

XX236-11-00



## V661V-312IR-1 Vandal-Proof IR Analog Camera Dome

FC  

### Vicon Industries Inc.

Tel: 631-952-2288 Fax: 631-951-2288 Toll Free: 800-645-9116  
24-Hour Technical Support: 800-34-VICON (800-348-4266) UK: 44/(0) 1489-566300

Vicon Industries Inc. does not warrant that the functions contained in this equipment will meet your requirements or that the operation will be entirely error free or perform precisely as described in the documentation. This system has not been designed to be used in life-critical situations and must not be used for this purpose.

[www.vicon-security.com](http://www.vicon-security.com)

# FCC COMPLIANCE STATEMENT

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.

**CAUTION:** 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 generate, 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 their own expense.

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

# CE COMPLIANCE STATEMENT

**WARNING:** This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

# IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
  2. Keep these instructions.
  3. Heed all warnings.
  4. Follow all instructions.
  5. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
  6. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
  7. Only use attachments/accessories specified by the manufacturer.
  8. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 9. CAUTION – THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.**
10. Use satisfy clause 2.5 of IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.



## EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### LIMITATION OF LIABILITY

THE INFORMATION IN THIS PUBLICATION IS BELIEVED TO BE ACCURATE IN ALL RESPECTS; HOWEVER, WE CANNOT ASSUME RESPONSIBILITY FOR ANY CONSEQUENCES RESULTING FROM THE USE THEREOF. THE INFORMATION CONTAINED HEREIN IS SUBJECT TO CHANGE WITHOUT NOTICE. REVISIONS OR NEW EDITIONS TO THIS PUBLICATION MAY BE ISSUED TO INCORPORATE SUCH CHANGES.

## PRECAUTIONS

Before installation, carefully read the manual to ensure correct operation and setup, heeding all warnings and instructions.

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

Ensure manual is kept in good condition for future use.

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

Only use attachments/accessories specified by the manufacturer.

Should any liquid get into the housing, immediately disconnect the device from the power supply and have it checked by authorized personnel before reusing.

Do not install the device in a place where it is exposed to gas or oil.

Installation and servicing by authorized personnel only, adhering to local safety regulations.

Unless you are an authorized technician, never try to dismantle the device. To avoid electric shock, never remove the screws or covers.

If a camera, do not expose the device to radioactivity. It will cause serious damage to the CCD.

Use Certified/Listed Class 2 power source only.

## Cleaning

Clean the device with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzene as they might damage the finish of the unit.

---

# TABLE OF CONTENTS

CONTENTS OF PACKAGE -----	5
INTRODUCTION -----	6
CAMERA CONNECTIONS -----	7
INSTALLATION -----	8
LENS ADJUSTMENT -----	9
THE DEFINITION OF TERMS -----	10
MENU MAP -----	12
EXTERNAL DIMENSION -----	23
TECHNICAL INFORMATION -----	24

---

## CONTENTS OF PACKAGE

Installation of the camera must be performed by qualified service personnel in accordance with all local and national electrical and mechanical codes.

Carefully remove the color camera and its accessories from the carton and verify that they were not damaged in shipment.

The content of the package includes:

1. Camera in housing
2. This manual
3. Accessory kit for installing
4. Drilling guide label

---

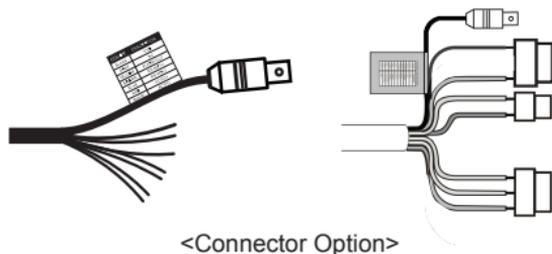
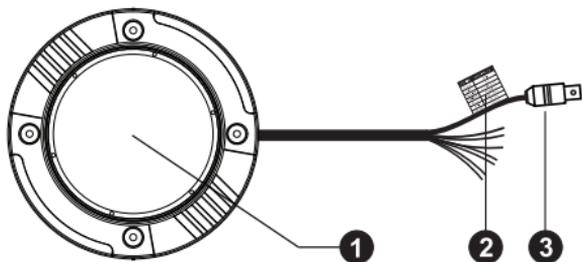
# INTRODUCTION

The V661V-312IR-1 series of cameras provides high-quality images using CCD especially designed for closed-circuit television (CCTV) and security surveillance applications.

Features :

- 1/3" Super-HADII 960H CCD
- Super high-resolution of 750TV lines
- Auto Electronic Shutter [1/60(50) ~ 1/100,000] and manual electronic shutter modes [1/60(50) ~ 1/10,000]
- 0.1 lux (Color), 0.01 lux (B/W), 0.001 lux (Slow-Shutter) @ F1.2 50 IRE
- Digital Noise Reduction - 2D,3D
- Day & Night (Auto, Day, Night)
- Sens-Up (~x256)
- Various Detection Methods (zone detection, motion trace, face trace, mine area, absent detection, cross object counting, entrance counting)
- Intelligent Scene Recognition
  - Provides the best image automatically for each scene
- Mechanical Iris Auto Adjustment
- Privacy Mask or Mosaic (max. 15 area /4-point polygonal/transparency)
- E-Zoom
- White Pixel Detection and Compensation
- Digital Effect-FLIP (H/V reverse, inverse)
- Defog (Auto) - Detects foggy condition automatically and provides high contrast picture
- IR Optimizer
- Coaxial communication (Coaxitron by Pelco)
- RS-485 Remote Camera Control (Pelco-D)-Option
- Support Line-Lock External Synchronization (line lock) - Option
- Multi-Language
- User Certified/Listed Class 2 Power Source only
- Operates in 12 VDC or 24 VAC

# CAMERA CONNECTIONS



Connect Cable Description

COLOR	DESCRIPTION
RED	24VAC/12VDC
WHITE	24VAC/12VDC
BROWN	RS 485(+)
BLUE	RS 485 (-)
YELLOW	ALARM-OUT
BLACK	GND
GRAY	DN EXT-IN

**1. Lens:** Allows a wide area to be monitored.

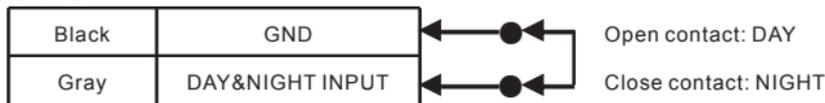
**2. Color Lead Wire & Color Display Label**

**2-1. External Day/Night Control (Option)**

Select Day/Night mode using external equipment by connecting control lines to the appropriate terminals.

• **DAY&NIGHT EXTERNAL INPUT**

Switches the cameras D/N mode to either Day or Night based on the input status. Refer to the diagram below. The camera's CNTL SIGNAL of D/N AUTO mode must be set to EXT2 for this to function.



