

# A series Sales Guide

Camera [IP/AHD], Recorder [NVR/DVR]



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- 1-1. FCC Certified
- 1-2. NDAA Compliant
- 1-3. Hanwha R&D and Production

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- 2-2. Camera [IP/AHD]
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# 1. Introduction

1-1. FCC Certified

1-2. NDAA Compliant

1-3. Hanwha R&D and Production

# 1-1. FCC Certified



**Security and Surveillance Solutions Like No Other**  
Proven technology. Unrivaled performance. Trusted partner.



**Intact**

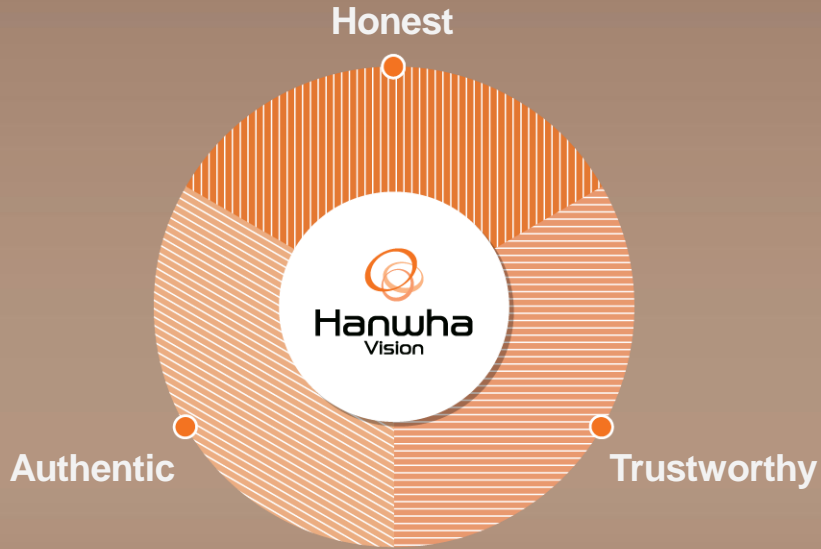


**Professional**



**Intelligent**

# 1-2. NDAA Compliant



Hanwha Vision offers reliable video surveillance Solution to meet the current and future need for security professional

# 1-3. Hanwha R&D and Production



Hanwha R&D, Korea

Hanwha Production Facility, Vietnam

Design by Hanwha Vision Korea,  
Production by Hanwha Vision Global Production Facility

# 2. Main Features

2-1. System Overview

2-2. Camera [IP/AHD]

2-3. Recorder [NVR/DVR]

2-4. Customer Support

# 2-1. System Overview





# 2-1. System Overview



※ ARD-410/810/1610 has four/eight/sixteen analog channels plus two IP cameras, and you can use additional IP cameras by turning off analog channels.  
The ARD-410/810/1610 has a total number of channels, including Analog and IP of six/ten/eighteen channels.  
(ex) The ARD-1610 can have 16 x analog channels + 2 x IP cameras OR 14 x analog channels + 4 x IP cameras.

## 2-2. IP Camera



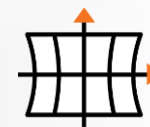
### WiseStream II

Improved bandwidth



### True WDR

Up to 120dB



### LDC

Lens distortion correction



### IVA

Intelligent Video Analytics



### Hallway view

270° rotation support



### Real-time transmission

30fps@Max. resolution



## 2 Main features

# 2-2. AHD Camera



### Image rotation

Flip, Mirror & Rotate support



### Real-time transmission

30fps@4MP



### Multiple outputs supported

AHD, TVI, CVI, CVBS



### 12V DC only

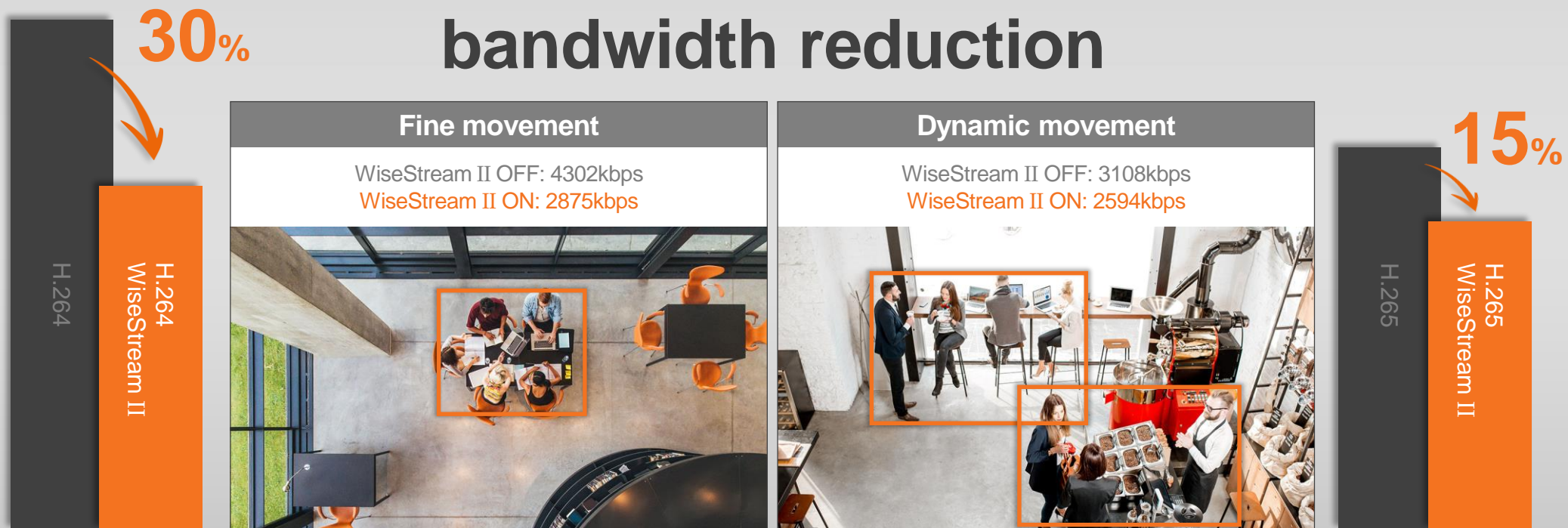
Do not connect AC power



# 2-2.1 H.265 + WiseStream II **IP**

Improved bandwidth by enhanced data compression technology, with maintaining video quality.

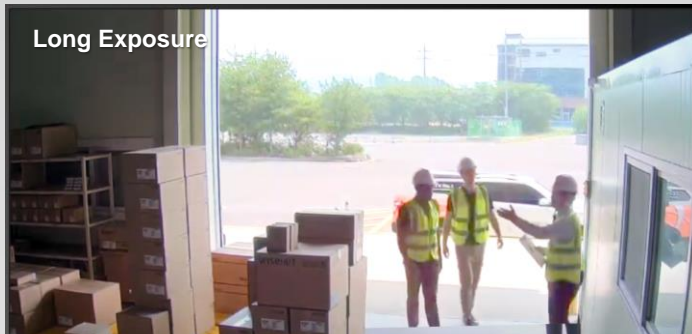
## Extreme bandwidth reduction



## 2 Main features for Camera

# 2-2.2 True WDR **IP** **AHD**

Supports backlight compensation by exposure control up to 120dB, not by digital method.



# 2-2.3 Loitering Detection IP Intelligent Video Analytics

Virtual line and area setup, available enter/exit & directional detection management based on motion detection.



