A-EAJ-100-**12** (1)

SONY

Network Camera

User's Guide

Software Version 1.2

Before operating the unit, please read this manual thoroughly and retain it for future reference.

SNC-VB600/VB600B/VB630/VM600/VM600B/VM601/ VM601B/VM630/VM631

IPELA

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Overview

Features

- High-quality Full HD (1080P) real-time monitoring, up to 60 fps. (SNC-VB630/VM630/VM631)
- High-quality SXGA (1280 × 1024) live images from camera can be monitored at a maximum frame rate of 60 fps. (SNC-VB600/VB630/VM600/VM601/VM630/VM631)
- Exmor CMOS sensor enables high-quality images for streaming.
- Wide dynamic range (View-DR) and Visibility Enhancer enable clearer images for streaming in the high contrast environment.
- NR(XDNR) enables clearer images for streaming in the low lightness environment.
- Two video compression modes (video codecs) JPEG/H.264 are supported.
- The maximum triple codec mode is available.
- Easy Focus enables easier focus adjustment when it is installed.
- "Edge Storage" for recording of video or audio signal based on alarm detection (such as network block), and same protocol real-time image streaming.
- Motion detection and camera tampering detection functions.
- Up to 20 users can view images from one camera at the same time.
- Date/time can be superimposed on the image.
- PoE (Power over Ethernet) compliant.

How to Use This User's Guide

This User's Guide explains how to operate the Network Camera from a computer.
The User's Guide is designed to be read on the computer display.
This section gives tips on making the most of the User's Guide-read it before you operate the camera.

Jumping to a related page

When you read the User's Guide on the computer display, you can click on a sentence to jump to a related page.

Software display examples

Note that the displays shown in the User's Guide are explanatory examples. Some displays may be different from the ones that appear in actual use.
The illustrations of the camera and menu display in the User's Guide show the SNC-VB600 as an example.

Printing the User's Guide

Depending on your system, certain displays or illustrations in the User's Guide, when printed out, may differ from those that appear on your screen.

Installation Manual (printed matter)

The supplied Installation Manual describes the names and functions of parts and controls of the Network Camera, connection examples, and how to set up the camera. Be sure to read the Installation Manual before hand.

System Requirements

The following computer environment is necessary for the computer to display images and the controls of the camera.
(Sep. 2012)

Common

OS

Microsoft Windows XP, Windows Vista (32bit version only), Windows 7 (32-bit version, 64-bit version)
Authorized editions:
Windows XP: Professional
Windows Vista: Ultimate, Business
Windows 7: Ultimate, Professional

Microsoft DirectX 9.0c or higher

Web Browser

Microsoft Internet Explorer Ver. 7.0, Ver. 8.0, Ver. 9.0
Firefox Ver.13.0
Safari Ver.5.1
Google Chrome Ver.17.0

CPU

Intel Core i7, 2.8 GHz or higher

Memory

2 GB or more

Display

1600 × 1200 pixels or higher

Accessing the Camera Using the Web Browser

After the IP address has been assigned to the camera, check that you can actually access the camera using the Web browser installed on your computer.
Use Internet Explorer as a Web browser.

1 Start the Web browser on the computer and type the IP address of the camera in the URL address bar.

The viewer window is displayed.

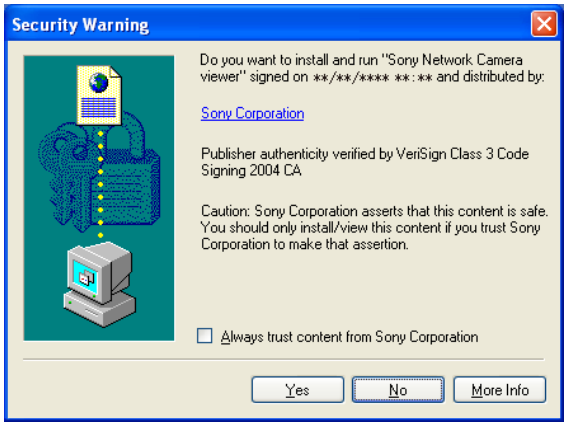
Display sample

Note

The maximum of users on the network who can see a viewer concurrently is 20. However, if the transmission ability of the camera is overloaded, access to the camera may not be possible, even if there are fewer than 20 users.
If monitoring with sound, the maximum number of users is 10.

When the viewer of the camera is displayed for the first time

"Security Warning" is displayed. When you click **Yes**, ActiveX control is installed and the viewer is displayed.



Notes

- If **Automatic configuration** is enabled in the Local Area Network (LAN) settings of Internet Explorer, the image may not be displayed. In that case, disable **Automatic configuration** and set the proxy server manually. For the setting of the proxy server, consult your network administrator.
- When you install ActiveX Control, you should be logged in to the computer as Administrator.

Tip

The software is optimized for Internet Explorer using medium font.

To display the viewer correctly

To operate the viewer correctly, set the security level of Internet Explorer to **Medium** or lower, as follows:

1 Select **Tools** from the menu bar for Internet Explorer, then select **Internet Options** and click the **Security** tab.

2 Click the **Internet** icon (when using the camera via the Internet), or **Local intranet** icon (when using the camera via a local network).

3 Set the slider to **Medium** or lower. (If the slider is not displayed, click **Default Level**.)

When using antivirus software, etc., on the computer

- When you use antivirus software, security software, personal firewall or pop-up blocker on your computer, the camera performance may be reduced, for example, the frame rate for displaying the image may be lower.
- The Web page displayed when you log in to the camera uses JavaScript. The display of the Web page may be affected if you use antivirus software or other software described above on your computer.

Basic Configuration by the Administrator

You can monitor the camera image by logging in with the initial conditions set for this network camera. You can also set various functions according to the installing position, network conditions or purpose of the camera. We recommend you configure the following items before monitoring images from the camera.

Setting contents	Setting menu
Set the format of the image sent from the camera.	Video codec Tab (page 19)
Select the White Balance mode according to the installation position.	White balance (page 18)
Select the brightness of the image sent from the camera.	Exposure (page 18) Brightness (page 18)
Select the quality of the image sent from the camera.	Video codec Tab (page 19)
Select the view size of the image.	View size (page 9)
Select whether the audio from the external input is sent or not.	Audio Tab (page 20)
Synchronize the date and time of the camera with those of the computer.	Date & time Tab (page 15)
Make the setting for sending the monitor image attached to an e-mail.	Mail Transfer Tab (page 32)
Set the user access right for the camera.	User Tab (page 25)

This section explains how to monitor the image from the camera using your Web browser (Internet Explorer).

The functions of the camera should be set by the Administrator. For the setting of the camera, see “Administrating the Camera” on page 14.

Administrator and User

This network camera identifies those who log in as the **Administrator** or **User**.
The **Administrator** can use all the functions of this network camera, including camera settings. The **User** can use the functions for monitoring the image and audio from the camera, and control the camera. The **Viewer mode** setting is used to restrict the user’s access rights. There are five types of users.

Each type of user can use the corresponding functions below.

Function	Administrator	User			
		Full	Pan/Tilt	Light	View
Monitor a live image	●	●	●	●	●
View the date and time	●	●	●	●	●
Control the frame rate (JPEG mode only)	●	●	–	–	–
Control the image view size	●	●	●	●	–
Save a still image and movie in the computer	●	●	●	●	–
Switch the TCP/UDP transmission mode (Available in H.264 mode only)	●	●	–	–	–
Perform the pan/tilt/zoom operation	●	●	●	–	–
Receive audio	●	●	●	●	●
Select the codec mode	●	●	●	●	–
Control the setting menu	●	–	–	–	–

● Usable function
– Not usable function

The access rights of the administrator and the user can be set in “Setting the Security — Security Menu” of the Administrator menu on page 25.

Logging in to System

Logging in as a user

1 Start the Web browser on your computer and type the IP address of the camera you want to monitor.

The viewer is displayed.

Display sample:

Two types of viewer are available: ActiveX viewer and Plug-in free viewer.

Note

If the main viewer does not start correctly, the security level of the Internet Explorer may be set to higher than **Medium**. See "To display the viewer correctly" on page 5 and check the security level.

About Viewers

You can use the following viewers.

ActiveX viewer

This viewer can monitor the camera image in any of the **JPEG** and **H.264** video codecs.
You must install this viewer when you access the main viewer for the first time.

When you display the main viewer of the camera for the first time

When you access the network camera using ActiveX viewer for the first time, the **Security Warning** appears. Click **Yes** and install ActiveX Control. You can use all the functions of the viewer with ActiveX Control.

Plug-in free viewer

This viewer enables a browser other than Internet Explorer to display images.

Notes

- If **Automatic configuration** is enabled in the Local Area Network (LAN) Settings of Internet Explorer, the camera image may not be displayed. In that case, disable **Automatic configuration** and set the proxy server manually. For the setting of the proxy server, consult your network administrator.
- When you install ActiveX Control, you should be logged in to the computer as the Administrator.

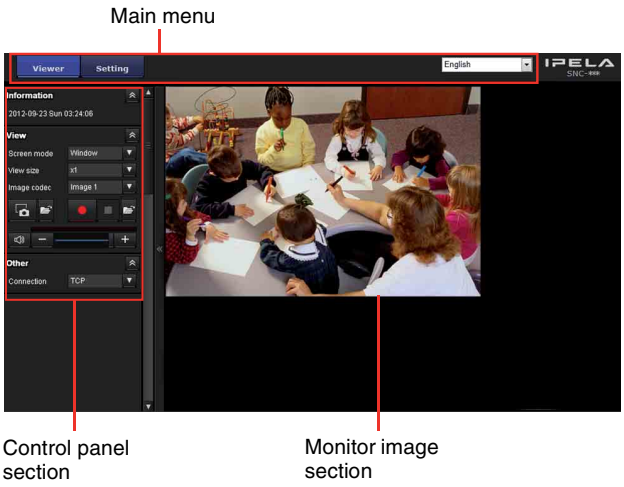
Tip

Every page of this software is optimized for Internet Explorer in **Medium** font.

