i

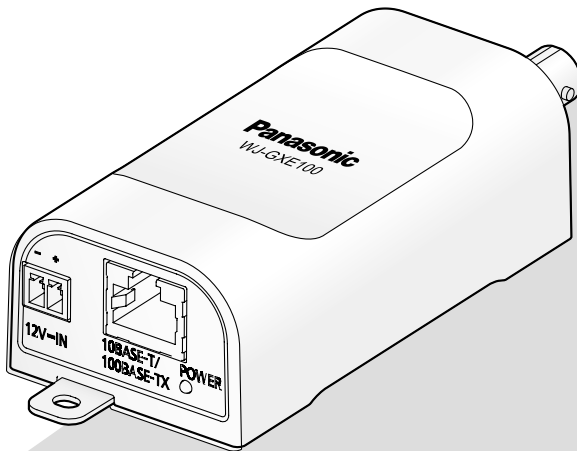# Installation Guide

Included Installation Instructions

Network Video Encoder

Model No. WJ-GXE100
WJ-GXE100E

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.

WARNING:

- To prevent injury, this apparatus must be securely attached to the floor/wall/ceiling in accordance with the installation instructions.
- To prevent fire or electric shock hazard, do not expose this apparatus to rain or moisture.
- The installation shall be carried out in accordance with all applicable installation rules.
- The connections should comply with local electrical code.

CAUTION:

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- Before attempting to connect or operate this product, please read the label on the bottom.

For U.S. and Canada:
WJ-GXE100
For Europe and other countries:
WJ-GXE100E

UL listed model No.
WJ-GXE100

For Canada

This Class A digital apparatus complies with Canadian ICES-003.

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: To assure continued compliance, (example - use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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 Europe

We declare under our sole responsibility that the product to which this declaration relates is in conformity with the standard or other normative document following the provisions of Directive 2004/108/EC.

Wir erklären in alleiniger Verantwortung, daß das Produkt, auf das sich diese Erklärung bezieht, mit der folgenden Norm oder normativen Dokument übereinstimmt. Gemäß den Bestimmungen der Richtlinie 2004/108/EC.

Nous déclarons sous notre propre responsabilité que le produit auquel se réfère la présente déclaration est conforme á la norme spécifiée ou à tout autre document normatif conformément aux dispositions de la directive 2004/108/CE.

Nosotros declaramos bajo nuestra única responsabilidad que el producto a que hace referencia esta declaración está conforme con la norma u otro documento normativo siguiendo las estipulaciones de la directiva 2004/108/CE.

Noi dichiariamo sotto nostra esclusiva responsabilità che il prodotto a cui si riferisce la presente dichiarazione risulta conforme al seguente standard o altro documento normativo conforme alle disposizioni della direttiva 2004/108/CE.

Wij verklaren als enige aansprakelijke, dat het product waarop deze verklaring betrekking heeft, voldoet aan de volgende norm of ander normatief dokument, overeenkomstig de bepalingen van Richtlijn 2004/108/EC.

Vi erklærer os eneansvarlige for, at dette produkt, som denne deklaration omhandler, er i overensstemmelse med standard eller andre normative dokumenter i følge bestemmelserne i direktiv 2004/108/EC.

Vi deklarerar härmed vårt fulla ansvar för att den produkt till vilken denna deklaration hänvisar är i överensstämmelse med standarddokument eller annat normativt dokument som framställs i direktiv 2004/108/EC.

Ilmoitamme yksinomaisella vastuullamme, että tuote, jota tämä ilmoitus koskee, noudattaa seuraavaa standardia tai muuta ohjeellista asiakirjaa, jotka noudattavat direktiivin 2004/108/EC säädöksiä.

Vi erklærer oss alene ansvarlige for at produktet som denne erklæringen gjelder for, er i overensstemmelse med følgende norm eller andre normgivende dokumenter som følger bestemmelsene i direktiv 2004/108/EC.

Contents

Important safety instructions

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Only use attachments/accessories specified by the manufacturer.

10) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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(2) PERSONAL INJURY OR ANY 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 BEING A PHOTOGENIC SUBJECT, DUE TO VIOLATION OF PRIVACY WITH THE RESULT OF THAT SURVEILLANCE-CAMERA'S PICTURE, INCLUDING SAVED DATA, FOR SOME REASON, BECOMES PUBLIC OR IS USED FOR ANY PURPOSE;

(7) LOSS OF REGISTERED DATA CAUSED BY ANY FAILURE.

Preface

The network video encoder WJ-GXE100 or WJ-GXE100E (hereinafter, the unit) is designed to operate using a PC on a network (10BASE-T/100BASE-TX).

The unit can also capture images from analog cameras and compress the images in JPEG or H.264 files.

By connecting to a network (LAN) or the Internet, images from the unit can be monitored on a PC via a network.

Note:
- It is necessary to configure the network settings of the PC and its network environment to monitor images from the unit on the PC. It is also necessary to install a web browser on the PC.

Main functions

Motion adaptive interlace/progressive conversion function
It is possible to generate digital images with smooth movements by detecting moving areas to process analog images.

Power over Ethernet function
When connecting with a PoE (Power over Ethernet) device, power will be supplied by simply connecting a LAN cable. (IEEE802.3afcompliant)

RS485 communication function
By using RS485 communication, it is possible to control cameras connected to this unit. This unit can support RS485 commands in various formats for different cameras by selecting a camera control protocol in the setup menu. It is also possible to add other RS485 commands that are not included on the setup menu by uploading command tables.

About the user manuals

There are 2 sets of operating instructions for the WJ-GXE100 (P model), WJ-GXE100E (E model) as follows.
  • Installation Guide: Explains how to install and connect devices.
  • Operating Instructions (included in the CD-ROM): Explains how to perform the settings and how to operate this unit.

Adobe® Reader® is required to read these operating instructions on the provided CD-ROM.
When the Adobe Reader is not installed on the PC, download the latest Adobe Reader from the Adobe web site and install it.
"WJ-GXE100" or "GXE100" shown in the instructions and illustrations used in these operating instructions indicates the WJ-GXE100, WJ-GXE100E.

