerics and symbols (up to 32 characters)

Enter the password of the Streaming Gateway.

Stream List

Specify the stream to connect to. Click the "Obtain Stream List" button to get a list of streams from the transmitter.

If "Streaming Gateway" > "Streaming settings" > "Protocol" of the source is set to "RTP," you cannot select that stream.

RTSP Username

Settings: Alphanumeric characters and symbols (up to 79 characters)

The RTSP username is automatically set. It can also be changed.

RTSP Password

Settings: Alphanumeric characters and symbols (up to 79 characters)

The RTSP password is automatically set. It can also be changed.

RTSP Comm. Method

Settings: "RTP over RTSP"

Select the communication method for camera video images.

SRT Latency

Settings: "20 ms" to "8000 ms"

Set the latency.

SRT Passphrase

Settings: Alphanumeric characters and symbols (up to 79 characters)

Set the passphrase.

5.2.6 DirectUri

Note

- To receive an MPEG2-TS stream with RTP, select "Comm. Method" or "RTP over UDP" in "RTP over RTSP."
- To receive an MPEG2-TS stream over UDP, check the following points.
  - Specify the port number (1024 to 65535) that receives the stream in "Port" and select "MPEG2-TS over UDP" in "Comm. Method."
  - You should make stream transmission settings for this product from the transmitter in advance.
  - For non-multicast communication, leave the IP address blank.

IP Address

Settings: "0.0.0.1" – "255.255.255.254"

Enter the IP address of the camera.

Click "Ping" to perform a connection test on the camera.

Port

Settings: "1" – "65535"

Enter the port number of the camera.

Typical port numbers are "554" when "Protocol" is "DirectUri," and "URI" is an RTSP stream URI.

Username

Settings: Alphanumeric characters and symbols (up to 32 characters)

Enter the username of the camera. A user with administrative privileges is required.

Password

Settings: Alphanumeric characters and symbols (up to 32 characters)

Enter the password for the camera.

URI

Settings: Alphanumeric characters (up to 1023 characters)

Enter an RTSP stream URI (starting with rtsp://, http://, or https://) or an RTP stream URI (starting with rtp://).

Transmission Mode

Settings: "Unicast" / "Multicast" / "Source-Specific Multicast"

Select the transmission mode.

Comm. Method

Settings: "RTP over UDP" / "RTP over RTSP" / "MPEG2-TS over UDP" / "RTSP over HTTP" / "RTSP over HTTPS"

Select the communication method for camera video images.

5.2.7 SRT

IP Address

Settings: "0.0.0.1" – "255.255.255.254"

Enter the IP address of the camera.

Click "Ping" to perform a connection test on the camera.

Port

Settings: "1" – "65535"

Enter the port number of the camera.

Latency

Settings: "20 ms" to "8000 ms"

Set the latency.

Passphrase

Settings: Alphanumeric characters and symbols (up to 79 characters)

Set the passphrase.

5.2.8 Still Image File

Content number

Settings: "1" – "4"

Select an image uploaded using the "Still Image Registration" function (5.7 Registering Still Images [▶ 48]). A preview of the selected image is displayed.

5.2.9 Qognify

IP Address

Settings: "0.0.0.1" – "255.255.255.254"

Enter the IP address of the camera.

Click "Ping" to perform a connection test on the camera.

Port

Settings: "1" – "65535"

Enter the port number of the camera.

If "Protocol" is set to "Qognify," enter the server access port of the Qognify VMS (default: 62000).

Username

Settings: Alphanumeric characters and symbols (up to 32 characters)

Enter the username of the camera. A user with administrative privileges is required.

Password

Settings: Alphanumeric characters and symbols (up to 32 characters)

Enter the password for the camera.

Camera List

Click "Obtain Camera Name" to retrieve a list of camera names.

Comm. Method

Settings: "RTP over RTSP"

Select the communication method for camera video images.

5.3 Changing Camera Information

1. Select "Camera" > "Camera Registration."
2. Click Edit ( ) for the camera position number you want to change.
3. Set each item.

Note
• Refer to 5.2 Registering a Camera Manually [▶ 36] for details about each item.

4. Click "OK."
5. Click "Apply."

5.4 Deleting Cameras

1. Select "Camera" > "Camera Registration."
2. Click Delete ( ) on the position number of the camera you want to delete.
3. Click "Apply."

5.5 Importing Camera Information

Load a CSV file containing camera candidate additions to register them.

Note
• Up to 255 camera candidates can be imported. • The CSV files that can be imported are as follows. – CSV files saved using the "Save Camera Information" function ("Save Camera Information" is a function in version 6.0 and earlier). – CSV files created by users – Refer to 9.1 CSV File Format for Registering Cameras [▶ 69] for details on CSV files that can be imported. • If "CameraName" (camera name) is garbled, a character encoding other than Unicode UTF-8 may be in use. Change the character encoding to Unicode UTF-8.

1. Select "Camera" > "Camera Registration."
2. Click "Load Camera Information."
3. Select the CSV file containing camera information, then click "Open."
4. Select the camera to add from the camera candidate list, then click "Add."
5. Click "Apply."

5.6 Setting the Quality of Streaming Video Images

Set the quality of streaming video images from cameras.

Note

- This product supports H.265, H.264, and MPEG (only cameras that support ONVIF Profile S) video compression formats.
- This function accesses the camera and changes image quality settings. Changing image quality settings such as resolution may affect the image quality of other recording devices and display devices using the same "Encoder." Please check the impact of changing the quality settings in advance.
- Depending on the camera, the set values may not be reflected. Check the camera specifications.
- It can be set only if "Protocol" is "ONVIF" or "AXIS." If "Protocol" is "Panasonic/i-PRO," the setting information is displayed.

1. Select "Camera" > "Camera Function."
2. Select the camera you want to set up from the "Camera Name" list box.
3. Set the "Video" tab of each item.
   The displayed items vary depending on the protocol.
   – "ONVIF" (ONVIF [▶ 45])
   – "AXIS" (AXIS [▶ 47])
4. Click "Apply."

5.6.1 ONVIF

If "Media Type" is "Media2," all items are read-only, and settings cannot be changed.

Camera Web Console

Displays a link to the web page of the camera.

Media Type

Displays the media type (Media1 / Media2).

Media Profile

Settings: EIZO_Profile / Profile of each camera

Select the profile.

Encoder

Settings: Depends on camera specifications

Select the encoder settings.

Compression Format

Settings: "H.264" / "MJPEG"

Select the compression format (if "Media Type" is "Media1").

