

# 2017 SELECTION GUIDE

End-to-end Solutions from Security to Business Management



# ACTi

## UNIFIED SOLUTION



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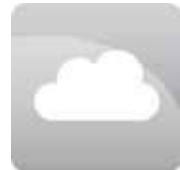
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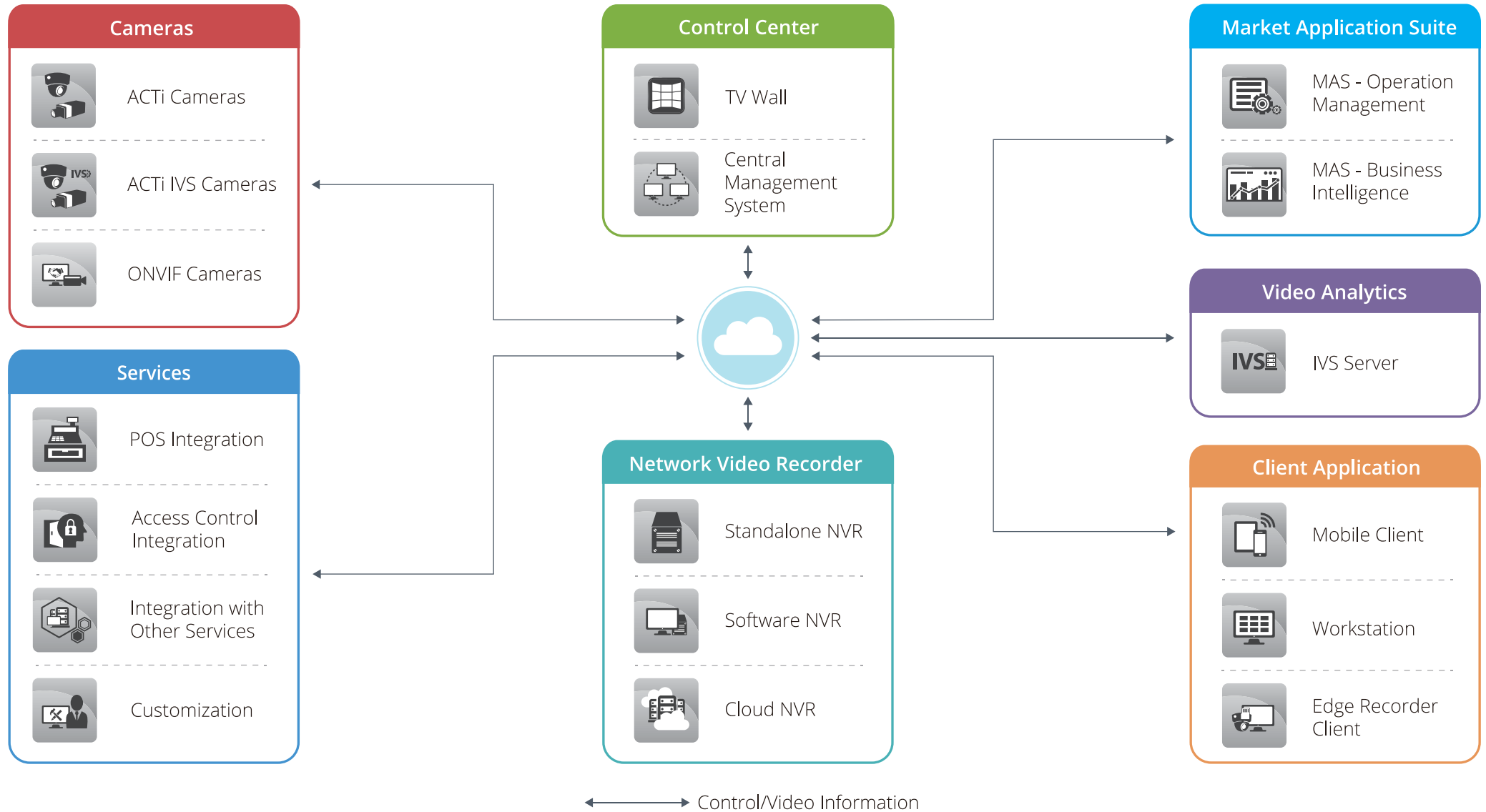
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# ACTi SOLUTION DIAGRAM





# ACTi Q93 & Q94 People Counting Cameras Introduction



## 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.

## Application Software

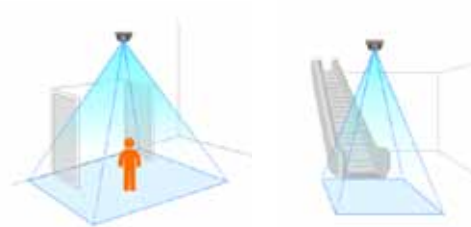
### Free Live People Counting Viewer



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

## Key Features

- ▶ 1 Megapixel
- ▶ Day & Night
- ▶ Superior Low Light Sensitivity
- ▶ Adaptive IR LED
- ▶ Extreme WDR (145dB)
- ▶ Super Wide Angle
- ▶ Installation Height Range
  - Q93:220-350 cm
  - Q94:360-450 cm



## People Counting Camera Selector



Find the most suitable counting camera for specific installation environment!

## Retail Applications



Maintain a comfortable shopping experience by ensuring the total number of shoppers doesn't exceed maximum occupancy limit.



Learn exactly how many customers come to the shop during peak hours to optimize employee schedules accordingly.



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



# ACTi MDD-200 Media Display Dongle Introduction



## Intelligent and Flexible

ACTi MDD-200 dongle with built-in analytics is able to display demographic adaptive content on the public screen with a customized layout. It is also possible to remotely manage the digital signage content of hundreds of dongles from a single Media Management Server.

## Smart Retail Demographics Demo

### Android device



### iOS device



## Key Features

- ▶ Digital Signage
- ▶ Age and Gender Detection
- ▶ Face Recognition
- ▶ General Advertising
- ▶ Demographic Adaptive Advertising
- ▶ Personal Communication
- ▶ VIP Arrival Notification
- ▶ Wireless (Wi-Fi and Bluetooth)
- ▶ Local Storage

## Digital Signage Applications



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



Support surveillance monitoring and theft prevention with live video.



Display reminders, instructions, general ads, notifications, and customized webpage content.



Recognize VIP guests based on face recognition technology, and notify personnel about their arrival for better service.



Signage reports with viewing information help the manager make right managerial and marketing decisions.





# ACTi Q22 Micro Box Camera Introduction



## 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.

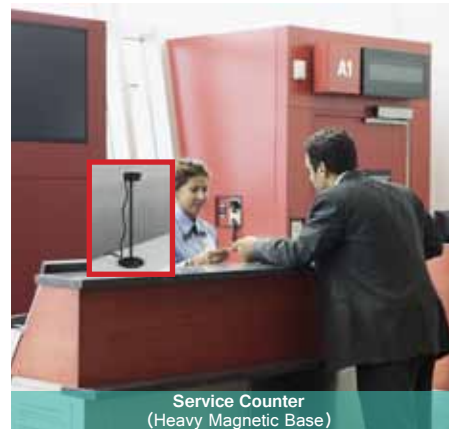


## Key Features

- ▶ 2 Megapixel with 1080p
- ▶ Omnidirectional Built-in Microphone
- ▶ Fixed Lens with f2.55mm / F2.2
- ▶ Superior Low Light Sensitivity
- ▶ Basic WDR
- ▶ Super Wide Angle
- ▶ Weatherproof (IP68) and Vandal Proof (IK10)
- ▶ Desktop Stand with Magnetic Base, Pole Mount, or Clamp Mounting Options for Flexible Installation

## 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.



Popular Product: Q22-K1





# ACTi Covert Camera Introduction



## Key Features

- ▶ Up to 5 Megapixel with 1080p
- ▶ General, Fisheye, Pinhole and L-shaped Pinhole Covert
- ▶ Superior Low Light Sensitivity
- ▶ Basic WDR
- ▶ Super Wide Angle
- ▶ 2-way Audio
- ▶ Digital Input / Output
- ▶ Local Storage
- ▶ Vibration Proof (EN50155)
- ▶ 12-meter Long Lens Cable

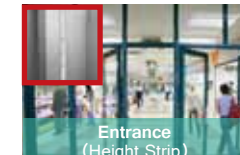
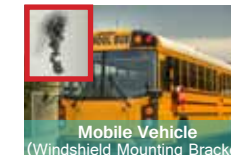
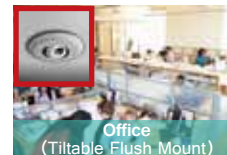
## Discreet Monitoring and Facial Identification

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.



## Applications and Installations

ACTi's covert cameras come with various shapes and wide range of disguise accessories to fit in all installation locations. They are ideal for retail stores, mobile vehicles, banks, and private places such as offices where the cameras are not welcomed.





## People Counting Camera



3x



3x



Model	Q61	Q81	Q91	Q92	Q93	Q94
<b>Maximum Resolution</b>	2MP	2MP	2MP	2MP	1MP	1MP
<b>Application Environment</b>	Indoor	Outdoor	Outdoor	Indoor	Indoor	Indoor
<b>Product Application</b>	People Counting	People Counting	People Counting	People Counting	People Counting	People Counting
<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	Electronic Day / Night	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 lux (IR LED on) at F 1.3	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F 1.3	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 F2.2	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
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	4m	4m	No	15m	5m	5m
<b>Lens</b>	Zoom, f3-9mm / F1.3-2.2, DC iris, Auto focus	Zoom, f3-9mm / F1.3-2.2, DC iris, Auto focus	Fixed focal, f2.55mm / F2.2, 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, f4.2mm / F1.8, Fixed iris, Fixed focus
<b>Zoom Ratio</b>	3x optical	3x optical	-	-	-	-
<b>Zoom Application</b>	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	-	-	-	-
<b>Viewing Angle Adjustment</b>	Pan: ±175°; Tilt: 5°-175°; Rotate: ±175°	Pan: ±175°; Tilt: 5°-170°; Rotate: ±175°	Pan: ±90°, Tilt: 0°-90°	-	-	-
<b>Horizontal Viewing Angle</b>	102.1°-36°	102.1°-36°	110.3°	110.3°	108.6°	73.1°
<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	60 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080	30 fps at 1280 x 720	30 fps at 1280 x 720
<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)	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
<b>Digital Image Stabilizer</b>	Yes	Yes	Yes	Yes	No	No
<b>Defogging</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Audio</b>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	1-way (Mic-in, Line-in)	No	No	No
<b>Digital Input / Output</b>	2/2	2/2	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)
<b>Power Source</b>	DC 12V; PoE Class 3	DC 12V; PoE Class 3	PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 3	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Vandal resistant (IK09)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (EN50155)	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>	Yes	Yes	No	No	No	No
<b>Fan</b>	No	No	No	No	No	No
<b>Operating Temperature</b>	-20°C ~ 50°C (-4°F ~ 122°F)	-40 °C ~ 50 °C (-40 °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, IK09	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC	CE, FCC	CE, FCC



**Heat Map Camera****Thermal Camera****Micro Box Camera****In-wall Box Camera**

Model	Q51	Q31	Q22	Q22-K1	Q250
<b>Maximum Resolution</b>	2MP	0.46MP	2MP	2MP	3MP
<b>Application Environment</b>	Indoor	Outdoor	Outdoor	Outdoor	Outdoor
<b>Product Application</b>	Heat Map	-	-	-	-
<b>Bundled Accessories</b>	No	Integrated bracket	Bracket	Gooseneck Bracket (PMA-1110), Desktop Mount (PMA-0901)	No
<b>Image Sensor</b>	Progressive Scan CMOS	Thermal	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	Yes	No	No	No	Yes
<b>Low Light Sensitivity</b>	Superior	Standard	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
<b>Mechanical IR Cut Filter</b>	Yes	No	No	No	Yes
<b>IR LED</b>	Adaptive IR LED	No	No	No	No
<b>IR Working Distance</b>	20m	-	-	-	-
<b>Lens</b>	Fixed focal, f1.3mm /F2.6, Fixed iris, Fixed 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
<b>Horizontal Viewing Angle</b>	171°	27°	110.3°	110.3°	108.6°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	30 fps at 1920 x 1080	<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>Multi-Streaming</b>	Triple streams	Dual streams	Dual streams	Dual streams	Triple streams
<b>Wide Dynamic Range</b>	Extreme WDR (130 dB)	Extreme WDR	Basic WDR (75 dB)	Basic WDR (75 dB)	Extreme WDR (145 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	No	DNR	DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	No	No	No	No	No
<b>Defogging</b>	Yes	No	No	No	Yes
<b>Audio</b>	2-way (Built-in Microphone, Mic-in, 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)
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1	1/0
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	No	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	DC 12V; PoE Class 2	DC 12V; PoE Class 2	PoE Class 2
<b>Environmental Casing</b>	No	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); Fire protection (EN45545); Built-in dehumidifier
<b>Mount Type</b>	Surface, Wall Mount, Ceiling Bracket, Flush, Corner Mount, Pole Mount, Gang Box	Surface, Wall Mount, Pole Mount	Desktop Mount, Edge Clamp, Bracket, Pole Mount	Desktop Mount	Surface, Wall Mount
<b>Built-in Analytics</b>	Yes	No	No	No	Yes
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes
<b>Heater</b>	No	Yes	No	No	No
<b>Fan</b>	No	Yes	No	No	No
<b>Operating Temperature</b>	-20°C ~ 50°C (-4°F ~ 122°F)	-40 °C ~ 45 °C (-40 °F ~ 113 °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)
<b>Approvals</b>	CE, FCC	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, EN45545, UL Listed