The screens used in these operating instructions show the case of P model.

System requirements for a PC

CPU:	Intel® Core™ 2 Duo 2.4 GHz or faster recommended
Memory:	512 MB or more (A minimum of 1 GB memory is required when using Microsoft® Windows® 7 or Microsoft® Windows Vista®.)
Network Interface:	10BASE-T/100BASE-TX 1 port
Monitor:	Image capture size: 1024 x 768 pixels or more
	Color: 24-bit True color or better
OS:	Microsoft® Windows® 7
	Microsoft® Windows Vista®
	Microsoft® Windows® XP SP3
Web browser:	Windows® Internet Explorer® 9.0 (32-bit)
	Windows® Internet Explorer® 8.0 (32-bit)
	Windows® Internet Explorer® 7.0 (32-bit)
	Microsoft® Internet Explorer® 6.0 SP3
Others:	CD-ROM drive
	(It is necessary to read the operating instructions and use the software on the provided CD-ROM.)
	DirectX® 9.0c or later
	Adobe® Reader®
	(It is necessary to view the PDF file on the provided CD-ROM.)

IMPORTANT:
- When using a PC that does not meet the above requirements, displaying of images may become slower or the web browser may become inoperable.
- Microsoft Windows 7 Starter, Microsoft Windows Vista Starter and Microsoft Windows XP Professional 64-bit Edition are not supported.
- When using IPv6 for communication, use Microsoft Windows 7 or Microsoft Windows Vista.

Note:
- For further information about PC system requirements and precautions for when using Microsoft Windows 7, Microsoft Windows Vista, or Windows Internet Explorer, click "Manual" - "Open" from the supplied CD-ROM and refer to "Notes on Windows® / Internet Explorer® versions".
- If using Microsoft Windows XP, screen tearing* may occur when the shooting scene drastically changes (for example, while shooting fast-moving subjects) due to the GDI restrictions of the OS.
  * A phenomenon in which portions of the screen are displayed out of alignment
- For information on the operation verification of the supported operating systems and web browsers, refer to our website at http://panasonic.net/pss/security/support/index.html.

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Distributing, copying, disassembling, reverse compiling and reverse engineering of the software provided with this product are all expressly prohibited. In addition, exporting any software provided with this product violating export laws is prohibited.

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.
- 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.
- Do not install this unit in locations where the unit or the cables can be destroyed or damaged by persons with malicious intent.

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.

Stop the operation immediately when something is wrong with this product.
When smoke goes up from the product, the smell of smoke comes from the product, or the exterior of the product has deteriorated, continued use will cause a fire or fall of the product resulting in injury, accidents, or damage to the product.
Turn the power off immediately and contact qualified service personnel for service.

Do not attempt to disassemble or modify this product.
Failure to observe this may cause fire or electric shock.
Consult the dealer for the repair or inspections.

Do not insert any foreign objects.
Fire or electrical shock may be caused if water or any foreign objects, such as metal objects, enter inside the unit.
Turn the power off immediately and contact qualified service personnel for service.

Select an installation area that can support the total weight.
Selecting an inappropriate installation surface may cause the product to fall down or topple over, resulting in injury.
Installation work shall be started after sufficient reinforcement.

Periodic inspections shall be conducted.
Rust on the metal parts or screws may cause a fall of the product resulting in injury or accidents.
Consult the dealer for the inspections.

Do not use this product in an inflammable atmosphere.
Failure to observe this may cause an explosion resulting in injury.

Avoid installing this product in the locations where salt damage occurs or corrosive gas is produced.
Otherwise, the mounting portions will deteriorate and accidents such as a fall of this product may occur.

Do not install this product in locations subject to vibration.
Loosening of mounting screws or bolts may cause a fall of the product resulting in injury.

Install this product in a location high enough to avoid people and objects from bumping the product.
Failure to observe this may cause a drop resulting in injury or accidents.

Do not strike or give a strong shock to this product.
Failure to observe this may cause fire or injury.

Turn the power off when wiring this product.
Failure to observe this may cause electric shock. In addition, short circuit or wrong wiring may cause fire.

Do not rub the edges of metal parts with your hand.
Failure to observe this may cause injury.

The screws and fixed parts must be securely tightened.
Failure to observe this may cause the product to fall resulting in injury.

Do not touch this product, the power cord or the connected cables during thunder (even in the process of work).
Failure to observe this may cause electric shock.

Do not damage the power cord.
Do not damage, fabricate, twist, stretch, bundle, or forcibly bend the power cord. Do not place heavy objects.
Keep away from heat sources.
Use of the damaged power cord may cause electric shock, short circuit, or fire.
Consult the dealer for repair.

Avoid placing receptacles that contain liquids such as water near this product.
If liquid spills onto the unit, it may cause fire or an electric shock.
Unplug the power plug immediately and contact qualified service personnel for service.

Avoid placing the product in unstable positions.
Injury or accidents may result if the product falls down or topples over.

Avoid moist or dusty places to install this system.
Failure to observe this may cause fire or electric shock.

Turn the power off when cleaning of this product.
Failure to observe this may cause injury.

Do not block the ventilation areas.
Doing so can cause fire since it can raise the temperature inside this product high.

[Precautions for use]

This product is designed to be used indoors. This product is not operable outdoors.

This product has no power switch.
When turning off the power, disconnect the power supply from the 12 V DC power supply or the PoE device. (When using both the 12 V DC power supply and the PoE device for power supply, disconnect both the connections.)

Use in environments below 0 °C {32 °F}
If you install this product or turn on the power of this product in temperatures below 0 °C {32 °F}, it may not start up correctly. Make sure to only start this product when the temperature is within the specified range.
Operations become stable approx. 30 minutes after starting up. After stabilizing, this product can be used in temperatures as cold as -10 °C to 0 °C {14 °F to 32 °F}.

To keep on using with stable performance
Do not use this product in hot and humid conditions for a long time. Failure to observe this causes component degradation resulting in life shortening of this product.
Do not expose this product to direct heat sources such as a heater.