When "Media Type" is set to "Media2," the setting information is displayed ("H.265" or "H.264").

Resolution

Settings: Depends on camera specifications

Set the resolution.

Frame Rate
Settings: Depends on camera specifications
Set the frame rate (video image update interval).

Encoding Interval
Settings: Depends on camera specifications
Set the encoding interval.
If "Media Type" is "Media2," this item is not displayed.

Bit Rate (Max.)
Settings: Depends on camera specifications
Set the maximum bit rate for the video to be transmitted.

Video Quality
Settings: Depends on camera specifications
Set the image quality. The higher the value, the higher the image quality.

GOV Length
Settings: Depends on camera specifications
Set the frame interval.

Profile
Settings: Depends on camera specifications
Set the profile.

Comm. Method
Displays the camera image connection method (RTP over UDP / RTP over RTSP).

Transmission Mode
Settings: "Unicast" / "Multicast"
Select the transmission method.

Multicast Address
Settings: "224.0.0.0" to "239.255.255.255"
Set the multicast address for multicast transmission.

Multicast Port
Settings: "1024" to "65534" (even numbers only)
Set the multicast port number for multicast transmission.

Multicast TTL
Settings: "1" to "255"
Set the network TTL value for multicast transmission.

5.6.2 AXIS

Camera Web Console
Displays a link to the web page of the camera.

Video Stream
Settings: Depends on camera specifications
Select the display mode to be used in the camera display.

Stream Profile
Settings: EIZO_Profile / Profile of each camera
Select the profile stored in the camera.

Compression Format
Displays the compression format (H.264 / H.265 / MJPEG).

Resolution
Settings: Depends on camera specifications
Set the resolution.

Frame Rate
Settings: "1 fps" to "60 fps"
Set the frame rate (video image update interval).

Rotation
Displays the direction of rotation of the image (0 / 90 / 180 / 270).

GOP Length
Displays the GOP length of the video.

Bit Rate (Max.)
Settings: "0 kbps" to "8192 kbps"
Set the maximum bit rate for the video to be transmitted.

Priority
Settings: "None" / "Frame Rate" / "Quality"
Set the priority for video compression.

Comm. Method
Displays the camera image connection method (RTP over UDP / RTP over RTSP).

Transmission Mode
Settings: "Unicast" / "Multicast"
Select the transmission method.

Multicast Address
Displays the multicast address for multicast transmission.

Multicast Port

Displays the multicast port number for multicast transmission.

Multicast TTL

Displays the network TTL value for multicast transmission.

5.7 Registering Still Images

Upload images to this product. If you specify an uploaded image during camera registration, it can be displayed in the camera display area (refer to 5.2 Registering a Camera Manually [▶ 36]).

1. Select "Camera" > "Still Image Registration."
2. Click "Upload."
3. Select the image to register, then click "Open."

6 Live Image Screen (Screen Streamed in Merge Mode) Settings

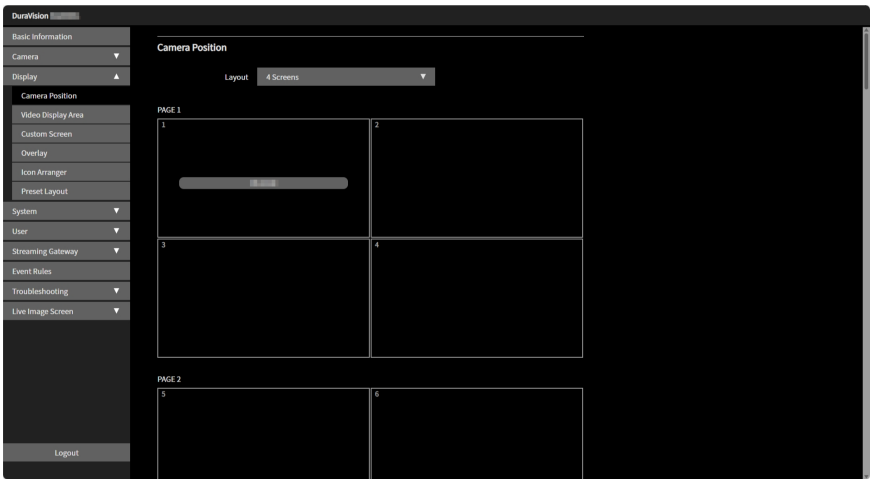
Configure display settings such as changing the layout of the live image screen (the screen streamed in Merge Mode) and displaying the current system status.

6.1 Setting Display Positions of Camera Video Images

Set the display position for video images from the cameras.

You can switch the display positions of the source and destination camera images by dragging and dropping the camera name.

1. Select "Display" > "Camera Position."
   The "Camera Position" screen appears.



2. From the "Layout" list box, select a live image screen layout.
   When a layout is selected, the display on the page changes to the selected state. You can configure settings while visualizing the display state.
3. Select the name of the camera to be moved, then drag it and drop it onto the camera name where it will be moved to.
   The display positions of the source and destination camera video image will switch.
4. Click "Apply."
   The display positions of camera video images are updated. If "Reset" is clicked, the information of the setting being changed is discarded and the setting is reset to the current display setting of the product.

6.2 Setting the Display Method of Camera Video Images

Configure settings for the items displayed on the live image screen.

1. Select "Display" > "Video Display Area."
2. Set each item.
   - "Camera Name Display" (Camera Name Display [▶ 50])
     - "Size" (Size [▶ 50])
     - "Color" (Color [▶ 50])
     - "Border" (Border [▶ 50])
     - "Background" (Background [▶ 50])
     - "Position" (Position [▶ 50])
   - "Time Display in Full Screen" (Time Display in Full Screen [▶ 50])
     - "Size" (Size [▶ 51])
     - "Color" (Color [▶ 51])
     - "Border" (Border [▶ 51])
     - "Background" (Background [▶ 51])
     - "Position" (Position [▶ 51])
   - "Sequence Interval" (Sequence Interval [▶ 51])
   - "Aspect Ratio Mode" (Aspect Ratio Mode [▶ 51])
   - ""Not Registered" Display" ("Not Registered" Display [▶ 51])
   - "Layout frame" (Layout frame [▶ 51])
3. Click "Apply."

Camera Name Display

If you want to display the registered camera name on the live image screen, check "Enable."

Size

Settings: "Large" / "Medium" / "Small"

Set the font size.

Color

Settings: "White" / "Black"

Set the text color.

Border

If you want to add a border to the text, check "Enable."