11:13

11:13

Friday 18, February

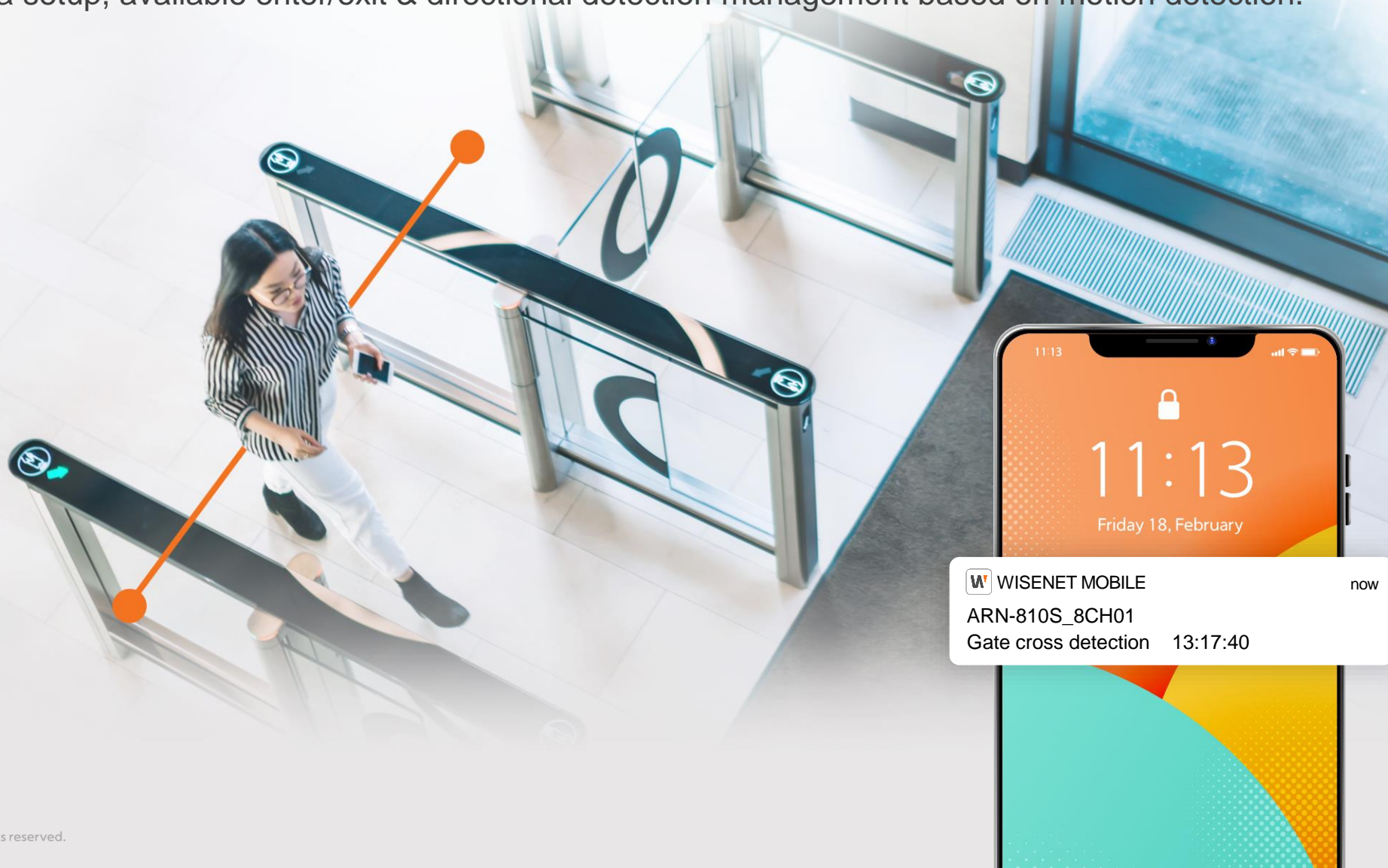
W WISENET MOBILE now

ARN-810S\_8CH01

Perimeter intrusion detection 11:13:10

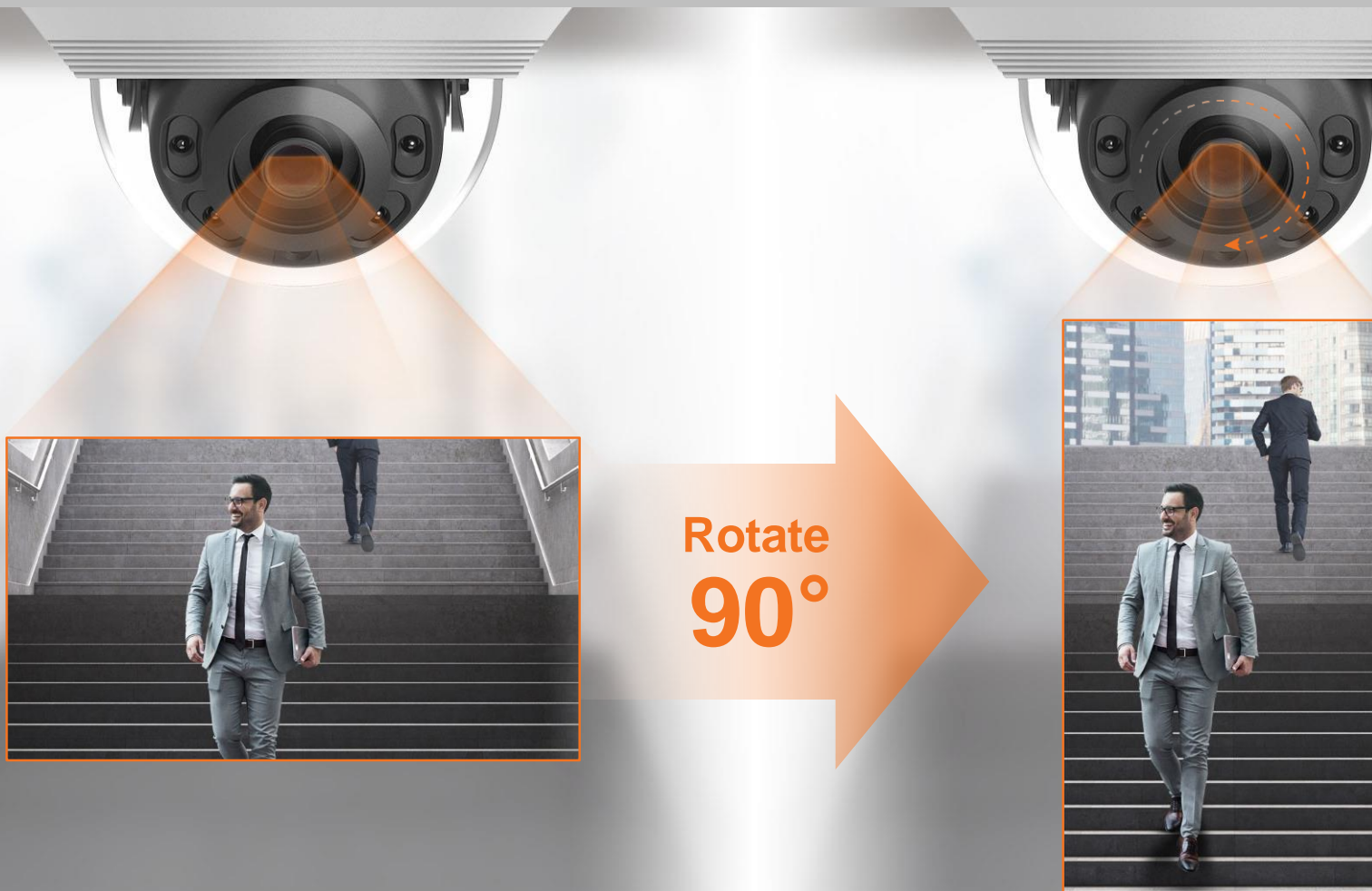
## 2-2.3 Line crossing **IP** Intelligent Video Analytics

Virtual line and area setup, available enter/exit & directional detection management based on motion detection.



## 2-2.4 Hallway view **IP**

Support 90°, 180°, 270° rotation, optimizing surveillance range for vertical shaped area monitoring.





## 2 Main features for Camera

### 2-2.5 Advanced LDC **IP** Lens distortion correction

Support distorted image correction and the operator can monitor more actual images.



## 2 Main features for Camera

# 2-2.6 Real-time video transmission

IP AHD

Max. 30fps with every resolution, smooth video monitoring support.

※ AHD Camera : ACO-6020R, ACE-6020R



20fps



30fps

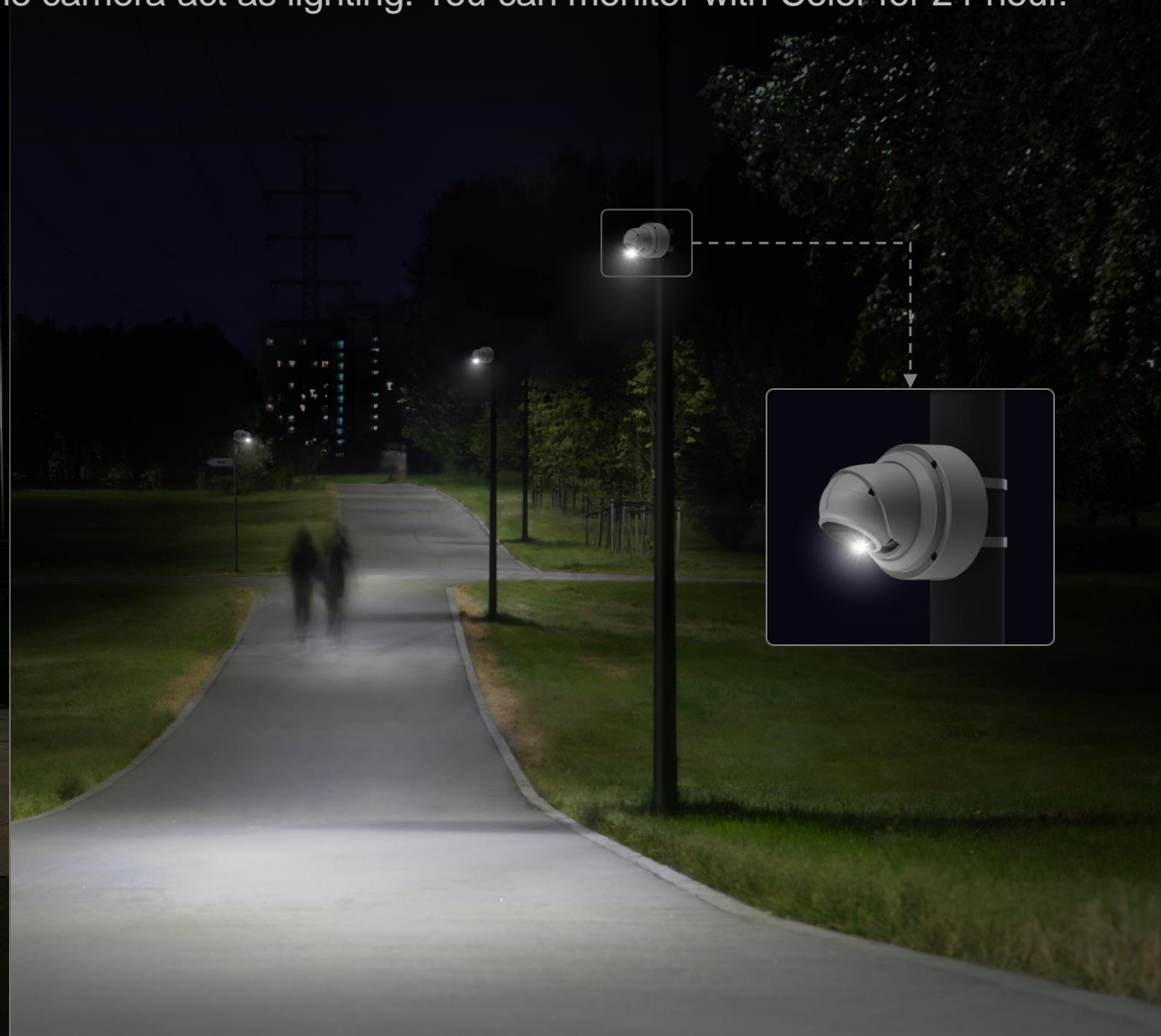
2 Main features for Camera


# 2-2.7 White light camera mode

IP Supplement light

In an environment where it is difficult to install separate lighting, the camera act as lighting. You can monitor with Color for 24-hour.

