### Standard accessories

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethernet cable</td>
<td>1 pc</td>
</tr>
<tr>
<td>CD-ROM*</td>
<td>1 pc</td>
</tr>
<tr>
<td>Warranty card</td>
<td>1 set</td>
</tr>
</tbody>
</table>

* CD-ROM contains the operating instructions and different kinds of tool softwares programs.

### Making connections

- **Turn off each system’s power supply before making a connection.** Before making connections, prepare the required peripheral devices and cables.
- **Use M12-RJ45 or M12-M12 Ethernet cable (category 5e or better, straight).**
- **The maximum cable length is 100 m (328 feet).**
- Use a switching hub or a router which is compliant with 10BASE-T/100BASE-TX.
- Use the M12 connector Ethernet cable to the camera by following the instructions in “Making connections.”
- Do not turn off the power of the camera during the process of initialization. Otherwise, it may fail to initialize and may cause malfunction.

### When connecting to a network using a PoE hub

- Before installing the camera, check the entire system configuration. The right of illustration gives a wiring example of how to connect the camera on the network via a PoE device (hub).

### Installation

#### Step 1 Preparations

- Obtain camera fixing screws or anchor bolts before installing the camera to the installation surface, the screws, bolt nuts, or anchor bolts listed below.
- Recommended screw: M 5 x 4 screws
- Minimum pull-out strength: 539 N (121 lbf)

#### Step 2 Fixing the camera

- Connect the cable to the camera and secure it onto the mounting surface.

#### Step 3 Setting the camera

- Set the camera so that it can be accessed from a PC.

#### Step 4 Adjusting the camera

- Adjust the angle of view and focus, and then adjust the dome cover and dome guard.

#### Step 6 Fixing the camera to the installation surface

- Use the template (accessory) to open the camera side holes (4 holes).
- Also open the wiring holes to ø25.4 mm {ø1 inch}.

#### Step 7 Attaching the camera to the installation surface

- Firmly tighten the 4 fixing screws with the fixing bracket (locally procured) sandwiched in between the camera and the installation surface.
- If necessary, attach the camera by placing a safety wire (locally procured) through the wing port and connecting it to the inside, using the fixing hole A {ø4 mm, hole}, located on the rear side of the camera.
Step2 Fixing the camera

2) Temporarily adjusting the view angle by adjusting the horizontal (PAN), vertical (TILT) and Image rotation (YAW).

The recommended values for temporary adjustment are as follows.

<table>
<thead>
<tr>
<th>Horizontal (PAN)</th>
<th>Vertical (TILT)</th>
<th>Image rotation (YAW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+70°</td>
<td>0°</td>
<td>0°</td>
</tr>
<tr>
<td>-70°</td>
<td>0°</td>
<td>0°</td>
</tr>
<tr>
<td>0°</td>
<td>0°</td>
<td>±170°</td>
</tr>
</tbody>
</table>

3) Adjusting the horizontal (PAN) and vertical (TILT) view angle.

When adjusting the view angle (PAN, TILT), adjust the Pan angle (Both side) to the lens part, as shown in the illustration, and adjust the Image rotation (YAW) while checking the computer screen.

Note: The Pan angle and Image rotation are available within the range of ±170°.

Adjusting the horizontal (PAN)

- Attach the lens adjuster so that the slit of the adjuster aligns with the projection part of the lens.
- You can smoothly change the image rotation (YAW) by grasping the Pan angle with your fingers and rotating it while applying some slight pressure.

Adjusting the vertical (TILT)

- You can adjust the Pan angle by grasping the left and right side of the lens part with your fingers and rotating it (scale by 3°).
- Vertical (TILT) angle: ±15°

Step3 Configuring the camera

1) Configuring the camera so that it can be accessed from a PC.

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

- [Start] > Click the “CD-ROM” in the operating instructions on the provided CD-ROM.
- If the installation screen of the web browser “Network Camera View 45” is displayed, follow the instructions of the wizard to start the installation.

- IMPORTANT: When no image is displayed on the “Live” page, refer to the Troubleshooting in the Operating Instructions on the provided CD-ROM.

- 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 click [OK].

User name: admin
Password: 12345

- Configure the camera to be configured cannot be changed when around 20 minutes have passed after turning on the power of the camera. (After pressing the “IP Setup accommodate period”.)

- For cameras in the initial set mode, the settings can be changed after 20 minutes for cameras in the initial set mode.

- After removing the protection sheet, avoid touching the surface of the dome cover.

2) Adjusting the focus of the lens by rotating the lens adjuster (accessory) which is attached to the focus ring of the lens.

- Attach the thin part of the lens adjuster when adjusting the focus of the lens.

3) Releasing the previously removed dome cover with the 3 fixing screws.

- The dome cover guard can be attached to the dome cover guard fixing screw.

- Make sure to always support the dome cover from the top of the dome cover protection sheet.

- Directly touching the dome cover can lead to image quality deterioration.

- IMPORTANT: After removing the protection sheet, avoid touching the surface of the dome cover.

4) Removing the dome cover protection sheet.

- Note:

Step4 Adjusting the camera

1) Checking the screen and menu positions, refer to Step2 Fixing the camera, then, adjusting the angle of the camera.

2) Adjust the focus of the lens by rotating the lens adjuster (accessory) which is attached to the focus ring of the lens.

- Attach the thin part of the lens adjuster when adjusting the focus of the lens.

3) Rotating the previously removed dome cover with the 2 dome cover guard fixing screws.

- Make sure to support the dome cover guard and rotate the dome cover guard.

- The attachment position of the dome cover guard can be adjusted.

- IMPORTANT: Choose an attachment position for the dome cover guard based on the camera’s position, so that the dome cover guard will not get in the way or damage the vehicle's paintwork or interior neatness. Rotate and attach the dome cover guard after you have decided on a position.

- IMPORTANT: There is no way to attach dome cover guard.

- Example of attaching the dome cover guard

- When attaching the dome cover guard on the left side of the travelling direction

- When attaching the dome cover guard on the left side of the travelling direction