

# SELECTION GUIDE

End-to-end solution and service provider incorporating in-house developed application software, analytics and cameras



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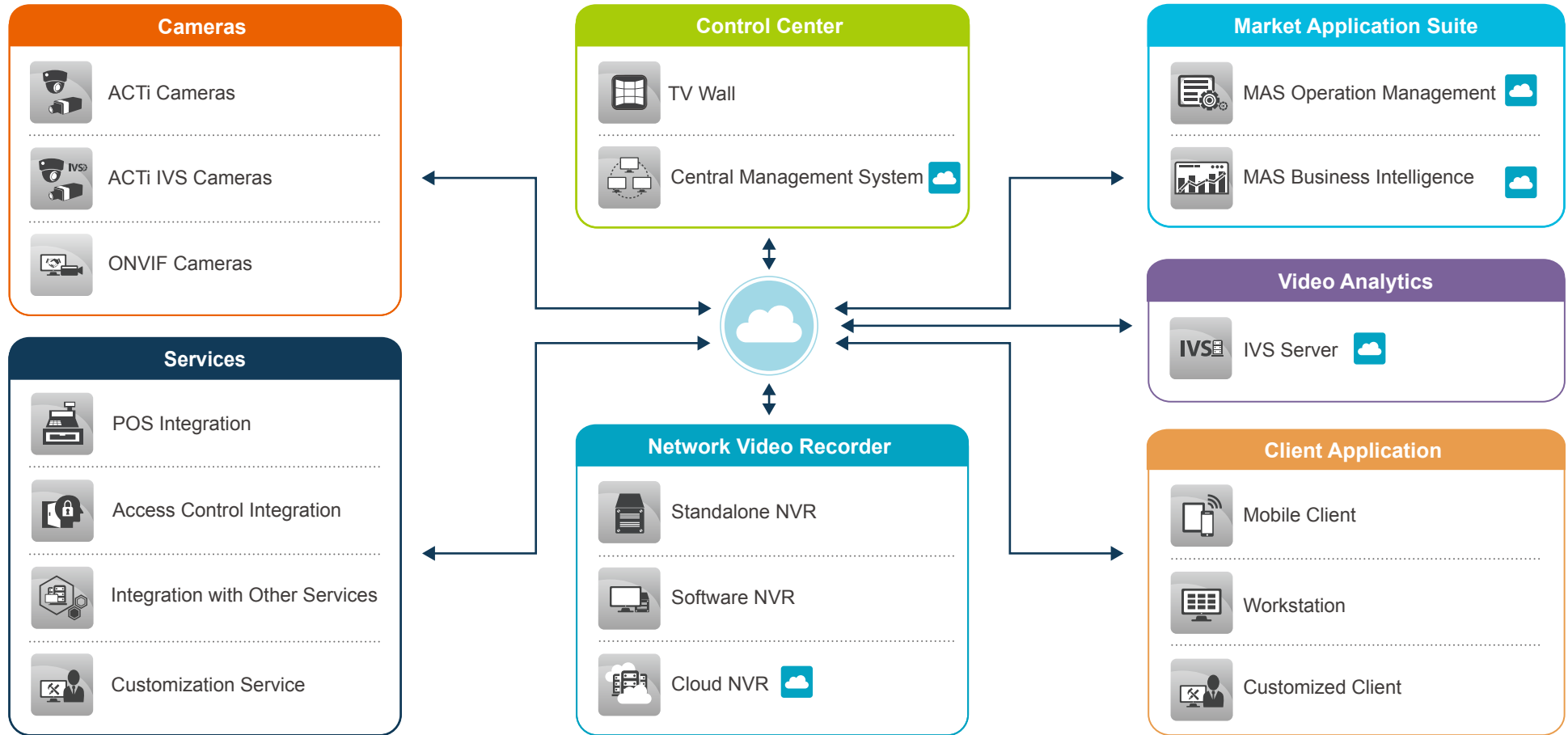
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# ACTi SOLUTION DIAGRAM



Control / Video Information
 
 Cloud Media Service Available

# MULTIFUNCTIONAL Q950 DOOR STATION

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## Applications



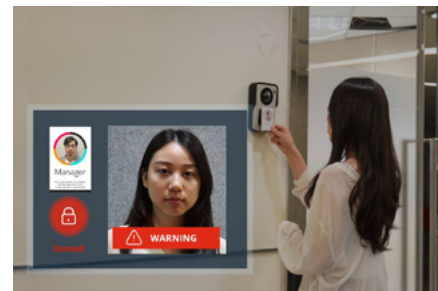
Intercom with remote door control for door and gate management



Intercom as a voice access point for service and emergency

## Key Features

- Two-way audio communication
- 6MP camera for visual validation
- RFID reader for automated access control
- Durable touch-sensitive button
- Proximity detection to alert about the visitor
- IP66 and IK09 certified resisting harsh weather and vandals
- Optional face recognition for access verification
- Controller for door status and locking
- IR LED for Day & Night applications



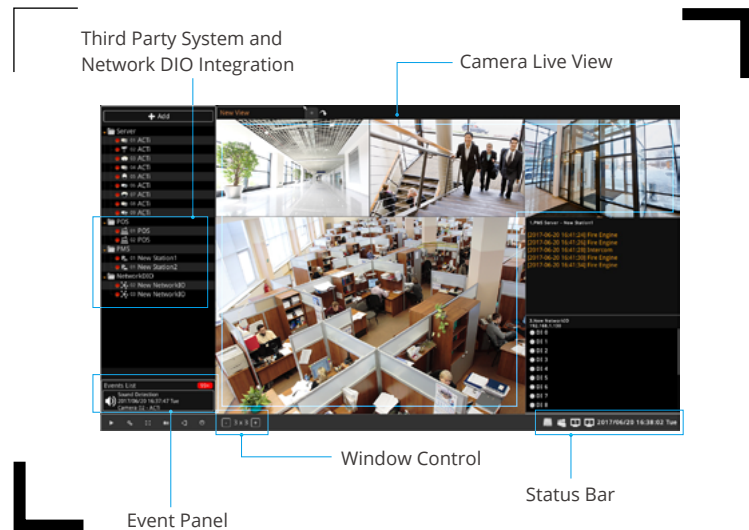
Access control with RFID and face recognition to identify visitors and open door automatically



Employee attendance management with arrival and leaving data registered by RFID

# ENR GENERATION 3




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## Alternative Solution to Software NVR 3

ACTi premium Linux-based Standalone NVRs provide you with all features you need for small-scale security and business management.

## Options for You

Maximum Recording Channels	Built-in PoE Connectors					
		Desktop 2 Bays	Tower 4 Bays	Rackmount 4 Bays	Transportation 2 Bays	Lockbox
4	0				MNR-110	
	4	ENR-220P			MNR-110P/ MNR-111P	
9	0	ENR-221			MNR-120	
	8	ENR-221P			MNR-120P/ MNR-121P	ENR-620P
16	0	ENR-222		ENR-420	MNR-130	
	16		ENR-320P			
32	0			ENR-421		
	16		ENR-321P			

\*Please visit our website at [www.acti.com](http://www.acti.com) for the product availability.

## Special Features

- Access to camera live view and receive notification via e-Map
- Up to 12MP maximum recording resolution and H.265 support
- Event detection by external IVS systems
- POS, Access Control, Car Park System and Network DIO integration ready
- Software auto updates with scheduler

# Q93 & Q94 PEOPLE COUNTING CAMERAS

// For more information → P.10



## Key Features

- Day & Night
- Superior Low Light Sensitivity
- Adaptive IR LED
- Extreme WDR (145dB)
- Installation Height Range
  - Q93: 2.4 m - 4.1 m (7' 9" - 13' 5")
  - Q94: 2.6 m - 5.1 m (8' 5" - 16' 7")

## Bi-directional Counting

With ACTi People Counting Cameras Q93 & Q94, the number of people that enter and leave the store can be counted automatically. Mounted straight down over where the people are walking, the camera is ideal for door, elevator and escalator application.

## Retail Applications



### Customer Footfall

Optimize customer shopping experience and maximize marketing campaign efficiency.



### Conversion Rate

Enhance selling strategy with combined people counting and POS data.



### Staff Allocation

Understand the distribution of coming customers in order to properly replenish stocks.

## Application Software



### Free Live People Counting Viewer

Enjoy the real-time counting by simply connecting the camera and specifying your ceiling height for fully automatic configuration!



### People Counting Camera Selector

Find the most suitable counting camera for specific installation environment!

 [www.acti.com/countingviewer](http://www.acti.com/countingviewer)

 [www.acti.com/peoplecountingselector](http://www.acti.com/peoplecountingselector)

# COVERT CAMERAS

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## Discreet Monitoring and Face Identification



Covert camera, as the name implies, is discreet and difficult to be discovered. Installed at eye level, it will capture a perfect view of a person's face even if he/she is wearing a hood or cap without causing negative feelings.

## Key Features

- Up to 5 Megapixel
- General, Fisheye, Pinhole and L-shaped Pinhole Covert
- Superior Low Light Sensitivity
- 2-way Audio
- Digital Input / Output
- Local Storage
- Vibration Proof (EN50155)
- 12-meter Long Lens Cable

## Applications and Installations



**Elevator**  
(Corner Mount)



**ATM**  
(Bracket)



**Mobile Vehicle**  
(Tiltable Surface Mount)



**Exhibition**  
(L-shaped Flush Mount)



**Vending Machine**  
(Flush Mount)



**Office**  
(Tiltable Flush Mount)



**Mobile Vehicle**  
(Windshield Mounting Bracket)



**Entrance**  
(Height Strip)

# Q22 MICRO BOX CAMERA

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## Key Features

- 2 Megapixel
- Built-in Microphone
- Fixed Lens with f2.55mm / F2.2
- Superior Low Light Sensitivity
- Super Wide Angle
- Weatherproof (IP68) and Vandal Proof (IK10)
- Desktop Stand with Magnetic Base, Pole Mount or Clamp Mounting Options for Flexible Installation

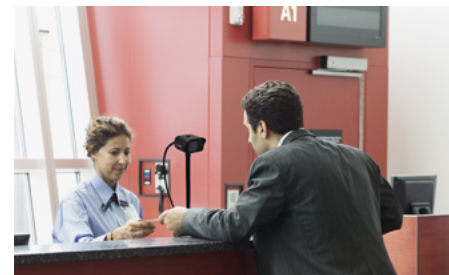
## Audio Recording



Q22 is equipped with a powerful microphone that can discern between a normal conversational volume and an abnormal one. Whenever it detects sounds surpassing a user defined limit, it will send a notification to alert management of the situation.

## Applications and Installations

ACTi's Q22 Micro Box Camera is about half the size of a deck of cards, weighs a little under 0.5 kg (1 lb) and has a sturdy IK10 rated casing. It can be installed at any service counter or wherever critical interactions take place.

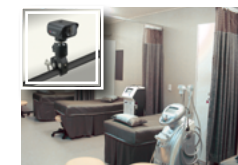


**Service Counter** (Heavy Magnetic Base)

Popular Product: Q22-K1



**Security Check**  
(Edge Clamp)



**Patient Monitoring**  
(Pole Mount)



# DIGITAL SIGNAGE SOLUTION

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## Real-time and Effective Communication

Display various contents such as pre-recorded videos, live video streams, images, text and web pages with customized layout for security and operation management of various markets.

## Applications



### Live View Monitoring

Bring the real-time video from the surveillance camera to the public screens for theft prevention.

### Emergency Instructions Broadcast

Centrally send instant alerts to all monitors upon emergency via Media Management Server.



### Workflow Optimization

Display real-time reminders, instructions and notifications for maximizing work efficiency.

### Personal Communication

Provide personalized information, including ads, instructions and greetings.



### Targeted Advertising

Display demographic adaptive ads based on age and gender of the people looking at the screen.



### Proximity Advertising

Trigger customized ads in proximity to particular products, boosting sales.

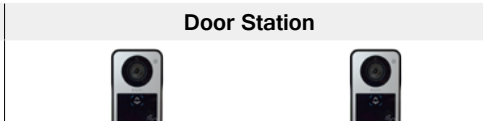
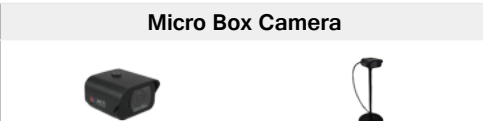
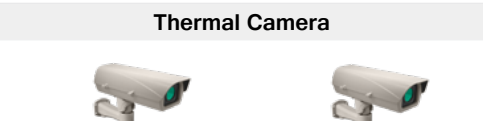


# People Counting Camera



Model	Q91	Q93	Q94	Q960	Q961	Q962
<b>Maximum Resolution</b>	2MP	1MP	1MP	0.6MP	0.6MP	0.6MP
<b>Application Environment</b>	Outdoor	Indoor	Indoor	Indoor	Indoor	Indoor
<b>Product Application</b>	People Counting	People Counting	People Counting	People Counting	People Counting	People Counting
<b>Metadata Accuracy</b>		Standard	Standard	Excellent	Excellent	Excellent
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Electronic Day / Night	Yes	Yes	No	No	No
<b>Low Light Sensitivity</b>	Superior	Superior	Superior	-	-	-
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0.1 lux at F2.2	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.2	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	-	-	-
<b>Mechanical IR Cut Filter</b>	No	Yes	Yes	No	No	No
<b>IR LED</b>	No	Adaptive IR LED	Adaptive IR LED	No	No	No
<b>IR Working Distance</b>	No	5m	5m	-	-	-
<b>Lens</b>	Fixed focal, f2.55mm / F2.2, Fixed iris, Fixed focus	Fixed focal, f2.55mm /F2.2, Fixed iris, Fixed focus	Fixed focal, f4.2mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f2mm /F2.2, Fixed iris, Dual lens	Fixed focal, f2.8mm /F2.0, Fixed iris, Dual lens	Fixed focal, f4.0mm /F2.2, Fixed iris, Dual lens
<b>Viewing Angle Adjustment</b>	Pan: ±90°, Tilt: 0°-90°	No	No	No	No	No
<b>Horizontal Viewing Angle</b>	110.3°	108.6°	73.1°	105°	83°	63°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264	H.264	H.264
<b>Frame Rate vs. Resolution</b>	60 fps at 1920 x 1080	30 fps at 1280 x 720	30 fps at 1280 x 720	24 fps at 640 x 960	24 fps at 640 x 960	24 fps at 640 x 960
<b>Multi-Streaming</b>	Triple streams	Triple streams	Triple streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	-	-	-
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	3D DNR	3D DNR	3D DNR
<b>Digital Image Stabilizer</b>	Yes	No	No	No	No	No
<b>Defogging</b>	Yes	Yes	Yes	No	No	No
<b>Audio</b>	1-way (Mic-in, Line-in)	No	No	No	No	No
<b>Digital Input / Output</b>	No	No	No	1/1	1/1	1/1
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSD/MicroSDHC/MicroSDXC (card not included)	MicroSD/MicroSDHC/MicroSDXC (card not included)	MicroSD/MicroSDHC/MicroSDXC (card not included)
<b>Installation Height Range</b>	-	2.4m - 4.1m (7.9ft - 13.5ft)	2.6m - 5.1m (8.5ft - 16.7ft)	2.5m - 3.5m (8.2ft - 11.5ft)	3m - 4m (9.8ft - 13.1ft)	4m - 5m (13.1ft - 16.4ft)
<b>Counting Method</b>	Line Counting	Line Counting, Area Counting, People Queue Detection	Line Counting, Area Counting, People Queue Detection	Line Counting	Line Counting	Line Counting
<b>Power Source</b>	PoE Class 2	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	No	No	No	No	No
<b>Built-in Analytics</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Heater</b>	No	No	No	No	No	No
<b>Operating Temperature</b>	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-10°C ~ 40°C (14°F ~ 104°F)	-10°C ~ 40°C (14°F ~ 104°F)	-10°C ~ 40°C (14°F ~ 104°F)
<b>Approvals</b>	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC





	Heat Map Camera	Thermal Camera		Micro Box Camera		In-wall Box Camera	Door Station	
Model	Q51	Q31	Q33	Q22	Q22-K1	Q250	Q950	Q951
<b>Maximum Resolution</b>	2MP	0.46MP	0.46MP	2MP	2MP	3MP	6MP	6MP
<b>Application Environment</b>	Indoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Product Application</b>	Heat Map	Thermal	Thermal	-	-	Train Application	Door Station	Door Station
<b>Bundled Accessories</b>	No	Integrated bracket	Integrated bracket	Bracket	Gooseneck Bracket (PMAx-1110), Desktop Mount (PMAx-0901)	No	No	No
<b>Image Sensor</b>	Progressive Scan CMOS	Thermal	Thermal	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	No	No	No	No	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Superior	Standard	Standard	Superior	Superior	Superior	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.6	-	-	Color: 0.1 lux at F2.2	Color: 0.1 lux at F2.2	Color: 0.1 lux, B/W: 0.05 lux at F2.2	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0
<b>Mechanical IR Cut Filter</b>	Yes	No	No	No	No	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	No	No	No	No	No	IR LED	IR LED
<b>IR Working Distance</b>	20m	-	-	-	-	-	5m	5m
<b>Lens</b>	Fixed focal, f1.3mm /F2.6, Fixed iris, Fixed focus	Fixed focal, f20mm / F1.0, Fixed iris, Manual focus	Fixed focal, f20mm / F1.0, Fixed iris, Manual focus	Fixed focal, f2.55mm / F2.2, Fixed iris, Fixed focus	Fixed focal, f2.55mm / F2.2, Fixed iris, Fixed focus	Fixed focal, f2.5mm / F2.2, Fixed iris, Fixed focus	Fixed focal, f1.65mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f4.00mm / F2.0, Fixed iris, Fixed focus
<b>Horizontal Viewing Angle</b>	171°	18.5°	30.4°	110.3°	110.3°	108.6°	198.5° (overview area) 121.1° (high detail area)	104.5°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 1920 x 1080	<b>NTSC:</b> 30 fps at 960 x 480 <b>PAL:</b> 25 fps at 960 x 576	<b>NTSC:</b> 30 fps at 960 x 480 <b>PAL:</b> 25 fps at 960 x 576	30 fps at 1920 x 1080	30 fps at 1920 x 1080	30 fps at 2048 x 1536 60 fps at 1920 x 1080	<b>Fisheye View:</b> 20 fps at 3072 x 2048 30 fps at 2048 x 2048 <b>Distorted View:</b> 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080
<b>Multi-Streaming</b>	Triple streams	Dual streams	Dual streams	Dual streams	Dual streams	Triple streams	Triple streams	Triple streams
<b>Wide Dynamic Range</b>	Extreme WDR (130 dB)	No	No	Basic WDR (75 dB)	Basic WDR (75 dB)	Extreme WDR (145 dB)	Extreme WDR (130 dB)	Extreme WDR (130 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	No	No	DNR	DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	No	No	No	No	No	No	No	No
<b>Defogging</b>	Yes	No	No	No	No	Yes	Yes	Yes
<b>Audio</b>	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-out)	1-way (Built-in Microphone)	2-way (Built-in Microphone, Built-in Speaker, Mic-in, Line-out)	2-way (Built-in Microphone, Built-in Speaker, Mic-in, Line-out)
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1	1/1	1/0	1/1	1/1
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	No	No	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	DC 12V; PoE Class 3	High PoE	High PoE	DC 12V; PoE Class 2	DC 12V; PoE Class 2	PoE Class 2	DC 12V; PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	No	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10); Vibration proof (EN50155)	<b>Q22:</b> Weatherproof (IP68); Vandal proof metal casing (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof metal casing (IK10); Vibration proof (IEC60571); Built-in dehumidifier	Weatherproof (IP66); Vandal proof metal casing (IK09)	Weatherproof (IP66); Vandal proof metal casing (IK09)
<b>Mount Type</b>	Surface, Wall Mount, Ceiling Bracket, Flush, Corner Mount, Pole Mount, Gang Box	Surface, Wall Mount, Pole Mount	Surface, Wall Mount, Pole Mount	Desktop Mount, Edge Clamp, Bracket, Pole Mount	Desktop Mount, Edge Clamp, Bracket, Pole Mount	Surface, Wall Mount	Surface, Gang Box	Surface, Gang Box
<b>Built-in Analytics</b>	Yes	No	No	No	No	Yes	No	No
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Heater</b>	No	Yes	Yes	No	No	No	No	No
<b>Fan</b>	No	No	No	No	No	No	No	No
<b>Operating Temperature</b>	-20°C ~ 50°C (-4°F ~ 122°F)	-40°C ~ 55°C (-40°F ~ 131°F)	-40°C ~ 60°C (-40°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)	-40°C ~ 55°C (-40°F ~ 131°F)	-40 °C ~ 50 °C (-40 °F ~ 122 °F)	-40°C ~ 50°C (-40°F ~ 122°F)
<b>Approvals</b>	CE, FCC	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, EN50155, IK10 (metal casing)	<b>Q22:</b> CE, FCC, IP68, NEMA 4X, EN50155, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing), IEC60571, UL Listed	CE, FCC, IP66, IK09, NEMA 4X	CE, FCC, IP66, IK09, NEMA 4X



Model	Covert				Pinhole Covert			
	Q11	Q12	Q19	Q110	Q14	Q14-K1	Q112	Q112-K1
<b>Maximum Resolution</b>	2MP	2MP	5MP	5MP	2MP	2MP	5MP	5MP
<b>Application Environment</b>	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
<b>Bundled Accessories</b>	No	No	No	No	No	Tilttable Flush Mount (PMAx-1017)	No	Tilttable Flush Mount (PMAx-1017)
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	No	No	No	No	No	No	No	No
<b>Low Light Sensitivity</b>	Superior	Superior	Standard	Standard	Superior	Superior	Standard	Standard
<b>Minimum Illumination</b>	Color: 0.1 lux at F1.85	Color: 0.1 lux at F2.2	Color: 0.1 lux at F2.0	Color: 0.1 lux at F2.8	Color: 0.1 lux at F2.5	Color: 0.1 lux at F2.5	Color: 0.1 lux at F2.5	Color: 0.1 lux at F2.5
<b>Lens</b>	Fixed focal, f3.6mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f2.55mm / F2.2, Fixed iris, Fixed focus	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.9mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f3.7mm / F2.5, Fixed iris, Fixed focus	Fixed focal, f3.7mm / F2.5, Fixed iris, Fixed focus	Fixed focal, f3.7mm / F2.5, Fixed iris, Fixed focus	Fixed focal, f3.7mm / F2.5, Fixed iris, Fixed focus
<b>Lens Mount</b>	RJ12 connector up to 12m from main unit	RJ12 connector up to 12m from main unit	RJ12 connector up to 12m from main unit	RJ12 connector up to 12m from main unit	RJ12 connector up to 12m from main unit	RJ12 connector up to 12m from main unit	RJ12 connector up to 12m from main unit	RJ12 connector up to 12m from main unit
<b>Horizontal Viewing Angle</b>	86.6°	110.3°	82.3°	126.9° (overview area), 77.4° (high detail area)	84.5°	84.5°	70.2°	70.2°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 1920 x 1080	30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	30 fps at 1920 x 1080	30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1100 TVL	1100 TVL	1350 TVL	1350 TVL	1100 TVL	1100 TVL	1350 TVL	1350 TVL
<b>View Mode</b>	-	-	-	-	-	-	-	-
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (75 dB)	Basic WDR (75 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (75 dB)	Basic WDR (75 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)
<b>Digital Noise Reduction</b>	DNR	2D + 3D DNR	DNR	2D + 3D DNR	DNR	DNR	DNR	DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB
<b>Audio</b>	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Built-in Microphone, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Built-in Microphone, Line-out)
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
<b>Serial Port</b>	RS-232	RS-232	RS-232	RS-232	RS-232	RS-232	RS-232	RS-232
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2
<b>Environmental Casing</b>	Vibration proof (EN50155)	Vibration proof (EN50155)	Vibration proof (EN50155)	Vibration proof (EN50155)	Vibration proof (EN50155)	Q14: Vibration proof (EN50155)	Vibration proof (EN50155)	Q112: Vibration proof (EN50155)
<b>Mount Type</b>	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Tilttable Flush Mount	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Tilttable Flush Mount
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)
<b>Approvals</b>	CE, FCC, EN50155	CE, FCC, EN50155	CE, FCC, EN50155	CE, FCC, EN50155	CE, FCC, EN50155	Camera: CE, FCC, EN50155	CE, FCC, EN50155	Camera: CE, FCC, EN50155