**2-2. Alarm Out - Open Collector (5V/10mA)**

- Motion detection signals are output through this port. Active state is Low (GND). Normal: Open Collector, ALARM: Low (GND)

**2-3. Power Input Terminal**

- RED & WHITE : These terminals accept 24 VAC or 12 VDC. When using 12 VDC it is recommended to use a DC power supply that can support an inrush current of 0.55A.

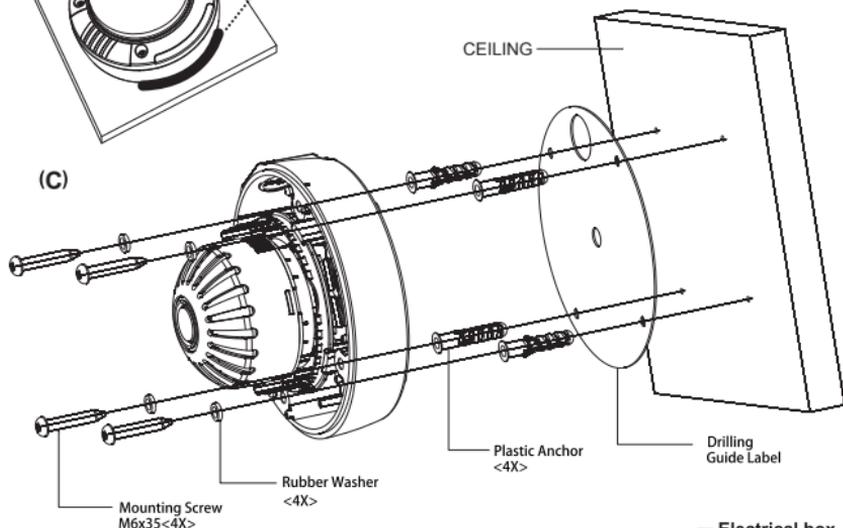
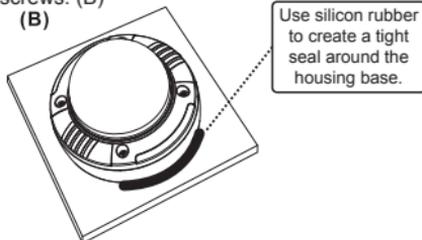
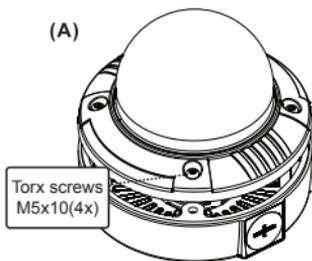
**2-4. Camera Control**

- BROWN : RS 485+
- BLUE : RS 485-

**3. Video :** BNC connector used to connect the camera to a monitor, switcher, etc.

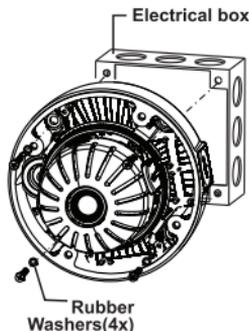
# INSTALLATION

1. Loosen the four Torx screws located midway up the front of the housing leave the screws. (A)
2. Drill the mounting location using the supplied drilling guide label. (C)
3. Attach the housing to the ceiling using suitable fasteners. M6x35 tapping screws are supplied; only use if they are suitable for the mounting surface. (C)
4. Secure the housing by tightening the loosened Torx screws. (B)



## ● MOUNTING HOUSING TO AN ELECTRICAL BACK BOX

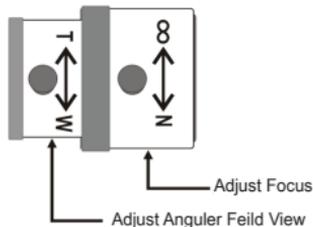
The housing can also be mounted on a 4s or 2s electrical box.



# Lens Adjustment

**Field of View:** Adjust setting from Telephoto from (T) to wide (W) for Field of View.

**Focus:** Adjust lens focus from near (N) to infinity ( $\infty$ ).

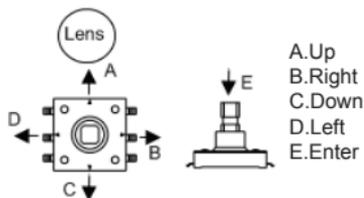


## DC Autoiris Lens

	<b>2.8-12 mm</b>
<b>Image Size</b>	1/3" CCD
<b>Focal Length</b>	2.8-12 mm
<b>Ape. Ratio</b>	1 : 1.4
<b>Angular Field of View (Degree)</b>	DIAGONAL 2.8 mm: 119.9 12 mm: 28.8

# Camera Operation

After all cabling is complete, the camera and lens can be setup. The camera/lens is set through an OSD menu system using a joystick control.



- A.Up
- B.Right
- C.Down
- D.Left
- E.Enter

## Camera Control Joystick

There is a joystick control in the camera base that is used to enter the osd for camera settings. This is used to navigate the osd for camera setup.

---

# THE DEFINITION OF TERMS

## **White Balance**

Compensates for deviations in the white color caused by changes in the color temperature of the light source so that the colors are reproduced correctly.

## **Auto Exposure**

Automatically adjusts the images to the optimum brightness.

## **SHT(Electronic Shutter)**

Controls the integration time (exposure) of the photodiode array and reduces, blooming overexposure, and smear when capturing moving objects.

## **Flicker(FLC)**

Avoids image flicker when there is a discrepancy between current and frequency.

## **AGC(Automatic Gain Control)**

Automatically adjusts (boosts) the video signal to the required level to produce a quality image in low light situations.

## **Sens-Up(Slow Shutter)**

Allows the video sensor of a camera to control sensitivity as it automatically detects the light level in dark environments to maintain a clear picture.

## **Back Light Compensation (BLC)**

Compensates for the brightness of the subjects with a large amount of background light that would make it practically impossible to see any details of the subjects. Adjusts the iris so that a distinctive subject and the background are delivered at the same time.

## **Wide Dynamic Range (WDR)**

Compensates for the brightness of the subjects with a large amount of background light that would make it practically impossible to see any details of the subjects. Adjusts the iris so that a distinctive subject and the background are delivered at the same time.

## **EHLC (Excessive High Light Compensation)**

Brings excessively high-brightness subjects into focus.

## **Mask**

Hides one or more areas that the user does not want to be displayed on screen. Masks can be set with their own display area, color, darkness and mosaic processing.

## **Detection**

Detects motion within the scene using one of the available methods. Some methods trigger the Alarm output.

## **Sharpness**

Reducing this parameter adjusts the noise level to smooth out the "noise" caused by the compression.

**Caution should be taken not to reduce it too much, which may result in a blurred image.**

## **Resolution**

Controls the display fine details. The higher the resolution, the higher level of details can be seen.