Background

If you want the text background to be semi-transparent, check "Enable."

Position

Settings: "Upper left" / "Upper center" / "Upper right" / "Lower left" / "Lower center" / "Lower right"

Set the display position for the text.

Time Display in Full Screen

To display the time on the screen during full screen display, check "Enable."

Size

Settings: "Extra large" / "Large" / "Medium" / "Small"

Set the font size.

Color

Settings: "White" / "Black"

Set the text color.

Border

If you want to add a border to the text, check "Enable."

Background

If you want the text background to be semi-transparent, check "Enable."

Position

Settings: "Upper left" / "Upper center" / "Upper right" / "Lower left" / "Lower center" / "Lower right"

Set the display position for the text.

Sequence Interval

Settings: "5 Seconds" to "60 Seconds"

Set the interval for changing screens during sequential display.

Aspect Ratio Mode

Settings: "Full" / "Aspect"

Set which aspect ratio to apply when the aspect ratio of the video image transmitted from the camera is different from the aspect ratio displayed in the image display area on the monitor. When "Layout" is selected for "Custom Screen," if "Aspect" is selected, "Full" or "Aspect" can be selected for each camera image. For details, refer to 6.3 Setting Custom Screen Layouts [▶ 52].

"Not Registered" Display

To display the text "Not Registered" if the camera is not registered, check "Enable."

Layout frame

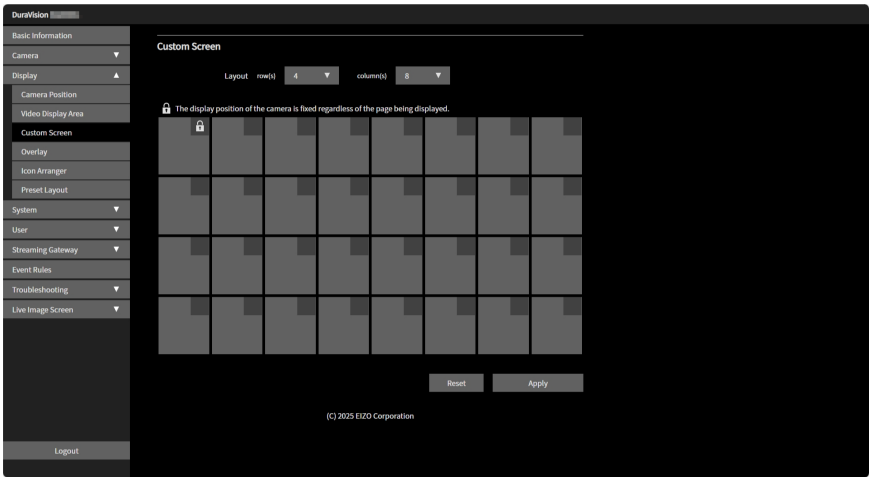
Settings: "White" / "Black"

Set the color of the camera image frame.

6.3 Setting Custom Screen Layouts

Set the display layout when "Custom Screen" is selected in "Layout" on the live image screen.

1. Select "Display" > "Custom Screen."
   The "Custom Screen" screen appears.



Note

- If you click the top-right corner within the display position frame, the  is displayed and can lock the display position of any camera video. The camera image display position will remain fixed even when switching pages.

2. Select the number of "row(s)" and "column(s)" from the list box.
   The screen will change according to the number of rows and columns selected.
3. Drag a camera image display position and drop it on the display position you want to link it with.
   The selected display positions will be linked.
4. Click "Apply."
   The linked display position is applied. If "Reset" is selected, the information of the setting being changed is discarded and the setting is reset to the current display setting of the product.

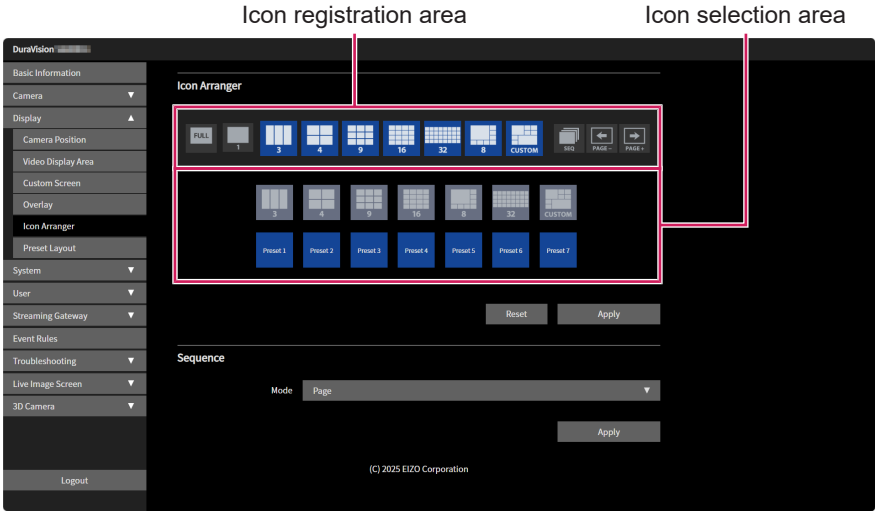
Note

- To unlink, click the linked display position. Alternatively, you can unlink by changing the rows and columns in the list box.
- If "Aspect Ratio Mode" is set to "Aspect," "Full" or "Aspect" is displayed for the camera display position, and the setting changes every time either one of them is selected. For information on the "Aspect Ratio Mode" setting, refer to 6.2 Setting the Display Method of Camera Video Images [▶ 50].

6.4 Changing the Selectable Layout on the Live Image Screen

You can change the layouts that can be selected on the live image screen.

1. Select "Display" > "Icon Arranger."
   The "Icon Arranger" screen appears. The layout of the icons registered in the "Icon registration area" can be selected on the live image screen.



2. Drag the icon to change and drop it at the desired position in the icon registration area.

Note

- If another icon is already registered at the destination, their positions are swapped.
- To delete a registration, drag and drop the icon from the icon registration area to the icon selection area.
- The settings for  cannot be changed.

3. Click "Icon Arranger" > "Apply."

6.5 Setting the Sequence Display Mode

1. Select "Display" > "Icon Arranger."
2. Select "Mode" in "Sequence" from the list box.
   – "Mode" (Mode [▶ 54])
3. Click "Sequence" > "Apply."

Mode

Settings: "Page" / "Preset"

Select how to switch camera images in sequence display.