## L-Shaped Pinhole Covert



## Fisheye Covert



Model	Q113	Q115	Q13	Q13-K1	Q111
<b>Maximum Resolution</b>	2MP	5MP	2MP	2MP	5MP
<b>Application Environment</b>	Indoor	Indoor	Indoor	Outdoor	Indoor
<b>Bundled Accessories</b>	No	No	No	Flush mount	No
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	No	No	No	No	No
<b>Low Light Sensitivity</b>	Superior	Standard	Superior	Superior	Standard
<b>Minimum Illumination</b>	Color: 0.1 lux at F2.5	Color: 0.1 lux at F2.5	Color: 0.1 lux at F2.0	Color: 0.1 lux at F2.0	Color: 0.1 lux at F2.0
<b>Lens</b>	Fixed focal, f3.7mm / F2.5, Fixed iris, Fixed focus	Fixed focal, f3.7mm / F2.5, Fixed iris, Fixed focus	Fixed focal, f1.19mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.19mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.19mm / F2.0, Fixed iris, Fixed focus
<b>Lens Mount</b>	RJ12 connector up to 12m from main unit	RJ12 connector up to 12m from main unit	RJ12 connector up to 12m from main unit	RJ12 connector up to 12m from main unit	RJ12 connector up to 12m from main unit
<b>Horizontal Viewing Angle</b>	84.5°	70.2°	182° (overview area), 111° (high detail area)	182° (overview area), 111° (high detail area)	189.7° (overview area), 115.7° (high detail area)
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	30 fps at 1440 x 1080	30 fps at 1440 x 1080	15 fps at 2592 x 1944
<b>Horizontal Resolution</b>	1100 TVL	1350 TVL	1100 TVL	1100 TVL	1350 TVL
<b>View Mode</b>	-	-	Fisheye View	Fisheye View	Fisheye View
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (75 dB)	Basic WDR (74 dB)	Basic WDR (75 dB)	Basic WDR (75 dB)	Basic WDR (74 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	DNR	DNR	DNR	2D + 3D DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB
<b>Audio Type</b>	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)
<b>Digital Input/Output</b>	1/1	1/1	1/1	1/1	1/1
<b>Serial Port</b>	RS-232	RS-232	RS-232	RS-232	RS-232
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2
<b>Environmental Casing</b>	Vibration proof (EN50155)	Vibration proof (EN50155)	Vibration proof (EN50155)	Weatherproof (IP66); Vandal resistant (IK09); Vibration proof (EN50155)	Vibration proof (EN50155)
<b>Mount Type</b>	Surface, Tilttable Surface Mount, Flush, Tilted Mount, Height Strip, Bracket	Surface, Tilttable Surface Mount, Flush, Tilted Mount, Height Strip, Bracket	Bracket, Flush, Tilttable Flush Mount	Flush	Bracket, Flush, Tilttable Flush Mount
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)	-30°C ~ 60°C (-22°F ~ 140°F)
<b>Approvals</b>	CE, FCC, EN50155	CE, FCC, EN50155	CE, FCC, EN50155	Camera: CE, FCC, IP66, NEMA 4X, IK09, EN50155	CE, FCC, EN50155



## Speed Dome



30x



33x



33x



36x



33x



36x

Model	I96	I97	I98	I99	I910	I915
Maximum Resolution	2MP	2MP	2MP	2MP	4MP	2MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes	Yes	Yes
Low Light Sensitivity	Extreme	Superior	Superior	Extreme	Superior	Extreme
Minimum Illumination	Color: 0.1 lux, B/W: 0.05 lux at F1.6	Color: 0.1 lux, B/W: 0.05 lux at F1.6	Color: 0.05 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0.05 lux at F1.55	Color: 0.1 lux, B/W: 0.05 lux at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.55
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes	Yes
IR LED	No	No	Adaptive IR LED	No	No	Adaptive IR LED
IR Working Distance	-	-	160m	-	-	150m
Lens	Zoom, f4.3-129mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.5-148.5mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.5-148.5mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.6-165.6mm / F1.55-5.0, DC iris, Auto focus	Zoom, f4.5-148.5mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.6-165.6mm / F1.55-5.0, DC iris, Auto focus
Zoom Ratio	30x optical, 16x digital	33x optical, 10x digital	33x optical, 10x digital	36x optical	33x optical	36x optical
Zoom Application	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation
Panning and Tilting Range	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: -20°-200°
Horizontal Viewing Angle	66.4°-2.61°	69.3°-3°	69.3°-3°	62.7°-2.7°	58.78°-2.35°	62.7°-2.7°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	30 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080	15 fps at 2688 x 1520 30 fps at 1920 x 1080	60 fps at 1920 x 1080
Horizontal Resolution	1800 TVL	1800 TVL	1800 TVL	1800 TVL	1850 TVL	1800 TVL
Multi-Streaming	Dual streams	Triple streams	Triple streams	Triple streams	Dual streams	Triple streams
Wide Dynamic Range	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Advanced WDR (75 dB)	Extreme WDR (145 dB)
Digital Noise Reduction	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
Digital Image Stabilizer	Yes	Yes	Yes	Yes	Yes	Yes
Defogging	Yes	Yes	Yes	Yes	Yes	Yes
S/N Ratio	56 dB	56 dB	56 dB	56 dB	56 dB	56 dB
Audio	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Digital Input / Output	4/2	4/2	4/2	4/2	4/2	4/2
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	AC 24V; High PoE	AC 24V; High PoE	AC 24V; High PoE	AC 24V; High PoE	AC 24V; High PoE	AC 24V; High PoE
Environmental Casing	Weatherproof (IP67); Vandal proof (IK10); Built-in dehumidifier	Weatherproof (IP67); Vandal proof (IK10); Built-in dehumidifier	Weatherproof (IP66); Vandal proof metal casing (IK10); Built-in dehumidifier; Scratch-resistant and water-repellent lens glass	Weatherproof (IP67); Vandal proof (IK10); Built-in dehumidifier	Weatherproof (IP67); Vandal proof (IK10);	Weatherproof (IP66); Vandal proof metal casing (IK10); Built-in dehumidifier; Scratch-resistant and water-repellent lens glass
Built-in Analytics	No	Yes	Yes	Yes	No	Yes
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes
Heater	Yes	Yes	Yes	Yes	Yes	Yes
Fan	Yes	Yes	Yes	Yes	Yes	Yes
Operating Temperature	-40°C ~ 50°C (-40°F ~ 122°F)	-52°C ~ 60°C (-61.6°F ~ 140°F) @ AC 24V -40°C ~ 60°C (-40°F ~ 140°F) @ High PoE	-40°C ~ 55°C (-40°F ~ 131°F)	-52°C ~ 60°C (-61.6°F ~ 140°F) @ AC 24V -30°C ~ 60°C (-22°F ~ 140°F) @ High PoE	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 55°C (-40°F ~ 131°F)
Approvals	CE, FCC, IP67, NEMA 4X, IK10, ETL Listed	CE, FCC, IP67, NEMA 4X, IK10	CE, FCC, IP66, NEMA 4X, IK10 (metal casing), UL Listed	CE, FCC, IP67, NEMA 4X, IK10	CE, FCC, IP67, NEMA 4X, IK10	CE, FCC, CB, IP66, NEMA 4X, IK10 (metal casing), UL Listed



## Speed Dome

## Speed Dome with H.265



20x



30x



30x



20x

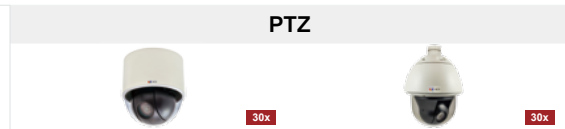


30x



20x

Model	B916	B917	B934	B945	B949	Z950
<b>Maximum Resolution</b>	2MP	2MP	2MP	2MP	2MP	2MP
<b>Application Environment</b>	Outdoor	Outdoor	Indoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Superior	Superior	Superior	Superior	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0.05 lux at F1.6	Color: 0.1 lux, B/W: 0.05 lux at F1.6	Color: 0.1 lux, B/W: 0.05 lux at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.03 lux, B/W: 0 lux (IR LED on) at F1.5
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	No	No	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	-	-	-	100m	150m	100m
<b>Lens</b>	Zoom, f4.7-94mm / F1.6-3.5, DC iris, Auto focus	Zoom, f4.5-135mm / F1.6-4.4, DC iris, Auto focus	Zoom, f4.5-135mm / F1.6-4.4, DC iris, Auto focus	Zoom, f4.7-94mm / F1.6-3.5, DC iris, Auto focus	Zoom, f4.5-135mm / F1.6-4.4, DC iris, Auto focus	Zoom, f5.2-104mm / F1.5-3.0, Auto focus
<b>Zoom Ratio</b>	20x optical	30x optical	30x optical	20x optical	30x optical	20x optical
<b>Zoom Application</b>	Camera Installation; Auto Zoom by Event; Manual Operation	Camera Installation; Auto Zoom by Event; Manual Operation	Camera Installation; Auto Zoom by Event; Manual Operation	Camera Installation; Auto Zoom by Event; Manual Operation	Camera Installation; Auto Zoom by Event; Manual Operation	Camera Installation; Auto Zoom by Event; Manual Operation
<b>Panning and Tilting Range</b>	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: 0°-180°	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: -15°-90°
<b>Horizontal Viewing Angle</b>	62°-2.8°	61.4°-3.6°	62.4°-3.5°	62°-2.8°	61.4°-3.6°	61.9°-3.5°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	60 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080	30 fps at 1920 x 1280
<b>Horizontal Resolution</b>	1450 TVL	1450 TVL	1450 TVL	1450 TVL	1450 TVL	-
<b>Multi-Streaming</b>	Triple streams	Triple streams	Triple streams	Triple streams	Triple streams	Triple streams
<b>Wide Dynamic Range</b>	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Advanced WDR
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	Yes	Yes	Yes	Yes	Yes	No
<b>Defogging</b>	Yes	Yes	Yes	Yes	Yes	No
<b>S/N Ratio</b>	56 dB	56 dB	56 dB	56 dB	56 dB	52 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)
<b>Digital Input / Output</b>	4/2	4/2	2/2	4/2	4/2	1/1
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC (card not included)
<b>Power Source</b>	AC 24V; High PoE	AC 24V; High PoE	DC 12V; High PoE	AC 24V; High PoE	AC 24V; High PoE	DC 24V; AC 24V
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof (IK10); Built-in dehumidifier	Weatherproof (IP67); Vandal proof (IK10); Built-in dehumidifier	Vandal resistant (IK09)	Weatherproof (IP66); Vandal proof metal casing (IK10); Built-in dehumidifier; Scratch-resistant and water-repellent lens glass	Weatherproof (IP66); Vandal proof metal casing (IK10); Built-in dehumidifier; Scratch-resistant and water-repellent lens glass	Weatherproof (IP66); Vandal proof metal casing (IK10)
<b>Built-in Analytics</b>	Yes	Yes	Yes	Yes	Yes	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	No
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	No
<b>Heater</b>	Yes	Yes	No	Yes	Yes	Yes
<b>Fan</b>	Yes	Yes	No	Yes	Yes	No
<b>Operating Temperature</b>	-52°C ~ 60°C (-61.6°F ~ 140°F) @ AC 24V -40°C ~ 60°C (-40°F ~ 140°F) for High PoE	-52°C ~ 60°C (-61.6°F ~ 140°F) @ AC 24V -40°C ~ 60°C (-40°F ~ 140°F) @ High PoE	-20°C ~ 50°C (-4°F ~ 122°F)	-40°C ~ 55°C (-40°F ~ 131°F)	-40°C ~ 55°C (-40°F ~ 131°F)	-40°C ~ 65°C (-40°F ~ 149°F)
<b>Approvals</b>	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IK09	CE, FCC, IP66, NEMA 4X, IK10 (metal casing)	CE, FCC, IP66, NEMA 4X, IK10 (metal casing)	CE, FCC, IP66, IK10 (metal casing)



	PTZ		Mini PTZ				
Model	I92	I94	B94A	B95A	B96A	B97A	B910
Maximum Resolution	2MP	2MP	1.3MP	2MP	5MP	3MP	4MP
Application Environment	Indoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Low Light Sensitivity	Extreme	Extreme	Superior	Superior	Standard	Standard	Standard
Minimum Illumination	Color: 0.1 lux, B/W: 0.05 lux at F1.6	Color: 0.1 lux, B/W: 0.05 lux at F1.6	Color: 0.1 lux, B/W: 0.05 lux at F1.8	Color: 0.1 lux, B/W: 0.05 lux at F1.8	Color: 0.1 lux, B/W: 0.05 lux at F1.8	Color: 0.1 lux, B/W: 0.05 lux at F1.8	Color: 0.1 lux, B/W: 0.05 lux at F1.8
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lens	Zoom, f4.3-129mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.3-129mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.8-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.8-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.8-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.8-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.8-3.0, DC iris, Auto focus
Zoom Ratio	30x optical, 16x digital	30x optical, 16x digital	10x optical	10x optical	10x optical	10x optical	10x optical
Zoom Application	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation
Panning and Tilting Range	Pan: 0°-360° (with Auto-flip); Tilt: 0°-180°	Pan: 0°-360° (with Auto-flip); Tilt: -20°-200°	Pan: ±175°; Tilt: 0°-180° (with E-flip)	Pan: ±175°; Tilt: 0°-180° (with E-flip)	Pan: ±175°; Tilt: 0°-180° (with E-flip)	Pan: ±175°; Tilt: 0°-180° (with E-flip)	Pan: ±175°; Tilt: 0°-180° (with E-flip)
Horizontal Viewing Angle	66.4°-2.68°	66.4°-2.61°	52.1°-5.9°	57.8°-6.9°	49.7°-5.8°	49.6°-5.6°	54.13°-6.65°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	30 fps at 1920 x 1080	66.4°-2.61°	30 fps at 1280 x 960 60 fps at 1280 x 720	30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2688 x 1520 30 fps at 1920 x 1080
Horizontal Resolution	1800 TVL	1800 TVL	1400 TVL	1450 TVL	1450 TVL	1500 TVL	1500 TVL
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Basic WDR (88 dB)	Basic WDR (75 dB)	Basic WDR (74 dB)	Superior WDR (110 dB)	Basic WDR (70 dB)
Digital Noise Reduction	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
S/N Ratio	56 dB	56 dB	52 dB	52 dB	52 dB	52 dB	52 dB
Audio	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Digital Input / Output	2/2	4/2	1/1	1/1	1/1	1/1	1/1
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	High PoE; DC 12V	High PoE; AC 24V	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
Environmental Casing	Vandal Resistant (IK09)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Heater	No	Yes	Yes	Yes	Yes	Yes	Yes
Fan	No	Yes	Yes	Yes	Yes	Yes	Yes
Operating Temperature	-10°C ~ 50°C (14°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)
Approvals	CE, FCC, IK09	CE, FCC, IP67, NEMA 4X, IK10, ETL Listed	CE, FCC, IP67, IK10, NEMA 4X, UL Listed	CE, FCC, IP67, IK10, NEMA 4X, UL Listed	CE, FCC, IP67, IK10, NEMA 4X, UL Listed	CE, FCC, IP67, NEMA 4X, IK10, UL Listed	CE, FCC, IP67, NEMA 4X, IK10, UL Listed





## Outdoor Mini Dome



Model	E99M	E918	E918M	E936	E936M
<b>Maximum Resolution</b>	3MP	3MP	3MP	2MP	2MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Electronic Day / Night	Electronic Day / Night	Electronic Day / Night	Electronic Day / Night	Electronic Day / Night
<b>Low Light Sensitivity</b>	Superior	Standard	Standard	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux at F1.8	Color: 0.1 lux at F2.8	Color: 0.1 lux at F2.8	Color: 0.1 lux, B/W: 0.1 lux at F2.2	Color: 0.1 lux, B/W: 0.1 lux at F2.2
<b>Mechanical IR Cut Filter</b>	No	No	No	No	No
<b>IR LED</b>	No	No	No	No	No
<b>Lens</b>	Fixed focal, f2.1mm /F1.8, Fixed iris, Fixed focus	Fixed focal, f1.9mm F2.8, Fixed iris, Fixed focus	Fixed focal, f1.9mm F2.8, Fixed iris, Fixed focus	Fixed focal, f2.55mm /F2.2 Fixed iris, Fixed focus	Fixed focal, f2.55mm / F2.2 Fixed iris, Fixed focus
<b>Viewing Angle Adjustment</b>	Pan: ±30°; Tilt: 0°-90°; Rotate: 0°-360°	Pan: ±90°; Tilt: 0°-90°	Pan: ±90°; Tilt: 0°-90°	Pan: ±90°; Tilt: 0°-90°	Pan: ±90°; Tilt: 0°-90°
<b>Horizontal Viewing Angle</b>	117.5°	126.4° (overview area), 77.1° (high detail area)	126.4° (overview area), 77.1° (high detail area)	110.3°	110.3°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 2048 x 1536 60 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1300 TVL	1250 TVL	1250 TVL	1100 TVL	1100 TVL
<b>Multi-Streaming</b>	Triple streams	Dual streams	Dual streams	Triple streams	Triple streams
<b>Wide Dynamic Range</b>	Extreme WDR (145 dB)	Superior WDR (110 dB)	Superior WDR (110 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	DNR	DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	No	No	No	Yes	Yes
<b>S/N Ratio</b>	56 dB	52 dB	52 dB	56 dB	56 dB
<b>Audio</b>	1-way (Built-in Microphone, Mic-in, Line-in )	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)
<b>Network Connector</b>	M12	RJ-45	M12	RJ-45	M12
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof (IK10); Vibration proof (IEC60571); Built-in dehumidifier	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)
<b>Built-in Analytics</b>	Yes	No	No	Yes	Yes
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-40°C ~ 55°C (-40°F ~ 131°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IP67, NEMA 4X, IK10, IEC60571, UL Listed	CE, FCC, CB, IP68, IK10, NEMA 4X, EN50155, UL Listed	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC, IP68, IK10, NEMA 4X, EN50155



## Outdoor Mini Dome

## Outdoor Mini Dome with H.265



Combo Kits p.58

Combo Kits p.58

Model	E926	E928	E933	E933M	A92	Z91	Z92
<b>Maximum Resolution</b>	10MP	3MP	2MP	2MP	3MP	4MP	4MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Superior	Superior	Superior	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.05 lux, B/W: 0 lux (IR LED on) at F2.2	Color: 0.05 lux, B/W: 0 lux (IR LED on) at F2.2	Color: 0.1 lux, B/W: 0.01 lux at F1.85 (AGC on)	Color: 0.02 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.02 lux, B/W: 0 lux (IR LED on) at F2.0
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	15m	15m	15m	15m	30m	30m	15m
<b>Lens</b>	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f2.55mm / F2.2, Fixed iris, Fixed focus	Fixed focal, f2.55mm / F2.2, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F2.0, Fixed iris, Fixed focus
<b>Viewing Angle Adjustment</b>	Pan: ±90°; Tilt: 35°-90°	Pan: ±90°; Tilt: 35°-90°	Pan: ±90°; Tilt: 35°-90°	Pan: ±90°; Tilt: 35°-90°	Pan: ±120°; Tilt: 30°-90°	Pan: ±175°; Tilt: 0°-90°; Rotate: ±175°	Pan: ±30°; Tilt: 25°-90°; Rotate: 0°-360°
<b>Horizontal Viewing Angle</b>	101.4°	85.7°	110.3°	110.3°	100°	101.8°	101.8°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	7 fps at 3648 x 2736 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080	30 fps at 2048 x 1536	20 fps at 2592 x 1520 30 fps at 2048 x 1520	20 fps at 2592 x 1520 30 fps at 2048 x 1520
<b>Horizontal Resolution</b>	1450 TVL	1250 TVL	1100 TVL	1100 TVL	1300 TVL	-	-
<b>Multi-Streaming</b>	Dual streams	Dual streams	Triple streams	Triple streams	Dual streams	Triple streams	Triple streams
<b>Wide Dynamic Range</b>	Basic WDR (70 dB)	Superior WDR (110 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Advanced WDR (72 dB)	Extreme WDR (120 dB)	Extreme WDR (120 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	No	No	Yes	Yes	Yes	No	No
<b>Defogging</b>	No	No	Yes	Yes	Yes	Yes	Yes
<b>S/N Ratio</b>	52 dB	52 dB	56 dB	56 dB	56 dB	55 dB	55 dB
<b>Audio</b>	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)	No	2-way (Mic-in, Line-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)
<b>Network Connector</b>	RJ-45	RJ-45	RJ-45	M12	RJ-45	RJ-45	RJ-45
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDXC (card not included)	MicroSDXC (card not included)
<b>Power Source</b>	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP66); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP66); Vandal proof (IK10)
<b>Built-in Analytics</b>	No	No	Yes	Yes	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	No	No
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-35°C ~ 60°C (-31°F ~ 140°F)	-35°C ~ 60°C (-31°F ~ 140°F)
<b>Approvals</b>	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC, IP66, IK10	CE, FCC, IP67, IK10	CE, FCC, IP66, IK10