## **2D\_ / 3D\_NR (Digital Noise Reduction)**

Adjusts the illuminance noise level in low light situations by reducing image noise in order to improve the image. - 2D-NR is space-based and 3D-NR is time-based.

**Frame Control**

Specifies how many frames are generated/transmitted in a unit of time. The more frames there are, the smoother the image will be. The television system(NTSC/PAL) has adopted 30/25 frames per second(fps) to be regarded as completely smooth image. However, when recording video data, video surveillance systems often use lower fram rates to reduce the size of the recording data.

**Nega**

Reverses the color signals for the Chroma signal so the image looks like a "negative."

**d-PTZ(Digital Pan/Tilt/Zoom)**

Adjusts the camera position and zooms in on a section of the overall full image. The pixels in this area are then enlarged so the image is the same size as the original, giving the appearance of being zoomed in. Widen the intervals between the pixels in the original signal according to the magnification, and then filling these intervals with interpolation signals.

**Communication**

Allows for the connection to external devices, such as keyboards, through the menu interface.

**Iris Control**

Automatically adjusts the level of the iris according to changing light levels without having to manually turn a ring on the lens to open or close the iris.

**LLC**

In the line lock mode, the AC power supply and vertical sync signal of the cameras are synchronized.

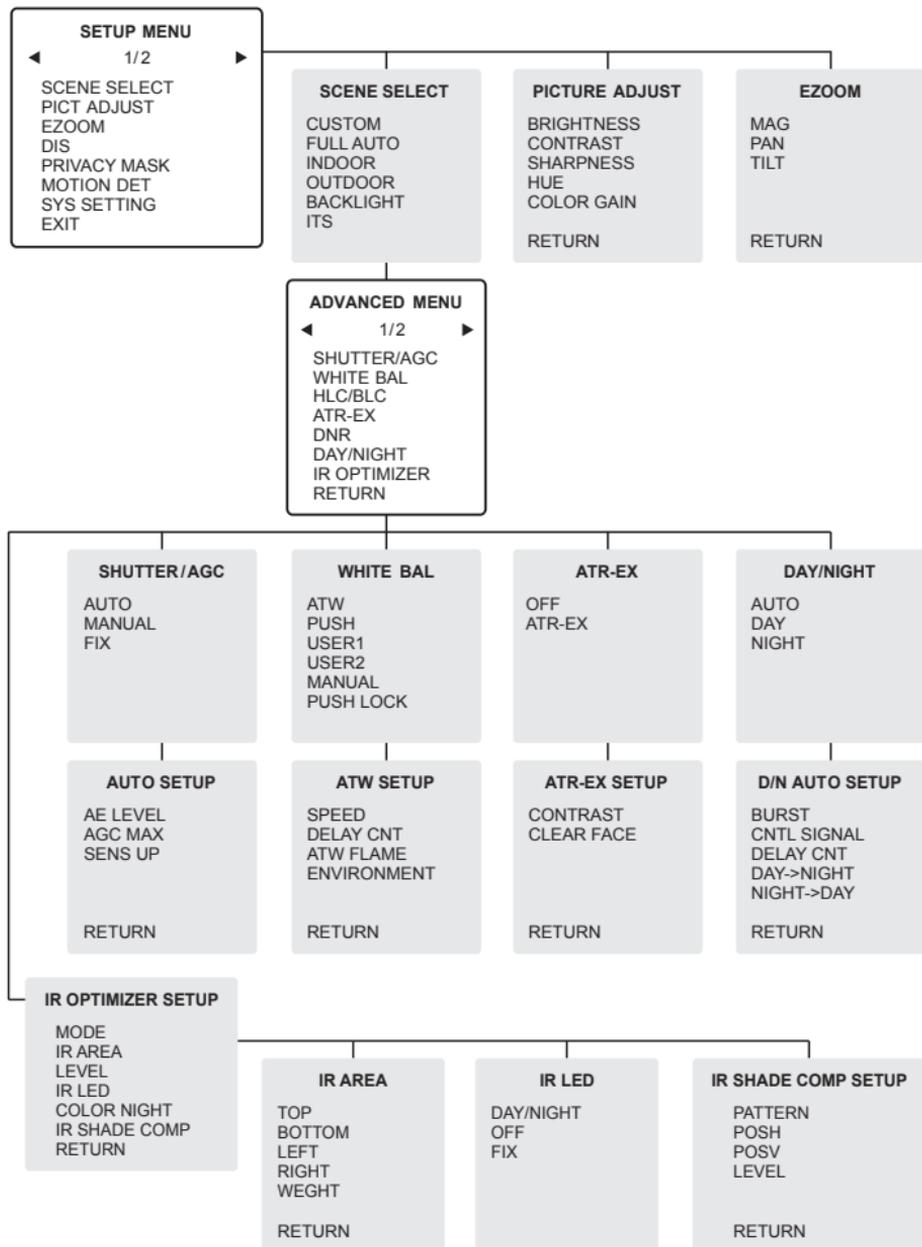
**White Pixel**

Automatically detects and compensates for peak white levels to maintain the image quality. White pixels whose frequency of occurrence varies in proportion to the temperature are sometimes observed when the devices are used under the influence of external factors or especially high temperatures.

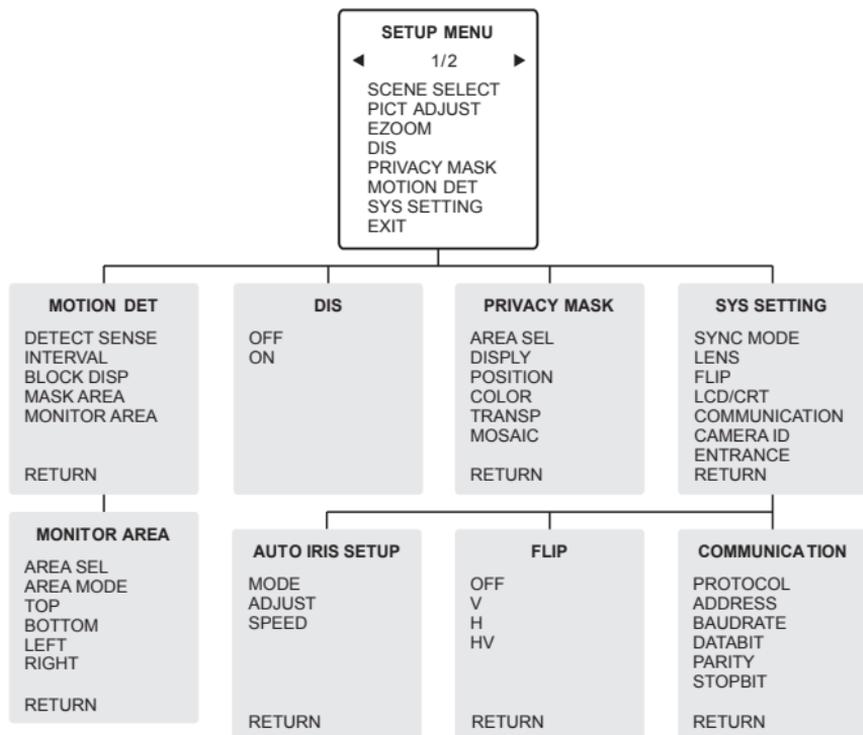
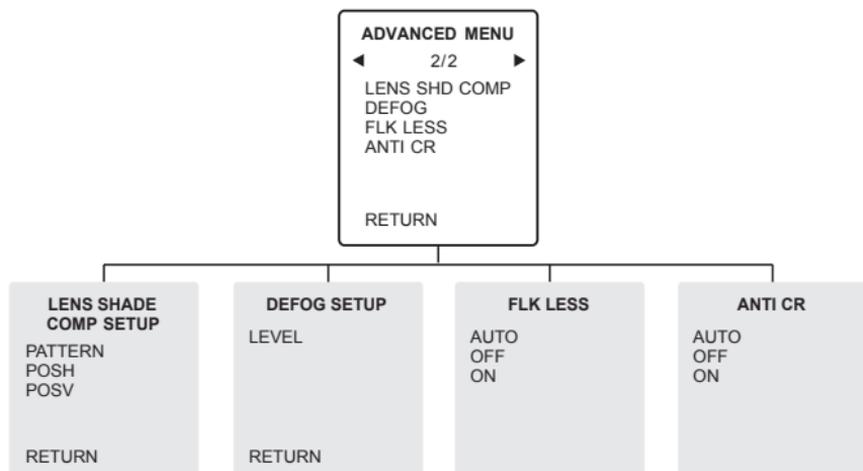
**Day/Night**