※ ANE-L7012L only



 **3,000K** | Warm white  
Makes your eyes less tired

# 2-2.8 White light camera mode

IP IR vs White light

In an environment where it is difficult to install separate lighting, the camera act as lighting. You can monitor with Color for 24-hour.

※ ANE-L7012L only



## 2 Main features for Camera

# 2-2.8 Light alarm mode

IP

Visual Warning

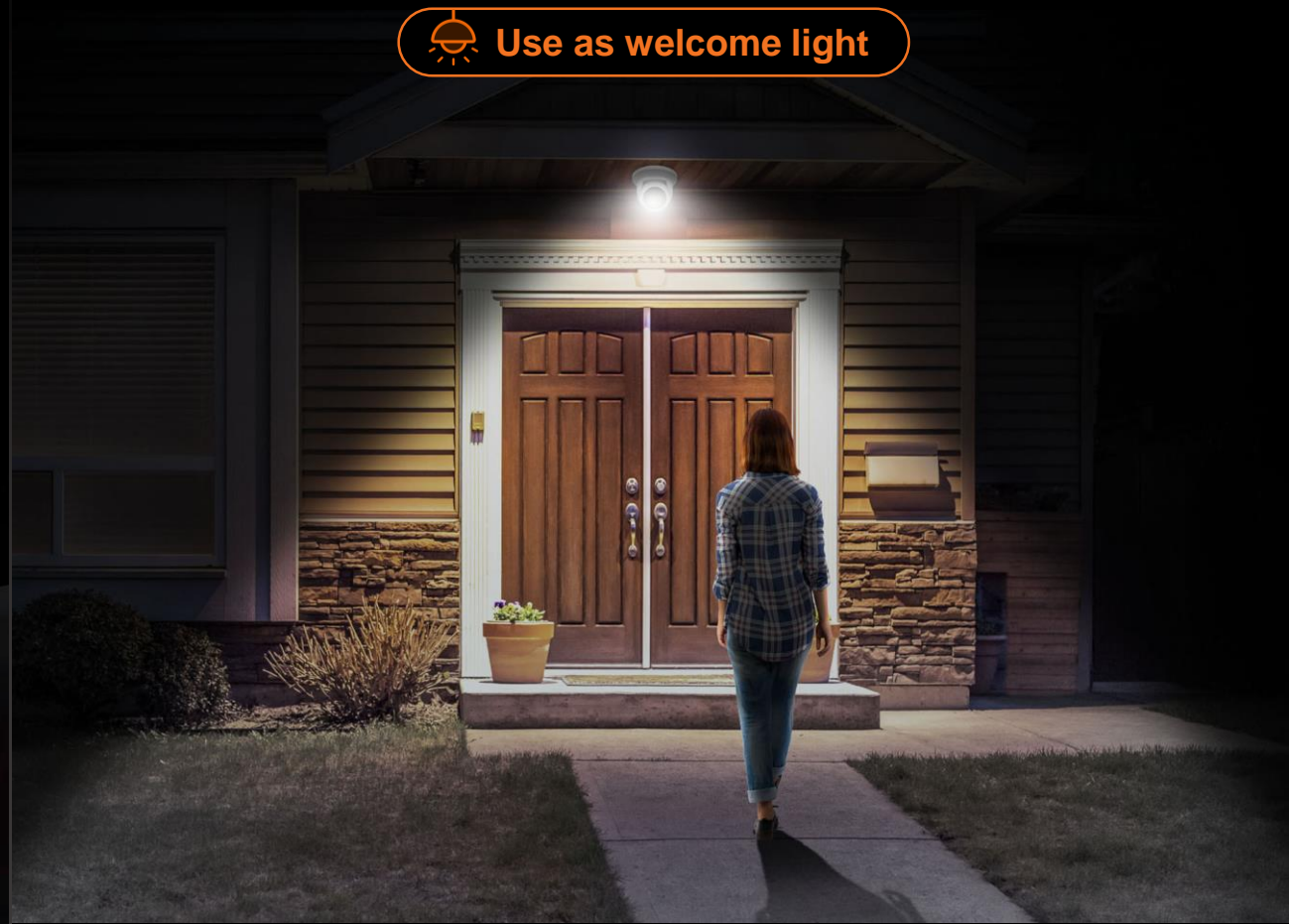
When tampering detection, Motion detection, IVA White light can be activated as a warning alarm or welcome. You can check moving objects in color by turning on the light during 'Dwell time'.