## Outdoor Mini Fisheye Dome



Model	E921	E921M	E923	E925	E925M	E927
<b>Maximum Resolution</b>	5MP	5MP	10MP	5MP	5MP	10MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	No	No	No	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Standard	Standard	Standard
<b>Minimum Illumination</b>	Color: 0.1 lux at F2.0	Color: 0.1 lux at F2.0	Color: 0.1 lux at F2.0	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0
<b>Mechanical IR Cut Filter</b>	No	No	No	Yes	Yes	Yes
<b>IR LED</b>	No	No	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	-	-	-	15m	15m	10m
<b>Lens</b>	Fixed focal, f1.19mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.19mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.37mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.19mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.19mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.37mm / F2.0, Fixed iris, Fixed focus
<b>Viewing Angle Adjustment</b>	Rotate: ±90°	Rotate: ±90°	Rotate: ±90°	Rotate: ±90°	Rotate: ±90°	Rotate: ±90°
<b>Horizontal Viewing Angle</b>	189.7° (overview area), 115.7° (high detail area)	189.7° (overview area), 115.7° (high detail area)	187.7° (overview area), 114.5° (high detail area)	189.7° (overview area), 115.7° (high detail area)	189.7° (overview area), 115.7° (high detail area)	187.7° (overview area), 114.5° (high detail area)
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	15 fps at 2592 x 1944	15 fps at 2592 x 1944	7 fps at 3648 x 2736	15 fps at 2592 x 1944	15 fps at 2592 x 1944	7 fps at 3648 x 2736
<b>Horizontal Resolution</b>	1350 TVL	1350 TVL	1450 TVL	1350 TVL	1350 TVL	1450 TVL
<b>View Mode</b>	Fisheye View	Fisheye View	Fisheye View	Fisheye View	Fisheye View	Fisheye View
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (70 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (70 dB)
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB
<b>Audio</b>	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)
<b>Network Connector</b>	RJ-45	M12	RJ-45	RJ-45	M12	RJ-45
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	PoE Class 1	PoE Class 1	PoE Class 1	PoE Class 2	PoE Class 2	PoE Class 2
<b>Environmental Casing</b>	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)
<b>Approvals</b>	CE, FCC, CB, IP68, IK10, NEMA 4X, EN50155, UL Listed	CE, FCC, CB, IP68, IK10, NEMA 4X, EN50155, UL Listed	CB, IP68, IK10, NEMA 4X, EN50155, UL Listed	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC, IP68, IK10, NEMA 4X, EN50155



### Indoor Mini Dome

### Indoor Mini Dome with H.265



Model	E91	E92	E93	E95	E97	E913	E911	E912
<b>Maximum Resolution</b>	1MP	3MP	5MP	2MP	10MP	3MP	3MP	5MP
<b>Application Environment</b>	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	No	No	No	No	No	No	Electronic Day / Night	Electronic Day / Night
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Superior	Standard	Standard	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux at F2.0	Color: 0.1 lux at F2.0	Color: 0.1 lux at F2.8	Color: 0.1 lux at F1.85	Color: 0.1 lux at F1.8	Color: 0.1 lux at F2.8	Color: 0.1 lux at F1.8	Color: 0.1 lux at F1.8
<b>Mechanical IR Cut Filter</b>	No	No	No	No	No	No	No	No
<b>IR LED</b>	No	No	No	No	No	No	No	No
<b>Lens</b>	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.9mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f1.9mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f2.1mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f2.1mm / F1.8, Fixed iris, Fixed focus
<b>Viewing Angle Adjustment</b>	Pan: ±90°; Tilt: 0°-90°	Pan: ±90°; Tilt: 0°-90°	Pan: ±90°; Tilt: 0°-90°	Pan: ±90°; Tilt: 0°-90°	Pan: ±90°; Tilt: 0°-90°	Pan: ±90°; Tilt: 0°-90°	Pan: ±90°; Tilt: 0°-90°	Pan: ±90°; Tilt: 0°-90°
<b>Horizontal Viewing Angle</b>	72.0°	83.3°	126.9° (overview area), 77.4° (high detail area)	87.5°	101.4°	126.4° (overview area)	117.5°	94.7°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 1280 x 720	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	30 fps at 2048 x 1536 60 fps at 1920 x 1080	30 fps at 2592 x 1944
<b>Horizontal Resolution</b>	700 TVL	1350 TVL	1350 TVL	1100 TVL	1450 TVL	1250 TVL	1300 TVL	1650 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Triple streams	Triple streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (75 dB)	Basic WDR (70 dB)	Superior WDR (110 dB)	Extreme WDR (145 dB)	Extreme WDR (116 dB)
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR	DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB	56 dB	56 dB
<b>Audio</b>	No	No	No	No	No	No	No	No
<b>Digital Input / Output</b>	No	No	No	No	No	No	No	No
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	PoE Class 1	PoE Class 1	PoE Class 1	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2
<b>Environmental Casing</b>	Vandal Resistant (IK08)	Vandal Resistant (IK08)	Vandal Resistant (IK08)	Vandal Resistant (IK08)	Vandal Resistant (IK08)	Vandal Resistant (IK08)	Vandal Resistant (IK08)	Vandal Resistant (IK08)
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 45°C (14°F ~ 113°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IK08	CE, FCC, IK08	CE, FCC, IK08	CE, FCC, IK08	CE, FCC, IK08	CE, FCC, IK08	CE, FCC, IK08	CE, FCC, IK08





### Indoor Mini Dome



### Indoor Mini Fisheye Dome



H.265

Model	D92	E96	E914
Maximum Resolution	3MP	5MP	5MP
Application Environment	Indoor	Indoor	Indoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	No	No	Electronic Day / Night
Low Light Sensitivity	Standard	Standard	Superior
Minimum Illumination	Color: 0.1 lux at F2.0	Color: 0.1 lux at F2.0	Color: 0.1 lux at F2.1
Mechanical IR Cut Filter	No	No	No
IR LED	No	No	No
Lens	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.19mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.27mm / F2.1, Fixed iris, Fixed focus
Viewing Angle Adjustment	Pan: ±90°; Tilt: 0°-90°	Rotate: ±90°	No
Horizontal Viewing Angle	83.3°	189.7° (overview area), 115.7° (high detail area)	184°
Compression	H.264, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG
Frame Rate vs. Resolution	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944	15 fps at 2048 x 1536 30 fps at 2592 x 1944
Horizontal Resolution	1350 TVL	1350 TVL	1650 TVL
View Mode	-	Fisheye View	Fisheye View
Multi-Streaming	Dual streams	Dual streams	Triple streams
Wide Dynamic Range	-	Basic WDR (74 dB)	Extreme WDR (116 dB)
Digital Noise Reduction	DNR	DNR	2D + 3D DNR
S/N Ratio	52 dB	52 dB	56 dB
Audio	No	No	No
Digital Input / Output	No	No	No
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	PoE Class 1	PoE Class 1	PoE Class 2
Environmental Casing	Vandal Resistant (IK08)	Vandal Resistant (IK08)	Vandal Resistant (IK08)
GPS Position	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes
Operating Temperature	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)
Approvals	CE, FCC, IK08	CE, FCC, IK08	CE, FCC, IK08



## Outdoor Zoom Dome



3x



2.4x



3x



3x



3x

Model	B81	B82	B83	B85	B87
Maximum Resolution	5MP	5MP	2MP	2MP	3MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes	Yes
Low Light Sensitivity	Standard	Standard	Superior	Superior	Standard
Minimum Illumination	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.2	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.3	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.2	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.2
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	40m	43.7m	40m	40m	40m
Lens	Zoom, f3-9mm / F1.2-2.1, DC iris, Auto focus	Zoom, f9-22mm / F1.6-2.3, DC iris, Auto focus	Zoom, f3-9mm / F1.3-2.2, DC iris, Auto focus	Zoom, f3-9mm / F1.2-2.1, DC iris, Auto focus	Zoom, f3-9mm / F1.2-2.1, DC iris, Auto focus
Zoom Ratio	3x optical	2.4x optical	3x optical	3x optical	3x optical
Zoom Application	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation
Viewing Angle Adjustment	Pan: ±175°; Tilt: 5°-170°; Rotate: ±175°	Pan: ±175°; Tilt: 5°-170°; Rotate: ±175°	Pan: ±175°; Tilt: 5°-170°; Rotate: ±175°	Pan: 0°-350°; Tilt: 5°-170°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 5°-170°; Rotate: 0°-350°
Horizontal Viewing Angle	85.7°-30.5°	29.5°-13°	102.1° - 36°	103.6°-36.2°	84.5°-29.8°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	15 fps at 2592 x 1944 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	60 fps at 1920 x 1080	30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080
Horizontal Resolution	1500 TVL	1500 TVL	1450 TVL	1450 TVL	1450 TVL
Multi-Streaming	Dual streams	Dual streams	Triple streams	Dual streams	Dual streams
Wide Dynamic Range	Basic WDR (74 dB)	Basic WDR (74 dB)	Extreme WDR (145 dB)	Basic WDR (75 dB)	Superior WDR (110 dB)
Digital Noise Reduction	DNR	2D + 3D DNR	2D + 3D DNR	DNR	DNR
Digital Image Stabilizer	No	No	Yes	No	No
Defogging	No	No	Yes	No	No
S/N Ratio	52 dB	52 dB	56 dB	52 dB	52 dB
Audio	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Digital Input / Output	2/2	2/2	2/2	2/2	2/2
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
Environmental Casing	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)
Built-in Analytics	No	No	Yes	No	No
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes
Heater	Yes	Yes	Yes	Yes	Yes
Fan	No	No	No	No	No
Operating Temperature	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)
Approvals	CE, FCC, CB, IP67, IK10, NEMA 4X, UL Listed	CE, FCC, CB, IP67, IK10, NEMA 4X, UL Listed	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, CB, IP67, IK10, NEMA 4X, UL Listed	CE, FCC, CB, IP67, IK10, NEMA 4X, UL Listed





## Outdoor Zoom Dome



4.3x



4.3x



4.3x



3.6x

Model	E815	E816	E817	KCM-7311
Maximum Resolution	5MP	10MP	3MP	4MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes
Low Light Sensitivity	Standard	Standard	Standard	Superior
Minimum Illumination	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0.05 lux at F1.4
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	No
IR Working Distance	30m	30m	30m	-
Lens	Zoom, f3.1-13.3mm / F1.4-4.0, P-Iris, Auto focus	Zoom, f3.1-13.3mm / F1.4-4.0, P-Iris, Auto focus	Zoom, f3.1-13.3mm / F1.4-4.0, P-Iris, Auto focus	Zoom, f3.3-12mm / F1.4-2.9, P-Iris, Auto focus
Zoom Ratio	4.3x optical	4.3x optical	4.3x optical	3.6x optical
Zoom Application	Camera installation	Camera installation	Camera installation	Camera installation; Auto zoom by event; Manual operation
Viewing Angle Adjustment	Pan: ±175°; Tilt: 5°-175°; Rotate: ±175°	Pan: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 0°-180°; Rotate: 0°-350°
Horizontal Viewing Angle	64.74°-25.8°	90.6°-34.3°	64.4°-26.4°	77.2°-22.6°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MPEG-4 SP, MJPEG
Frame Rate vs. Resolution	15 fps at 2592 x 1944 30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	8 fps at 2032 x 1920 30 fps at 1280 x 720
Horizontal Resolution	1350 TVL	1450 TVL	1250 TVL	1422 TVL
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	Basic WDR (74 dB)	Basic WDR (70 dB)	Superior WDR (110 dB)	Advanced WDR (80 dB)
Digital Noise Reduction	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
Digital Image Stabilizer	No	No	No	No
Defogging	No	No	No	Yes
S/N Ratio	52 dB	52 dB	52 dB	-
Audio	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Digital Input / Output	2/2	2/2	2/2	2/2
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC (card not included)
Power Source	PoE Class 3	PoE Class 3	PoE Class 3	DC 12V; PoE Class 3
Environmental Casing	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof
Built-in Analytics	No	No	No	No
GPS Position	Manual setting	Manual setting	Manual setting	No
ONVIF Compliant	Yes	Yes	Yes	Yes
Heater	Yes	Yes	Yes	No
Fan	No	No	No	No
Operating Temperature	-30°C ~ 50°C (-22°F ~ 122°F)	-30°C ~ 50°C (-22°F ~ 122°F)	-30°C ~ 50°C (-22°F ~ 122°F)	-30°C ~ 50°C (-22°F ~ 122°F)
Approvals	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, UL Listed

## Outdoor Zoom Dome with H.265



3x



4.3x



2.8x



4.3x



4.4x



4.4x

Model	B89	A81	A82	A83	Z81	Z82
<b>Maximum Resolution</b>	3MP	3MP	5MP	2MP	2MP	4MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Superior	Superior	Superior	Extreme	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.3	Color: 0.05 lux, B/W: 0.005 lux at F1.4 (AGC on)	Color: 0.1 lux, B/W: 0.05 lux at F 1.5 (AGC on)	Color: 0.05 lux, B/W: 0.005 lux at F1.4 (AGC on)	Color: 0.02 lux, B/W: 0 lux at F1.4	Color: 0.02 lux, B/W: 0 lux at F1.4
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	40m	30m	30m	30m	30m	30m
<b>Lens</b>	Zoom, f3-9mm / F1.3-2.2, DC iris, Auto focus	Zoom, f2.8-12mm / F1.4-2.8, P-Iris, Auto focus	Zoom, f3.6-10mm / F1.5-2.8, P-Iris, Auto focus	Zoom, f2.8-12mm / F1.4-2.8, P-Iris, Auto focus	Zoom, f2.7-12mm / F1.4, Auto focus	Zoom, f2.7-12mm / F1.4, Auto focus
<b>Zoom Ratio</b>	3x optical	4.3x optical	2.8x optical	4.3x optical	4.4x optical	4.4x optical
<b>Zoom Application</b>	Camera installation; Auto zoom by event; Manual operation	Camera installation	Camera installation	Camera installation	Camera installation	Camera installation
<b>Viewing Angle Adjustment</b>	Pan: ±175°; Tilt: 5°-175°; Rotate: ±175°	Pan: ±135°; Tilt: 0°-90°; Rotate: ±90°	Pan: ±135°; Tilt: 0°-90°; Rotate: ±90°	Pan: ±135°; Tilt: 0°-90°; Rotate: ±90°	Pan: 0°-360°; Tilt: 15°-90°; Rotate: 0°-360°	Pan: 0°-360°; Tilt: 15°-90°; Rotate: 0°-360°
<b>Horizontal Viewing Angle</b>	97.5°-34.2°	90.6°-32.7°	79.5°-38.1°	88°-25°	102°-32°	91°-27°
<b>Compression</b>	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
<b>Frame Rate vs. Resolution</b>	30 fps at 2048 x 1536 60 fps at 1920 x 1080	30 fps at 2048 x 1536	30 fps at 2592 x 1944 60 fps at 1920 x 1080	30 fps at 1920 x 1080	30 fps at 1920 x 1080	20 fps at 2592 x 1520 30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1450 TVL	1300TVL	1650 TVL	1100 TVL	-	-
<b>Multi-Streaming</b>	Triple streams	Dual streams	Triple streams	Dual streams	Triple Streams	Triple Streams
<b>Wide Dynamic Range</b>	Extreme WDR (145 dB)	Extreme WDR (142dB)	Extreme WDR (100 dB)	Extreme WDR (100 dB)	Extreme WDR (120 dB)	Extreme WDR (120 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	Yes	Yes	Yes	Yes	No	No
<b>Defogging</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>S/N Ratio</b>	56 dB	56 dB	56 dB	56 dB	52 dB	52 dB
<b>Audio</b>	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	1-way (Built-in Microphone)	1-way (Built-in Microphone)
<b>Digital Input / Output</b>	2/2	1/1	1/1	1/1	No	No
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC (card not included)	MicroSDHC (card not included)
<b>Power Source</b>	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Weatherproof (IP68); Vandal proof (IK10); Built-in dehumidifier	Weatherproof (IP66); Vandal proof (IK10)	Weatherproof (IP66); Vandal proof (IK10)	Weatherproof (IP66); Vandal proof (IK10)	Weatherproof (IP67)	Weatherproof (IP67)
<b>Built-in Analytics</b>	Yes	No	No	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	No	No
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Heater</b>	Yes	No	No	No	No	No
<b>Fan</b>	No	No	No	No	No	No
<b>Operating Temperature</b>	-40°C ~ 60°C (-40°F ~ 140°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 60°C (-40°F ~ 140°F)	-40°C ~ 60°C (-40°F ~ 140°F)
<b>Approvals</b>	CE, FCC, IP68, IK10, NEMA 4X	CE, FCC, IP66, IK10, NEMA 4X	CE, FCC, IP66, IK10, NEMA 4X	CE, FCC, IP66, IK10, NEMA 4X	CE, FCC, IP67	CE, FCC, IP67





### Indoor Zoom Dome

### Indoor Zoom Dome with H.265



3x



3x



3x



3x



4.3x



4.3x

Model	B61	B63	B65	B67	A61	A62
<b>Maximum Resolution</b>	5MP	2MP	2MP	3MP	3MP	5MP
<b>Application Environment</b>	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Superior	Superior	Standard	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.2	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.3	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.2	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.2	Color: 0.05 lux, B/W: 0.005 lux at F1.4 (AGC on)	Color: 0.05 lux, B/W: 0.005 lux at F1.4 (AGC on)
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	40m	40m	40m	40m	15m	15m
<b>Lens</b>	Zoom, f3-9mm / F1.2-2.1, DC iris, Auto focus	Zoom, f3-9mm / F1.3-2.2, DC iris, Auto focus	Zoom, f3-9mm / F1.2-2.1, DC iris, Auto focus	Zoom, f3-9mm / F1.2-2.1, DC iris, Auto focus	Zoom, f2.8-12mm / F1.4-2.8, P-Iris, Auto focus	Zoom, f2.8-12mm / F1.4-2.8, DC-Iris, Auto focus
<b>Zoom Ratio</b>	3x optical	3x optical	3x optical	3x optical	4.3x optical	4.3x optical
<b>Zoom Application</b>	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation	Camera installation
<b>Viewing Angle Adjustment</b>	Pan: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°	Pan: ±175°; Tilt: 5°-170°; Rotate: ±175°	Pan: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°	Pan: ±135°; Tilt: 0°-90°; Rotate: ±90°	Pan: ±135°; Tilt: 0°-90°; Rotate: ±90°
<b>Horizontal Viewing Angle</b>	85.7°-30.5°	102.1°-36°	103.6°-36.2°	84.5°-29.8°	90.6°-32.7°	71°-25°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	15 fps at 2592 x 1944 30 fps at 1920 x 1080	60 fps at 1920 x 1080	30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	30 fps at 2048 x 1536	30 fps at 2592 x 1944
<b>Horizontal Resolution</b>	1500 TVL	1450 TVL	1450 TVL	1450 TVL	1300 TVL	1300 TVL
<b>Multi-Streaming</b>	Dual streams	Triple streams	Dual streams	Dual streams	Dual streams	Triple streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Extreme WDR (145 dB)	Basic WDR (75 dB)	Superior WDR (110 dB)	Extreme WDR (142 dB)	Advanced WDR (72 dB)
<b>Digital Noise Reduction</b>	DNR	2D + 3D DNR	DNR	DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	No	Yes	No	No	Yes	Yes
<b>Defogging</b>	No	Yes	No	No	Yes	Yes
<b>S/N Ratio</b>	52 dB	56 dB	52 dB	52 dB	56 dB	56 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)
<b>Digital Input / Output</b>	2/2	2/2	2/2	2/2	1/1	1/1
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	No	No
<b>Built-in Analytics</b>	No	Yes	No	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Heater</b>	No	Yes	No	No	No	No
<b>Operating Temperature</b>	-10°C ~ 50°C (14°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C~40°C (14°F~104°F)	-10°C~40°C (14°F~104°F)
<b>Approvals</b>	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09, UL Listed	CE, FCC	CE, FCC



## Indoor Zoom Dome



4.3x



4.3x



4.3x



3.6x

Model	E616	E617	E618	KCM-3311
Maximum Resolution	5MP	10MP	3MP	4MP
Application Environment	Indoor	Indoor	Indoor	Indoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes
Low Light Sensitivity	Standard	Standard	Standard	Superior
Minimum Illumination	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0.05 lux at F1.4
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	No
IR Working Distance	30m	30m	30m	-
Lens	Zoom, f3.1-13.3mm / F1.4-4.0, P-Iris, Auto focus	Zoom, f3.1-13.3mm / F1.4-4.0, P-Iris, Auto focus	Zoom, f3.1-13.3mm / F1.4-4.0, P-Iris, Auto focus	Zoom, f3.3-12mm / F1.4-2.9, P-Iris, Auto focus
Zoom Ratio	4.3x optical	4.3x optical	4.3x optical	3.6x optical
Zoom Application	Camera installation	Camera installation	Camera installation	Camera installation; Auto zoom by event; Manual operation
Viewing Angle Adjustment	Pan: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 0°-180°; Rotate: 0°-350°
Horizontal Viewing Angle	64.74°-25.8°	90.6°-34.3°	64.4°-26.4°	77.2°-22.6°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MPEG-4 SP, MJPEG
Frame Rate vs. Resolution	15 fps at 2592 x 1944 30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	8 fps at 2032 x 1920 30 fps at 1280 x 720
Horizontal Resolution	1350 TVL	1450 TVL	1250 TVL	1422 TVL
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	Basic WDR (74 dB)	Basic WDR (70 dB)	Superior WDR (110 dB)	Advanced WDR (80 dB)
Digital Noise Reduction	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
Digital Image Stabilizer	No	No	No	No
Defogging	No	No	No	Yes
S/N Ratio	52 dB	52 dB	52 dB	-
Audio	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	No
Digital Input / Output	2/2	2/2	2/2	No
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	No
Power Source	PoE Class 3	PoE Class 3	PoE Class 3	PoE Class 3
Environmental Casing	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	No
Built-in Analytics	No	No	No	No
GPS Position	Manual setting	Manual setting	Manual setting	No
ONVIF Compliant	Yes	Yes	Yes	Yes
Heater	Yes	Yes	Yes	No
Operating Temperature	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)
Approvals	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09	CE, FCC



## Outdoor Vari-Focal Dome



Model	E82A	E83A	E84A	E86A	E89	D82A
<b>Maximum Resolution</b>	3MP	5MP	2MP	3MP	10MP	3MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Superior	Standard	Standard	Standard
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	30m	30m	30m	30m	30m	-
<b>Lens</b>	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f3.1-13.3mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus
<b>Viewing Angle Adjustment</b>	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°
<b>Horizontal Viewing Angle</b>	70.5°-28.2°	69.2°-28.2°	92.5°-35.9°	70.5°-28.8°	100.5°-25.8°	70.5°-28.2°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	15 fps at 2048 x 1536 30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1350 TVL	1350 TVL	1100 TVL	1250 TVL	1450 TVL	1350 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (75 dB)	Superior WDR (110 dB)	Basic WDR (70 dB)	-
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR	DNR	DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1	2/2	1/1
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X