Temperature of the unit
The bottom of the unit may get hot during operation.
When removing the unit, make sure to leave enough time for the product to cool after turning the power off.

Handle this product with care.
Do not drop this product, nor apply shock or vibration to this product. Failure to observe this may cause trouble.

About the PC monitor
Displaying the same image on a monitor for a long time may damage the monitor. It is recommended to use a screen-saver.

When an error is detected, this product will restart automatically.
This product will be inoperable for around 2 minutes after the restart just as when the power is turned on.

Product disposal/transfer
Data saved on this product or a 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 this product.

Cleaning this product body
Be sure to turn off the power before cleaning. Do not use strong abrasive detergent when cleaning this product. Otherwise, it may cause discoloration.
When using a chemical cloth for cleaning, read the caution provided with the chemical cloth product.

Transmission interval

Image transmission interval may become slow depending on the network environment, PC performance, shooting subject, access number, etc.

Code label

The code labels (accessory) are required at inquiry for trouble. Use caution not to lose these labels. It is recommended to paste one of the labels onto the CD-ROM case.

Indication label

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

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Precautions for Installation

Panasonic assumes no responsibility for injuries or property damage resulting from failures arising out of improper installation or operation inconsistent with this documentation.

This product is designed to be used indoors.

This product is not operable outdoors.

Do not expose this product to direct sunlight for hours and do not install the product near a heater or an air conditioner. Otherwise, it may cause deformation, discoloration and malfunction. Keep this product away from water and moisture.

Installation place

Contact your dealer for assistance if you are unsure of an appropriate place in your particular environment.

- Make sure that the installation area is strong enough to hold this product, such as a concrete ceiling.
- Install the product in the foundation area of the architecture or where sufficient strength is assured.
- If a ceiling board such as plaster board is too weak to support the total weight, the area shall be sufficiently reinforced.

Do not place the unit in the following places:

- Locations where it may get wet from rain or water splash (including under the eaves, etc.)
- Locations where a chemical agent is used such as a swimming pool
- Locations subject to moisture or oil smoke such as a kitchen
- Locations that have a specific environment that is subject to an inflammable atmosphere or solvents
- Locations where a radiation, an X-ray, a strong radio wave or a strong magnetic field is generated
- Locations where corrosive gas is produced, locations where it may be damaged by briny air such as seashores

- Locations where the temperature is not within the specified range (page 28)
- Locations subject to vibrations (This product is not designed for on-vehicle use.)
- Locations subject to condensation as the result of severe changes in temperature

Be sure to remove this product if it is not in use.

Shielded (STP) LAN cables must be used with this unit to ensure compliance with EMC standards. *

* E model only

Before installation

- When this product is mounted on a wall or ceiling, use the screws described on page 16. The screws to be used are not provided. Prepare the screws according to the material, structure, strength and other factors of the mounting area and the total weight of objects to be mounted.
- Ensure that the mounting surface, anchor and screws are sufficiently strong.
- Do not mount this product on a plaster board or a wooden section because they are too weak. If this product is unavoidably mounted on such a section, the section shall be sufficiently reinforced.

About the network connection

When connecting to a network using the network cable of this product, observe the following.

- When wiring for the network, design and engineer not to be affected by thunder.

Screw tightening

- The screws and bolts must be tightened with an appropriate tightening torque according to the material and strength of the installation area.
- Do not use an impact driver. Use of an impact driver may damage the screws or cause tightening excessively.
- Tighten screws at a right angle to the surface. After tightening screws, perform visual check to ensure that the tightening is sufficient enough so that there is no movement or looseness.

Radio disturbance

When this product is used near TV/radio antenna, strong electric field or magnetic field (near a motor, a transformer or a power line), images may be distorted and noise sound may be produced.

PoE (Power over Ethernet)

Use a PoE hub/device that is compliant with IEEE802.3af standard.

Router

When connecting this product to the Internet, use a broadband router with the port forwarding function (NAT, IP masquerade).
Refer to the Operating Instructions on the provided CD-ROM for further information about the port forwarding function.

Time & date setting

It is necessary to set the time & date before putting this product into operation. Refer to the Operating Instructions on the provided CD-ROM for descriptions of how to perform the settings.
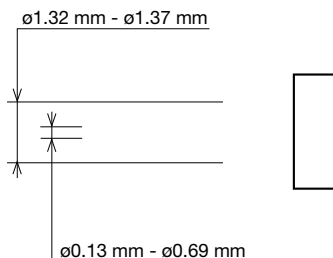
For BNC coaxial cable connection

Use only the recommended plug below when connecting a BNC coaxial cable (locally procured) to the video input connector on the unit.
Applicable plug: MIL-C39012C or MIL-C39012/16F

  * Suffixes attached to the standards may be updated.

BNC coaxial cable (locally procured)

Plug

<Tip dimensions inside the recommended plug>
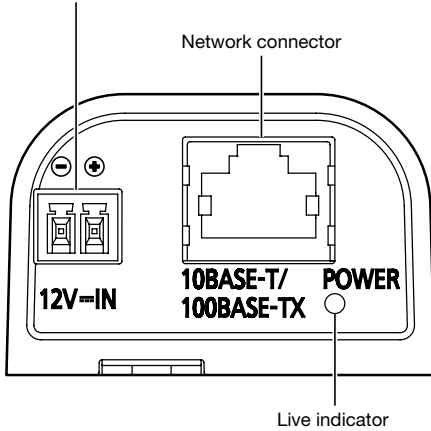
ø1.32 mm - ø1.37 mm

ø0.13 mm - ø0.69 mm
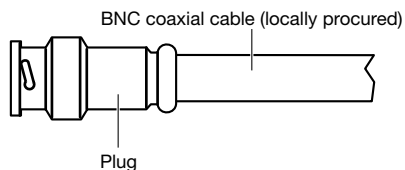
IMPORTANT:

- Use a compatible plug. Failure to observe this may cause trouble such as poor contact. At worst, the connector of this product may be damaged.
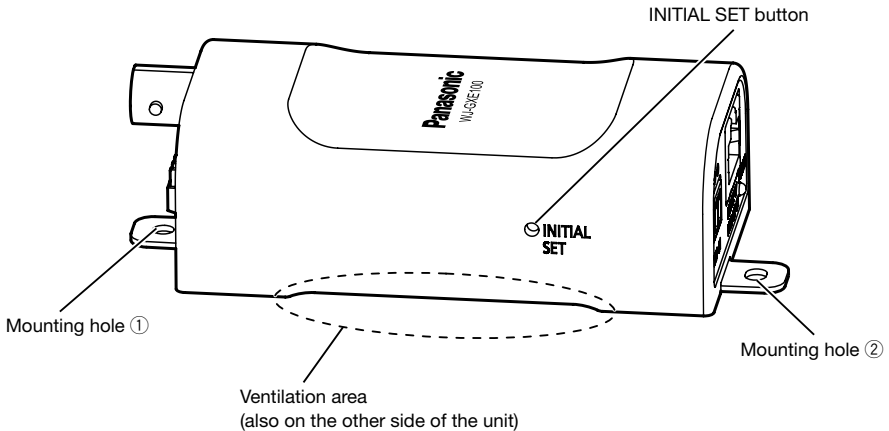
Major operating controls
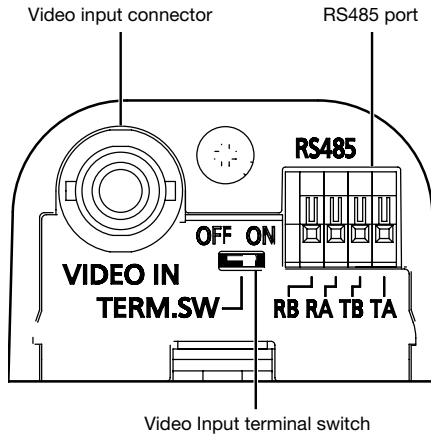
12 V DC
power supply terminal

Network connector

<About the live indicator>

When the power is turned on	Lights green
When connected to a network (not accessed)	Lights orange
When connected to a network (accessed)	Blinks orange/ Blinks green

10BASE-T/ 100BASE-TX   **POWER**

12V⎓IN

Live indicator

INITIAL SET button

Panasonic WV-SWE100

⊖ **INITIAL SET**

Mounting hole ①

Mounting hole ②

Ventilation area
(also on the other side of the unit)

About the [INITIAL SET] button

After turning off the power of the unit, turn on the power of the unit while holding down this button, and wait for around 5 seconds or more without releasing this button. Wait around 2 minutes after releasing the button. The unit will start up and the settings including the network settings will be initialized. Do not turn off the power of the unit during the process of the initialization. Before initializing the settings, it is recommended to write down the settings in advance.

Video input connector   RS485 port

RS485

OFF ON

VIDEO IN
TERM.SW   RB RA TB TA

Video Input terminal switch

Video Input terminal switch

OFF ON

Terminated (default setting)

OFF ON

Not terminated

Preparations

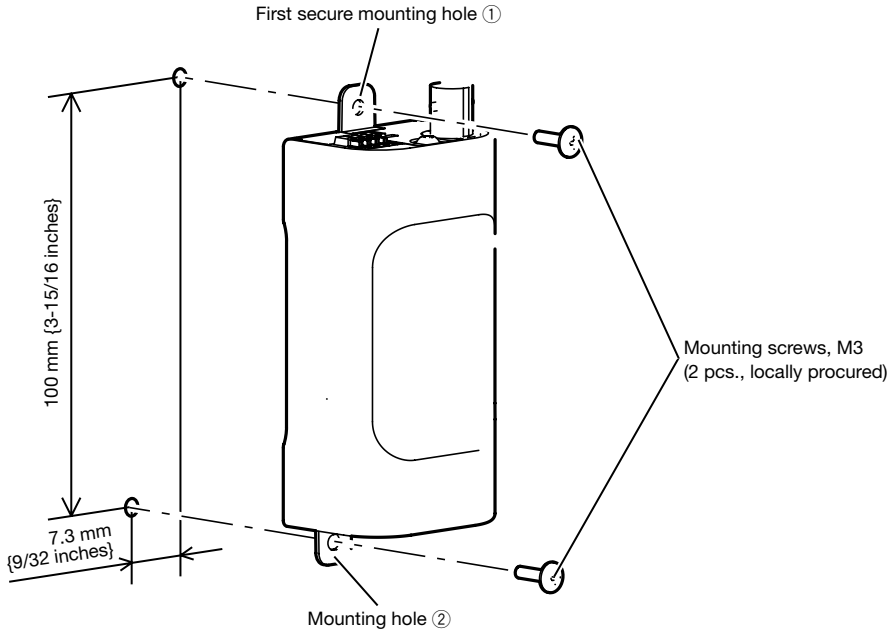The screws used to mount the unit to a wall or ceiling are not supplied.

Prepare the screws according to the material, structure, strength and other factors of the mounting area and the total weight of objects to be mounted.

IMPORTANT:

- Purchase 2 screws (M3) according to the material of the installation area. Nails cannot not be used for mounting.
- Required pull-out capacity of a single screw/bolt is 196 N {44.06 lbf} or more.
- Do not mount this product on a plaster board or a wooden section because they are too weak. If this product is unavoidably mounted on such a section, the section shall be sufficiently reinforced.

Mounting to a wall or ceiling

1 As necessary, set the terminal resistance (75 Ω) to on or off with the video input terminal switch. (☞ Page 15)

2 Use 2 mounting screws (locally procured) to mount the unit directly to a wall or ceiling. Fix screws to the mounting holes in order from ① to ②.

