ALI-TS2012VR 2MP HD-TVI Vandalproof Outdoor Dome Camera Quick Installation Guide

The ALIBI ALI-TS2012VR dome camera include a high resolution CMOS array sensor with and advanced circuit design technology. The camera features high resolution, low image distortion and low noise features which makes them suitable for surveillance and image processing systems. Features include:

- 2 MP high performance CMOS array with resolution up to 1928(H) × 1088(V) pixels
- Low illumination, 0.01 Lux @ (F1.2, AGC ON), 0 Lux with IR
- 2.8 mm — 12 mm motorized lens
- OSD menu
- IP66 weatherproof, IK10 vandalproof enclosure
- Requires Alibi HD-TVI compatible recorder (HD-TVI DVR)
- Optional installation with wall mount bracket ALI-AB2 and flange adapter ALI-AF3

**What’s in the box**

- Camera assembly
- Mounting hardware
- Video test adapter cable
- Security L-wrench
- Drill template
- This instruction guide

**Tools you need**

To install the camera, you will need:

- 12 Vdc or 24 Vac power source. See Specifications for wattage requirement.
- Tools and additional fasteners (may be required) for mounting the camera
- Video and power extension cable

**Step 1. Install the camera**

The camera includes hardware to install it directly to a mounting surface. You can also easily install the camera onto a single- or double-gang electrical box. Camera drop cables can be routed through the conduit port on the side of the camera back box, through the mounting surface or into an electrical box, if used.

Before installation:

- Make sure that the device is in good condition and all the assembly parts are included.
- **IR Reflection Prevention**: Avoid mounting the camera near reflective surfaces. The IR light from the camera can reflect back into the lens. Do not remove the plastic cover until the cover is installation is complete.
- Check the specification of the products for the installation environment.
- Make sure that the wall or the ceiling is strong enough to withstand 3 times the weight of the camera.
- To avoid fire or shock hazard, use only UL listed power supplies. Verify that the power supply will provide the rated voltage and wattage for the camera. See the Specifications section.
During installation:

- **Monitor impedance**: You can attach the CVBS drop cable to a setup monitor. Ensure that the monitor input impedance is set to 75 Ω.

- **Camera drop cable**: The camera drop cable includes three connectors:
  - **Video BNC connector (gray)**: Provides the HD-TVI video signal for transmission across a coax (75 Ω) extension cable.
  - **Power connector**: The camera can be powered with 24 Vac or 12 Vdc voltage. When applying 12 Vdc voltage, observe the polarity (+ / −) shown in the drop cable power connector picture on page 1.

The following procedure outlines an installation of the camera to a mounting surface. Your installation steps may differ, depending on how the camera is mounted and how the drop cable connects to video and power extension cables. To install the camera onto a surface:

1. Separate the camera dome cover assembly from the camera module by loosening the three captive dome screws using the security L-wrench provided. Note that the dome cover is tethered to the camera module.

2. Remove the camera module assembly from the back box after loosening the three captive screws. Note that the camera module may be tethered to the back box.

3. Using the drill template or the back box (see page 1), mark the locations of the mounting screw holes, and the hole for the drop cable if routing the cable through the mounting surface.

   **NOTE** Several holes are provided in the back box for mounting it onto a surface, a gang box and in other configurations. Use at least four screws to back box to the mounting surface.

4. Using appropriate fasteners, secure the back box to the mounting surface or gang box. The mounting screws and wall inserts are adequate for surface types.

5. Route power and video extension cables from your power source and monitoring equipment to the mounting location. Do not apply power to the power extension cable at this time. If the extension cables will be attached to the camera drop cables within the back box, route the cables into the housing.

   **NOTE** Camera drop cable connectors are not waterproof. Seal as needed.

6. Connect the camera drop cables to the video and power extension cables, and then secure the camera module to the back box using the security L-wrench provided. Tighten the screws until snug.