Allows the camera to be effective even in the lowest of light conditions while still showing clear color pictures during daylight hours. Day/Night cameras automatically change.

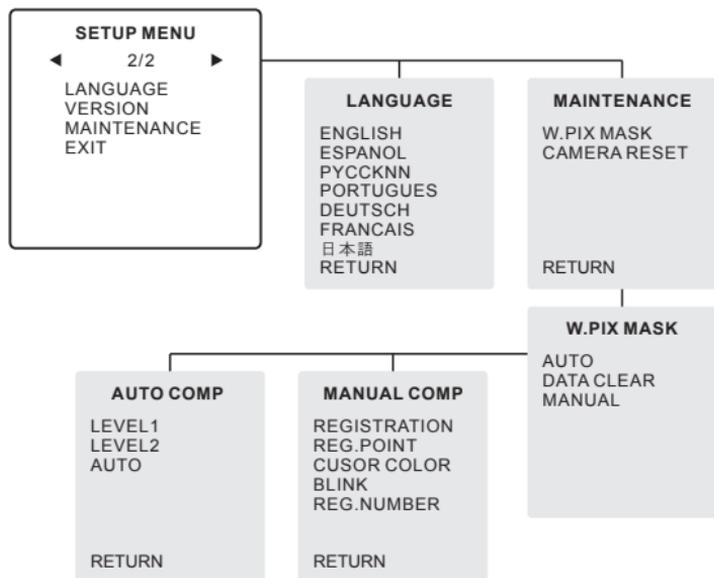
# MENU MAP



# MENU MAP



# MENU MAP



## <SETUP MENU>

### 1. Scene Select

Select from six modes, CUSTOM/FULL AUTO/INDOOR/OUTDOOR/BACKLIGHT/ITS. All the selections other than Custom have been preset with settings considered optimal for that environment, although they can be changed. All functions can be set and adjusted manually from the Advanced Menu.

#### **CUSTOM**

Custom mode turns off the auto scene recognition.

#### **FULL AUTO**

Full Auto mode supports a variety of scene types. It is not specialized to any particular type scene, so it allows average shooting in any situation.

#### **INDOOR**

Indoor mode is specialized to indoor scenes, such as indoor shop surveillance. It allows natural shooting with high contrast.

#### **OUTDOOR**

This mode is specialized to outdoor scenes, such as road surveillance. It features high contrast and resolution, and allows shooting with high visibility even in foggy outdoor conditions.

#### **BACKLIGHT**

This mode is specialized to scenes that mix indoor and outdoor conditions, such as entranceway surveillance.

It allows shooting with high visibility and a high dynamic range, even under backlighting conditions.

#### **ITS**

This mode is specialized to scenes where moving subjects enter the picture, such as traffic surveillance scenes. It allows high-resolution shooting of moving subjects with low blur.

## 2. Picture Adjust Function

This menu provides functions that enable users to easily adjust the image quality to suit the image output device used. A sliding scale shows the value for each

**Brightness** - The image brightness can be adjusted, where a higher number produces a brighter image.

**Contrast** - Adjusts the image contrast (light and shade differences).

**Sharpness** - Adjust the crisp boundaries and details of the image (apparent resolution). A sharper image may increase image noise.

**Hue** - Adjust the hue (gradation of color) by selecting a value.

**Color Gain** - Adjust the intensity (brilliance) of the colors.

## 3. EZOOM (Electronic Zoom)

**EZoom** - Select ON/OFF. When ON is selected, the camera will simulate pan and tilt positions in the scene and optical zoom of the image; the following adjustments can be made. A sliding scale is provided.

**MAG** - Magnification rate = ZOOM (0~255)

**PAN** - Horizontal position settings

**TILT** - Vertical position settings

## 4. DIS (Digital Image Stabilizer)

Digital Image Stabilizer (DIS) function internally detects movement of the image due to camera shaking and performs a digital compensation process in the DSP to stabilize the image output and reduce blurring. Select ON/OFF.

## 5. PRIVACY MASK

The mask function hides one or more areas of the scene that the user does not want to be displayed on the screen. This setting is capable of outputting 15 masks to the display. Each of these 15 masks can be set with its own display area, color, darkness and mosaic processing.

**AREA SEL** - Select mask area (1-15).

**DISPLAY** - Select to have mask ON or OFF.

**POSITION** - If display is ON, the position of the mask can be moved as needed.

**COLOR** - Sets the color of the mask. Select from:

RED/GREEN/BLUE/YELLOW/CYAN/MAGENTA/WHITE/BLACK.

**TRANSP** - Set the brightness ratio of the mask: 0%/50%/75%/100%.

**MOSAIC** - Set the mosaic to ON or OFF when transparency is less than 100%.

## 6. MOTION DET (Motion Detection)

By using the motion detection function, the camera is capable of detecting moving objects. The motion detection function identifies motion and outputs motion information when the difference in luminance exceeds a specific level between frames. Up to 4 motion detection areas can be set up.

### DETECT SENSE

Set the motion detection threshold using a sliding scale. Threshold detects the amount of change in the area. The higher the number, the more sensitive to motion the camera is.