First secure mounting hole ①

100 mm {3-15/16 inches}

7.3 mm {9/32 inches}

Mounting screws, M3 (2 pcs., locally procured)

Mounting hole ②

IMPORTANT:

- Take the following cautions to prevent this product from overheating. Failure to observe this may cause fire or trouble.
  - · Do not block the ventilation areas
  - · Mount the unit at least 2 cm {25/32 inches} away from other walls or objects (Mount the unit so that excessive force is not applied to the connected cables when they are connected)
  - · Mount the unit so that nothing is touching the bottom side of the unit
- Take the following cautions when installing the unit in housing (such as camera housing), a power supply box, or a rack.
  - · Ensure that the unit is firmly secured
  - · Ensure that excessive force is not applied to the cables
  - · Ensure that the unit or cables do not come into contact with any installed heaters or fans
  - · Do not use in areas that exceed the specified operating temperatures for the unit (☞ page 28)
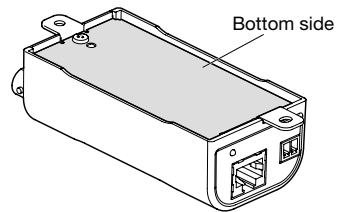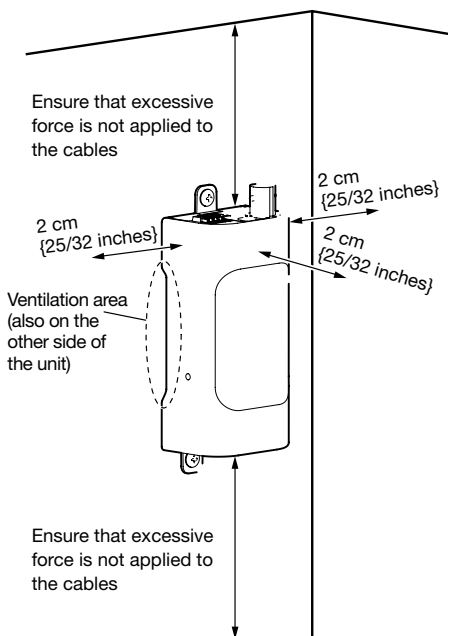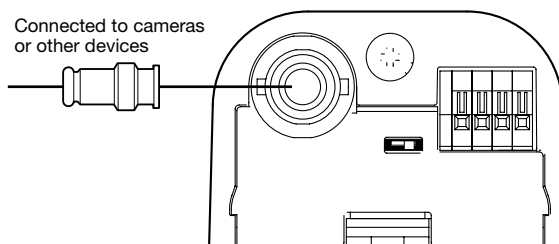
Connection

Caution:
- ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY (UL 1310/CSA 223) or LIMITED POWER SOURCE (IEC/EN/UL/CSA 60950-1).
- A READILY ACCESSIBLE DISCONNECT DEVICE SHALL BE INCORPORATED TO THE EQUIPMENT POWERED BY 12 V DC POWER SUPPLY.

Before starting the connection, turn off the power of the unit and the devices to be connected.
Check and prepare the required devices and cables for connection.

1 Connect the BNC coaxial cable to the video input connector on the unit.

Connected to cameras
or other devices

IMPORTANT:
- The maximum BNC coaxial cable length is 500 m {1640 feet} when using a 5C-2V cable and 400 m {1312 feet} when using RG-59/U, BELDEN 9259 or equivalent.
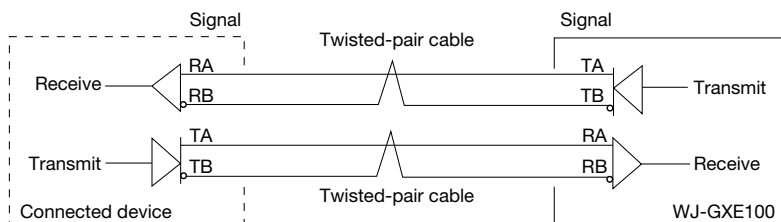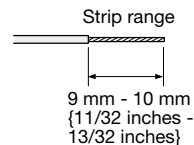
2 Connect a twisted-pair cable to the RS485 port.
When connecting an external device, remove 9 mm - 10 mm {11/32 inches - 13/32 inches} of the outer jacket of the cable and twist the cable core to prevent the short circuit first.
Specification of cable (wire):
22 AWG - 28 AWG, Single core, twisted
* Check whether the stripped part of the wire is not exposed and is securely connected.

RB RA TB TA
Receive Transmit

Strip range

9 mm - 10 mm
{11/32 inches -
13/32 inches}

Signal   Twisted-pair cable   Signal

Receive — RA   TA — Transmit
         RB   TB

Transmit — TA   RA — Receive
          TB   RB

Connected device   Twisted-pair cable   WJ-GXE100
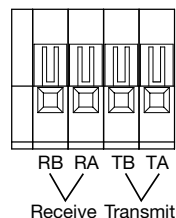
IMPORTANT:

• The RS485 port of this unit is intended for use with 4-line communications.
  When connecting 2-line communication devices, make connections as shown in the following illustration.

Twisted-pair cable (RS485, 2-line)
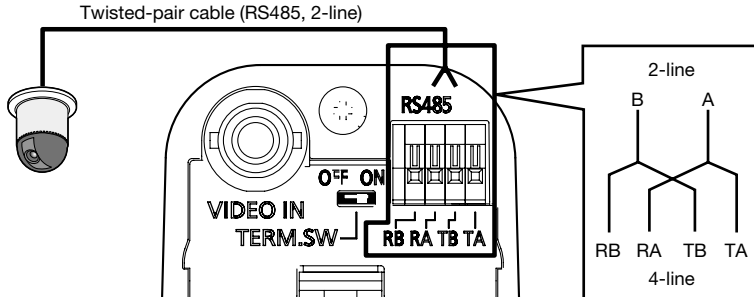
• When making connections with 2-line communications, select "2-line" in the setup menu. Refer to the Operating Instructions on the provided CD-ROM for further information about the setup menu.
• The status of the RS485 port is always terminated.
• Make connections so that excessive force is not applied to the BNC coaxial cable or the twisted-pair cable when they are connected.
• The maximum twisted-pair cable length is 1200 m {3937 feet}.

3 Connect a LAN cable (category 5 or better, straight, STP*) to the network connector on the unit.

*   E model only

LAN cable (category 5 or better, straight, STP*)

4 Connect the power cord.

IMPORTANT:

• The 12 V DC power supply shall be insulated from the commercial AC power.

