



**VK2-HDX20-SMW**

*Please read this manual thoroughly before use and keep it handy for future reference.*

# 1 Introduction

The VK2-HDX20-SMW is a full HD H265 Vandal Resistant 20:1 zoom lens PTZ dome. It support alarm inputs and outputs and 2 way audio.

The Dome can be powered via PoE or a separate 12VDC or 24VACpower supply

## 1.1 Components

This system comes with the following components;

* Dome Camera .....	1
* Installation Guide/CD .....	1
* Template Sheet .....	1
* Mounting Bracket .....	1
* Safety Lanyard .....	1
* Accessory Kit .....	1
1) Mounting screws (PH6 x 35.0).....	(4)
2) Plastic anchors .....	(4)
3) O-Rings .....	(4)
* Accessory Connector .....	1
1) 2-Pin Terminal Block .....	(3)
2) 3-Pin Terminal Block .....	(2)
* RJ-45 Waterproof Cover .....	1

**NOTE: Check your package to make sure that you received the complete system, including all components listed above.**

**NOTE: 12VDC/24VAC PSU is not included.**

## 1.2 Key Features

- **Excellent video quality**

The network camera offers the highly efficient H.265 video compression, which drastically reduces bandwidth and storage requirements without compromising image quality. H.264 and Motion JPEG is also supported for increased flexibility.

- **Quad Streams**

The network camera can deliver quad video streams simultaneously using H.265/H.264 and Motion JPEG. This means that several video streams can be configured with different compression formats, resolutions and frame rates for different needs.

- **Intelligent video capabilities**

The network camera includes intelligent capabilities such as enhanced video motion detection. The network camera's external inputs and outputs can be connected to devices such as sensors and relays, enabling the system to react to alarms and activate lights or open/close doors.

- **Improved Security**

The network camera logs all user access, and lists currently connected users. Also, its full frame rate video can be provided over HTTPS.

- **PoE (Power over Ethernet)**

This network camera can be powered through PoE (IEEE 802.3af), which simplifies installation since only one cable is needed for carrying power, as well as video controls.

- **ONVIF Certificate**

This is a global interface standard that makes it easier for end users, integrators, consultants, and manufacturers to take advantage of the possibilities offered by network video technology. ONVIF enables interoperability between different vendor products, increased flexibility, reduced cost, and future-proof systems.

- **Micro-SD Recording support**

The network camera also supports a Micro-SD memory slot for local recording with removable storage of type SDHC and SDXC.

- **Audio support**

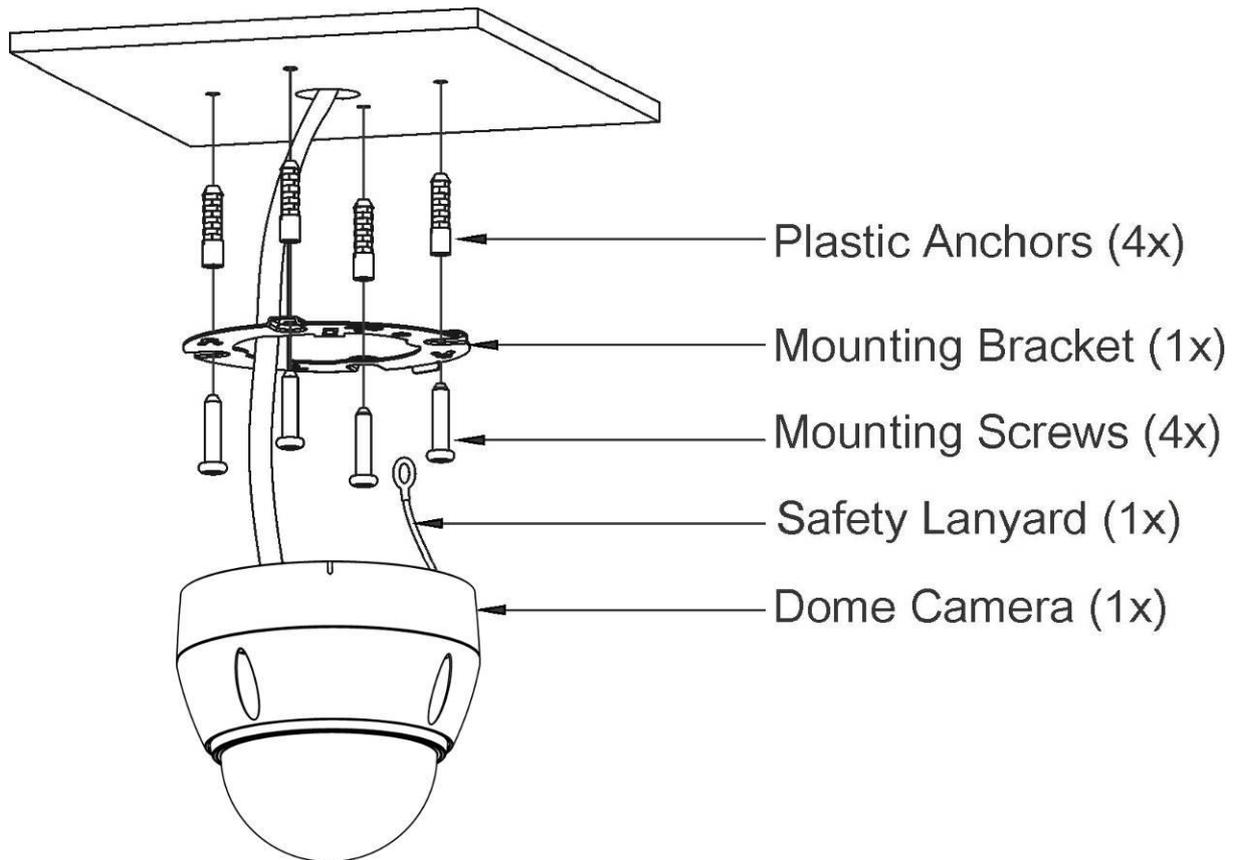
The network camera also supports two-way audio.