## Indoor Vari-focal Dome



Model	E62A	E63A	E65A	E67A	E69
Maximum Resolution	3MP	5MP	3MP	2MP	2MP
Application Environment	Indoor	Indoor	Indoor	Indoor	Indoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	No	Yes
Low Light Sensitivity	Standard	Standard	Standard	Superior	Superior
Minimum Illumination	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4
Mechanical IR Cut Filter	Yes	Yes	Yes	No	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	No	Adaptive IR LED
IR Working Distance	30m	30m	30m	-	30m
Lens	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus
Viewing Angle Adjustment	Pan: 0°-350°; Tilt: 17°-163°; Rotation: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotation: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotation: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotation: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotation: 0°-350°
Horizontal Viewing Angle	70.5° - 28.2°	66.62° - 28.88°	70.5° - 28.8°	92.5° - 35.9°	92.5° - 35.9°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	30 fps at 1920 x 1080	30 fps at 1920 x 1080
Horizontal Resolution	1350 TVL	1350 TVL	1250 TVL	1100 TVL	1100 TVL
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	Basic WDR (74 dB)	Basic WDR (74 dB)	Superior WDR (110 dB)	Basic WDR (75 dB)	Basic WDR (75 dB)
Digital Noise Reduction	DNR	DNR	DNR	DNR	DNR
Digital Image Stabilizer	No	No	No	No	No
Defogging	No	No	No	No	No
S/N Ratio	52 dB	52 dB	52 dB	52 dB	52 dB
Audio	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Digital Input / Output	1/1	1/1	1/1	1/1	1/1
Serial Port	No	No	No	No	No
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2
Environmental Casing	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes
Operating Temperature	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)
Approvals	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09





### Indoor Vari-Focal Dome



### Outdoor Fixed Dome



Model	E610	D62A	D65A	B71	KCM-7111	D72A
<b>Maximum Resolution</b>	10MP	2MP	3MP	3MP	4MP	3MP
<b>Application Environment</b>	Indoor	Indoor	Indoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	No	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Superior	Standard	Superior	Standard	Standard
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.2	Color: 0.1 lux, B/W: 0.05 lux at F2.0	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0
<b>Mechanical IR Cut Filter</b>	Yes	No	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	No	Adaptive IR LED	Adaptive IR LED	No	Adaptive IR LED
<b>IR Working Distance</b>	30m	-	30m	40m	-	30m
<b>Lens</b>	Vari-focal, f3.1-13.3mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Fixed focal, f3.6mm / F1.2, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F2.0, Fixed iris, Manual focus	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus
<b>Viewing Angle Adjustment</b>	Pan: 0°-350°; Tilt: 5°-170°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: ±175°; Tilt: 5°-175°; Rotate: ±175°	Pan: 0°-350°; Tilt: 0°-180°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°
<b>Horizontal Viewing Angle</b>	100.5°-25.8°	92.5°-35.9°	70.5°-28.2°	81.7°	82.6°	83.3°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MPEG-4 SP, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	7 fps at 3648 x 2736 30 fps at 1920 x 1080	30 fps at 1920 x 1080	15 fps at 2048 x 1536 30 fps at 1920 x 1080	30 fps at 2048 x 1536 60 fps at 1920 x 1080	8 fps at 2032 x 1920 30 fps at 1280 x 720	15 fps at 2048 x 1536 30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1450 TVL	1100 TVL	1350 TVL	1300 TVL	1561 TVL	1350 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Triple streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (70 dB)	-	-	Extreme WDR (145 dB)	Basic WDR	-
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	2D + 3D DNR	DNR	DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	56 dB	-	52 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
<b>Digital Input / Output</b>	2/2	1/1	1/1	2/2	2/2	1/1
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	PoE Class 2	PoE Class 2	PoE Class 2	DC 12V; PoE Class 3	DC 12V; PoE Class 3	PoE Class 2
<b>Environmental Casing</b>	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (IEC60571); Built-in dehumidifier	Weatherproof (IP67); Vandal proof	Weatherproof (IP67); Vandal proof (IK10)
<b>Built-in Analytics</b>	No	No	No	Yes	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	No	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-40°C ~ 55°C (-40°F ~ 131°F)	-30°C ~ 50°C (-22°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IP68, NEMA 4X, IK10, IEC60571	CE, FCC, IP67	CE, FCC, IP67, IK10, NEMA 4X



## Outdoor Fixed Dome



H.265

Model	E72A	E73A	E74A	E76	E77	E78	E710
<b>Maximum Resolution</b>	3MP	5MP	3MP	2MP	10MP	2MP	3MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Superior	Standard	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.85	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.85	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	30m	30m	30m	30m	30m	30m	30m
<b>Lens</b>	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f2.1mm / F1.8, Fixed iris, Fixed focus
<b>Viewing Angle Adjustment</b>	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°	Pan: ±175°; Tilt: 5°-175°; Rotate: ±175°
<b>Horizontal Viewing Angle</b>	83.3°	82.3°	85.7°	87.5°	101.4°	84.5°	117.5°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	60 fps at 1920 x 1080	30 fps at 2048 x 1536 60 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1350 TVL	1350 TVL	1250 TVL	1100 TVL	1450 TVL	1100 TVL	1300 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Triple streams	Triple streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Basic WDR (74 dB)	Superior WDR (110 dB)	Basic WDR (75 dB)	Basic WDR (70 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR	DNR	2D + 3D DNR	2D + 3D DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB	56 dB	56 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1	1/1	1/1	1/1
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP68); Vandal proof (IK10)	Weatherproof (IP68); Vandal proof (IK10)
<b>Built-in Analytics</b>	No	No	No	No	No	Yes	Yes
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 60°C (-40°F ~ 140°F)
<b>Approvals</b>	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP68, IK10, NEMA 4X	CE, FCC, IP68, NEMA 4X, IK10





## Indoor Fixed Dome



Model	B51	B53	E51	E53	E54	E56	E58	D55
<b>Maximum Resolution</b>	5MP	3MP	1MP	3MP	5MP	3MP	2MP	3MP
<b>Application Environment</b>	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Standard	Standard	Standard	Superior	Standard
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8	Color: 0.1 lux at F2.0	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.85	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8
<b>Mechanical IR Cut Filter</b>	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	40m	40m	-	30m	30m	30m	30m	20m
<b>Lens</b>	Fixed focal, f1.9mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f1.9mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus
<b>Viewing Angle Adjustment</b>	Pan: 0°-350°; Tilt: 17°-163°; Rotation: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°	Pan: 0°-330°; Tilt: 0°-180°	Pan: 0°-330°; Tilt: 20°-90°	Pan: 0°-330°; Tilt: 20°-90°	Pan: 0°-330°; Tilt: 20°-90°	Pan: 0°-330°; Tilt: 20°-90°	Pan: 0°-330°; Tilt: 20°-90°
<b>Horizontal Viewing Angle</b>	129.56° (overview area), 79.0° (high detail area)	129.56° (overview area), 79.0° (high detail area)	77.5°	72.0°	72.0°	85.7°	87.5°	72.0°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	15 fps at 2592 x 1944 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	30 fps at 1280 x 720	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	30 fps at 1920 x 1080	15 fps at 2048 x 1536 30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1500 TVL	1450 TVL	700 TVL	1350 TVL	1350 TVL	1250 TVL	1100 TVL	1350 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Superior WDR (110 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Superior WDR (110 dB)	Basic WDR (75 dB)	-
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	No	No	No	No	No	No
<b>Digital Input / Output</b>	1/1	1/1	No	No	No	No	No	No
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	No	No	No	No	No	No
<b>Power Source</b>	DC 12V, PoE Class 2	DC 12V; PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2
<b>Environmental Casing</b>	Vandal Resistant (IK09)	Vandal Resistant (IK09)	No	No	No	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, UL Listed	CE, FCC, UL Listed	CE, FCC, UL Listed	CE, FCC	CE, FCC	CE, FCC, UL Listed



## Outdoor Hemispheric Dome



Model	I71	I73	B74A	B76A	B77A
Maximum Resolution	5MP	6MP	8MP	12MP	6MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes	Yes
Low Light Sensitivity	Superior	Extreme	Superior	Superior	Superior
Minimum Illumination	Color: 0.1 lux, B/W: 0.05 lux at F2.8	Color: 0.1 lux, B/W: 0.05 lux at F2.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes
IR LED	No	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	-	-	20m	20m	20m
Lens	Fixed focal, f1.05mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f1.3mm / F2.6, Fixed iris, Fixed focus	Fixed focal, f1.65mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f1.65mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f1.65mm / F2.8, Fixed iris, Fixed focus
OZT Technology	No	No	Yes	Yes	No
Viewing Angle Adjustment	Rotate: ±175°	Rotate: ±175°	Rotate: ±175°	Rotate: ±175°	Rotate: ±175°
Horizontal Viewing Angle	189.7° (overview area), 115.7° (high detail area)	203.5° (overview area), 124.2° (high detail area)	198.5° (overview area), 121.1° (high detail area)	198.5° (overview area), 121.1° (high detail area)	198.5° (overview area), 121.1° (high detail area)
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	<b>Fisheye View:</b> 15 fps at 2592 x 1944 30 fps at 1440 x 1080 <b>Dewarped View:</b> 12 fps at 2592 x 1944 <b>ePTZ View:</b> 12 fps at 1920 x 1080	<b>Fisheye View:</b> 10 fps at 3072 x 2048 14 fps at 2048 x 1536 <b>Dewarped View:</b> 12 fps at 2592 x 1944 <b>ePTZ View:</b> 12 fps at 1920 x 1080	<b>Fisheye View:</b> 24 fps at 3072 x 2048 30 fps at 2048 x 2048 <b>Dewarped View:</b> 10 fps at 4096 x 2160 30 fps at 1920 x 1080 <b>ePTZ View:</b> 30 fps at 1920 x 1080	<b>Fisheye View:</b> 18 fps at 4000 x 3000 30 fps at 2048 x 2048 <b>Dewarped View:</b> 10 fps at 4096 x 2160 30 fps at 1920 x 1080 <b>ePTZ View:</b> 30 fps at 1920 x 1080	<b>Fisheye View:</b> 20 fps at 3072 x 2048 30 fps at 2048 x 2048 <b>Dewarped View:</b> 30 fps at 1920 x 1080 <b>ePTZ View:</b> 30 fps at 1920 x 1080
Multi-Streaming	Dual streams	Dual streams	Triple streams	Triple streams	Triple streams
Wide Dynamic Range	Advanced WDR (80 dB)	Advanced WDR (80 dB)	Extreme WDR (130 dB)	Extreme WDR (130 dB)	Extreme WDR (130 dB)
Digital Noise Reduction	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
Defogging	Yes	Yes	Yes	Yes	Yes
Audio	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-in, Line-out )	2-way (Built-in Microphone, Mic-in, Line-in, Line-out )	2-way (Built-in Microphone, Mic-in, Line-in, Line-out )
Digital Input / Output	2/2	2/2	2/2	2/2	2/2
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
Environmental Casing	Weatherproof (IP68); Vandal proof (IK10)	Weatherproof (IP68); Vandal proof (IK10)	Weatherproof (IP68); Vandal proof (IK10)	Weatherproof (IP68); Vandal proof (IK10)	Weatherproof (IP68); Vandal proof (IK10)
Built-in Analytics	No	No	Yes	Yes	No
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes
Operating Temperature	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)
Approvals	CE, FCC, IP68, IK10, NEMA 4X, ETL Listed	CE, FCC, IP68, IK10, NEMA 4X	CE, FCC, CB, IP68, IK10, NEMA 4X, UL Listed	CE, FCC, CB, IP68, IK10, NEMA 4X, UL Listed	CE, FCC, IP68, IK10, NEMA 4X







## Indoor Hemispheric Dome



Model	I51	B57A	B59A	B511A
Maximum Resolution	5MP	6MP	8MP	12MP
Application Environment	Indoor	Indoor	Indoor	Indoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes
Low Light Sensitivity	Superior	Superior	Superior	Superior
Minimum Illumination	Color: 0.1 lux, B/W: 0.05 lux at F2.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes
IR LED	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	-	20m	20m	20m
Lens	Fixed focal, f1.05mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f1.65mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f1.65mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f1.65mm / F2.8, Fixed iris, Fixed focus
OZT Technology	No	No	Yes	Yes
Horizontal Viewing Angle	180° (overview area), 109.8° (high detail area)	198.5° (overview area), 121.1° (high detail area)	198.5° (overview area), 121.1° (high detail area)	198.5° (overview area), 121.1° (high detail area)
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	<b>Fisheye View:</b> 15 fps at 2592 x 1944 30 fps at 1440 x 1080 <b>Dewarped View:</b> 12 fps at 2592 x 1944 <b>ePTZ View:</b> 12 fps at 1920 x 1080	<b>Fisheye View:</b> 20 fps at 3072 x 2048 30 fps at 2048 x 2048 <b>Dewarped View:</b> 30 fps at 1920 x 1080 <b>ePTZ View:</b> 30 fps at 1920 x 1080	<b>Fisheye View:</b> 24 fps at 3072 x 2048 30 fps at 2048 x 2048 <b>Dewarped View:</b> 10 fps at 4096 x 2160 30 fps at 1920 x 1080 <b>ePTZ View:</b> 30 fps at 1920 x 1080	<b>Fisheye View:</b> 18 fps at 4000 x 3000 30 fps at 2048 x 2048 <b>Dewarped View:</b> 10 fps at 4096 x 2160 30 fps at 1920 x 1080 <b>Dewarped ePTZ View:</b> 30 fps at 1920 x 1080
Multi-Streaming	Dual streams	Triple streams	Triple streams	Triple streams
Wide Dynamic Range	Advanced WDR (80 dB)	Extreme WDR (130 dB)	Extreme WDR (130 dB)	Extreme WDR (130 dB)
Digital Noise Reduction	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
Defogging	Yes	Yes	Yes	Yes
Audio	2-way (Line-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-in, Line-out )	2-way (Mic-in, Line-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-in, Line-out )
Digital Input / Output	2/2	1/1	1/1	1/1
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC, MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
Environmental Casing	No	No	No	No
Built-in Analytics	No	No	Yes	Yes
ONVIF Compliant	Yes	Yes	Yes	Yes
Operating Temperature	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)
Approvals	CE, FCC, ETL Listed	CE, FCC	CE, FCC	CE, FCC



## Indoor Fisheye Dome



Model	B54	B55	B56
<b>Maximum Resolution</b>	5MP	10MP	3MP
<b>Application Environment</b>	Indoor	Indoor	Indoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Standard
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0.05 lux at F2.0	Color: 0.1 lux, B/W: 0.05 lux at F2.0	Color: 0.1 lux, B/W: 0.05 lux at F2.0
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes
<b>IR LED</b>	No	No	No
<b>Lens</b>	Fixed focal, f1.19mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.37mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.19mm / F2.0, Fixed iris, Fixed focus
<b>Horizontal Viewing Angle</b>	189.7° (overview area), 115.7° (high detail area)	187.7° (overview area), 114.5° (high detail area)	189.7° (overview area), 115.7° (high detail area)
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	15 fps at 2592 x 1944	7 fps at 3648 x 2736	20 fps at 2048 x 1536
<b>Horizontal Resolution</b>	1500 TVL	1550 TVL	1450 TVL
<b>View Mode</b>	Fisheye View	Fisheye View	Fisheye View
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Basic WDR (70 dB)	Superior WDR (110 dB)
<b>Digital Noise Reduction</b>	DNR	DNR	DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
<b>Digital Input / Output</b>	1/1	1/1	1/1
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2
<b>Environmental Casing</b>	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes
<b>Operating Temperature</b>	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)
<b>Approvals</b>	CE, FCC	CE, FCC	CE, FCC





## Zoom Bullet



36x



30x



30x



33x



10x



10x

Model	I42	I45	I47	I48	B44	B45
<b>Maximum Resolution</b>	2MP	2MP	4MP	2MP	1.3MP	2MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Extreme	Extreme	Superior	Superior	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.55	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	40m	40m	40m	40m (120m with maximum exposure)	40m	40m
<b>Lens</b>	Zoom, f4.6-165.6mm / F1.55-5.0, DC iris, Auto focus	Zoom, f4.3-129mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.3-129mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.5-148.5mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.8-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.8-3.0, DC iris, Auto focus
<b>Zoom Ratio</b>	36x optical	30x optical	30x optical	33x optical	10x optical	10x optical
<b>Zoom Application</b>	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation
<b>Horizontal Viewing Angle</b>	62.7°-2.7°	65.6°-2.07°	66.4°-2.14°	69.3°-3°	52.1°-5.7°	57.8°-6.9°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	60 fps at 1920 x 1080	30 fps at 1920 x 1080	15 fps at 2688 x 1520 30 fps at 1920 x 1080	60 fps at 1920 x 1080	30 fps at 1280 x 960 60 fps at 1280 x 720	30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1800 TVL	1800 TVL	1850 TVL	1800 TVL	1400 TVL	1450 TVL
<b>Multi-Streaming</b>	Triple streams	Dual streams	Dual streams	Triple streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Advanced WDR (75 dB)	Extreme WDR (145 dB)	Basic WDR (88 dB)	Basic WDR (75 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	DNR	DNR
<b>Digital Image Stabilizer</b>	Yes	Yes	Yes	Yes	No	No
<b>Defogging</b>	Yes	Yes	Yes	Yes	No	No
<b>S/N Ratio</b>	56 dB	56 dB	56 dB	56 dB	52 dB	52 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1	1/1	1/1
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)
<b>Built-in Analytics</b>	Yes	No	No	Yes	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Heater</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing), UL Listed	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)



## Zoom Bullet



10x



10x



10x



20x



30x

Model	B46	B49	B410	B415	B416
<b>Maximum Resolution</b>	5MP	3MP	10MP	2MP	2MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.2	Color: 0.05 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	40m	40m	40m	40m	40m
<b>Lens</b>	Zoom, f4.9-49mm / F1.8-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.6-3.0, DC iris, Auto focus	Zoom, f6.3-63mm / F2.2-3.5, P-Iris, Auto focus	Zoom, f4.7-94mm /F1.6-F3.5, DC iris, Auto focus	Zoom, f4.5-135mm F1.6-F4.4, DC iris, Auto focus
<b>Zoom Ratio</b>	10x optical	10x optical	10x optical	20x optical	30x optical
<b>Zoom Application</b>	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation
<b>Horizontal Viewing Angle</b>	49.7°-5.8°	49.6°-5.6°	50.6°-4.59°	62°-2.8°	61.4°-3.6°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	15 fps at 2592 x 1944 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1500 TVL	1450 TVL	1550 TVL	1450 TVL	1450 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Triple streams	Triple streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Superior WDR (110 dB)	Basic WDR (70 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	DNR	2D + 3D DNR	2D + 3D DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	56 dB	56 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1	1/1
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes
<b>Heater</b>	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)



## Zoom Bullet



10x



10x



4.3x



10x

Model	E413	E415	E416	E417
Maximum Resolution	5MP	3MP	10MP	2MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes
Low Light Sensitivity	Standard	Standard	Standard	Superior
Minimum Illumination	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	30m	30m	30m	30m
Lens	Zoom, f4.9-49mm / F2.8-3.5, Adaptive iris, Auto focus	Zoom, f4.9-49mm / F2.8-3.5, Adaptive iris, Auto focus	Zoom, f3.1-13.3mm / F1.4-4.0, P-Iris, Auto focus	Zoom, f4.9-49mm / F2.8-3.5, Adaptive iris, Auto focus
Zoom Ratio	10x optical	10x optical	4.3x optical	10x optical
Zoom Application	Camera installation	Camera installation	Camera installation	Camera installation
Horizontal Viewing Angle	51.6°-6°	51.6°-6.2°	90.6°-34.3°	60° - 7.3°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	15 fps at 2592 x 1944 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	60 fps at 1920 x 1080
Horizontal Resolution	1350 TVL	1250 TVL	1450 TVL	1100 TVL
Multi-Streaming	Dual streams	Dual streams	Dual streams	Triple streams
Wide Dynamic Range	Basic WDR (74 dB)	Superior WDR (110 dB)	Basic WDR (70 dB)	Extreme WDR (145 dB)
Digital Noise Reduction	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
S/N Ratio	52 dB	52 dB	52 dB	56 dB
Audio	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Digital Input / Output	1/1	1/1	1/1	1/1
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	PoE Class 3	PoE Class 3	PoE Class 3	DC 12V; PoE Class 3
Environmental Casing	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes
Heater	Yes	Yes	Yes	Yes
Operating Temperature	-30°C ~ 50°C (-22°F~122°F)	-30°C ~ 50°C (-22°F~122°F)	-30°C ~ 50°C (-22°F~122°F)	-30°C ~ 50°C (-22°F~122°F)
Approvals	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, IK10 (metal casing), NEMA 4X	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)



## Zoom Bullet with H.265



10x



4.3x



2.8x



Model	B412	A41	A42	A43
<b>Maximum Resolution</b>	3MP	3MP	5MP	2MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Superior	Superior	Superior	Extreme
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.05 lux, B/W: 0.005 lux at F1.4 (AGC on)	Color: 0.1 lux at F1.5; B/W: 0.05 lux at F1.5 (AGC on)	Color: 0.05 lux at F1.4; B/W: 0.005 lux at F1.4 (AGC on)
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	60m	30m	30m	30m
<b>Lens</b>	Zoom, f4.7-47mm / F1.6-3.0, DC iris, Auto focus	Zoom, f2.8-12mm / F1.4-2.8, P-Iris, Auto focus	Zoom, f3.6-10mm / F1.5-F2.8, P-Iris, Auto focus	Zoom, f2.8-12mm / F1.4-F2.8, P-Iris, Auto focus
<b>Zoom Ratio</b>	10x optical	4.3x optical	2.8x optical	4.3x optical
<b>Zoom Application</b>	Camera installation; Auto zoom by event; Manual operation	Camera installation	Camera installation	Camera installation
<b>Horizontal Viewing Angle</b>	58°-5.8°	90.6°-32.7°	79.5°-38.1°	88°-25°
<b>Compression</b>	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 2048 x 1536 60 fps at 1920 x 1080	30 fps at 2048 x 1536	30 fps at 2592 x 1944 60 fps at 1920 x 1080	30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1450 TVL	1300 TVL	1650 TVL	1100 TVL
<b>Multi-Streaming</b>	Triple streams	Dual streams	Triple streams	Dual streams
<b>Wide Dynamic Range</b>	Extreme WDR (145 dB)	Extreme WDR (142 dB)	Extreme WDR (100 dB)	Extreme WDR (100 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	Yes	Yes	Yes	Yes
<b>Defogging</b>	Yes	Yes	Yes	Yes
<b>S/N Ratio</b>	56 dB	56 dB	56 dB	56 dB
<b>Audio</b>	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)
<b>Analog Video Output</b>	No	1, BNC	1, BNC	1, BNC
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	No	No	No
<b>Power Source</b>	DC 12V; High PoE	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof metal casing (IK10); Built-in dehumidifier	Weatherproof (IP66); Vandal proof metal casing (IK10)	Weatherproof (IP66); Vandal proof metal casing (IK10)	Weatherproof (IP66); Vandal proof metal casing (IK10)
<b>Built-in Analytics</b>	Yes	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes
<b>Heater</b>	Yes	No	No	No
<b>Operating Temperature</b>	-40°C ~ 60°C (-40°F ~ 140°F)	-30°C ~ 50°C (-22°F ~ 122°F)	-30°C ~ 50°C (-22°F ~ 122°F)	-30°C ~ 50°C (-22°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP66, NEMA 4X, IK10 (metal casing)	CE, FCC, IP66, NEMA 4X, IK10 (metal casing)	CE, FCC, IP66, NEMA 4X, IK10 (metal casing)



