

## VCA LICENSE LIST

### License Function

Model	Basic License			Advanced License										
	Number of Detection Zone	Tamper detect	Presence (Intelligent Motion Sensor)	Surveillance							Counting		PTZ	
				Enter/Exit	Appear/Disappear	Stopped	Dwell	Direction Filter	Speed filter	Tail gating	On-screen Counter	Counting Line	PTZ Autotracking	
ZNS-PRES <b>Free</b> *1	40	<input type="radio"/>	<input type="radio"/>											
ZNS-COUNT	40	<input type="radio"/>									<input type="radio"/>	<input type="radio"/>		
ZNS-ACCESS	40	<input type="radio"/>	<input type="radio"/>							<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
ZNS-DETECT	40	<input type="radio"/>	<input type="radio"/>			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>						
ZNS-FOLLOW	40	<input type="radio"/>											<input type="radio"/>	
ZNS-SURV	40	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
ZNS-PRO *2	40	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
ZNS-ADVANCED	40	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
ZNS-TRACK	40	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	

\*1 Except for Encoder, Free License cannot use calibration setting. \*2 ZNS-PRO is only available for ZN-xxV series(V, Vx, Vxx) and ZN-Rx/Zs.

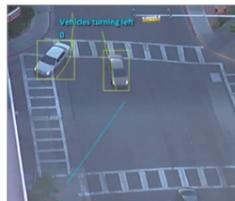
## Imbedded Intelligence Content Analytics



### Intrusion Detection

— Presence, Enter/Exit, Appear/Disappear

For perimeter security and crime prevention cameras can be used as intrusion detection sensor. An alarm is generated when a pre-determined object (person or vehicle) crosses into the detection zone. Equally, an alarm is generated when an object crosses from the inside to the outside of a detection zone.



### Directional Detection

— Direction Filter

Objects that travel in the configured direction (within the limits of the acceptance angle) through a zone or over a line trigger an alarm. This can be used for traffic control and entry/exit monitoring.



### People and Vehicle Counting

— On-screen Counter, Counting Line

This feature counts the people and vehicles that pass through the setup "lines" with precision. It recognizes directions, so it can differentiate whether they are entering or exiting. It can also measure the speed of the objects. This feature is ideal for retail: counting customers, identifying trends and alerting staff when a group gathers in a defined location.



### Tailgating Detection

— Tailgating

Object tailgating is defined as two objects crossing a virtual line or zone within in a pre-defined time frame. This is suitable for vehicles or with people in an access control setting.



### Stopping and Dwell Detection

— Stopped, Dwell

Objects that are stopped inside a zone, or remain inside a zone for longer than the defined amount of time will trigger an alarm. Ideal for identifying a loitering person.

# GANZ **PixelPro GXi** WITH **GXi** TECHNOLOGY

## "PixelPro GXi" Network Camera with Video Content Analytics

Produced by **GANZ IP**



**LINE UP**

Network Cameras with VCA

VCA Encoders

Repositionable Cameras with VCA

Thermal Camera with VCA

**GANZ IP WITH PixelPro GXi**  
TECHNOLOGY

<PixelPro GXi Series>

**Box Series  
ZN-NH22XE**



- C/CS Mount selectable
- 1/2.9" Progressive Scan CMOS
- 25/30 fps@1080p
- True Day/Night and Digital WDR Performance
- DC Auto iris
- Dual-Streaming IP Video - H.264 Compression
- Audio Input/Output : 1/1
- Video recording to SD/SDHC memory card
- Embedded Video Analytics

**Qube Series  
ZN1-Q3FN2**



- Cube type camera
- 1/4" Progressive Scan CMOS
- 25/30 fps@720p
- Horizontal: Approx. 91°
- Easy and flexible installation
- MicroSD/SDHC memory card slot
- Embedded Video Analytics

**Indoor Dome Series  
ZN1-M4FN3**



- Mini (Biscuit) type dome
- 25/30 fps@1080p
- MicroSD/SDHC memory card slot
- Embedded Video Analytics