**Covert****Pinhole Covert**

Model	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)	<b>Q14:</b> Vibration proof (EN50155)	Vibration proof (EN50155)	<b>Q112:</b> Vibration proof (EN50155)
<b>Mount Type</b>	Bracket, Flush, Corner Mount, Tilttable Flush Mount	Bracket, Flush, Corner Mount, Tilttable Flush Mount	Bracket, Flush, Corner Mount, Tilttable Flush Mount	Bracket, Flush, Corner Mount, Tilttable Flush Mount	Bracket, Flush, Corner Mount, Tilttable Flush Mount	Tilttable Flush Mount	Bracket, Flush, Corner Mount, Tilttable Flush 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	<b>Camera:</b> CE, FCC, EN50155	CE, FCC, EN50155	<b>Camera:</b> 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



PTZ



30x



30x



30x



30x



33x



18x

Model	I91	I92	I93	I94	I912	KCM-8211
Maximum Resolution	1MP	2MP	1MP	2MP	4MP	2MP
Application Environment	Indoor	Indoor	Outdoor	Outdoor	Indoor	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	Extreme	Extreme	Extreme	Superior	Superior
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 F1.6	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: 0.05 lux at F1.6
Mechanical IR Cut Filter	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, f4.3-129mm / 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, f4.7-84.6mm / F1.6-2.8, DC iris, Auto focus
Zoom Ratio	30x optical, 16x digital	30x optical, 16x digital	30x optical, 16x digital	30x optical, 16x digital	33x optical	18x optical, 16x digital
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° (with Auto-flip); Tilt: 0°-180°	Pan: 0°-360° (with Auto-flip); Tilt: 0°-180°	Pan: 0°-360° (with Auto-flip); Tilt: -20°-200°	Pan: 0°-360° (with Auto-flip); Tilt: -20°-200°	Pan: 0°-360° (with Auto-flip); Tilt: 0°-180°	Pan: 0°-360° (with Auto-flip); Tilt: 0°-180°
Horizontal Viewing Angle	66.4°-2.68°	66.4°-2.68°	66.4°-2.68°	66.4°-2.61°	58.78°-2.35°	66.9°-4.0°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MPEG-4 SP, MJPEG
Frame Rate vs. Resolution	30 fps at 1280 x 720	30 fps at 1920 x 1080	30 fps at 1280 x 720	30 fps at 1920 x 1080	15 fps at 2688 x 1520 30 fps at 1920 x 1080	15 fps at 1920 x 1080 30 fps at 1280 x 720
Horizontal Resolution	1450 TVL	1800 TVL	1450 TVL	1800 TVL	1850 TVL	-
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Advanced WDR (75 dB)	Advanced WDR (80 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	No
Defogging	Yes	Yes	Yes	Yes	Yes	Yes
S/N Ratio	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	2/2	2/2	4/2	4/2	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)	No
Power Source	DC 12V; High PoE	DC 12V; High PoE	AC 24V; High PoE	AC 24V; High PoE	DC 12V; High PoE	DC 12V; High PoE
Environmental Casing	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Vandal Resistant (IK09)	Weatherproof (IP66); Vandal proof (IK10)
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	No
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes
Heater	No	No	Yes	Yes	No	Yes
Fan	No	No	Yes	Yes	No	Yes
Operating Temperature	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-40°C ~ 45°C (-40°F ~ 113°F)
Approvals	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IP67, NEMA 4X, IK10, ETL Listed	CE, FCC, IP67, NEMA 4X, IK10, ETL Listed	CE, FCC, IK09, UL Listed	CE, FCC, IP66, IK10



## Mini PTZ



10x



10x



10x



10x



10x



10x

Model	B94A	B95A	B96A	B97A	B910	B914
<b>Maximum Resolution</b>	1.3MP	2MP	5MP	3MP	4MP	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>	Superior	Superior	Standard	Standard	Standard	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: 0.05 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
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Lens</b>	Zoom, f4.9-49mm / F1.6-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.6-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.6-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.6-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.6-3.0, DC iris, Auto focus	Zoom, f4.7-47mm / F1.6-3.0, DC iris, Auto focus
<b>Zoom Ratio</b>	10x optical	10x optical	10x optical	10x 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>Panning and Tilting Range</b>	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)	Pan: ±175°; Tilt: 0°-180° (with E-flip)
<b>Horizontal Viewing Angle</b>	52.1°-5.9°	57.8°-6.9°	49.7°-5.8°	49.6°-5.6°	54.13°-6.65°	58°-5.8°
<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>	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	30 fps at 2048 x 1536 60 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1400 TVL	1450 TVL	1450 TVL	1500 TVL	1500 TVL	1450 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Triple streams
<b>Wide Dynamic Range</b>	Basic WDR (88 dB)	Basic WDR (75 dB)	Basic WDR (74 dB)	Superior WDR (110 dB)	Basic WDR (70 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
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 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)
<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 (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>Heater</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Fan</b>	Yes	Yes	Yes	Yes	Yes	No
<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	CE, FCC, IP67, NEMA 4X, IK10	CE, FCC, IP67, NEMA 4X, IK10, UL Listed	CE, FCC, IP67, NEMA 4X, IK10	CE, FCC, IP67, NEMA 4X, IK10	CE, FCC, IP67, NEMA 4X, IK10





## Speed Dome



30x



30x



33x



33x



36x



33x



36x

Model	I95	I96	I97	I98	I99	I910	I915
<b>Maximum Resolution</b>	1MP	2MP	2MP	2MP	2MP	4MP	2MP
<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>	Extreme	Extreme	Superior	Superior	Extreme	Superior	Extreme
<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: 0.05 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
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	No	No	No	Adaptive IR LED	No	No	Adaptive IR LED
<b>IR Working Distance</b>	-	-	-	160m	-	-	150m
<b>Lens</b>	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, f4.5-148.5mm / 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
<b>Zoom Ratio</b>	30x optical, 16x digital	30x optical, 16x digital	33x optical, 10 x digital	33x optical, 10x digital	36x optical	33x 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; 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: -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°
<b>Horizontal Viewing Angle</b>	66.4°-2.68°	66.4°-2.61°	69.3°-3°	69.3°-3°	64.3°-2.04°	58.78°-2.35°	62.7°-2.7°
<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	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
<b>Horizontal Resolution</b>	1450 TVL	1800 TVL	1800 TVL	1800 TVL	1800 TVL	1850 TVL	1800 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Triple streams	Triple streams	Triple streams	Dual 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 (75 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	Yes	Yes	Yes	Yes
<b>Defogging</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>S/N Ratio</b>	56 dB	56 dB	56 dB	56 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)
<b>Digital Input / Output</b>	4/2	4/2	4/2	4/2	4/2	4/2	4/2
<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>	AC 24V; High PoE	AC 24V; High PoE	AC 24V; High PoE	AC 24V; High PoE	AC 24V; High PoE	AC 24V; High PoE	AC 24V; High PoE
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof (IK10)	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
<b>Built-in Analytics</b>	No	No	Yes	No	Yes	No	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>	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)	-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 (-11°F ~ 140°F) @ High PoE	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 55°C (-40°F ~ 131°F)
<b>Approvals</b>	CE, FCC, IP67, IK10, NEMA 4X, ETL Listed	CE, FCC, IP67, IK10, NEMA 4X, ETL Listed	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP66, NEMA 4X, IK10 (metal casing), UL Listed	CE, FCC, IP67, NEMA 4X, IK10	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP66, NEMA 4X, IK10 (metal casing)



## Speed Dome



20x



30x



30x



20x



30x

Model	B916	B917	B934	B945	B949
Maximum Resolution	2MP	2MP	2MP	2MP	2MP
Application Environment	Outdoor	Outdoor	Indoor	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	Superior	Superior	Superior	Superior
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 F1.6	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
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes
IR LED	No	No	No	Adaptive IR LED	Adaptive IR LED
IR Working Distance	-	-	-	100m	150m
Lens	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 Ratio	20x optical	30x optical	30x optical	20x optical	30x 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
Panning and Tilting Range	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°
Horizontal Viewing Angle	62°-2.8°	61.4°-3.6°	62.4°-3.5°	62°-2.8°	61.4°-3.6°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	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
Horizontal Resolution	1450 TVL	1450 TVL	1450 TVL	1450 TVL	1450 TVL
Multi-Streaming	Triple streams	Triple streams	Triple streams	Triple streams	Triple streams
Wide Dynamic Range	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)
Digital Noise Reduction	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
Digital Image Stabilizer	Yes	Yes	Yes	Yes	Yes
Defogging	Yes	Yes	Yes	Yes	Yes
S/N Ratio	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 (Mic-in, Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Digital Input / Output	4/2	4/2	2/2	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)
Power Source	AC 24V; High PoE	AC 24V; High PoE	DC 12V, 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	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
Built-in Analytics	Yes	Yes	Yes	Yes	Yes
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	Yes	Yes	No	Yes	Yes
Operating Temperature	-52°C ~ 60°C (-61.6°F ~ 140°F) @ AC 24V -40°C ~ 60°C (-40°F ~ 140°F) @ 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)
Approvals	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)



## Outdoor Mini Dome



Model	E99M	E918	E918M	E920	E920M	E922	E922M	E936	E936M
<b>Maximum Resolution</b>	3MP	3MP	3MP	5MP	5MP	10MP	10MP	2MP	2MP
<b>Application Environment</b>	Outdoor	Outdoor	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	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	No	Electronic Day / Night	Electronic Day / Night	Electronic Day / Night	Electronic Day / Night	Electronic Day / Night	Electronic Day / Night	Electronic Day / Night	Electronic Day / Night
<b>Low Light Sensitivity</b>	Superior	Standard	Standard	Standard	Standard	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 at F2.8	Color: 0.1 lux at F2.8	Color: 0.1 lux at F1.8	Color: 0.1 lux at F1.8	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	No	No	No	No
<b>IR LED</b>	No	No	No	No	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, f1.9mm / F2.8, Fixed iris, Fixed focus	Fixed focal, f1.9mm / F2.8, 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, f2.55mm / 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°; Rotation: 0°-360°	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>	117.5°	126.4° (overview area), 77.1° (high detail area)	126.4° (overview area), 77.1° (high detail area)	126.9° (overview area), 77.4° (high detail area)	126.9° (overview area), 77.4° (high detail area)	101.4°	101.4°	110.3°	110.3°
<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	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	15 fps at 2592 x 1944 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	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>	1300 TVL	1250 TVL	1250 TVL	1350 TVL	1350 TVL	1450 TVL	1450 TVL	1100 TVL	1100 TVL
<b>Multi-Streaming</b>	Triple streams	Dual streams	Dual streams	Dual streams	Dual 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)	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (70 dB)	Basic WDR (70 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	DNR	DNR	DNR	DNR	DNR	DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	No	No	No	No	No	No	No	Yes	Yes
<b>S/N Ratio</b>	56 dB	52 dB	52 dB	52 dB	52 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)	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	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)	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 1	PoE Class 1	PoE Class 1	PoE Class 1	PoE Class 2	PoE Class 2
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof (IK10); Vibration proof (IEC60571); Fire protection (EN45545); 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)	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	No	No	No	No	Yes	Yes
<b>GPS Position</b>	Manual setting	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	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)	-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, EN45545, UL Listed	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, 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



## Outdoor Mini Dome

Model	E924	E924M	E926	E926M
<b>Maximum Resolution</b>	5MP	5MP	10MP	10MP
<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>	Standard	Standard	Standard	Standard
<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 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
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	15m	15m	15m	15m
<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, f3.6mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.8, 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°
<b>Horizontal Viewing Angle</b>	82.3°	82.3°	101.4°	101.4°
<b>Compression</b>	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	15 fps at 2592 x 1944 30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1350 TVL	1350 TVL	1450 TVL	1450 TVL
<b>Multi-Streaming</b>	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 (70 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	No	No	No	No
<b>Defogging</b>	No	No	No	No
<b>S/N Ratio</b>	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)
<b>Network Connector</b>	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)
<b>Power Source</b>	PoE Class 2	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)
<b>Built-in Analytics</b>	No	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	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)
<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



## Outdoor Mini Dome



Model	E928	E928M	E933	E933M
<b>Maximum Resolution</b>	3MP	3MP	2MP	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>	Standard	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 F2.2	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.2
<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>	15m	15m	15m	15m
<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, f2.55mm / F2.2, Fixed iris, Fixed focus	Fixed focal, f2.55mm / F2.2, 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°
<b>Horizontal Viewing Angle</b>	85.7°	85.7°	110.3°	110.3°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
<b>Frame Rate vs. Resolution</b>	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>	1250 TVL	1250 TVL	1100 TVL	1100 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Triple streams	Triple streams
<b>Wide Dynamic Range</b>	Superior WDR (110 dB)	Superior WDR (110 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
<b>Digital Image Stabilizer</b>	No	No	Yes	Yes
<b>Defogging</b>	No	No	Yes	Yes
<b>S/N Ratio</b>	52 dB	52 dB	56 dB	56 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)
<b>Network Connector</b>	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)
<b>Power Source</b>	PoE Class 2	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)
<b>Built-in Analytics</b>	No	No	Yes	Yes
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	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)
<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





## Outdoor Mini Fisheye Dome



Model	E921	E921M	E923	E923M
Maximum Resolution	5MP	5MP	10MP	10MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	No	No	No	No
Low Light Sensitivity	Standard	Standard	Standard	Standard
Minimum Illumination	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 at F2.0
Mechanical IR Cut Filter	No	No	No	No
IR LED	No	No	No	No
Lens	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, f1.37mm / F2.0, Fixed iris, Fixed focus
Viewing Angle Adjustment	Rotate: ±90°	Rotate: ±90°	Rotate: ±90°	Rotate: ±90°
Horizontal Viewing Angle	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)	187.7° (overview area), 114.5° (high detail area)
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	15 fps at 2592 x 1944	15 fps at 2592 x 1944	7 fps at 3648 x 2736	7 fps at 3648 x 2736
Horizontal Resolution	1350 TVL	1350 TVL	1450 TVL	1450 TVL
View Mode	Fisheye View	Fisheye View	Fisheye View	Fisheye View
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (70 dB)	Basic WDR (70 dB)
Digital Noise Reduction	DNR	DNR	DNR	DNR
S/N Ratio	52 dB	52 dB	52 dB	52 dB
Audio	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)
Network Connector	RJ-45	M12	RJ-45	M12
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 1	PoE Class 1	PoE Class 1	PoE Class 1
Environmental Casing	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)
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes
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)	-20°C ~ 50°C (-4°F ~ 122°F)
Approvals	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