### INTERVAL

Set the motion detection interval using the sliding scale. Subjects are detected when an interval exceeding the set number of fields has elapsed from the previous motion detection event.

### BLOCK DISP

When selected ON, motion detection frame display selections are available. Displays the results of the motion detected in each block.

### MASK AREA

This is used for setting the no-detection area. The active point (MASK AREA 1~96) is displayed. Move from point to point using the joystick. Press the joystick to select edit point (no-detection area).

## MONITOR AREA

Set the position of the motion detection area. Select the area to be set up and turn area mode ON. The size of the frame can be adjusted using the Top, Bottom, Left and Right sliding scales.

## 7. SYS SETTING

### 7-1. SYNC MODE

Select how the camera is synchronized with other cameras in the system. External synchronization (line lock) is a function that synchronizes the phase between an output video signal and an external reference signal.

#### INT

Using this mode, timing is controlled by internal electronics in the camera; synchronization is not implemented with multiple cameras.

#### LL

In Line Lock mode, LL is used to synchronize the vertical sync signal with the AC power supply with a power line frequency of 60 Hz (for the NTSC format) or 50 Hz (for the PAL format). **Line Lock is not available when using a 12 VDC power supply.** Use line lock mode to minimize color rolling.

**PHASE** -Use the sliding scale to select a value from 0 to 524.(PAL format: 624)

### 7-2. LENS

Set the lens type

**AUTO** When Auto is selected, there are further menu options.

**MANUAL** Allows manual adjustment of lens. *Do not select this option.*

#### 7-2-1. MODE

**AUTO** Adjusts the iris in accordance with the subject brightness.

**OPEN** Fully opens the iris.

**CLOSE** Fully closes the iris.

#### 7-2-2. ADJUST

When performing the automatic mechanical iris adjustments, a suitable convergence speed (how fast the lens responds) for the lens installed is calculated. View a high-brightness subject, which will make the brightness of the entire screen uniform.

-Check that the scene conditions are sufficiently bright and stable.

#### 7-2-3. SPEED

Manually sets the convergence speed for how fast the lens responds to lighting changes (autoiris).

### 7-3. FLIP

Digital Flip (rotation state) can be selected to be OFF/V (top/bottom reversal)/H (left/right reversal)/HV (rotation by 180 degrees).

### 7-4. LCD/CRT

Select monitor mode of LCD or CRT.

### 7-5. COMMUNICATION (OPTION)

This sets up communication using the RS-485 format.

**Protocol** - RS-485 protocol. (PELCO-D).

**Address** - Select the camera ID. (001 - 255).

**Baud Rate** - Select serial communication speed (2400/4800/9600/19200/38400/57600/115200).

**Databit** - Internally fixed.

**Parity** - Select OFF/ODD/EVEN. This is used to find the Bit to extract an error on the keyboard.

**Stopbit** - Internally fixed.

Key of Keyboard Controller:

**MENU** Turn joystick handle clockwise, ZOOM/TELE

**ENTER** Turn joystick handle clockwise, IRIS/CLOSE

**OSD Cursor Movement** Joystick Up / Down / Left / Right

## 7-6. CAMERA ID

Set the camera ID ON or OFF. When ON, the CAMERA ID SETUP screen can be displayed.

A title of 64 characters per line can be configured.

Use the joystick to navigate the cursor.

Pushing centrally on the joystick will allow selection of that character.

The arrows at the bottom allow you to move the cursor without changing the character.



### CHR1

Select CHR1 is displayed Table of input Characters.

### CHR2

Select CHR2 is displayed Table of input White Bar.

### CLR

Select CLR to insert a space.

### POS

Select POS to return to the live view screen to adjust the location of the camera ID title display. (If it is moved too much to the right side or down, the ID might move off the screen.)

## 8. EXIT-MENU

**SAVE** Save the settings (settings are saved).

**NOT SAVE** Exit menu without saving.

**CANCEL** Changes (restore settings to those selected when the menu was displayed).

**BACK** Return to previous menu.

## 9. LANGUAGE

Select a language from English, Spanish, Russian, Portuguese, German, French, or Japanese.

## 10. VERSION

Camera version information is displayed.

## 11. MAINTENANCE

### W.PIX MASK

The white pixel detection and compensation function can automatically detect and compensate up to 64 white pixels (static detection). It is recommended that this be set to Auto and not modified.

### AUTO

Auto mode performs the optimal operation for detecting white pixels and automatically detects the white pixels of CCD image sensors.

### LEVEL1 - Normal Defect

Adjust the threshold value of the white pixel detection using the sliding scale.

### LEVEL2 - Large Defect

Adjust the threshold value for very large white pixel detection.

**AUTO** Press joystick to select White Pixel Compensation mode.

**RUN** Press joystick to start White Pixel Compensation.

**RUNNING** Process to find white pixels.

**SBC SUCCESS** Process complete.

**BACK** Process complete.

## MANUAL

### - REGISTRATION

Manual white pixel defect information registration

- 1) Press the joystick to turn on white pixel compensation position marker display.
- 2) Use the joystick to align the marker with the position of the white pixel.
- 3) Press the joystick to exit and select EXIT to save.

**NOTE:** In manual detection mode, the detection data is always treated as a very large white pixel. Up to 64 white pixel detections are available.

### - NEXT REGISTRATION

Continue with manual white pixel compensation settings

### - REG. POINT

Selects whether to display the registered White or Black pixels(OFF/WHITE/BLACK).

### - CURSOR COLOR

Select cursor color during manual detect registration (white, black, red, green, blue).

### - BLINK

Select to have cursor display blinking during manual detect registration (ON/OFF).

### - REG.NUMBER

The number of registered white pixel detect counts (out of 64).

## DATA CLEAR

Initialize the white pixel compensation information. Select Yes or No.  
To erase white pixel data, select YES.

## CAMERA RESET

Select Camera Reset or Back. Selecting Camera Reset returns camera to factory default settings. Choosing Back returns to the previous menu.

## <ADVANCED MENU>

### 12. SHUTTER/ AGC

AEME (Auto Exposure/Manual Exposure) selection (shutter/AGC).

This control adjusts the exposure amount using the shutter speed.

#### 12-1. AUTO

Select to perform exposure control automatically.

#### AE LEVEL (Auto Exposure Level)

Set the AE level using the sliding scale. Set exposure control so that the output level (evaluation value) is the target brightness level (AE reference level). This control is called AE gain control.

#### AGC MAX

Set the AGC (Auto Gain Control) maximum setting to adjust brightness.

This control adjusts the exposure amount.

#### SENS UP (Slow Shutter)

Adjust the proper brightness in low-light conditions. Select the setting for slow shutter speed to allow extra light into the camera (AUTO or OFF). Select Auto to have the camera automatically make this adjustment. Select Off to disable this function.

#### 12-2. MANUAL

Select to perform exposure control manually.

#### SHUTTER

Select the shutter speed.