**Indoor Dome Series  
ZN1-D4NFN6L / ZN-DN312XE-M**



- IR LED (ZN1-D4NFN6L)
- Remote Zoom/Focus (ZN-DN312XE-M)
- 25/30 fps@1080p
- MicroSD/SDHC memory card slot
- Embedded Video Analytics

**Outdoor Dome Series  
ZN-DNT352XE-M / ZN-DNT352XE-MIR**



- IR LED (ZN-DNT352XE-MIR)
- Remote Zoom/Focus
- 1/2.7" Progressive Scan CMOS
- 25/30 fps@1080p
- MicroSD/SDHC memory card slot
- Embedded Video Analytics



**Repositionable Dome Series  
ZN-DN332XE-MPD / ZN-DNT372XE-MPD**

- Repositionable (Simple PTZ)
- 1/2.7" Progressive Scan CMOS
- 25/30 fps@1080p
- MicroSD/SDHC memory card slot
- Embedded Video Analytics



**Bullet Series  
ZN1-N4NFN6 / ZN1-B4NVD43**

- 4.3mm Lens (Horizontal: Approx. 74.4°)
- Varifocal Lens (ZN1-B4NVD43)
- Repositionable 3~9mm (Horizontal: Approx. 98.2° - 37.4°)
- IP66 for all weather conditions
- 1/2.9" Progressive Scan CMOS
- 25/30 fps@1080p
- Alarm Input/output : 1/1
- MicroSD/SDHC memory card slot
- Embedded Video Analytics



**PTZ Series  
ZN-PTZ202XE / ZN-PTZ202XE-XT**

- Optical 20x, Digital 8x
- Horizontal: Approx. 55.5° - 3.1°
- PoE+/24VAC
- 25/30 fps@1080p
- MicroSD/SDHC memory card slot
- Embedded Video Analytics



**Encoreder  
ZS1-1DS / ZS1-4DS**

- 1ch/4ch Video Encoder
- 25/30fps @ D1 (720x480)
- PoE (ZS1-1DS)
- The packaging contains DC power adaptor
- MicroSD/SDHC memory card slot
- Embedded Video Analytics



**Thermal Series  
ZN-TH110FVE-H**

- Uncooled Vanadium Oxide Microbolometer
- Effective Pixels : 320x240
- Alarm Input/output : 1/1
- H.264 Dual Stream
- NETD : 50mK
- The packaging contains DC power adaptor
- MicroSD/SDHC memory card slot
- Embedded Video Analytics

# SPECIFICATION

		Box Series	Qube Series	Indoor Dome Series			Outdoor Dome Series		Bullet Series	
MODEL		ZN-NH22XE	ZN1-Q3FN2	ZN1-M4FN3	ZN1-D4NFN6L	ZN-DN312XE-M	ZN-DNT352XE-M	ZN-DNT352XE-MIR	ZN1-N4NFN6	
										