※ ANE-L7012L only

 Use as Alert

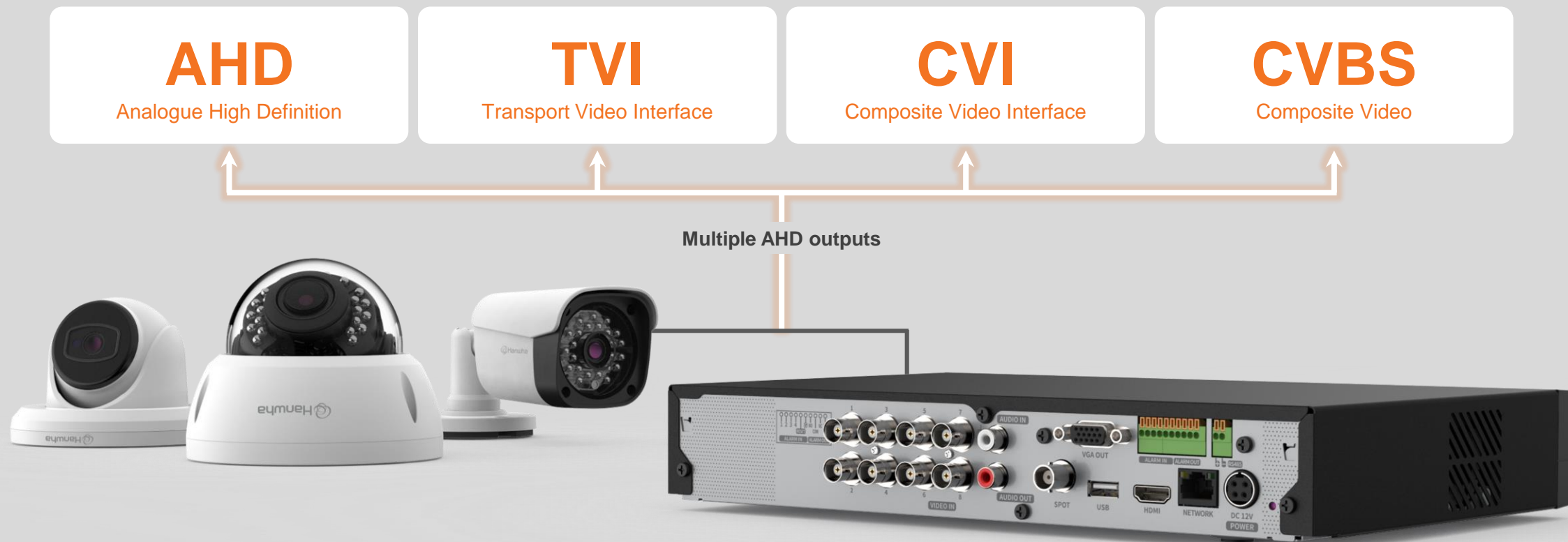


 Use as welcome light



# 2-2.9 Multiple AHD outputs **AHD**

Supports multiple AHD outputs, AHD, TVI, CVI and CVBS



# 2-3. Recorder



## UHD 4K

Support up to 4K Monitor, 4K Camera



## QR Code

Easy Connect with P2P support



## Wisenet Viewer for PC

MS Windows / Apple macOS



## Triple Codec

H.264 / H.265 / MJPEG support



## Wisenet Mobile

Google Android / Apple iPadOS and iOS



## PoE

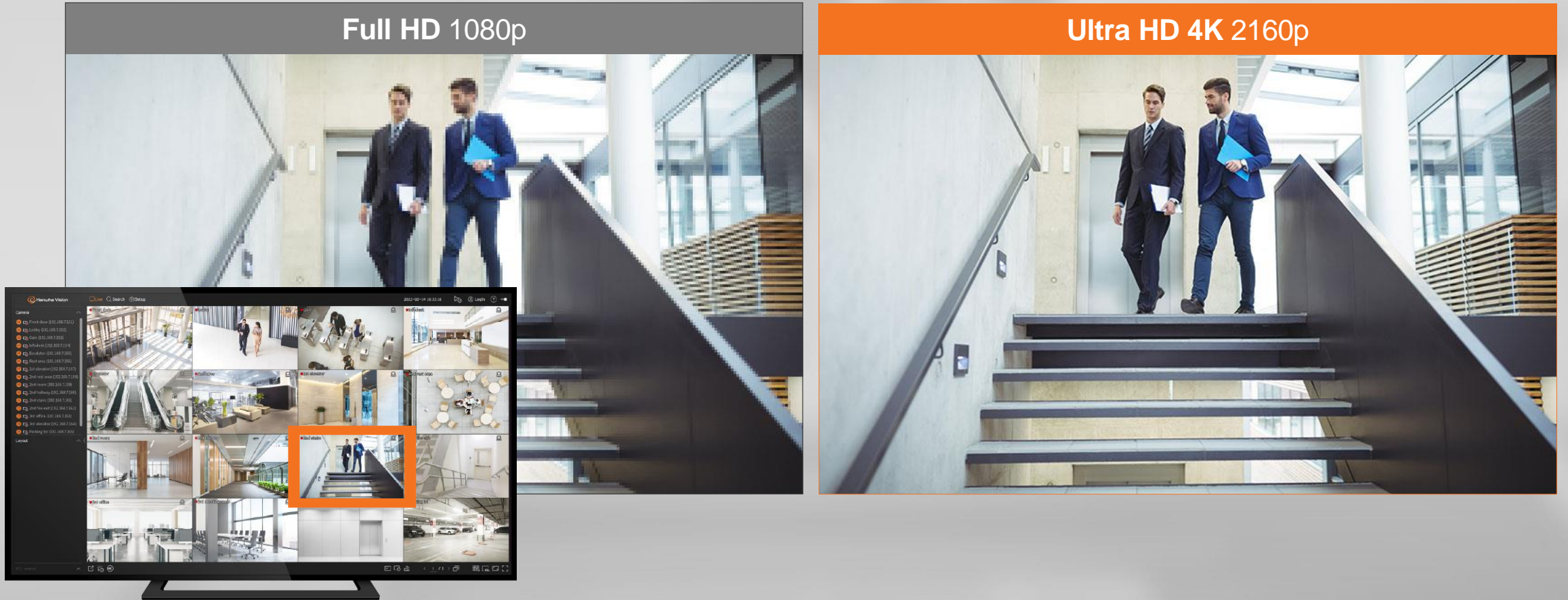
Power over Ethernet



2 Main features for Recorder

# 2-3.1 4K Monitor **UHD**

HDMI output support up to UHD(Ultra-high definition), which offers high quality images and viewing experience.





2 Main features for Recorder

# 2-3.2 Installation Wizard

**Quick setup for fast and easy installation**

Complete the setup in 9 stages, including Network, Camera, Channel, Date&Time, Mobile/PC Connect

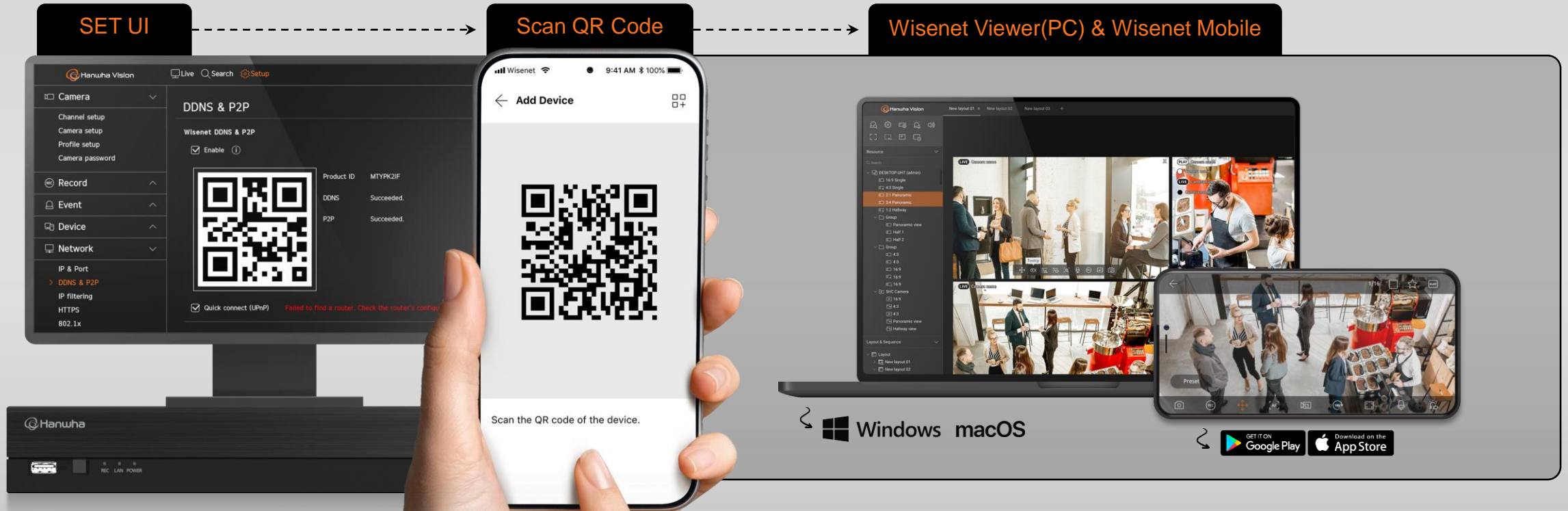
The screenshot shows the 'Installation wizard' interface. At the top, a progress bar highlights the 'Camera register' step. Below this, a large orange-bordered box contains a sequence of 9 steps, each with a number and a label: STEP 01 Language, STEP 02 Network, STEP 03 Recorder ID/PW, STEP 04 Camera ID/PW, STEP 05 Date&Time, STEP 06 Resolution, STEP 07 Camera register, STEP 08 Channel setup, and STEP 09 Easy connect. Below the steps, a table lists camera registration details for 16 cameras, including model, IP, MAC, and status.

STEP 01	STEP 02	STEP 03	STEP 04	STEP 05	STEP 06	STEP 07	STEP 08	STEP 09
Language	Network	Recorder ID/PW	Camera ID/PW	Date&Time	Resolution	Camera register	Channel setup	Easy connect
<input type="checkbox"/>	QNO-8020RA	192.168.7.152	00:09:18:A1:A2:04	Success	<input type="checkbox"/>	6		
<input type="checkbox"/>	QNO-8020RA	192.168.7.153	00:09:18:A1:A2:0D	Success	<input type="checkbox"/>	7		
<input type="checkbox"/>	QNO-8020RA	192.168.7.154	00:09:18:A1:A2:07	Success	<input type="checkbox"/>	8		
<input type="checkbox"/>	QNO-8020RA	192.168.7.155	00:09:18:A1:A2:01	Success	<input type="checkbox"/>	9		
<input type="checkbox"/>	QNO-8020RA	192.168.7.156	00:09:18:A1:A2:08	Success	<input type="checkbox"/>	10		
<input type="checkbox"/>	QNO-8020RA	192.168.7.157	00:09:18:A1:A2:12	Success	<input type="checkbox"/>	11		
<input type="checkbox"/>	QNO-8020RA	192.168.7.158	00:09:18:A1:A2:0A	Success	<input type="checkbox"/>	12		
<input type="checkbox"/>	QNO-8020RA	192.168.7.159	00:09:18:A1:A2:05	Success	<input type="checkbox"/>	13		
<input type="checkbox"/>	QNO-8020RA	192.168.7.160	00:09:18:A1:A2:0C	Success	<input type="checkbox"/>	14		
<input type="checkbox"/>	QNO-8020RA	192.168.7.161	00:09:18:A1:A2:0F	Success	<input type="checkbox"/>	15		
<input type="checkbox"/>	QNO-8020RA	192.168.7.162	00:09:18:A1:A2:03	Success	<input type="checkbox"/>	16		
<input type="checkbox"/>	QNO-8020RA	192.168.7.163	00:09:18:A1:A2:02	Success	<input type="checkbox"/>			
<input type="checkbox"/>	QNO-8020RA	192.168.7.164	00:09:18:A1:A2:05	Success	<input type="checkbox"/>			
<input type="checkbox"/>	QNO-8020RA	192.168.7.165	00:09:18:A1:A2:05	Success	<input type="checkbox"/>			

## 2 Main features for Recorder

# 2-3.3 Easy connect to Wisenet Viewer(PC) and Wisenet Mobile

Easy connect to your Wisenet Viewer(PC) and Wisenet Mobile Just Scan QR Code or Input Product ID, make you access wherever you like.



## 2 Main features for NVR/DVR

# 2-3.4 Wisenet Viewer(PC)



PC viewer for NVR/DVR



Windows, macOS support



Flexible channel division and custom layout



Event-Action rule management



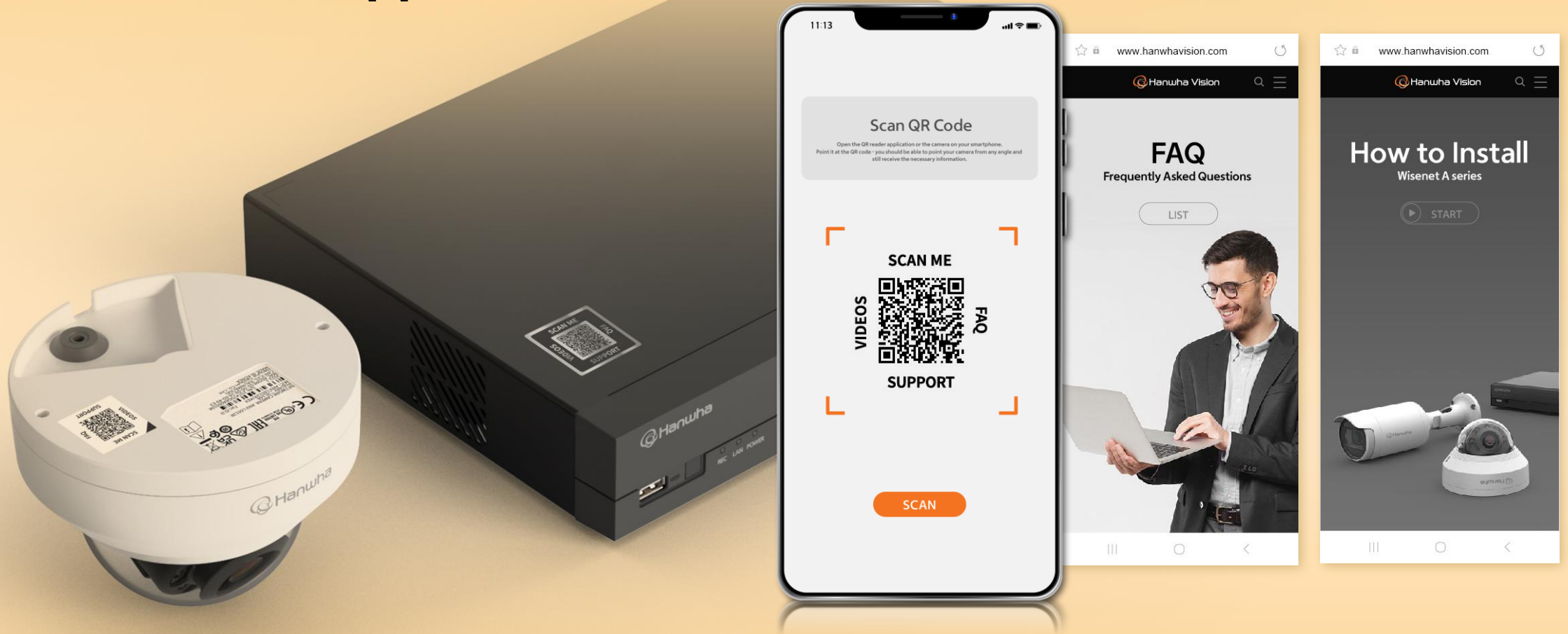
Display web pages & Media files play in the layout