## Outdoor Mini Fisheye Dome



Model	E925	E925M	E927	E927M	E929	E929M
<b>Maximum Resolution</b>	5MP	5MP	10MP	10MP	3MP	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	Standard	Standard	Standard	Standard
<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 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>	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>	15m	15m	10m	10m	15m	14m
<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, f1.37mm / 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
<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)	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)
<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	7 fps at 3648 x 2736	20 fps at 2048 x 1536	20 fps at 2048 x 1536
<b>Horizontal Resolution</b>	1350 TVL	1350 TVL	1450 TVL	1450 TVL	1250 TVL	1250 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 (70 dB)	Superior WDR (110 dB)	Superior WDR (110 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>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	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)	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 (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, 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, IP68, IK10, NEMA 4X, EN50155	CE, FCC, IP68, IK10, NEMA 4X, EN50155



## Indoor Mini Dome



Model	E91	E92	E93	E95	E97	E913
<b>Maximum Resolution</b>	1MP	3MP	5MP	2MP	10MP	3MP
<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>	No	No	No	No	No	No
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Superior	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 F2.8	Color: 0.1 lux at F1.85	Color: 0.1 lux at F1.8	Color: 0.1 lux at F2.8
<b>Mechanical IR Cut Filter</b>	No	No	No	No	No	No
<b>IR LED</b>	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
<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°
<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)
<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>	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
<b>Horizontal Resolution</b>	700 TVL	1350 TVL	1350 TVL	1100 TVL	1450 TVL	1250 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 (74 dB)	Basic WDR (75 dB)	Basic WDR (70 dB)	Superior WDR (110 dB)
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR	DNR	2D + 3D DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB
<b>Audio</b>	No	No	No	No	No	No
<b>Digital Input / Output</b>	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)
<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>	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
<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)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 45°C (14°F ~ 113°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

**Indoor Mini Dome****Indoor Mini Fisheye Dome**

Model	D91	D92	E96	E98
<b>Maximum Resolution</b>	1MP	3MP	5MP	10MP
<b>Application Environment</b>	Indoor	Indoor	Indoor	Indoor
<b>Image Sensor</b>	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
<b>Day / Night</b>	No	No	No	No
<b>Low Light Sensitivity</b>	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 at F2.0
<b>Mechanical IR Cut Filter</b>	No	No	No	No
<b>IR LED</b>	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, f1.19mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f1.37mm / F2.0, Fixed iris, Fixed focus
<b>Viewing Angle Adjustment</b>	Pan: ±90°; Tilt: 0°-90°	Pan: ±90°; Tilt: 0°-90°	Rotate: ±90°	Rotate: ±90°
<b>Horizontal Viewing Angle</b>	72.0°	83.3°	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
<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	7 fps at 3648 x 2736
<b>Horizontal Resolution</b>	700 TVL	1350 TVL	1350 TVL	1450 TVL
<b>View Mode</b>	-	-	Fisheye View	Fisheye View
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	No	No	Basic WDR (74 dB)	Basic WDR (70 dB)
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB
<b>Audio</b>	No	No	No	No
<b>Digital Input / Output</b>	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)
<b>Power Source</b>	PoE Class 1	PoE Class 1	PoE Class 1	PoE Class 1
<b>Environmental Casing</b>	Vandal Resistant (IK08)	Vandal Resistant (IK08)	Vandal Resistant (IK08)	Vandal Resistant (IK08)
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting
<b>ONVIF Compliant</b>	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 ~ 45°C (14°F ~ 113°F)
<b>Approvals</b>	CE, FCC, IK08	CE, FCC, IK08	CE, FCC, IK08	CE, FCC, IK08





## Outdoor Zoom Dome



3x



2.4x



3x



3x



3x

Model	B81	B82	B83	B85	B87
<b>Maximum Resolution</b>	5MP	5MP	2MP	2MP	3MP
<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	Superior	Superior	Standard
<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 F1.6	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
<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, 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
<b>Zoom Ratio</b>	3x optical	2.4x optical	3x optical	3x optical	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; Auto zoom by event; Manual operation
<b>Viewing Angle Adjustment</b>	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°
<b>Horizontal Viewing Angle</b>	85.7°-30.5°	29.5°-13°	102.1° - 36°	103.6°-36.2°	84.5°-29.8°
<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	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
<b>Horizontal Resolution</b>	1500 TVL	1500 TVL	1450 TVL	1450 TVL	1450 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Triple streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Basic WDR (74 dB)	Extreme WDR (145 dB)	Basic WDR (75 dB)	Superior WDR (110 dB)
<b>Digital Noise Reduction</b>	DNR	2D + 3D DNR	2D + 3D DNR	DNR	DNR
<b>Digital Image Stabilizer</b>	No	No	Yes	No	No
<b>Defogging</b>	No	No	Yes	No	No
<b>S/N Ratio</b>	52 dB	52 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)
<b>Digital Input / Output</b>	2/2	2/2	2/2	2/2	2/2
<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 (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)
<b>Built-in Analytics</b>	No	No	Yes	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>Heater</b>	Yes	Yes	Yes	Yes	Yes
<b>Fan</b>	No	No	No	No	No
<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, 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, UL Listed





### Outdoor Zoom Dome

### Outdoor Zoom Dome with H.265



4.3x



4.3x



4.3x



3.6x



4.3x



2.8x



4.3x

Model	E815	E816	E817	KCM-7311	A81	A82	A83
Maximum Resolution	5MP	10MP	3MP	4MP	3MP	5MP	2MP
Application Environment	Outdoor	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	Standard	Standard	Standard	Superior	Superior	Superior	Extreme
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	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)
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	30m	30m	30m	-	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, 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 Ratio	4.3x optical	4.3x optical	4.3x optical	3.6x optical	4.3x optical	2.8x optical	4.3x optical
Zoom Application	Camera installation	Camera installation	Camera installation	Camera installation; Auto zoom by event; Manual operation	Camera installation	Camera installation	Camera installation
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°	Pan: ±135°; Tilt: 0°-90°; Rotate: ±90°	Pan: ±135°; Tilt: 0°-90°; Rotate: ±90°	Pan: ±135°; Tilt: 0°-90°; Rotate: ±90°
Horizontal Viewing Angle	64.74°-25.8°	90.6°-34.3°	64.4°-26.4°	77.2°-22.6°	90.6°-32.7°	79.5°-38.1°	88°-25°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MPEG-4 SP, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, 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	30 fps at 2048 x 1536	30 fps at 2592 x 1944	30 fps at 1920 x 1080
Horizontal Resolution	1350 TVL	1450 TVL	1250 TVL	1422 TVL	1300TVL	1650 TVL	1100 TVL
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Triple streams	Dual streams
Wide Dynamic Range	Basic WDR (74 dB)	Basic WDR (70 dB)	Superior WDR (110 dB)	Advanced WDR (80 dB)	Extreme WDR (100 dB)	Extreme WDR (100 dB)	Extreme WDR (100 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
Digital Image Stabilizer	No	No	No	No	Yes	Yes	Yes
Defogging	No	No	No	Yes	Yes	Yes	Yes
S/N Ratio	52 dB	52 dB	52 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 (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)
Digital Input / Output	2/2	2/2	2/2	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 (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	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	Weatherproof (IP66); Vandal proof (IK10)	Weatherproof (IP66); Vandal proof (IK10)	Weatherproof (IP66); Vandal proof (IK10)
Built-in Analytics	No	No	No	No	No	No	No
GPS Position	Manual setting	Manual setting	Manual setting	No	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Heater	Yes	Yes	Yes	No	No	No	No
Fan	No	No	No	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)	-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, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67	CE, FCC, IP66, IK10, NEMA 4X	CE, FCC, IP66, IK10, NEMA 4X	CE, FCC, IP66, IK10, NEMA 4X



## Indoor Zoom Dome



3x



3x



3x



3x



3x

Model	B61	B63	B64	B65	B67
<b>Maximum Resolution</b>	5MP	2MP	1.3MP	2MP	3MP
<b>Application Environment</b>	Indoor	Indoor	Indoor	Indoor	Indoor
<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	Superior	Superior	Superior	Standard
<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: 0.1 lux, B/W: 0.5 lux (IR LED on) at F1.2
<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, 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, f3-9mm / F1.2-2.1, DC iris, Auto focus
<b>Zoom Ratio</b>	3x optical	3x optical	3x optical	3x optical	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; Auto zoom by event; Manual operation
<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: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°
<b>Horizontal Viewing Angle</b>	85.7°-30.5°	102.1°-36°	90.6°-31.8°	103.6°-36.2°	84.5°-29.8°
<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	60 fps at 1920 x 1080	30 fps at 1280 x 960 60 fps at 1280 x 720	30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1500 TVL	1450 TVL	1400 TVL	1450 TVL	1450 TVL
<b>Multi-Streaming</b>	Dual streams	Triple streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Extreme WDR (145 dB)	Basic WDR (88 dB)	Basic WDR (75 dB)	Superior WDR (110 dB)
<b>Digital Noise Reduction</b>	DNR	2D + 3D DNR	DNR	DNR	DNR
<b>Digital Image Stabilizer</b>	No	Yes	No	No	No
<b>Defogging</b>	No	Yes	No	No	No
<b>S/N Ratio</b>	52 dB	56 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)
<b>Digital Input / Output</b>	2/2	2/2	2/2	2/2	2/2
<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	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)	Vandal Resistant (IK09)
<b>Built-in Analytics</b>	No	Yes	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>Heater</b>	No	Yes	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 ~ 50°C (14°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09, UL Listed



## Indoor Zoom Dome



4.3x



4.3x



4.3x



4.3x



3.6x

Model	E616	E617	E618	E621	KCM-3311
<b>Maximum Resolution</b>	5MP	10MP	3MP	1.3MP	4MP
<b>Application Environment</b>	Indoor	Indoor	Indoor	Indoor	Indoor
<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	Standard	Superior
<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: 0.05 lux at F1.4
<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	No
<b>IR Working Distance</b>	30m	30m	30m	30m	-
<b>Lens</b>	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, f3.1-13.3mm / F1.4-4.0, P-Iris, Auto focus	Zoom, f3.3-12mm / F1.4-2.9, P-Iris, Auto focus
<b>Zoom Ratio</b>	4.3x optical	4.3x optical	4.3x optical	4.3x optical	3.6x optical
<b>Zoom Application</b>	Camera installation	Camera installation	Camera installation	Camera installation	Camera installation; Auto zoom by event; Manual operation
<b>Viewing Angle Adjustment</b>	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: 5°-175°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 0°-180°; Rotate: 0°-350°
<b>Horizontal Viewing Angle</b>	64.74°-25.8°	90.6°-34.3°	64.4°-26.4°	64.4°-26.4°	77.2°-22.6°
<b>Compression</b>	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MPEG-4 SP, MJPEG
<b>Frame Rate vs. Resolution</b>	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	30 fps at 1280 x 960	8 fps at 2032 x 1920 30 fps at 1280 x 720
<b>Horizontal Resolution</b>	1350 TVL	1450 TVL	1250 TVL	1000 TVL	1422 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 (70 dB)	Superior WDR (110 dB)	Superior WDR (110 dB)	Advanced WDR (80 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	No	No	No	No	No
<b>Defogging</b>	No	No	No	No	Yes
<b>S/N Ratio</b>	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)	No
<b>Digital Input / Output</b>	2/2	2/2	2/2	2/2	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)	No
<b>Power Source</b>	PoE Class 3	PoE Class 3	PoE Class 3	PoE Class 3	PoE Class 3
<b>Environmental Casing</b>	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	No
<b>Built-in Analytics</b>	No	No	No	No	No
<b>GPS Position</b>	Manual setting	Manual setting	Manual setting	Manual setting	No
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes
<b>Heater</b>	Yes	Yes	Yes	Yes	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)	-10°C ~ 50°C (14°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IK09	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	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)	No
<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, IP66, 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	E610	D62A	D65A
<b>Maximum Resolution</b>	3MP	5MP	3MP	2MP	2MP	10MP	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	Yes	No	Yes	Yes	No	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Superior	Superior	Standard	Superior	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 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
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	No	Yes	Yes	No	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	No	Adaptive IR LED	Adaptive IR LED	No	Adaptive IR LED
<b>IR Working Distance</b>	30m	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, 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	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: 17°-163°; Rotate: 0°-350°	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°
<b>Horizontal Viewing Angle</b>	70.5°-28.2°	66.62°-28.88°	70.5°-28.8°	92.5°-35.9°	92.5°-35.9°	100.5°-25.8°	92.5°-35.9°	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	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	30 fps at 1920 x 1080	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
<b>Horizontal Resolution</b>	1350 TVL	1350 TVL	1250 TVL	1100 TVL	1100 TVL	1450 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)	Basic WDR (74 dB)	Superior WDR (110 dB)	Basic WDR (75 dB)	Basic WDR (75 dB)	Basic WDR (70 dB)	No	No
<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)	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	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)	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	PoE Class 2	PoE Class 2
<b>Environmental Casing</b>	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)	Vandal Resistant (IK09)
<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, IK09	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09	CE, FCC, IK09