Camera Module	Image Sensor	SONY EXMOR 1/2.9" 1080p CMOS	1/4" 720p CMOS	1/2.7" 1080p CMOS	SONY EXMOR 1/2.9" 1080p CMOS	1/2.7" 1080p CMOS	1/2.7" 1080p CMOS		SONY EXMOR 1/2.9" 1080p CMOS	
	Effective Pixels	1920 x 1080	1280 x 720	1920 x 1080			1920 x 1080			
	Minimum Illumination	Color: 0.5 lux (50IRE) B/W : 0.001lux (DSS ON)	Color: 0.8 lux(50 IRE) B/W : 0.1lux (DSS ON)	Color: 1.0lux B/W : 0.001lux (DSS ON)	Color: 1.0lux B/W : 0.001 lux (DSS ON)	Color: 0.5lux B/W : 0.001lux (DSS ON)	Color: 0.5lux B/W : 0.001lux (DSS ON)	Color: 0.5lux B/W : 0lux (IR LED On)	Color: 1.0lux B/W : 0 lux (IR LED ON)	
	Lens	C/CS	2.7mm, F2.0	2.8mm, F2.0	4.3mm, F2.0	3.0(w) - 9.0mm(t), F1.2(w) - F2.1(t), Optical 3x, Motorized Focus & zoom lens			4.3mm, F2.0	
	Field of View	-	Horizontal: Approx. 91.0° Vertical: Approx. 59.0°	Horizontal: Approx. 110.0° Vertical: Approx. 81.5°	Horizontal: Approx. 74.4° Vertical: Approx. 40.8°	Horizontal: Approx. 93.0°(W) to 31.7°(T) Vertical: Approx. 68.4°(W) to 23.8°(T)			Horizontal: Approx. 74.4° Vertical: Approx. 40.8°	
Day & Night	True Day & Night (Removable IR Cut Filter)		Digital Day & Night			True Day & Night (IR Cut Filter Removable)				
Video	Compression	H.264, MJPEG			H.264, MPEG-4, MJPEG			H.264, MJPEG		
	Number of Streams	Triple Stream*, Configurable streams in H.264, MJPEG	Dual Stream*, Configurable streams in H.264, MJPEG	Triple Stream*, Configurable streams in H.264, MJPEG						
	MaximumResolutions	Full HD 1080p(1920 x 1080)	720p(1280 x 720)	Full HD 1080p(1920 x 1080)						
	Frame rate	25/30 fps@1080p	25/30 fps@720p	25/30 fps@1080p			25/30 fps@1080p			
Audio In / Out	1 / 1		-			1 / 1		-		
Function	DI / DO	1 / 1		-			1 / 1		-	
	SD Memory Card Slot	SD slot (up to 64GB)	microSD slot (up to 64GB)	microSD slot (up to 64GB)			microSD slot (up to 64GB)			
Electrical	Power Source	12VDC, PoE	12VDC	PoE	12VDC, PoE			PoE		
	Power Consumption (Approx)	6.0W @ 12VDC	3.4W @ 12VDC	2.4W @ PoE	5.0W @ 12VDC	4.7W @ 12VDC	13.8W @ 12VDC	15.12W @ 12VDC	5.6W @ PoE	
Environmental	Operating Temperature (Not include cold start)	[12VDC] 0°C ~ 50°C (32°F ~ 122°F); [PoE] 0°C ~ 45°C (32°F ~ 113°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)		0 °C ~ 50 °C (32 °F ~ 122 °F)	[12VDC] -40°C ~ 50°C (-40°F ~ 122°F); [PoE] -20°C ~ 50°C (-4°F ~ 122°F); Built-in heater Cold Start:[12VDC] -20°C (-4°F) [PoE] 0°C (32°F)	[12VDC] -40°C ~ 50°C (-40°F ~ 122°F); [PoE] 0°C ~ 50°C (32°F ~ 122°F); Built-in heater Cold Start: [12VDC] -20°C (-4°F); [PoE] 0°C (32°F)	-20°C ~ 45°C (-4°F ~ 113°F)	
	Operating Humidity	Up to 85% RH (Non-condensing)								
Mechanical	Dimensions	70.5(W) x 63.9(H) x 137.9(D) mm	76.1(W) x 142.5(H) x 92.3(D) mm	Housing: 105.5(ø) x 55.5(H) mm, Dome: 55.0(ø) mm	Housing: 148.0(ø) x 100.0(H) mm, Dome: 100(ø) mm	Housing: 148.0(ø) x 120.9(H) mm, Dome: 100(ø) mm	Housing: 155.0(ø) x 129.0(H) mm, Dome: 100.0(ø) mm		76.0(W) x 73.5(H) x 245.0(D) mm	
	Weight (Approx)	470g	142g	270g	430g	520g	1.2kg		600g	
Certifications	CE / FCC			CE / FCC / IP66						
Onvif (Profile S)	Supported									
Accessories (option)	-									
Other Models	ZN-NH11VP(N)E, ZN-NH21VE		-	ZN-D100VE, ZN-D200VE, ZN-D312VE		ZN1-D4NMZ43L	ZN-DN312XE	ZN-DNT350VP(N)E, ZN-DT352VE, ZN-DNT352XE	ZN-DNT352XE-IR	-

\*It depends on VCA

## VCA(Video Contents Analytics) Engine and Application

\*For the corresponding licenses, please see the back cover.

