

VANDAL-PROOF & WATERPROOF WDR IR D&N 3-AXIS DOME CAMERA SK-V251IR(D)/MP22AI MANUAL



PRECAUTION

1. You can install the camera indoors or outdoors.
2. Choose an ideal location for the camera, since a camera unit must be protected against vibration.
3. Be careful not to scratch the camera unit, especially lens or dome cover.
4. Use the camera within the temperature(-10°C ~ +50°C).
5. Avoid any direct sun light toward the lens.
6. Use the AC adaptor 12V DC, 1A regulated.
Dual voltage product can use 24V AC, 1A adaptor.(option)



If the product is to be put out of operation definitively, take it to a local recycling plant for a disposal which is not harmful to the environment.

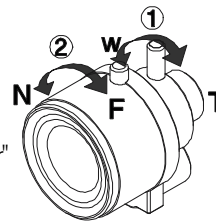
FEATURES

1. IP67(Waterproof)
2. Durable MATERIAL : Body – Aluminum, Dome – Polycarbonate
3. This camera is incredibly flexible to install with its 3-axis camera construction, which makes the camera ceiling, wall or slope mountable.
4. 25M range visible in total darkness with 24pcs of IR LEDs.
5. Mechanical filter exchange(True Day & Night), built-in WDR function.
6. Adopted DNR technology, It reduces noise efficiently in low light condition.
7. SupremeResolution.(690 TV-Line)
8. Multi-language full OSD support.

HOW TO INSTALL

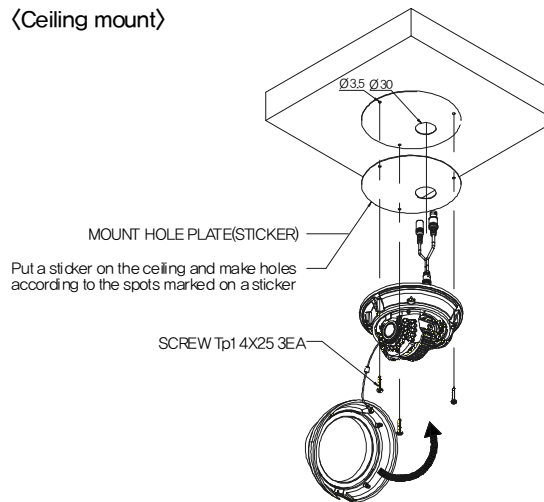
1. Camera installation

- (1) Fix the camera set with the supplied screws on ceiling or wall mount.
If you don't use supplied screws, the camera may fall off.
- (2) Please refer to '3. Camera angle adjustment' regarding adjust camera angle.
- (3) Lens adjustment(Vari-focal Lens only)
After opening the LED cover,
① By turning the "Tele-Wide" knob, you can access a range of focal lengths within specified limits.
② Since then, by turning the "Near-Far" knob, you can set the focus toward the wanted object.
- (4) Re-assemble the camera.

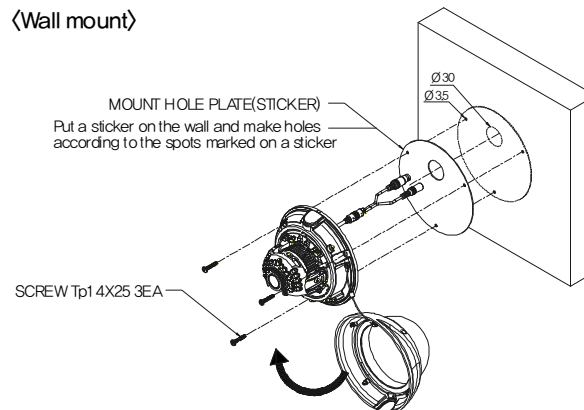


⚠️ **Caution** To avoid scratching the dome cover please leave the protective film on until the dome is safely installed.