Configuration of Main Viewer

This section explains the functions of the parts and controls of the main viewer. For a detailed explanation on each part or control, see the specified pages.

Main viewer using ActiveX viewer



Main menu

Viewer

Displays the ActiveX viewer or the Plug-in free viewer.

Setup

Click to display the Administrator menu. (page 14)
You can operate this function only when logging in as the administrator.

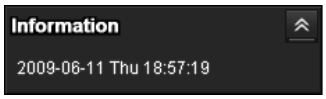
Language

Set language from pull-down.

Control panel section

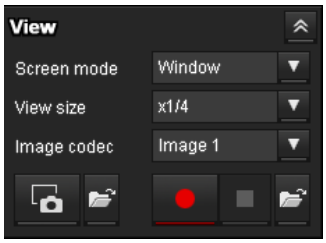
You can drag the panels to the monitor screen and configure them.
To return to the operation panel, drag the panel and configure the operation panel.
Click the  to hide the detail setting menu or click it again to show the menu.

Information panel



Check the date and time here.

View panel



You can change the screen mode, size of the image, image codec mode and frame rate. Also, still images and movies can be saved (movie saving can also be stopped) from here. Microphone and audio output levels can be adjusted.

Screen Mode

Select Window or Full Screen.

View size

Selects the view size to be displayed.
Click **View size** list box to select the view size.
Select **x1/4** to display images, reduced to 1/4 of the size set in **Image size**.
Select **x1/2** to display images, reduced to 1/2 of the size set in **Image size**.
Select **x1** to display images set in **Image size** of the Video / Audio menu. (page 19)
Select **Full** to display images according to the view size.
Select **Fit** to display images according to the view size, with fixed aspect ratio.

Image Codec

Select Image1, Image2 and Image3 of the video codec.

Frame rate

(Displayed only when the camera image is in JPEG.)
Selects the frame rate to transmit images.

Capture

Click to capture a still image shot by the camera and to store it in the computer. Click to open the folder to be saved.

Note

In the case of Windows VISTA or Windows 7, if "Enable Protected Mode" is checked in Control Panel-Internet Option-Security, still images cannot be shot.

Run/Stop Save Video

Runs and stops Save Video. Click to open the folder to be saved.

Note

In the case of Windows VISTA or Windows 7, if "Enable Protected Mode" is checked in Control Panel-Internet Option-Security, video content cannot be saved.

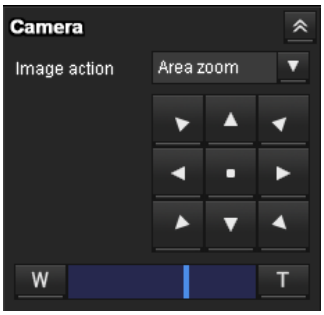
Volume

Displays when **Enable** in the Audio tab of the Video / Audio menu is checked.

Use the slide bar to adjust the volume for sound output level.

When you click , the icon changes to and the output from the speaker stops. To output sound from the speaker, click again.

Camera control panel



This panel allows you to control the camera's pan/tilt/home position and zoom (page 12).

Image action

Select the mode of operation from **Off, Area zoom** and **Vector dragging**.

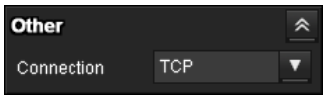
Pan/Tilt control

Click the arrow button the direction in which you want to move the camera. Keep it pressed to move the camera continuously.
To return to the home position, click .

Zoom control

Press W to zoom out, and press T to zoom in. Zooming continues while the button remains pressed.

Others panel



(The **Other** panel is displayed in the case of an H.264 image.)

You can switch between TCP and UDP (Unicast/Multicast).

Each click switches the transmission mode of the video/audio data between TCP mode, Unicast mode, and Multicast mode (page 13).

Monitor image

The image shot by the camera is shown here.
There are two modes for on-screen pan/tilt/zoom operation using a mouse: Area zoom mode and Vector dragging mode.
In the Area zoom mode, clicking will pan or tilt the camera towards the center of the image. The Area zoom will move the camera in the direction that displays the area selected by the operator and zooms in at the same time. The operator can choose a part of the image to view and zoom in by surrounding an area with a frame by dragging the mouse.
In the Vector dragging mode, the camera pans or tilts in the dragged direction. How long you drag the mouse determines the speed. Releasing the button on the mouse after dragging stops the panning or tilting of the camera. You can also use the camera control panel bar to pan or tilt.
The zoom operation using the mouse wheel is available in all modes.

Plug-in free viewer

Main viewer using Plug-in free viewer

Display sample:

Monitor screen

There are two modes for on-screen pan/tilt/zoom operation using a mouse: Area zoom mode and Vector dragging mode. A control bar is displayed on the screen.
In the Area zoom mode, clicking will pan or tilt the camera towards the center of the image. The Area zoom will move the camera in the direction that displays the area selected by the operator and zooms in at the same time. The operator can choose a part of the image to view and zoom in by surrounding the area with a frame by dragging the mouse.
In the Vector dragging mode, the camera pans or tilts in the dragged direction. How long you drag the mouse determines the speed. Releasing the button on the mouse after dragging stops the panning or tilting of the camera. You can also use the tool bar to pan or tilt.
The zoom operation using the mouse wheel is available in all modes.

Control bar

The following operation buttons are available.

Setting
You can set the streaming method, image size, frame rate and image codec.

Streaming start button
Starts streaming. (Appears while stops streaming.)

Streaming stop button
Stops streaming. (Appears while streaming.)

Save still image button
Captures still images taken by the camera and saves them to the computer.

Using Solid PTZ function

You can operate the camera by using the Solid PTZ function, which provides panning, tilting and zooming by adjusting the position and zooming ratio from the maximum image size (1280 × 1024 (SNC-VB600/VM600/VM601), 1920 × 1080 (SNC-VB630/VM630/VM631)), without moving the camera. There are three modes of camera operation: **Area zoom mode**, **Vector dragging mode** and **PTZ Control bar**. You can control pan/tilt and zoom in either mode.
The available functions for the camera operation modes vary according to the viewer display. The available functions are as follows:

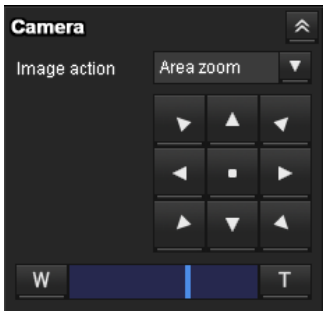
	ActiveX viewer
Operation from control panel	○
Area zoom	○
Vector dragging	○
PTZ control bar	○

Notes

- Pan/Tilt limitation
  The solid PTZ function controls streaming by cropping or reducing a maximum size image.
  Thus, the more the camera zooms out, the less area to be panned or tilted, and becomes unavailable at the WIDE setting.
- Zoom limitation
  The solid PTZ function enables you to display an area of 1/16 the maximum image size (Aspect ratio: 1:4), when zoomed in at the TELE setting.
  An image cannot be enlarged beyond this.
  And the whole area shot in the maximum image size will be displayed if the camera is zoomed out at the WIDE setting.
  The solid PTZ function's zoom is performed digitally; therefore, some deterioration in image quality may be observed at the TELE setting.
- The Solid PTZ function is not available with Plug-in free viewer.

Controlling via the control panel (Operation common to Area zoom mode and Vector dragging mode)

You can operate the camera direction and zoom by using the control panel for the monitor image currently displayed.



Pan/Tilt control

Click the arrow button in the direction in which you want to move the camera. Keep it pressed to move the camera continuously.
To return to the home position, click ▪.

Zoom control

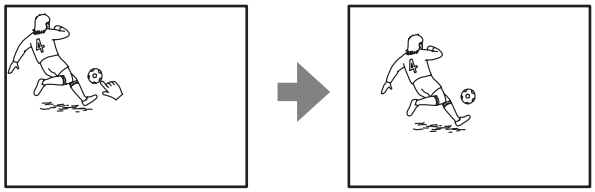
Click W to zoom out, and click T to zoom in. Zooming continues while the button remains pressed.

Note

The four edges of the image may be dark depending on the zoom position. This is a phenomenon related to the structure of the camera, and does not cause a problem.

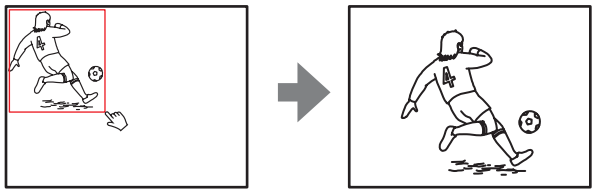
Panning and tilting by clicking the monitor image (Area zoom mode only)

Click on the monitor image, and the camera moves so that the clicked portion is positioned at the center of the display.



Panning, tilting and zooming by specifying the area (Area zoom mode only)

Click and hold the left button of the mouse on the monitor image, and drag the mouse diagonally to draw a red frame around the portion you want to enlarge. The camera moves so that framed portion is positioned at the center of the display and is zoomed in.

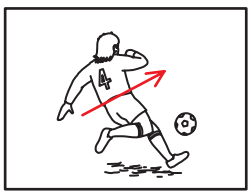


Note

When the specified area is zoomed in, the center may be shifted or some portion of the image may appear out of the monitor image section. In this case, click the point you want to move to the center or click the arrow button on the camera control panel.

Panning and tilting by dragging the screen (Vector dragging mode only)

When you click on the starting point on the image and drag to the end point, the camera pans/tilts in the direction of the arrow from the starting point to the end point. The speed of operation is determined by the length of arrow. Releasing the button on the mouse stops the panning/tilting of the camera.