## Vari-Focal Bullet



Model	E41	E42B	E43B	E44A	E46A	E48	D42A
<b>Maximum Resolution</b>	1MP	3MP	5MP	2MP	3MP	10MP	3MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Superior	Standard	Standard	Standard
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.4
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	30m	30m	30m	30m	30m	30m	30m
<b>Lens</b>	Vari-focal, f3.3-12mm / F1.6, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f3.1-13.3mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus
<b>Horizontal Viewing Angle</b>	69.8°-19.1°	70.5°-28.2°	69.2°-28.2°	92.5°-35.9°	70.5°-28.8°	100.5°-25.8°	70.5°-28.2°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 1280 x 720	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	15 fps at 2048 x 1536 30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	700 TVL	1350 TVL	1350 TVL	1100 TVL	1250 TVL	1450 TVL	1350 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (75 dB)	Superior WDR (110 dB)	Basic WDR (70 dB)	-
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR	DNR	DNR	DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB
<b>Audio</b>	No	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
<b>Digital Input / Output</b>	No	1/1	1/1	1/1	1/1	1/1	1/1
<b>Local Storage</b>	No	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 3	PoE Class 2
<b>Environmental Casing</b>	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, IK10 (metal casing)	CE, FCC, IP68, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)



## Fixed Bullet



Model	E31A	E32A	E33A	E36	E37
<b>Maximum Resolution</b>	1MP	3MP	5MP	2MP	10MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Superior	Standard
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.85	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.85
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	30m	30m	30m	30m	30m
<b>Lens</b>	Fixed focal, f4.2mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f4.2mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f4.2mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.85, Fixed iris, Fixed focus
<b>Horizontal Viewing Angle</b>	55.9°	62.7°	62.7°	88.1°	101.4°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 1280 x 720	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	700 TVL	1350 TVL	1350 TVL	1100 TVL	1450 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (75 dB)	Basic WDR (70 dB)
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR	DNR
<b>Digital Image Stabilizer</b>	No	No	No	No	No
<b>Defogging</b>	No	No	No	No	No
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB
<b>Audio</b>	No	No	No	No	No
<b>Digital Input / Output</b>	No	No	No	No	No
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2
<b>Environmental Casing</b>	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)
<b>Built-in Analytics</b>	No	No	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)





## Fixed Bullet



## Fixed Bullet with H.265

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Model	E38	E39	D32	A31	A32	Z31
<b>Maximum Resolution</b>	2MP	2MP	3MP	3MP	3MP	4MP
<b>Application Environment</b>	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Superior	Extreme	Standard	Superior	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.85	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0.01 lux at F1.85 (AGC on)	Color: 0.1 lux, B/W: 0.01 lux at F2.0 (AGC on)	Color: 0.02 lux, B/W: 0 lux (IR LED on) at F1.8
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	30m	30m	20m	30m	30m	30m
<b>Lens</b>	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f4.2mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus
<b>Horizontal Viewing Angle</b>	99°	90.6°	62.7°	106.9°	80°	76.8°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	60 fps at 1920 x 1080	60 fps at 1920 x 1080	15 fps at 2048 x 1536 30 fps at 1920 x 1080	30 fps at 2048 x 1536	30 fps at 2048 x 1536	20 fps at 2592 x 1520 30 fps at 2048 x 1520
<b>Horizontal Resolution</b>	1100 TVL	1100 TVL	1350 TVL	1300 TVL	1300 TVL	-
<b>Multi-Streaming</b>	Triple streams	Triple streams	Dual streams	Dual streams	Dual streams	Triple streams
<b>Wide Dynamic Range</b>	Extreme WDR (145 dB)	Extreme WDR (145 dB)	-	Advanced WDR (72 dB)	Advanced WDR (72 dB)	Extreme WDR (120 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	Yes	Yes	No	Yes	Yes	Yes
<b>Defogging</b>	Yes	Yes	No	Yes	Yes	Yes
<b>S/N Ratio</b>	56 dB	56 dB	52 dB	56 dB	56 dB	55 dB
<b>Audio</b>	No	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)	No	No	No	No
<b>Digital Input / Output</b>	No	1/1	No	No	No	No
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	No	No	No	No
<b>Power Source</b>	PoE Class 2	DC 12V; PoE Class 3	PoE Class 2	DC 12V; PoE Class 3	PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP68); Built-in dehumidifier; Vandal proof metal casing (IK10)	Weatherproof (IP66)	Weatherproof (IP66); Vandal proof metal casing (IK10)	Weatherproof (IP66)	Weatherproof (IP67)
<b>Built-in Analytics</b>	Yes	Yes	No	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	No
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-30°C ~ 50°C (-22°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-35°C ~ 60°C (-31°F ~ 140°F)
<b>Approvals</b>	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP66	CE, FCC, IP66, NEMA 4X, IK10 (metal casing)	CE, FCC, IP66	CE, FCC, IP67



### Zoom Box

### Zoom Box with H.265



30x



33x



36x



10x



10x



20x



Model	I27	I28	I29	B23	B210	B214	B26
<b>Maximum Resolution</b>	4MP	2MP	2MP	3MP	10MP	2MP	3MP
<b>Application Environment</b>	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Superior	Superior	Extreme	Standard	Standard	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0.05 lux at F1.6	Color: 0.1 lux, B/W: 0.05 lux at F1.6	Color: 0.1 lux, B/W: 0.05 lux at F1.55	Color: 0.1 lux, B/W: 0.05 lux at F1.8	Color: 0.1 lux, B/W: 0.05 lux at F2.2	Color: 0.1 lux, B/W: 0.05 lux at F1.6	Color: 0.1 lux, B/W: 0.01 lux at F1.55
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	No	No	No	No	No	No	No
<b>Lens</b>	Zoom, f4.3-129mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.5-148.5mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.6-165.6mm / F1.55-5.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.8-3.0, DC iris, Auto focus	Zoom, f6.3-63mm / F2.2-3.5, P-Iris, Auto focus	Zoom, f4.7-94mm / F1.6-3.5, DC iris, Auto focus	Zoom, f4.6-165.6mm / F1.55-5.0, DC iris, Auto focus
<b>Zoom Ratio</b>	30x optical	33x optical	36x optical	10x optical	10x optical	20x optical	36x optical
<b>Zoom Application</b>	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation
<b>Horizontal Viewing Angle</b>	58.9°-2.11°	69.3°-3°	62.7°-2.7°	49.56°-5.62°	50.6°-4.59°	62°-2.8°	57.6° - 2.35°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	15 fps at 2688 x 1520 30 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	60 fps at 1920 x 1080	30 fps at 2048 x 1536 60 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1850 TVL	1800 TVL	1800 TVL	1450 TVL	1550 TVL	1450 TVL	1450 TVL
<b>Multi-Streaming</b>	Dual streams	Triple streams	Triple streams	Dual streams	Dual streams	Triple streams	Triple streams
<b>Wide Dynamic Range</b>	Advanced WDR (75 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Superior WDR (110 dB)	Basic WDR (70 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	Yes	Yes	Yes	No	No	Yes	Yes
<b>Defogging</b>	Yes	Yes	Yes	No	No	Yes	Yes
<b>S/N Ratio</b>	56 dB	56 dB	56 dB	52 dB	52 dB	56 dB	56 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1	1/1	1/1	1/1
<b>Serial Port</b>	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Optional housing (IP66-IP68)	Optional housing (IP66-IP68)	Optional housing (IP66-IP68)	Optional housing (IP66-IP68)	Optional housing (IP66-IP68)	Optional housing (IP66-IP68)	Optional housing (IP66-IP68)
<b>Built-in Analytics</b>	No	Yes	Yes	No	No	Yes	Yes
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Heater</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Fan</b>	No	No	No	No	No	No	No
<b>Operating Temperature</b>	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)
<b>Approvals</b>	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC





## Zoom Box

## Fixed Box



4.3x



10x



10x



10x



18x



18x



Model	E210	E213	E215	E219	KCM-5211E	KCM-5611	E217	A21
<b>Maximum Resolution</b>	10MP	5MP	3MP	2MP	4MP	2MP	2MP	3MP
<b>Application Environment</b>	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Outdoor	Outdoor	Indoor/Outdoor	Indoor/Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Superior	Superior	Superior	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0.05 lux at F1.4	Color: 0.1 lux, B/W: 0.05 lux at F2.8	Color: 0.1 lux, B/W: 0.05 lux at F2.8	Color: 0.1 lux, B/W: 0.05 lux at F2.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0.05 lux at F2.0	Color: 0.05 lux, B/W: 0.005 lux at F1.8 (AGC on)
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	No	No	No	No	IR LED	IR LED	No	No
<b>IR Working Distance</b>	-	-	-	-	-	20m	-	-
<b>Lens</b>	Zoom, f3.1-13.3mm / F1.4-4.0, P-Iris, Auto focus	Zoom, f4.9-49mm / F2.8-3.5, Adaptive iris, Auto focus	Zoom, f4.9-49mm / F2.8-3.5, Adaptive iris, Auto focus	Zoom, f4.9-49mm / F2.8-3.5, Adaptive iris, Auto focus	Zoom, f4.7-84.6mm / F1.6-2.8, DC iris, Auto focus	Zoom, f4.7-84.6mm / F1.6-2.8, DC iris, Auto focus	Fixed focal, f2.93mm / F2.0, Fixed iris, Manual focus	Fixed focal, f2.8mm / F1.8, Fixed iris, Fixed focus
<b>Zoom Ratio</b>	4.3x optical	10x optical	10x optical	10x optical	18x optical	18x optical	-	-
<b>Zoom Application</b>	Camera installation	Camera installation	Camera installation	Camera installation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	No	No
<b>Horizontal Viewing Angle</b>	90.6°-34.3°	51.6°-6°	51.6°-6.2°	60°-7.3°	48.9°-3.6°	48.9°-3.6°	101.3°	102.2°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MPEG-4 SP, MJPEG	H.264, MPEG-4 SP, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	7 fps at 3648 x 2736 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	60 fps at 1920 x 1080	8 fps at 2032 x 1920 30 fps at 1280 x 720	15 fps at 1920 x 1080 30 fps at 1280 x 720	60 fps at 1920 x 1080	30 fps at 2048 x 1536
<b>Horizontal Resolution</b>	1450 TVL	1350 TVL	1250 TVL	1100 TVL	1650 TVL	974 TVL	1100 TVL	1300 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Triple streams	Dual streams	Dual streams	Triple streams	Dual Streams
<b>Wide Dynamic Range</b>	Basic WDR (70 dB)	Basic WDR (74 dB)	Superior WDR (110 dB)	Extreme WDR (145 dB)	Advanced WDR (80 dB)	Advanced WDR	Extreme WDR (145 dB)	Extreme WDR (142 dB)
<b>Digital Noise Reduction</b>	DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	No	No	No	Yes	No	No	Yes	Yes
<b>Defogging</b>	No	No	No	Yes	Yes	Yes	Yes	Yes
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	56 dB	-	-	56 dB	56 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1	2/2	2/2	1/1	1/1
<b>Serial Port</b>	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422, Terminal block	RS-485
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC (card not included)	MicroSDHC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC memory card slot (card not included)
<b>Power Source</b>	DC 12V; PoE Class 3	PoE Class 2	PoE Class 2	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V, PoE Class 3
<b>Environmental Casing</b>	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Weatherproof (IP66)	Weatherproof (IP66)	Optional housing (IP66)	Optional housing (IP66-IP68)
<b>Built-in Analytics</b>	No	No	No	Yes	No	No	Yes	Tampering Detection
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	No	No	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Heater</b>	Yes	No	No	Yes	No	No	No	No
<b>Fan</b>	No	No	No	No	No	No	No	No
<b>Operating Temperature</b>	-20°C ~ 50°C (-4°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)
<b>Approvals</b>	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC, IP66, UL Listed	CE, FCC, IP66	CE, FCC	CE, FCC



### Vari-Focal Box

### Vari-Focal Box with H.265



Model	E21VA	E22VA	E23B	E24A	E222	E271	A23	A24
<b>Maximum Resolution</b>	1MP	5MP	2MP	3MP	2MP	10MP	3MP	5MP
<b>Application Environment</b>	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Superior	Standard	Superior	Standard	Superior	Superior
<b>Minimum Illumination</b>	Color: 0.1 lux, B/W: 0.05 lux at F1.4	Color: 0.1 lux, B/W: 0.05 lux at F1.4	Color: 0.1 lux, B/W: 0.05 lux at F1.4	Color: 0.1 lux, B/W: 0.05 lux at F1.4	Color: 0.1 lux, B/W: 0.05 lux at F1.4	Color: 0.1 lux, B/W: 0.05 lux at F1.4	Color: 0.05 lux, B/W: 0.005 lux at F1.4 (AGC on)	Color: 0.1 lux, B/W: 0.05 lux at F1.5 (AGC on)
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	No	No	No	No	No	No	No	No
<b>Lens</b>	Vari-focal, f2.8-12mm / F1.4, DC iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, DC iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, DC iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, DC iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, DC iris, Manual focus	Vari-focal, f3.1-13.3mm / F1.4-4.0, DC iris, Manual focus	Vari-focal, f2.8-12mm / F1.4-2.8, P-iris, Auto back focus	Vari-focal, f3.6-10mm / F1.5-2.8, P-iris, Auto back focus
<b>Horizontal Viewing Angle</b>	62°-24.8°	70.9°-29.2°	88.4°-35.7°	78.1°-26.8°	87.5°-32.1°	100.5°-26.2°	92.9° - 32.2°	89.1° - 38.2°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 1280 x 720	15 fps at 2592 x 1944 30 fps at 1920 x 1080	30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	60 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	30 fps at 2048 x 1536	30 fps at 2592 x 1944
<b>Horizontal Resolution</b>	700 TVL	1350 TVL	1100 TVL	1250 TVL	1100 TVL	1450 TVL	1300 TVL	1650 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Triple streams	Dual streams	Dual streams	Triple streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (75 dB)	Superior WDR (110 dB)	Extreme WDR (145 dB)	Basic WDR (70 dB)	Extreme WDR (142 dB)	Extreme WDR (100 dB)
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR	2D + 3D DNR	DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	No	No	No	No	Yes	No	Yes	Yes
<b>Defogging</b>	No	No	No	No	Yes	No	Yes	Yes
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	56 dB	52 dB	56 dB	56 dB
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
<b>Serial Port</b>	No	No	RS-485, RS-422	No	RS-485, RS-422	No	RS-485	RS-485
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
<b>Power Source</b>	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 3	PoE Class 2	DC 12V; PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66-IP68)	Optional housing (IP68)
<b>Built-in Analytics</b>	No	No	No	No	Yes	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)
<b>Approvals</b>	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC





Model	Fixed Cube				Fisheye Cube		Wireless Cube
	E11A	E12A	E13A	E14	E15	E16	C11W
<b>Maximum Resolution</b>	1MP	3MP	5MP	10MP	5MP	10MP	1.3MP
<b>Application Environment</b>	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	No	No	No	No	No	No	No
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Standard	Standard	Standard	Standard
<b>Minimum Illumination</b>	Color: 0.1 lux at F1.8	Color: 0.1 lux at F2.0	Color: 0.1 lux at F2.0	Color: 0.1 lux at F1.8	Color: 0.1 lux at F2.0	Color: 0.1 lux at F2.0	Color: 0.5 lux at F1.8
<b>Mechanical IR Cut Filter</b>	No	No	No	No	No	No	No
<b>IR LED</b>	No	No	No	No	No	No	No
<b>Lens</b>	Fixed focal, f4.2mm / F1.8, Fixed iris, Manual focus	Fixed focal, f2.8mm / F2.0, Fixed iris, Manual focus	Fixed focal, f2.8mm / F2.0, Fixed iris, Manual focus	Fixed focal, f3.6mm / F1.8, Fixed iris, Manual focus	Fixed focal, f1.19mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.37mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus
<b>Lens Mount</b>	CS mount (interchangeable lens)	CS mount (interchangeable lens)	CS mount (interchangeable lens)	CS mount (interchangeable lens)	Board mount	Board mount	Board mount
<b>Horizontal Viewing Angle</b>	53.8°	92.6°	92.6°	99°	189.7° (overview area) 115.7° (high detail area)	187.7° (overview area) 114.5° (high detail area)	55°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 1280 x 720	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	15 fps at 2592 x 1944	7 fps at 3648 x 2736	30 fps at 1280 x 1024
<b>Horizontal Resolution</b>	700 TVL	1350 TVL	1350 TVL	1450 TVL	1350 TVL	1450 TVL	800 TVL
<b>View Mode</b>	—	—	—	—	Fisheye View	Fisheye View	—
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (70 dB)	Basic WDR (74 dB)	Basic WDR (70 dB)	Basic WDR (75 dB)
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Defogging</b>	No	No	No	No	No	No	Yes
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB
<b>Audio</b>	2-way (Built-in Microphone, Line-out)	2-way (Built-in Microphone, Line-out)	2-way (Built-in Microphone, Line-out)	2-way (Built-in Microphone, Line-out)	2-way (Built-in Microphone, Line-out)	2-way (Built-in Microphone, Line-out)	2-way (Built-in Microphone, Line-out)
<b>Digital Input / Output</b>	No	No	No	No	No	No	No
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC (card not included)
<b>Power Source</b>	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	DC 12V
<b>Built-in Analytics</b>	No	No	No	No	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-10°C ~ 45°C (14°F ~ 113°F)	-10°C ~ 45°C (14°F ~ 113°F)	-10°C ~ 45°C (14°F ~ 113°F)	-10°C ~ 45°C (14°F ~ 113°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	0°C ~ 40°C (32°F ~ 104°F)
<b>Approvals</b>	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC



### Video Encoder

1 Channel

1 Channel

1 Channel

4 Channels

4 Channels

8 Channels

16 Channels



Model	V11	V21	V22	V23	V24	V31	V32
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 960 x 480 25 fps at 960 x 576	30 fps at 960 x 480 25 fps at 960 x 576	30 fps at 960 x 480 25 fps at 960 x 576	30 fps at 960 x 480 25 fps at 960 x 576	30 fps at 960 x 480 25 fps at 960 x 576	30 fps at 960 x 480 25 fps at 960 x 576	30 fps at 960 x 480 25 fps at 960 x 576
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
<b>Audio</b>	2-way (Line-in x 1, Line-out x 1)	2-way (Line-in x 1, Line-out x 1)	2-way (Line-in x 1, Line-out x 1)	2-way (Line-in x 4, Line-out x 1)	2-way (Line-in x 4, Line-out x 1)	2-way (Line-in x 8, Line-out x 1)	2-way (Line-in x 16, Line-out x 1)
<b>Analog Video Input</b>	BNC x 1	BNC x 1	BNC x 1	BNC x 4	BNC x 4	BNC x 8	BNC x 16
<b>Analog Video Output</b>	No	BNC x 1	BNC x 1	No	No	No	No
<b>Digital Input / Output</b>	No	1/1	1/1	4 (DI/DO configurable)	4 (DI/DO configurable)	8 (DI/DO configurable)	16 (DI/DO configurable)
<b>Serial Port</b>	No	RS-485/RS-422	RS-485/RS-422	RS-485/RS-422	RS-485/RS-422	RS-485/RS-422	RS-485/RS-422
<b>Local Storage</b>	No	MicroSD/MicroSDHC/MicroSDXC (card not included)	MicroSD/MicroSDHC/MicroSDXC (card not included)	MicroSD/MicroSDHC/MicroSDXC (card not included)	MicroSD/MicroSDHC/MicroSDXC (card not included)	MicroSD/MicroSDHC (card not included)	MicroSD/MicroSDHC (card not included)
<b>Power Source</b>	DC 7V-20V; PoE Class 3	DC 7V-20V; PoE Class 3	DC 7V-20V; PoE Class 3	DC 7V-20V; PoE Class 3	DC 7V-20V; PoE Class 3	AC 100V-240V	AC 100V-240V
<b>Environmental Casing</b>	No	No	Vibration proof (NEMA TS2-ready, without certificate)	No	Vibration proof (NEMA TS2-ready, without certificate)	No	No
<b>Mount Type</b>	Surface	Surface	Surface	Surface	Surface	Rack mount	Rack mount
<b>Rack Space</b>	-	-	-	-	-	1U	1U
<b>Remote Access</b>	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client
<b>Event Trigger</b>	Video motion detection (3 regions), Video loss, Sound detection, Video Recovery, Scheduler, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully
<b>Event Response</b>	Notify control center, Change camera settings, Command other devices, E-mail notification with snapshots, Upload video or snapshot to FTP server, Change motion detection profile	Notify control center, Go to PTZ preset point or preset tour, Change camera settings, Command other devices, E-mail notification with snapshots, Save video or snapshot to local storage, Upload video or snapshot to FTP server, Activate external device through digital output, Change motion detection profile	Notify control center, Go to PTZ preset point or preset tour, Change camera settings, Command other devices, E-mail notification with snapshots, Save video or snapshot to local storage, Upload video or snapshot to FTP server, Activate external device through digital output, Change motion detection profile	Notify control center, Go to PTZ preset point or preset tour, Change camera settings, Command other devices, E-mail notification with snapshots, Save video or snapshot to local storage, Upload video or snapshot to FTP server, Activate external device through digital output, Change motion detection profile	Notify control center, Go to PTZ preset point or preset tour, Change camera settings, Command other devices, E-mail notification with snapshots, Save video or snapshot to local storage, Upload video or snapshot to FTP server, Activate external device through digital output, Change motion detection profile	Notify control center, Go to PTZ preset point or preset tour, Change camera settings, Command other devices, E-mail notification with snapshots, Save video or snapshot to local storage, Upload video or snapshot to FTP server, Activate external device through digital output, Change motion detection profile	Notify control center, Go to PTZ preset point or preset tour, Change camera settings, Command other devices, E-mail notification with snapshots, Save video or snapshot to local storage, Upload video or snapshot to FTP server, Activate external device through digital output, Change motion detection profile
<b>Client PC Operating System</b>	Windows 8, Windows 7, Windows Server 2008, Windows Vista, Windows Server 2003, Windows XP	Windows 8, Windows 7, Windows Server 2008, Windows Vista, Windows Server 2003, Windows XP	Windows 8, Windows 7, Windows Server 2008, Windows Vista, Windows Server 2003, Windows XP	Windows 8, Windows 7, Windows Server 2008, Windows Vista, Windows Server 2003, Windows XP	Windows 8, Windows 7, Windows Server 2008, Windows Vista, Windows Server 2003, Windows XP	Windows 8, Windows 7, Windows Server 2008, Windows Vista, Windows Server 2003, Windows XP	Windows 8, Windows 7, Windows Server 2008, Windows Vista, Windows Server 2003, Windows XP
<b>PC Web Browser</b>	IE 11	IE 11	IE 11	IE 11	IE 11	IE 11	IE 11
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Fan</b>	No	No	No	No	No	Yes	Yes
<b>Operating Temperature</b>	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-40°C ~ 76°C (-40°F ~ 168.8°F)	-10°C ~ 50°C (14°F ~ 122°F)	-40°C ~ 76°C (-40°F ~ 168.8°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)
<b>Approvals</b>	CE, FCC	CE, FCC	CE, FCC, NEMA TS2-ready (without certificate)	CE, FCC	CE, FCC, NEMA TS2-ready (without certificate)	CE, FCC	CE, FCC