⚡ Ceiling mount

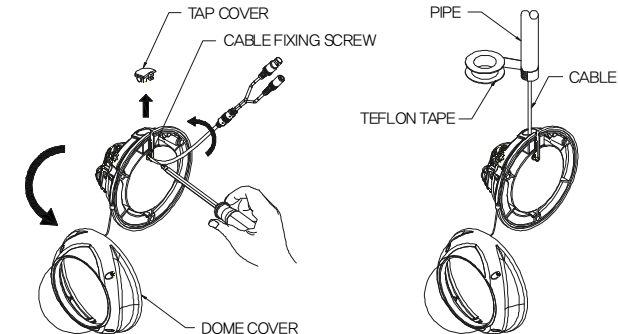


⚡ Wall mount



2. Pipe application

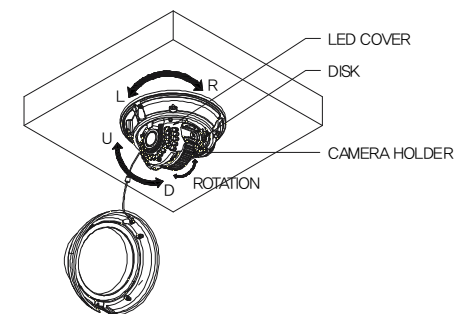
- (1) Remove the screw for fixing a cable on the bottom of the base.
 - (2) Open the DOME COVER.
 - (3) Remove the TAP COVER and place the cables there.
 - (4) After distributing cables, use the TEFLON tape to wipe the pipe.
 - (5) Combine the pipe to the base.
- ⚠️ **Caution** If you don't wipe TEFLON tape on pipe, it might cause troubles on water-resistant.



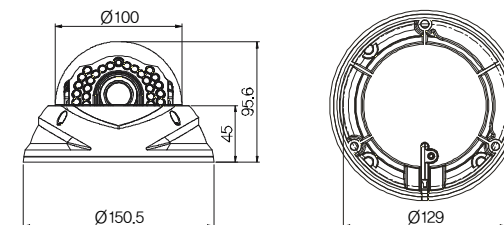
3. Camera angle adjustment :

- (1) Pan adjustment : Grasp the disk of camera and then adjust direction to the right or left(-160° ~ 190°)
- (2) Tilt adjustment : Grasp the LED cover of camera and then adjust direction to the up or down(6° ~ 90°)
- (3) Roll adjustment : Grasp the camera holder and then rotate (-178° ~ 178°)

⚠️ **Caution** If you try to adjust the camera out of limited angle, it might cause troubles and damage to camera.



DIMENSION

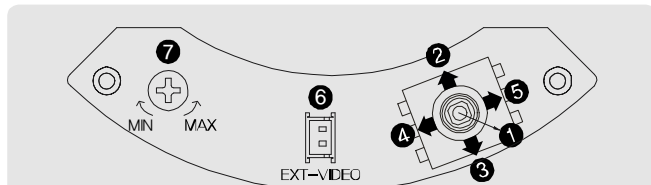


SPECIFICATION

Model No.	SK-V251IR/MP22AI	SK-V251IRD/MP22AI
Image Sensor	1/3" PIXIM DPS SENSOR – SEAWOLF	
Effective Pixel	758(H) X 540(V) PIXEL	
Resolution	690 TV– Line	
TV Type	NTSC / PAL	
Sync. Type	Internal	Internal / External
Scanning System	Progressive scan	
Video Output	1.0 Vp–p(Sync, Negative) Termination 75Ω ±10%	
Gamma Characteristic	γ = 0.45(Selectable)	
White Balance	ATW / AWC / MANUAL(2,000 ~ 11,000°K)	
Min. Illumination	0.1 Lux(Sense up X64), 0 Lux(LEDs ON, Max. 25M)	
S/N Ratio	More 50 dB(AGC OFF)	
SDNR	ON	
Backlight	WDR / BLC / OFF	
Day & Night	True D&N(AUTO / COLOR / BW)	
LED Output	IR LED 24pcs(Level adjustable)	
Gain Control	AUTO / MANUAL	
Sense Up	Max. X64(X2, X4, X8, X16, X32, X64)	
Test Illumination	Average test illuminance by front view	
Power Supply	Regulated 12V DC	Regulated 12V DC or 24V AC
Current Consumption	Max. 500mA(at 12V DC)/LED ON, Max. 510mA(at 24V AC)/LED ON	
Reverse Polarity Protection	Yes	
Lens	Vari focal auto iris lens	
Operation Temp.	–10 ~ 50°C	
Preservation Temp.	–20 ~ 60°C	
Dimension	∅150.5 X 95.6(H)mm	
Weight	Approx. 800g	

FUNCTION SETTING

1. How to use the jog lever



① ENTER :

- Push the lever : Used to access the menu and confirm selection.
- Push the lever for one second : Open the menu or close the menu. Used to return to previous menu from the motion detection or privacy mask setting section.

②UP, ③DOWN : Used to move the cursor to up or down.

④LEFT, ⑤RIGHT : Used to move the cursor to left or right and change the value.

⑥EXT-VIDEO : Extra video output terminal for installation. Plug your test monitor in hear. The cable is option.

⑦LED : LED level adjust.

(Caution) In case of operating "LED", don't put stress excessively.

※ All specification is subject to change without notice to improve the quality.