#### AGC MAX

Set the maximum AGC (Automatic Gain Control, DB) to adjust brightness.

#### 12-3. FIX

Exposure control does not track even if the subject brightness changes.

### 13. WHITE BAL

Compensate for deviations in the white color caused by changes in the color temperature of the light source, so that the colors are reproduced correctly.

#### ATW - ATW mode (1800°K ~10500°K)

Performs indoor/outdoor identification, estimates the light source, and performs WB control automatically.

**SPEED** Use the sliding scale to adjust the ATW speed (0-255); 255: fastest, 0: slowest.

**DELAY CNT** Use the sliding scale to adjust the number of fields for operation to start (1-255) When 1 is set, operation starts immediately.

**ATW FRAME** Use the sliding scale to adjust the frame expansion or contraction rate (1-255).

**ENVIRONMENT** Select from AUTO/INDOOR/SUNNY (outdoor)/SHADE (outdoor) environment.

#### PUSH

The PUSH function performs White Balance control automatically, regardless of the indoor/outdoor and light source conditions. Compensation may be performed incorrectly since this control is easily affected by deeply colored subjects.

## USER1

The USER1 functions set the White Balance gain in accordance with preset values (3200°K). WB control does not track even if the subject color temperature changes.

Use the sliding scale to adjust red and blue gain.

R (R-GAIN): Adjust R-GAIN value (0-255)

B (B-GAIN): Adjust B-GAIN value (0-255)

## USER2

The USER2 functions set the White Balance gain in accordance with preset values (5800°K). WB control does not track even if the subject color temperature changes.

Use the sliding scale to adjust red or blue gain.

R(R-GAIN):Adjust R-GAIN value (0-255)

B(B-GAIN):Adjust B-GAIN value (0-255)

## MANUAL

Manual White Balance allows WB control to be performed manually. The configurable color temperature setting range is 1500K to 15000K. Use the sliding scale to set the number of white balance steps; the setting can be performed in 64 steps.

## PUSH LOCK

PUSH LOCK sets the White Balance based on the current scene. The PUSH LOCK function first transfers to PUSH mode and performs ATW operation and then transfers to HOLD mode when complete.

## 14. HLC/BLC

### HLC (Highlight Compensation)

HLC luminance signal processing is a function that suppresses (masks) the luminance signal. It enhances visibility impaired by strong light sources or other factors by performing output while suppressing the brightness of high-brightness areas.

**CLIP LEVEL** Use the sliding scale to set the HLC mask level for optimum brightness.

### BLC (Backlight Compensation)

The BLC function provides compensation by increasing the brightness of the overall scene, so that subjects with a loss of dark detail due to backlight will have the right brightness level.

## 15.ATR-EX

The ATR (Adaptive Tone Reproduction) function provides gradation compensation to improve the contrast of subjects whose gradation has been lost in a scene, for example due to low-luminance and high-luminance areas existing in the same picture. The ATR function improves the visibility of the entire picture by providing the optimum gradation compensation for the image based on the luminance information, by compressing the dynamic range while restoring the contrast component of the subject.

Select ON or OFF. Selecting ON provides the following settings.

**CONTRAST(LOW/MID/HIGH)** Contrast adjustment gain

**CLEAR FACE(OFF/ LOW/MID/HIGH)** High-frequency component adjustment gain

## 16. DNR

Digital Noise Reduction is used to remove image noise, which is generated under low-light conditions and other high-gain states, in order to improve the image quality of the camera.

**LEVEL** Adjusts the NR (3D+2D) strength(0~6) using the sliding scale.

## 17. DAY/NIGHT Select from AUTO, DAY or NIGHT

**17-1 AUTO** Camera automatically switches between Day and Night modes according to the D>N and N>D levels.

**BURST:** Select B/W Burst ON/OFF.

**CNTL SIGNAL:** Select a brightness reference for identifying Day/Night Control Signal.

**INT** Internal AGC (ILM) levels.

**EXT1** External sensor inverting.

**EXT2** External sensor non-inverting.

- Ext: Camera switches between Day and Night modes according to the D/N EXT input.

**Delay CNT:** Adjust the time for the transition between the Day and Night (0-255).

**DAY>NIGHT Level** Select switching level Day to Night (0-255).

**NIGHT>DAY Level** Select switching level Night to Day (0-255).

**DAY:** Camera stays in Day mode (Color).

**NIGHT:** Camera stays in Night mode (B/W).

## 18. IR OPTIMIZER (Option)

When the Night operation mode of the Day/Night function is established, and is used together with an external infrared LED light source, excessive front lighting may be generated, resulting in overexposure. IR Optimizer can be set ON to correct this.

### 18-1. IR OPTIMIZER SETUP

#### MODE

Select IR optimizer photometry mode, Auto or Center.

#### IR AREA

Set the IR optimizer area when in Center mode. Select values for top, bottom, left, right and weight using the sliding scales.

#### LEVEL

Use the sliding scale to set the IR optimizer intensity (0~12).

#### IR LED (IR Model only)

**OFF** LED light level is LOW

**FIX** Adjust LED light level (0~255).

**DAY/NIGHT** LED light level determinate AE reference level

#### COLOR NIGHT

The Color Night Mode (CNM) function allows images to be taken as color images even with infrared LED floodlighting under low-brightness conditions.

This camera features a function that achieves both improved sensitivity and the ability to reproduce colors under infrared LED floodlighting using signal processing that separates the infrared LED light components from the images taken and extracts the original colors of the subject. This function takes effect during Night operations. Select ON or OFF.

**COLOR GAIN** LOW/MID/HIGH

#### IR SHADE COMP (IR Model only)

The IR-SHD function compensates for observable events in which the light passing through the lens is imaged non-uniformly.

Shading function ON/OFF selection.

#### PATTERN

Selects the shape of the ellipse (HIGH/MID/LOW).

#### POSH/POSV

Use the center coordinate settings to adjust the shading compensation to the center position of the optical axis.

#### LEVEL

The compensation level can be set to low, medium or high for basic shading compensation data.

## 19. LENS SHD COMP

The Lens Shade function compensates when the lens produces an image with uneven brightness, with the corners being less bright. Select ON or OFF. If ON is selected, more options are provided.

### **PATTERN**

When the camera views a white image, the brightness is marked as a shape (i.e., ellipse or rectangle). Select (LOW-SET1/MID-SET2/HIGH-SET3), where low is a little compensation and high is maximum compensation to the brightness of the corners of the image.

### **POSH / POSV**

Use the center coordinate settings to adjust the shading compensation to the center position of the optical axis.

## 20. DEFOG

Select Defogging function to be ON or OFF. The defog function raises the contrast to improve visibility. For example, in foggy conditions, contrast is reduced and visibility drops. In such cases, enabling the defog function prevents a drop in contrast. In addition to compensating for contrast, compensation is also made for the saturation, edges, and 3D-NR moving body identification threshold. The defog compensation strength can be set to three levels (Low, Mid, High) using the ON function.