## Outdoor Fixed Dome



Model	B71	E72A	E73A	E74A	E76
<b>Maximum Resolution</b>	3MP	3MP	5MP	3MP	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>	Superior	Standard	Standard	Standard	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 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
<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	30m	30m	30m	30m
<b>Lens</b>	Fixed focal, f3.6mm / F1.2, 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, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.85, Fixed iris, Fixed focus
<b>Viewing Angle Adjustment</b>	Pan: ±175°; Tilt: 5°-175°; Rotate: ±175°	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°
<b>Horizontal Viewing Angle</b>	81.7°	83.3°	82.3°	85.7°	87.5°
<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	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
<b>Horizontal Resolution</b>	1300 TVL	1350 TVL	1350 TVL	1250 TVL	1100 TVL
<b>Multi-Streaming</b>	Triple streams	Dual streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Extreme WDR (145 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Superior WDR (110 dB)	Basic WDR (75 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	DNR	DNR	DNR	DNR
<b>S/N Ratio</b>	56 dB	52 dB	52 dB	52 dB	52 dB
<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 (Line-in, Line-out)	2-way (Line-in, Line-out)
<b>Digital Input / Output</b>	2/2	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	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2
<b>Environmental Casing</b>	Weatherproof (IP68); Vandal proof (IK10); Vibration proof (IEC60571); Fire protection (EN45545); Built-in dehumidifier	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)
<b>Built-in Analytics</b>	Yes	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 ~ 55°C (-40°F ~ 131°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, IEC60571, EN45545	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X



## Outdoor Fixed Dome



Model	E77	E78	KCM-7111	D72A
<b>Maximum Resolution</b>	10MP	2MP	4MP	3MP
<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>	Standard	Superior	Standard	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 F1.85	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	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	No	Adaptive IR LED
<b>IR Working Distance</b>	30m	30m	-	30m
<b>Lens</b>	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.85, 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: 17°-163°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 5°-175°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 0°-180°; Rotate: 0°-350°	Pan: 0°-350°; Tilt: 17°-163°; Rotate: 0°-350°
<b>Horizontal Viewing Angle</b>	101.4°	84.5°	82.6°	83.3°
<b>Compression</b>	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	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	1561 TVL	1350 TVL
<b>Multi-Streaming</b>	Dual streams	Triple streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (70 dB)	Extreme WDR (145 dB)	Basic WDR	No
<b>Digital Noise Reduction</b>	DNR	2D + 3D DNR	DNR	DNR
<b>Digital Image Stabilizer</b>	No	Yes	No	No
<b>Defogging</b>	No	Yes	No	No
<b>S/N Ratio</b>	52 dB	56 dB	-	52 dB
<b>Audio</b>	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)
<b>Digital Input / Output</b>	1/1	1/1	2/2	1/1
<b>Local Storage</b>	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	DC 12V; PoE Class 2	DC 12V; PoE Class 3	PoE Class 2
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP68); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof	Weatherproof (IP67); Vandal proof (IK10)
<b>Built-in Analytics</b>	No	Yes	No	No
<b>GPS Position</b>	Manual setting	Manual setting	No	Manual setting
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes
<b>Operating Temperature</b>	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-30°C ~ 50°C (-22°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)
<b>Approvals</b>	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP68, IK10, NEMA 4X	CE, FCC, IP67	CE, FCC, IP67, IK10, NEMA 4X



## Indoor Fixed Dome














Model	B51	B52	B53	E51	E52	E53	E54
<b>Maximum Resolution</b>	5MP	10MP	3MP	1MP	1MP	3MP	5MP
<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>	Yes	Yes	Yes	No	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Standard	Standard	Standard	Standard	Standard	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 F1.8	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 F1.8
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	No	Yes	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	40m	40m	40m	-	30m	30m	30m
<b>Lens</b>	Fixed focal, f1.9mm / F2.8, 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, f2.8mm / 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, f3.6mm / 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°-330°; Tilt: 0°-180°	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)	102°	129.56° (overview area), 79.0° (high detail area)	77.5°	60.6°	72.0°	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
<b>Frame Rate vs. Resolution</b>	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	30 fps at 1280 x 720	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
<b>Horizontal Resolution</b>	1500 TVL	1550 TVL	1450 TVL	700 TVL	700 TVL	1350 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 (70 dB)	Superior WDR (110 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (74 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>	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	No	No	No	No
<b>Digital Input / Output</b>	1/1	1/1	1/1	No	No	No	No
<b>Local Storage</b>	MicroSDHC / MicroSDXC (card not included)	MicroSDHC / MicroSDXC (card not included)	MicroSDHC / MicroSDXC (card not included)	No	No	No	No
<b>Power Source</b>	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; 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)	Vandal Resistant (IK09)	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 ~ 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, IK09	CE, FCC, UL Listed	CE, FCC, UL Listed	CE, FCC, UL Listed	CE, FCC, UL Listed



## Indoor Fixed Dome



Model	E56	E58	E59	D51	D52	D54	D55
<b>Maximum Resolution</b>	3MP	2MP	10MP	1MP	3MP	1MP	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>	Yes	Yes	Yes	No	No	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	Superior	Standard	Standard	Standard	Standard	Standard
<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 at F2.0	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
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	No	No	Yes	Yes
<b>IR LED</b>	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	No	No	Adaptive IR LED	Adaptive IR LED
<b>IR Working Distance</b>	30m	30m	30m	-	-	20m	20m
<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, f3.6mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f3.6mm / 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
<b>Viewing Angle Adjustment</b>	Pan: 0°-330°; Tilt: 20°-90°	Pan: 0°-330°; Tilt: 20°-90°	Pan: 0°-330°; Tilt: 20°-90°	Pan: 0°-330°; Tilt: 0°-180°	Pan: 0°-330°; Tilt: 0°-180°	Pan: 0°-330°; Tilt: 20°-90°	Pan: 0°-330°; Tilt: 20°-90°
<b>Horizontal Viewing Angle</b>	85.7°	87.5°	101.4°	60.2°	70.8°	60.6°	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
<b>Frame Rate vs. Resolution</b>	15 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	30 fps at 1280 x 720	15 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
<b>Horizontal Resolution</b>	1250 TVL	1100 TVL	1450 TVL	700 TVL	1350 TVL	700 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>	Superior WDR (110 dB)	Basic WDR (75 dB)	Basic WDR (70 dB)	No	No	No	No
<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	No	No	No	No	No	No
<b>Digital Input / Output</b>	No	No	No	No	No	No	No
<b>Local Storage</b>	No	No	No	No	No	No	No
<b>Power Source</b>	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>	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 ~ 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, UL Listed	CE, FCC, UL Listed	CE, FCC, UL Listed	CE, FCC, UL Listed

 	Outdoor Hemispheric Dome					Indoor Hemispheric Dome			
									
Model	I71	I73	B74A	B76A	B77A	I51	B57A	B59A	B511
Maximum Resolution	5MP	6MP	8MP	12MP	6MP	5MP	6MP	8MP	12MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Indoor	Indoor	Indoor	Indoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	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	Yes	Yes
Low Light Sensitivity	Superior	Extreme	Superior	Superior	Superior	Superior	Superior	Superior	Superior
Minimum Illumination	Color: 0.1 lux, B/W: 0.05 lux at F2.8	Color: 0.1 lux, B/W: 0.05 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	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 F2.6
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IR LED	No	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	-	-	20m	20m	20m	-	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	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, f1.3mm / F2.6, Fixed iris, Fixed focus
OZT Technology	No	No	Yes	Yes	No	No	No	Yes	Yes
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)	180° (overview area), 109.8° (high detail area)	198.5° (overview area), 121.5° (high detail area)	198.5° (overview area), 121.1° (high detail area)	194.2° (overview area), 118.5° (high detail area)
Compression	H.264, MJPEG	H.264, MJPEG	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	<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	<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 Mode:</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 Mode:</b> 30 fps at 1920 x 1080
Multi-Streaming	Dual streams	Dual streams	Triple streams	Triple streams	Triple 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)	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	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
Defogging	Yes	Yes	Yes	Yes	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 )	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 (Mic-in, Line-in, Line-out)
Digital Input / Output	2/2	2/2	2/2	2/2	2/2	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)	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	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)	No	No	No	No
Built-in Analytics	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes
ONVIF Compliant	Yes	Yes	Yes	Yes	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)	-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, IP68, IK10, NEMA 4X, ETL Listed	CE, FCC, IP68, IK10, NEMA 4X	CE, FCC, IP68, IK10, NEMA 4X	CE, FCC, IP68, IK10, NEMA 4X	CE, FCC, IP68, IK10, NEMA 4X	CE, FCC, ETL Listed	CE, FCC	CE, FCC	CE, FCC



## Indoor Fisheye Dome



Model	B54	B55	B56
Maximum Resolution	5MP	10MP	3MP
Application Environment	Indoor	Indoor	Indoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes
Low Light Sensitivity	Standard	Standard	Standard
Minimum Illumination	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
Mechanical IR Cut Filter	Yes	Yes	Yes
IR LED	No	No	No
Lens	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
Horizontal Viewing Angle	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)
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	15 fps at 2592 x 1944	7 fps at 3648 x 2736	20 fps at 2048 x 1536
Horizontal Resolution	1500 TVL	1550 TVL	1450 TVL
View Mode	Fisheye View	Fisheye View	Fisheye View
Multi-Streaming	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	Basic WDR (74 dB)	Basic WDR (70 dB)	Superior WDR (110 dB)
Digital Noise Reduction	DNR	DNR	DNR
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)
Digital Input / Output	1/1	1/1	1/1
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2
Environmental Casing	No	No	No
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	CE, FCC	CE, FCC





## Zoom Bullet



36x



30x



30x



33x



12x



10x



10x

Model	I42	I45	I47	I48	B41	B44	B45
<b>Maximum Resolution</b>	2MP	2MP	4MP	2MP	5MP	1.3MP	2MP
<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>	Extreme	Extreme	Superior	Superior	Standard	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 F1.6	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	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>	40m	40m	40m	40m	40m	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, f5.2-62.4mm / F1.8-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.6-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.6-3.0, DC iris, Auto focus
<b>Zoom Ratio</b>	36x optical	30x optical	30x optical	33x optical	12x 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	Camera installation; Auto zoom by event; Manual operation
<b>Horizontal Viewing Angle</b>	64.3°-2.04°	65.6°-2.07°	66.4°-2.14°	69.3°-3°	48.4°-4.8°	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	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	15 fps at 2592 x 1944 30 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	1500 TVL	1400 TVL	1450 TVL
<b>Multi-Streaming</b>	Triple streams	Dual streams	Dual streams	Triple streams	Dual 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 (74 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	DNR
<b>Digital Image Stabilizer</b>	Yes	Yes	Yes	Yes	No	No	No
<b>Defogging</b>	Yes	Yes	Yes	Yes	No	No	No
<b>S/N Ratio</b>	56 dB	56 dB	56 dB	56 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)	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>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>	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)	Weatherproof (IP67); Vandal proof metal casing (IK10)
<b>Built-in Analytic</b>	Yes	No	No	Yes	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>Heater</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, 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)	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 F1.6	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 F2.2	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 F1.6
<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 / F1.6-3.0, 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

### Zoom Bullet with H.265



10x



10x



4.3x



10x



4.3x



2.8x



4.3x

Model	E413	E415	E416	E417	A41	A42	A43
<b>Maximum Resolution</b>	5MP	3MP	10MP	2MP	3MP	5MP	2MP
<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	Superior	Superior	Extreme
<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, B/W: 0 lux (IR LED on) at F1.4	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.8	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	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>	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, 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	10x optical	4.3x optical	10x optical	4.3x optical	2.8x optical	4.3x optical
<b>Zoom Application</b>	Camera installation	Camera installation	Camera installation	Camera installation	Camera installation	Camera installation	Camera installation
<b>Horizontal Viewing Angle</b>	51.6°-6°	51.6°-6.2°	90.6°-34.4°	60°-7.3°	90.6°-32.7°	79.5°-38.1°	88°-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	H.265, 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	30 fps at 2048 x 1536	30 fps at 2592 x 1944	30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1350 TVL	1250 TVL	1450 TVL	1100 TVL	1300 TVL	1650 TVL	1100 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Triple streams	Dual streams	Triple streams	Dual streams
<b>Wide Dynamic Range</b>	Basic WDR (74 dB)	Superior WDR (110 dB)	Basic WDR (70 dB)	Extreme WDR (145 dB)	Extreme WDR (100 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	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	No	No	No	Yes	Yes	Yes	Yes
<b>Defogging</b>	No	No	No	Yes	Yes	Yes	Yes
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	56 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 (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	No	No	No	1, BNC	1, BNC	No
<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)	No	No	No
<b>Power Source</b>	PoE Class 3	PoE Class 3	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 metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	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>	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
<b>ONVIF Compliant</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Heater</b>	Yes	Yes	Yes	Yes	No	No	No
<b>Fan</b>	No	No	No	No	No	No	No
<b>Operating Temperature</b>	-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)	-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, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, 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	E41B	E42B	E43B
Maximum Resolution	1MP	1MP	3MP	5MP
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	Standard
Minimum Illumination	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
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	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
Horizontal Viewing Angle	69.8°-19.1°	59.8°-24.7°	70.5°-28.2°	69.2°-28.2°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	30 fps at 1280 x 720	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
Horizontal Resolution	700 TVL	700 TVL	1350 TVL	1350 TVL
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (74 dB)
Digital Noise Reduction	DNR	DNR	DNR	DNR
S/N Ratio	52 dB	52 dB	52 dB	52 dB
Audio	No	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Digital Input / Output	No	1/1	1/1	1/1
Local Storage	No	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
Environmental Casing	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)
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	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)
Approvals	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)