2. OSD menu structure

OSD Menu	Select Menu	Sub Menu	Summary	
LENS SELECT	DC		Lens type selection (Fixed iris lens or Vari-focal auto iris lens)	
	MANUAL			
PRESETS			*Preset mode for common application to speed up installation	
	CUSTOM		User setting value	
	INDOOR		For indoor	
	WINDOW		Maximizing WDR function	
	OUTDOOR		For outdoor	
	WDR	LOW		Although the subject had a bright light behind of it, you can see the subject clearly as well as background
		NORMAL		
		MEDIUM		
		HIGH		
	BLC	OFF		Determines that use BLC(Back Light Compensation) function or not
ON				
EXPOSURE...	CUSTOM --		AGC level selectable (CUSTOM -- LIMIT : 60)	
	LOW(24)			
	MEDIUM(30)			
	HIGH(36)			
SENSE-UP			Determines that use the SENSE-UP function or not and SENSE-UP level selectable	
	OFF		No use sense-up mode	
	AUTO --		Use sense-up mode automatically in low illumination(Limit : 2X ~ 64X)	
FLICKERLESS	MANUAL --		Sense-up level selectable between x2 ~ x64	
	OFF		Optimized mode for flicker(If user choose CRR2 mode, AWC mode is not available on the White Balance menu)	
WHITE BALANCE	CRR		Move the camera lens toward to white paper then press the enter button to find the optimal white balance for current environment(User can not use this mode when Flickerless is CRR2)	
	CRR2			
	OFF			
ATW			Balances the color automatically depending on the source of light from 2,000°K ~ 11,000°K	
	AWC-↓			
MANUAL-↓	R/B --		Adjust the Red or Blue values to shift the color of the object	
	KELVIN --		Adjust color temperature	
DAY&NIGHT	AUTO-↓	INPUT DELAY (Sec)	The camera automatically detects lighting condition and selects the mode accordingly	
	COLOR		The picture is always displayed in Color	
	B/W		The picture is always displayed in Black and white	
IMAGE ADJUST...	GAMMA	25 ~ 45 ~ 100	Change the GAMMA of the screen (Default : 45)	
	SHARPNESS	MIN ~ MAX	Change the sharpness of the screen (Default : Max)	
	COLOR GAIN	-8 ~ 0 ~ 8	Change the color gain of the screen (Default : 0)	
	FLIP	OFF		Normal image(No image inversion)
		HORIZ		Set a horizontal image inversion
		VERT		Set a vertical image inversion
		BOTH		Set horizontal and vertical image inversion
	ZOOM	OFF		Normal image(No Zoom)
		ON-↓		Max 4x digital zoom available
				PAN, TILT : Zoomed in image can be moved to horizontal and vertical

MOTION	OFF		No use motion detection function
	ON...	AREA SELECT	Select motion detection area up to 4 area
		AREA 1 ~ 4	<ul style="list-style-type: none"> – Adjust position & size of motion detection area – Press the enter button to move into the motion area setting section, whenever you press the enter button, the mask color is changed. – When the mask color is white you can set the position of mask by up, down, left and right button. – When the mask color is green and red you can adjust the size by 4 buttons. – Press the enter button for a few second to escape.
PRIVACY	OFF		No use privacy mask function
	ON --	MASK 1~12	<ul style="list-style-type: none"> – Allow you to mask certain areas of the screen, support 12 privacy zone – Press the set button to move into the privacy mask setting section, whenever you press the set button, the mask color is changed. – When the mask color is white(or black or RED) you can set the position of mask by up, down, left and right button. – When the mask color is blue, you can adjust the size by 4 buttons. – Press the set button for a few second to escape.
		MASK COLOR	Select mask color(WHITE, BLACK, RED)
FUNCTION SETUP..	RS-485 SETUP*	CAMERA #	ID setting for RS-485 communication(1~255)
		CAMERA ID SETUP	<ul style="list-style-type: none"> ID DISPLAY : Display the camera ID on the screen CAMERA ID : Change the camera ID ID POSITION : Select the position to display the ID on the screen
SYNC	INT		Internal Sync with 12V DC power
	L, L, ↓		External Sync with 24V AC power (Dual power only)
	V-PHASE		Phase controllable at 24V AC input(L/L mode)

- The '↓' or '←' icon appeared with desired function, press the set button to move sub menu.
- The '---' icon appeared with function that is unavailable according to function setting.
- * User can control the menu by using PELCO-D, 2,400bps only.

3. When using control device through RS-485 protocol(option)

(1) ENTER

- Push the IRIS OPEN key : Used to access the menu and confirm selection.
- Push the IRIS OPEN key for one second : Open or close the menu and use it to escape the setup in case of setting Privacy Zone or Motion detection Zone.

(2) Up · Down

- Move Joystick to up/down or push the arrow key(↑, ↓)
- Used to move the cursor to up or down to choose the menu.

(3) Left · Right

- Move Joystick to left/right or push the arrow key(←, →)
- Used to move the cursor to left or right to change the value.

(4) IRIS CLOSE KEY

- Use it to move out to previous menu.
 - To escape the setup when setting the Privacy Zone or Motion Zone.
- (Caution) Do not use the menu key on the controller.