## Digital Signage System

### Media Display Station

### Media Display Dongle



Model	ECD-1000	ECD-200	MDD-100
Maximum Number of Video Devices	16	16	1
Maximum Number of Clients	1 local, 2 remote	1 local, 2 remote	-
Product Application	Digital Signage, Video Decoding, Public Viewer	Digital Signage, Video Decoding, Public Viewer, Video Intelligence	Digital Signage
Free License	16	16	1 (for camera video stream); 4 (for signage display)
Video Resolution	Up to 2-Megapixel (Local display); Up to 12-Megapixel (Remote display)	Up to 8-Megapixel (Local display); Up to 12-Megapixel (Remote display)	-
Compression	H.264	H.265, H.264	-
Media Source	-	-	Camera Live Video, Pre-recorded video (AVI, MP4), Image (JPG, JPEG, PNG), Text, Web page
Built-in Analytics	-	Object based motion detection, Face detection, Age detection, Gender detection (License required)	-
Audio	1-way	2-way (Line-in, Line-out)	-
Digital Input/Output	No	2/2	-
Network Connector	RJ-45	RJ-45	-
Analog Video Output	1, BNC	-	-
HDMI Output	1, HDMI	1, HDMI	1, HDMI
Power Source	DC 12V; PoE Class 3	DC 12V	DC 5V
Mount Type	Surface, Pole, VESA 10 x 10	Surface, Pole, VESA 10 x 10	-
Bundled Accessories	Pole Mount; Power Adapter	Pole Mount; Power Adapter	USB Power Adapter; HDMI Extension Cable
Wireless	-	mini-PCIe slot x 1 for optional Wireless modules such as Wi-Fi (IEEE 802.11b/g/n), 4G	Wi-Fi (IEEE 802.11b/g/n), Bluetooth
Local Storage	No	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC memory card slot (64GB included)
External Storage Interface	USB (Support Digital Signage function from external USB drive)	USB (Support Digital Signage function from external USB drive)	-
Display Layout Mode	1, 2, 4, 9, 12, 16, 1+5, 1+7, 1+12, 2+4, 2+8	Custom grid layout (up to 16 channels)	Custom grid layout (up to 4 channels)
Digital Zoom	Yes	Yes	-
Event Status	Display status upon network loss, Motion and DI	Display status upon network loss, Motion and DI	Display status upon customized settings
PTZ Control	Yes	Yes	-
Local Access	HDMI monitor; USB keyboard & mouse	HDMI/VGA port for monitor; USB keyboard & mouse	HDMI monitor
Remote Access	Web Client	Web Client	Web Client
Event Trigger	Video Loss, Network Loss	Video Loss, Network Loss, Video Analytics	Metadata status, Device status, Storage error, Emergency event
Event Response	Play alert sound	Show event on local display, Play sound on HDMI display, Activate external device through digital output, Digital signage event response	E-mail notification, Switch to pre-defined content or layout, Allow instant override, Digital signage reports
Server Operating System	Embedded Linux	Embedded Linux	Windows 8.1
Client PC Operating System	Windows 8, Windows 7, Windows Vista, Windows Server 2003, Windows XP	Windows 10, Windows 8, Windows 7, Windows Server 2012, Windows Server 2008	Windows 7, Windows 8.1, Windows Server 2008, Windows Server 2012
PC Web Browser	IE 11	IE 11	IE 11
ONVIF Compliant	Yes	Yes	-
Operating Temperature	0°C ~ 50°C (32°F ~ 122°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)
Approvals	CE, FCC	CE, FCC	CE, FCC



# Video Management System

## Mini Standalone NVR



Combo Kits p.58



Combo Kits p.58

Model	ENR-010P	ENR-020P	INR-100	ZNR-120P	ZNR-121P
Maximum Number of Video Devices	4	9	16	4	8
Additional Computing Power	No	No	Yes	No	No
Maximum Number of Clients	1 local, 2 remote	1 local, 2 remote	1 local, 5 remote	1 local, 2 remote	1 local, 2 remote
Free License	4	9	16	4	8
Video Resolution	Up to 4-Megapixel (Local display), Up to 12-Megapixel (Remote display)	Up to 4-Megapixel (Local display), Up to 12-Megapixel (Remote display)	Support all ACTI cameras in all resolution	Up to 8-Megapixel(Local display), Up to 12-Megapixel (Remote display)	Up to 8-Megapixel(Local display), Up to 12-Megapixel (Remote display)
Compression	H.264	H.264	H.265, H.264, MPEG-4, MJPEG	H.265, H.264	H.265, H.264
Audio	No	No	2-way (Mic-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Built-in PoE Connectors	4 Ports	8 Ports	No	4 Ports	8 Ports
Power Source	DC 48V	DC 48V	AC 100-240V	DC 48V	DC 52V
Scheduled Recording	Yes	Yes	Yes	Yes	Yes
Event Recording	Yes	Yes	Yes	Yes	Yes
Manual Recording	Yes	Yes	Yes	Yes	Yes
Speed Up	Yes	Yes	Yes	No	No
Dual Stream Management	Yes	Yes	Yes	No	No
Recording Throughput	16 Mbps	36 Mbps	300 Mbps	40 Mbps	60 Mbps
HDD Interface	Maximum 1 SATA disk	Maximum 1 SATA disk	Maximum 1 SATA disk	Maximum 1 SATA disk	Maximum 1 SATA disk
External Storage Interface	No	No	eSATA, iSCSI	No	No
RAID Level	No	No	No	No	No
Digital Zoom	Yes	Yes	Yes	Yes	Yes
Event Status	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client
Instant Playback	Instant Playback in live view window (Remote client)	Instant Playback in live view window (Remote client)	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window
e-Map	No	No	Yes	No	No
PTZ Control	Yes	Yes	Yes	Yes	Yes
Playback Control	Continuous forward and backward playback with speeds 0.5x / 1x / 2x / 4x / 8x / 16x / 32x; pause; stop	Continuous forward and backward playback with speeds 0.5x / 1x / 2x / 4x / 8x / 16x / 32x; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 0.125x / 0.25x /0.5x / 1x / 2x / 4x / 8x / 16x / 32x / 64x / 128x/ 256x; pause; stop	Continuous forward and backward playback with speeds 0.125x / 0.25x /0.5x / 1x / 2x / 4x / 8x / 16x / 32x / 64x / 128x/ 256x; pause; stop
Synchronized Playback	4 channels	9 channels	9 channels (Local),16 channels (Remote)	4 channels	8 channels
Local Access	HDMI monitor; USB keyboard & mouse	HDMI monitor; USB keyboard & mouse	HDMI/DVI/Display port for monitor; Joystick; Keyboard & mouse	HDMI/VGA monitor; USB keyboard & mouse	HDMI/VGA monitor; USB keyboard & mouse
Remote Access	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Web Client	Web Client
Permission Control	Unlimited number of users, Customizable permissions for user groups	Unlimited number of users, Customizable permissions for user groups	Unlimited number of users, Active Directory, Customizable permissions for user groups, Account lockout, Automatic logout after idle, Playback password protected, Password validity period	128 Remote users, Customizable permissions for user groups	128 Remote users, Customizable permissions for user groups
GPS Position	No	No	Manual setting	No	No
Video Export	RAW, AVI	RAW, AVI	RAW, AVI, EXE	MP4	MP4
Server Operating System	Embedded Linux	Embedded Linux	Embedded Windows 7	Embedded Linux	Embedded Linux
Client PC Operating System	Windows 8, Windows 7	Windows 8, Windows 7	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 8, Windows 7	Windows 8, Windows 7
PC Web Browser	IE 11	IE 11	IE 11	IE 10 or newer, Firefox, Chrome, Opera	IE 10 or newer, Firefox, Chrome, Opera
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	-10°C ~ 55°C (14°F ~ 131°F)	-10°C ~ 55°C (14°F ~ 131°F)
Approvals	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC







# Video Management System

## Desktop Standalone NVR



Model	ENR-1000	ENR-110	ENR-120	ENR-130	ENR-140
Maximum Number of Video Devices	4	4	9	16	16
Additional Computing Power	No	No	No	No	No
Maximum Number of Clients	1 local, 2 remote	1 local, 2 remote	1 local, 2 remote	1 local, 2 remote	1 local, 2 remote
Free License	4	4	9	16	16
Video Resolution	Up to 2-Megapixel (Local display), Up to 12-Megapixel (Remote display)	Up to 4-Megapixel (Local display), Up to 12-Megapixel (Remote display)	Up to 4-Megapixel (Local display), Up to 12-Megapixel (Remote display)	Up to 4-Megapixel (Local display), Up to 12-Megapixel (Remote display)	Up to 4-Megapixel (Local display), Up to 12-Megapixel (Remote display)
Compression	H.264	H.264	H.264	H.264	H.264
Audio	No	No	No	No	No
Built-in PoE Connectors	No	No	No	No	No
Power Source	DC 12V	DC 12V	DC 12V	DC 12V	AC 100-240V
Scheduled / Event / Manual Recording	Yes	Yes	Yes	Yes	Yes
Speed Up	Yes	Yes	Yes	Yes	Yes
Dual Stream Management	No	Yes	Yes	Yes	Yes
Recording Throughput	16 Mbps	16 Mbps	36 Mbps	48 Mbps	48 Mbps
HDD Interface	Maximum 2 SATA disks	Maximum 2 SATA disks	Maximum 2 SATA disks	Maximum 2 SATA disks	Maximum 4 SATA disks
External Storage Interface	No	No	No	No	No
RAID Level	No	No	No	No	No
Digital Zoom	Yes	Yes	Yes	Yes	Yes
Event Status	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client
Instant Playback	Instant Playback in live view window (Remote client)	Instant Playback in live view window (Remote client)	Instant Playback in live view window (Remote client)	Instant Playback in live view window (Remote client)	Instant Playback in live view window (Remote client)
e-Map	No	No	No	No	No
PTZ Control	Yes	Yes	Yes	Yes	Yes
Playback Control	Continuous forward and backward playback with speeds 0.5x / 1x / 2x / 4x / 8x / 16x / 32x; pause; stop	Continuous forward and backward playback with speeds 0.5x / 1x / 2x / 4x / 8x / 16x / 32x; pause; stop	Continuous forward and backward playback with speeds 0.5x / 1x / 2x / 4x / 8x / 16x / 32x; pause; stop	Continuous forward and backward playback with speeds 0.5x / 1x / 2x / 4x / 8x / 16x / 32x; pause; stop	Continuous forward and backward playback with speeds 0.5x / 1x / 2x / 4x / 8x / 16x / 32x; pause; stop
Synchronized Playback	4 channels	4 channels	9 channels	16 channels	16 channels
Local Access	HDMI monitor; USB keyboard & mouse; USB joystick	HDMI monitor; USB keyboard & mouse; USB joystick	HDMI monitor; USB keyboard & mouse; USB joystick	HDMI monitor; USB keyboard & mouse; USB joystick	HDMI monitor; USB keyboard & mouse; USB joystick
Remote Access	Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client
Permission Control	Unlimited number of users, Customizable permissions for user groups	Unlimited number of users, Customizable permissions for user groups	Unlimited number of users, Customizable permissions for user groups	Unlimited number of users, Customizable permissions for user groups	Unlimited number of users, Customizable permissions for user groups
GPS Position	No	No	No	No	No
Video Export	RAW, AVI	RAW, AVI	RAW, AVI	RAW, AVI	RAW, AVI
Server Operating System	Embedded Linux	Embedded Linux	Embedded Linux	Embedded Linux	Embedded Linux
Client PC Operating System	Windows 8, Windows 7	Windows 8, Windows 7	Windows 8, Windows 7	Windows 8, Windows 7	Windows 8, Windows 7
PC Web Browser	IE 11	IE 11	IE 11	IE 11	IE 11
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)
Approvals	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC



# Video Management System

## Desktop Standalone NVR

## Lockbox Standalone NVR



Model	ENR-220P	ENR-221	ENR-221P	ENR-222	ZNR-220P	ENR-620P
Maximum Number of Video Devices	4	9	9	16	16	9
Additional Computing Power	No	No	No	No	No	No
Maximum Number of Clients	1 local, 2 remote	1 local, 2 remote	1 local, 2 remote	1 local, 2 remote	1 local, 2 remote	1 local, 2 remote
Free License	4	9	9	16	16	9
Video Resolution	Support all ACTI cameras in all resolutions	Support all ACTI cameras in all resolutions	Support all ACTI cameras in all resolutions	Support all ACTI cameras in all resolutions	Support all ACTI cameras in all resolutions	Support all ACTI cameras in all resolutions
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	H.265, H.264, MJPEG
Audio	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Built-in PoE Connectors	4 Ports	No	8 ports	No	16 ports	8 Ports
Power Source	DC 48V	DC 48V	DC 48V	DC 48V	AC 100-240V	DC 48V
Scheduled / Event / Manual Recording	Yes	Yes	Yes	Yes	Yes	Yes
Speed Up	Yes	Yes	Yes	Yes	No	Yes
Dual Stream Management	Yes	Yes	Yes	Yes	No	Yes
Recording Throughput	300 Mbps	300 Mbps	300 Mbps	300 Mbps	160 Mbps	300 Mbps
HDD Interface	Maximum 2 SATA disks	Maximum 2 SATA disks	Maximum 2 SATA disks	Maximum 2 SATA disks	Maximum 2 SATA disks	Maximum 2 SATA disks
External Storage Interface	iSCSI	iSCSI	iSCSI	iSCSI	No	iSCSI
RAID Level	No	No	No	No	No	No
Digital Zoom	Yes	Yes	Yes	Yes	Yes	Yes
Event Status	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client
Instant Playback	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window
e-Map	Yes*	Yes*	Yes*	Yes*	No	Yes
PTZ Control	Yes	Yes	Yes	Yes	Yes	Yes
Playback Control	Continuous forward and backward playback with speeds 0.125x/0.25x/0.5x/1x/2x/4x/8x/16x, pause, stop	Continuous forward and backward playback with speeds 0.125x/0.25x/0.5x/1x/2x/4x/8x/16x, pause, stop	Continuous forward and backward playback with speeds 0.125x/0.25x/0.5x/1x/2x/4x/8x/16x, pause, stop	Continuous forward and backward playback with speeds 0.125x/0.25x/0.5x/1x/2x/4x/8x/16x, pause, stop	Continuous forward and backward playback with speeds 0.125x / 0.25x /0.5x / 1x / 2x / 4x / 8x / 16x / 32x / 64x / 128x/ 256x, pause, stop	Continuous forward and backward playback with speeds 0.125x/0.25x/0.5x/1x/2x/4x/8x/16x, pause, stop
Synchronized Playback	4 channels	9 channels	9 channels	16 channels	16 channels	4 channels
Local Access	HDMI monitor; USB keyboard & mouse	HDMI monitor; USB keyboard & mouse	HDMI monitor; USB keyboard & mouse	HDMI monitor; USB keyboard & mouse	HDMI/VGA monitor; USB keyboard & mouse	HDMI monitor; USB keyboard & mouse
Remote Access	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client	Web Client	Web Client, Mobile Client
GPS Position	No	No	No	No	No	No
Video Export	RAW, AVI	RAW, AVI	RAW, AVI	RAW, AVI	MP4	RAW, AVI
Server Operating System	Embedded Linux	Embedded Linux	Embedded Linux	Embedded Linux	Embedded Linux	Embedded Linux
Client PC Operating System	Windows 10, Windows 8, Windows 7	Windows 10, Windows 8, Windows 7	Windows 10, Windows 8, Windows 7	Windows 10, Windows 8, Windows 7	Windows 8, Windows 7	Windows 7, Windows 8, Windows 10
PC Web Browser	IE 11	IE 11	IE 11	IE 11	IE 10 or newer, Firefox, Chrome, Opera	IE 11
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	10°C ~ 55°C (14°F ~ 131°F)	0°C ~ 40°C (32°F ~ 104°F)
Approvals	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC, UL



# Video Management System

## Rackmount Standalone NVR



Model	ENR-190	INR-440	INR-450	INR-460	GNR-410	ZNR-421
Maximum Number of Video Devices	16	200	200	200	64	32
Additional Computing Power	No	No	Yes	No	No	No
Maximum Number of Clients	1 local, 2 remote	1 local, 5 remote	1 local, 5 remote	1 local, 5 remote	1 local, 4 remote	1 local, 2 remote
Free License	16	64 (64 for ACTi and 1 for third-party video device)	64 (64 for ACTi and 1 for third-party video device)	64 (64 for ACTi and 1 for third-party video device)	64 (64 for ACTi and 1 for third-party video device)	32
Video Resolution	Up to 4-Megapixel (Local display), Up to 10-Megapixel (Remote display)	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions	12MP
Compression	H.264	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264
Audio	No	No	No	2-way (Min-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Line-in, Line-out)
Power Source	AC 100-240V	AC 100-240V	AC 100-240V	AC 100-240V	AC 100-240V	DC 12V
Redundant Power Supply	No	Yes	Yes	No	No	No
Rack Mount	Rack Mount (1U)	Rack Mount (2U)	Rack Mount (2U)	Rack Mount (2U)	Rack Mount (2U)	Rack Mount (1U)
Scheduled / Event / Manual Recording	Yes	Yes	Yes	Yes	Yes	Yes
Dual Stream Management	Yes	Yes	Yes	Yes	Yes	No
Recording Throughput	48 Mbps	300 Mbps	300 Mbps	300 Mbps	300 Mbps	320 Mbps
HDD Interface	Maximum 4 SATA disks	Maximum 12 SATA disks (without storage disks)	Maximum 12 SATA disks (without storage disks)	Maximum 8 SATA disks (without storage disks)	Maximum 8 SATA disks (1 system disk included)	Maximum 4 SATA disks (1 system disk included)
External Storage Interface	No	SAS, iSCSI	eSATA, iSCSI, USB	eSATA, iSCSI	eSATA, iSCSI, USB	No
RAID Level	No	Hardware RAID 0, 1, 5, 6, 10, 50, 60	Hardware RAID 0, 1, 5, 6, 10, 50, 60	Hardware RAID 0, 1, 5, 10	Software RAID 0, 1	No
Event Status	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client
Instant Playback	Instant Playback in live view window (Remote client)	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window
e-Map	No	Yes	Yes	Yes	Yes	No
PTZ Control	Yes	Yes	Yes	Yes	Yes	Yes
Playback Control	Continuous forward and backward playback with speeds 0.5x / 1x / 2x / 4x / 8x / 16x / 32x; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 0.125x / 0.25x / 0.5x / 1x / 2x / 4x / 8x / 16x / 32x / 64x / 128x / 256x; pause; stop
Synchronized Playback	16 channels	9 channels (local), 64 channels (remote)	9 channels (local), 64 channels (remote)	9 channels (local), 64 channels (remote)	9 channels (local), 64 channels (remote)	16 channels
Local Access	HDMI monitor; USB keyboard & mouse	VGA port for monitor; USB joystick; keyboard & mouse	VGA port for monitor; USB joystick; keyboard & mouse	DVI/VGA/Display port for monitor; USB joystick; keyboard & mouse	HDMI/VGA/Display port for monitor; USB joystick; keyboard & mouse	HDMI/VGA monitor; USB keyboard & mouse
Remote Access	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Web Client
Video Export	RAW, AVI	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE	MP4
Server Operating System	Embedded Linux	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7	Embedded Linux
Client PC Operating System	Windows 8, Windows 7	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 8, Windows 7
PC Web Browser	IE 11	IE 11	IE 11	IE 11	IE 11	IE 10 or newer, Firefox, Chrome, Opera
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	-10°C ~ 55°C (14°F ~ 131°F)
Approvals	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC



## Video Management System

### Tower Standalone NVR

### Transportation Standalone NVR



Model	GNR-330	INR-340	MNR-310	MNR-320P	MNR-330P
Maximum Number of Video Devices	64	64	32	16	16
Additional Computing Power	No	Yes	No	No	Yes
Maximum Number of Clients	1 local, 4 remote	1 local, 5 remote	1 local, 3 remote	1 local, 3 remote	1 local, 3 remote
Free License	32 (32 for ACTi and 1 for third-party video device)	32 (32 for ACTi and 1 for third-party video device)	16 (16 for ACTi and 1 for third-party video device)	16 (16 for ACTi and 1 for third-party video device)	16 (16 for ACTi and 1 for third-party video device)
Video Resolution	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions
Compression	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG
Audio	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)
Built-in PoE Connectors	No	No	No	4 Ports	4 Ports
Wireless	No	No	COM port and mini-PCIe slot for optional Wireless modules	Built-in GPS, mini-PCIe slot x 4 for optional Wireless modules	Built-in GPS, mini-PCIe slot x 4 for optional Wireless modules
Serial Port	No	No	RS-232	DB9 connectors for RS-232/422/485 signal x 2	DB9 connectors for RS-232/422/485 signal x 2
Power Source	AC 100-240V	AC 100-240V	AC 100-240V; DC 9-36V, DC 12V	DC 9-36V, DC 12V	DC 9-36V, DC 12V
Scheduled / Event / Manual Recording	Yes	Yes	Yes	Yes	Yes
Speed Up	Yes	Yes	Yes	Yes	Yes
Dual Stream Management	Yes	Yes	Yes	Yes	Yes
Recording Throughput	300 Mbps	300 Mbps	192 Mbps	192 Mbps	192 Mbps
HDD Interface	Maximum 6 SATA disks (without storage disks)	Maximum 6 SATA disks (without storage disks)	Maximum 2 SATA disks (without storage disks)	Maximum 1 SATA disk (without storage disks)	Maximum 1 SATA disk (without storage disks)
External Storage Interface	eSATA, iSCSI, USB	eSATA, iSCSI, USB	eSATA, iSCSI, USB	USB	USB
RAID Level	Hardware RAID 0, 1, 5, 10	Hardware RAID 0, 1, 5, 10	Software RAID 0, 1	Software RAID 0, 1	Software RAID 0, 1
Digital Zoom	Yes	Yes	Yes	Yes	Yes
Event Status	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full
Instant Playback	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window (Remote client)	Instant Playback in live view window	Instant Playback in live view window
e-Map	Yes	Yes	Yes	Yes	Yes
PTZ Control	Yes	Yes	Yes	Yes	Yes
Playback Control	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop
Synchronized Playback	9 channels (local), 64 channels	9 channels (local), 64 channel	4 channels (local), 32 channels (remote)	4 channels (local), 16 channels (remote)	4 channels (local), 16 channels (remote)
Local Access	HDMI/VGA/Display port for monitor; USB joystick, keyboard & mouse	HDMI/VGA/Display port for monitor; USB joystick, keyboard & mouse	HDMI/VGA monitor; USB keyboard & mouse; USB joystick	HDMI/VGA port for monitor; USB joystick; keyboard & mouse	HDMI/VGA port for monitor; USB joystick; keyboard & mouse
Remote Access	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client
Permission Control	Unlimited number of users, Active Directory, Customizable permissions for user groups, Account lockout, Automatic logout after idle, Playback password protected, Password validity period	Unlimited number of users, Active Directory, Customizable permissions for user groups, Account lockout, Automatic logout after idle, Playback password protected, Password validity period	Unlimited number of users, Active Directory, Customizable permissions for user groups, Account lockout, Automatic logout after idle, Playback password protected, Password validity period	Unlimited number of users, Active Directory, Customizable permissions for user groups, Account lockout, Automatic logout after idle, Playback password protected, Password validity period	Unlimited number of users, Active Directory, Customizable permissions for user groups, Account lockout, Automatic logout after idle, Playback password protected, Password validity period
GPS Position	Manual setting	Manual Setting	Manual setting	Manual setting	Manual setting
Video Export	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE
Server Operating System	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7
Client PC Operating System	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2012, Windows Server 2008
PC Web Browser	IE 11	IE 11	IE 11	IE 11	IE 11
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	-20°C ~ 60°C (-4°F ~ 140°F)	0°C ~ 45°C (32°F ~ 113°F)	0°C ~ 45°C (32°F ~ 113°F)
Approvals	CE, FCC	CE, FCC	CE, FCC, E-Mark	CE, FCC, UL, CCC, BSMI, E-Mark	CE, FCC, UL, CCC, BSMI, E-Mark



