

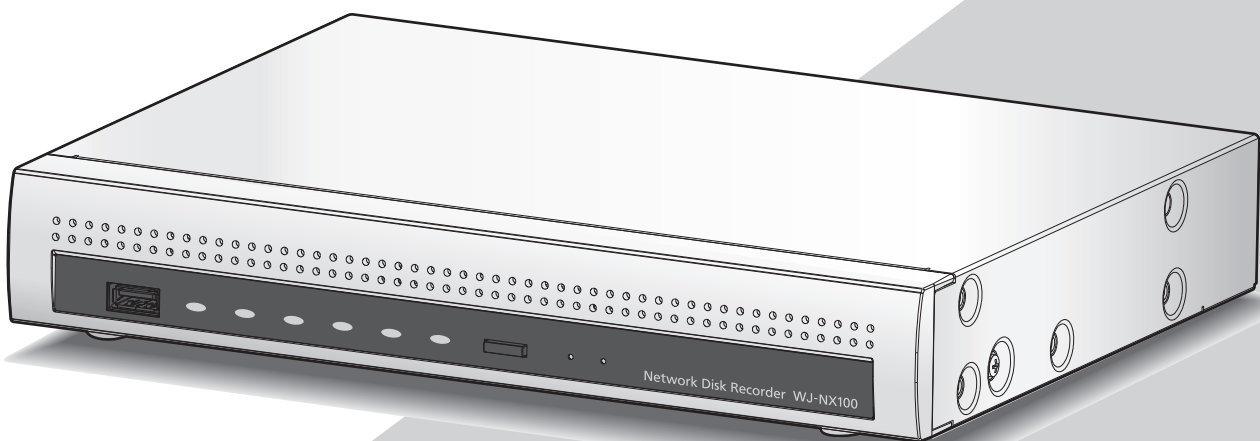
**iii·PRO**

# Important Information

## Network Disk Recorder

Model No. **WJ-NX100/2E**

For professional use only



**HDMI**<sup>®</sup>  
HIGH-DEFINITION MULTIMEDIA INTERFACE

Before attempting to connect or operate this product,  
please read these instructions carefully and save this manual for future use.

The model number is abbreviated in some descriptions in this manual.

# Safety Information

## Caution:

- This recorder is only intended for a connection to an ethernet or PoE network without routing to the outside plant.
- Before attempting to connect or operate this product, please read these instructions carefully.

## Notice:

- This product is not suitable for use in locations where children are likely to be present.
- For information about screws and other parts required for installation, refer to the corresponding section of this document.
- The power supply cord is used as the main disconnect device, ensure that the socket-outlet is located/installed near the equipment and is easily accessible.
- This product is a professional equipment.



: Functional earthing; functional grounding(US) symbol



: Direct current symbol



: Alternation current symbol



: Polarity of d.c. power connector



: For indoor use only

For U.S.A.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For U.S.A.

Supplier's Declaration of conformity Trade

Name: i-PRO

Model No. : WJ-NX100/2E

Responsible Party: i-PRO Americas Inc.

8550 Fallbrook Drive, Suite 200

Houston,

Texas 77064

Support Contact: 1-800-513-5417

For U.S.A.

The model number and serial number of this product may be found on the surface of the unit.

You should note the model number and serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

For Canada

CAN ICES-3(A)/NMB-3(A)

For U.S.A.

**Note:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### FCC Caution:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Make sure to use the included AC power adapter.

### Fixing screw

Instllation method	Recommended screw	Minimum pull-out strength
Mount the recorder on the wall	M5, 10mm {13/32 inches}	196 N {44 lbf}

When installing the recorder on a wall, the height should be no more than 2 m {6.6 ft}.



For U.K.

### FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amp and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local our dealer.

**IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.**

### How to replace the fuse

The location of the differs according to the type of AC mains plug (figures A and B).

Confirm the AC mains plug fitted and follow the instructions below. Illustrations may differ from actual AC mains plug.

Open the fuse cover with a screwdriver and replace the fuse and close or attach the fuse cover.

Figure A

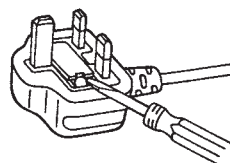
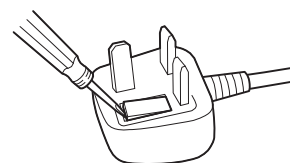


Figure B



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# Introduction

## Preface

The network disk recorders WJ-NX100/2E (hereinafter, recorder) equipped H.265 CODEC and are designed for use within a H.265 surveillance system, and record images/audio from up to 4 network cameras (hereinafter, cameras) on the hard disk drives (HDDs).

This product has a built-in 2 TB HDD. In addition, one more HDD is expandable. With one more HDD added, two HDDs can be used in RAID1 mode.

For more information about HDD for expansion, please contact your dealer.

This recorder supports connection with a monitor equipped with the HDMI (High-Definition Multimedia Interface) connector. Connection using an HDMI cable (optional) offers display of playback/live images with superior quality. It is possible to display images from multiple cameras, switch those images and perform basic operation of the camera.

## Features

### The ports with PoE power supply function equipped

The camera is equipped with four camera ports\*<sup>1</sup> with PoE power supply function compliant with IEEE802.3af, so there is no need to prepare a separate PoE switching hub to connect the camera.

\*<sup>1</sup> Power cannot be supplied to the PoE+ camera. A separate power supply is required for the PoE+ camera.

### Compact size for space saving

280 mm (W) \* 44 mm (H) \* 212 mm (D) {11-1/32 inches (W) . 1-23/32 inches (H) . 8-11/32 inches (D)}

### High-definition image monitoring is available

Images from up to 4 cameras with the image capture size of 4K (3840 × 2160) can be saved as video data\*<sup>2</sup>.

This recorder also supports the HDMI output to 2 monitors that can display recorded images and live images from the cameras in high definition.

\*<sup>2</sup> When recording at 30 fps, the live images and playback images are displayed as I-Frame.

