This Installation Guide is comprised of pages [1/2] and [2/2]. This "Installation Guide" explains the installation method of the camera using the ceiling mount cover (sold separately). Please be sure to read the "Safety Precautions" section for correct use. After reading this Installation Guide, keep it in a readily accessible location for future reference. This camera is for indoor use only.

**WARNING**
To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

**Caution**
Request a professional installer for all installation work. Never try to install the camera yourself. Doing so may result in unforeseen accidents such as dropping the camera or electric shock.

### Check Included Items
- Camera
- Power connector
- Installation Guide (This document)
- Warranty card

### Symbols used in this Installation Guide
- Parts indicated in the Installation Guide ([2/2]) with this icon are not included with the camera, and should be provided by the user.

### Accessories
The following accessories can be purchased separately as necessary. Some accessories are not available in certain countries or regions. A ceiling mount cover or indoor dome housing is necessary to install the camera on a ceiling.

**Ceiling Mount Cover**
SS40-S-VB/SS40-B-VB

**Indoor Dome Housing**
DR41-C-VB/DR41-S-VB

**Pendant Mounting Kit**
PC600-VB

**AC Adapter**
PA-V18

### Safety Precautions
**Caution**

Failure to follow the instructions may result in property damage.

- Do not hold the device by the camera head.
- Do not turn the camera rotator by hand.
- Never touch the camera head during initialization.
- Do not install on an unstable surface. Also, make sure the camera is installed ±5° or less horizontal.
- After turning off the power, do not turn the power on again for at least five seconds.
- Take measures to remove static electricity before performing any procedures.
- If there is condensation, please wait to power on, until the condensation dissipates.
- The network camera is only intended for a connection to an Ethernet or PoE network without routing to the outside plant.

**Important**

Failure to do so may result in malfunctions.

- Take care not to damage wiring or the connector.

Failure to do so may result in damage to peripheral items.

### Precautions for Use
**Warning**
Failure to follow the instructions may result in death or serious injury.

- If you discover defective conditions such as smoke, strange sounds, heat or strange odors, immediately stop using the camera and contact your nearest dealer.
- Fire or electric shock may result from continued use of the product.

Notes on Power Supply

- Only use the dedicated AC adapter (sold separately) when using AC adapter.
- Do not set any heavy objects on the power cable (or the LAN cable for a PoE power supply).
- Do not pull, forcibly bend, scratch, or modify the power cable (or the LAN cable for a PoE power supply).
- Do not cover or wrap the AC adapter (sold separately) with cloth or blankets.

Failure to do so may result in fire or electric shock.

Notes on the Installation

- Do not install in the following places:
  - Places in direct sunlight, near heat-generating objects, or locations subject to high temperatures
  - Places near flammable substances
  - Places subject to rain or dew
  - Places subject to water or steam
  - Places subject to severe vibration
  - Places subject to the camera angle

Notes on the Installation

- Do not install in places that are subject to salt damage or corrosive gas.

Failure to do so may result in malfunctions.

- The camera cannot be installed on vertical surfaces such as walls.
- Be sure to attach the safety wire when installing the camera.

Failure to do so may result in the camera falling or other accidents.

- Do not touch the edges of the product with bare hands.
- Be careful not to get your fingers caught when installing.

- Be careful not to get your fingers caught when installing.

### Part Names


*1 Please refer to the “Operation Guide” for the method to reset the camera.
*2 On: when powered on, during reboot, during normal use / Off: when [Turn Off] is selected (please refer to the “Operation Guide”)

The contents of this guide are subject to change without any prior notice.
Specifications

Please refer to the “Specifications” for specifications not listed below.

- Lens: 20x optical zoom (20x digital zoom) lens with auto focus
- Viewing Angle:
  - For 16:9 aspect ratios: Horizontal: 80.4° (W) – 3.2° (T) / Vertical: 35.1° (W) – 1.8° (T)
  - For 4:3 aspect ratios: Horizontal: 46.3° (W) – 2.4° (T) / Vertical: 35.1° (W) – 1.8° (T)
- Pan Angle Range: 340° (±170°) (Pan is automatically stopped at ±90°)
- Tilt Angle Range: 100° (positive) / 90° (negative) (when the horizontal direction of the camera is 0°)
- Network Terminal: LAN x 1 (RJ45, 10BASE-TX/autofull-duplex/full-duplex)
- * Use a category 5 or better LAN cable. 100 m (300 ft.) or less in length.
- Audio Input Terminal: 3.5 mm (0.14 in.) mini-jack connector (monaural)
- Audio Output Terminal: 3.5 mm (0.14 in.) mini-jack connector (monaural)
- External Device I/O Terminal x 2, Output x 2
  - Memory Card: SD Memory Card, SDHC Memory Card, SDXC Memory Card (Compatible)
- Operating Environment:
  - Temperature: AC: Max. approx. 8.8 W / DC: Max. approx. 8.6 W
  - Power Connectors:
    - External Power Source: 24 V AC/12 V DC
    - AC Adapter: PA-V18 (100 – 240 V AC) (sold separately)
- Power Connection
  - Use the dedicated AC adapter (sold separately).
  - Use UL cable (UL-1015 or equivalent) for 12 V DC or 24 V AC wiring.
  - Power connector: Approx. 5 – 7 mm (0.20 – 0.28 in.)
  - Cable strip should be approx. 8 – 9 mm (0.31 – 0.35 in.)
- Power Requirement:
  - 12 V DC or 24 V AC input can be used.
  - Connect the included power connector as shown below.