## Vari-Focal Bullet



Model	E44A	E46A	E48	D42A
Maximum Resolution	2MP	3MP	10MP	3MP
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	Superior	Standard	Standard	Standard
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 lux (IR LED on) at F1.4
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	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
Horizontal Viewing Angle	92.5°-35.9°	70.5°-28.8°	100.5°-25.8°	70.5°-28.2°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	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
Horizontal Resolution	1100 TVL	1250 TVL	1450 TVL	1350 TVL
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	Basic WDR (75 dB)	Superior WDR (110 dB)	Basic WDR (70 dB)	No
Digital Noise Reduction	DNR	DNR	DNR	DNR
S/N Ratio	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)
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 2	PoE Class 2	PoE Class 3	PoE Class 2
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
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)
Approvals	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	E34A	E36	E37
<b>Maximum Resolution</b>	1MP	3MP	5MP	3MP	2MP	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>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Standard	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 F1.8	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	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	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 / F1.8, 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°	68.0°	88.1°	101.4°
<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>	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	7 fps at 3648 x 2736 30 fps at 1920 x 1080
<b>Horizontal Resolution</b>	700 TVL	1350 TVL	1350 TVL	1250 TVL	1100 TVL	1450 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 (74 dB)	Superior WDR (110 dB)	Basic WDR (75 dB)	Basic WDR (70 dB)
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR	DNR	DNR
<b>Digital Image Stabilizer</b>	No	No	No	No	No	No
<b>Defogging</b>	No	No	No	No	No	No
<b>S/N Ratio</b>	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB
<b>Audio</b>	No	No	No	No	No	No
<b>Digital Input / Output</b>	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)
<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 (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 (IP68); Vandal proof metal casing (IK10)
<b>Built-in Analytics</b>	No	No	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>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, 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)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)





## Fixed Bullet



Model	E38	E39	D31	D32	A31
<b>Maximum Resolution</b>	2MP	2MP	1MP	3MP	3MP
<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>	Superior	Extreme	Standard	Standard	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 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0.01 lux at F1.85 (AGC on)
<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	20m	20m	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, f4.2mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F1.85, Fixed iris, Fixed focus
<b>Horizontal Viewing Angle</b>	99°	90.6°	55.9°	62.7°	106.9°
<b>Compression</b>	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	30 fps at 1280 x 720	15 fps at 2048 x 1536 30 fps at 1920 x 1080	30 fps at 2048 x 1536
<b>Horizontal Resolution</b>	1100 TVL	1100 TVL	700 TVL	1350 TVL	1300 TVL
<b>Multi-Streaming</b>	Triple streams	Triple streams	Dual streams	Dual streams	Dual streams
<b>Wide Dynamic Range</b>	Extreme WDR (145 dB)	Extreme WDR (145 dB)	No	No	Extreme WDR (100 dB)
<b>Digital Noise Reduction</b>	2D + 3D DNR	2D + 3D DNR	DNR	DNR	2D + 3D DNR
<b>Digital Image Stabilizer</b>	Yes	Yes	No	No	Yes
<b>Defogging</b>	Yes	Yes	No	No	Yes
<b>S/N Ratio</b>	56 dB	56 dB	52 dB	52 dB	56 dB
<b>Audio</b>	No	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)	No	No	No
<b>Digital Input / Output</b>	No	1/1	No	No	No
<b>Local Storage</b>	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	No	No	No
<b>Power Source</b>	PoE Class 2	DC 12V; PoE Class 3	PoE Class 2	PoE Class 2	DC 12V; PoE Class 3
<b>Environmental Casing</b>	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10); Built-in dehumidifier	Weatherproof (IP66)	Weatherproof (IP66)	Weatherproof (IP66); Vandal proof metal casing (IK10)
<b>Built-in Analytics</b>	Yes	Yes	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)	-30°C ~ 50°C (-22°F ~ 122°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	CE, FCC, IP66, NEMA 4X, IK10 (metal casing)



## Zoom Box



30x



30x



30x



33x



36x

Model	I24	I25	I27	I28	I29
<b>Maximum Resolution</b>	1MP	2MP	4MP	2MP	2MP
<b>Application Environment</b>	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
<b>Day / Night</b>	Yes	Yes	Yes	Yes	Yes
<b>Low Light Sensitivity</b>	Extreme	Extreme	Superior	Superior	Extreme
<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: 0.05 lux at F1.6	Color: 0.1 lux, B/W: 0.05 lux at F1.55
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	No	No	No	No	No
<b>Lens</b>	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, f4.3-129mm / 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
<b>Zoom Ratio</b>	30x optical, 16x digital	30x optical, 16x digital	30x optical	33x 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; Auto zoom by event; Manual operation
<b>Horizontal Viewing Angle</b>	65.6°-2.07°	65.6°-2.07°	58.9°-2.11°	61.7°-2.07°	64.3°-2.04°
<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	30 fps at 1920 x 1080	15 fps at 2688 x 1520 30 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080
<b>Horizontal Resolution</b>	1450 TVL	1800 TVL	1850 TVL	1800 TVL	1800 TVL
<b>Multi-Streaming</b>	Dual streams	Dual streams	Dual streams	Triple streams	Triple streams
<b>Wide Dynamic Range</b>	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Advanced WDR (75 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
<b>Digital Image Stabilizer</b>	Yes	Yes	Yes	Yes	Yes
<b>Defogging</b>	Yes	Yes	Yes	Yes	Yes
<b>S/N Ratio</b>	56 dB	56 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)
<b>Digital Input / Output</b>	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
<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>	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)
<b>Built-in Analytics</b>	No	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>Heater</b>	No	No	Yes	Yes	Yes
<b>Fan</b>	No	No	No	No	No
<b>Operating Temperature</b>	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°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





## Zoom Box



12x



10x



20x



30x

Model	B27	B210	B214	B215
Maximum Resolution	3MP	10MP	2MP	2MP
Application Environment	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/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	Superior	Superior
Minimum Illumination	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: 0.05 lux at F1.6
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes
IR LED	No	No	No	No
Lens	Zoom, f5.2-62.4mm / 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, f4.5-135mm / F1.6-4.4, DC iris, Auto focus
Zoom Ratio	12x optical	10x optical	20x optical	30x optical
Zoom Application	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
Horizontal Viewing Angle	50.2°-4.69°	50.6°-4.59°	62°-2.8°	61.4°-3.6°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	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
Horizontal Resolution	1450 TVL	1550 TVL	1450 TVL	1450 TVL
Multi-Streaming	Dual streams	Dual streams	Triple streams	Triple streams
Wide Dynamic Range	Superior WDR (110 dB)	Basic WDR (70 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)
Digital Noise Reduction	DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
Digital Image Stabilizer	No	No	Yes	Yes
Defogging	No	No	Yes	Yes
S/N Ratio	52 dB	52 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)
Digital Input / Output	1/1	1/1	1/1	1/1
Serial Port	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422	RS-485, RS-422
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	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)
Built-in Analytics	No	No	Yes	Yes
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes
Heater	No	Yes	Yes	Yes
Fan	No	No	No	No
Operating Temperature	-10°C ~ 50°C (14°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)
Approvals	CE, FCC	CE, FCC	CE, FCC	CE, FCC



## Zoom Box



4.3x



10x



10x



10x



18x



18x

Model	E210	E213	E215	E219	KCM-5211E	KCM-5611
<b>Maximum Resolution</b>	10MP	5MP	3MP	2MP	4MP	2MP
<b>Application Environment</b>	Indoor/Outdoor	Indoor/Outdoor	Indoor/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>	Standard	Standard	Standard	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
<b>Mechanical IR Cut Filter</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>IR LED</b>	No	No	No	No	IR LED	IR LED
<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
<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
<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°
<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
<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
<b>Horizontal Resolution</b>	1450 TVL	1350 TVL	1250 TVL	1100 TVL	1650 TVL	974 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)	Basic WDR (74 dB)	Superior WDR (110 dB)	Extreme WDR (145 dB)	Advanced WDR (80 dB)	Advanced WDR
<b>Digital Noise Reduction</b>	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
<b>Defogging</b>	No	No	No	Yes	Yes	Yes
<b>S/N Ratio</b>	52 dB	52 dB	52 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)
<b>Digital Input / Output</b>	1/1	1/1	1/1	1/1	2/2	2/2
<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
<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	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>	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Weatherproof (IP66)	Weatherproof (IP66)
<b>Built-in Analytics</b>	No	No	No	Yes	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	Yes	No	No
<b>Fan</b>	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)
<b>Approvals</b>	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC, IP66	CE, FCC, IP66



## Vari-Focal Box



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, 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 (100 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)	Optional housing (IP66)
<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, RoHS	CE, FCC, RoHS



## Fixed Box



Model	E21FA	E217	A21	A22
Maximum Resolution	1MP	2MP	3MP	5MP
Application Environment	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/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	Superior	Superior	Superior
Minimum Illumination	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: 0.05 lux, B/W: 0.005 lux at F1.8 (AGC on)	Color: 0.1 lux, B/W: 0.05 lux at F2.0 (AGC on)
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes
IR LED	No	No	No	No
Lens	Fixed focal, f4.2mm / F1.8, Fixed iris, Manual focus	Fixed focal, f2.8mm / F1.8, Fixed iris, Manual focus	Fixed focal, f2.8mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f4.0mm / F2.0, Fixed iris, Fixed focus
Horizontal Viewing Angle	53.8°	107.7°	102.2°	85.3°
Compression	H.264, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
Frame Rate vs. Resolution	30 fps at 1280 x 720	60 fps at 1920 x 1080	30 fps at 2048 x 1536	30 fps at 2592 x 1944
Horizontal Resolution	700 TVL	1100 TVL	1300 TVL	1650 TVL
Multi-Streaming	Dual streams	Triple streams	Dual streams	Triple streams
Wide Dynamic Range	Basic WDR (74 dB)	Extreme WDR (145 dB)	Extreme WDR (100 dB)	Extreme WDR (100 dB)
Digital Noise Reduction	DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
Digital Image Stabilizer	No	Yes	Yes	Yes
Defogging	No	Yes	Yes	Yes
S/N Ratio	52 dB	56 dB	56 dB	56 dB
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)
Digital Input / Output	1/1	1/1	1/1	1/1
Serial Port	No	RS-485, RS-422	RS-485	RS-485
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 2	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
Environmental Casing	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)
Built-in Analytics	No	Yes	No	No
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting
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	CE, FCC	CE, FCC, RoHS	CE, FCC, RoHS

**Fixed Cube****Wireless Cube**

Model	E11A	E12A	E13A	E14	C11W
<b>Maximum Resolution</b>	1MP	3MP	5MP	10MP	1.3MP
<b>Application Environment</b>	Indoor	Indoor	Indoor	Indoor	Indoor
<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>	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: 0.5 lux at F1.8
<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, 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, 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
<b>Horizontal Viewing Angle</b>	53.8°	92.6°	92.6°	99°	55°
<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	7 fps at 3648 x 2736 30 fps at 1920 x 1080	30 fps at 1280 x 1024
<b>Horizontal Resolution</b>	700 TVL	1350 TVL	1350 TVL	1450 TVL	800 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 (70 dB)	Basic WDR (75 dB)
<b>Digital Noise Reduction</b>	DNR	DNR	DNR	DNR	2D + 3D DNR
<b>Defogging</b>	No	No	No	No	Yes
<b>S/N Ratio</b>	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)
<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 (card not included)
<b>Power Source</b>	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	DC 12V
<b>Environmental Casing</b>	No	No	No	No	No
<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>	-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)	0°C ~ 40°C (32°F ~ 104°F)
<b>Approvals</b>	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC

**Fixed Cube****Fisheye Cube**

Model	D11	D12	E15	E16
Maximum Resolution	1MP	3MP	5MP	10MP
Application Environment	Indoor	Indoor	Indoor	Indoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	No	No	No	No
Low Light Sensitivity	Standard	Standard	Standard	Standard
Minimum Illumination	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 at F2.0
Mechanical IR Cut Filter	No	No	No	No
IR LED	No	No	No	No
Lens	Fixed focal, f3.6mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f3.6mm / 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
Lens Mount	Board mount	Board mount	Board mount	Board mount
Horizontal Viewing Angle	60.2°	70.8°	189.7° (overview area), 115.7° (high detail area)	187.7° (overview area), 114.5° (high detail area)
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	30 fps at 1280 x 720	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944	7 fps at 3648 x 2736
Horizontal Resolution	700 TVL	1350 TVL	1350 TVL	1450 TVL
View Mode	-	-	Fisheye View	Fisheye View
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	No	No	Basic WDR (74 dB)	Basic WDR (70 dB)
Digital Noise Reduction	DNR	DNR	2D + 3D DNR	2D + 3D DNR
Defogging	No	No	No	No
S/N Ratio	52 dB	52 dB	52 dB	52 dB
Audio	No	No	2-way (Built-in Microphone, Line-out)	2-way (Built-in Microphone, Line-out)
Digital Input / Output	No	No	No	No
Local Storage	No	No	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	PoE Class 1	PoE Class 2	PoE Class 2	PoE Class 2
Environmental Casing	No	No	No	No
Built-in Analytics	No	No	No	No
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes
Operating Temperature	-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)
Approvals	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>Video Motion Detection</b>	3 regions	3 regions	3 regions	3 regions	3 regions	3 regions	3 regions
<b>Wide Dynamic Range</b>	No	No	No	No	No	No	No
<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 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 12V (DC 7V-20V); PoE Class 3	DC 12V (DC 7V-20V); PoE Class 3	DC 12V (DC 7V-20V); PoE Class 3	DC 12V (DC 7V-20V); PoE Class 3	DC 12V (DC 7V-20V); PoE Class 3	AC 100-240V	AC 100-240V
<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 (IE), Mobile Client (iOS & Android)	Web Client (IE), Mobile Client (iOS & Android)	Web Client (IE), Mobile Client (iOS & Android)	Web Client (IE), Mobile Client (iOS & Android)	Web Client (IE), Mobile Client (iOS & Android)	Web Client (IE), Mobile Client (iOS & Android)	Web Client (IE), Mobile Client (iOS & Android)
<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, Scheduler in minutes, System booted successfully, Video loss, Video Recovery, Storage removed, Failed to write storage	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 8, IE 9, IE 10, IE 11, Firefox with VLC, Chrome with VLC, Safari with Quicktime	IE 8, IE 9, IE 10, IE 11, Firefox with VLC, Chrome with VLC, Safari with Quicktime	IE 8, IE 9, IE 10, IE 11, Firefox with VLC, Chrome with VLC, Safari with Quicktime	IE 8, IE 9, IE 10, IE 11, Firefox with VLC, Chrome with VLC, Safari with Quicktime	IE 8, IE 9, IE 10, IE 11, Firefox with VLC, Chrome with VLC, Safari with Quicktime	IE 8, IE 9, IE 10, IE 11, Firefox with VLC, Chrome with VLC, Safari with Quicktime	IE 8, IE 9, IE 10, IE 11, Firefox with VLC, Chrome with VLC, Safari with Quicktime
<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