Remote connection (DDNS/P2P)



# 2-4. Customer Support



**Scan QR Code, and you can access Technical Support like How to install and FAQ**

## 3. Specification and Accessory

3-1. IP Camera & NVR Recorder specs

3-2. AHD Camera & DVR Recorder specs

3-3. Installation Guide for Camera

# 3-1. IP Camera specs

Category		2MP				4MP		
		Bullet		Vandal Dome		Bullet		Vandal Dome
		ANO-L6012R	ANO-L6022R	ANV-L6012R	ANV-L6023R	ANO-L7012R	ANO-L7022R	ANV-L7012R
Video	Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/3" CMOS	1/3" CMOS	1/3" CMOS
	Resolution	2M (1920x1080)	2M (1920x1080)	2M (1920x1080)	2M (1920x1080)	4M (2560x1440)	4M (2560x1440)	4M (2560x1440)
	Max. Framerate	30fps	30fps	30fps	30fps	30fps	30fps	30fps
	Min. Illumination	0.03lux (F2.0)	0.03lux (F2.0)	0.03lux (F2.0)	0.03lux (F2.0)	0.15lux (F2.0)	0.15lux (F1.6)	0.15lux (F2.0)
Lens	Focal Length	2.8mm Fixed	4mm Fixed	2.8mm Fixed	3.6mm Fixed	2.8mm Fixed	4mm Fixed	2.8mm Fixed
	Angular Field of View	H : 113.7° V : 61.5° D : 134.4°	H : 84.3° V : 45.6° D : 98.3°	H : 113.7° V : 61.5° D : 134.4°	H : 94.8° V : 49.3° D : 114.3°	H : 107.5° V : 59.7° D : 122°	H : 78.2° V : 41.2° D : 92°	H : 107.5° V : 59.5° D : 122°
Operation	Wide Dynamic Range	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)
	Analytics	Motion Detection, Tampering	Motion Detection, Tampering	Motion Detection, Tampering	Motion Detection, Tampering, Defocus Detection, IVA	Motion Detection, Tampering, Defocus Detection, IVA	Motion Detection, Tampering, Defocus Detection, IVA	Motion Detection, Tampering, Defocus Detection, IVA
	IR Viewable Length	30m (98.43ft)	30m (98.43ft)	30m (98.43ft)	15m (49.21ft)	20m (65.62ft)	25m (82.02ft)	20m (65.62ft)
Network	Video Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
	Streaming	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)
Environment	Certification	IP66	IP66	IP66, IK10	IP66, IK10, NEMA4X	IP66	IP66	IP66, IK10
	Operating Temp. / Humidity	-30°C ~ +55°C / Less than 90% RH	-30°C ~ +55°C / Less than 90% RH	-30°C ~ +55°C / Less than 90% RH	-30°C ~ +55°C / Less than 90% RH	-30°C ~ +55°C / Less than 95% RH	-30°C ~ +55°C / Less than 95% RH	-30°C ~ +55°C / Less than 95% RH
Electrical	Input Voltage	PoE	PoE	PoE	PoE	PoE	PoE	PoE
	Power Consumption	Max 6.4W, Typical 5.0W	Max 6.4W, Typical 5.0W	Max 6.4W, Typical 5.0W	Max 6.7W, Typical 5.0W	Max 7.5W, Typical 5.7W	Max 7.5W, Typical 5.7W	Max 7.5W, Typical 5.7W

# 3-1. IP Camera specs (Motorized Varifocal / Flateye)

Category		2MP			4MP			
		Bullet	Vandal Dome	Flateye	Bullet	Vandal Dome	Flateye	Flateye
		ANO-L6082R	ANV-L6082R	ANE-L6012R	ANO-L7082R	ANV-L7082R	ANE-L7012R	ANE-L7012L
Video	Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
	Resolution	2M (1920x1080)	2M (1920x1080)	2M (1920x1080)	4M (2560x1440)	4M (2560x1440)	4M (2560x1440)	4M (2560x1440)
	Max. Framerate	30fps	30fps	30fps	30fps	30fps	30fps	30fps
	Min. Illumination	0.03lux (F1.6)	0.03lux (F2.0)	0.03lux (F1.6)	0.1lux (F1.6)	0.03lux (F2.0)	0.13lux (F1.6)	0.05lux (F1.2)
Lens	Focal Length	3.3~10.3mm Motorized VF	3.3~10.3mm Motorized VF	2.8mm Fixed	3.3~10.3mm Motorized VF	3.3~10.3mm Motorized VF	2.8mm Fixed	3.0mm Fixed
	Angular Field of View	H : 105.2° ~ 30.6° V : 54.8° ~ 17.2° D : 126.9° ~ 35.1°	H : 105.2° ~ 30.6° V : 54.8° ~ 17.2° D : 126.9° ~ 35.1°	H : 107.7° V : 59.0° D : 126.7°	H : 94.8° ~ 28.1° V : 50.2° ~ 15.8° D : 112.9° ~ 32.2°	H : 94.8° ~ 28.1° V : 50.2° ~ 15.8° D : 112.9° ~ 32.2°	H : 98.3° V : 54.2° D : 114.6°	H : 97° V : 53° D : 113°
Operation	Wide Dynamic Range	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)
	Analytics	Motion Detection, Tampering	Motion Detection, Tampering	Motion Detection, Tampering	Motion Detection, Tampering, Defocus Detection, IVA	Motion Detection, Tampering, Defocus Detection, IVA	Motion Detection, Tampering, Defocus Detection, IVA	Motion Detection, Tampering, Defocus Detection, IVA
	IR Viewable Length	30m (98.43ft)	30m (98.43ft)	20m (65.62ft)	30m (98.43ft)	30m (98.43ft)	20m (65.62ft)	
	Light Viewable Length							20m (65.62ft)
Network	Video Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
	Streaming	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)	Unicast(6 users) / Multicast, Multiple streaming (Up to 3 profiles)
Environment	Certification	IP66	IP66, IK10	IP67, IK10	IP66	IP66, IK10	IP67, IK10	IP66, IP67, IK10
	Operating Temp. / Humidity	-30°C ~ +55°C / Less than 95% RH	-30°C ~ +55°C / Less than 95% RH	-30°C ~ +55°C / Less than 95% RH	-30°C ~ +55°C / Less than 95% RH	-30°C ~ +55°C / Less than 95% RH	-30°C ~ +55°C / Less than 95% RH	-30°C ~ +55°C / Less than 95% RH
Electrical	Input Voltage	PoE	PoE	PoE	PoE	PoE	PoE	PoE
	Power Consumption	Max 7.0W, Typical 5.0W	Max 7.0W, Typical 5.0W	Max 6.6W, Typical 4.8W	Max 8.0W, Typical 6.0W	Max 8.0W, Typical 6.0W	Max 7.5W, Typical 5.7W	Max 7.6W, Typical 4.2W

# 3-1. IP Camera specs



## Vandal Dome Camera

### ANV-L7012R/L6012R

Category	Specification
Resolution	4MP / 2MP
Lens	2.8mm Fixed lens
Framerate	Support 30fps@Max. resolution
Wide Dynamic Range	120dB
Analytics	Motion detection, Tampering, IVA (Enter/Exit, Directional detection, Virtual line) Defocus detection : L7012R
Power Consumption	Max 7.5W, Typical 5.7W (PoE): L7012R Max 6.4W, Typical 5.0W (PoE): L6012R
Certification	IP66, IK10
Application Programming Interface	ONVIF Profile S/G/T SUNAPI (HTTP API)



# 3-1. IP Camera specs



## Vandal Dome Camera

### ANV-L7082R/L6082R

Category	Specification
Resolution	4MP / 2MP
Lens	3.3 ~ 10.3mm Motorized Varifocal lens
Framerate	Support 30fps@Max. resolution
Wide Dynamic Range	120dB
Analytics	Motion detection, Tampering, IVA (Enter/Exit, Directional detection, Virtual line) Defocus detection: L7082R
Power Consumption	Max 8.0W, Typical 6.0W (PoE) : L7082R Max 7.0W, Typical 5.0W (PoE) : L6082R
Certification	IP66, IK10
Application Programming Interface	ONVIF Profile S/G/T SUNAPI (HTTP API)