Loaded with the entire model of GXi Series

### Basic functions

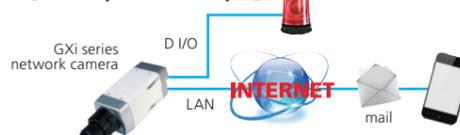
The Network Cameras of GXi Series has a built-in video analysis engine, enabling the video camera to carry out three-dimensional image processing, the video camera which was originally two-dimensional. Moreover, adding the filters for "time", "speed", "size" and "number", it can automatically recognize from the video the movement of people and vehicles, the changes in the objects, such as buildings and facilities, etc.

Moreover, by loading the calibration setting function that sets up the "depth" of the video camera that is two-dimensional, it has the function to realize efficient and reliable video analysis from the stage of installation and adjustments.

### Applications

At the company of the GXi Series, we are providing developmental tools to enable the customers to build all kinds of systems at their sites, by applying the VCA video analysis engine. Based on this, the customers can prepare applications that respond to their needs, such as the applications for specialized monitoring of people, for integrating marketing information, as well as for use on the Smartphones.

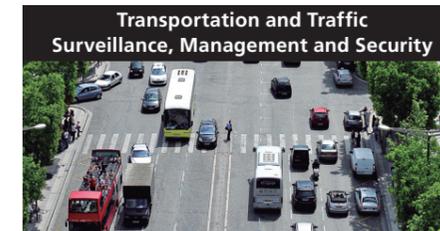
#### [Development example]



The GXi can easily be used as a sensor. Even without the recorder application, it is possible to utilize the VCA function, set off different types of alarms, and put lighting settings on automatic control.

### Features and Benefits of "GXi Imbedded Intelligence"

- Intuitive web browser interface
- Real-time on-screen annotation of the object tracking and segmentation bitmap(blobs) gives information about the operation of the Imbedded Intelligence.
- High quality tracking engine
- Instant alarm notifications
- Intelligent event search with video
- Flexible licenses with add on functions
- Unique, easy to use, patented 3D calibration
- Real-time display of object classification, speed, area and height
- Speed filter with upper and lower speed thresholds
- Filters for object class (people, group of people, vehicle, clutter, etc.)
- Selection of object classification defined by user
- Full forensic metadata stream in XML format



Bullet Series	PTZ Series		Repositionable Dome Series	
ZN1-B4NVD43	ZN-PTZ202XE	ZN-PTZ202XE-XT	ZN-DN332XE-MPD	ZN-DNT372XE-MPD
				