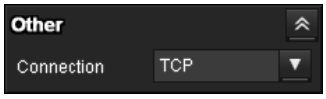
Switching Transmission Mode

You can change the transmission mode for video/audio data.
This function can be used when the video codec mode is set to **H.264** and the ActiveX viewer is used.

Note

The function may not operate correctly if you use personal firewall software or antivirus software on your computer. In that case, disable the software or select the TCP mode.

1 Select **TCP, Unicast** or **Multicast** from the **Connection** drop-down list in the Others panel.



TCP: This is normally selected.
When **TCP** is selected, HTTP communication is adopted for video/audio communications. HTTP is the protocol used for reading the usual Web page. In an environment capable of reading Web pages, you can watch or listen to video/audio by selecting the TCP port.

Unicast: When **Unicast** is selected, RTP (Realtime Transport Protocol) is adopted for video/audio communications. Since RTP is the protocol for running video/audio data, the video/audio playback is smoother than when TCP (HTTP) is selected. If a firewall is installed between the camera and the computer, or depending on the network environment, video/audio may not play back properly when **Unicast** is selected. In this case, select **TCP**.

Multicast: This protocol is selectable when **Multicast streaming** (page 22) is **On**. When **Multicast** is selected as the transmission port, RTP (Real-time Transport Protocol) and UDP multicast techniques are adopted for video/audio transmission. By selecting it, the network transmission load of the camera can be reduced. If a router that does not correspond to a multicast or firewall is installed between the camera and the computer, video/audio may not play back properly. In this case, select **TCP** or **Unicast**.

Note

When connecting via a proxy server, neither **Unicast** nor **Multicast** can be selected.

Administrating the Camera

This section explains how to set the functions of the camera by the Administrator.
For details about monitoring the camera image, see “Operating the Camera” on page 7.

This section explains the basic operations and each option of the Administrator menu.

Note on the display of menu options

The setting menus of this unit will clearly display only the setting options that you can currently select. Grayed out options cannot be selected.
Only supported functions are displayed.

Basic Operations of the Administrator Menu

You can use the Administrator menu to set all functions to suit the user’s needs.
Click **Setting** in the viewer to display the Administrator menu.

How to set up the Administrator menu

1 Log in to the homepage to display the viewer.
For details, see “Logging in as a user” on page 8.

2 Click **Setting** on the main menu.
The authentication dialog appears. Enter the user name and password for Administrator.
The user name “admin” and password “admin” are set at the factory for the Administrator.
The Administrator menu appears.

3 Click the menu name (example: System) on the left side of the Administrator menu.
The clicked menu appears.

Example: “System” menu

4 Select the required tab above the menu, and set each setting option in the tab.

Example: “Date & time” tab of “System” menu

See page 15 for details of the menu tabs and setting options.

5 After setting, click **OK**.
The settings you have made become active.

Click **Cancel** to nullify the set values and return to the previous settings.

Buttons common to every menu

The following buttons are displayed on all the menus. The functions of the buttons are the same on every menu.

Click this button to confirm the settings.

Click this button to nullify the set values and return to the previous settings.

General notes on menus

- One-byte katakana character is not valid for any text field, such as User name.
- After changing a setting on a menu, wait at least 30 seconds before turning off the power of the camera. If the power is turned off immediately, the new setting may not be stored correctly.
- If the camera settings are changed while watching the main viewer, some settings cannot be restored. To reflect the change on the opening main viewer, click **Refresh** on the Web browser.

Configuration of the Administrator menu

System

Displays the System menu. (“Configuring the System — System Menu” on page 15).

Video / Audio

Displays the Video / Audio menu for setting the camera image and audio. (“Setting the Camera Image and Audio — Video / Audio Menu” on page 18).

Network
Displays the Network menu for setting the network connection. (“Configuring the Network — Network Menu” on page 23).

Security
Displays the Security menu for setting the login user name and password to specify which computer(s) can connect to the camera. (“Setting the Security — Security Menu” on page 25)

PTZ control
Displays the PTZ control menu. (“Setting the PTZ control — PTZ control Menu” on page 26)

Action input
Displays the setting menu for all built-in detection functions. (“Setting the Sensor input/Camera tampering detection/Motion detection — Action input Menu” on page 26)

Action output
Displays the Action output Menu for setting an action of the functions such as e-Mail (SMTP) and Edge Storage. (“Setting the Action output — Action output Menu” on page 32)

Schedule
Displays the Schedule menu for the e-Mail (SMTP) function, Alarm output function, etc. (“Setting the Schedule — Schedule Menu” on page 34)

Configuring the System — System Menu

When you click **System** in the Administrator menu, the System menu appears.
Use this menu to perform the principal settings of the software.
The System menu consists of the following tabs: **Information**, **Date & time**, **Installation**, **Initialize**, **System log** and **Access log**.

Information Tab

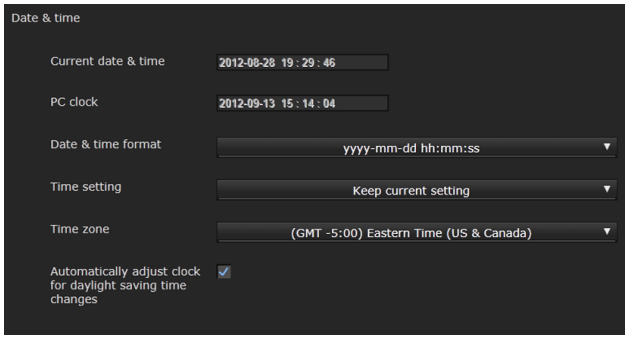
Model name
The model name of the camera is displayed.

Serial number
The serial number of the camera is displayed.

Software version
The software version of the camera is displayed.

OK/Cancel
See “Buttons common to every menu” on page 14.

Date & time Tab



Current date & time
Displays the date and time set on the camera.

Note

After you have purchased the camera, be sure to check the date and time of the camera and set as necessary.

PC clock
Displays the date and time set on your computer.

Date & time format
Select the format of date and time to be displayed in the main viewer from the drop-down list.
You can select the format between **yyyy-mm-dd hh:mm:ss** (year-month-day hour:minutes:seconds), **mm-dd-yyyy hh:mm:ss** (month-day-year

hour:minutes:seconds), and **dd-mm-yyyy hh:mm:ss** (day-month-year hour:minutes:seconds).

Adjust

Select how to set the day and time.

Keep current setting: Select if you do not need to set the date and time.

Synchronize with PC: Select if you want to synchronize the camera's date and time with the computer.

Manual setting: Select if you want to set the camera's date and time manually.
Select the year, month, date, hour, minutes and seconds from each drop-down list.

Synchronize with NTP: Select if you want to synchronize the camera's date and time with those of the time server called NTP server (Network Time Protocol).
Set the NTP server when **Synchronize with NTP** is selected.

NTS server: Synchronize with the selected NTP server address.

Time zone

Set the time difference from Greenwich Mean Time in the area where the camera is installed.
Select the time zone in the area where the camera is installed from the drop-down list.

Automatically adjust the clock for daylight saving time changes

When selected, the clock is automatically adjusted according to the daylight saving time of the selected time zone.

Note

If the time zone selected in **Time zone** is different from that set on the computer, the time is adjusted using the time zone difference and set on the camera.

OK/Cancel

See "Buttons common to every menu" on page 14.

Installation Tab

You can perform settings related to installation. After performing settings, the camera will be restarted.

High frame rate mode (SNC-VB600/VB630/VM600/VM601/VM630/VM631 only)

Set the maximum frame rate to 60 fps (NTSC) or 50 fps (PAL).
When the setting is set to **Off**, the maximum frame rate is 30 fps (NTSC) or 25 fps (PAL).

For details about how to switch NTSC/PAL, refer to the supplied Installation Manual.

Notes

- When the setting is set to **On**, Image 2 may not be available, and Image 3 is not available.
- When the Wide Dynamic Range (View-DR) level is set to **High**, you cannot select **On**. (SNC-VB600/VM600/VM601)
- When the Wide Dynamic Range (View-DR) level is set to **Middle**, you cannot select **On**. (SNC-VB630/VM630/VM631)

Wide dynamic range (View-DR) level

Using the Wide dynamic range (View-DR) function will improve visibility of bright and dark parts of an image. The level of this function is adjustable.

Note

To improve visibility of bright and dark parts, the camera superimposes images taken by slow shutter speed.
When you select **High**, the camera takes the image by superimposing 4 images.
When you select **Middle**, the camera takes the image by superimposing 2 images.
When you select **Low**, the camera takes 1 image.

When you select **High** or **Middle**, the effect of the **Shutter speed** function in the **Video / Audio** menu **- Picture** tab is limited, depending on the scene.
When you select **Low**, the **Wide dynamic range (View-DR)** function in the **Video / Audio** menu **- Picture** tab is not available.
High is available only for SNC-VB600/VB600B/VM600/VM600B/VM601/VM601B.

Stabilizer

Set the stabilizer function. Select the checkbox to display steadier images when the camera is installed in a place subject to vibration.

Note

When the stabilizer function is set, the angle of image taken will be smaller than usual.
The stabilizer may not respond, depending on the amount of vibration.
Be sure to set this function during the installation. If the stabilizer setting is changed at a later time, other settings will have to be reset.

Eflip

You can display flip vertical images on the computer.
Select **Off** when you hang the camera from a ceiling.

Select **On** when you install the camera on a rack, etc.

Note

Privacy mask positions and motion detection areas, etc., will not be inverted, even if the **On/Off** setting of the inverted image is switched. To invert the image, make the setting again.

OK/Cancel

See "Buttons common to every menu" on page 14.