- "Page"
  Switches displayed pages in order while maintaining the layout. Pages with no registered cameras are skipped.
- "Preset"
  Switches preset layout icons displayed on the live image screen sequentially from left to right. Refer to 6.6 Configuring Preset Layouts [▶ 55] for details on preset layouts.

Note

- In the following cases,  on the live image screen cannot be selected:
  – When "Mode" is set to "Page" and a preset layout is displayed
  – When "Mode" is set to "Preset" and a layout other than a preset layout is displayed

6.6 Configuring Preset Layouts

The display layout and camera arrangement on the live image screen can be saved as a preset layout.

Note

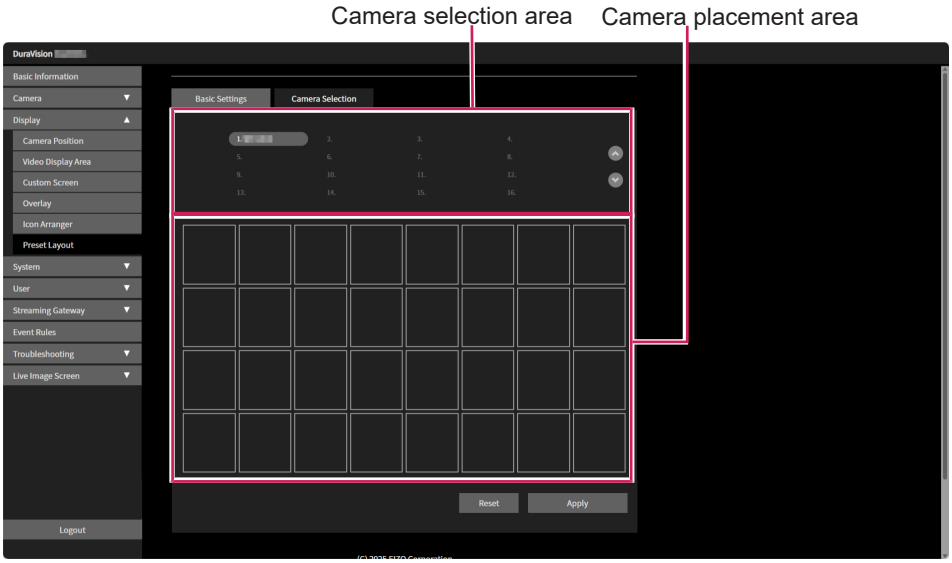
- Up to 7 preset layouts can be saved.

1. Select "Display" > "Preset Layout."
2. Select the preset number to configure from the "Preset Number" list box.
3. Select the "Basic Settings" tab and enter "Preset Name."
   – "Preset Name" (Preset Name [▶ 56])
4. Select the "row(s)" and "column(s)" number from the list box.
   The screen changes according to the selected number of rows and columns.
5. Select a camera display position, then drag and drop it onto the display position to combine.
   The selected display positions are combined.

Note

- To separate, click the combined display position. Alternatively, change the rows and columns using the list box.

6. Click "Apply."
7. Select the "Camera Selection" tab.



8. Drag the camera to configure from the camera selection area or camera placement area, and drop it at the desired position in the camera placement area.

Note

- Clicking a camera to configure in the camera selection area places it in an available position in the camera placement area.
- If another camera is already placed at the destination, their positions are swapped.
- To remove the setting, drag and drop the camera from the camera placement area to the camera selection area.

9. Click "Apply."

Preset Name

Settings: Any character (up to 16 characters)

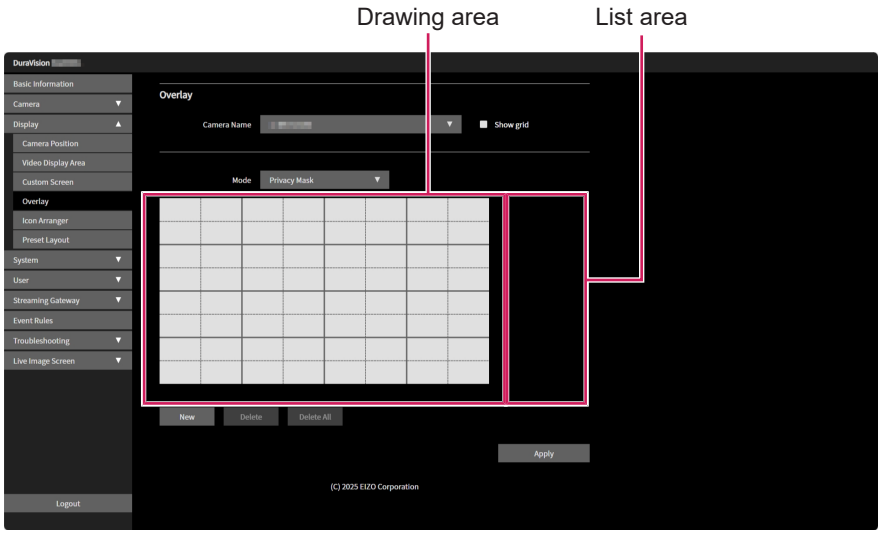
Enter a name for the preset.

6.7 Setting the Overlay

Privacy masks and virtual lines can be displayed on the camera image.

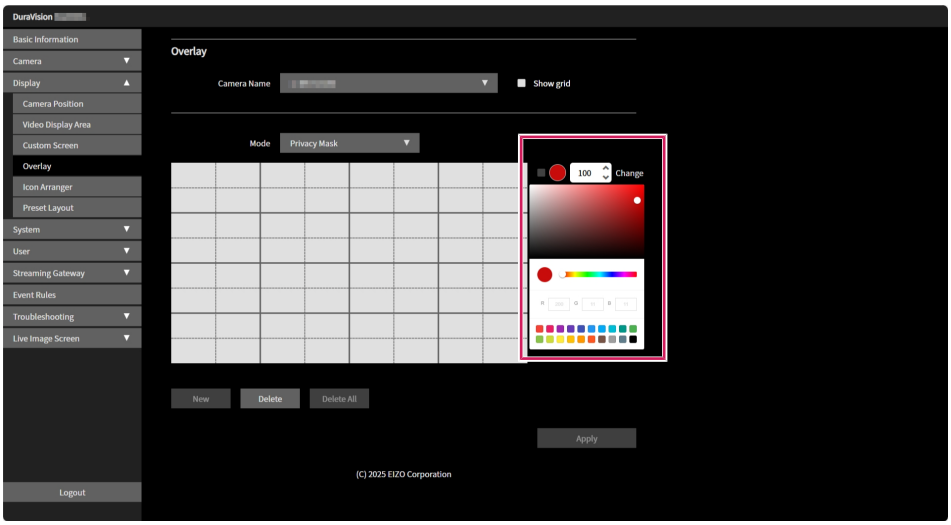
1. Select "Display" > "Overlay."
2. Select the camera you want to set up from the "Camera Name" list box.
   The setting screen of the selected camera is displayed.