### Quick setup and operations

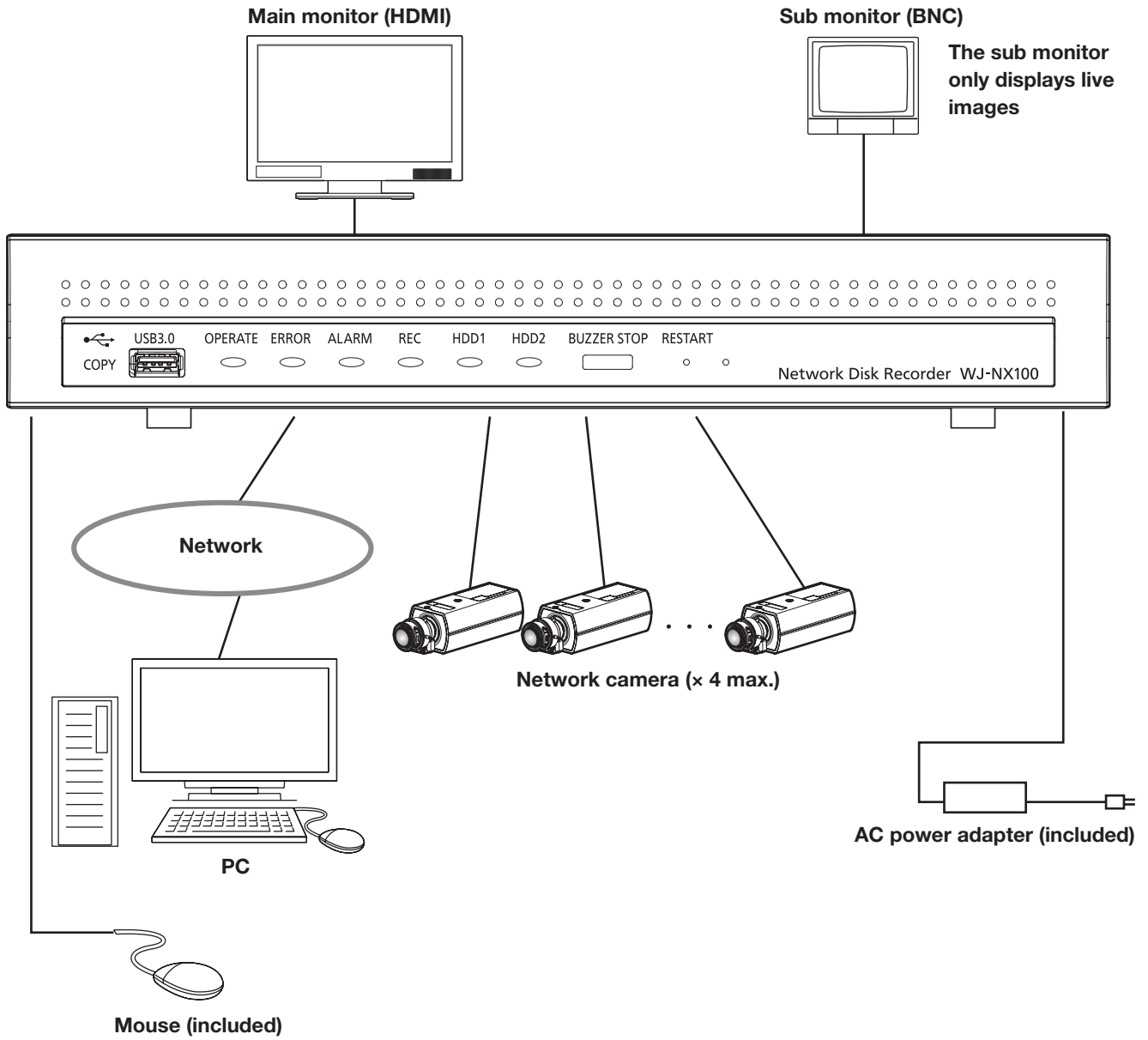
By connecting the mouse (included) to this recorder, quick operations are available while viewing a monitor.

By using "Easy Start" which realizes quick setup, the cameras are automatically recognized and settings can be configured without operations from a PC\*<sup>3</sup>.

Recorded images can easily be searched using calendar or time line.

\*<sup>3</sup> A PC will be necessary for some of the camera settings and to use the user manual and to view the setting version.

## System Configuration



## Standard accessories

CD-ROM*1 .....	1 pc.
Mouse .....	1 pc.
Installation Guide .....	1 pc.
Quick Reference Guide .....	1 pc.
Activation Key Card .....	1 pc.
Cable Clamp .....	1 pc.
Power cord .....	3 pcs.
AC power adapter .....	1 pc.
Cushion rubber (large)*2 .....	1 pc.
Cushion rubber (small)*2 .....	2 pcs.

\*1 The CD-ROM contains the Important Information (this document) and Quick Reference Guide (PDFs). Make sure to read them when installing or setting the recorder.

\*2 A total of 3 cushion rubbers (large)/(small) are pasted onto one sheet of backing sheet. Please peel them off before use. Cushion rubbers are used for vertical installation.

## About the user manuals

There are 4 manuals for the WJ-NX100/2E as follows.

Installation Guide (Printed):	Contains procedures of how to install/connect this product with devices and descriptions about "Easy start".
Important Information (this document):	Contains preface, precautions, and major operating controls and their functions and specifications.
Operating Instructions (PDF):	Contains descriptions of how to configure the required settings and how to operate this product. Refer to our support website ( <a href="https://i-pro.com/global/en/surveillance/documentation_database">https://i-pro.com/global/en/surveillance/documentation_database</a> ).
Quick Reference Guide:	Contains descriptions of how to operate functions frequently used.

"NX100" shown in this manual or setup menu on this recorder indicates the WJ-NX100/2E.

Refer to "readme.txt" on the included CD-ROM for further information about the dedicated software (option) that receives and displays the event and error information, compatible cameras and their versions.

Refer to our support website ([https://i-pro.com/global/en/surveillance/training\\_support/support/technical\\_information](https://i-pro.com/global/en/surveillance/training_support/support/technical_information)) for latest information about the compatible cameras and functions to be added or changed by firmware upgrade.