## 21. FLK LESS

Select Flickerless function to be AUTO/ON/OFF.

**MODE** (when AUTO or ON is selected), select either:

**GAIN CNTL** Selects gain modulation ON.

**SHUTTER FIX** Selects flickerless shutter fix ON.

## 22. ANTI CR (Anti Color-Rolling)

Anti color-rolling mode is available when the AEME parameter is set to AE. When that parameter is set to HOLD, the status of the previous field is maintained. Anti color-rolling compensates for proper color in certain lighting conditions.

Users can select from the following anti color-rolling modes:

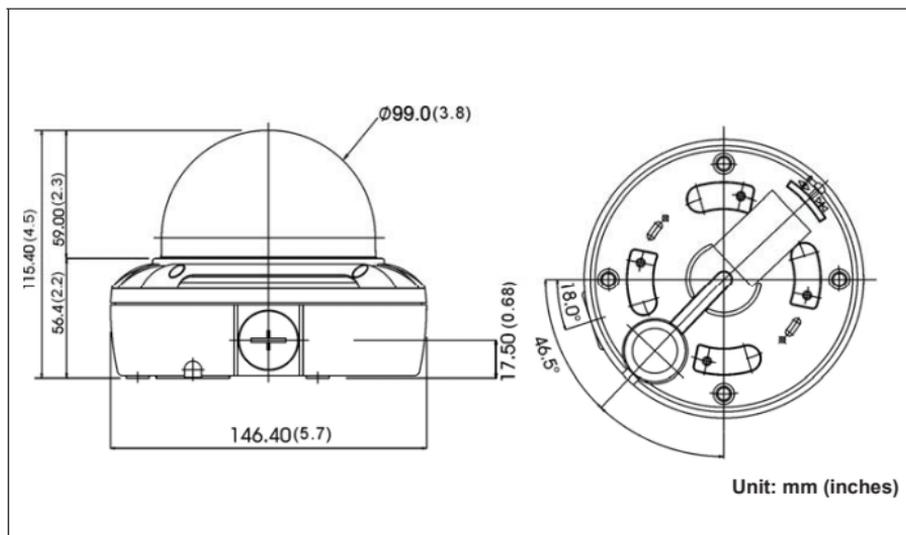
**AUTO** Anti color-rolling is automatically detected and compensation is done.

**ON** Anti color-rolling is always compensating.

**OFF** Anti color-rolling is not compensating.

If the Auto anti color-rolling mode is selected, then the Auto flickerless mode is turned on at the same time.

# EXTERNAL DIMENSION



<p><b>Window Size</b></p>	<p>0.1 in. (3.0 mm thick), impact-resistant polycarbonate 3.9 in. (99 mm) diameter</p>
<p><b>Cable Entry</b></p>	<p>One 1" hole opening</p>
<p><b>Weight - Unit:</b> <b>Shipping:</b></p>	<p>1.7 lb (760 g) 2.11 lb (960 g)</p>

# Technical Information

MODEL		V661V-312IR-1	V661V-312IR-1-P	
Power	Power source	DC12V / AC24V +/- 10% (Option)		
	Power consumption	AC24V / DC12V - 180mA(2.2W) DC12V - 170mA (2.1W)		
General	Image sensor	1/3" Super-HADII 960H CCD		
	Total pixels	1028(H)x508(V)	1028(H)x596(V)	
	Effective pixels	976(H)x494(V)	976(H)x582(V)	
	Scanning system	2:1 interlace		
	Scanning frequency	15.734KHz(H) x 59.94Hz(V)	15.625KHz(H) x 50Hz(V)	
	Sync. system	Internal / Line Lock (Option)		
	Resolution	750TVL		
	Min. illumination	0.1 Lux(Color), 0.01 Lux(B/W), 0.001Lux(Slow-shutter)		
	Video Output	1.0 Vp-p (75 ohm, Composite)		
	S/N Ratio	50dB (AGC off)		
	Camera Control	Tact Switch, Coaxial COMM (32BIT), RS485 (Pelco D)		
	F U N C T I O N	Lens	DC / MANUAL	
		Scene Select	CUSTOM / FULL AUTO / INDOOR / OUTDOOR / BACKLIGHT / ITS	
		White Balance	ATW/ PUSH/ USER1/ USER2/ MANUAL/ PUSH LOCK	
		AGC	6~44.8DB	
		Shutter Speed	1/60-1/100,000 sec. (Auto)	1/50-1/100,000 sec. (Auto)
		BLC	OFF / HLC / BLC	
		Camera Title	Alpha Numeric	
		DNR	2DNR, 3DNR: Gain Adjust	
		Day & Night	Auto / Day / Night	
		IR Optimizer	OFF / ON	
		Color Night	OFF / ON	
		Privacy zone	Max 15 (Tilt, Color, Transparency, Mosaic)	
Effect		V-Flip / Mirror / Rotation / Nega&Posi / Freeze / Sharpness		
Sens-up		OFF / AUTO		
Sharpness		0~15 steps		
D.WDR		OFF / ATR-EX (LOW/MID/HIGH)		
E-Zoom		OFF / 0 ~ x255(E-Zoom) / PAN/TILT		
Bad Pixel	AUTO/MANUAL/Done (Max 64 point), Detected pixel display			
MOTION	Detect Sense/Interval/Block DISP/Mask Area/Monitor Area			
Auto-color-roling	Auto / ON / OFF			
LANGUAGE	English, Spanish, Russian, Portuguese, German, French, Japanese (OPTION)			
Connector & etc.	Power input	2P WIRE / Terminal block (Option)		
	Video output	BNC connector		
	Lens	f=2.8~12mm F1.4~360 Varifocal, ICR (D&N)		
	Lens Mount	Fixed Mount		
	Operating temp.	14°F ~ 122°F (-10°C ~ +50°C)		
	Operating humidity	0 ~ 90% (non-condensing)		
	External Dimension	5.7 in. (146.4mm) (W) x 4.5 in. (113.3mm) (H)		
Weight	1.67 lb (760g)			

## ● IR CAMERA TYPE

Power	Power consumption	AC24V / DC12V - 440mA(5.2W - IR LED ON) DC12V - 430mA(5.1W - IR LED ON)
	Min. illumination	0.1 Lux(Color), 0 Lux(B/W) IR LED ON @ F1.2, 50IRE
General	IR LED / Sensor	IR LED 30EA (850 nm / 76degree), Sensor 1EA
	LED Lighting Distance	30M(98ft)
Etc.	Weight	1.70lb(775g)

# Shipping Instructions

Use the following procedure when returning a unit to the factory:

1. Call or write Vicon for a Return Authorization (R.A.) at one of the locations listed below. Record the name of the Vicon employee who issued the R.A.