Note
• If you check "Show grid," you can display a grid on the camera image on the live image screen.



3. Select the type of overlay you want to set from the "Mode" list box.
   – "Privacy Mask"
   You can set up to 10 privacy masks.
   Designates 3 or 4 points in the drawing area and draws polygonal shaped privacy masks.
   – "Virtual Line"
   You can set up to 10 virtual lines.
   Designates 2-10 points in the drawing area and draws virtual lines.
4. Click "New."
   A new overlay item is added to the list area.

5. Set each overlay item.



   - "Check box" (Check box [▶ 57])
   - "Color" (Color [▶ 57])
   - "Opacity" (Opacity [▶ 57])
   - "Weight" (Weight [▶ 57])
6. Draw the overlay in the drawing area.
7. Click "Apply."
   The overlay is displayed in the drawing area.

Note

- You can remove specific overlays by following these steps.
  1. Select the overlay you want to remove in the drawing area.
     "Selected" is displayed on the selected overlay item in the list area.
  2. Click "Delete."
  3. Click "Apply."
- Click "Delete All" to remove all overlays.

Check box

Switch between displaying/hiding the overlay.

Color

Select a color from the color palette.

Opacity

Settings: "0" to "100"

For "Privacy Mask," select the opacity.

Weight

Settings: "1" to "12"

For "Virtual Line," select the line weight.

6.8 Setting the Display Methods of Live Image Screens

You can configure display settings such as changing the live image screen layout.

1. Select "Live Image Screen" > "Live Image Screen Status."
2. Select each setting item from the list box.
   – "Layout" (Layout [▶ 58])
   – "Page" (Page [▶ 58])
   – "Sequence" (Sequence [▶ 58])
3. Click "Apply."

Layout

Settings: "1 Screen" / "3 Screens" / "4 Screens" / "9 Screens" / "16 Screens" / "32 Screens" / "8 Screens" / "Custom Screen"

Set the layout to be displayed on the live image screen.

Page

Settings: "1" to "48"

Switch the page with the camera image displayed on the monitor.

Sequence

To enable sequence display, select the "Enable" checkbox.

6.9 Setting the Current Monitor Display Status

1. Select "Live Image Screen" > "System Status."
2. Set each item.
   – "Current Status" (Current Status [▶ 58])
3. Click "Apply."

Current Status

Settings: "Live Image Screen" / "Quick Shutdown"

Select the status.

- "Live Image Screen"
  When the monitor screen displays the live image screen
- "Quick Shutdown"
  When the power is off

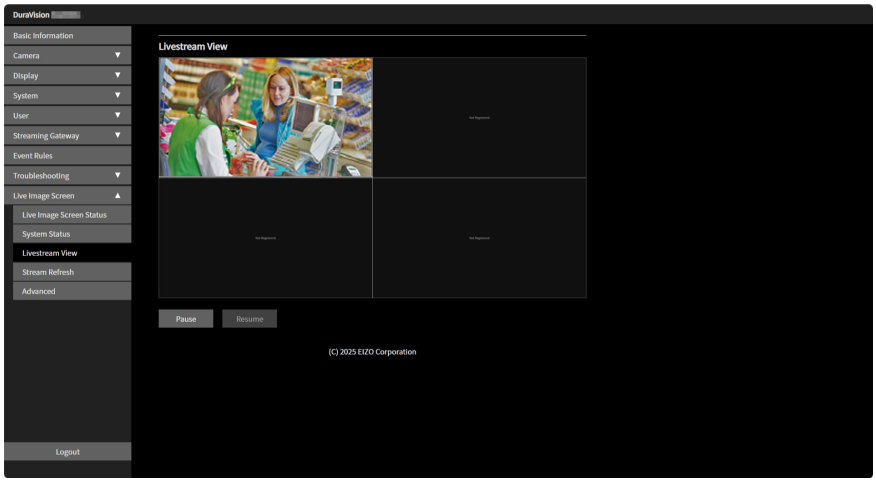
6.10 Checking the Livestream View

The current live image screen display can be viewed as video from a web browser.

Attention

- This function does not work when the "Streaming mode" of "Streaming Gateway" is set to "Relay mode."
- Up to 2 users can use this function at the same time.
- The display frame rate for this function is 1 fps.
- This function will not work if the web browser is Internet Explorer.

1. Select "Live Image Screen" > "Livestream View."
   The live image screen is displayed as video. Clicking "Pause" stops the video, and clicking "Resume" plays the video. Double-clicking the live streaming display switches to full-screen view.



6.11 Updating the Camera Image of the Live Image Screen to the Latest Status

Update the camera image on the live image screen to the latest status.

1. Select "Live Image Screen" > "Stream Refresh."
2. Click "Execute."

6.12 Configuring Advanced Settings for Camera Videos

Configure advanced settings for displaying camera video on the live image screen. Normally, there is no need to change these settings.

Attention
• Changing the settings may cause the display to function improperly.

1. Select "Live Image Screen" > "Advanced."
2. Set each item.
   - "B Frame Decode Buffer" (B Frame Decode Buffer [▶ 60])
   - "Skip non-reference frames" (Skip non-reference frames [▶ 60])
   - "Suspend while in Background" (Suspend while in Background [▶ 60])
   - "Instant Camera Switching" (Instant Camera Switching [▶ 60])
   - "Sync timestamp" (Sync timestamp [▶ 61])
   - "Latency [0-1000 ms]" (Latency [0-1000 ms] [▶ 61])
   - "Network traffic condition" (Network traffic condition [▶ 61])
   - "RTP receive port restrictions" (RTP receive port restrictions [▶ 61])
   - "RTP receive port range" (RTP receive port range [▶ 61])
3. Click "Apply."

B Frame Decode Buffer

When "Enable" is checked, streams containing B-frames can be displayed, but the following issues occur. By default, "Enable" is not checked.

- The display of camera images is delayed.
- Video with a low frame rate such as 1 fps may not be displayed.

Skip non-reference frames

When "Enable" is checked, non-reference frames are skipped to maintain the display, but the following may occur.

- Camera video stuttering may increase.