The external appearance in the document may differ from the actual product within no influence range on operation due to improvement of the product.

### System requirements for a PC

It is recommended to operate this unit using a PC that meets the following system requirements.

OS:	Microsoft Windows 8.1, Microsoft Windows 10
Web browser:	Windows Internet Explorer 11 (32-bit)
CPU:	Intel® Core™ i7-860
Memory:	4 GB or more
Monitor:	1024 × 768 pixels or more, 24-bit True color or better
Network interface:	10BASE-T/100BASE-TX/1000BASE-T 1 port
Audio:	Sound card (When using the audio function)
Others:	CD-ROM drive: It is necessary to refer to the operating instructions on the included CD-ROM. DirectX® 9.0c or later Adobe® Reader® : CD-ROM drive: It is necessary to refer to the operating instructions on the included CD-ROM.

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**Important:**

- Refer to our support website ([https://i-pro.com/global/en/surveillance/training\\_support/support/technical\\_information](https://i-pro.com/global/en/surveillance/training_support/support/technical_information)) for information about the latest operation verification of the supported operating systems and web browsers.
- If using a PC that does not meet the above system requirements, it may cause problems such as slow imaging or the browser becomes inoperable.  
Microsoft Windows RT and Microsoft Edge are not supported.
- When using Microsoft Windows 8.1, use it in the desktop. The software cannot be used in the Modern UI design.

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**Note:**

- Refer to "Notes about versions of Windows/Internet Explorer" (PDF) on the included CD-ROM for further information about system requirements for a PC and precautions when using Microsoft Windows or Windows Internet Explorer.
- 

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### GPL/LGPL

- This product contains software licensed under GPL (GNU General Public License), LGPL (GNU Lesser General Public License), etc.
- Customers can duplicate, distribute and modify the source code of the software under license of GPL and/or LGPL.
- Refer to the "readme.txt" file on the included CD-ROM for further information about the source code of the software contained in this product and copyright notice comprised in the GPL/LGPL software.
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- (2) ANY INCONVENIENCE, LOSS, OR DAMAGE CAUSED BY INAPPROPRIATE USE OR NEGLIGENT OPERATION OF THE USER;
- (3) ALL MALFUNCTIONS OR TROUBLES FROM UNAUTHORIZED DISASSEMBLE, REPAIR OR MODIFICATION OF THE PRODUCT BY THE USER, REGARDLESS OF THE CAUSE OF THE MALFUNCTION OR TROUBLE;
- (4) INCONVENIENCE OR ANY LOSS ARISING WHEN IMAGES ARE NOT DISPLAYED, DUE TO ANY REASON OR CAUSE INCLUDING ANY FAILURE OR PROBLEM OF THE PRODUCT;
- (5) ANY PROBLEM, CONSEQUENTIAL INCONVENIENCE, OR LOSS OR DAMAGE, ARISING OUT OF THE SYSTEM COMBINED BY THE DEVICES OF THIRD PARTY;
- (6) ANY CLAIM OR ACTION FOR DAMAGES BROUGHT BY ANY PERSON OR ORGANIZATION AS A PHOTOGRAPHED SUBJECT DUE TO VIOLATION OF PRIVACY CONCERNING A SURVEILLANCE CAMERA'S PICTURE OR SAVED DATA, FOR SOME REASON (INCLUDING USE WHEN USER AUTHENTICATION ON THE AUTHENTICATION SETTING SCREEN IS SET TO OFF), BECOMING PUBLIC OR BEING USED FOR ANY PURPOSE;
- (7) LOSS OF REGISTERED DATA CAUSED BY ANY FAILURE (INCLUDING INITIALIZATION OF THE PRODUCT DUE TO FORGOTTEN AUTHENTICATION INFORMATION SUCH AS A USER NAME AND PASSWORD).



## Network security

As you will use this unit connected to a network, your attention is called to the following security risks.

- ① Leakage or theft of information through this unit
- ② Use of this unit for illegal operations by persons with malicious intent
- ③ Interference with or stoppage of this unit by persons with malicious intent

It is your responsibility to take precautions such as those described below to protect yourself against the above network security risks.

- Use this unit in a network secured by a firewall, etc.
- If this unit is connected to a network that includes PCs, make sure that the system is not infected by computer viruses or other malicious entities (using a regularly updated anti-virus program, anti-spyware program, etc.).
- Protect your network against unauthorized access by restricting users to those who log in with an authorized user name and password set by using user authentication.
- Apply measures such as user authentication to protect your network against leakage or theft of information, including image data, authentication information (user names and passwords), alarm mail information, FTP server information and DDNS server information.
- After the unit is accessed by the administrator, make sure to close the browser.
- Change the administrator password periodically. Keep the authentication information (your user name and password) in a safe place free from public view.
- Do not install the camera in locations where the camera or the cables can be destroyed or damaged by persons with malicious intent.

## Limitation of liability

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CHANGES ARE ADDED TO THE INFORMATION HEREIN, AT ANY TIME, FOR THE IMPROVEMENTS OF THIS PUBLICATION AND/OR THE CORRESPONDING PRODUCT (S).

## About Secure Communication Kit (option)

Registering a license of a secure communication kit (option) to the recorder enables secure communication\* with cameras. Each secure communication kit differs in the number of cameras that can be registered as shown in the table below. Use several licenses as necessary. For further information, refer to the operating instruction on the following web site.

[https://i-pro.com/global/en/surveillance/training\\_support/support/technical\\_information](https://i-pro.com/global/en/surveillance/training_support/support/technical_information)

\* Encrypted communication using an electronic certificate.

WJ-NXS01, WJ-NXS01W	WJ-NXS04, WJ-NXS04W
1 camera	4 cameras

## About the business intelligence function (option)

Registering the license of the additional business intelligence kit WJ-NXF02, WJ-NXF02W (option) allows the recorder to detect faces whose features are similar to the registered faces by comparing face images in live image with the registered face images (face matching function). The statistical processing for the results of the face matching will also become available and it displays the result on the main monitor connected with the recorder.

For further information, refer to the operating instruction on the following web site.