# 3-1. IP Camera specs



## Compact Vandal Dome Camera

### ANV-L6023R

Category	Specification
Resolution	2MP
Lens	3.6mm Fixed lens
Framerate	Support 30fps@2MP
Wide Dynamic Range	120dB
Analytics	Motion detection, Tampering Defocus detection, IVA (Enter/Exit, Directional detection, Virtual line)
Power Consumption	Max 6.7W, Typical 5.0W (PoE)
Certification	IP66, IK10, NEMA4X
Application Programming Interface	ONVIF Profile S/G/T SUNAPI (HTTP API)

# 3-1. IP Camera specs



## Flateye Camera

### ANE-L7012R/L6012R

Category	Specification
Resolution	4MP / 2MP
Lens	2.8mm Fixed lens
Framerate	Support 30fps@Max. resolution
Wide Dynamic Range	120dB
Analytics	Motion detection, Tampering, IVA (Enter/Exit, Directional detection, Virtual line) Defocus detection: L7012R
Power Consumption	Max 7.5W, Typical 5.7W (PoE) : L7012R Max 6.6W, Typical 4.8W (PoE) : L6012R
Certification	IP67, IK10
Application Programming Interface	ONVIF Profile S/G/T SUNAPI (HTTP API)

# 3-1. IP Camera specs



## Flateye Camera

### ANE-L7012L

Category	Specification
Resolution	4MP
Lens	3.0mm Fixed lens
Framerate	Support 30fps@Max. resolution
Wide Dynamic Range	120dB
Analytics	Motion detection, Tampering Defocus detection, IVA (Enter/Exit, Directional detection, Virtual line): L7012L
Power Consumption	Max 7.6W, Typical 4.2W (PoE) : L7012L
Certification	IP66/IP67, IK10
Application Programming Interface	ONVIF Profile S/G/T SUNAPI (HTTP API)

# 3-1. IP Camera specs

## ANO-L7012R/L7022R/L6012R/L6022R



# Bullet Camera

Category	Specification
Resolution	4MP / 2MP
Lens	2.8mm (L6012R/L7012R) / 4mm (L6022R/L7022R) Fixed lens
Framerate	Support 30fps@Max. resolution
Wide Dynamic Range	120dB
Analytics	Motion detection, Tampering, IVA (Enter/Exit, Directional detection, Virtual line) Defocus detection: L7012R/L7022R
Power Consumption	Max 7.5W, Typical 5.7W (PoE): L7012R/L7022R Max 6.4W, Typical 5.0W (PoE): L6012R/L6022R
Certification	IP66
Application Programming Interface	ONVIF Profile S/G/T SUNAPI (HTTP API)

# 3-1. IP Camera specs



## Bullet Camera

### ANO-L7082R/L6082R

Category	Specification
Resolution	4MP / 2MP
Lens	3.3 ~ 10.3mm Motorized Varifocal lens
Framerate	Support 30fps@Max. resolution
Wide Dynamic Range	120dB
Analytics	Motion detection, Tampering, IVA (Enter/Exit, Directional detection, Virtual line) Defocus detection: L7082R
Power Consumption	Max 8.0W, Typical 6.0W (PoE) : L7082R Max 7.0W, Typical 5.0W (PoE) : L6082R
Certification	IP66
Application Programming Interface	ONVIF Profile S/G/T SUNAPI (HTTP API)

# 3-1. NVR Recorder specs

Category		 ARN-410S	 ARN-810S	 ARN-1610S
IP Camera	Imaging Device	Max. 4CH	Max. 8CH	Max. 16CH
	Resolution	8MP ~ CIF		
	Protocols	SUNAPI, ONVIF		
Local Display		HDMI	HDMI	HDMI, VGA (Clone)
Recording	Compression	H.265, H.264, MJPEG		
	Recording Bandwidth	Max. 40Mbps	Max. 60Mbps	Max. 80Mbps
Storage	HDD Slot	SATA 1ea (Max. 6TB)	SATA 1ea (Max. 6TB)	SATA 2ea (Max. 12TB)
Network	Transmission Bandwidth	Max. 40Mbps	Max. 60Mbps	Max. 80Mbps
Remote Connection	Web viewer	Google Chrome, Microsoft Edge, Mac Safari		
	Smart phone	iOS, Android		
	PC viewer	MS Windows, Apple macOS		
	Easy configuration	P2P(QR code)		
Environmental	Operating Temperature	0°C to +40°C (32°F to 104°F)		
	Operating Humidity	20% ~ 85% RH		
Electrical	Power Input	54VDC / 1.20A	54VDC / 1.67A	100 ~ 240 VAC
	Power Consumption	Max 52W (1HDD, PoE On)	Max 84W (1HDD, PoE On)	Max 188.2W (2HDD, PoE On)
	PoE Budget	35W	65W	130W

## 3-2. AHD Camera specs (Motorized Varifocal / Flateye)

Category		2MP		5MP			
		Flateye	Bullet	Flateye	Bullet	Vandal	
		ACE-6020R	ACO-6020R	ACE-8020R	ACO-8020R	ACV-8080R	ACV-8081R
Video	Imaging Device	1/3" 2MP CMOS	1/3" 2MP CMOS	1/2.5" 5MP CMOS	1/2.5" 5MP CMOS	1/2.5" 5MP CMOS	1/2.8" 5MP CMOS
	Resolution	1920x1080	1920x1080	2592x1944	2592x1944	2592x1944	2592x1944
	Max. Framerate	30fps / 25fps (60Hz/50Hz)	30fps / 25fps (60Hz/50Hz)	Max. 30fps (@5MP Max. 20fps, CVI supports up to 4M)	Max. 30fps (@5MP Max. 20fps, CVI supports up to 4M)	Max. 30fps (@5MP Max. 20fps, CVI supports up to 4M)	Max. 30fps (@5MP Max. 20fps)
	Min. Illumination	0.1Lux (F1.0, 1/30sec)	0.1Lux (F1.0, 1/30sec)	0.1Lux (F1.0, 1/30sec)	0.1Lux (F1.0, 1/30sec)	0.1Lux (F1.0, 1/30sec)	0.1Lux (F1.0, 1/30sec)
	Video Out	AHD / TVI / CVI / CVBS	AHD / TVI / CVI / CVBS	AHD / TVI / CVI / CVBS	AHD / TVI / CVI / CVBS	AHD / TVI / CVI / CVBS	AHD / TVI / CVI / CVBS
	Video Transmission Distance	300m (5C2V Coaxial Cable)	300m (5C2V Coaxial Cable)	300m (5C2V Coaxial Cable)	300m (5C2V Coaxial Cable)	300m (5C2V Coaxial Cable)	300m (5C2V Coaxial Cable)
Lens	Focal Length (Zoom Ratio)	3.6mm fixed focal	3.6mm fixed focal	3.6mm fixed focal	3.6mm fixed focal	3.5mm~10.5mm (x3) motorized varifocal	3.5mm~10.5mm (x3) motorized varifocal
	Max. Aperture Ratio	F1.6	F1.6	F1.6	F1.6	F1.6	F1.6
	Angular Field of View	H : 81° V : 42°	H : 81° V : 42°	H : 94° V : 54°	H : 94° V : 54°	H : 114°(Wide) ~ 33.9°(Tele) V : 58.1°(Wide) ~ 18.8°(Tele)	H : 99.1°(Wide) ~ 30.3°(Tele) V : 52.4°(Wide) ~ 17°(Tele)
Operational	Day & Night	AUTO / COLOR / BW	AUTO / COLOR / BW	AUTO / COLOR / BW	AUTO / COLOR / BW	AUTO / COLOR / BW	AUTO / COLOR / BW
	Backlight Compensation	OFF / BLC	OFF / BLC	OFF / BLC	OFF / BLC	OFF / BLC	OFF / WDR/ BLC / HLC
	Wide Dynamic Range	DWDR	DWDR	DWDR	DWDR	DWDR	WDR
	Digital Noise Reduction	2D + 3DNR	2D + 3DNR	2D + 3DNR	2D + 3DNR	2D + 3DNR	2D + 3DNR
	Gain Control	OFF / LOW/MIDDLE / HIGH	OFF / LOW/MIDDLE / HIGH	OFF/LOW/MIDDLE/HIGH	OFF/LOW/MIDDLE/HIGH	OFF/LOW/MIDDLE/HIGH	OFF/LOW/MIDDLE/HIGH
	White Balance	ATW / AWC	ATW / AWC	ATW / AWC	ATW / AWC	ATW / AWC	AUTO / AUTOext / PRESET / MANUAL
	Electronic Shutter Speed	AUTO (1/30~1/50,000)	AUTO (1/30~1/50,000)	AUTO (1/30~1/50,000)	AUTO (1/30~1/50,000)	AUTO (1/30~1/50,000)	AUTO (1/30~1/30,000)
	Video Rotation	OFF / MIRROR / V-FLIP / ROTATE	OFF / MIRROR / V-FLIP / ROTATE	OFF / MIRROR / V-FLIP / ROTATE	OFF / MIRROR / V-FLIP / ROTATE	OFF / MIRROR / V-FLIP / ROTATE	OFF / MIRROR / V-FLIP / ROTATE
	IR Viewable Length	25m	25m	20m	20m	20m	25m
	Coaxial Protocol	ACP (AHD Coax Protocol), TCP (TVI Coax Protocol), CCP (CVI Coax Protocol), CVBS: Pelco-C (Coaxitron)	ACP (AHD Coax Protocol), TCP (TVI Coax Protocol), CCP (CVI Coax Protocol), CVBS: Pelco-C (Coaxitron)	ACP (AHD Coax Protocol), TCP (TVI Coax Protocol), CCP (CVI Coax Protocol), CVBS: Pelco-C (Coaxitron)	ACP (AHD Coax Protocol), TCP (TVI Coax Protocol), CCP (CVI Coax Protocol), CVBS: Pelco-C (Coaxitron)	ACP (AHD Coax Protocol), TCP (TVI Coax Protocol), CCP (CVI Coax Protocol), CVBS: Pelco-C (Coaxitron)	ACP (AHD Coax Protocol), TCP (TVI Coax Protocol), CCP (CVI Coax Protocol), CVBS: Pelco-C (Coaxitron)
Environmental & Electrical	Operating Temperature / Humidity	-30°C ~ + 55°C / Less than 90% RH	-30°C ~ + 55°C / Less than 90% RH	-30°C ~ + 55°C / Less than 90% RH	-30°C ~ + 55°C / Less than 90% RH	-30°C ~ + 55°C / Less than 90% RH	-30°C ~ + 55°C / Less than 90% RH
	Certification	IP67, IK10, FCC, UL	IP67, IK10, FCC, UL	IP67, IK10, FCC, UL	IP67, IK10, FCC, UL	IP66, IK10, FCC, UL	IP66, IK10, FCC, UL
	Input Voltage	12VDC	12VDC	12VDC	12VDC	12VDC	12VDC
	Power Consumption	Max 3.6W	Max. 3.6W	Max 5.4W	Max 5.4W	Max 7.2W	Max 7.2W