Initialize Tab

Reboot

Used when rebooting the system.
Click **Reboot**, and the message "This System will be rebooted. Are you sure?" appears. Click **OK** to reboot the camera. It takes about two minutes to restart.

Factory default

Resets the camera to the factory settings.

Retain current network settings

When this item is checked, only the current network settings will be retained after reset.
Click **Factory default**, and the message "This System will be rebooted. Are you sure?" appears.
When you click **OK**, the network indicator on the camera starts to blink. After adjustments of the default settings have finished, the camera reboots automatically. Do not turn off the camera until the camera reboots.

Tip

The camera can also be reset to the factory settings by turning on the power of this unit while pressing the reset button on the camera. For details, refer to the supplied Installation Manual.

Format SD memory card

You can format a SD memory card (not supplied) inserted into the SD card slot of the camera. When you click **Format**, a confirming message appears. Click **OK** to start formatting. Any files and folders stored in the SD memory card will be deleted.

Notes

- Before formatting, set **Edge Storage** in the Execution Condition tab of the Action output menu to **Off**, to write-protect the SD memory card.
- Do not activate the **Format SD memory card** function when no card is inserted into the SD card slot.

Backup setting data

Saves the setting data of the camera in a file.
Click **Save**, and follow the instructions on the Web browser to specify the folder and save the setting data of the camera.
The file name preset at the factory is "snc-vb600.cfg" for SNC-VB600.

Restore setting

Loads the stored setting data of the camera.
Click **Browse...** and select the file in which the setting data is stored. Click **OK**, and the camera is adjusted according to the loaded data.

Restore the privacy masking setting

If you select this, the stored setting data of the camera and the privacy masking data are loaded.

Note

With **Restore setting**, some items in the Network menu (page 23) cannot be restored.

System log Tab

The data of the software activity of the camera is recorded in this log. It includes data that is useful if a problem occurs.
Click **Reload** to reload the latest data.

Access log Tab

The access record of the camera is displayed.
Click **Reload** to reload the latest data.

Setting the Camera Image and Audio
— Video / Audio Menu

When you click **Video / Audio** in the Administrator menu, the Video / Audio menu appears.
Use this menu to set the functions of the camera.
The Video / Audio menu consists of the following tabs:
SNC-VB600/VB630: Picture, **Focus**, **Video codec**, **Audio**, **Day/Night, Privacy masking**, **Superimpose** and **Streaming**.
SNC-VM600/VM601/VM630/VM631: Picture, **Focus/Zoom**, **Video codec**, **Audio**, **Day/Night, Privacy masking**, **Superimpose** and **Streaming**.

Picture Tab

You can set the color conditions, exposure, etc., of the camera.

Preview screen

Preview the image and adjust the picture setting.

Exposure

Adjust the settings of exposure.

Wide dynamic range (View-DR)

In high-contrast scenes such as against a back light, this function reduces overexposure and underexposure. Select the checkbox to turn on the Wide dynamic range (View-DR) function.

Visibility Enhancer

Using the Visibility Enhancer function will make the darker part of a camera image brighter as well as automatically correct brightness and contrast to show bright parts clearly without overexposure.

Backlight compensation

Select the checkbox to enable the backlight compensation function.

Exposure compensation

Select the exposure correction value from the list box to adjust the target brightness for the automatic exposure setting. A larger value brightens the image, and a smaller value darkens the image.

Auto gain maximum rate

Limit the maximum amount of gain-controlled automatic exposure control.

Shutter speed

- Auto-controlled shutter speed automatically sets the exposure.
- Select the minimum and maximum shutter speeds from the list box.

White balance

Mode

Select the White Balance mode.
ATW: Eliminating the influences caused by environmental illumination or lights, adjust the white balance automatically to reproduce original colors of the objects (approximately 2500 K to 6000 K).
ATW-PRO: Automatically adjusts the color to be closest to the image you are viewing (approximately 3000 K to 5800 K).
Indoor: Sets a white balance suitable for indoor photography.
Outdoor: Sets a white balance suitable for outdoor photography.
Fluorescent lamp: Sets a white balance suitable for photography under three-band fluorescent lighting with a neutral white color.
Mercury lamp: Sets a white balance suitable for photography under a mercury lamp.
Sodium vapour lamp: Sets a white balance suitable for photography under a high-pressure sodium vapor lamp.
Metal halide lamp: Sets a white balance suitable for photography under a metal halide lamp.
White LED: Sets a white balance suitable for photography under the light of white LEDs.
One push WB: The **One push trigger** button becomes active. Click **On** to adjust the white balance instantly.
Manual: When this option is selected, **R gain** and **B gain** become active. Selectable gain values are from 0 to 4095.

Image

NR (XDNR)

Image noise can be reduced by using the noise reduction function.

Brightness

Set the brightness.

Saturation

Set the saturation.

Sharpness

Set the sharpness.

Contrast
Set the contrast.

OK/Cancel
See “Buttons common to every menu” on page 14.

Focus Tab — Adjusting the Focus (SNC-VB600/VB630 only)

Preview screen
Preview the image and adjust the focus.

Easy Focus
Adjust the focus position.
Click the **Start** button to adjust the focus position automatically.

Focus
The most suitable focus position may not be available depending on imaging conditions. If so, adjust the focus position manually.

Note

Use **Focus** only when **Easy Focus** cannot be set to the most suitable focus position.

Focus reset
Click the **On** button to return to the default flange back position.

Focus/Zoom Tab — Adjusting the focus/zoom (SNC-VM600/VM601/VM630/VM631 only)

Adjust the focus and zoom position by looking at the image.

Preview screen
Preview the image and adjust the focus/zoom.

Easy Focus
Adjust the focus position.
Click the **Start** button to adjust the focus position automatically.

Focus
The most suitable focus position may not be available depending on imaging conditions. If so, adjust the focus position manually.

Note

The most suitable focus may not be available depending on imaging conditions. If so, click the <<<, <<, <, >, >>, >>> buttons to adjust the focus.

Adjusting the zoom
Click the button to adjust the zoom position accordingly.

Note

The focus is moved slightly after adjusting; adjust the focus again, as necessary.

Video codec Tab

Use this tab to set the items for the video codec.

Image 1, Image 2 and Image 3
Up to three image codec modes can be set. Configure the following setting for each image mode.

Note

The image size and frame rate for Image 2 codec and subsequent codecs may be restricted depending on the type of codec, image size and/or frame rate selected for Image 1.

Image Codec
Select **JPEG**, **H.264** or **Off**. Note that Image 1 cannot be set to **Off**.

Note

The selectable size of images and frame rate for Image 2 and Image 3 may be limited, depending on the setting of codec type, image size, frame rate, and image quality for Image 1.

Image size
You can select the size of images sent from the camera.

Notes

- If the image size is not in the aspect ratio 5:4, the top and bottom part of the screen may not be displayed. (SNC-VB600/VB600B/VM600/VM600B/VM601/VM601B)
- If the image size is not 1920 × 1080, the top and bottom part of the screen may not be displayed. However, if the image size is 720 × 574 or 720 × 480, the full image is displayed but not in the 1:1 pixel aspect ratio. (SNC-VB630/VM630/VM631)

Frame rate
Set the frame rate of the image.

"fps" is a unit indicating the number of frames transmitted per second.
The frame rate of JPEG image can be changed by the setting of **Image quality**.

Bit rate
Set the bit rate of H.264 image transmission for a line. When the bit rate is set to a high level, better image quality can be enjoyed.

I-picture interval
Set the I-picture insertion interval in seconds.

H.264 profile
Set the H.264 profile setting.

CBR
Selectable bit rates are CBR and VBR. Select CBR if you want to compress an image by constant bit rate. Select VBR if you want to maintain image quality. When you select the CBR checkbox, CBR will be applied. When the CBR checkbox is not selected, VBR will be applied.

Image quality
Set the JPEG image quality.
Selectable values are from **1** to **10**.
When **10** is selected, the best image quality is achieved.

Bandwidth control
Limits the network bandwidth for the JPEG image data output from the camera.

Note

Audio may be interrupted depending on the selected bandwidth. In this case, select a wider bandwidth. This function is not available when the setting is set to **0**.

OK/Cancel
See "Buttons common to every menu" on page 14.

Audio Tab

Audio sending
Make settings for sending audio from the microphone input connector.

Enable
Select the checkbox if you want to send audio from the network camera.

Note

When you change the **Audio** setting, click **Refresh** on the Web browser to reflect the change on the opening main viewer page.

Audio in
Select microphone input or line input.

Mic volume
When the Audio in is set to microphone input, set the volume level of the audio input from the microphone input connector. It is adjustable from **–10** to **+10**.

Audio Codec
Select the codec type of audio from the microphone input connector. The bit rate may differ, depending on the codec type.

Note

No audio is output if the Plug-in free viewer is used.

OK/Cancel
See "Buttons common to every menu" on page 14.

Day/Night Tab
Use this tab to set the day/night function of the camera.

Preview screen
This screen is for monitoring images and configuring day/night settings.

Day/Night

Mode
Select the day/night mode. This function has the following modes.
Auto: Normally works in day mode; switches automatically to night mode in a dark place.
Manual: Switch the day/night mode manually.
When you select **Manual** and the checkbox of the night mode is selected, the camera works in night mode. Otherwise, the camera works in day mode.
Sensor input: Controls the day/night mode by synchronizing it with the sensor input.
Select the synchronized sensor from **Sensor input 1** and **Sensor input 2**. While a sensor input is detected, the camera works in night mode.

Threshold
This mode is available when **Auto** is selected.
Set the brightness level when the night mode is set.

Hold time
This mode is available when **Auto** is selected.

Set the reaction time of changes in brightness.

Status
Displays the day/night function status.

OK/Cancel
See “Buttons common to every menu” on page 14.

Privacy masking Tab

Using the privacy masking enables you to hide images by masking specified parts of the images when streaming.