[https://i-pro.com/global/en/surveillance/training\\_support/support/technical\\_information](https://i-pro.com/global/en/surveillance/training_support/support/technical_information)

# Precautions

## **Refer installation work to the dealer.**

Installation work requires technique and experiences. Failure to observe this may cause fire, electric shock, injury, or damage to the product.

- Be sure to consult the dealer.

## **Do not disassemble nor alter this product.**

Failure to observe this may cause fire or electric shock.

- Ask your dealer for inspection and repair.

## **Do not insert any foreign objects.**

Do not allow any foreign object or liquid such as water, a metallic part, etc. to enter since it may cause fire or electric shock.

- If it happens, disconnect the power plug from the electric outlet immediately and contact your dealer.

## **Stop the operation immediately when something is wrong with this product.**

When smoke goes up from the product or the smell of smoke comes from the product, continued use will result in fire, injury, or damage to the product.

- Turn off the power of this product immediately, and then contact your dealer.

## **Avoid placing receptacles that contain liquids such as water on/near this product.**

If liquid spills onto this product, it may cause fire or an electric shock.

- If it happens, disconnect the power plug from the electric outlet immediately and contact your dealer.

## **Clean the power plug periodically to keep it dust free.**

Dust can cause the insulation to be damaged and cause a fire.

- When cleaning, disconnect the power plug and wipe with a clean dry cloth.

## **Do not install this product in an unstable location.**

Selecting an inappropriate installation surface may cause the product to fall down or topple over, resulting in injury.

## **Do not touch this product, power cord and connected cables when thunder is heard.**

Failure to observe this may cause electric shock.

## **Do not connect/disconnect the power plug with wet hands.**

Failure to observe this may cause electric shock.

## **Avoid doing anything that can damage the power cord/plug.**

Do not damage, modify, forcefully bend, twist, stretch or bundle the power cord, and do not put a heavy thing on the power cord.

Using a damaged power cord can cause electric shock, short circuit, fire, etc.

- Contact your dealer for repair of the power cord and plug.

## **Grounding**

The power plug of this product is 2-prong plug equipped with a grounding terminal. Use this product after confirming that grounding is properly installed.

If grounding is not installed properly, it may cause ground leakage or damage the product resulting in electric shock.

- Contact the dealer for details. (The grounding installation cost is not included in the price of this product.)

## **Do not engage in work related to the installation and wiring during the power is on.**

Failure to observe this may cause fire or electric shock.

## **Hold the power plug to disconnect the power cord.**

Do not pull the power cord since it can cause fire, electric shock, etc.

## **Connect the power plug firmly.**

If the power plug is not connected firmly, it can cause fire, electric shock, etc.

- Do not use the damaged power cord and loose electric outlets.

## **Do not connect to outlets or wiring device if their ratings are beyond the specified rating.**

If the rating goes over the specified rating such by putting many loads on one electric outlet, it can cause generation of heat resulting in fire.

## **Do not strike or give a strong shock to this product**

Failure to observe this may cause fire or electric shock.

## **Avoid placing this product in locations which are subject to humidity and dust.**

Failure to observe this may cause fire or electric shock.

## **Do not block the ventilation holes.**

Doing so can cause fire since it can raise the temperature inside this product high.

## **This product is only intended for a connection to an ethernet without routing to the outside plant.**

# Precautions (continued)

## Precautions for use

### When the product is accessible from the Internet

To prevent unauthorized access, note the following.

- Leave user authentication turned on.
- Periodically change passwords that are used to access the product.

Refer to the Operating Instructions (PDF) on our support website for information about how to change passwords.

### Power source

The input power source for the AC power adapter used for this product is 100 V - 240 V AC 50 Hz/ 60 Hz.

Do not connect to the outlet that provides the power to equipment that requires a measurable amount of power (such as a copy machine, air conditioner, etc.). Avoid placing this product in locations where is subject to water.

\* The included power cord(s) is (are) dedicated to the use with this product. Do not use with any other device. Also, do not use any other power cord with this product.

### Ambient operating temperature

Use this product at temperatures between +5 °C to +45 °C. Failure to do so may damage the internal parts or cause malfunction.

\* Performance and lifetime of hard disk drives are easily affected by heat (used at high temperature). It is recommended to use this product at a temperature of approx. +25 °C.

### To cut the power supply

This product has no power switch. To cut the power supply, unplug the power plug of the product from the AC outlet. If the power cord cannot be unplugged easily due to installation condition, connect the power cord to an AC outlet via a distribution board circuit breaker with a cut-off capacity.

### Built-in backup battery

- Do not expose the built-in battery to excessive heat such as sunlight, fire, etc.

### Hard disk drive (HDD)

- Hard disk drives are precision devices. Handle them with care. It is possible to damage them if they are moved while their motors are still running.
- Please be forewarned that any loss of information on the HDD is not guaranteed under any circumstances.
- Do not move or install this product just after turning the power on or off (for around 30 seconds.) The hard disk drives are running.
- The HDD is consumable and the lifetime differs depending on the operational environment. Write errors may occur frequently after around 20000 hours of each HDD operation and head and motor deterioration may occur after around 30000 hours of operation. They will reach the end of their lifetime after 30000 hours of operation if they have been used at the recommended ambient temperature (approx. +25 °C).

- To prevent data loss from disk crashes, it is recommended to keep the ambient operating temperature at approx. +25 °C and to replace them after around 18000 hours of operation. You can check the operating time of each HDD in "Operation" of the "HDD information" tab under "Maintenance" under "Advanced" from the setup menu.
- When hard disk drive trouble occurs, replace it immediately. Contact your dealer about servicing.

### About external storage devices (External HDD and USB memory)

- An external hard disk drive or a USB memory that is compatible with USB3.0 can be connected to the copy port to use as the external storage device.
- Use external storage devices formatted in exFAT, FAT (FAT16) or FAT32.
- USB media recognizable by the recorder can be formatted by the recorder. Refer to Operating Instructions (PDF) for the format procedure.
- External storage devices requiring password authentication or a special driver or using an encryption function cannot be used.

### Prevent condensation from forming

If this happens, it can cause malfunction.

Leave it switched off for around 2 hours in the following cases.