SONY EXMOR 1/2.9" 1080p CMOS	1/3" 1080p CMOS 1920 x 1080		1/2.7" 1080p CMOS	
Color: 1.0lux B/W : 0 lux (IR LED ON)	Color: 1.5lux (50 IRE) / 0.02lux (Sens-up) B/W : 0.1lux (50 IRE) / 0.001lux (Sens-up)		Color: 0.5lux B/W : 0.001lux (DSS ON)	
3.0(w) – 9.0mm(t), F1.5(w) – F2.5(t), Optical 3x	4.45(w) – 89.0mm(t), F1.6(w) – F2.9(t), Optical 20x, Digital 8x		3.0(w) – 9.0mm(t), F1.2(w) – F2.1(t), Optical 3x, Motorized Focus & zoom lens	
Horizontal: Approx. 98.2°(W) to 37.4°(T) Vertical: Approx. 55.2°(W) to 21.6°(T)	Pan Rotation Angle : 360° Endless Rotation / Tilt Rotation Angle : -5° ~ 185° Horizontal: Approx. 55.56°(W) to 3.10°(T) / Vertical: Approx. 43.32°(W) to 2.34°(T)		Horizontal: Approx. 93.0°(Wide) to 31.7°(Tele) Vertical: Approx. 68.4°(Wide) to 23.8°(Tele)	
True Day & Night (Removable IR Cut Filter)				
H.264, MJPEG				
Triple Stream*, Configurable streams in H.264, MJPEG				
Full HD 1080p(1920 x 1080)				
25/30 fps@1080p				
-	1 / 1		1 / 1	
microSD slot (up to 64GB)				
12VDC, PoE	24VAC, PoE+(802.3at)		12VDC, 24VAC, PoE	
6.0W @ 12VDC	18.0W @ 24VAC	44.0W (heater on) @ 24VAC	8.7W @ 12VDC	16.2W @ 12VDC
[12VDC] -20°C ~ 50°C (-4°F ~ 122°F); [PoE] -20°C ~ 45°C (32°F ~ 113°F);	[AC24V/PoE+] 0°C ~ 50°C (32°F ~ 122°F);	[AC24V] -40°C ~ 50°C (-40°F ~ 122°F); [PoE+] 0°C ~ 50°C (32°F ~ 122°F); Built-in fan and heater	0°C ~ 50°C (32°F ~ 122°F)	[12VDC/24VAC] -20°C ~ 50°C (-4°F ~ 122°F); [PoE] 0°C ~ 50°C (32°F ~ 122°F); Built-in fan and heater Cold Start: [12VDC/24VAC] -20°C(-4°F); [PoE] 0°C (32°F)
Up to 85% RH (non-condensing)				
86.0(W) x 83.5(H) x 280.0(D) mm	180(ø) x 240(H) mm	232.0(ø) x 278.1(H) mm	Housing: 165.3(ø) x 134.7(H) mm, Dome: 100.0(ø) mm	Housing: 154.4(ø) x 130.0(H) mm, Dome: 100.0(ø) mm
860g	2.0kg	4.6kg	1.2kg	1.6kg
CE / FCC / IP66	CE/FCC	CE / FCC / IP66	CE/FCC	CE / FCC / IP66
Supported				
-	Flash Mount Bracket:FMB-4200	Wall Mount Bracket : WMB-4600 Ceiling Mount Bracket : CMB-4600 Corner Mount Adapter : CMA-4600 Pole Mount Adapte	Flash Mount Bracket : FMB-3302	-
ZN-BT662XE, ZN1-B4NMZ43	ZN-PTZ36VP(N), ZN-PT27VP(N)	ZN-PTZ36VP(N)-XT, ZN-PT27VP(N)-XT, ZN-37VP(N)-XT, ZN-PT12VP(N)-XT	-	ZN-DNT372XE-MPD-1

		Encoreder	
MODEL		ZS1-1DS	ZS1-4DS
Video	Input/ Output	1 / 1	4 / -
	Compression	H.264, MJPEG Selectable per Stream	
	Number of Streams	Dual Stream, Configurable	
	MaximumResolutions	D1 (720 x 480/576)	
	Frame Rate	25/30fps @ D1 (PAL/NTSC)	
Audio	Input	4 / 1	
Function	DI / DO	2 / 2	4 / 4
	SD Memory Card Slot	Supported (64GB)	
Electrical	Power Source	12VDC, PoE	12VDC (DC Jack)
	Power Consumption (Approx)	2.8W@12VDC	8.8W@12VDC
Environmental	Operating Temperature (Not include cold start)	0°C ~ 50°C	
	Operating Humidity	Up to 85% RH (Non-condensing)	
Mechanical	Dimensions	103.4(W) x 37.7(H) x 140.7(D) mm	137.1(W) x 38.0(H) x 243.1(D) mm
	Weight (Approx)	430 g	920 g
Certifications		CE/FCC	
Onvif		Supported	
Other Models		ZS1-4DB1	ZS1-4DB1 (Rack:ZA-NVE12K) ZS1-4DB2 (Rack:ZA-NVE40K)