## 3-2. AHD Camera specs



# Vandal Dome Camera

### ACV-8081R/8080R

Category	Specification
Resolution	5MP
Lens	3.3 ~ 10.5mm Motorized Varifocal lens
Framerate	Support 20fps@5MP, 30fps@4MP *CVI supports up to 4MP
Video Out	AHD / TVI / CVI / CVBS
Power Consumption	Max 7.2W
Certification	IP67, IK10

## 3-2. AHD Camera specs



# Flateye Camera

### ACE-8020R/6020R

Category	Specification
Resolution	5MP / 2MP
Lens	3.3 ~ 10.3mm Motorized Varifocal lens
Framerate	Support 20fps@5MP - 30fps@4MP : ACE-8020R - 30fps@2MP : ACE-6020R *CVI supports up to 4MP
Video Out	AHD / TVI / CVI / CVBS
Power Consumption	Max 5.4W(8020R) / Max 3.6W(6020R)
Certification	IP67, IK10

## 3-2. AHD Camera specs

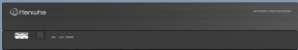
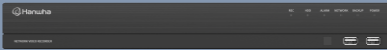
### ACO-8020R/6020R






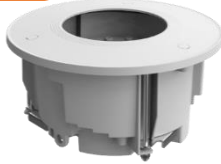





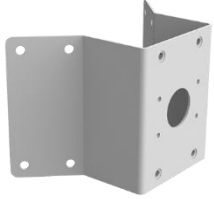







Category	Specification
Resolution	5MP / 2MP
Lens	3.3 ~ 10.3mm Motorized Varifocal lens
Framerate	Support 20fps@5MP - 30fps@4MP : ACO-8020R - 30fps@2MP : ACO-6020R *CVI supports up to 4MP
Video Out	AHD / TVI / CVI / CVBS
Power Consumption	Max 5.4W(8020R) / Max 3.6W(6020R)
Certification	IP67, IK10

# Bullet Camera

# 3-2. DVR Recorder specs

Category		 ARD-410	 ARD-810	 ARD-1610D
Analog camera	Inputs	4CH (1Vp-p 75ohm, BNC)	8CH (1Vp-p 75ohm, BNC)	16CH (1Vp-p 75ohm, BNC)
	Signal Type	AHD HD TVI, HD CVI (5MP, 4MP, 1080p), CVBS (NTSC/PAL)		
IP Camera	Inputs	Additional 2CH (Max. 6CH)	Additional 2CH (Max. 10CH)	Additional 2CH (Max. 18CH)
	Resolution	5MP ~ CIF		
	Protocols	SUNAPI (Wisenet), ONVIF	SUNAPI (Wisenet), ONVIF	SUNAPI (Wisenet), ONVIF
Local Display	1x HDMI (up to UHD, 3840 x 2160), 1x VGA (up to FHD, 1920x1080)			
Record	Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
	Analog Camera Record Rate	5MP (5M Half 12fps/12fps), 4MP (4M Half 15fps/12fps), 2MP (2M 15fps/12fps) * Half : Horizontal resolution 1/2		
	IP Camera Recording Bandwidth	Max. 30Mbps	Max. 40Mbps	Max. 100Mbps
Remote Connection	Web Viewer	Google Chrome, Microsoft Edge, Mac Safari		
	Smart Phone	iOS, Android		
	PC Viewer	MS Windows, Apple macOS, Linux Ubuntu		
	Easy Connection	P2P(QR code)		
Environmental	Operating Temperature	0°C to +40°C (+32°F to +104°F)	0°C to +40°C (+32°F to +104°F)	0°C to +40°C (+32°F to +104°F)
	Operating Humidity	20% ~ 85% RH	20% ~ 85% RH	20% ~ 85% RH
Electrical	Power Input	DC 12V		
	Power Consumption	Max. 19.2W (6T HDD 1ea)	Max. 20.4W (6T HDD 1ea)	Max. 40.8W (6T HDD 2ea)

## 3-3. Installation Guide of ANV-L6012R / L7012R

					
<b>Hanging Mount</b> SBP-122HMW	<b>Ceiling Mount</b> SBP-300CMW	<b>Ceiling Mount</b> SBP-156CMW	<b>In-ceiling Mount</b> SHD-1408FPW	<b>Wall Mount</b> SBP-300WMW1	<b>Wall Mount</b> SBP-300WMW
					
<b>Wall Mount</b> SBP-137WMW1	<b>Wall Mount Base</b> SBP-300BW	<b>Pole Mount Base</b> SBP-300PMW1	<b>Corner Mount Base</b> SBP-300KMW1	<b>Parapet Mount</b> SBP-300LMW	<b>Parapet Mount</b> SBP-156LMW
					
<b>Installation Box</b> SBP-300NBW	<b>Back Box</b> SBV-A14B	<b>Back Box</b> SBV-120GW	<b>Weather Cap</b> SBV-120WCW	<b>Smoke Dome cover</b> SPB-VAW12	

# Ceiling

(ANV-L6012R / L7012R)



Back Box



SBV-A14B



Ceiling Mount



SBP-300CMW

or



SBP-156CMW

+

Hanging Mount



SBP-122HMW



Indoor Only

In-Ceiling Housing

Plenum



SHD-1408FPW

# Wall

(ANV-L6012R / L7012R)



**Back Box**



SBV-A14B

**Weather Cap**



SBV-120WCW

**Wall Mount**



SBP-137WMW1

**Option**



Installation Box SBP-300NBW or Wall Mount Base SBP-300BW

**Wall Mount**



SBP-300WMW1 or SBP-300WMW

**Hanging Mount**



SBP-122HMW

# Pole

(ANV-L6012R / L7012R)



Back Box



SBV-A14B

Pole Mount



SBP-300PMW1

Option



Installation Box  
SBP-300NBW

Wall Mount



SBP-300WMW1

or



SBP-300WMW

Hanging Mount



SBP-122HMW



# Corner

(ANV-L6012R / L7012R)



# Parapet & Smoked Dome (ANV-L6012R / L7012R)

ANV - L6012R / L7012R



Parapet Mount

Hanging Mount

Parapet Mount

Hanging Mount

Smoke Dome Cover

SPB-VAW12



SBP-300LMW










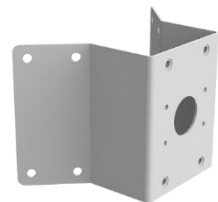







SBP-122HMW



SBP-156LMW

SBP-122HMW

## 3-3. Installation Guide of ANV-L6082R / L7082R // ACV-8080R / 8081R

					
<b>Hanging Mount</b> SBP-122HMW	<b>Ceiling Mount</b> SBP-300CMW	<b>Ceiling Mount</b> SBP-156CMW	<b>In-ceiling Mount</b> SHD-1408FPW	<b>Wall Mount</b> SBP-300WMW1	<b>Wall Mount</b> SBP-300WMW
					
<b>Wall Mount</b> SBP-137WMW1	<b>Wall Mount Base</b> SBP-300BW	<b>Pole Mount Base</b> SBP-300PMW1	<b>Corner Mount Base</b> SBP-300KMW1	<b>Parapet Mount</b> SBP-300LMW	<b>Parapet Mount</b> SBP-156LMW
					
<b>Installation Box</b> SBP-300NBW	<b>Back Box</b> SBV-A14B	<b>Back Box</b> SBV-120GW	<b>Weather Cap</b> SBV-120WCW	<b>Smoke Dome cover</b> SPB-VAW12	

# Ceiling

(ANV-L6082R / L7082R // ACV-8080R / 8081R)