- When this product is placed in an extremely humid place.
- When this product is placed in a room where a heater has just been turned on.
- When this product is moved from an air-conditioned room to a humid and high-temperature room.

### About the monitor

When displaying the same image on the PC monitor for a long time, it may cause image burn-in on the PC monitor.

### Cleaning

- Turn the power off, and then use a soft cloth to clean this product.
- Do not use strong or abrasive detergents when cleaning the body.
- When using a chemical cloth for cleaning, read the caution provided with the chemical cloth product.

### Product disposal/transfer

Images saved on the storage device used with this product may lead to personal information leakage. When it is necessary to dispose or give this product to someone, even when for repair, make sure that there is no data on the hard disk drives.

# Precautions (continued)

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## **Indication label**

Refer to the indication label placed on the surface of this product for the equipment classification and power source, etc.

## **AVC Patent Portfolio License**

THIS PRODUCT IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL USE OF A CONSUMER OR OTHER USES IN WHICH IT DOES NOT RECEIVE REMUNERATION TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE [HTTP://WWW.MPEGLA.COM](http://www.mpegla.com)

## **About reboot of this product**

In the following cases, this product will automatically reboot to continue recording.

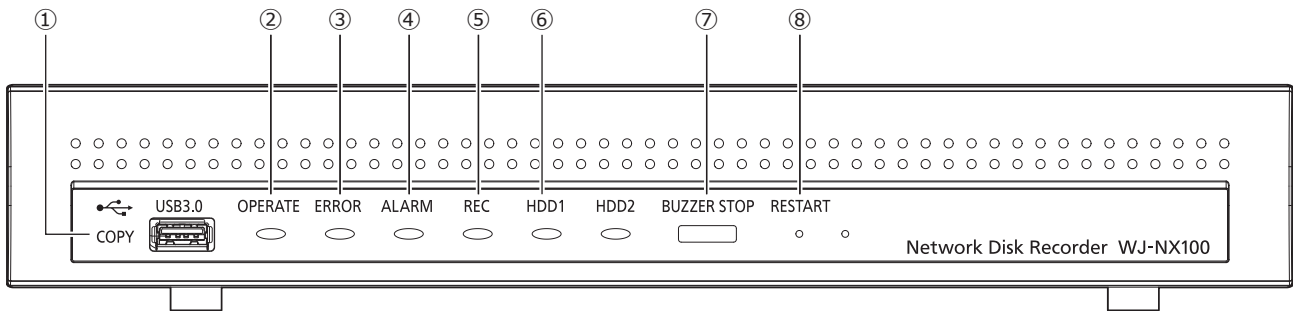
- When the software of this product has detected the internal error and reboot becomes necessary.

## **Disclaimer of warranty on recorded data**

i-PRO Co., Ltd. assumes no responsibility or liability, directly or indirectly, for failure of recording or editing including loss of data due to any reason or cause which does not exclude repair or maintenance of this product regardless whether the subject is hard disk or other parts.

# Major operating controls and their functions

## Front view



### ① Copy port (USB3.0) [COPY]

Connect an external storage device (external Hard disk drive, USB memory) to this port and copy images and audio recorded on the hard disk drive.

\* Mouse connection is also available.

#### Note:

- When inserting or removing the external storage device (USB memory), hold down this product so that it does not move or tip over.

### ② Operation indicator [OPERATE]

Lights when the power is on.

### ③ Error indicator [ERROR]

Blinks when an error that can become a problem for the recorder to run the system occurs.

**Blinks red:** System error

**Blinks orange:** Thermal error, cooling fan malfunction, etc.

Shows a solid light when automatically reset from an error status.

### ④ Alarm indicator [ALARM]

Blinks when an alarm occurs, and lights when the alarm output stops. This indicator will go off when the [Reset] button (see Operating Instructions (PDF)) is clicked.

### ⑤ Recording indicator [REC]

Lights orange when recording is being performed.

### ⑥ [HDD1]/[HDD2] indicator

Indicates the operational status (access/failure) of the respective hard disk drive.

**Blinks green:** Indicates that the respective hard disk drive is being accessed.

**Lights red:** Indicates that a fault (or an error) has occurred on a hard disk drive.

**Off:** Indicates that the respective hard disk drive is not being accessed.

### ⑦ Buzzer stop button [BUZZER STOP]

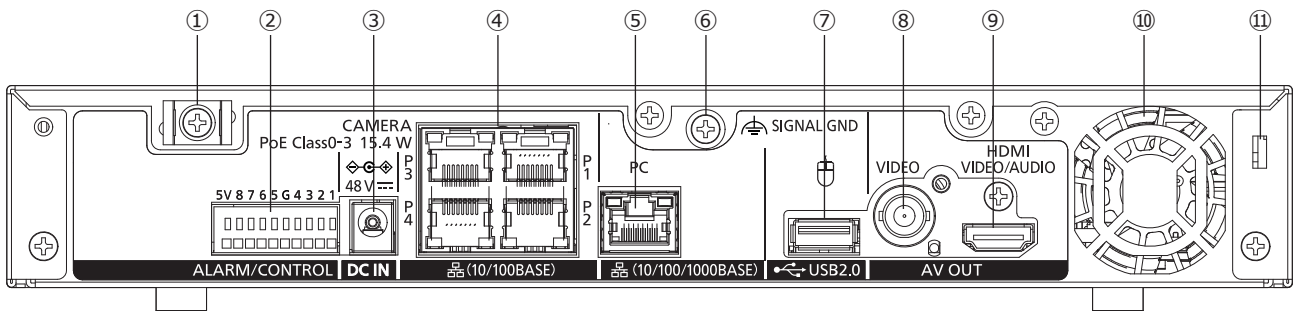
Press this button to stop the buzzer that started sounding at an alarm/error occurrence. Refer to the Operating Instructions (PDF) for further information about alarms and errors.

### ⑧ Restart switch [RESTART]

Restarts the recorder. Insert a fine stick, like a paper clip and keep pressing for more than 5 seconds.