   **NOTE** The HD-TVI video cable must attach to the HD-TVI compatible equipment. If the HD-TVI video cable will attach to NTSC compatible equipment, set the HD-TVI - CVBS switch on the camera module appropriately. See the photo on page 1. The CVBS video cable an attach to any equipment compatible with an NTSC signal.

7. Connect the other end of the power extension cable to a 12 Vdc or 24 Vac power source. If using a 12 Vdc power, observe the polarity of the drop cable shown in the photo on page 1 of this guide.

8. Verify that a video signal can be seen on your video monitoring equipment.

**Step 2. Adjust the camera for your surveillance target**

1. Observe the live video on your monitoring equipment, or plug the video test cable provided into the mating plug on the camera module and then into a local video setup monitor (not provided).

2. To adjust the camera pan (direction), grasp the camera gimbal on both sides at the pivot point, then rotate the as shown in the illustration below to point it at your surveillance target.

   ![Pan adjustment](image)

3. Reinstall the camera dome cover assembly. Ensure that the dome is clean of grease and dust to prevent IR reflections. Also, the foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDs from the lens. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

**Step 3. Open the OSD menu**

The On Screen Display (OSD) provides configuration options for refining the performance of the camera. It also can be used to block sensitive portions in the field of view (Privacy).

You can open the OSD menu system using the built-in joystick on the camera, from either the HD-TVI DVR Live View display or through remote login to the ALIBI recorder.

**Opening the OSD Menu using the joystick**

The OSD joystick is located on the camera module near the CVBS video test connector (see page 1). The joystick can be rocked up (toward the camera body – see below), down (away from the camera body), left and right, and can be pressed in (down toward the back box). Use the OSD joystick is used to open the OSD menu and navigate through the menus. The OSD menu tree is shown on “OSD Definitions: On-screen Display (OSD) menus” on page 4.
To open the OSD menus and select a menu option, press the joystick in (down toward the back box).

To navigate the menus, rock the joystick up (UP (▲), see photo above) or down (▼) to move through the parameter list menus vertically.

Rock the joystick left (◄) or right (►) to change the parameter value that appears for the parameter.

Press the joystick in (down toward the back box) to select the parameter value shown. Changes made to the OSD setup must be saved to be restored after power off and power on.

Opening the OSD Menu through the HD-TVI DVR

To open the OSD menu on the HD-TVI DVR monitor:

1. Open the HD-TVI DVR Live View screen, and then click inside the screen where the PTZ camera video image is displayed. See below.

2. Click the PTZ Control icon in the Quick Setting Toolbar. The PTZ camera Live View window will expand to full screen and the pop-up window shown below will open.

3. In the PTZ Control panel pop-up window, click the Menu icon on the Configuration line.

4. Drag the PTZ Control window to a position where it doesn’t obscure the OSD menu.

Opening the OSD Menu through remote login to the HD-TVI DVR

To open the OSD menu during a remote login to the recorder:

1. After logging into the HD-TVI DVR, open the camera in a single Live View window.
The function of the directional keys and Iris buttons are defined in the table below.

<table>
<thead>
<tr>
<th>Keys</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>▲</td>
<td>Move up in the parameter list.</td>
</tr>
<tr>
<td>▼</td>
<td>Move down in the parameter list.</td>
</tr>
<tr>
<td>◄</td>
<td>Move to previous page, field, or move the camera left.</td>
</tr>
<tr>
<td>►</td>
<td>Move to next page, field, or move field right.</td>
</tr>
<tr>
<td>Zoom +</td>
<td>Zoom in</td>
</tr>
<tr>
<td>Zoom –</td>
<td>Zoom out</td>
</tr>
<tr>
<td>Iris+(OPEN)</td>
<td>Set parameter value, or open sub-menu</td>
</tr>
<tr>
<td>Iris–(CLOSE)</td>
<td>Cancel change of parameter.</td>
</tr>
</tbody>
</table>

**OSD Definitions: On-screen Display (OSD) menus**

After the camera is installed on a compatible recorder, you can open the OSD menu clicking the PTZ Control icon on the Quick Setting Toolbar.