## Video Management System

### Standalone CMS

### Standalone TV Wall



Model	CMS-100	CMS-200	TVW-100
<b>Product Application</b>	-	-	-
<b>Maximum Number of Video Devices</b>	800	1600	-
<b>Maximum number of Monitors</b>	-	-	4
<b>Free License</b>	100	200	-
<b>Compression</b>	H.265, H.264, MJPEG, MPEG-4	H.265, H.264, MJPEG, MPEG-4	H.265, H.264, MPEG-4, MJPEG
<b>Audio</b>	2-way (Mic-in, Line-out)	2-way (Mic-in, Line-out)	2-way (Mic-in, Line-out)
<b>Power Source</b>	AC 100-240V	AC 100-240V	AC 100-240V
<b>Rack Mount</b>	-	Rackmount (1U)	-
<b>Third-party Integration</b>	Point of Sale (POS), Access Control, Network I/O, Parking Management Station (PMS)	Point of Sale (POS), Access Control, Network I/O, Parking Management Station (PMS),	-
<b>Manual Recording</b>	Yes	Yes	-
<b>Dual Stream Management</b>	Yes	Yes	-
<b>HDD Bay</b>	Maximum 1 SATA disk (without storage disks)	Maximum 1 SATA disk (without storage disks)	Maximum 1 SATA disk (without storage disks)
<b>USB</b>	Yes	Yes	Yes
<b>Maximum display layout</b>	64	64	64 (per monitor)
<b>Digital Zoom</b>	Yes	Yes	-
<b>Event Status</b>	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	-
<b>Instant Playback</b>	Instant Playback in live view window	Instant Playback in live view window	-
<b>e-Map</b>	Yes	Yes	Yes
<b>PTZ Control</b>	PTZ Control, Speed Control	PTZ Control, Speed Control	-
<b>Playback Control</b>	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	-
<b>Synchronized Playback</b>	9 channels (Local), 64 channels (Remote)	9 channels (Local), 64 channels (Remote)	-
<b>Local Access</b>	HDMI/DVI/Display port for monitor; Keyboard & mouse	DVI/VGA/Display port for monitor; Keyboard & mouse	HDMI/DVI/VGA/Display port/Mini display port for monitor; Keyboard & mouse
<b>Remote Access</b>	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	-
<b>Server Operating System</b>	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7
<b>Client PC Operating System</b>	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008
<b>PC Web Browser</b>	IE 11	IE 11	IE 11
<b>ONVIF Compliant</b>	Yes	Yes	-
<b>Fan</b>	Yes	Yes	Yes
<b>Operating Temperature</b>	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)
<b>Approvals</b>	CE, FCC	CE, FCC	CE, FCC



## Video Management System

### Software NVR

### Control Center



Model	NVR 3 Corporate	NVR 3 Enterprise	CMS 2
Maximum Number of Video Devices	100	100	6400
Maximum Number of POS Devices	100	0	6400
Maximum Number of Access Control and Network I/O Devices	100	0	6400
Maximum Number of Clients	1 local, unlimited remote (recommended up to 5)	1 local, unlimited remote (recommended up to 5)	1 local, unlimited remote (recommended up to 5)
Free License	1 (1 for ACTi and 1 for third-party video device)	16 (16 for ACTi and 1 for third-party video device)	2
Video Resolution	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions
Compression	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG
Multi-Streaming	Dual streams	Dual streams	Dual streams
Third-party Integration	Point-of-sale (POS), Access Control, Network I/O, Parking Management Station (PMS)	-	Point-of-sale (POS), Access Control, Network I/O, Parking Management Station (PMS)
Scheduled Recording	Yes	Yes	-
Event Recording	Yes	Yes	-
Manual Recording	Yes	Yes	Yes
Speed Up	Yes	Yes	-
Redundancy Service	Yes	Yes	-
Recording Throughput	100 channels at 5MP/15fps	100 channels at 5MP/15fps	-
Display Layout Mode	1, 3, 4, 5, 6, 8, 9, 10, 12, 16, 18, 24, 25, 35, 36, 48, 49, 64, Custom	1, 3, 4, 5, 6, 8, 9, 10, 12, 16, 18, 24, 25, 35, 36, 48, 49, 64, Custom	1, 3, 4, 5, 6, 8, 9, 10, 12, 16, 18, 24, 25, 35, 36, 48, 49, 64, Custom
Digital Zoom	Yes	Yes	Yes
Event Status	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full
Instant Playback	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window
e-Map	Yes	Yes	Yes
PTZ Control	Yes	Yes	Yes
Playback Control	Continuous forward and backward playback with speeds 1x / 2x / 4x / 8x / 16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x / 2x / 4x / 8x / 16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x / 2x / 4x / 8x / 16x or frame-by-frame; pause; stop
Synchronized Playback	64 channels	64 channels	64 channels
Video Push	Support Video Push from ACTi Mobile Client devices	No	Support Video Push from ACTi Mobile Client devices
Local Access	Monitor; joystick; keyboard & mouse	Monitor; joystick; keyboard & mouse	Monitor; joystick; keyboard & mouse
Remote Access	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client
Event Trigger	<b>NVR:</b> Disk full; Disk not found; Disk is available; Schedule service start and stop; Video Push start and stop; CPU limit exceeded <b>Device:</b> Video motion detection; Passive IR sensor; External device through digital input; Sound detection; Intelligent event detection; Video Push start and stop; Video loss; Video Recovery; Network loss and recovery <b>Extended Device:</b> Point-of-sale(POS)status; Network I/O status; Access Control status; Car park status	<b>NVR:</b> Disk full; Disk not found; Disk is available; Schedule service start and stop; CPU limit exceeded <b>Device:</b> Video motion detection; Passive IR sensor; External device through digital input; Sound detection; Video loss; Video Recovery; Network loss and recovery	<b>NVR:</b> source loss and recovery; schedule service start and stop; Disk full; Disk not found; Disk is available; Schedule service start and stop <b>Device:</b> video motion detection; passive IR sensor; external device through digital input; Sound detection; video loss and recovery; network loss and recovery; Point-of-sale (POS) status; Network I/O status; Access control status; Car park status
Event Response	Pop-up window with live video and event confirmation activation; Switch to hotspot window; Switch to customize view; Command a PTZ device to go to a preset point; Play alert sound; Activate external device through digital output; Execute system command to activate other programs; Upload video or snapshot to FTP server; E-mail notification with snapshots; Push notification	Pop-up window with live video and event confirmation activation; Switch to hotspot window; Switch to customize view; Command a PTZ device to go to a preset point; Play alert sound; Activate external device through digital output; Execute system command to activate other programs; Upload video or snapshot to FTP server; E-mail notification with snapshots	<b>NVR:</b> Play alert sound; Execute system command to activate other programs; E-mail notification with snapshots <b>Device:</b> Pop-up window with live video; Switch to hotspot window; Switch to customize view; Play alert sound; Send video to TV Wall server
Permission Control	Unlimited number of users; Active Directory; Customizable permissions for user groups; Account lockout; Automatic logout after idle; Playback password protected; Password validity period	Unlimited number of users; Active Directory; Customizable permissions for user groups; Account lockout; Automatic logout after idle; Playback password protected; Password validity period	Unlimited number of users; Active Directory; Customizable permissions for user groups; Account lockout; Automatic logout after idle; Playback password protected; Password validity period
GPS Position	Manual setting	Manual setting	Manual setting
Server Operating System	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008
Client PC Operating System	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008
PC Web Browser	IE 11	IE 11	IE 11
ONVIF Compliant	Yes	Yes	Yes





### Market Application Products



Model	IVS Server 1	People Counting Server 1	ALPR Server 2	LPR-100	LPR-120
<b>Product Type</b>	Software Market Application Suite	Software Market Application Suite	Software Market Application Suite	Standalone Market Application Suite	Standalone Market Application Suite
<b>Maximum Number of Video devices</b>	9	9	6	6	6
<b>License required</b>	Yes	Yes	Yes	Yes	Yes
<b>Free License</b>	1 channel with 2 hours recycling	1 channel with 2 hours recycling	1 channel with 2 hours recycling	1	1
<b>Built-in Analytics</b>	Object Line Crossing Detection, Object Enter Area Detection, Missing Object Detection, Unattended Object Detection, Tampering Detection, Smoke Detection, Incorrect Direction Detection, People Queue Detection	Object Line Counting, People Line Counting, Heat Map, Dwell Time, Gender Detection (project request), Age Detection (project request)	Automatic License Plate Recognition	Automatic License Plate Recognition	Automatic License Plate Recognition
<b>Audio Type</b>	-	-	-	2-way, Mic-in, Line-out	2-way, Mic-in, Line-out
<b>Analyzed Stream</b>	Live View, Playback	Live View, Playback	Live View, Playback	Live View, Playback	Live View, Playback
<b>Analyzed Source</b>	NVR, Camera, pre-recorded video	NVR, Camera, pre-recorded video	NVR, Camera, pre-recorded video	NVR, Camera, pre-recorded video	NVR, Camera, pre-recorded video
<b>Report System</b>	Standard Report	Standard Report, Professional Report	Standard Report	Standard Report	Standard Report
<b>Server Operating System</b>	-	-	-	Embedded Windows 7	Embedded Windows 7
<b>USB</b>	-	-	-	6 port(s), USB 3.0	2 port(s), USB 2.0, 2 port(s), USB 3.0
<b>HDD Bay</b>	-	-	-	SATA, Max. 1 Disk (without storage disks)	SATA, Max. 1 Disk (without storage disks)
<b>HDD Size</b>	-	-	-	3.5"	2.5"
<b>Local Access</b>	-	-	-	HDMI/DVI/Display port for monitor, Keyboard & mouse	DVI/VGA/Display port for monitor, Keyboard & mouse
<b>Remote Access</b>	No	No	Workstation	Workstation	Workstation
<b>Operating Temperature</b>	-	-	-	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)
<b>Approvals</b>	-	-	-	CE, FCC	CE, FCC
<b>Description</b>	IVS Server 1 can analyzes, record and search camera live and pre-recorded video stream from ACTI camera, Software NVR or Standalone NVR for special objects with intelligent video analytics algorithms, such as Line crossing, Enter Area, Missing Object, Unattended Object and Tamper.	People Counting Server 1 is the video analytics software designed to detect and count the number of people's entries and exits. You can set up a counting line in the desired area where people will pass by, and the system will automatically count people that move in and out separately, and the counting results can be analyzed by time interval.	ALPR Server 2 is a video analytics software tool with Automatic License Plate Recognition (ALPR) technology to detect and recognize the car license plate. It can record and search camera live and pre-recorded video stream from ACTI camera, Software NVR or Standalone NVR.	LPR-100 supports concurrent analysis of up to 6 channels for Automatic License Plate Recognition. The server analyzes live and pre-recorded videos; recognize blacklist and whitelist vehicles and send the notification accordingly. The analyzed data can be searched and filtered by time, plate number, and various vehicle attributes	LPR-120 supports concurrent analysis of up to 6 channels for Automatic License Plate Recognition. The server analyzes live and pre-recorded videos; recognize blacklist and whitelist vehicles and send the notification accordingly. The analyzed data can be searched and filtered by time, plate number, and various vehicle attributes

# METADATA GENERATOR BOX

ACTi automates metadata management from data collecting, analyzing to generating visualized insights using Metadata Generator Boxes. With the help of critical metadata, the operations of your business can be greatly enhanced. For instance, in-store marketing can be optimized by understanding customer footfall and interest in specific products, or the snapshots or video of license plates can be used for recognizing blacklisted cars at the parking lot and much more applications. With ACTi Metadata Generator Box Matrix, you can easily find solutions from the perspective of applications and market locations, such as queue detection at the retail store, or automatic license plate recognition at the vehicle gate of a parking lot.

Location	Environment	Location Examples	Generic Object (People or Other)			People						Face		Vehicle					
			Line & Area Counting	Heat Map & Dwell Time	Line Crossing Detection Enter Area Detection Missing Object Detection Unattended Object Detection	Line & Area Counting	Fight Detection	Slip, Trip, & Fall Detection	Queue Detection	Fingerprint Recognition	RFID Recognition	Age & Gender Detection	Face Recognition	Parking Spot Availability Detection	Loitering Detection	Counting & Type Detection	Automatic License Plate Recognition		
Entrance	Indoor	EAS Gate Elevator Indoor Entrance	Q93 Q94 Q96x		IVS Cameras	Q93 Q94 Q96x MGB-109 MGB-205						R12CP-30	R11C-30	MGB-102 MGB-203 MGB-204	MGB-103 MGB-104 MGB-202 VMGB-102 R21CF-30 R21CF-31				
	Outdoor	Outdoor Entrance													MGB-104 MGB-202				
Service Counter	Indoor	ATM Cash Register Self-Service Area Service Desk			IVS Cameras				Q93 Q94					MGB-102 MGB-203 MGB-204	MGB-103 MGB-104 MGB-202				
Signage Area	Indoor	Exhibition Area Merchandise Area			IVS Cameras									MGB-102 MGB-203 MGB-204	MGB-103 MGB-104 MGB-202				
Vehicle Gate	Outdoor	Container Terminal Parking Lot Car Gate Perimeter Gate			IVS Cameras													MGB-108	LPR-100 LPR-120
Other Areas	Indoor	Classroom Lobby Merchandise Area Sport Facilities Warehouse Parking Space		Q51	IVS Cameras		MGB-105	MGB-106						MGB-102 MGB-203 MGB-204	MGB-103 MGB-104 MGB-202 VMGB-102	Q920 Q921 Q922 Q923	MGB-107	MGB-108	LPR-100 LPR-120 MGB-114
	Outdoor	Campus Concourse Area Lane					MGB-105	MGB-106							MGB-104 MGB-202	MGB-110			



# MISSION CRITICAL SOLUTION PACKAGES

ACTi Solution Packages bring out of the box solutions for handling the increasing challenges of your business in more automated and seamless ways. The solutions can be applied in retail, commercial building, parking lot, and many other markets for optimizing business management.



Discover more solutions:

 [www.acti.com/products/solution-packages](http://www.acti.com/products/solution-packages)

## POPULAR SOLUTIONS

### Retail Solutions

#### People Counting Package

Foot traffic reports.  
Live total occupancy.



#### Digital Signage Package

Video clips, images, web pages,  
and video from surveillance  
cameras. Demographically  
-relevant ads.



#### Demographics Package

Video-based age, gender and  
emotion detection to collect  
demographic data.



### Access Control Solutions

#### Access Control Package with RFID Card

RFID card-based access control  
for up to 4 doors.



#### Access Control Package with RFID & Face Snapshot

RFID card detection together  
with face snapshot as an evidence.



#### Access Control Package with Face Recognition

RFID card detection with face  
recognition (up to 99% accuracy)  
for increased security.



### Digital Enterprise

#### Attendance Management with Card & Snapshot

Tracking of arrival and leaving of  
employees. Snapshot of each  
person for future reference.



### Fleet Management

#### Fleet Management Package

Task management and vehicle  
tracking of small fleets. Camera,  
GPS, NVR, Management Server.



### Parking Lot Management

#### Parking Lot Management Package

Recognize vehicles, notify personnel,  
track vehicle count and total  
occupancy of the parking lot.



# IP COMBO KITS

ACTi introduces its value combo kits with worry-free compatibility of recorder and camera for small-scale applications, like a residence or a small business. The kits contain a ZNR-series recorder and multiple cameras in a single package. The IP Combo Kits include 4 and 8 channel POE recorders along with 4 and 8 cameras respectively.

## ZNR-120P-K1

Includes four 4MP Outdoor Mini Dome (Z91) and one 4-channel NVR (ZNR-120P)



## ZNR-120P-K2

Includes four 4MP Outdoor Mini Bullet (Z31) and one 4-channel NVR (ZNR-120P)



## ZNR-120P-K3

Includes four 3MP Outdoor Mini Dome (A92) and one 4-channel NVR (ZNR-120P)



\* All Bundled 1TB HDD

## ZNR-121P-K1

Includes eight 4MP Outdoor Mini Dome (Z91) and one 8-channel NVR (ZNR-121P)



## ZNR-121P-K2

Includes eight 4MP Outdoor Mini Bullet (Z31) and one 8-channel NVR (ZNR-121P)








## ZNR-121P-K3

Includes eight 3MP Outdoor Mini Dome (A92) and one 8-channel NVR (ZNR-121P)



\* All Bundled 2TB HDD

Model	 All Specs → p.41	 All Specs → p.18	 All Specs → p.18
	Z31	Z91	A92
Maximum Resolution	4MP	4MP	3MP
Application Environment	Outdoor	Outdoor	Outdoor
Day / Night	Yes	Yes	Yes
Low Light Sensitivity	Superior	Superior	Superior
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
Lens	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F1.85, Fixed iris, Fixed focus
Horizontal Viewing Angle	76.8°	101.8°	100°
Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
Frame Rate vs. Resolution	20 fps at 2592 x 1520 30 fps at 2048 x 1520	20 fps at 2592 x 1520 30 fps at 2048 x 1520	30 fps at 2048 x 1536
Wide Dynamic Range	Extreme WDR	Extreme WDR	Advanced WDR
Environmental Casing	Weatherproof (IP67)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP66); Vandal proof (IK10)





Model	 All Specs → p.48	 All Specs → p.48
	ZNR-120P	ZNR-121P
Maximum Number of Video Devices	4	8
Video Resolution	Local: up to 8MP; Remote: up to 12MP	Local: up to 8MP; Remote: up to 12MP
Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG
Built-in PoE Connectors	4 Ports	8 Ports
Scheduled / Event / Manual Recording	Yes	Yes
Recording Throughput	40 Mbps	60 Mbps
HDD Interface	Maximum 1 SATA disk	Maximum 1 SATA disk
Instant Playback	Instant Playback in live view window	Instant Playback in live view window
PTZ Control	Yes	Yes
Synchronized Playback	4 channels	8 channels
Remote Access	Web Client	Web Client
Video Export	MP4	MP4

# ACCESS CONTROL SOLUTION DEMO KITS

With the support of ACTi access control demo kits, system integrator and distributor can efficiently demonstrate to the customers how to prevent unauthorized access utilizing RFID cards, camera, and face recognition technology. The kits are bundled with either Access Control Server or ACTi premium Standalone NVR, which provides integrated solution of access control and video surveillance.

All models are portable with their own travel bag that contains equipment and accessories needed for a tabletop demo.

You only need to have an HDMI monitor, a keyboard, and a mouse for local management, or use any remote device with web browser to access the server.

	Card Recognition	Card + Face Recognition
Access Control + VMS	<p><i>PADK-0016</i></p>  <p>Camera + NVR + Card Reader</p>	<p><i>PADK-0018</i></p>  <p>Camera + NVR + Face Recognition Reader</p>
Access Control	<p><i>PADK-0015</i></p>  <p>Card Reader + Access Control Server</p>	<p><i>PADK-0017</i></p>  <p>Face Recognition Reader + Access Control Server</p>

# MARKET APPLICATION SUITE

ACTi Market Application Suite (MAS) is a cloud-ready solution that uses video analytics to optimize business intelligence and operation management through comprehensive reports and real-time event handling. ACTi MAS also aggregates big data into dynamic and easy-to-understand insights. The information helps the executives make right managerial decisions.

## Customized Solutions for Different Markets



### Retail

Smart report describing customer behavior that allows predicting future trends and facilitating better service.

### Business Intelligence

- Optimize service employee schedules with ACTi people counting camera solution.
- Integrate POS and ACTi people counting solutions for better business planning.
- Enhance the store layout with ACTi's heat map technology.
- Enhance the marketing promotions for specific market segments with ACTi's age and gender analytics.

### Operation Management

- Manage all customer and employee related incidents through a single web-based platform.
- Investigate internal fraud with the integration of POS and ACTi video analytics.



### Parking Lot

Parking lot management by Automatic License Plate Recognition (ALPR) MAS.

### Operation Management

- Distinguish between black- and whitelisted cars and perform a predefined action accordingly.



### Logistics

Traffic management of multiple warehouses and goods tracking.

### Operation Management

- Track goods with the integration of ACTi MAS and warehouse's barcode scanning system.
- Optimize warehouse traffic by identifying congestion in aisles through ACTi's heat map.

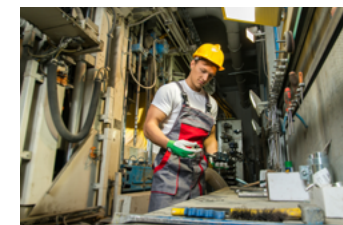


### Mobile Vehicle

Fleet Management MAS for route optimization, vehicle behavior analysis and passenger reports.

### Operation Management

- Manage logistic fleet with real-time tracking of vehicle location and other relevant information.



### Factory

Automated supervision of factory processes for better quality assurance and employee safety.

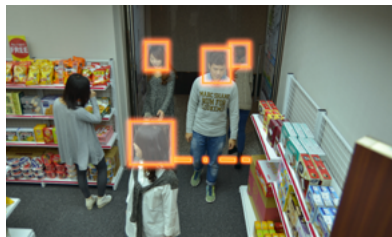
### Operation Management

- Execute and validate processes by remote management.
- Detect tailgating in critical areas with the integration of access control system and IP cameras.

# VIDEO ANALYTICS

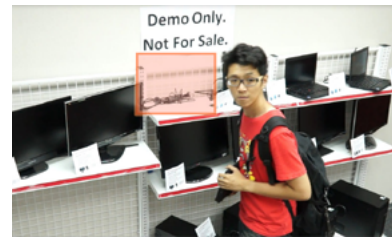
ACTi's video analytics is designed to transform your video surveillance network into a smart detection system. It uses advanced image processing algorithms to recognize humans and everyday objects, track the movements of objects, such as appearances, disappearances or loitering, and determine whether the movements are suspicious based on user-defined rules. It also provides algorithms to count the number of objects or humans passing by a specific location. ACTi's video analytics not only help you enhance your existing surveillance system, but also provide you with valuable information for business intelligence and management.