Notes

- For setting the privacy masking, set **Image size1** in the Video codec tab of the Video / Audio menu to the maximum rate.
- Do not set the Solid PTZ function for Image 1.

Preview screen
This screen is for monitoring images and configuring privacy masking.

Effect
Set the effect of privacy masks.

Color
Specify the color of privacy masks. This setting is common to every privacy mask.

Position
Allows you to delete privacy masks one-by-one or all at one time.
After completing the configuration, register by clicking **OK**.

Clear: Click the button to delete the privacy mask set.

Clear all: Click the button to delete all privacy mask.

Setting a privacy mask
Operate according to the following procedure to set a privacy mask in the position of your choice:

1. Specify the privacy mask area by dragging the mouse on the preview screen.
2. Select the number to register from the **Position** drop-down list.
3. Select the color of the mask from the **Color** drop-down list.

Note

The color is common to every privacy mask. The color selected last is applied.

4. Click **OK**.
The mask is displayed on the preview screen.

OK/Cancel
See “Buttons common to every menu” on page 14.

Superimpose Tab

Select whether or not to superimpose the custom string and the character date & time on the image.

Preview screen
Preview the image, and adjust the superimposed image. You can move the position of superimposed image displayed on the preview screen by drag and drop.

Image
Select the video codec mode to set for the superimposed image.
The setting for the superimposed image is available if you check the checkbox next to the list box.
For details about the video codec mode, see the Video codec tab in the Video / Audio menu.

Position
Select the number to set the display position on the preview screen.

Type
Set the type of display information to text, or date and time.

Custom string
Describes the superimposed content for each position. When **Date & time** is set in **Type**, <datetime> is displayed, and you can add the custom string.

Text color
Select the font color of the superimposed text.

Background color
Select the background color of the superimposed text.

Transparent
Select the background color transparent of the superimposed text.

Alignment

Set the horizontal position of the superimposed text.

OK/Cancel

See “Buttons common to every menu” on page 14.

Streaming Tab

Use this tab to set the items for the transmission by unicast or multicast.

Unicast streaming

Specify the transmission port numbers of the H.264 video data and audio data to be used when **Unicast** is selected from the **Connection** drop-down list in the **Other** panel on the main viewer.

Video port number 1, 2, 3

Specify the transmission port number of the H.264 video data. It is initially set to 50000.
Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for video data communication and control. When performing simultaneous multi-transmission, a different port number will be used for every transmission, based on the port number specified here.
The settings for Image 1, Image 2 and Image 3 apply to Video port number 1, 2 and 3 respectively.

Audio port number

Specify the transmission port number of the audio data. It is initially set to 58000. Specify an even number from 1024 to 65534. Three port numbers (the number specified here and an odd number with 1 added to the specified number) are used for audio data communication and control. When operating multi-transmission at the same time, a different port number will be used in every transmission based on the port number specified here.

Note

Specify different numbers for the video port number and the audio port number.

RTSP video port number 1, 2, 3

Specify the H.264 video transmission port number used for RTSP unicast streaming. The default setting is 51000. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for video data communication and control. When performing simultaneous multi-transmission, a different port number will be used for every transmission, based on the port number specified here.
The settings for Image 1, Image 2 and Image 3 apply to RTSP video port number 1, 2 and 3 respectively.

RTSP audio port number

Specify the audio transmission port number used for RTSP unicast streaming. The default setting is 57000. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for audio data communication and control. When performing simultaneous multi-transmission, a different port number will be used for every transmission, based on the port number specified here.

Multicast streaming

Set whether the camera uses multicast streaming for H.264 video data and audio data or not. It reduces the transmission load on the camera by having a computer of the same segment network receive the same transmitting data.
Select the checkbox to allow multicast sending.
When you select the checkbox, set **Multicast address, Video port number and Audio port number** properly.

Multicast address 1, 2, 3

Type the multicast address used on the multicast streaming.

Video port number 1, 2, 3

Specify the H.264 video transmission port number used for the multicast streaming. It is initially set to 60000. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are used for video data communication and control.
The settings for Image 1, Image 2 and Image 3 apply to Video port number 1, 2 and 3 respectively.

Audio port number

Specify the audio transmission port number used for the multicast streaming. It is initially set to 58000. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are used for audio data communication and control.

Note

Specify different numbers for the video port number and the audio port number.

RTSP multicast address

Set the multicast address used on RTSP multicast streaming.

RTSP multicast video port number 1, 2, 3

Specify the H.264 video transmission port number used for RTSP multicast streaming. The default setting is 61000. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for video data communication and control. When performing simultaneous multi-transmission, a different port number will be used for every transmission, based on the port number specified here. The settings for Image 1, Image 2 and Image 3 apply to RTSP video port number 1, 2 and 3 respectively.

RTSP multicast audio port number

Specify the audio transmission port number used for RTSP multicast streaming. The default setting is 59000. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for audio data communication and control. When performing simultaneous multi-transmission, a different port number will be used for every transmission, based on the port number specified here.

RTSP setting

Set the RTSP setting which cannot be set in the Unicast streaming setting and Multicast streaming.

RTSP port number

Set the port number used for RTSP streaming. The default setting is 554.
If you change the setting, the RTSP server will be rebooted.

RTSP time out

Specify the time out of the Keep-Alive command by RTSP streaming. You can set the time out from **0** second to **600** seconds.
At the **0** setting, time out of the Keep-Alive command is not available.

OK/Cancel

See “Buttons common to every menu” on page 14.

Configuring the Network — Network Menu

When you click **Network** in the Administrator menu, the Network menu appears.
Use this menu to configure the network to connect the camera and the computer.
The Network menu consists of the **Network** tab.

Network Tab

This section provides the menus for connecting the camera through the network cable.

Status

MAC address

Displays the MAC address of the camera.

Ethernet status

Displays the current transmission rate.

Auto-MDI/MDIX

According to the port of the connected Ethernet device, automatically switches the port of the unit between MDI and MDI-X for transmission.
Displays the Ethernet port mode of the unit.

IP address

Displays the current IP address.

Subnet mask

Displays the current subnet mask.

Default gateway

Displays the current default gateway.

LinkLocal IP

Displays the current link-local IP address.

Primary DNS server

Displays the current primary DNS server.

Secondary DNS server

Displays the current secondary DNS server.

IPv4 setting

Configure the IPv4 network setting.

To obtain the IP address automatically from a DHCP server

Select **Obtain an IP address automatically (DHCP)**.

The IP address, subnet mask, default gateway are assigned automatically. To obtain DNS server addresses automatically, select **Obtain DNS server address automatically**. To set manually, deselect **Obtain DNS server address automatically**, and type the address in the **Primary DNS server** and **Secondary DNS server** boxes.

Note

When you select **Obtain an IP address automatically (DHCP)**, make sure that a DHCP server is operating on the network.

To specify the IP address manually

Deselect **Obtain an IP address automatically (DHCP)**. Type the address in the **IP address**, **Subnet mask**, **Default gateway**, **Primary DNS server** and **Secondary DNS server** boxes. **Host name** and **Domain suffix** are not available.

MTU

Enter the MTU value for the Ethernet port. (1280 - 1500)

Common setting

Host name

Type the host name of the camera to be transmitted to the DHCP server. This setting is valid only when **Obtain an IP address automatically (DHCP)** is selected.

Domain suffix

Type the domain suffix of the camera to be transmitted to the DHCP server. This setting is valid only when **Obtain an IP address automatically (DHCP)** is selected.

Note

The domain suffix is sent to the DHCP server as FQDN (Fully Qualified Domain Name) information when **Host name** is set.

HTTP port number

Normally select **80**. If you want to use a port number other than 80, select the text box and type a port number between 1024 and 65534.

Note

When you have set the **HTTP port numbe**r to a number other than 80 in the Network menu or in SNC toolbox, access the camera again by typing the IP address of the camera on your Web browser as follows:

Example: Setting port number 8000 when IP address is 192.168.0.100

OK/Cancel

See “Buttons common to every menu” on page 14.

Setting the Security
— Security Menu

When you click **Security** in the Administrator menu, the User tab appears.

User Tab

Set the user names and passwords of Administrator and up to 9 kinds of users (User 1 to User 9), and the access right of each user.

Administrator, User 1 to 9

Specify **User name**, **Password**, **Re-type password** and **Viewer mode** for each user ID.

User name

Type a user name between 5 and 16 characters.

Password

Type a password between 5 and 16 characters.

Re-type password

To confirm the password, retype the password that you typed in the **Password** box.

Viewer mode

When the user is authenticated for logging in the main viewer, select the viewer mode to be displayed after authentication.

Administrator, Full: The user can operate all functions in this mode.
Pan/Tilt: In addition to the **Light** mode, the user can operate pan/tilt/zoom.
Light: In addition to the **View** mode, the user can select the image size of the main viewer, select codec and capture a still image.
View: The user can only monitor the camera image.

For the functions available for each viewer mode, see "Administrator and User" on page 7.

Viewer authentication

Set whether the user is authenticated or not when the main viewer is displayed.
When the checkbox is selected, the main viewer is displayed in accordance with the viewer mode of the authenticated user. When the checkbox is not selected, select the viewer mode of the main viewer which is displayed without authentication from **Full**, **Light** or **View**.

OK/Cancel

See "Buttons common to every menu" on page 14.

Setting the PTZ control
— PTZ control Menu

When you click **PTZ control** in the Administrator menu, the PTZ control menu appears.

PTZ control Tab

Solid PTZ

Select **On** to enable the Solid PTZ function. You can set Image 1, Image 2 and Image 3 separately.

Note

The Solid PTZ function is not available with Plug-in free viewer.

OK/Cancel

See “Buttons common to every menu” on page 14.