## Client Application

### Media Display Station



### Media Display Dongle



Model	ECD-1000	MDD-100	MDD-200
Maximum Number of Video Devices	16	1	1
Maximum Number of Clients	1 local, 2 remote	-	-
Product Application	Digital Signage, Video Decoding, Public Viewer	Digital Signage	Digital Signage
Free License	16	-	-
Video Resolution	Up to 2-Megapixel (Local display); Up to 10-Megapixel (Remote display)	-	-
Compression	H.264	-	-
Frame Rate vs. Resolution	30 fps at 1920 x 1080	-	-
Media Source	-	Camera Live Video, Pre-recorded video (.AVI), Image (.JPG), Text, Web page	Camera Live Video, Pre-recorded video (.AVI), Image (.JPG), Text, Web page
Built-in Analytics	-	-	Age detection, Gender detection, Face Recognition
Audio	1-way	-	-
Network Connector	RJ-45	-	-
Analog Video Output	1, BNC	-	-
HDMI Output	1, HDMI Type A	-	-
Power Source	DC 12V; PoE Class 3	DC 5V	DC 5V
Mount Type	Surface, Pole, VESA 10 x 10	-	-
Bundled Accessories	Pole Mount; Power Adapter	Power Adapter	Power Adapter
Wireless	-	Wi-Fi (IEEE 802.11b/g/n), Bluetooth	Wi-Fi (IEEE 802.11b/g/n), Bluetooth
Local Storage	No	MicroSDHC/MicroSDXC memory card slot (32GB included)	MicroSDHC/MicroSDXC memory card slot (32GB included)
External Storage Interface	USB (Support Digital Signage function from external USB drive)	No	No
Display Layout Mode	1, 2, 4, 9, 12, 16, 1+5, 1+7, 1+12, 2+4, 2+8	-	-
Digital Zoom	Yes	-	-
Event Status	Display status upon network loss, Motion and DI	-	-
PTZ Control	Yes	-	-
Local Access	HDMI monitor; USB keyboard or mouse	HDMI monitor	HDMI monitor
Remote Access	Web Client (IE)	-	-
Event Trigger	Video Loss, Network Loss	-	-
Event Response	Play alert sound	-	-
Server Operating System	Embedded Linux	Windows 7	Windows 7
Client PC Operating System	Windows 8, Windows 7, Windows Vista, Windows Server 2003, Windows XP	-	-
PC Web Browser	IE 9, IE 10, IE 11	-	-
ONVIF Compliant	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, UL	CE, FCC, UL





## Video Management System

### Mini Standalone NVR

### Tower Standalone NVR



Model	ENR-010P	ENR-020P	INR-100	GNR-3000	GNR-330	INR-340
Maximum Number of Video Devices	4	9	16	64	64	64
Additional Computing Power	No	No	Yes	No	No	Yes
Maximum Number of Clients	1 local, 2 remote	1 local, 2 remote	1 local, 5 remote	1 local, 4 remote	1 local, 4 remote	1 local, 5 remote
Free License	4	9	16	32(32 for ACTi and 1 for third-party video device)	32(32 for ACTi and 1 for third-party video device)	32(32 for ACTi and 1 for third-party video device)
Video Resolution	Up to 4-Megapixel (Local display), Up to 12-Megapixel (Remote display)	Up to 4-Megapixel (Local display), Up to 10-Megapixel (Remote display)	Support all ACTi cameras in all resolution	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions
Compression	H.264	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
Audio	No	No	2-way	2-way	2-way	2-way
Built-in PoE Connectors	4 Ports	8 Ports	No	No	No	No
Power Source	DC 48V	DC 48V	AC 100-240V	AC 110-220V	AC 100-240V	AC 100-240V
Scheduled Recording	Yes	Yes	Yes	Yes	Yes	Yes
Event Recording	Yes	Yes	Yes	Yes	Yes	Yes
Manual Recording	Yes	Yes	Yes	Yes	Yes	Yes
Speed Up	Yes	Yes	Yes	Yes	Yes	Yes
Dual Stream Management	Yes	Yes	Yes	Yes	Yes	Yes
Recording Throughput	16 Mbps	36 Mbps	300 Mbps	300 Mbps	300 Mbps	300 Mbps
HDD Interface	Maximum 1 SATA disk	Maximum 1 SATA disk	Maximum 1 SATA disk	Maximum 5 SATA disks (1 system disk included)	Maximum 6 SATA disks (1 system disk included)	Maximum 6 SATA disks (1 system disk included)
External Storage Interface	No	No	eSATA, iSCSI	eSATA, iSCSI, USB	eSATA, iSCSI, USB	eSATA, iSCSI, USB
RAID Level	No	No	Software RAID 0, 1	Software RAID 0, 1	Hardware RAID 0, 1, 5, 10	Hardware RAID 0, 1, 5, 10
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	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
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	Instant Playback in live view window
e-Map	No	No	Yes	Yes	Yes	Yes
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 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
Synchronized Playback	4 channels	9 channels	9 channels (Local),16 channels (Remote)	9 channels (local), 64 channels (remote)	9 channels (local), 64 channels (remote)	9 channels (local), 64 channels (remote)
Local Access	HDMI monitor; USB keyboard & mouse	HDMI monitor; USB keyboard & mouse	HDMI/DVI/Display port for monitor; Joystick; Keyboard & mouse	VGA port for monitor; USB joystick; keyboard & mouse	HDMI & VGA & Display port for monitor; USB joystick, keyboard & mouse	HDMI & VGA & Display port for monitor; USB joystick, keyboard & mouse
Remote Access	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)
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	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	No	No	Manual setting	Manual setting	Manual setting	Manual setting
Video Export	AVI, RAW	AVI, RAW	AVI, RAW, EXE	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE
Server Operating System	Embedded Linux	Embedded Linux	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7
Client PC Operating System	Windows 8, Windows 7	Windows 8, Windows 7	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	Windows 10, Windows 8, Windows 7, Windows Server 2012, Windows Server 2008
PC Web Browser	IE 9, IE 10, IE 11	IE 9, IE 10, IE 11	IE 10, IE 11	IE 10, IE 11	IE 10, IE 11	IE 10, 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)	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	CE, FCC

# Video Management System

## Desktop Standalone NVR



Model	ENR-1000	ENR-110	ENR-120	ENR-130	ENR-140	ENR-221P
Maximum Number of Video Devices	4	4	9	16	16	9
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	4	9	16	16	9
Video Resolution	Up to 2-Megapixel (Local display), Up to 10-Megapixel (Remote display)	Up to 4-Megapixel (Local display), Up to 10-Megapixel (Remote display)	Up to 4-Megapixel (Local display), Up to 10-Megapixel (Remote display)	Up to 4-Megapixel (Local display), Up to 10-Megapixel (Remote display)	Up to 4-Megapixel (Local display), Up to 10-Megapixel (Remote display)	Up to 8-Megapixel (Local display), Up to 12-Megapixel (Remote display)
Compression	H.264	H.264	H.264	H.264	H.264	H.265, H.264, MPEG-4, MJPEG
Built-in PoE Connectors	No	No	No	No	No	Yes
Power Source	DC 12V	DC 12V	DC 12V	DC 12V	AC 100-240V	DC 48V
Scheduled Recording	Yes	Yes	Yes	Yes	Yes	Yes
Event Recording	Yes	Yes	Yes	Yes	Yes	Yes
Manual Recording	Yes	Yes	Yes	Yes	Yes	Yes
Speed Up	Yes	Yes	Yes	Yes	Yes	Yes
Dual Stream Management	No	Yes	Yes	Yes	Yes	Yes
Recording Throughput	16 Mbps	16 Mbps	36 Mbps	48 Mbps	48 Mbps	27 Mbps
HDD Interface	Maximum 2 SATA disks	Maximum 2 SATA disks	Maximum 2 SATA disks	Maximum 2 SATA disks	Maximum 4 SATA disks	Maximum 2 SATA disks
External Storage Interface	No	No	No	No	No	eSATA, iSCSI
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	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)	Instant Playback in live view window (Remote client)
e-Map	No	No	No	No	No	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 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	9 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	HDMI monitor; USB keyboard & mouse
Remote Access	Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Web Client (IE), Mobile Client (iOS & Android)
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	Unlimited number of users, Customizable permissions for user groups
Video Export	AVI, RAW	AVI, RAW	AVI, RAW	AVI, RAW	AVI, RAW	AVI, RAW
Server Operating System	Embedded Linux	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	Windows 8, Windows 7
PC Web Browser	IE 9, IE 10, IE 11	IE 9, IE 10, IE 11	IE 9, IE 10, IE 11	IE 9, IE 10, IE 11	IE 9, IE 10, IE 11	IE 9, IE 10, 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)	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	CE, FCC



# Video Management System

## Rackmount Standalone NVR



Model	ENR-190	INR-410	INR-430	INR-440	INR-450	INR-460	GNR-410
Maximum Number of Video Devices	16	200	200	200	200	200	64
Additional Computing Power	No	No	No	No	Yes	No	No
Maximum Number of Clients	1 local, 2 remote	1 local, 5 remote	1 local, 5 remote	1 local, 5 remote	1 local, 5 remote	1 local, 5 remote	1 local, 4 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)	64 (64 for ACTi and 1 for third-party video device)	32 (32 for ACTi and 1 for third-party video device)
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	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions
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, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG
Audio	No	No	No	No	No	2-way	2-way
Power Source	AC 100-240V	AC 110-220V	AC 100-240V	AC 100-240V	AC 100-240V	AC 100-240V	AC 100-240V
Redundant Power Supply	No	No	No	Yes	Yes	No	No
Rack Mount	Rack Mount (1U)	Rack Mount (2U)	Rack Mount (2U)	Rack Mount (2U)	Rack Mount (2U)	Rack Mount (2U)	Rack Mount (2U)
Scheduled / Event / Manual Recording	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dual Stream Management	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recording Throughput	48 Mbps	300 Mbps	300 Mbps	300 Mbps	300 Mbps	300 Mbps	300 Mbps
HDD Interface	Maximum 4 SATA disks	Maximum 8 SATA disks (1 system disk included)	Maximum 8 SATA disks (without storage 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)
External Storage Interface	No	eSATA, iSCSI, USB	eSATA, iSCSI, USB	SAS, iSCSI, USB	iSCSI, USB	eSATA, iSCSI, USB	eSATA, iSCSI, USB
RAID Level	No	Software RAID 0, 1	Hardware RAID 0, 1, 5, 10	Hardware RAID 0, 1, 5, 6, 10, 50, 60	Hardware RAID 0, 1, 5, 10	Hardware RAID 0, 1, 5, 10	Software RAID 0, 1
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 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 (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	Instant Playback in live view window
e-Map	No	Yes	Yes	Yes	Yes	Yes	Yes
PTZ Control	Yes	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 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	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)	9 channels (local), 64 channels (remote)	9 channels (local), 64 channels (remote)
Local Access	HDMI monitor; USB keyboard & mouse	HDMI & VGA port for monitor; USB joystick; keyboard & mouse	HDMI & VGA port for monitor; USB joystick; keyboard & mouse	VGA port for monitor; USB joystick; keyboard & mouse	VGA & Mini display 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
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	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client
Video Export	AVI, RAW	AVI, RAW	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE
Server Operating System	Embedded Linux	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7
Client PC Operating System	Windows 8, Windows 7	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	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 9, IE 10, IE 11	IE 10, IE 11	IE 10, IE 11	IE 10, IE 11	IE 10, IE 11	IE 10, IE 11	IE 10, IE 11
ONVIF Compliant	Yes	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)	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	CE, FCC	CE, FCC



## Video Management System

### Transportation Standalone NVR



Model	MNR-310	MNR-320P	MNR-330P
Maximum Number of Video Devices	32	16	16
Additional Computing Power	No	No	Yes
Maximum Number of Clients	1 local, 3 remote	1 local, 3 remote	1 local, 3 remote
Free License	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
Compression	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG
Audio	2-way	2-way	2-way
Built-in PoE Connectors	No	4 Ports	4 Ports
Wireless	Yes (Wi-Fi, 4G, GPS optional accessories required)	Yes (Built-in GPS, Wi-Fi, 4G optional accessories required)	Yes (Built-in GPS, Wi-Fi, 4G optional accessories required)
Serial Port	RS-232	No	No
Power Source	AC 100-240V; DC 12V; DC 9-36V	DC 12V; DC 9-36V	DC 12V; DC 9-36V
Scheduled / Event / Manual Recording	Yes	Yes	Yes
Speed Up	Yes	Yes	Yes
Dual Stream Management	Yes	Yes	Yes
Recording Throughput	192 Mbps	192 Mbps	192 Mbps
HDD Interface	Maximum 2 SATA disks (without storage disks)	Maximum 1 SATA disks (without storage disks)	Maximum 1 SATA disks (without storage disks)
External Storage Interface	eSATA, iSCSI, USB	USB	USB
RAID Level	Software RAID 0, 1	Software RAID 0, 1	Software RAID 0, 1
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 (Remote client)	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	4 channels (local), 32 channels (remote)	4 channels (local), 16 channels (remote)	4 channels (local), 16 channels (remote)
Local Access	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 (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)
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
Video Export	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE
Server Operating System	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7
Client PC Operating System	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 10, IE 11	IE 10, IE 11	IE 10, IE 11
ONVIF Compliant	Yes	Yes	Yes
Operating Temperature	-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, E-Mark	CE, FCC, UL, CCC, BSMI, E-Mark	CE, FCC, UL, CCC, BSMI, E-Mark