When using 12 V DC power supply*

① Loosen the screws of the power cord plug (accessory).

② Connect the cable of the 12 V DC power supply* to the power cord plug.
Strip the end of the wire by 3 mm - 7 mm {1/8 inches - 9/32 inches}, and twist the stripped part of the wire sufficiently to avoid short circuit.
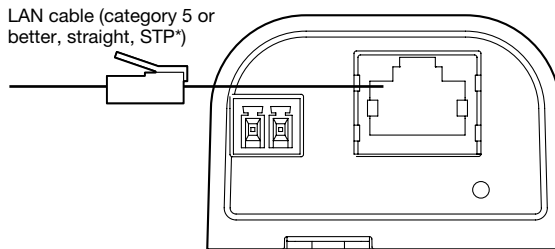Specification of cable (wire):
16 AWG - 24 AWG, Single core, twisted
• Check whether the stripped part of the wire is not exposed and is securely connected.

③ Tighten the screws of the power cord plug. (Recommended tightening torque: 0.34 N·m {0.25 lbf·ft})

④ Connect the power cord plug to the 12 V DC power supply terminal on the unit.

⑤ Tie the power cord and LAN cable together using the cable tie (accessory). Tie the cables together so that they cannot be easily pulled out from the unit by leaving sufficient slack in the cables.
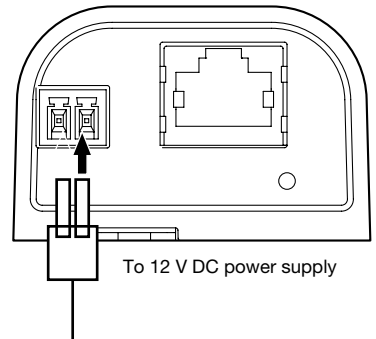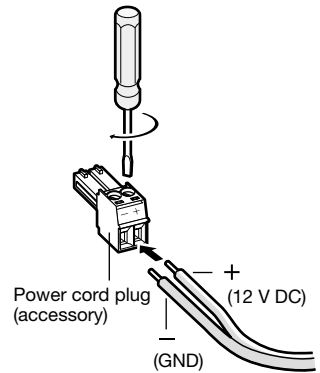
* FOR UL LISTED MODEL(S), ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY.

IMPORTANT:
• Be sure to use the power cord plug provided with this product.
• Be sure to fully insert the power cord plug (accessory) into the 12 V DC power supply terminal. Otherwise, it may damage the unit or cause malfunction.
• Make connections so that excessive force is not applied to the power cord or the LAN cable when they are connected.
• Be sure to use an AC adaptor compliant with the Specifications regarding power source and power consumption. (☞ Page 28)

Power cord plug (accessory)
(12 V DC) +
(GND)

To 12 V DC power supply

Cable tie (accessory)
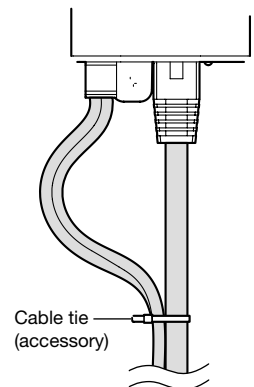
When using PoE (IEEE802.3af compliant)

Connect a LAN cable (category 5 or better, straight, STP*) between a PoE device (such as a hub) and the network connector of the unit.

* E model only

IMPORTANT:

- Use all 4 pairs (8 pins) of the LAN cable.
- The maximum cable length is 100 m {328 feet}.
- Make sure that the PoE device in use is compliant with IEEE802.3af standard.
- When connecting both the 12 V DC power supply and the PoE device for power supply, 12 V DC will be used for power supply. Depending on the PoE device used, the power supply lamp may not light and the network connections may not be possible. In this case, disable the PoE device setting, and refer to the operating instructions of the PoE device in use.
- When disconnecting the LAN cable once, reconnect the cable after around 2 seconds. When the cable is quickly connected, the power may not be supplied from the PoE device.
- Make connections so that excessive force is not applied to the LAN cable when it is connected.
- The camera is to be connected only to PoE networks without routing outside plant when using PoE.

Connection example when connecting to a network using a PoE hub

PoE device (hub)

LAN cable (category 5 or
better, straight, STP*)

PC

BNC coaxial cable

Analog camera
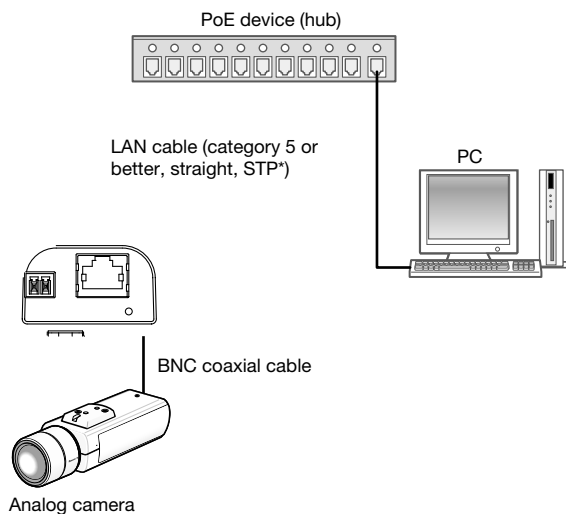
<Required cable>
LAN cable (category 5 or better, straight, STP*)
* E model only

IMPORTANT:
- Use a switching hub or a router which is compliant with 10BASE-T/100BASE-TX.
- If a PoE device (hub) is not used, the network video encoder must be connected to a power supply.

Configure the network settings

Configuring the unit so that it can be accessed from a PC

The following are descriptions for when the unit with default settings is configured. If you are using firewall software on your PC, the Setup Program may not be able to find any units on your network. Configure the setting of the unit after temporarily invalidating the firewall software. Contact the network administrator or your Internet service provider for information about configuring the settings of the network.

1 Insert the provided CD-ROM into the CD-ROM drive of your PC.

- The License Agreement will be displayed. Read the Agreement and choose "I accept the term in the license agreement", and click [OK].
- The launcher window will be displayed. If the launcher window is not displayed, double click the "CDLauncher.exe" file on the CD-ROM.