Setting the Sensor input/ Camera tampering detection/Motion detection
— Action input Menu

When you click **Action input** in the Administrator menu, the Action input Menu appears. The Action input Menu consists of the **Event condition, Sensor input**, **Camera tampering detection** and **Motion detection** tabs.

Event condition Tab

Create event execute conditions for each action.
You can combine the following event execute conditions together.

or: detect when either condition happens.

and: detect when both conditions happen within a specified interval regardless of the sequence.

then: detect when each of the conditions happen within a specified interval in sequence.

Interval

Specify the interval time used when condition is set to **and**, **then**.
In the case the condition is set as 1 and 2, the system sounds an alarm when either 1 or 2 happens, and the other happens within the specified interval.
In the case the condition is set as 1 then 2, the system sounds an alarm when 1 happens, and then 2 happens within the specified interval.
If you select “or” condition, this setting will be ignored.
The maximum duration to be set is 7200 seconds.
You can select the alarm as follows:

Sensor input 1: The external sensor that is connected to sensor input 1 of the camera I/O port.

Sensor input 2: The external sensor that is connected to sensor input 2 of the camera I/O port.

Camera tampering detection: An alarm that is triggered if the camera detects tampering, such as direction shifting or spray.

VMF: The alarm detected by the VMF function.

Motion detection: The alarm detected by the motion detection function.

Network disconnection: The alarm detected by disconnection to a specific IP address.

Sensor input Tab — Set the sensor input 1/2

Sensor input mode

Set the direction of the detected input signal to the sensor input terminal of the camera.

Normally open: Detects the alarm when the sensor input is short-circuited.

Normally closed: Detects the alarm when the sensor input is open-circuited.

OK/Cancel

See “Buttons common to every menu” on page 14.

Camera tampering detection Tab — Set the camera tampering detection

Note

Before using the tampering detection function, first adjust the focus (SNC-VB600/VB600B/VB630) or the focus/zoom (SNC-VM600/VM600B/VM601/VM601B/VM630/VM631).
If you adjust focus/zoom with the tampering detection function activated, detection may not be effective.

Enable

Select **On** to activate the function to detect camera tampering, such as direction shifting or spray.

Detection status

Display the tampering detection state of the time when Camera tampering detection tab is opened. To clear the detection status, click Clear button.

OK/Cancel

See “Buttons common to every menu” on page 14.

Motion detection Tab — Set the motion/VMF detection

Motion detection responds to moving objects in the camera image and outputs an alarm. In VMF, an alarm sounds when motion is detected under the motion detection setting, entering or passing through a specified area, or on an inspection line.

Notes

- For setting the privacy masking, set **Image size1** in the Video codec tab of the Video / Audio menu to the maximum rate.
- Do not set the Solid PTZ function for Image 1.

What is VMF

VMF is a function for inspecting a motion detected in a specified area, entering or passing through a specified area, or on an inspection line.
The inspection methods; Intrusion/Passing, can be used, and can be set to execute independently, or in combination.
For example:

- An alarm sounds when an object enters areas A, B and C.
- An alarm sounds when an object passes through area A and enters area B.
- An alarm sounds when an object passes through areas A and B, and enters area C.
- An alarm sounds when an object enters area A, and passes through area B.

Intrusion

When a moving object exists in the designated area, an alarm will sound. Video/audio recording can be performed in synchronization with this alarm.

Passing

A passage line is determined, and when a moving object passes the setting line, an alarm sounds.
Video/audio recording can be performed in synchronization with this alarm.

Notes

- Before actual use, perform an operation test and confirm that the motion detection function works correctly.
- Even when privacy masking is used, the motion detection function operates based on the images before masking is processed.
- Before actual use, be sure to set **Image size1** in the Video codec tab of the Video / Audio menu to the maximum rate.
- The authentication check dialog appears when you open the motion detection setting screen. Enter the administrator user ID and password.

When the Motion detection menu is displayed for the first time

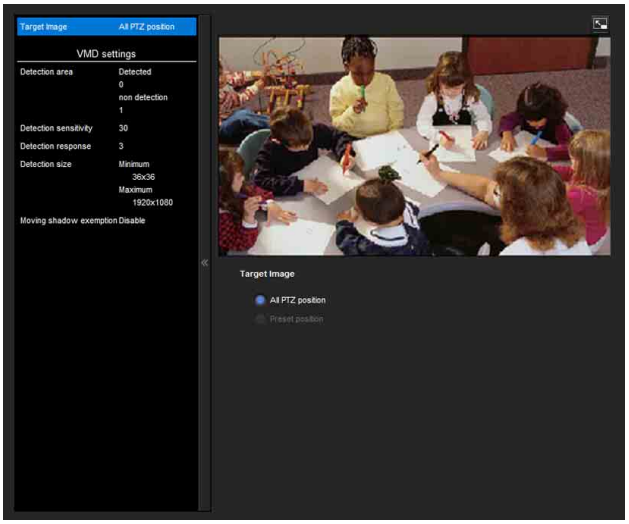
When you click **Motion detection**, “Security Warning” is displayed.
When you click **Yes**, ActiveX control is installed and the Motion detection menu is displayed.

Notes

- If **Automatic configuration** is enabled in the Local Area Network (LAN) settings of Internet Explorer, the image may not be displayed. In that case, disable **Automatic configuration** and set the proxy server manually. For the setting of the proxy server, consult your network administrator.
- When you install ActiveX control, you should be logged in to the computer as Administrator.

Setting items for motion detection

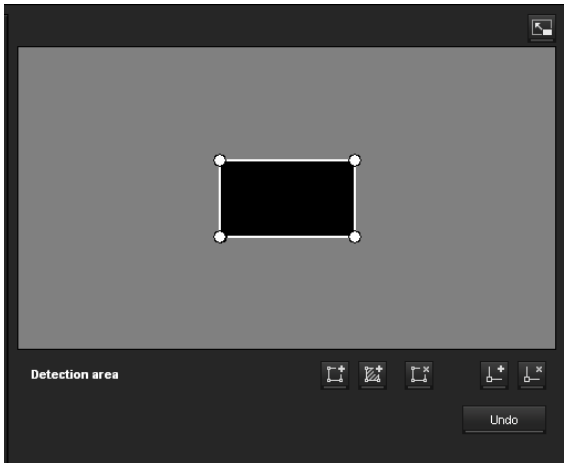
Use the settings tab to set the conditions for the motion detection function while observing camera images.



VMD settings

Detection area

Specify the effective scope of motion detection.



Note

The frames shown on the monitor screen are not displayed on the image files sent or recorded with motion detection.

Configuring the detection area

The following procedure is used to configure the motion detection area:

1 Use the following buttons to specify the active area(s) and inactive area(s).

Add detection area

Clicking this button will add an active area window in the center of the screen.
When you place the cursor on the area, the cursor changes to a crossed arrow, which you can drag to move the area.
When you place the cursor on the vertex of the area, the cursor changes to ↔, which you can drag to move the vertex.

Add non detection area

Clicking this button will add an inactive area window in the center of the screen.
When you place the cursor on the area, the cursor changes to a crossed arrow, which you can drag to move the area.
When you place the cursor on the vertex of the area, the cursor changes to ↔, which you can drag to move the vertex.

Delete Area

Clicking this button will change the cursor to a button. While the cursor is a button, click on a part of the area to delete that area.
After the deletion, the cursor will return to its original form. To exit this operation, click this button again.
It is the same function as the button displayed under VMF settings.

Add vertex

Clicking this button will change the cursor to a button. In that state, when you click on a part of the side of the area, a vertex is added to that point. After the addition, the cursor will return its original form. To exit this operation, click this button again.
It is the same function as the button displayed in VMF settings.

Delete vertex

Clicking this button will change the cursor to a button. In that state, when you click on a part of the vertex of the area, the vertex added to that point is deleted. After the deletion, the cursor will return its original form. To exit this opertion, click this button again.
It is the same function as the button displayed in VMF settings.

Note

The vertex can be moved in an outward direction but cannot be moved toward the inside of an area.

Detection sense

Set the sensitivity of motion detection.

A value from **1** to **256** can be specified.
Clicking **Return to the default** changes the value to the default value.

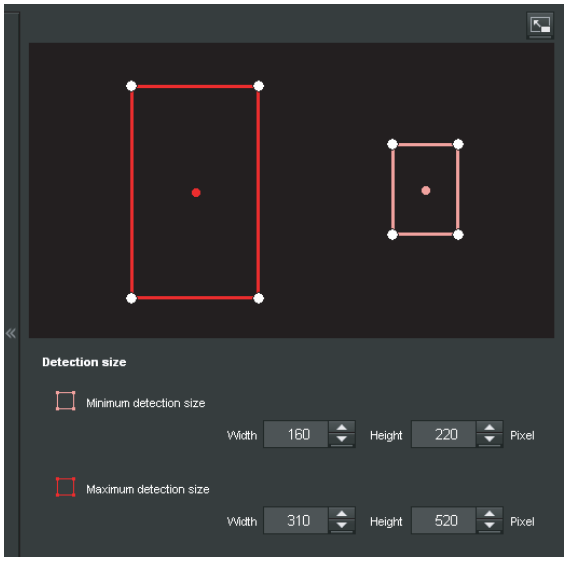
Detection response

Set the response velocity of motion detection.

A value from **1** to **5** can be specified.
Clicking **Return to the default** changes the value to the default value.

Detection size

Specify the minimum detection size and maximum detection size for motion detection. To specify the detection size, you can either enter values or drag the vertexes of the area.



The area size is measured in pixels.

- When you place the cursor on the area, the cursor changes to a crossed arrow, which you can drag to move to the minimum detection size area and maximum detection size area.
- When you place the cursor on the vertex of the area, the cursor changes to ↔. Drag and move the vertex to adjust the detection size.