To navigate the OSD menu and select options:
- Move the cursor up/down to select the menu item.
- Move the cursor left/right to adjust the value of the selected item.
- Click the OK key to confirm a selection.

**FORMAT menu**

Move the cursor to FORMAT, and click the menu button to enter the FORMAT sub-menu to select the format of camera. Camera settings in the recorder must match the option selected in the camera.

**FOCUS (and ZOOM) menu**

Move the cursor to FOCUS, and press the menu button to enter the FOCUS sub menu. Move the cursor to adjust the camera lens by the FOCUS+, FOCUS-, ZOOM+ and ZOOM-.

**MAIN MENU**

**AE (Auto Exposure)**

AE describes the brightness-related parameters. You can adjust the image brightness by the BRIGHTNESS, EXPOSURE MODE, and GAIN in different light conditions.

- **BRIGHTNESS**: Brightness refers to the brightness of the image. You can set the brightness value from 1 to 10 to darken or brighten the image. The higher the brightness value, the brighter the image.
- **EXPOSURE MODE**: You can set AE mode as GLOBAL, BLC, and WDR.
  - **GLOBAL**: GLOBAL refers to the normal exposure mode, used when adjusting for unusual lighting distribution, variations, non-standard processing, or conditions of under exposure to get an optimum image.
  - **BLC (Backlight Compensation)**: BLC compensates light to the object in the front to make it clear, while compensating for over-exposure of the background where the light is strong. The level can be adjusted from 0 to 8.
  - **WDR (Wide Dynamic Range)**: The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. WDR balances the brightness level of the whole image and provide clear images with details.
- **GAIN**: Optimizes the clarity of image in poor light. GAIN level can be set to HIGH, MIDDLE, and LOW. Select OFF to disable the GAIN function. Noise is amplified when GAIN is on.

**WB (White Balance)**

White balance is the white rendition function of the camera to adjust the color temperature according to the environment. It can remove unrealistic color casts in the image. You can set WB mode as either ATW or MWB.

- **ATW**: In ATW mode, white balance is adjusted automatically according to the color temperature of the scene illumination.
- **MWB**: In MWB mode, you can set the R GAIN/B GAIN value from 0 to 255 to adjust the shades of red/blue color of the image.

**DAY-NIGHT**

Color, B/W, and SMART are selectable for DAY and NIGHT switches.

- **COLOR**: The image is colored in day mode all the time.
- **B/W**: The image is black and white all the time, and the IR LED turns on in the low-light conditions.
- **SMART**: You can select to turn on/off the INFRARED and set the value of SMART IR in this menu.

  - **INFRARED**: Select this option to turn on/off the IR LED in response to the light level in the field of view.
  - **SMART IR**: Use the Smart IR feature is to adjust the light to its most suitable intensity, and to prevent the image from over exposure. The SMART IR value can be adjusted from 0 to 3. The higher the value, the more obvious the effects are. If set to 0, SMART IR is disabled.

**VIDEO SETTING Menu**

Move the cursor to VIDEO SETTING and press the confirm button to enter the submenu. In this menu you can adjust CONTRAST, SHARPNESS, COLOR GAIN, DNR and MIRROR settings.

- **CONTRAST**: This feature enhances the difference in color and light between parts of an image. You can set the CONTRAST value from 1 to 10.
- **SHARPNESS**: Sharpness determines the amount of detail an imaging system can reproduce. You can set the SHARPNESS value from 1 to 10.

- **COLOR GAIN**: Adjust this feature to change the saturation of the color. The value ranges from 1 to 10.

- **DNR** (Digital Noise Reduction): The DNR function can decrease the noise effect, especially when capturing moving images in low light conditions and delivering more accurate and sharp image quality. You can set the DNR value from 1 to 10.

- **MIRROR**: DEFAULT, H, V, and HV are selectable for mirror.
  - **DEFAULT**: The mirror function is disabled.
  - **H**: The image is reflected horizontally.
  - **V**: The image is reflected vertically.
  - **HV**: The image is reflected both horizontally and vertically.