Back Box



SBV-A14B



Ceiling Mount



SBP-300CMW

or



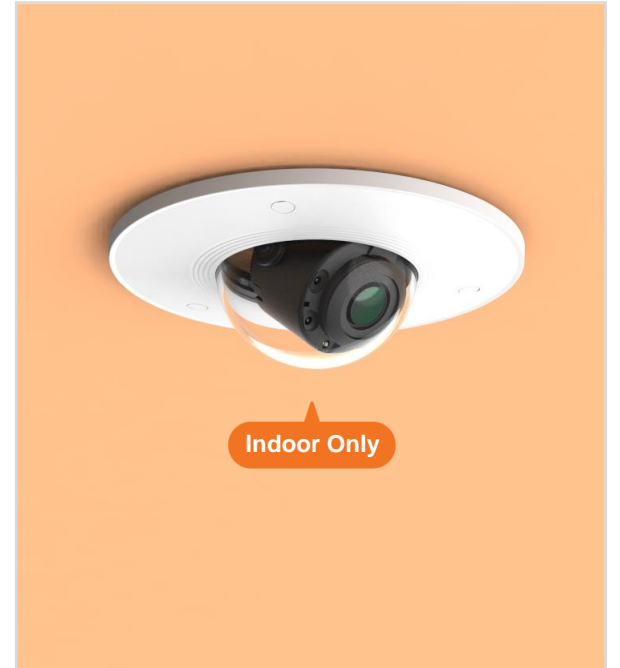
SBP-156CMW

+

Hanging Mount



SBP-301HMW2



Indoor Only

In-ceiling Housing



SHD-1408FW

or



SHD-1408FPW

Plenum

# Wall

(ANV-L6082R / L7082R // ACV-8080R / 8081R)



Back Box



SBV-A14B



Wall Mount



SBV-137WMW1



Tilt Mount



SBV-138TMW

# Wall

(ANV-L6082R / L7082R // ACV-8080R / 8081R)



# Pole

(ANV-L6082R / L7082R // ACV-8080R / 8081R)



Back Box



SBV-A14B

Pole Mount



SBP-300PMW1

Option



Installation Box  
SBP-300NBW

Wall Mount



SBP-300WMW1



SBP-300WMW

Hanging Mount

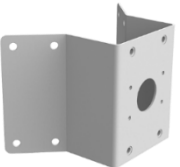

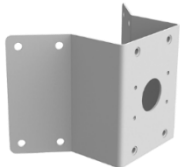


SBP-301HMW2

# Corner

(ANV-L6082R / L7082R // ACV-8080R / 8081R)

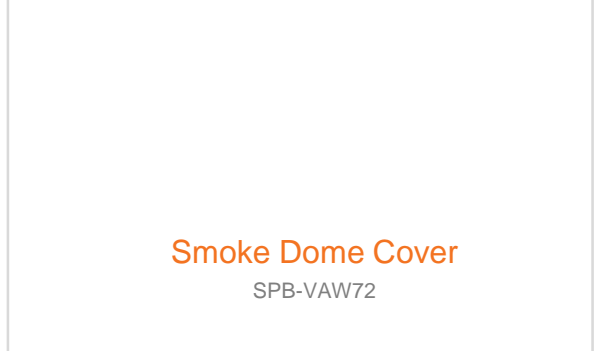


<p><b>Corner Mount</b></p>  <p>SBP-300KMW1</p>	<p><b>Back Box</b></p>  <p>SBV-A14B</p>	<p><b>Corner Mount</b></p>  <p>SBP-300KMW1</p>	<p><b>Wall Mount</b></p>  <p>SBP-137WMW1</p>	<p><b>Corner Mount</b></p>  <p>SBP-300KMW1</p>	<p><b>Option</b></p>  <p>Installation Box SBP-300NBW</p>	<p><b>Wall Mount</b></p>  <p>SBP-300WMW1 or SBP-300WMW</p>	<p><b>Corner Mount</b></p>  <p>SBP-301HMW2</p>
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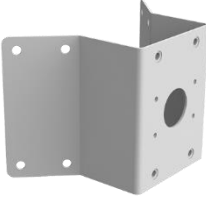






# Parapet & Smoked Dome

(ANV-L6082R / L7082R // ACV-8080R / 8081R)



### 3-3. Installation Guide of ANE-L6012R / L7012R / L7012L // ACE-6020R / 8020R

				
<p><b>Hanging Mount</b> SBP-301HMW2</p>	<p><b>Ceiling Mount</b> SBP-300CMW</p>	<p><b>Ceiling Mount</b> SBP-156CMW</p>	<p><b>Wall Mount</b> SBP-300WMW1</p>	<p><b>Wall Mount</b> SBP-300WMW</p>
				
<p><b>Wall Mount</b> SBP-125WMW</p>	<p><b>Wall Mount Base</b> SBP-300BW</p>	<p><b>Pole Mount Base</b> SBP-300PMW1</p>	<p><b>Corner Mount</b> SBP-300KMW1</p>	<p><b>Parapet Mount</b> SBP-300LMW</p>
				
<p><b>Parapet Mount</b> SBP-156LMW</p>	<p><b>Installation Box</b> SBP-300NBW</p>	<p><b>Back Box</b> SBV-A14B</p>	<p><b>Back Box</b> SBV-125BW</p>	

# Ceiling

(ANE-L6012R / L7012R / L7012L // ACE - 6020R / 8020R)



Back Box



SBV-A14B



Ceiling Mount



SBP-300CMW

or



SBP-156CMW

+



Hanging Mount



SBP-301HMW2

# Wall

(ANE-L6012R / L7012R / L7012L // ACE - 6020R / 8020R)



Back Box



SBV-A14B



Wall Mount



SBP-125WMW



Wall Mount



Hanging Mount



SBP-301HMW2

# Pole

(ANE-L6012R / L7012R / L7012L // ACE - 6020R / 8020R)



Back Box



SBV-A14B

Pole Mount



SBP-300PMW1

Option



Installation Box  
SBP-300NBW

Wall Mount



SBP-300WMW1



SBP-300WMW

Hanging Mount



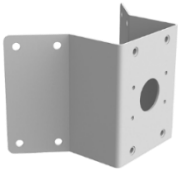
SBP-301HMW2

# Corner

(ANE-L6012R / L7012R / L7012L // ACE - 6020R / 8020R)



Corner Mount



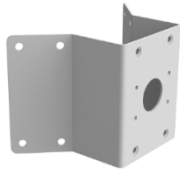
SBP-300KMW1

Back Box



SBV-A14B

Corner Mount



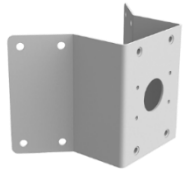
SBP-300KMW1

Wall Mount



SBP-125WMW1

Corner Mount



SBP-300KMW1

Option



Installation Box  
SBP-300NBW

Wall Mount



SBP-300WMW1



SBP-300WMW

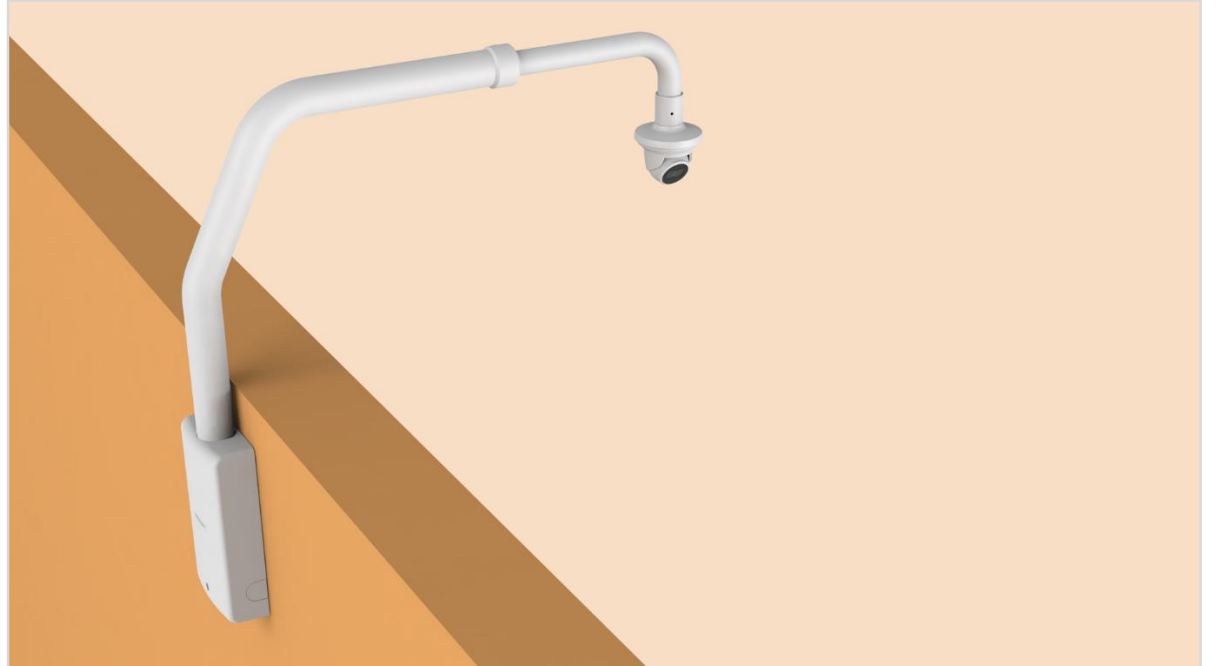
Corner Mount



SBP-301HMW2

# Parapet

(ANE-L6012R / L7012R / L7012L // ACE - 6020R / 8020R)



Parapet Mount



SBP-300LMW



Hanging Mount



SBP-301HMW2

Parapet Mount



SBP-156LMW




Hanging Mount



SBP-301HMW2

### 3-3. Installation Guide of ANO-L6012R / L6022R / L6082R / L7012R / L7022R / L7082R // ACO-6020R / 8020R

				
<p><b>Corner Mount</b> SBP-300KMW1</p>	<p><b>Back Box</b> SBV-A14B</p>			



# Conduit Hole Adaptor & Pole & Corner

(ANO-L6012R / L6022R / L6082R / L7012R / L7022R / L7082R // ACO-6020R / 8020R)



Back Box



SBV-A14B



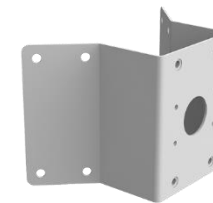
Back Box



SBV-A14B



Corner Mount



SBP-300KMW1



Back Box



SBV-A14B