# Major operating controls and their functions (continued)

## Rear view



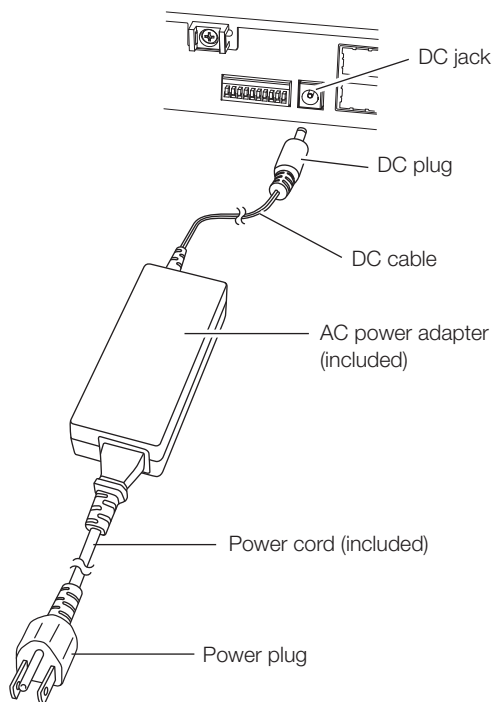
**1 Clamp mount (To prevent power cord disconnection)**

**2 Alarm/Control terminal [ALARM/CONTROL]**

It is used when connecting with an external device such as a sensor or anti-theft door switch that output alarm signals, or when connecting with an external alarm equipment such as a buzzer or a lamp.

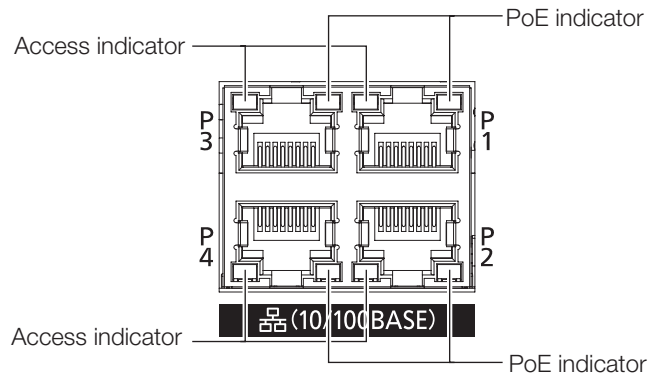
**3 DC jack [DC IN]**

Connect the DC plug of the included AC power adapter. Make sure that you insert the DC plug all the way to prevent from loosening or coming off. Secure the DC cable with a cable clamp so that the DC plug will not come off. (Refer to "How to prevent DC plug disconnection" on page 15)



**4 Network port (Camera port) [CAMERA]**

Connect the recorder with a PC and cameras via a network compatible with 10BASE-T or 100BASE-TX. When the port is being accessed, the access indicator (green) lights. When the port is supplying power, the PoE indicator (orange) lights.



**Note:**

- The camera port comes with the PoE power supply function that complies with IEEE802.3af.
- The camera number detected at Easy Start does not match the camera port number (P1 - P4) on the rear panel of the recorder.

**5 Network port (PC port) [PC]**

Connect the recorder with a PC via a network compatible with 10BASE-T, 100BASE-TX or 1000BASE-T. The right lamp (yellow) only lights up at 1000M connection. The left lamp (green) only lights up at 100M connection. Both lamps light up at 10M connection. The lamp blinks when sending or receiving data.

**6 SIGNAL GND terminal [SIGNAL GND]**

Connect this terminal with the SIGNAL GND terminals of the devices in the system for signal ground. When operating the recorder and the devices in the system without signal ground, noise may be produced.

## Major operating controls and their functions (continued)

⑦ **Mouse connection port (USB2.0) [ ㉑ ]**

The included mouse is connected to this port.

⑧ **Video output connector (BNC) [VIDEO]**

Connect a sub monitor (BNC) to this connector. Only the live images will be displayed. The setup menu will not be displayed.

The default is PAL output.

⑨ **Main monitor output connector (HDMI)[HDMI VIDEO/AUDIO]**

This connector is used to connect to an HDMI-ready monitor (the main monitor). It displays live images, recorded images, or the setup menu of the recorder.

⑩ **Cooling fan outlet**

⑪ **Security wire hole**

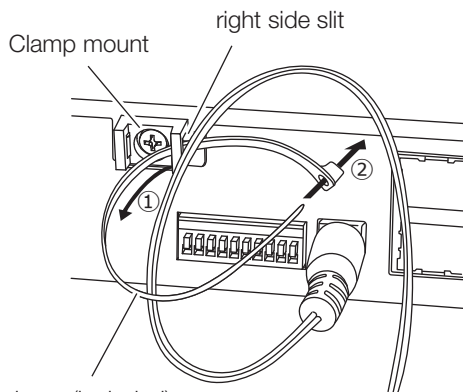
Mount the lock device for the anti-theft security wire.

③ Tighten the DC cable at 15 cm to 20 cm {5-7/8 inches ~ 7-7/8 inches} from the DC plug and fix it to the clamp mount.

Cut the surplus part of the cable clamp as necessary.

### How to prevent DC plug disconnection

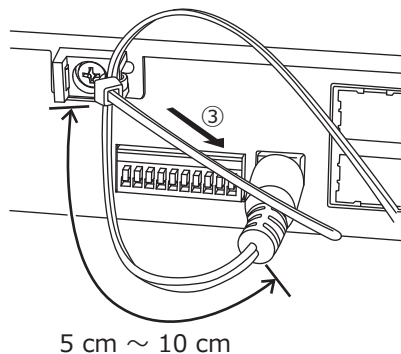
Fix a 15 cm ~ 20 cm {5-7/8 inches ~ 7-7/8 inches} space of the DC cable from the DC plug with the included cable clamp passed through the clamp mount.



Cable clamp (included)

① Pass the cable clamp (included) through the right side slit of clamp mount.

② To tighten the DC cable, make a loop with the cable clamp as shown in the illustration.



# User/Host management

It is necessary to register users who operate the recorder and hosts (PC) that accesses the recorder via a network such as a LAN. Up to 32 users can be registered.