Note:
- Refer to "Using the CD-ROM" in the Operating Instructions on the provided CD-ROM for further information about CDLauncher.

2 Click the [Run] button next to [IP Setting Software].
"Panasonic IP Setting Software" page will be displayed. Click the [Network Settings] button after selecting the MAC address/IP address of the unit to be configured.

3 Select the unit you want to configure, and click [Access Camera].
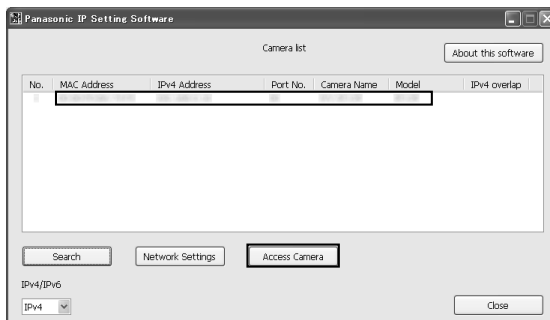
Note:
- When more than one unit is displayed in [IP Setting Software] screen, click the unit with the same MAC address as the MAC address printed on the unit that you want to configure.

4 If the installation screen of the viewer software "Network Camera View 4S" is displayed, follow the instructions of the wizard to start the installation. (The viewer software is installed from the camera.)

- The "Live" page will be displayed.
- Perform the [Time & date] settings in the "Setup" - "Basic" page before using the unit.
- If the setting (NTSC/PAL) for [Video input] on the [JPEG/H.264] tab of the "Setup" - "Image" page is changed, the camera's settings will be reset to the default. Note that the network settings and [Time & date] settings will not be reset.
- If you cannot install the viewer software "Network Camera View 4S" or if images are not displayed, click the [Install] button next to [Viewer Software] on the launcher window to install the software.

Note:
- When no image is displayed on the "Live" page, refer to the Troubleshooting in this document or in the Operating Instructions on the provided CD-ROM.
- It is possible to enhance the network security by encrypting the access to units using the HTTPS function. Refer to the Operating instructions on the provided CD-ROM for how to configure the HTTPS settings.
- Click the [Setup] button on the "Live" page, the user authentication window will be displayed. Enter the default user name and password as follows, and log in.
  User name: admin
  Password: 12345
- When changing settings related to the network settings, such as connection mode, IP address, and subnet mask, click the [Network Settings] button in [IP Setting Software] screen as shown in step 3, then change each setting.
- Due to security enhancements in "IP Setting Software", "Network settings" of the unit to be configured cannot be changed when around 20 minutes have passed after turning on the power of the unit. (When the effective period is set to "20 min" in the "Easy IP Setup accommodate period".)
  However, settings can be changed after 20 minutes for units in the initial set mode.
- "Network Camera Recorder with Viewer Software Lite" which supports live monitoring and recording images from multiple cameras is available. For further information, refer to our website (http://panasonic.net/pss/security/support/info.html).

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	Reference pages
Power is not turned on.	▶	**When using DC power supply** • Is 12 V DC power supply connected to the power supply terminal? → Check whether the connection is appropriately established. • Is the AC adaptor in use compliant with the Specifications? → Check the Specifications regarding AC adaptor. **When using a PoE device for power supply** • Are the PoE device and the network connector on the unit connected using a 4-pair LAN cable? → Check whether the connection is appropriately established. • Depending on the PoE device, the power supply will stop when the demanded power exceeds its total power limit for all PoE ports. → Refer to the operating instructions of the PoE device in use.	21, 22
Images are not displayed correctly.	▶	• Is the power of the camera connected to this product turned on? → Turn on the power of the camera. • Is the BNC coaxial cable correctly connected to the video input connector of the unit? → Check that the video input connector is correctly connected. • Does the video input (NTSC/PAL) setting of the camera connected to this unit match the video input setting on the [JPEG/H.264] tab of "Image" page? → Set the video input to NTSC or PAL according to the camera in use. (☞ Operating Instructions (included in the CD-ROM))	– 19 –

The setup menu of the matrix switcher cannot be displayed.	▶	• Non-interlace signals sometimes may not be transmitted to display setup menus. The setup menus of the matrix switchers such as WJ-SX550 Series are composed of non-interlace signals, which this unit sometimes cannot transmit.	–
Cameras cannot be controlled.	▶	• Are coaxial communications used to control cameras? → Camera control is not supported for coaxial communications. Use RS485.	–
		• Is the cable correctly connected to RS485 terminal of the camera? → Check that the connecting positions of the signals (TA, TB, RA, RB) of this product and the connected device are correct.	19, 20
		• If Pan/Tilt/Zoom functions cannot be operated for Panasonic cameras, you must select "Custom" for "Protocol" on the [RS485] tab of the "Image" page and upload the command table to the unit. For further information, refer to our website (http://panasonic.net/pss/security/support/info.html).	–

Specifications

• Basic

Power source:	12 V DC, PoE (IEEE802.3af compliant)
Power consumption:	12 V DC*: 200 mA, PoE 48 V: 75 mA (Class 1 device) * FOR UL LISTED MODEL(S), ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY.
Ambient operating temperature:	-10 °C to +50 °C {14 °F to 122 °F} (During start-up: 0 °C to +50 °C {32 °F to 122 °F})
Ambient operating humidity:	Less than 90 % (no condensation)
Video input connector:	1 V [p-p]/75 Ω, NTSC or PAL composite video signal* * NTSC and PAL can be switched in the setup menu.
Serial port:	RS485 (For external device control)
Dimensions:	45 mm (W) x 29.5 mm (H) x 88 mm (D) {1-25/32 inches (W) x 1-5/32 inches (H) x 3-15/32 inches (D)} (excluding projections)
Mass:	Approx. 110 g {0.24 lbs}
Finish:	Unit (resin part): PC resin, sail white Unit (metal part): Electrogalvanized steel sheet, sail white coating