Suspend while in Background

When "Enable" is checked, only communication with the camera displayed on the live image screen is maintained, and communication with the non-displayed cameras is disconnected each time. Communication with the camera can be minimized, but the following issues occur. By default, "Enable" is not checked.

- Since communication with the camera starts when the display starts, it takes time for the camera image to be displayed.

Instant Camera Switching

If you check "Enable," decoding for cameras that are not displayed is maintained, reducing the time until camera images appear when switching pages. However, the following restrictions apply. By default, "Enable" is not checked.

- Up to 32 cameras can be displayed (communication fails after the 33rd).
- If the "Suspend while in Background" function is enabled, this function is disabled (the "Suspend while in Background" function takes priority).
- Since camera feeds not displayed on the screen are also decoded in parallel, the decoding performance depends on the total number of cameras registered in the system rather than the current display layout (refer to 10.2 Decoding Performance [▶ 72]).

Sync timestamp

This feature applies only to video streams received via RTSP or RTP.

If "Enable" is checked, the live stream will be displayed according to the time stamp received from the camera. Display stuttering may be improved, but the following issues occur. By default, "Enable" is not checked.

- Increasing the delay time (buffering time) improves display stability but increases display delay. Reducing the delay time setting shortens display delay but may result in unstable display.
- Increased CPU load may lead to reduced performance, such as a decrease in the frame rate that can be displayed.

Latency [0-1000 ms]

The delay time for "Sync timestamp" can be set from 0 to 1000 ms.

Network traffic condition

If you check "Enable," the data reception and network status can be checked by the color of the circle displayed in the upper right of the screen. By default, "Enable" is not checked.

- Black
  Default status
- Red
  Packet lost detection
- Yellow
  No packets received for a certain period of time
- Gray
  Frame rate drops due to high load
- Green
  Normal reception of 30 frames or higher

RTP receive port restrictions

When "Enable" is checked, the "RTP receive port range" setting becomes active, and the range of receive ports is restricted. By default, "Enable" is not checked.

RTP receive port range

Settings: "1024" to "65535"

Specifies the range of RTP receive ports (UDP) used after RTSP communication begins.

7 3D Camera Settings

When an applicable extension license is registered to this product, registering cameras that generate 3D video and adjusting 3D video parallax are available.

Attention

- Select "Merge mode (Low Latency)" in "Streaming Gateway" > "Streaming mode." Low-latency streaming suitable for remote control can be performed (refer to Streaming Gateway [▶ 12]).
- When using the DX0231-IP as a receiver device for streams from this product, set "Layout" on the DX0231-IP to "1 Screen" and output to a 3D monitor.

7.1 Registering Cameras That Generate 3D Video

Specify the two cameras used to generate 3D video.

- Streaming method: RTP
- Compression method: H.264

1. Select "3D Camera" > "3D Camera Registration."
2. Set each item.
   - "Left Camera" (Left Camera [▶ 62])
   - "Right Camera" (Right Camera [▶ 62])
   - "Fisheye Correction" (Fisheye Correction [▶ 62])
3. Click "Apply."
   The specified cameras are registered in the "Camera" > "Camera Registration" list (Left camera: No. 1, Right camera: No. 2).

Note

- "Layout" in "Live Image Screen" is set to "Custom Screen," and "Page" is set to "1."
- Deleting a camera turns off fisheye correction for that position number. If a camera is overwritten without being deleted, the fisheye correction setting is retained.
- To delete a camera, go to "Camera" > "Camera Registration" (refer to 5.4 Deleting Cameras [▶ 44]).

Left Camera

Settings: "1024" – "65534" (even numbers only)

Specify the RTP port number streamed by the left camera for 3D video (the RTP port number received by this product). The default setting is "50004."

Right Camera

Settings: "1024" – "65534" (even numbers only)

Specify the RTP port number streamed by the right camera for 3D video (the RTP port number received by this product). The default setting is "50006."

Fisheye Correction

To use fisheye correction, select the "Enable" checkbox.

Fixed adjustment values are applied (correction values cannot be changed).

Attention

- In the following cases, fisheye correction is disabled regardless of this setting:
  - When "Streaming mode" in "Streaming Gateway" is set to "Relay mode" (refer to Streaming Gateway [▶ 12])
  - When the compression format of the received camera video is MJPEG

7.2 Adjusting Parallax in 3D Video

Simulates the display on a 3D monitor, allowing you to adjust parallax while checking the actual appearance.

Attention

- This function does not operate when "Streaming mode" in "Streaming Gateway" is set to "Relay mode" (refer to Streaming Gateway [▶ 12]).

Note

- This function does not display actual 3D video, so it will not appear in 3D on this screen.
- Set the input signal format on the 3D monitor to "Side by Side."

1. Select "3D Camera" > "Parallax Adjustment."
2. Operate controls to perform adjustments.

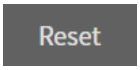
Parallax Adjustment

To adjust the horizontal or vertical position, zoom in first.


: Zooms in/out. The video from both cameras zooms in or out simultaneously.


: Adjusts the horizontal position. The video from both cameras moves in opposite directions.


: Adjusts the vertical position. The video from both cameras moves in opposite directions.



: Restores the display to its state before adjustment.

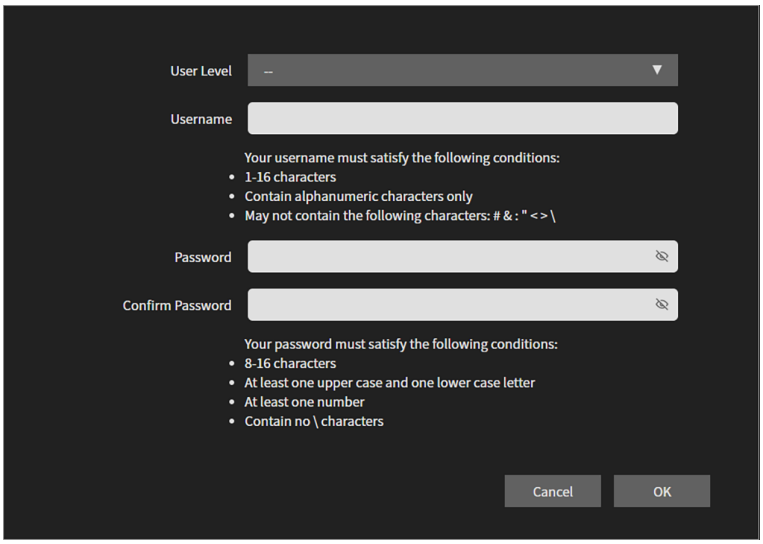
8 Managing User Accounts

Register, change, or delete user accounts (username, user level, and password) used to access the system.