## 2 Installation

### 2.1 Mounting the Dome Camera

The dome camera is for use in surface or pendent mounting applications, and the mounting position must be capable of supporting loads of up to 4.5 kg. (Pendent mounting must use pendent mount accessory.)

The dome camera's mounting bracket should be attached to a structural object, such as hard wood, wall stud or ceiling rafter that supports the weight of the dome camera.



**CAUTION: A silicone rubber sealant must be applied to seal the housing to secure waterproofing.**

**CAUTION: Please reset the camera after 30 ~ 60 minutes when installing it in situations colder than -10°C.**

#### 2.1.1 Locking the Dome Camera

1. Make screw holes on the ceiling using the supplied mounting Template Sheet (Figure A).
2. Fix the Mounting Bracket to the ceiling using supplied Anchors (4x) and Mounting Screws (4x) (Figure B).
3. Hook up the Safety Lanyard to the Safety Lanyard Hook of the Mounting Bracket (Figure C).
4. Align the locking tab on the bracket and the locking slot on the base of the dome (Figure D).
5. Turn the dome to the counterclockwise about 10 degree to the locked position (Figure E).

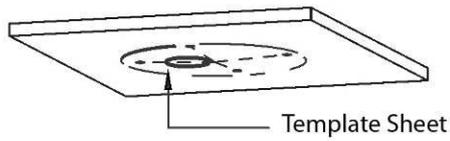


Figure A

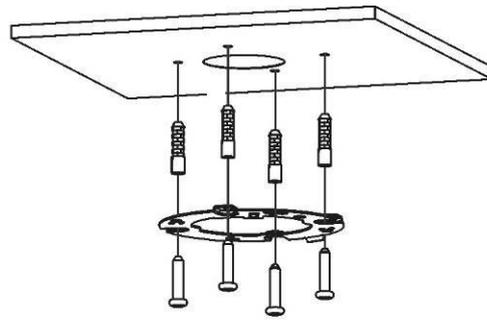


Figure B

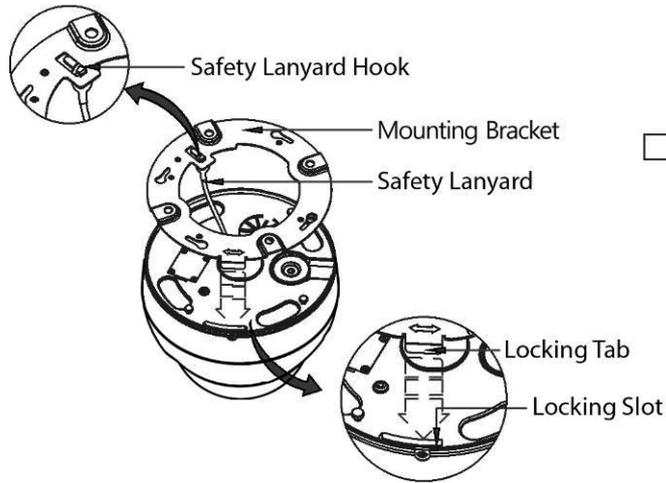


Figure C

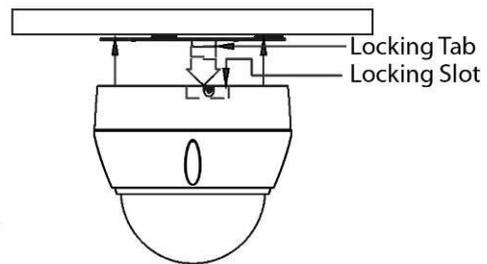


Figure D

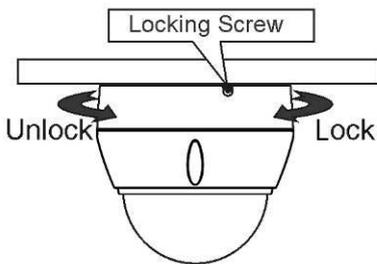


Figure E

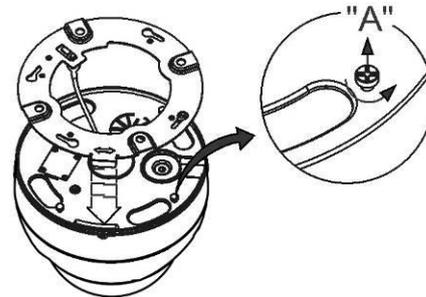
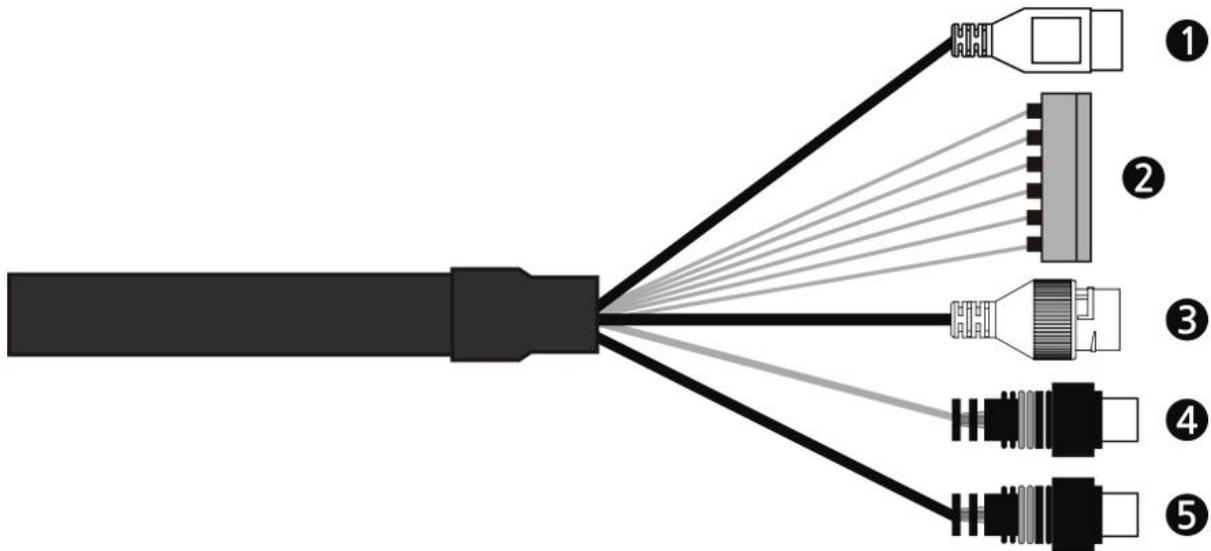


Figure F

**CAUTION:** Before installing mounting bracket to surface pre-adjust the four mounting screws "A" on the base of the dome camera to best match the mounting bracket locked position. Unscrew the locking screw on the side of the dome's base and fit the tab of the mounting bracket into the locking slot. Screws "A" should not be too tight or too loose when the dome is in the locked position. After setting the proper positions of screws "A" remove the mounting bracket and install it to the proper surface. If it is too difficult to lock the dome in position after the mounting bracket has been installed readjust the screws "A" by unscrewing them a small amount and try to install dome camera again.