It is possible to register the following for the user information.

Item	Description
User name	User name is to be registered to log in to the recorder. The user name will be entered at the time of login.
Password	Password is to be registered to log in to the recorder together with the user name. The password will be entered at the time of login.
Level	Users are classified into the following levels depending on the available operations. Administrator/Manager/Operator/Viewer/Logged out The administrators can perform all the configurations and operations. It is possible to select in advance the functions that can be controlled by users at other levels. (☞ Operating Instructions (PDF))
Priority level	Priority level indicates the operational priority. Users at each level are assigned the fixed priorities ranging from "0" (Highest) to "4" (Low). Administrator 0      Highest Manager      1      High Operator      2 Viewer      3 Logged out      4      Low When the two or more users at the same level perform the same operation, the recorder will be controlled in accordance with the latest operation.
Default screen	Select a startup screen to be displayed on the main monitor or a PC screen after login from the following.

## When operating from a PC via a network

Operation of the recorder can be made using a PC via a network. Up to 16 hosts (PCs) can access the recorder at the same time.

When another host (PC) tries to log in to the recorder after 16 hosts (PCs) have already logged in, the user with the lowest priority will be logged out. When the user who is trying to log in has the same priority as the users who have already logged in, the user whose login is the earlier is logged out.

When accessing the recorder from a PC via a network, the log-in authentication method is different as follows depending on the "User authentication" settings of the "Basic" tab under "User management" under "Advanced" from the setup menu.

(☞ Operating Instructions (PDF))

User authentication setting	User/Host to log in	Remarks
Off	Log in as an administrator.	
On (default)	Log in as a registered user.	The login window will be displayed.



# Troubleshooting

## Before asking for repairs, check the symptoms with the following table.

Contact your dealer if a problem cannot be solved even after checking and trying the solution in the table or a problem is not described below.

Symptom	Cause/solution	Ref. pages
<b>Power is not turned on.</b>	<ul style="list-style-type: none"> <li>Is the power plug connected to the outlet firmly? Confirm the cable is firmly connected.</li> </ul>	–
	<ul style="list-style-type: none"> <li>Check if the power cord is properly inserted into the AC power adapter. Check if it is connected firmly.</li> </ul>	–
	<ul style="list-style-type: none"> <li>Check if the DC plug is properly inserted into the DC jack of the recorder. Check if it is connected firmly.</li> </ul>	15
<b>Camera images are not displayed on the monitor.</b>	<ul style="list-style-type: none"> <li>Are the camera's user name and password registered correctly? Check if the user name and the password are correct on the "Change registration information" screen on the [Register cameras] tab under [Basic setup] - [Camera].</li> </ul>	Operating Instructions
	<ul style="list-style-type: none"> <li>Is the power of the camera and connected devices on? Check whether the power is supplied to the camera and the devices.</li> </ul>	–
	<ul style="list-style-type: none"> <li>Confirm that the cables are connected correctly and firmly. Confirm the cables are firmly connected.</li> </ul>	Installation Guide
	<ul style="list-style-type: none"> <li>Is the connection distance to the camera too long? Check that the Ethernet cable is 100 m or shorter.</li> </ul>	–
	<ul style="list-style-type: none"> <li>Depending on the HDMI monitor, it may not be displayed properly. Turn the monitor off and on and check whether it is displayed.</li> </ul>	–
	<ul style="list-style-type: none"> <li>Is the monitor luminance appropriately adjusted, or is the contrast appropriately adjusted? Check whether the settings are appropriate.</li> </ul>	–
	<ul style="list-style-type: none"> <li>Users who have logged into the system may not be authorized to display the images from cameras. Check the user level settings of these users.</li> </ul>	Operating Instructions
<b>Part of the displayed image is missing.</b>	<ul style="list-style-type: none"> <li>This phenomenon is caused by dispersion of display area on the monitor. This is not a malfunction.</li> </ul>	–
	<ul style="list-style-type: none"> <li>When a function to automatically enlarge the images in the connected monitor is enabled, some part of the images may not be displayed depending on the photographic subject.</li> </ul>	–
<b>Image is blurred.</b>	<ul style="list-style-type: none"> <li>Is the lens of the camera soiled with dirt or dust? Check whether the lens of the camera is clean.</li> </ul>	–
<b>Cannot open the setup menu.</b>	<ul style="list-style-type: none"> <li>Users who have logged into the system may not be authorized to display the setup menu. Check the user level settings of these users.</li> </ul>	Operating Instructions
	<ul style="list-style-type: none"> <li>Isn't it the sub monitor you are currently operating? The setup menu cannot be displayed on the sub monitor.</li> </ul>	Installation Guide
<b>The images or embedded characters displayed on the monitor look blurry.</b>	<ul style="list-style-type: none"> <li>Depending on the photographic subject or HDMI monitor that is connected, images or embedded characters may look blurry. This phenomenon is not trouble.</li> </ul>	–
<b>No alarm action is taken.</b>	<ul style="list-style-type: none"> <li>Check if alarm input signals are properly input to the ALARM/CONTROL connector at the rear panel.</li> </ul>	Installation Guide
	<ul style="list-style-type: none"> <li>Are the settings of the alarm connector appropriate?</li> </ul>	Operating Instructions
	<ul style="list-style-type: none"> <li>Is "Off" or "Recording only" selected for "Mode"? Check whether the settings are appropriate.</li> </ul>	Operating Instructions