		Thermal Series
MODEL		ZN-TH110FVE-H
Camera Module	Focal Plane Array	17 μm Uncooled Vanadium Oxide Microbolometer
	Effective Pixels	320x240
	Spectral Response	8 - 14 μm
	Lens (Optional)	7.5mm, F1.4 (42.1 Degree FoV) 16.7mm, F1.2 (18.7 Degree FoV) 25mm, F1.2 (12.4 Degree FoV) 35mm, F1.2 (8.9 Degree FoV) 50mm, F1.2 (6.2 Degree FoV)
	NEDT	Less than 50mK
Video	Compression	H.264, MPEG4, MJPEG
	Number of Streams	Dual Stream, Configurable
	Maximum Resolutions	Sensor is 320x240; Image can be scaled from QCIF to D1
	Frame rate	9Hz or 30Hz Models Available
Audio In / Out		1 / 1
Function	DI / DO	1 / 1
	SD Memory Card Slot	Support (microSD type)
Electrical	Power Source	12V DC (Screw Terminal)
	Power Consumption (Approx)	Estimated 6-8 Watts
Environmental	Operating Temperature (Not include cold start)	indoor:0 °C ~ 50 °C (32 °F ~ 122 °F)
	Operating Humidity	Up to 85% RH (Non-condensing)
Mechanical	Dimensions	55.0(W) x 55.0(H) x 125.7(D) mm
	Weight (Approx)	350g
Certifications		-
Onvif (Profile S)		-
Other Models		-

## Layout Image



## Repositionable Camera

Model : ZN-DN332XE-MPD  
ZN-DN372XE-MPD

The Repositional camera has a simple PTZ function. It does not operate by the controller like the regular PTZ camera, but it is capable of setting up with ease the angles of the view during the operation time and it moves according to the schedule to the respective positions that have been registered in advance.

### [Example]

- At the time of shelf-sorting during inventory in the store, it faces the directions to cover all the areas required, with no need of construction. It coordinates the angles.
- During the day, it covers the entire office and at night, it covers the entrance and exit.
- Even during construction, install the camera for the time being and make the adjustments later on.

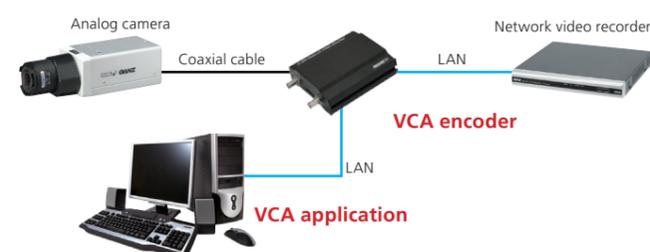


It automatically makes the necessary changes to cover the areas to be monitored during the day and at night. The functions of VCA can be set, according to the respective needs.

## VCA Encoder

Model : ZS1-1/4DS

This is an encoder which has as its external unit the video analysis engine that is built-in the GX Series Network Camera. Its setting is also simple. The input side is equipped with a coaxial cable outlet and the output side, with a LAN Port. All that needs to be done to connect it is to "bypass" between the analogue monitoring camera and the recorder. It is possible to invest the analogue monitoring camera with the "video analysis function". Moreover, regarding the video analysis functions and applications, like the GX Series Network Camera with the video analysis engine built-in, it selects the application for each function, corresponding to the objects to be monitored and the information to be collected.



## Thermal Camera

Model : ZN-TH110FVE-H

Thermal Camera is a camera that is capable of shooting infrared that is emitted naturally by objects. By the combination of the visualization of infrared and the highly functional video analysis engine (VCA) in the Thermal Camera, it is capable of monitoring most efficiently long distances and extensive areas even in total darkness.