Attention
• You can register up to 10 user accounts. If there are more than 10 users, no new user information can be registered. • You cannot register a username that is the same as a registered user account. • At least one user with a user level of "ADMIN" must be registered.

8.1 Registering User Accounts

1. Select "User" > "Local User."
2. Click "Add."
   A dialog box for setting the user account is displayed.



3. Set each item.
   – "User Level" (User Level [▶ 64])
   – "Username" (Username [▶ 64])
   – "Password" (Password [▶ 65])
   – "Confirm Password"
   Enter the same password again for confirmation.
4. Click "OK."

User Level

Select "ADMIN."

This product cannot be used by user accounts with user levels other than "ADMIN."

Username

Enter a username. Set the username to meet the following conditions.

- 1-16 characters
- Alphanumeric characters and symbols only
- Does not contain the following characters: # & : " < > \

The following usernames cannot be set.

- "." / ".." / "auto-login"

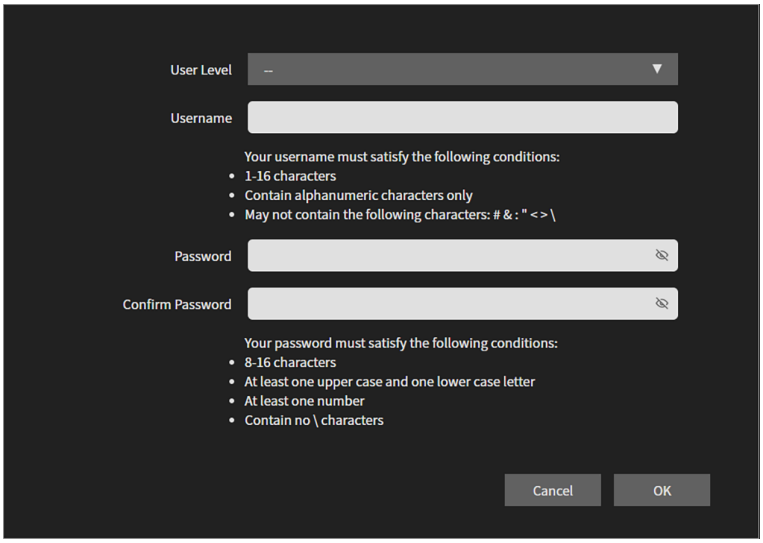
Password

Enter a password. Set a password that is difficult for a third party to guess.

- 8 to 16 characters
- At least one uppercase and lowercase English letter
- At least one number
- Does not contain the character \

8.2 Changing User Accounts

1. Select "User" > "Local User."
2. Click Edit ( ) for the user you want to change.
3. Set each item.
   - "User Level" (User Level [▶ 64])
   - "Username" (Username [▶ 64])
   - "Password" (Password [▶ 65])
   - "Confirm Password"
     Enter the same password again for confirmation.



4. Click "OK."

8.3 Deleting User Accounts

1. Select "User" > "Local User."
2. Click Delete ( ) for the user you want to delete.
   A confirmation dialog box asking "Are you sure you want to delete user XXX?" is displayed.
3. Click "OK."

8.4 Configuring LDAP Settings

If you use a directory service (LDAP) for user management, you can log in to this product using a user account on an LDAP server.

Attention
• Web browser access is only possible for accounts with an "ADMIN" user level. • Before applying LDAP settings, perform a login test to ensure that you can log in with an "ADMIN" user account. If LDAP settings are incorrect, you will not be able to log in to this product.

1. Select "User" > "LDAP."
2. Set each item.
   – "User Account" (User Account [▶ 66])
   – "LDAP" (LDAP [▶ 66])
   – "Search Filter Settings" (Search Filter Settings [▶ 67])
   – "Login Test" (Login Test [▶ 67])
3. Click "Apply."

8.4.1 User Account

Type

Settings: "Local User" / "LDAP"

Select the user account type. If set to "LDAP," login using a local user account is disabled.

8.4.2 LDAP

Server Address

Settings: Alphanumerics and symbols (up to 255 characters)

Enter the IP address or host name of the LDAP server.

Port

Settings: "1" – "65535"

Enter the port number.

The typical port number is "389" ("636" if SSL is enabled).

Base DN

Settings: Alphanumerics and symbols (up to 255 characters)

Enter the distinguished name of the branch you want to search.

Example: ou=ldap,dc=example,dc=com

Bind DN

Settings: Alphanumerics and symbols (up to 255 characters)

Enter the username of a user who has access rights to the Base DN.

Example: cn=binduser,ou=ldap,dc=example,dc=com

Bind Password

Settings: Alphanumerics and symbols (up to 255 characters)

Enter the password for the Bind DN.

Username Attribute

Settings: Alphanumerics and symbols (up to 255 characters)

Enter the attribute for the user account name used for login.

Example: cn

SSL

Check "Enable" to use SSL communication (LDAPS).

Certificate Validation

Check "Enable" to validate the certificate.

The root certificate of the LDAP server must be registered in "Root Certificate" of this product.

8.4.3 Search Filter Settings

ADMIN User Filter

Settings: Alphanumerics and symbols (up to 255 characters)

Configure filters for users with "ADMIN" access rights.

Example:

(memberOf=cn=admin,ou=ldap,dc=example,dc=com)

CAMERA CONTROL User Filter

To enable camera control access rights, check "Enable" and configure the filter.

LIVE User Filter

To enable LIVE access rights, check "Enable" and configure the filter.

8.4.4 Login Test

Username

Settings: Alphanumerics and symbols (up to 32 characters)

Enter the username.

Password

Settings: Alphanumerics and symbols (up to 32 characters)

Enter a password.

Test

Settings: "Execute"

Perform a login test.