## Video Management System

### Standalone CMS

### Standalone TV Wall

### Standalone IVS



Model	CMS-100	CMS-200	TVW-100	LPR-100	LPR-120
<b>Product Application</b>	-	-	-	License Plate Recognition	License Plate Recognition
<b>Maximum Number of Video Devices</b>	800	1600	-	6	6
<b>Maximum number of Monitors</b>	-	-	4	-	-
<b>Free License</b>	100	200	-	1	1
<b>Compression</b>	H.265, H.264, MJPEG, MPEG-4	H.265, H.264, MJPEG, MPEG-4	H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG
<b>Audio Type</b>	2-way	2-way	2-way	2-way	2-way
<b>Power Source</b>	AC 100-240V	AC 100-240V	AC 100-240V	AC 100-240V	AC 100-240V
<b>Rack Mount</b>	No	Rackmount (1U)	Rackmount (1U)	No	Rackmount (1U)
<b>Third-party Integration</b>	Point of Sales (PoS), Access Control, Network I/O, Car Park	Point of Sales (PoS), Access Control, Network I/O, Car Park	-	-	-
<b>Manual Recording</b>	Yes	Yes	-	-	-
<b>Dual Stream Management</b>	Yes	Yes	-	-	-
<b>HDD Bay</b>	Maximum 1 SATA disks (without storage disks)	Maximum 1 SATA disks (without storage disks)	Maximum 1 SATA disks (without storage disks)	Maximum 1 SATA disks (without storage disks)	Maximum 1 SATA disks (without storage disks)
<b>External Storage Interface</b>	USB	USB	USB	-	-
<b>Analyzed Stream</b>	-	-	-	Live View, Playback	Live View, Playback
<b>Analyzed Source</b>	-	-	-	NVR, Camera, pre-recorded video	NVR, Camera, pre-recorded video
<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	-	-	-
<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	DVI & VGA & Display port & Mini display port for monitor; Keyboard & mouse	HDMI & DVI & Display port for monitor; Keyboard & mouse	DVI & VGA & Display port for monitor; Keyboard & mouse
<b>Remote Access</b>	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	-	Workstation	Workstation
<b>Server Operating System</b>	Windows 7	Windows 7	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7
<b>Client PC Operating System</b>	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	Windows 8, Windows 7	Windows 8, Windows 7
<b>PC Web Browser</b>	IE 10, IE 11	IE 10, IE 11	IE 10, IE 11	-	-
<b>ONVIF Compliant</b>	Yes	Yes	-	-	-
<b>Fan</b>	Yes	Yes	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)	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	CE, FCC	CE, FCC
<b>Supported Countries</b>	-	-	-	-	-



# Video Management System

## Software NVR

## Control Center



Model	NVR 3 Corporate	NVR 3 Enterprise	NVR 3 Standard	CMS 2
Maximum Number of Video Devices	100	100	64	6400
Maximum Number of POS Devices	100	0	0	6400
Maximum Number of Access Control and Network I/O Devices	100	0	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)	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)	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	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
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams
Third-party Integration	Point-of-sale (POS), Access Control, Network I/O, Car Park	-	-	Point-of-sale (POS), Access Control, Network I/O, Car Park
Scheduled Recording	Yes	Yes	Yes	-
Event Recording	Yes	Yes	Yes	-
Manual Recording	Yes	Yes	Yes	Yes
Speed Up	Yes	Yes	Yes	-
Redundancy Service	Yes	Yes	Yes	-
Recording Throughput	100 channels at 5MP/15fps	100 channels at 5MP/15fps	64 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	1, 3, 4, 5, 6, 8, 9, 10, 12, 16, 18, 24, 25, 35, 36, 48, 49, 64, Custom
Digital Zoom	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
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
e-Map	Yes	Yes	No	Yes
PTZ Control	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 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	64 channels
Video Push	Support Video Push from ACTi Mobile Client devices	No	No	Support Video Push from ACTi Mobile Client devices
Local Access	Monitor; joystick; keyboard & mouse	Monitor; joystick; keyboard & mouse	Monitor; joystick; keyboard & mouse	Monitor; joystick; keyboard & mouse
Remote Access	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)	Workstation, Web Client (IE), Mobile Client (iOS & Android)
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> 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 <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	Pop-up window with live video; Switch to hotspot window; Command a PTZ device to go to a preset point; Play alert sound; Activate external device through digital output; 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	12 users and 3 user groups in maximum; Customizable permissions for user groups; Account lockout; 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
Server Operating System	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	Windows 10, Windows 8, Windows 7, Windows Server 2012, Windows Server 2008
Client PC Operating System	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	Windows 10, Windows 8, Windows 7, Windows Server 2012, Windows Server 2008
PC Web Browser	IE 10, IE 11	IE 10, IE 11	IE 10, IE 11	IE 10, IE 11
ONVIF Compliant	Yes	Yes	Yes	Yes



## Video Analytics



Model	ALPR Server 2	People Counting Server 1	IVS Server 1
Product Type	Software IVS	Software IVS	Software IVS
Maximum Number of Video devices	6	9	9
License required	Yes	Yes	Yes
Free Trial License	1 channel with 2 hours recycling	1 channel with 2 hours recycling	1 channel with 2 hours recycling
Built-in Analytics	License Plate Recognition, Vehicle Counting	Object Counting, People Counting, Heat Map, Dwell Time, Gender detection (for project request), Age detection (for project request)	Line crossing, Enter Area, Missing Object, Unattended Object, Tamper, Smoke Detection, Incorrect Direction, People Queue management.
Analyzed Stream	Live View, Playback	Live View, Playback	Live View, Playback
Analyzed Source	NVR, Camera, pre-recorded video	NVR, Camera, pre-recorded video	NVR, Camera, pre-recorded video
Report System	Standard Report	Standard Report, Professional Report	Standard Report
Remote Access	Workstation; Mobile Client	No	No
Description	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.	People Counting Server 1 is a 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.	IVS Server 1 can analyze, record and search camera live and pre-recorded video stream from ACTi camera, Software NVR(NVR3) or Standalone NVR(ENR series, GNR series, INR series) for special objects with intelligent video analytics algorithms, such as Line crossing, Enter Area, Missing Object, Unattended Object and Tamper
Supported Countries		-	-



# 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 product layout with ACTi's heat map technology.
- Enhance the marketing promotions on specific market segments with ACTi's age and gender analytics.

#### Operation Management

- Manage all customer and employee related incidents through 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 white listed 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 tailing in critical areas with the integration of access control system and IP cameras.



Features		Market Application Suites					
		Retail	Parking Lot	Factory	Logistics	Commercial Building	Mobile Vehicle
							
Analyses	Visitor Counting	Y					
	Total Occupancy	Y					
	Heatmap	Y					
	Age & Gender Detection	Y					
	VIP Face Recognition	Y				Y	
	Conversion Rate	Y					
	Revenue	Y	Y				
	Intelligent Video Surveillance		Y	Y	Y	Y	
	Tracking			Y	Y		Y
	License Plate Recognition		Y	Y	Y	Y	
Interaction with Systems & Devices	Access Control			Y	Y	Y	
	Active Directory			Y	Y	Y	
	ERP	Y					
	Point-of-Sale	Y	Y				
	Video Management System	Y	Y	Y	Y	Y	Y
	IVS Camera or Server	Y	Y	Y	Y	Y	Y
	IoT Device	Y	Y	Y	Y	Y	Y
Dashboards	Graphs	Y	Y	Y	Y	Y	Y
	Lists	Y	Y	Y	Y	Y	Y
	System or Service Management	Y	Y	Y	Y	Y	Y
	Digital Signage	Y		Y		Y	
Real-time Notifications	Exception Alerts	Y	Y	Y	Y	Y	Y
	Black & White List Alerts	Y	Y		Y	Y	
	VIP Arrival Alert	Y				Y	
Reports	Meta Data Export to CSV, Excel	Y	Y	Y	Y	Y	Y
	Analysis Report to CSV, Excel	Y	Y	Y	Y	Y	Y
Customization	Custom Logo, Style	Y	Y	Y	Y	Y	Y
	User Requested Features	Y	Y	Y	Y	Y	Y



# Cloud Media Services

ACTi's Cloud Media Services are provided through a flexible solution architecture to cover all business requirements. Typically, businesses are concerned with the kind of data they upload to the cloud for security concerns. ACTi allows its customers to manage this challenge through a hybrid solution that allocates sensitive data in local sites and stores all other data in the cloud.

No matter the requirement, whether it is a fully-cloud based solution or a partial migration, ACTi has you covered.

Our solution portfolio has offerings for Service Providers, Distributors and System Integrators that want to enable our service under their own business model and also for End Users that want to work directly under our Cloud.

## Solution Architecture





# 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!

Android device



iOS device



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.



### Access Control & POS

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



### Notification Push

Receive instant pop-up notifications from NVR3, even when the phone is resting.



# 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 IVS helps you enhance your existing surveillance system while providing you with valuable information for business intelligence and management.

## Popular Algorithms



**People Counting**

**"People Counting"** provides bi-directional counting function for people entering and exiting an area, as determined by a virtual line.

Available Product: People Counting Server 1



**Missing Object**

**"Missing Object"** detects and captures video for objects that have suddenly disappeared from a marked area.

Available Product: IVS Server 1



**Enter Area**

**"Enter Area"** detects and captures video of people that have entered and stayed in a marked area for longer than a certain amount of time.

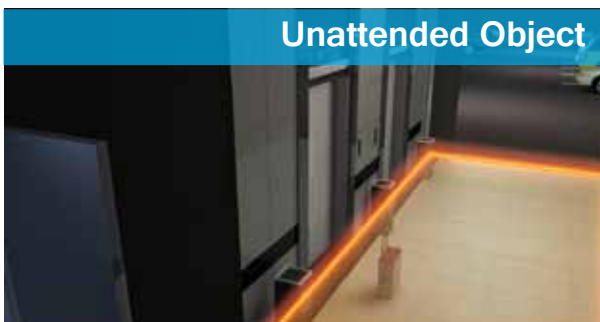
Available Product: IVS Server 1



**Line Crossing**

**"Line Crossing"** captures the movement of people or objects over a predetermined virtual line.

Available Product: IVS Server 1



**Unattended Object**

**"Unattended Object"** detects and captures video of objects that have suddenly appeared in a certain area.

Available Product: IVS Server 1



**Automatic License Plate Recognition**

**"Automatic License Plate Recognition (ALPR)"** detects and recognizes vehicle license plates in the predefined area, and then matches this data against the database.

Available Product: ALPR Server 2





# POS Integration

The retail industry is suffering from huge losses day-to-day due to unauthorized discounts (sweethearting) or common steal. Prevention and detection of such events can easily be managed through the integration of the POS system data and video from the cashier area. In case of any POS exception, you can quickly be notified about it, validate the occurrence with video and later use this as evidence if needed. Available Product: NVR 3 Corporate

## Applications

### Sweethearting



The manager will be notified immediately when discounts are given. This is able to prevent profit loss resulted from the unauthorized discounts given by the employee to his/her relatives or friends.

### Employee Theft



Don't let employees reduce your bottom line. Use filter to quickly review exceptional events, such as void transaction, discounts or changes in price or quantity, and identify dishonest clerks.

### Manual Barcode Input



Mistakes could be made, purposely or unintentionally, by keying in a barcode manually, which causes incorrect transaction data and wrong payment. The manager can always be alerted when this behavior occurs, and see the video to verify.

### Wrong Change



Save your time and good reputation. You can quickly clarify any dispute if a customer claims that he has been given wrong change. Finding the receipt and corresponding video is always just a few clicks away.



# Access Control Integration

Access control is the very first line of defense against any danger and loss. Adding videos to your access control system can definitely improve the security of your business. By linking the data from access control with video footage in real time, you will be able to smartly identify and prevent all potential breaches!

## Applications



Identity Fraud

Without surveillance videos, it is hard to be sure if the identity shown in the entry log matches the accessing person. Access control integrated with the surveillance system can remarkably prevent the crises and loss resulted from unauthorized access.



Tailing

When someone is entering a restricted area, the access control system will record only this entry, without noticing the people who tail behind and access without any access card. ACTi's surveillance system allows you to visually validate every entrance in real time.

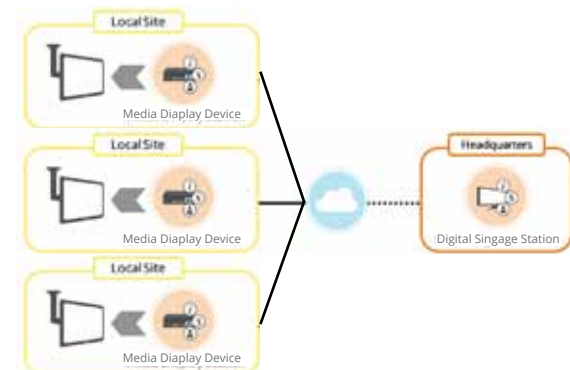


# Digital Signage Station













Multiple TV panels across the site can be remotely managed for Digital Signage content together with live video from the surveillance system.

Promoting products to your customers by displaying ads or related product information from the public monitor, according to their profiles such as gender and age, can smartly draw their attention and increase the efficiency of your marketing campaigns.