Moving shadow exemption

Set ON/OFF for the moving shadow exemption function of motion detection.
Selecting **Do not respond to shadows** will prevent the shadows of a moving object from being recognized as moving objects.
Remove the check to disable the shadow removal function of motion detection.

VMF settings

Set the alarm to sound when the specified conditions (**Intrusion**, **Passing**) of the motion detection occur. You can also set the conditions' order, and set the alarm to sound only when the specified conditions occur in sequence.

Number of filters

Select filter numbers you want to set from 1, 2 or 3.
The following VMF setting is saved for the individual setting number selected here.

Alarm trigger checkbox: Set whether the alarm of the specified filter number, will sound when the detection conditions occur.

Filter type: Select the filter type from **Intrusion**, **Passing** or **None**.

Filter settings

Settings for each filter can be edited here.
The inspection line and active window are set to default values. Edit according to use.

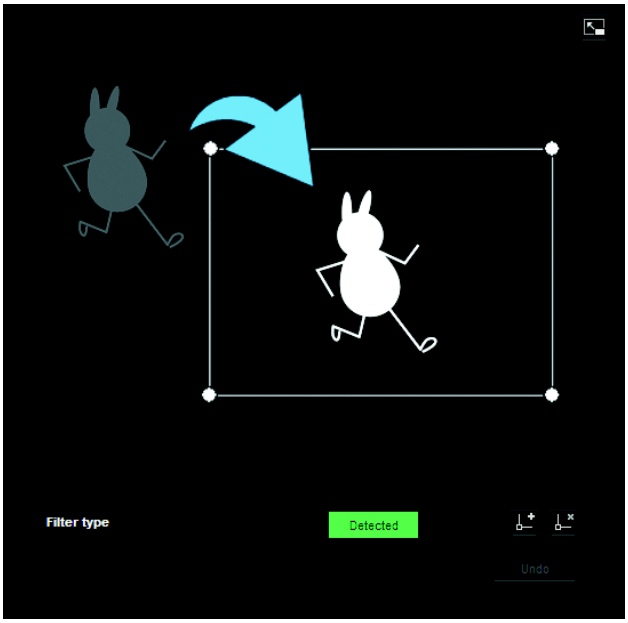
■ VMF status indicator of each filter

The filter is on when the set filter type conditions (**Intrusion**, **Passing**) are met.

Tip

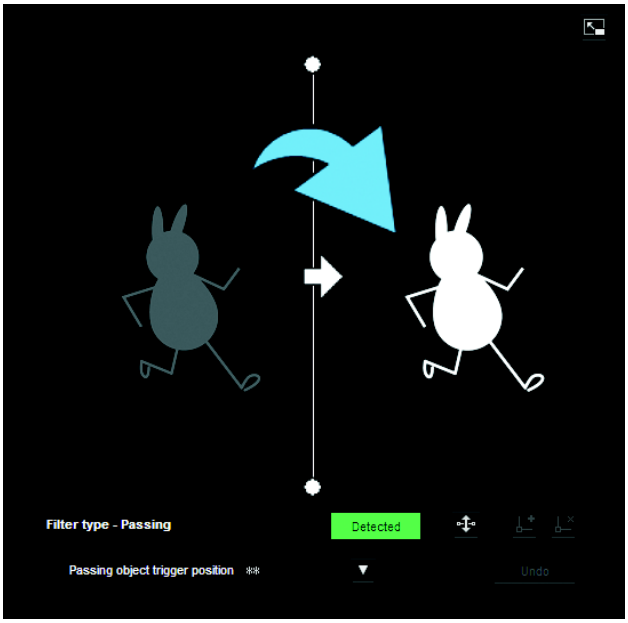
The buttons displayed on the edit screen for filter is used in the same way as those for detection setting. See page 28.

Intrusion



This criterion is for whether a moving object exists in the trigger area.
Similar to an active window, a trigger area can also be moved and vertexes can be moved/added or deleted.

Passing



Edit the pass inspection line according to the following procedure:

Passing object trigger line

By default, one passing object trigger line is displayed. The number of vertexes is 2.
Placing the cursor on the line will turn the cursor into a cross, and when you drag the line, the whole line will move.
Placing the cursor on the vertex will turn the cursor into ↔, and when you drag the line, the vertex will move.
The arrow displayed in the center of the passing object trigger line shows the direction of inspection. Trigger is performed when an object passes the passing object trigger position in this direction.

Trigger direction setting

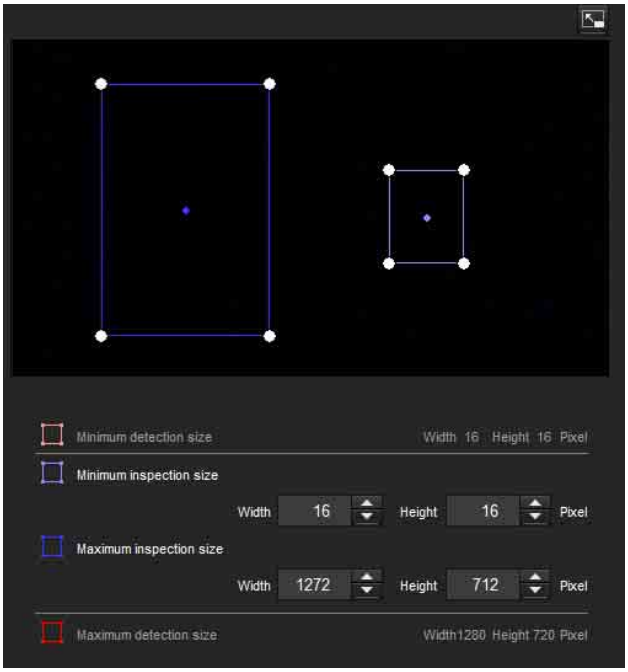
Each time you click , the trigger direction toggles among the directions left, right and both.

Passing object trigger position

Select the passing object trigger position from **All side**, **Left side**, **Top side**, **Right side** and **Bottom side**.

Trigger size

Specify the minimum trigger size and maximum trigger size of motion. To specify the size, you can either enter values or drag the vertexes of the area.



The size of motion is measured in pixels.

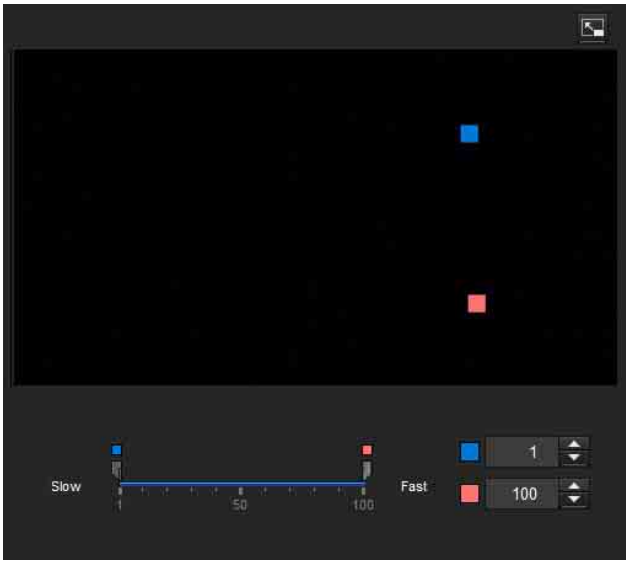
- When you place the cursor on the area, the cursor changes to a crossed arrow, which you can drag to move the minimum trigger size area and maximum trigger size area.
- Placing the cursor on the vertex of the minimum trigger size area or maximum trigger size area will change the cursor to ↔, then you can drag the vertex to change the inspection size.

Tip

The minimum and maximum detection sizes configured in the VMD setting are displayed, but the size of the area cannot be modified from here.

Trigger speed

Specify the minimum and maximum speeds to be detected.



- Min. speed and Max. speed can be specified within a scale of 100.
- The blue marker for minimum speed cannot be set to the right of the red marker for maximum speed.
- The squares indicating Min. speed and Max. speed move on the right and left sides of the preview screen.

Note

The set value is only valid under the conditions of **Intrusion** or **Passing**.

Matching decision

Select the filter type you want to match and check **Use as matching condition**.
Select Filter 1, Filter 2 and Filter 3 in the list box of **Matching decision**.
Set the alarm to sound when the specified maximum 3 conditions occur in sequence. If the conditions occur in a different order, the alarm will not sound. Select the condition from **Intrusion**, **Passing** or **None**.

Filter order switching button

Clicking switches the order of filter between the neighouring methods.
e.g., If you click the button between 1 and 2, they will switch order. If you click the button between 2 and 3, they will switch order.

Specifying the time

Specify the reference interval in seconds between 1 and 2, or 2 and 3.
For example, if 1 and 2 are set and “3 seconds” is specified, an alarm will sound when the inspection conditions of 2 are met within 3 seconds from when the inspection conditions of 1 are met.

■ VMF status indicator

The indicator is on when the set filter type conditions are met.

Full-screen display button

Click to display the ActiveX area in full screen.
Clicking again will show the normal display.

Stretch bar

Click to hide the menu list on the left and enlarge the preview screen.
Clicking again will show the menu list as it was before.

OK/Cancel

Click **OK** to finalize any changes made to the settings and send them to the camera.
If you click **Cancel**, changes made to the settings will be discarded and the screen will be reloaded with the current camera settings.

Network disconnection Tab — Monitoring the connection of a specified IP address

IP address monitoring

Set the specific IP address of which the network connection status is to be monitored.
IP address monitoring is not available for IPv6.

OK/Cancel

See “Buttons common to every menu” on page 14.

Setting the Action output — Action output Menu

When you click **Action output** in the Administrator menu, the Action output menu appears.
The Action output menu consists of the **Execution Condition, Mail Transfer, Alarm output** and **Edge Storage** tabs.