9 Reference

9.1 CSV File Format for Registering Cameras

To be readable in "Load Camera Information" (refer to 5.5 Importing Camera Information [▶ 44]), a CSV file must meet the following conditions:

- Comma-separated CSV file
- First row is the header row
- Header row contains all required items
- Value of each item is within the setting range
- Character encoding of the CSV file is UTF-8

Header row name	Setting range				
	ONVIF	AXIS	Panasonic/i-PRO	DirectUri	SRT
CameraName	(Optional) Any character string (up to 100 characters)	(Optional) Any character string (up to 100 characters)	(Optional) Any character string (up to 100 characters)	(Optional) Any character string (up to 100 characters)	(Optional) Any character string (up to 100 characters)
Protocol	ONVIF*1	AXIS	Panasonic	DirectUri	SRT
IPAddress	(Required) 0.0.0.1 – 255.255.255.254	(Required) 0.0.0.1 – 255.255.255.254	(Required) 0.0.0.1 – 255.255.255.254	(Required) 0.0.0.1 – 255.255.255.254	(Required) 0.0.0.1 – 255.255.255.254
Port*2	(Required) 1 – 65535	(Required) 1 – 65535	(Required) 1 – 65535	(Required) 1 – 65535	(Required) 1 – 65535
UserName	(Optional) Alphanumeric characters, symbols (up to 32 characters)	(Optional) Alphanumeric characters, symbols (up to 32 characters)	(Optional) Alphanumeric characters, symbols (up to 32 characters)	(Optional) Alphanumeric characters, symbols (up to 32 characters)	(Optional) Alphanumeric characters, symbols (up to 32 characters)
PassWord	(Optional) Alphanumeric characters, symbols (up to 32 characters)	(Optional) Alphanumeric characters, symbols (up to 32 characters)	(Optional) Alphanumeric characters, symbols (up to 32 characters)	(Optional) Alphanumeric characters, symbols (up to 32 characters)	(Optional) Alphanumeric characters, symbols (up to 32 characters)
Uri	Not required	Not required	Not required	(Required) Alphanumeric characters (up to 1023 characters)	(Required) Alphanumeric characters (up to 1023 characters)
Comm. Method	udp / rtsp	udp / rtsp	udp	udp / rtsp / m2ts_udp	Not required
Enable SSL	off / on	off / on	off / on	Not required	Not required
Certificate Validation	off / on	off / on	off / on	Not required	Not required
Passphrase	Not required	Not required	Not required	Not required	(Optional) Alphanumeric characters, symbols (up to 79 characters)
Latency	Not required	Not required	Not required	Not required	(Required) 20 ms – 8000 ms

Header row name	Setting range				
	ONVIF	AXIS	Panasonic/i-PRO	DirectUri	SRT
TransmissionMode	unicast / multicast	unicast / multicast	Not required	unicast / multicast / ssm	Not required

*1 When "Protocol" is set to "ONVIF," the "Media Type" will be "Media1."

*2 Typical port numbers are "80" ("443" if SSL is enabled) when "Protocol" is "ONVIF," "AXIS," "Panasonic/i-PRO," and "554" when "Protocol" is "DirectUri" and "URI" is an RTSP stream URI.

Sample CSV File

```
CameraName,Protocol,IPAddress,Port,UserName,PassWord,Uri,Comm. Method,Enable SSL,Certificate Validation,Latency,Passphrase,TransmissionMode
camera1,panasonic,192.168.0.101,80,user,pass,,udp,off,off,,,
camera2,onvif,192.168.0.103,80,user,pass,,udp,off,off,,,unicast
camera3,srt,192.168.0.104,5000,user,pass,srt://192.168.0.104,,off,off,125,12345678,
camera4,directUri,192.168.0.105,554,user,pass,rtsp://192.168.0.105/stream1,udp,off,off,,,unicast
camera5,directUri,224.0.0.1,10002,user,pass,,m2ts_udp,off,off,,,multicast
```

10 Specifications

10.1 List of Specifications

10.1.1 Decoding Process

Interlaced video streams cannot be displayed.

Number of cameras that can be displayed simultaneously	32 (Max.)
Number of cameras that can be registered	48 (Max.)
Camera protocol	ONVIF Profile S, AXIS VAPIX, Panasonic/i-PRO, RTSP, SRT
Video compression formats	H.265, H.264, MJPEG
Audio compression formats	AAC, Opus, G.711, G.726
Streaming protocols	RTP (H.265, H.264, MJPEG, MPEG2-TS), SRT (H.265, H.264), UDP (MPEG2-TS)
Bit rate	8192 kbps (Max)
Maximum resolution	H.265, H.264: 3840 x 2160 *1 MJPEG: 640 x 480
Maximum frame rate	60 fps*2

*1 If the maximum resolution is exceeded, the image will not be displayed. Lower the resolution and bit rate of the camera.

*2 The maximum frame rate depends on the resolution (refer to 10.2 Decoding Performance [▶ 72]).

10.1.2 Network

Wired LAN standard	RJ-45 (1000BASE-T, 100BASE-TX)
Communication protocols	DHCP, DNS, HTTP, HTTPS, LDAP, LDAPS, NTP, RTP, RTSP, SNMP, SRT, IEEE802.1X

10.1.3 Power

Input	PoE+ input: IEEE802.3at Type2 AC adapter: DC 12 V ±10%, 2.0 A
Maximum power consumption	PoE+ input: 25.5 W AC adapter: 24.0 W

10.1.4 Physical Specifications

Dimensions	165 mm x 44.2 mm x 130 mm (W x H x D)
Net weight	Approx. 720 g

10.1.5 Operating Environment Conditions

Temperature	0 ˚C – 40 ˚C
Humidity	20 % – 80 % R.H. (no dew condensation)
Air Pressure	540 hPa – 1060 hPa

10.1.6 Transport / Storage Conditions

Temperature	-20 ˚C – 60 ˚C
Humidity	10 % – 90 % R.H. (no dew condensation)
Air Pressure	200 hPa – 1060 hPa

10.2 Decoding Performance

Note

- The image is automatically enlarged or reduced in the product according to the layout.
- The values are provided for reference. Videos are not displayed properly if the decoding performance is exceeded due to camera settings, network installation environment or other reasons. If videos are not displayed properly, reduce the camera resolution and bit rate. Set camera settings according to the instructions in the manual of the camera.
- MJPEG is only supported when "Protocol" is "ONVIF."

10.2.1 Merge mode decoding performance (H.265 / H.264, when "Bit Rate" is set to "4096 kbps")

4 Screens Layout	3840 x 2160 / 20 fps, 1920 x 1080 / 60 fps, 1280 x 720 / 60 fps
9 Screens Layout	1920 x 1080 / 30 fps, 1280 x 720 / 50 fps, 640 x 480 / 60 fps
12 Screens Layout	1920 x 1080 / 20 fps, 1280 x 720 / 40 fps, 640 x 480 / 60 fps
16 Screens Layout	1920 x 1080 / 20 fps, 1280 x 720 / 40 fps, 640 x 480 / 60 fps
32 Screens Layout	1280 x 720 / 15 fps, 640 x 480 / 30 fps

10.2.2 MJPEG

640 x 480 / 30 fps

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