**RESET**
- **RESET**: Reset all the settings to the default.

**SAVE & EXIT**
- **SAVE & EXIT**: To save your new settings, move the cursor to SAVE & EXIT and click OK to save the setting and exit the menu.

**Cleaning Instructions**
- Dust or grease on the dome cover will cause IR reflection. Do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDs. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

Clean the camera dome with an approved glass cleaning solution and a lint free cloth.
- Dust can be removed from the unit by wiping it with a soft damp cloth. To remove stains, gently rub the surface with a soft cloth moistened with a mild detergent solution, then rinse and dry it with a soft cloth.
- Remove all foreign particles, such as plastic or rubber materials, attached to the camera housing. These may cause damage to the surface over time.

| Specifications | | |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| **Camera** | **Image Sensor** | 2MP CMOS Image Sensor | **Effective Pixels** | 1928(H)*1088(V) | **Min. illumination** | 0.01 Lux @ F1.2, AGC ON, 0 Lux with IR | **Shutter Time** | 1/25 s to 1/50,000 s |
| | **Lens** | Motorized VF: 2.8 mm ~ 12 mm @ F1.2 | | | | | **Lens Mount** | ф14 |
| | **Day & Night** | ICR | | | | | **Angle Adjustment** | Pan 0° ~ 340°, Tilt 0° ~ 75°, Rotate 0° ~ 355° |
| | **Synchronization** | Internal Synchronization | | | | | **WDR** | > 120 dB |
| | **Video Frame Rate** | 1080p @ 30 fps | | | | | **HD Video Output** | 1 Analog HD output |
| | **S/N Ratio** | > 62 dB | | | | | **Menu** | **AGC** | Supported |
| | | | | | | | **D/N Mode** | Color / BW / SMART |
| | | | | | | | **White Balance** | AWB / MVB |
| | | | | | | | **BLC** | Supported |
| | | | | | | | **Functions** | Wide Dynamic Range, Digital noise reduction, Digital zoom (62x), Mirror, SMART IR |
| **General** | **Operating Conditions** | -40 °F ~ 140 °F (-40 °C ~ 60 °C), Humidity 90% or less (non-condensing) | | | | | **Power Supply** | 12 Vdc ± 15% / 12 Vac ± 15% |
| | **Power Consumption** | Max. 10 W | | | | | **Protection Level** | IP66, IK10 |
| | **IR Range** | 100 ft max. (30 m max) | | | | | **Communication** | Up the coax |
| | **Dimensions** | 4.72" × 4.89" (119.2 mm × 124.1 mm) | | | | | **Weight** | 3.53 lb (1600 g) |

**Troubleshooting**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing appears on the screen.</td>
<td>- Check the power connection. - Check the video signal cable connection to the monitor.</td>
</tr>
<tr>
<td>The video image is dim or not clear.</td>
<td>- If the camera lens is dirty, clean it with a soft, clean cloth. - Adjust the monitor controls, if necessary. - If the camera is facing a very strong light, change the camera position. - Adjust the lens focus.</td>
</tr>
<tr>
<td>The screen is dark.</td>
<td>- Adjust the contrast control of the monitor. - If you have an intermediate device, set the impedance (75 Ω /Hi-Z) properly, and check the cable connections.</td>
</tr>
<tr>
<td>The camera is not working properly and the surface of the camera is hot.</td>
<td>- Verify that the camera is correctly connected to an appropriate regulated power source.</td>
</tr>
<tr>
<td>The image on the monitor flickers</td>
<td>- Make sure that the camera isn’t facing direct sunlight or fluorescent light. If necessary, change the camera position.</td>
</tr>
</tbody>
</table>

**Cleaning Instructions**
- Do not use benzene, thinner or other chemical products on the camera assembly; these may dissolve the paint and promote damage of the surfaces. Before using any chemical product, carefully follow the accompanying instructions.