Vicon Industries Inc.  
135 Fell Court  
Hauppauge, NY 11788  
Phone: 631-952-2288; Toll-Free: 1-800-645-9116; Fax: 631-951-2288

For service or returns from countries in Europe, contact:

Vicon Industries (U.K.) Ltd  
Brunel Way  
Fareham, PO15 5TX  
United Kingdom  
Phone: +44 (0)1489/566300; Fax: +44 (0)1489/566322

2. Attach a sheet of paper to the unit with the following information:
  - a. Name and address of the company returning the unit
  - b. Name of the Vicon employee who issued the R.A.
  - c. R. A. number
  - d. Brief description of the installation
  - e. Complete description of the problem and circumstances under which it occurs
  - f. Unit's original date of purchase, if still under warranty
3. Pack the unit carefully. Use the original shipping carton or its equivalent for maximum protection.
4. Mark the R.A. number on the outside of the carton on the shipping label.

# Vicon Standard Equipment Warranty

Vicon Industries Inc. (the "Company") warrants your equipment to be free from defects in material and workmanship under Normal Use from the date of original retail purchase for a period of three years, with the following exceptions:

1. IQEYE Cameras: Two years if purchased before 1/1/2011.
2. IQEYE Cameras: Five years if purchased between 1/2/2011 – 12/31/2014.
3. Uninterruptible Power Supplies: Two years from date of original retail purchase.
4. VDR-700 Recorder Series: One year from date of original retail purchase.
5. V5616MUX: One year from date of original retail purchase.
6. Arecont Cameras: One year from date of original retail purchase.
7. FMC series fiber-optic media converters and associated accessories: Lifetime warranty.
8. For PTZ cameras, "Normal Use" excludes prolonged use of lens and pan-and-tilt motors, gear heads, and gears due to continuous use of "autopan" or "tour" modes of operation. Such continuous operation is outside the scope of this warranty.
9. Any product sold as "special" or not listed in Vicon's commercial price list: One year from date of original retail purchase.

## NOTE:

- If the product is to be used outdoors or in dusty, humid, or other hostile environments, it must be suitably protected.
- Camera products must be protected, whether in use or not, from exposure to direct sunlight or halogen light as the light may damage the camera image sensor. This applies to both indoor and outdoor use of the cameras.
- For camera products supplied without a lens, extreme care should be used when mounting a lens on these products. Damage to the product due to incorrectly mounted lenses will invalidate this limited hardware warranty.
- Failure to comply with any of the aforementioned requirements will invalidate this Limited Hardware Warranty.

Date of retail purchase is the date original end-user takes possession of the equipment, or, at the sole discretion of the Company, the date the equipment first becomes operational by the original end-user.

The sole remedy under this Warranty is that defective equipment be repaired or (at the Company's option) replaced, at Company repair centers, provided the equipment has been authorized for return by the Company, and the return shipment is prepaid in accordance with policy. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer. When a product or part is exchanged the replacement hardware becomes the property of the original purchaser and all hardware or part thereof that is replaced shall become the property of Vicon.

The warranty does not apply (a) to faulty and improper installation, maintenance, service, repair and/or alteration in any way that is not contemplated in the documentation for the product or carried out with Vicon consent in writing, operation adjustments covered in the operating manual for the product or normal maintenance, (b) to cosmetic damages, (c) if the product is modified or tampered with, (d) if the product is damaged by acts of God, misuse, abuse, negligence, accident, normal wear and tear and deterioration, improper environmental conditions (including, but not limited to, electrical surges, water damage, chemical exposure, and/or heat/cold exposure) or lack of responsible care. € if the product has had the model or serial number altered, defaced or removed, (f) to consumables (such as storage media or batteries) (g) to products that have been purchased "as is" and Vicon the seller or the liquidator expressly disclaim their warranty obligation pertaining to the product, (h) to any non-Vicon hardware product or any software (irrespective of packaged or sold with Vicon hardware product) and Vicon products purchased from an unauthorized distributor/reseller, (i) to damage that occurs in shipment or (j) to damages by any other causes not related to defective design, workmanship and/or materials.

The warranty for the products shall run from Vicon to End User customers only (including product purchased through authorized partners and resellers). Vicon is not obligated under any circumstances to honor warranties on product(s) purchases from internet auction sites including eBay, uBid or from any other unauthorized resellers. Except as explicitly provided herein, Vicon disclaims all other warranties, including the implied warranties of fitness for a particular purpose and merchantability.

**Software supplied either separately or in hardware is furnished on an "As Is" basis. Vicon does not warrant that such software shall be error (bug) free. Software support via telephone, if provided at no cost, may be discontinued at any time without notice at Vicon's sole discretion. Vicon reserves the right to make changes to its software in any of its products at any time and without notice.**

The Warranty and remedies provided above are exclusive and in lieu of all other express or implied warranties including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose. Certain jurisdictions do not allow the exclusion of implied warranties. If laws under such jurisdictions apply, then all express and implied warranties are limited to the warranty period identified above. Unless provided herein, any statements or representations made by any other person or firm are void. Except as provided in this written warranty and to the extent permitted by law, neither Vicon nor any affiliated shall be liable for any loss, (including loss of data and information), inconvenience, or damage, including, but not limited to, direct, special, incidental or consequential damages, resulting from the use or inability to use the Vicon product, whether resulting from breach of warranty or any other legal theory. Notwithstanding the foregoing, Vicon total liability for all claims under this warranty shall not exceed the price paid for the product. These limitations on potential liabilities have been an essential condition in setting the product.

No one is authorized to assume any liability on behalf of the Company, or impose any obligations on it in connection with the sale of any Goods, other than that which is specified above. In no event will the Company be liable for indirect, special, incidental, consequential, or other damages, whether arising from interrupted equipment operation, loss of data, replacement of equipment or software, costs or repairs undertaken by the Purchaser, or other causes.

This warranty applies to all sales made by the Company or its dealers and shall be governed by the laws of New York State without regard to its conflict of laws principles. This Warranty shall be enforceable against the Company only in the courts located in the State of New York.

The form of this Warranty is effective February 1, 2015.

**THE TERMS OF THIS WARRANTY APPLY ONLY TO SALES MADE WHILE THIS WARRANTY IS IN EFFECT. THIS WARRANTY SHALL BE OF NO EFFECT IF AT THE TIME OF SALE A DIFFERENT WARRANTY IS POSTED ON THE COMPANY'S WEBSITE, [WWW.VICON-SECURITY.COM](http://WWW.VICON-SECURITY.COM). IN THAT EVENT, THE TERMS OF THE POSTED WARRANTY SHALL APPLY EXCLUSIVELY.**

Vicon Part Number: 8006-9010-03-11 Rev 0215

**Vicon Industries Inc.**

**Internet Address: [www.vicon-security.com](http://www.vicon-security.com)**



**V661V-312IR-1(-P)**

---

Rev.A