Execution Condition Tab

Set execute conditions for each action.
Set the action input execute conditions when the condition created in the Event condition tab is implemented.

Mail Transfer: Set the condition of mail transfer.
Alarm output 1: Set the condition to control alarm output of the I/O port on the rear of the camera.
Alarm output 2: Set the condition to control alarm output of the I/O port on the rear of the camera.
Edge Storage: Set the condition to record images using the Edge Storage function.

Mail Transfer Tab — Setting the e-Mail (SMTP) Function

SMTP Server

Note

The frame rate and operability on the main viewer may be reduced while a file is being transmitted by the e-Mail (SMTP) function.

SMTP server name
Type the SMTP server name using up to 64 characters, or the IP address of the SMTP server.

SMTP port number
Enter a port number from 25 to 65535.
The standard port number is 25.

Address

Recipient e-mail address 1, 2, 3
Type the recipient e-mail address using up to 64 characters.
You can specify up to three recipient e-mail addresses.

Administrator e-mail address
Type the Administrator e-mail address using up to 64 characters.
This address is used for reply e-mails and sending system messages from the mail server.

Content

Subject
Type the subject/title of the e-mail using up to 64 characters.
An e-mail sent in response to alarm detection will indicate the type of alarm in the subject. **(S1)** is added for sensor input 1 detection, **(S2)** for sensor input 2 detection, **(TP)** for camera interference detection, **(MD)** is additionally available for motion detection.

Message
Type the text of the e-mail using up to 384 characters. (A line break is equivalent to 2 characters.)

Event triggered execution

File attachment
Set whether an image file (JPEG file) is to be attached to the e-mail or not.
When **On** is selected, the image file made using the settings below is attached. When **Off** is selected, only the message is sent.

Image file name
Type the file name you want to assign to the image to be attached to an e-mail. You can use up to 10 alphanumeric characters, – (hyphen) and _ (underscore) for naming.

Suffix
Select a suffix to be added to the file name.
None: No suffix is added. The image file name is assigned to the image to be sent via e-mail.
Date & time: The date & time suffix is added to the image file name.
The date/time suffix consists of lower two-digits of the year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits), and sequential number (2 digits), thus adding 14-digit number to the image file name.

Periodical execution

You can set to send e-mails periodically.

Image file name

Type the file name of the image attached to the e-mail using up to 10 alphanumeric characters, – (hyphen) and _ (under score).

The actual image file name will be the specified image file name with a suffix and the extension .jpg.

Suffix

Select a suffix to be added to the file name used when the e-mail is sent.

None: The name of the sent file will be the image file name.
Date & time: The date & time suffix is added to the image file name.
The date & time suffix consists of the year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minutes (2 digits) and seconds (2 digits), and sequential number (2 digits), thus adding a 14-digit number to the image file name.

OK/Cancel

See “Buttons common to every menu” on page 14.

Alarm output Tab — Setting the Alarm output

You can perform setting in this menu to control the alarm output of the I/O port on the rear of the camera linked to alarm detection function.

Tip

For details on connection of peripheral devices to the alarm output of the I/O port, refer to the supplied Installation Manual.

Alarm duration

Alarm duration 1, 2

Enter the duration for which the alarm is output, between 1 sec. and 60 sec.

OK/Cancel

See “Buttons common to every menu” on page 14.

Edge Storage Tab — Setting the Edge Storage

With Edge Storage, video or audio signal can be recorded from the alarm detection results, such as network block, recorded video and audio can be streamed with the same protocol as the real-tim streaming.

Notes

- The frame rate and operability on the main viewer may be reduced during image storage.
- Stop the Edge Storage recording when you remove the SD memory card from the camera or turn off the power of the camera with a SD memory card inserted.
- Whenever you remove or insert a card, wait at least 10 seconds.
- Before using a SD memory card, format it using the computer, or by **Format SD memory card** in the Initialize tab of the System menu (page 17).
- The supplied ActiveX viewer is not used for streaming the recorded video or audio data. For details on supported applications, contact an authorized Sony dealer.

SD memory card

Display the available free space of external SD memory.

Overwrite

Select On to overwrite the file when there is insufficient memory space to record the image in the SD memory.

On: Overwrite is enabled and old files will be overwritten in the order of date.
Off: Overwrite is prohibited. No recording will be performed.

Recording status

Display the current recording status.
The recording status will not be updated until the screen is refreshed.
Use the **Start** and **Stop** button to start or stop the recording manually.

Recording mode

Codec

Select the video codec mode you want to record.
For detailed settings of video codec mode, see the Video codec tab in the Video / Audio menu.

Audio

Set whether to record the audio signals input from the camera.
Select the checkbox to record.

Note

Audio recording is not available when the **Audio codec** in the Audio tab of the Video / Audio menu is set to **Off**.

Recording capacity

Displays the maximum recording time of the alarm buffer in the current camera setting of the video mode, image size, bit rate and frame rate.

Note

Maximum recording time varies depending on the image size and quality setting in the Video / Audio menu.

Recording time

Set the recording time for the Pre-alarm image/audio and Post alarm image/audio.

Pre-alarm duration

Type the recording time of the image/audio before alarm detection.

Post-alarm duration

Type the recording time of the image/audio after alarm detection.

OK/Cancel

See “Buttons common to every menu” on page 14.

Setting the Schedule — Schedule Menu

When you click **Schedule** in the Administrator menu, the Schedule menu appears.
The Schedule menu consists of the **Schedule** tab.

Schedule Tab

When you click the Schedule tab, the setting menu for each action is displayed. You can set the schedule of the following actions; **Mail Transfer**, **Alarm output**, **Edge Storage**, **Day / Night**.

Action

Displays an action name to set the schedule.

Execution Condition

Select an action execute condition from the list box.

Always

Select the checkbox to always enable the specified condition for each action.
Always is not available for **Day / Night**.

Interval

Set the interval to enable the function periodically.
Displays when **Execution Condition** is set to **Periodical**.

Setting the schedule

You can set the schedule by arranging the schedule area of each action. Click on the area you want to set the schedule; 1 block for 1 hour. When you double-click on a selected area, the dialog of setting the start time and duration appears, and you can set the details.
If you want to delete a schedule you have set, select the schedule and press the delete key on your keyboard.

OK/Cancel

See “Buttons common to every menu” on page 14.

Glossary

ActiveX control

A component program object that can be used with web pages or other application programs. The technology for creating ActiveX control is part of software developed by Microsoft.

Bandwidth control

To limit the amount of transmitted data.

Bit rate

The rate at which data bits are transmitted.

Capture

To send audio and video converted to digital data from video devices to a computer.

Codec

Software/hardware for coding/decoding video and audio data.

Contrast

The difference in tone between the lightest and darkest portions of the image.

Default gateway

Device that can be used to access another network.

DHCP server

Acronym for Dynamic Host Configuration Protocol server. The IP address of a terminal without an individual IP address can be automatically distributed by the Dynamic Host Configuration Protocol (DHCP). The DHCP server assigns the IP addresses to the terminals.

Digital certificate

An electronic certificate that a CA (Certificate Authority) attests that a public key to cancel a secret code is issued by an authentic publisher.

DNS server

Acronym for Domain Name System server. As an IP address required for connecting to the device on an IP network is numerical and difficult to remember, the Domain Name System was established. A domain name is alphabetic and is easier to remember. When a client computer uses a domain name to connect to another computer, it asks a DNS server to translate the name into the corresponding IP address. The client computer can then obtain the IP address of the computer to be connected.

Frame rate

The number of frames of a moving image that can be transmitted per a second.

HTTP port

A port used to communicate between the web server and the web client, such as a web browser.

H.264

An image compression format. The standard written by the JVT (Joint Video Team) a joint organization for standardization (composed of ISO and ITU-T. H.264), is capable of transmitting video data at a higher compression rate than that of MPEG4.

IP address

Acronym for Internet Protocol Address. An individual IP address is basically assigned to each piece of equipment connected to the Internet.

JPEG

Acronym for Joint Photographic Expert Group. The still image compression technology or standards of ISO (International Organization for Standardization) and ITU-T. Popularly used as an image compression format on the Internet, etc.

MAC address

A network address that uniquely identifies each LAN card.

Multicast

The class D IP address assigned between 224.0.0.0 and 239.255.255.255. Using this IP address enables you to transmit the same data to multiple equipment.

Network address

The portion that identifies the local network (subnet) in an IP address.

Network bandwidth

Bit rate that can be used for networking.

NTP server

Network time server that transmits and receives time information over the networks.

Primary DNS server

One of the DNS servers that can first reply to a request by connected devices or other DNS servers.

Proxy server

A server or software that acts as an intermediary between a local network and the Internet so that it can connect to the Internet in place of a computer on a local network.

Saturation

The degree to which a color is pure.

Secondary DNS Server

Subsidiary DNS server used when a primary DNS server cannot be used.

Sharpness

The degree to which the boundary of two portions is clearly distinguished.

SMTP server

A server for sending or relaying e-mail messages between servers.

SNMP

A protocol for monitoring and managing network devices.

Solid PTZ

Zooming in/out function of an image without using an optical zooming function.

SSL

Acronym for Secure Sockets Layer. This is a protocol developed by Netscape Communications Corporation to be used for communications of encrypted data on the Internet.

Subnet mask

32-bit stream used to distinguish the subnet address from an IP address.

TCP

Acronym for Transmission Control Protocol. A standard protocol used for Internet connection. Compared with the other protocol, UDP, TCP provides reliable communication but communication speed is slower.

UDP

Acronym for User Datagram Protocol. A standard protocol used for Internet connection. Compared with the other protocol, TCP, UDP can transmit data faster, but reliable communication is not guaranteed.

Unicast

Transmission of data to specified equipment on a network by specifying a single address.

802.1X

A standard that performs user authentication and dynamic key generation and traffic on a LAN.

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