## 2.2 Basic Configuration of Dome Camera System

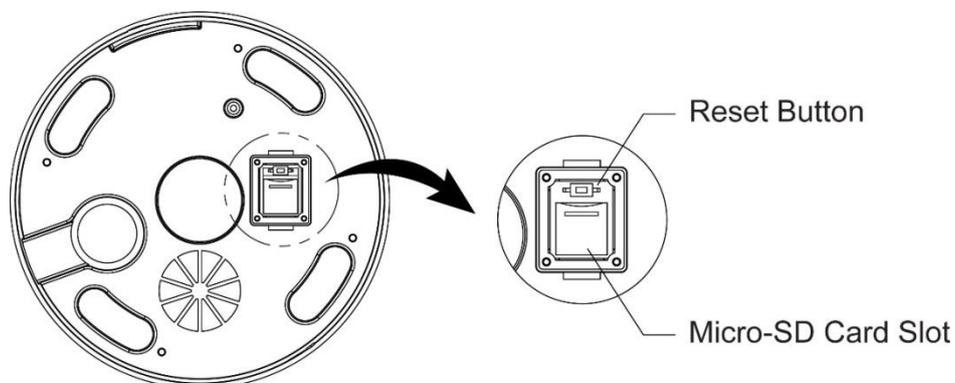


No.	Type	Description
1	3-PIN TERMINAL BLOCK	CAMERA POWER (12VDC, 24VAC)
2	6-PIN TERMINAL BLOCK	A1: ALARM INPUT 1
		A2: ALARM INPUT 2
		A3: ALARM INPUT 3
		A4: ALARM INPUT 4
		G: GND
		AO: ALARM OUTPUT
3	RJ-45	ETHERNET
4	RCA BLACK	AUDIO INPUT
5	RCA GRAY	AUDIO OUTPUT

The camera must be installed by qualified service personnel in accordance with all local and federal electrical and building codes.

## 2.3 Resetting to the factory default settings

To reset the network camera to the original factory settings, go to the Setup > System > Maintenance web page (described in “System > Maintenance” of User Manual) or use the **Reset** button on the network camera, as described below:



### • Using the Reset button:

Follow the instructions below to reset the network camera to the factory default settings using the Reset button.

1. Switch off the network camera by disconnecting the power adapter.
2. Open the Micro-SD card cover.
3. Press and hold the Reset button on the board with your finger while reconnecting the power.
4. Keep the Reset button pressed for about 2 seconds.
5. Release the Reset button.
6. The network camera resets to factory defaults and restarts after completing the factory reset.
7. Close the Micro-SD card cover tightly to ensure waterproofing.

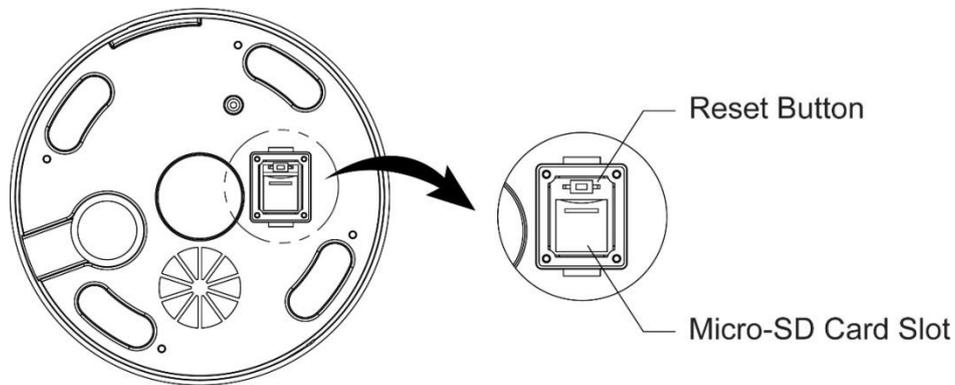
**CAUTION:** When performing a Factory Reset, you will lose any settings that have been saved.  
(Default IP 192.168.30.220)

## 2.4 Connections

### • Micro-SD Card Insertion

User can install and change Micro-SD card as shown in the following picture.

1. Open the Micro-SD card cover.
2. Install or change Micro-SD card.
3. Close the Micro-SD card cover tightly to ensure waterproofing.



### • Connecting to the RJ-45

Connect a standard RJ-45 cable to the network port of the camera. Generally a crossover cable is used for directly connection to PC, while a direct cable is used for connection to a hub.

### • Connecting Alarms

#### – A1,A2,A3,A4 (Alarm Input 1,2,3,4)

You can use external devices to signal the camera to react on events. Mechanical or electrical switches can be wired to the A1,A2,A3,A4 (Alarm Input 1,2,3,4) and G (Ground) connectors.

#### – G (Ground)

**NOTE: All the connectors marked G or GND are common.**

Connect the ground side of the alarm input and/or alarm output to the G (Ground) connector.

#### – AO (Alarm Output)

The camera can activate external devices such as buzzers or lights. Connect the device to the AO (Alarm Output) and G (Ground) connectors.

### • Connecting Audio

Connect speaker to audio output line and external mic to audio input line.

### • Connecting the Power

Connect power of 12VDC or 24VAC for the camera.