• Encoder

RS485 communication with cameras:	Pan/tilt/zoom/focus/preset positions/auto focus/brightness (When using Panasonic combination cameras)
Camera control protocol:	Panasonic/Pelco-D/Pelco-P/Custom
Camera title on screen:	Up to 20 characters (alphanumeric characters, marks) On/Off
Video motion detection (VMD alarm):	On/Off, (up to 4 areas available)

• Network

Network:	10BASE-T/100BASE-TX, RJ-45 connector
Resolution	NTSC mode: Picture (Camera) mode: VGA [4:3] H.264 VGA (640x480)/QVGA (320x240), max. 30 fps JPEG VGA (640x480)/QVGA (320x240), max. 30 fps Picture (Camera) mode: VGA [16:9] H.264 VGA (640x360)/QVGA (320x180), max. 30 fps JPEG VGA (640x360)/QVGA (320x180), max. 30 fps Picture (Camera) mode: D1 H.264 D1 (720x480), max. 30 fps JPEG D1 (720x480), max. 30 fps

Resolution	PAL mode:
	Picture (Camera) mode: VGA [4:3]
	H.264 VGA (640x480)/QVGA (320x240), max. 25 fps
	JPEG VGA (640x480)/QVGA (320x240), max. 25 fps
	Picture (Camera) mode: VGA [16:9]
	H.264 VGA (640x360)/QVGA (320x180), max. 25 fps
	JPEG VGA (640x360)/QVGA (320x180), max. 25 fps
	Picture (Camera) mode: D1
	H.264 D1 (720x576), max. 25 fps
	JPEG D1 (720x576), max. 25 fps
Image compression method:	H.264[1]
	Image quality: Low/ Normal/ Fine
	Transmission type: Unicast/Multicast
	Bit rate:
	(Constant bit rate/Best effort)
	64 kbps/ 128 kbps/ 256 kbps/ 384 kbps/ 512 kbps/
	768 kbps/ 1024 kbps/ 1536 kbps/ 2048 kbps/ 3072 kbps/
	4096 kbps
	(Frame rate)
	NTSC mode:
	1 fps/ 3 fps/ 5 fps/ 7.5 fps/ 10 fps/ 15 fps/ 20 fps/
	30 fps
	PAL mode:
	1 fps/ 3.1 fps/ 4.2 fps/ 6.25 fps/ 8.3 fps/ 12.5 fps/
	20 fps/ 25 fps
	JPEG
	Image quality:
	0 SUPER FINE/ 1 FINE/ 2/ 3/ 4/ 5 NORMAL/ 6/ 7/ 8/
	9 LOW (10 steps: 0-9)
	Transmission type: PULL/PUSH
Transmission interval:	NTSC mode: 0.1 fps - 30 fps
	PAL mode: 0.08 fps - 25 fps
	(JPEG frame rate will be restricted when displaying both JPEG and H.264 images.)
Bandwidth control:	Unlimited/ 64 kbps/ 128 kbps/ 256 kbps/ 384 kbps/ 512 kbps/ 768 kbps/ 1024 kbps/ 2048 kbps/ 4096 kbps/ 8192 kbps
Protocol:	IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMPv6
	IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP
OS[2] [3]:	Microsoft Windows 7
	Microsoft Windows Vista
	Microsoft Windows XP SP3
Browser:	Windows Internet Explorer 9.0 (32-bit)
	Windows Internet Explorer 8.0 (32-bit)
	Windows Internet Explorer 7.0 (32-bit)
	Microsoft Internet Explorer 6.0 SP3
Maximum concurrent access number:	14 (Depends on network conditions)

FTP client:	Alarm image FTP transmission, FTP periodic image transmission[*4]
Multi-screen:	Up to 16 camera images can be displayed simultaneously on a multi-screen. (Including the camera itself)
Cellular phone compatibility:	JPEG image
Mobile terminal compatibility: (As of December, 2012)[*5]	iPad, iPhone, iPod touch (iOS 4.2.1 or later) Android[TM] mobile terminals

*1 Transmission for 2 streams can be individually set in the same compression method.

*2 For further information about PC system requirements and precautions for when using Microsoft Windows 7, Microsoft Windows Vista, or Windows Internet Explorer, click "Manual" - "Open" from the supplied CD-ROM and refer to "Notes on Windows®/Internet Explorer® versions".

*3 When using IPv6 for communication, use Microsoft Windows 7 or Microsoft Windows Vista.

*4 Not available when "D1" is selected for "Picture (Camera) mode".

*5 For further information about compatible devices, refer to our website (http://panasonic.net/pss/security/support/info.html).

Standard accessories

Installation Guide (this document) .... 1 pc.
Warranty card (P model only) .... 1 pc.
CD-ROM*[1] .... 1 pc.
Code label *[2] .... 1 pc.
Power cord plug .... 1 pc.
Cable tie .... 2 pcs. (incl. 1 spare)

*1 The CD-ROM contains the operating instructions and different kinds of tool software programs.
*2 This label may be required for network management. The network administrator shall retain the code label.

Optional accessory

User License Accessory (For H.264) ....BB-HCA8A (P model)
BB-HCA8CE (E model, Korea)*
* Required in Korea

SECURITYCAMERAS
The First Name in Security

Information for Users on Collection and Disposal of Old Equipment and used Batteries

These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.
For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.
By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.
For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.
Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union
If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]
These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Cd

Note for the battery symbol (bottom two symbol examples):
This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

For U.S. and Canada:

Panasonic System Communications Company of North America, Unit of Panasonic Corporation of North America
www.panasonic.com/business/
For customer support, call 1.800.528.6747
Three Panasonic Way, Secaucus,
New Jersey 07094 U.S.A.

Panasonic Canada Inc.
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3 Canada
(905)624-5010
www.panasonic.ca

For Europe and other countries:

Panasonic Corporation
http://panasonic.net

Importer's name and address to follow EU rules:

Panasonic Testing Centre
Panasonic Marketing Europe GmbH
Winsbergring 15, 22525 Hamburg, Germany

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www.a1securitycameras.com email: sales@a1securitycameras.com