# Troubleshooting (continued)

Symptom	Cause/solution	Ref. pages
<b>The "Communication error: Cam.cc" indication is displayed on the main monitor. ("cc" indicates the camera number.)</b>	<ul style="list-style-type: none"> <li>Confirm that the camera is connected correctly and firmly. Check the camera connection.</li> </ul>	Installation Guide
	<ul style="list-style-type: none"> <li>If the connection is appropriate, the cable may be broken or the camera may be out of order. Consult the dealer.</li> </ul>	–
<b>The "Thermal error" indication is displayed on the main monitor.</b>	<ul style="list-style-type: none"> <li>The ambient operating temperature is +5 °C to +45 °C. The "Thermal error" is displayed based on the internal thermal information of the HDD. If the "Thermal error" indication is displayed, it is recommended to change the installation environment so that the ambient temperature is maintained at approx. +25 °C. When the "Thermal error" indication is displayed frequently, contact your dealer.</li> </ul>	13
	<ul style="list-style-type: none"> <li>Check if the fan is malfunctioning.</li> </ul>	Operating Instructions
	<ul style="list-style-type: none"> <li>Check if the recorder ventilation holes or cooling fan are blocked, and also check for dust collected around the ventilation holes.</li> </ul>	Installation Guide
<b>The clock of the recorder may keep bad time.</b>	<ul style="list-style-type: none"> <li>The clock function of the recorder is accurate within ±30 seconds per month. To keep the correct recording, set the time periodically, or enable the auto time adjustment function on the rear panel terminal, or configure the system using the NTP function so as to keep the correct current time.</li> </ul>	–
<b>[HDD] indicator lights red.</b>	<ul style="list-style-type: none"> <li>The hard disk drive is faulty. Contact your dealer.</li> </ul>	Installation Guide
<b>The error indicator blinks red.</b>	<ul style="list-style-type: none"> <li>A system error occurred. Contact your dealer.</li> </ul>	13
<b>"Authentication error" of the camera is displayed.</b>	<ul style="list-style-type: none"> <li>With a new detection with Easy Start, "Authentication error" will be displayed since the registered user name and password of the camera will be cleared. In that case, open the "Change registration information" screen on the [Register cameras] tab under [Basic setup] - [Camera], and manually re-enter the user name and the password.</li> </ul>	Operating Instructions
	<ul style="list-style-type: none"> <li>Initialize the camera and retry the camera registration upon referring to the operating instructions of the camera.</li> </ul>	–
<b>The cursor of the mouse is not displayed.</b>	<ul style="list-style-type: none"> <li>Is the cable connected correctly? Some mouse may not be recognizable. Use the mouse supplied with the recorder.</li> </ul>	–

## Inspect the power cord, power plug and connectors periodically.

Symptom	Cause/solution	Ref. pages
<b>The power cord insulation is damaged.</b>	<ul style="list-style-type: none"> <li>The power cord, connector, or power plug is damaged. This may result in electric shock or a fire. Unplug the power plug from the AC outlet immediately, and refer to qualified service personnel.</li> </ul>	–
<b>The power cord, plug and connectors get hot during use.</b>		
<b>The power cord gets hot when bent or stretched.</b>		

# Specifications

## • General

Power source:	DC48 V 1.7 A
Power consumption:	With included AC power adapter 81.6 W (DC48 V 1.7 A)
Ambient operating temperature:	Main body: +5 °C - +45 °C {41 °F - 113 °F} Mouse (included): +5 °C - +40 °C {41 °F - 104 °F}
Ambient operating humidity:	5 % to 90 % (non condensing)
Maximum operating altitude:	2000 m {6562 feet} above sea level
Recording compression method:	H.265, H.264, JPEG
Dimensions:	280 mm (W) × 44 mm (H) × 212 mm (D) {11-1/32 inches (W) . 1-23/32 inches (H) . 8-11/32 inches (D)} (excluding rubber feet and projections)
Mass:	Approx. 1.9 kg {4.2 lbs} When two hard disk drives are installed: Approx. 2.0 kg {4.4 lbs}
Finish:	Front view: Solid metallic coating, Resin Top cover: Solid metallic coating, Zinc-coated steel Rear view: Zinc-coated steel

## • HDD

Built-in HDD: HDD(2 TB) × 1

\* One more HDD is expandable. With one more HDD added, the product can be used in RAID1 mode. For more information about HDD for expansion, please contact your dealer.

## • Input/Output

Video:	Video output connector: 1 V [p-p]/75 Ω, ×1 (BNC) Monitor (HDMI) connector: HDMI, ×2 (19 pin, type A) 3840 × 2160 (4K) p/30 Hz 3840 × 2160 (4K) p/25 Hz 1920 × 1080 p/60 Hz 1920 × 1080 i/60 Hz 1920 × 1080 p/50 Hz 1920 × 1080 i/50 Hz
Mouse connection port:	High-speed serial interface, USB2.0, ×1
Copy port:	High-speed serial interface, USB3.0, ×1
Alarm/Control connector:	Alarm output*2, Alarm input 1 and 2*1, Emergency recording input*1, HDD error/Recording error output*2, Camera error output*2, Face matching output*2, Time adjustment I/O*1*2, +5 V output*3
Network port (Camera):	10BASE-T/100BASE-TX (RJ-45) ×4 Power supply standard: IEEE802.3af compatible Power supply capacity: Up to 62 W (each 15.4 W × 4 systems)
Network port (PC):	10BASE-T/100BASE-TX/1000BASE-T (RJ-45) ×1
Support protocols:	HTTP, HTTPS, RTP, RTSP, TCP/IP, UDP/IP, FTP (Server), SMTP, NTP (Server, Client), DNS, SNMP, POP3

\*1 Non-voltage make contact input +3.3 V pull-up Approx. 23 kΩ

\*2 Open collector output 24 V DC max., -200 mA max.

\*3 +5 V ±0.5 V 200 mA max.

## • AC power adapter (included)

Input voltage:	100 V AC to 240 V AC 50 Hz/60 Hz
Output voltage:	DC48 V 1.875 A
Ambient operating temperature:	0 °C - +40 °C {32 °F - 104 °F}
Dimensions:	58 mm(W) × 31 mm(H) × 140 mm(D) {2-9/32 inches (W) . 1-7/32 inches (H) . 5-17/32 inches (D)} (excluding power cord and DC cable)
Mass:	Approx. 300 g {0.66 lbs}

# Specifications (continued)

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## • Option

Secure Communication Kit (license for 1 camera)	WJ-NXS01, WJ-NXS01W
Secure Communication Kit (license for 4 cameras)	WJ-NXS04, WJ-NXS04W
Additional Business Intelligence Kit	WJ-NXF02, WJ-NXF02W
Rack mount bracket (for vertical installation or wall mount)	WV-Q202

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