## Popular Algorithms



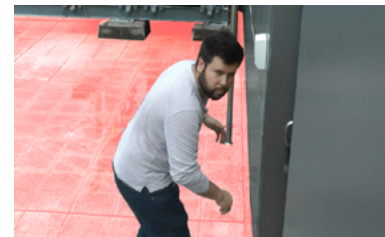
### People Counting

Provide bi-directional counting function for people entering and exiting an area.



### Missing Object

Detect objects that have suddenly disappeared from a marked area.



### Enter Area

Detect people who have entered and stayed in a marked area for longer than a certain amount of time.



### Line Crossing

Capture the movement of people or objects over a predetermined virtual line.



### Unattended Object

Detect objects that have that have been left behind in a certain area.



### Automatic License Plate Recognition

Detect and recognize vehicle license plates in the predefined area, and then match this data against the database.



### Face Recognition / Age and Gender Detection

Identify the faces, and detect the age and gender of people for demographic purposes or event triggers.

# POS INTEGRATION

ACTi unified solution uses video analytics along with POS data to help store owners optimize both security and business management. The huge losses due to unauthorized discounts or common steal can be greatly prevented. In case of any POS exception, the owners can quickly be notified and validate it with video evidence. On the other hand, POS data can also be used to help owners understand their customers for better business strategy, enhancing revenue.

## Applications



### Employee Theft

Detect and notify the manager when the cash register is open while no transaction is conducted or the transaction is voided.



### Sweethearting

Notify the manager immediately when unauthorized discounts are given by the employee to his/her relatives or friends.



### Conversion Rate

Get an accurate conversion rate and enhance selling strategy with people counting data compared with POS data.

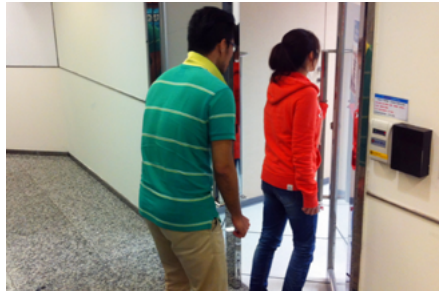


### VIP Service

Identify VIP customers using ACTi face recognition technology and perform customized service to enhance shopping experience with the help of POS data.

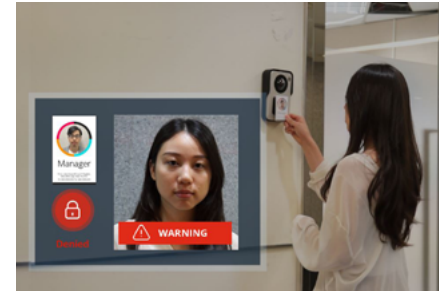
# ACCESS CONTROL SYSTEM

Access control is the very first line of defense against any danger and loss. Adding video to access control system can definitely improve the security of your premises.



## Tailgating and Piggybacking

Automatically validate unauthorized access by detecting person who tails behind and enters without swiping the access card.



## Identity Fraud

With ACTi face recognition technology, open the door with accurate identification along with access card to prevent the crises and loss resulting from unauthorized access.

# PARKING LOT MANAGEMENT SYSTEM

ACTi Parking Lot Management System can efficiently help manage vehicles and transactions using ALRP technology. The system can be applied to different locations and purposes of the parking lot to optimize security and operation management.



## Access Control at the Entrance

Automatically detect the license plate on entrance of the parking lot. Recognize whitelisted and blacklisted cars to automatically allow access or alert security.



## Payment Calculation at the Exit

Automatically detect the license plate of the leaving vehicle at the gate. Easily check its profile and payment statement generated from the license plate information in the management system.



## Car Locator at the Parking Spot

Automatically read the license plate when a car parks at a spot. Efficiently identify the vacant spots and the location of the parked car.

# MOBILE CLIENT

ACTi universal mobile application is designed to remotely access video management software, cameras or TV wall for managing the surveillance system anytime from anywhere with intuitive layout. Just a single app to connect everything within ACTi unified solution!



[Download ACTi Mobile Client now on your iOS or Android device for free! ▶▶▶](#)

## Main Features



### Live View and Playback

Watch live view or playback critical recordings stored in NVR and cameras' memory cards.



### Zoom and PTZ Control

Simply pinch to zoom or swipe to control the pan and tilt of your cameras.



### Digital Input / Output

Remotely activate network devices, such as alarms, locks or electric gates.



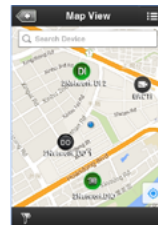
### Video Push

Capture live video with mobile device's camera and immediately push it to NVR for evidence recording through wireless networks.



### Search Video Recordings

Search video recordings by various events, for example motion or digital input.



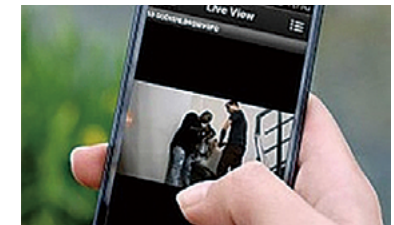
### Google Maps

Built-in Google Maps can automatically detect GPS location from cameras as well as NVR and CMS servers and display these on an interactive map.



### 3rd Party System Integration

Play the video corresponding to specific POS or access control incidents.



### Notification Push

Receive instant pop-up notifications from NVR 3, even when the phone is resting.



### Optional Lenses

<b>Model</b>	PLEN-0101	PLEN-0114	PLEN-0119	PLEN-0127	PLEN-0129	PLEN-0130	PLEN-0131	PLEN-2103	PLEN-2200	PLEN-2202	PLEN-2203	PLEN-2204	PLEN-2206	PLEN-4101	PLEN-4102	PLEN-4103	PLEN-4104
<b>Product Type</b>	Fixed Lens	Fixed Lens	Fixed Lens	Vari-focal Lens	Fixed Lens	Fixed Lens	Vari-focal Lens	Fixed Lens	Vari-focal Lens	Vari-focal Lens	Vari-focal Lens	Vari-focal Lens	Vari-focal Lens	Fixed Lens	Fixed Lens	Fixed Lens	Fixed Lens
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
<b>Lens Mount</b>	CS Mount	Board Mount	CS Mount	CS Mount	Board Mount	CS Mount	CS Mount	CS Mount	CS Mount	CS Mount	CS Mount	CS Mount	CS Mount	Board Mount	Board Mount	Board Mount	Board Mount
<b>Focal Length</b>	Fixed focal, f4.2mm	Fixed focal, f4.2mm	Fixed focal, f2.8mm	Vari-focal, f2.8-12mm	Fixed focal, f2.93mm	Fixed focal, f2.93mm	Vari-focal, f2.8-12mm	Fixed focal, f4.0mm	Vari-focal, f3.1-13.3mm	Vari-focal, f4.1-9mm	Vari-focal, f3.1-9m	Vari-focal, f7.5-50mm	Vari-focal, f2.8-8.5mm	Fixed focal, f1.9mm	Fixed focal, f2.55mm	Fixed focal, f8.0mm	Fixed focal, f6.0mm
<b>Iris</b>	Fixed iris, F1.8	Fixed iris, F1.8	Fixed iris, F2.0	DC iris, F1.4	Fixed iris, F2.0	Fixed iris, F2.0	Fixed iris, F1.4	Fixed iris, F2.0	DC iris, F1.4-4.0	DC iris, F1.6	DC iris, F1.3	DC iris, F1.5	P-iris, F1.2	Fixed iris, F2.8	Fixed iris, F2.2	Fixed iris, F1.8	Fixed iris, F1.8
<b>Focus</b>	Manual focus	Fixed focus	Manual focus	Manual focus	Fixed focus	Manual focus	Manual focus	Fixed focus	Manual focus	Manual focus	Manual focus	Manual focus	Manual focus	Fixed focus	Fixed focus	Fixed focus	Fixed focus
<b>Supported Models</b>	E12A E13A	D92	-	-	-	-	-	-	-	-	E23B	E23B	A21 A23	-	-	D92	D92

### Optional Dome Covers

<b>Model</b>	PDCX-0104	PDCX-1101	PDCX-1104	PDCX-1105	PDCX-1106	PDCX-1108	PDCX-1109	PDCX-1110	PDCX-1111	PDCX-1112	PDCX-1113							
<b>Product Type</b>	Smoked Dome Cover	Smoked Dome Cover	Smoked Dome Cover	Smoked Dome Cover	Smoked Dome Cover	Smoked Dome Cover	Smoked Dome Cover	Smoked Dome Cover	Smoked Dome Cover	Smoked Dome Cover	Smoked Dome Cover							
<b>Material</b>	Plastic (PC), Plastic (ABS)	Plastic (PC), Plastic (ABS)	Plastic (PC), Plastic (ABS)	Plastic, Aluminum	Plastic (PC)	Plastic, Aluminum	Plastic (PC), Plastic (ABS)	Plastic (PC)	Plastic (PC)	Plastic (PC)	Plastic (PC)							
<b>Durability</b>	Standard	Vandal Proof (IK10)	Vandal Proof (IK10)	Vandal Resistant (IK09)	Vandal Resistant (IK08)	Vandal Proof (IK10)	Vandal Proof (IK10)	Vandal Proof (IK10)	Vandal Proof (IK10)	Vandal Proof (IK10)	Vandal Proof (IK10)							
<b>Supported Models</b>	-	B51 B52 B53 D6X(A) E6X(A) D7X(A) (E78 & E89 excluded)	D8X(A) E7X(A) E8X(A) KCM-3311 KCM-7111 KCM-7311	E610 E616 E617 E618 E89 E815 E816	E817 B910 B94A B95A B96A B97A	B934 I92 I912	D92 E91 E92 E93	E95 E96 E97 E911 E913	I94 I96 I97 I99	I910 B916 B917	B61 B63 B65 B67 B81	B82 B83 B85 B87	I71 I73 B74A B76A B77A	E913 E918 E918M E921	E921M E923 E936 E936M	E925 E925M E926	E927 E928 E933 E933M	E78

### Power Supply Accessories

<b>Model</b>	PACX-0005	PACX-0006	PPBX-0006	PPBX-0007	PPBX-0008	PPBX-0009	PPBX-0011	PPOE-0001	PPOE-0101	PPOE-0102
<b>Product Type</b>	Charger	Battery	Power Adapter	Power Adapter	Power Adapter	Power Adapter	Power Adapter	PoE Injector	PoE Injector	PoE Injector
<b>Description</b>	Charger for PMON-1001 (Europe, AC 110~240V)	Rechargeable Li-ion Battery for PMON-2000	Power Adapter AC 100~240V for MNR-310	Power Ignition Control Module for MNR-310	AC 100~240V, with universal connectors for PLED-0203~PLED-0205	AC 100~240V power adapter for ENR-220P, ENR-221P	Power Adapter AC 100~240V, with universal connectors for all DC12V powered devices	AC 100~240V IEEE802.3af PoE Injector for Class 1, 2 or 3 devices	AC 100~240V IEEE 802.3at High PoE injector for I91, I92 and B934	AC 100~240V IEEE 802.3at High PoE injector for KCM-8211, I93-I98 and I910

### Network Peripherals













<b>Model</b>	PWLM-0100	PWLM-0101	PWLM-0102	PWLM-0103	PWLM-0104	PWLM-0105	PWLM-0200	PWLM-0201	PWLM-0202	PWLM-0301
<b>Product Type</b>	Wireless Module	Wireless Module	Wireless Module	Wireless Module	Wireless Module	Wireless Module	Wireless Module	Wireless Module	Wireless Module	Wireless Module
<b>Description</b>	4G LTE Wireless Module for MNR-310 (Europe / Australia / New Zealand)	4G LTE Wireless Module for MNR-310 (US)	4G LTE Wireless Module for MNR-310 (North America)	4G LTE Wireless Module for MNR-310 (Japan)	4G LTE / 3G / 2G Wireless Module for all MNR (except MNR-310), ECD-200 (US)	4G LTE / 3G / 2G Wireless Module for all MNR (except MNR-310), IVS-010, ECD-200 (Europe and Asia)	Wi-Fi Module for MNR-310	Wi-Fi Module for MNR-320P	Wi-Fi Module for all MNR (except MNR-310), ECD-200	Advantech EWM-C109F6G1E GPS+3.5G module for MNR-1xx

### Standalone NVR Accessories

<b>Model</b>	PMAx-1200	PMAx-1201	PMAx-1202	PMAx-1203
<b>Product Type</b>	Standalone NVR Mount	Standalone NVR Mount	Standalone NVR Mount	Standalone NVR Mount
<b>Description</b>	19" Rackmount Rails	26" Rackmount Rails	19" Rackmount Rails	26" Rackmount Rails
<b>Supported Models</b>	GNR-410/ INR-460	GNR-410/ INR-460	ENR-190	ENR-190



# Mounting Accessory Matrix

Camera Type	Camera Installation Series		Example Models	Target Surface	Mounting Method																				
					Surface	Tilttable Surface Mount	Gang Box	Flush	Tilttable Flush Mount	Wall Mount	Tilted Mount	Pendant	Pole Mount	Corner Mount	Bracket	Integrated Bracket	Ceiling Bracket	Height Strip	Converter for NPT Standard Mounts	Desktop Mount	Edge Clamp				
Box	Micro Box		Q22	Desktop																	Y				
				Edge																				Y	
				Ceiling													Y								
				Wall													Y								
				Pole												Y									
	Indoor Box		A2x, B2x, E2x, I2x,	Ceiling													Y								
				Wall													Y								
				Pole												Y (w/Housing)									
				Corner												Y (w/Housing)									
	Outdoor-Ready Box		KCM-5611, KCM-5211E	Wall												Y									
Pole														Y											
Corner															Y										
Bullet	Mini Bullet		E38	Ceiling												Y									
				Wall													Y								
	Bullet with Integrated Bracket		A3x, A4x, B4x, E39, E41x, E44A, E46A, I4x	Ceiling			E39, E4x, I48 only										Except B4x, I4x	B4x, I4x only							
				Wall			Except A3x, A4x										Y								
				Pole											Y										
	Bullet with Bundled Removable Bracket		D3x, D4x, E3x, E41A ~ E43A,	Ceiling												Y									
				Wall												Y									
				Pole											Y										
	Thermal Bullet		Q31	Wall													Y								
				Pole											Y										
Covert	Covert		Q11, Q12, Q13, Q111, Q14, Q112	Ceiling				Y	Y												Y				
				Wall				Y	Y													Y			
				Corner												Except Fisheye Covert									
	L-shape Pinhole Covert		Q113, Q115	Ceiling	Y	Y		Y																	
				Wall	Y	Y		Y			Y										Y				
	Windshield														Y										
Outdoor Fisheye Covert		Q13-K1	Wall				Y																		
Cube	Cube with Bundled Removable Bracket		E1x	Ceiling												Y									
				Wall												Y									
Door Station	Door Station		Q950	Wall	Y		Y																		
















# Mounting Accessory Matrix

Camera Type	Camera Installation Series	Example Models	Target Surface	Mounting Method																	
				Surface	Tilttable Surface Mount	Gang Box	Flush	Tilttable Flush Mount	Wall Mount	Tilted Mount	Pendant	Pole Mount	Corner Mount	Bracket	Integrated Bracket	Ceiling Bracket	Height Strip	Converter for NPT Standard Mounts			
Dome	Mini Dome & Mini Fisheye Dome		E9x, E9xx(M)	Ceiling	Y		Y					Y						Y			
				Wall	Y		Y		Y												
				Pole									Y	Y							
			E99M, Z92	Ceiling	Y																
					Q9x	Ceiling	Y		Y					Y							Y
						Pole								Y							
			Z91, A92	Ceiling	Y								Y							Y	
				Wall	Y					Y											
	Pole												Y								
				B71, B6x, B8x, D5x, D6x, D7x, D8x, E5x, E6x, E61x, E7x, E8x, KCM-3311, KCM-7x11	Ceiling	Y		Y	Y					Y							Y
					Wall	Y	Special Series	Y			Y										
					Pole									Y	Y			Except E78			
		A61, A81, A82	Ceiling	Y								Y							Y		
			Wall	Y						Y											
			Pole											Y							
		Q61, Q81	Ceiling	Y		Y	Y					Y							Y		
			Pole									Y									
				B54 ~ B56, B511A, I51, I7x	Ceiling	Y		Y	Indoor Dome only					Y							Indoor Dome only
					Wall	Y		Y			Y	Y									
	PTZ / Speed Dome	Outdoor Mini PTZ		B94A ~ B97A, B910, B914, E89, E815	Ceiling	Y		Y	Y				Y							Y	
Wall						B914, E89, E815	Y			Y											
Pole													Y	Y							
Corner																Y					
Rooftop / Parapet																					Except B914
Indoor PTZ			I92, I912, KCM-8111	Ceiling	Y		Y	Y				Y							Y		
				Wall						Y											
				Pole									Y	Y							
				Corner											Y						
Outdoor PTZ & Speed Dome			I93 ~ I96	Ceiling			I9x only					Y							Y		
				Wall			I9x only			Y											
				Pole									Y	Y							
	Corner													Y							
	Rooftop / Parapet																			Y	

\* For more mounting solutions, please refer to the Mounting Selector on [www.acti.com/mountingselector](http://www.acti.com/mountingselector)

# 2018 Camera Roadmap Matrix

## A / C / D / E / Z Series

Product Type		Cube	Fisheye Cube	Box			Bullet			Mini Bullet	Mini Dome		Dome						Mini Fisheye Dome		Speed Dome	
																						
Application Environment		Indoor	Indoor	Indoor/Outdoor			Outdoor			Outdoor	Indoor	Outdoor	Indoor			Outdoor			Indoor	Outdoor	Outdoor	
Lens		Fixed focal	Fixed focal	Fixed focal	Vari-focal	Zoom	Fixed focal	Vari-focal	Zoom	Fixed focal	Fixed focal	Fixed focal	Fixed focal	Vari-focal	Zoom	Fixed focal	Vari-focal	Zoom	Fixed focal	Fixed focal	Zoom	
Day Only	Standard	1MP	E11A								E91		E51									
		1.3MP	C11W																			
		3MP	E12A								D92 E92											
		5MP	E13A	E15							E93									E96	E921 E921M	
		10MP	E14	E16							E97										E923	
	Super Low Light	2MP									E95	E936 E936M		D62A E67A								
		3MP	E17								E911	E99M										
		5MP									E912									E914		
	Complicated Light	3MP									E913	E918 E918M										
Day & Night	Standard	1MP			E21VA		E31A	E41														
		3MP					D32 E32A	D42A E42B					D55 E53	D65A E62A		D72A E72A	D82A E82A					
		5MP				E22VA	E213 (10x)	E33A	E43B	E413 (10x)			E54	E63A	E616 (4.3x)	E73A	E83A	E815 (4.3x)		E925 E925M		
		10MP				E271	E210 (4.3x)	E37	E48	E416 (4.3x)		E926	E59	E610	E617 (4.3x)	E77	E89	E816 (4.3x)		E927		
	Super Low Light	2MP			E23B		E36	E44A				E58	E69		E76	E84A						
	Complicated Light	3MP			E24A	E215 (10x)		E46A	E415 (10x)		E928	E56	E65A	E618 (4.3x)	E74A	E86A	E817 (4.3x)					
	Complicated and Super Low Light	2MP			E217	E222	E219 (10x)	E39		A43 (4.3x) E417 (10x)	E38		E933 E933M		E78			A83 (4.3x) Z81 (4.4x)			Z950 (20x)	
		3MP			A21	A23		A31		A41 (4.3x)	A32		A92		A61 (4.3x)	E710		A81 (4.3x)				
		4MP									Z31		Z91 Z92					Z82 (4.4x)				
		5MP				A24				A42 (2.8x)					A62 (4.3x)	E79		A82 (2.8x)				
	8MP																				A950 (22x)	

# 2018 Camera Roadmap Matrix

## KCM / B / I / Q Series

Product Type			In-Wall Box	Micro Box	Zoom Box		Zoom Bullet	Mini Dome		Dome		Fisheye Dome	Hemispheric Dome		Mini PTZ	PTZ		Speed Dome		Covert	Fisheye Covert		L-Shape Pinhole Covert	Pinhole Covert	Door Station			
Application Environment			Outdoor	Outdoor	Indoor/Outdoor	Outdoor	Outdoor	Indoor	Outdoor	Indoor		Outdoor	Indoor	Indoor	Outdoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Indoor	Indoor	Outdoor	Indoor	Indoor	Outdoor		
Lens			Fixed focal	Fixed focal	Zoom	Zoom	Zoom	Fixed focal	Fixed focal	Fixed focal	Zoom	Fixed focal	Zoom	Fixed focal	Fixed focal	Fixed focal	Zoom	Zoom	Zoom	Zoom	Zoom	Fixed focal	Fixed focal	Fixed focal	Fixed focal	Fixed focal	Fixed focal	
Day Only	Standard	5MP																										
	Super Low Light	2MP		Q22 Q22-K1																		Q110 Q19	Q111		Q115	Q112 Q112-K1		
		3MP																									Q14 Q14-K1	
Day & Night	Standard	4MP																										
		5MP					B46 (10x)			B51	B61 (3x)		B81 (3x) B82 (2.4x)	B54			B96A (10x)											
		10MP			B210 (10x)		B410 (10x)			B52				B55														
	Super Low Light	1.3MP					B44 (10x)											B94A (10x)										
		2MP					B45 (10x)				B65 (3x)		B85 (3x)					B95A (10x)										
	Complicated Light	3MP			B23 (10x)		B49 (10x)			B53	B67 (3x)		B87 (3x)	B56				B97A (10x)										
	Complicated Light and Super Low Light	1MP																										
		2MP				B214 (20x) I28 (33x) I29 (36x)	KCM-5611 (18x)	B415 (20x) B416 (30x) I42 (36x) I45 (30x) I48 (33x)				B63 (3x)		B83 (3x)		Q51			I92 (30x)	I94 (30x)	B934 (26x)						B916 (20x) B917 (30x) B945 (20x) B949 (30x) I96 (30x) I97 (33x) I98 (33x) I99 (36x) I915 (36x)	
		3MP	Q250			B26 (36x)		B412 (10x) B421 (36x)				B612(3x)	B71	B89 (3x)				B911 (10x)				B923 (30x)	B943 (36x)					
		4MP				I27 (30x)	KCM-5211E (18x)	I47 (30x)					KCM-3311 (3.6x)						I912 (33x)								I910 (33x)	
		5MP						B419 (10x) B420 (36x) B43 (30x)								I51	I71	B912 (10x)					B913 (30x)					
		6MP																										Q950 Q951
8MP																												
12MP																												



## ACTi Corporation

ACTi Corporation is an end-to-end IP video surveillance solution provider, covering all the way from Security to Business management solutions. The core value of ACTi is to deliver these solutions through in-house developed technologies applied to its whole product line. The products include IP cameras, video management software and video analytics that are seamlessly unified. These solutions are customized for all markets through the comprehensive support of pre-sales and post-sales service tools and utilities and a 24/7 Technical support worldwide.

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