Connecting the Camera

Power Connection

- Power supply should conform to all local codes.
- The power supply should also comply with IEC60950-1 (SILVUPS) standards.
- The camera does not have a power switch. Connecting and disconnecting the LAN cable (PoE power supply), AC adapter, or external power supply plug turns the power ON and OFF, respectively.
- When the camera needs to be rebooted, perform the reboot operation from the camera's setting page (please refer to the “Operation Guide”).

External Device (PoE over Ethernet)

Power can be supplied to the camera by using a LAN cable to connect it to a PoE HUB that conforms to the IEEE802.3at Type1 standard.

Important

- Check with your dealer for more information about PoE HUB and Midspan technology.
- Midspan (a LAN cable power supply device) is a device that, like a PoE HUB, supplies power to the camera via a LAN connection: 24 V AC.
- Some PoE HUBs allow the limitation of power for each port, but applying limits may interfere with performance. If using this type of PoE HUB, do not limit the operating power.
- Some PoE HUBs have limits for the total power consumption for the ports, which can interfere with performance when multiple ports are in use. In more detail, check the instruction guide for your PoE HUB.
- The camera can also be connected to an AC adapter (sold separately) while receiving power from a PoE HUB. In such cases, the PoE power supply is given priority, and the camera does not use the power supply from the AC adapter (sold separately).

External Device Power Supply

- 12 V DC or 24 V AC input can be used.
- Connect the included power connector as shown below.

Recommended Power Cables [Reference]

<table>
<thead>
<tr>
<th>Cable (AWG)</th>
<th>22</th>
<th>20</th>
<th>16</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 V DC maximum cable length (m)</td>
<td>6 (19.4)</td>
<td>9 (29.5)</td>
<td>14 (45.8)</td>
<td>23 (75.5)</td>
</tr>
<tr>
<td>24 V AC maximum cable length (m)</td>
<td>17 (56.1)</td>
<td>19 (62.3)</td>
<td>29 (95.1)</td>
<td>46 (150.8)</td>
</tr>
</tbody>
</table>

Use UL cable (UL-1015 or equivalent) for 12 V DC or 24 V AC wiring.

AC Adapter

Use the dedicated AC adapter (sold separately).

External Device I/O Terminals

External device I/O terminals consist of two input and output systems each. Viewer can be used to check external device input status and control output to an external device (please refer to the “Operation Guide”).

Audio Input/Output Terminals

Each audio input/output terminal has one input system and one output system. Connecting the camera to an audio input/output device such as a microphone or a speaker with an amplifier allows you to send/receive audio through the viewer.

Audio Input Terminal Common LINE IN/MIC IN (monaural input)

* Although the camera has a single audio input system, it supports two types of microphone input: LINE IN and MIC IN. Before using the audio input, change [Audio Input Mode] on the Setting Page (please refer to the “Operation Guide”). LINE IN is selected by default.

- Dynamic MIC IN
  - Input impedance (microphone bias resistance): 2.2 kΩ ± 5%
  - Microphone power supply: plug-in power (voltage: 1.8 V)
- * Supported microphones: Condenser microphones with plug-in power support
  - LINE IN
    - Input level: up to 1 Vp-p
    - * Use a microphone with an amplifier.

Audio Output Terminal LINE OUT (monaural output)

Connect the camera to a speaker with an amplifier. Audio can be sent to the speaker from Viewer.

- Output terminal: 3.5 mm (0.14 in.) mini jack (monaural)
- Output level: up to 1 Vp-p
- * Use a speaker with an amplifier.

Important

- Using incorrect settings for [Audio Input Mode] may damage the camera and/or microphone. Be sure to configure the settings correctly.
- Microphone characteristics may affect volume and sound quality.
- Images and audio do not always synchronize properly.
- Audio may be interrupted depending on PC characteristics and network environment.
- Video and audio can be streamed to up to 30 clients. However, audio may be interrupted when the camera is streaming to many clients or using SSL.
- Audio may be interrupted when using antivirus software.
- Connecting and disconnecting the LAN cable interrupts the audio. Use the viewer to reconnect.
Securely attach the safety wire to an anchor or structure. After securing one end of the safety wire to the ceiling, secure the other end to the camera using the screw that is fastened to the camera.

EN

DE

Befestigen Sie das Sicherungseil mit einem Dübel oder an einem tragfähigen Teil der Deckenstruktur. Befestigen Sie zunächst das Ende, das an der Decke angebracht ist, und sichern Sie dann das andere Ende des Seils, das an der Kamera befestigt wird, mit der mitgelieferten Schraube.

FR

Attachez solidelement le fil de sécurité à un point d'ancrage ou une structure. Une fois que vous avez fixé au plafond l'une des extrémités du fil de sécurité, fixez l'autre extrémité à la caméra à l'aide de la vis qui se trouve sur la caméra.

TA

Należy prawidłowo podłączyć przewód zabezpieczający do kotwy lub konstrukcji. Po zamocowaniu jednego końca przewodu zabezpieczającego do sufitu należy zamocować drugi koniec do kamery, używając śruby przykręcionej do kamery.

TH

If the cables cannot be stored above a ceiling made of concrete, etc., or if the cables do not fit within the ceiling mount cover, bend the cutout section of the ceiling mount cover using diagonal pliers, etc., to create a cutout through which to guide the cables.

EN

Dezoblászlózsa tartozékával vagy kiegészítők segítségével a talajtappanyagban lévő hagymányos talajtappanyagok helyét lehetővé teszi a motoros talajtappanyagok felhasználását ezen a helyen, az általános motoros talajtappanyagok kezelésének lehetőségét.

TH
電工ボックスをご利用の場合は、オプションの天井取付用カバーに同梱の取付金具をお使しください。

要使用接続子、ご使用時も吊り下げる絶縁天井のカバーに同梱した接続子を取り付けてください。