# Mounting Accessory Matrix

Camera Type	Camera Installation Series		Example Models	Target Surface	Mounting Method																				
					Surface	Tiltable Surface Mount	Gang Box	Flush	Tiltable 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								
	Indoor Box		B2x, D2x, E2x, A2x, I2x,	Ceiling																					
				Wall																					
				Pole												Y (w/Housing)									
				Corner													Y (w/Housing)								
	Outdoor-Ready Box		KCM-5511, KCM-5611, KCM-5x11	Wall																					
Pole															Y										
Corner																Y									
Bullet	Mini Bullet		E38	Ceiling														Y							
				Wall																Y					
	Bullet with Integrated Bracket		A4x, B4x, E44A ~ E46A E41x, I4x, E39, I48	Ceiling			E39, E4x, I48 only												Except B4x, I4x	B4x, I4x only					
				Wall			Except A31, A4X													Y					
				Pole												Y									
	Bullet with Bundled Removable Bracket		D42A D3x, E41, E3x(A)	Ceiling																					
				Wall																					
				Pole												Y									
Corner																Y									
Thermal Bullet		Q31	Wall															Y							
			Pole																						
Covert	Covert		Q11, Q12, Q13, Q111, Q14, Q112	Ceiling				Y	Y																
				Wall				Y	Y																
				Corner																	Except Fisheye Covert				
	L-shape Pinhole Covert		Q113, Q115	Ceiling	Y	Y		Y																	
				Wall	Y	Y		Y				Y										Y			
	Windshield																			Y					
Cube	Cube with Bundled Removable Bracket		D1x E1x	Ceiling																					
				Wall																			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	Desktop Mount	Edge Clamp		
Dome	Mini Dome & Mini Fisheye Dome		E9x, E9xx(M)	Ceiling	Y		Y					Y						Y					
				Wall	Y		Y		Y														
				Pole						Y	Y												
			E99M	Ceiling	Y																		
					Q9x	Ceiling	Y		Y						Y						Y		
						Pole								Y									
	Indoor & Outdoor Dome		B71, B6x, B8x, D5x, D6x, D7x, D8x, E5x, E6x, E61x, E7x, E8x, KCM-3311, KCM-7x11	Ceiling	Y		Y	Y					Y						Y				
				Wall	Y		Y			Y													
				Pole									Y	Y									
				Corner												Except E78							
			A81, A82	Ceiling	Y									Y						Y			
				Wall	Y						Y												
			Q61, Q81	Ceiling	Y		Y	Y						Y						Y			
				Pole										Y									
		Indoor & Outdoor Hemispheric & Fisheye Dome		B5x, B511, I51, I7x	Ceiling	Y		Y	Indoor Dome only					Y							Indoor Dome only		
					Wall	Y		Y			Y	Y											
					Pole							Y	Y	Y									
					Corner								Y			Y							
	PTZ / Speed Dome	Outdoor Mini PTZ		B94A ~ B97A, B910	Ceiling	Y		Y	Y				Y							Y			
					Wall			Y			Y												
Pole												Y	Y										
Corner															Y								
Rooftop / Parapet																					Y		
Indoor PTZ			I91, I92, I912	Ceiling	Y		Y	Y					Y							Y			
				Wall						Y													
				Pole									Y	Y									
				Corner											Y								
Outdoor PTZ & Speed Dome			I93 ~ I98, I910 KCM-8211	Ceiling			19x only						Y							Y			
				Wall			19x only			Y													
				Pole									Y	Y									
				Corner											Y								
	Rooftop / Parapet																			Y			





# Popular Mounting Accessory Sets

		Ceiling	Wall	Pole	Corner			
Dome			<b>PMAX-0313 / 0314</b> Heavy Duty Wall Mount for Indoor / Outdoor Domes		<b>SMAX-0155</b> Pole Mount with Wall Mount		<b>SMAX-0157</b> Corner Mount with Wall Mount	
	Outdoor		<b>PMAX-0312</b> PTZ Wall Mount		<b>SMAX-0226</b> Pole Mount with Junction Box and PTZ Wall Mount		<b>SMAX-0227</b> Corner Mount with Junction Box and PTZ Wall Mount	
PTZ	Indoor		<b>PMAX-0311</b> L-Type Wall Mount		<b>SMAX-0103</b> Pole Mount with Pendant Mount and PTZ Mount Kit		<b>SMAX-0016</b> Corner Mount with Gooseneck and PTZ Mount Kit	
Bullet			<b>PMAX-0806</b> Gangbox Converter		<b>PMAX-0504</b> Pole Mount for Bullet Cameras		<b>SMAX-0272</b> Corner Mount with Mounting Bracket	
	Box		<b>PMAX-0206</b> PoE Heavy Duty Outdoor Housing with Mounting Bracket		<b>SMAX-0281</b> Pole Mount with Mounting Bracket and Heavy Duty Outdoor Housing		<b>SMAX-0261</b> Corner Mount with Mounting Bracket and Housing	



# Popular Mounting Accessory Sets

## Ceiling & Wall

## Corner

**Covert, Fisheye  
Covert & Pinhole  
Covert**

**PMAX-1016**  
Tilttable Flush Mount



**PMAX-1017**  
Tilttable Flush Mount  
(Disguise)



**PMAX-1108**  
Bracket



**PMAX-0403**  
Corner Mount



## Ceiling & Wall

## Wall

## Windshield

**L-Shape Pinhole  
Covert**

**PMAX-0334**  
Tilttable Surface Mount



**PMAX-0331**  
Height Strip (Disguise)



**PMAX-1109**  
Windshield Mounting Bracket



## Desktop

## Pole

**Micro Box Camera**

**PMAX-0901 + PMAX-1110**  
Desktop Mount Magnetic Base  
with Gooseneck



**PMAX-0510**  
Pole Mount

Horizontal  
Pole



Vertical  
Pole



## Edge

**PMAX-1111**  
Edge Clamp

Horizontal  
Edge



Vertical  
Edge



### 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	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, f3.1-9mm	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	D91 D92	-	-	D11 D12	-	-	A22	-	-	E23B	E23B	A21 A23	D11 D12	-	D91 D92	D91 D92

### Optional Dome Covers

<b>Model</b>	PDCX-0104	PDCX-0105	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 Cover	Smoked Cover	Smoked Cover	Smoked Cover	Smoked Cover	Smoked Cover	Smoked Cover	Smoked Cover	Smoked Cover	Smoked Cover	Smoked Cover	Smoked Cover						
<b>Material</b>	Plastic	Plastic	Plastic	Plastic	Plastic/Aluminum	Plastic	Plastic/Aluminum	Plastic	Plastic	Plastic	Plastic	Plastic						
<b>Durability</b>	Standard	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>	D51 D52 E51	D54 D55 E52 E53 E54 E55 E56 E58 E59	B51 B52 B53 D6X(A) E6X(A) D7X(A)	D8X(A) E7X(A) E8X(A) KCM-3311 KCM-7111 KCM-7311	E610 E616 E617 E618 E621 E621 E689	E817 E822 E910 B94A B95A B96A B97A	B934 I91 I92 I912	D91 D92 E91 E92 E93	E95 E96 E97 E98 E913	I93 I94 I95 I96 I97 I910 B916 B917	B61 B63 B64 B65 B67 B81 B82	B83 B84 B85 B87 Q61 Q81	I71 I73 B74(A) B76A B77A	E913 E918 E918M E919 E919M E920 E920M	E921 E921M E922 E922M E923 E923M E936 E936M	E924 E924M E925 E925M E926 E926M	E927 E927M E928 E928M E929 E929M E933 E933M	E78

### Power Supply Accessories

<b>Model</b>	PACX-0005	PACX-0006	PPBX-0002	PPBX-0003	PPBX-0006	PPBX-0007	PPBX-0008	PPOE-0001	PPOE-0101	PPOE-0102
<b>Product Type</b>	Charger	Battery	Power Adapter	Power Adapter	Power Adapter	Power Ignition Control Module	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	AC 100-240V power adapter with universal connectors for all DC 12V powered devices	AC 100-240V power adapter with universal connectors for V11 and V2x series	Power Adapter AC 100~240V for MNR-310	Power Ignition Control Module for MNR-310	AC 100~240V, with universal connectors	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 KCM-8111	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
<b>Product Type</b>	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 MNR-320P, MNR-330P (US)	4G LTE / 3G / 2G Wireless Module for MNR-320P, MNR-330P (Europe and Asia)	Wi-Fi Module for MNR-310	Wi-Fi Module for MNR-320P	Wi-Fi Module for MNR-320P, MNR-330P

### 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-320 / INR-330 / INR-410 / INR-420 / INR-430 / INR-460	GNR-320 / INR-330 / INR-410 / INR-420 / INR-430 / INR-460	ENR-190	ENR-190

### Controllers

<b>Model</b>	PJSK-0100
<b>Product Type</b>	Joystick
<b>Description</b>	Joystick for all ENR, INR, and MNR Series , for PTZ Control

# 2017 Camera Roadmap Matrix

## A / C / D / E Series

Product Type			Cube	Fisheye Cube	Box			Bullet			Mini Bullet	Mini Dome		Dome						Mini Fisheye Dome			
																							
Application Environment			Indoor	Indoor	Indoor/Outdoor			Outdoor			Outdoor	Indoor	Outdoor	Indoor			Outdoor			Indoor	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		
Day Only	Standard	1MP	D11 E11A										D91 E91		D51 E51								
		1.3MP	C11W																				
		3MP	D12 E12A											D92 E92		D52							
		5MP	E13A	E15										E93	E920 E920M							E96	E921 E921M
		10MP	E14	E16										E97	E922 E922M							E98	E923 E923M
	Super Low Light	2MP												E95	E936 E936M		D62A E67A						
		3MP	E17											E911	E99M								
	Complicated Light	3MP												E913	E918 E918M								E919 E919M
Day & Night	Standard	1MP			E21FA	E21VA		D31 E31A	D41A E41 E41B						D54 E52					D71A E71A			
		3MP						D32 E32A	D42A E42B						D55 E53	D65A E62A				D72A E72A	D82A E82A		
		5MP			D22FA E22FA	E22VA	E213 (10x)	E33A	E43B	E413 (10x)				E924 E924M	E54	E63A	E616 (4.3x)	E73A	E83A	E815 (4.3x)		E925 E925M	
		10MP				E271	E210 (4.3x)	E37	E48	E416 (4.3x)				E926 E926M	E59	E610	E617 (4.3x)	E77	E89	E816 (4.3x)		E927 E927M	
	Super Low Light	2MP				E23B		E36	E44A					E58	E69					E76	E84A		
	Complicated Light	1MP								E45A												E85A	
		1.3MP															E621 (4.3x)					E822 (4.3x)	
		3MP				E24A	E215 (10x)	E34A	E46A	E415 (10x)				E928 E928M	E56	E65A	E618 (4.3x)	E74A	E86A	E817 (4.3x)		E929 E929M	
	Complicated and Super Low Light	2MP			E217	E222	E219 (10x)	E39		E417 (10x) A43 (4.3x)	E38			E933 E933M						E78		A83 (4.3x)	
		3MP			A21	A23		A31		A41 (4.3x)												A81 (4.3x) A85 (4.3x)	
5MP				A22	A24				A42 (2.8x)												A82 (2.8x)		

# 2017 Camera Roadmap Matrix

## KCM / B / I / Q Series

Product Type			In-Wall Box	Micro Box	Zoom Box		Zoom Bullet	Thermal Bullet	Mini Dome			Dome		Fisheye Dome	Hemispheric Dome		Mini PTZ	PTZ		Speed Dome	Covert	Fisheye Covert			L-Shape Pinhole Covert	Pinhole Covert	Intercom		
			Outdoor	Outdoor	Indoor/Outdoor	Outdoor	Outdoor	Outdoor	Indoor	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	Fixed focal	Zoom	Fixed focal	Zoom	Fixed focal	Fixed focal	Fixed focal	Zoom	Zoom	Zoom	Zoom	Zoom	Zoom	Fixed focal	Fixed focal	Fixed focal	Fixed focal	Fixed focal	Fixed focal
Day Only	Standard	5MP																					Q110 Q19	Q111		Q115	Q112 Q112-K1		
	Super Low Light	2MP		Q22 Q22-K1						Q91													Q11 Q12	Q13	Q13-K1	Q113	Q14 Q14-K1		
	Complicated Light	0.46MP						Q31																					
Day & Night	Standard	4MP										KCM-7111						B910 (10x)											
		5MP			B22 (10x)		B41 (12x) B46 (12x)				B51	B61 (3x)		B81 (3x) B82 (2.4x)	B54			B96A (10x)											
		10MP			B210 (10x)		B410 (10x)				B52				B55														
	Super Low Light	1.3MP			B24 (10x)		B44 (10x)					B64 (3x)		B84 (3x)				B94A (10x)											
		2MP					B45 (10x)					B65 (3x)		B85 (3x)				B95A (10x)											
	Complicated Light	3MP			B27 (12x)		B49 (12x)				B53	B67 (3x)		B87 (3x)	B56			B97A (10x)											
		1MP			I24 (30x)				Q93 Q94										I91 (30x)	I93 (30x)		I95 (30x)							
	Complicated Light and Super Low Light	2MP			B214 (20x) B215 (30x) I28 (33x) I25 (30x) I29 (36x)	KCM-5511 (22x) KCM-5611 (18x)	B415 (20x) B416 (30x) I45 (30x) I48 (30x)		Q92			B63 (3x) Q61 (3x)		B83 (3x) Q81 (3x)	Q51			I92 (30x)	KCM-8211 (18x) I94 (30x)	B934 (30x)		B916 (20x) B917 (30x) B945 (20x) B949 (30x) I96 (30x) I97 (30x) I98 (33x) I99 (36x) I915 (36x)							
		3MP	Q250				B412 (10x) Q41 (10x)						B71					B914 (10x)											
		4MP			I27 (30x)	KCM-5211E (18x)	I47 (30x)					KCM-3311 (3.6x)		KCM-7311 (3.6x)				I912 (33x)			I910 (33x)								
		5MP													I51	I71													
		6MP														B57A	B77A I73											Q950	
8MP															B59A	B74													
12MP															B511	B76A													

Available Now

Available in Q2, 2017