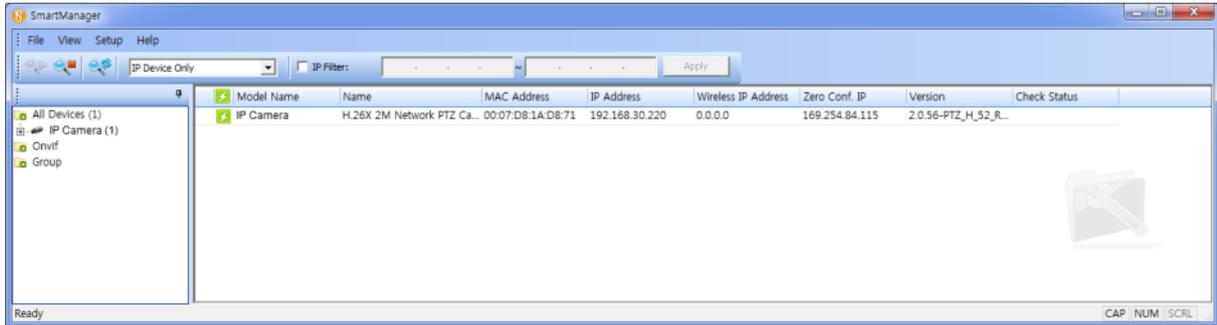
Connect the positive (+) pole to the '+' position and the negative (-) pole to the '-' position.

- Be careful not to reverse the polarity when you connect the power cable.
- You can also use a router featuring PoE (Power over Ethernet) to supply power to the camera.

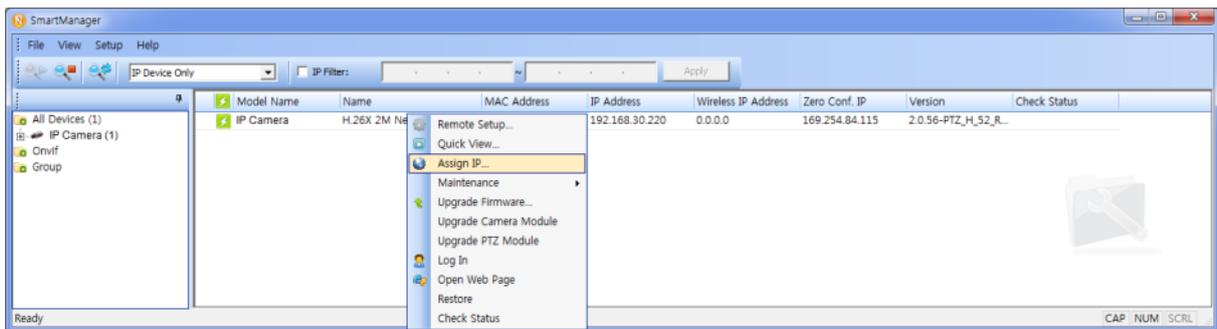
## 2.4.1 Network Connection & IP Assignment

The camera supports the operation through the network. When a camera is first connected to the network, it is necessary to allocate an IP address to the device with the SmartManager utility on the CD. (Default IP 192.168.30.220)

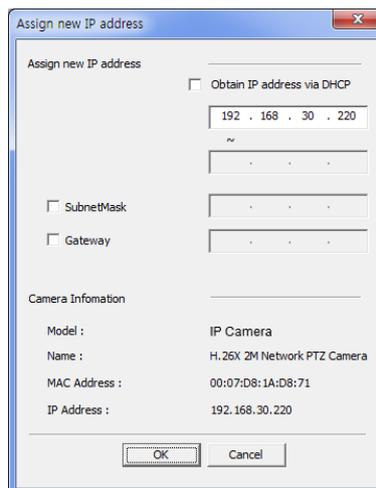
- 1) Connect the network camera/device to the network and power up.
- 2) Start SmartManager utility (Start > All programs > SmartManager > SmartManager).  
The main window will display, and after a short while any network devices connected to the network will be displayed in the list.



- 3) Select the camera on the list and click right button of the mouse. You can see the pop-up menu as below.

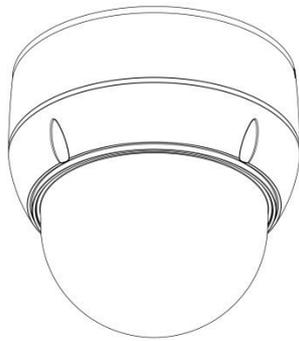


- 4) Select Assign IP Address. The Assign IP window will display. Enter the required IP address.



**NOTE:** For more information, refer to the SmartManager User Manual.





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Rev.A