

2018 SELECTION GUIDE

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



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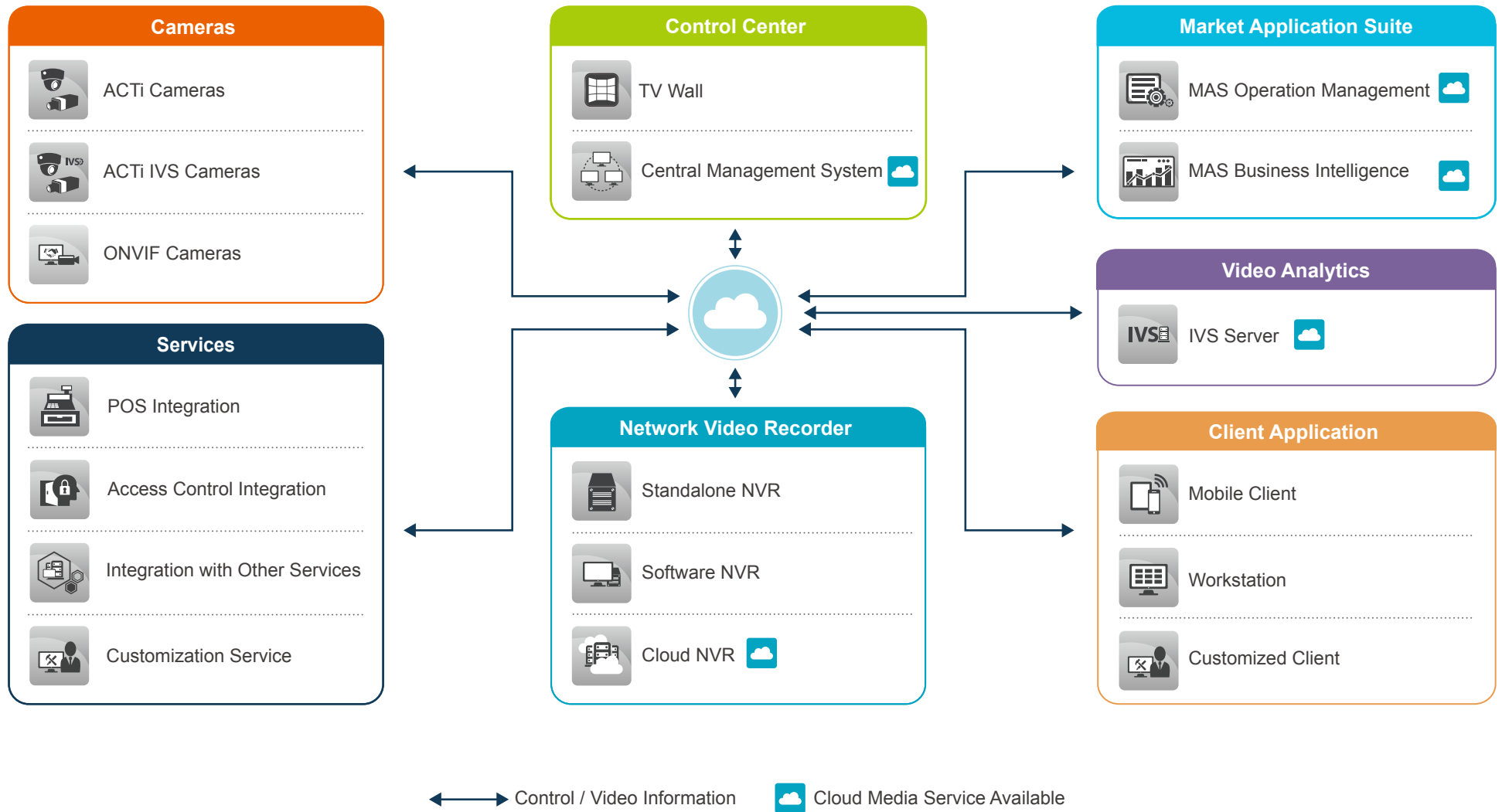
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ACTi SOLUTION DIAGRAM



MULTIFUNCTIONAL Q950 DOOR STATION

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Key Features

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

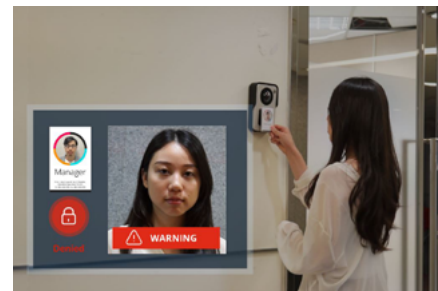
Applications



Intercom with remote door control for door and gate management



Intercom as a voice access point for service and emergency



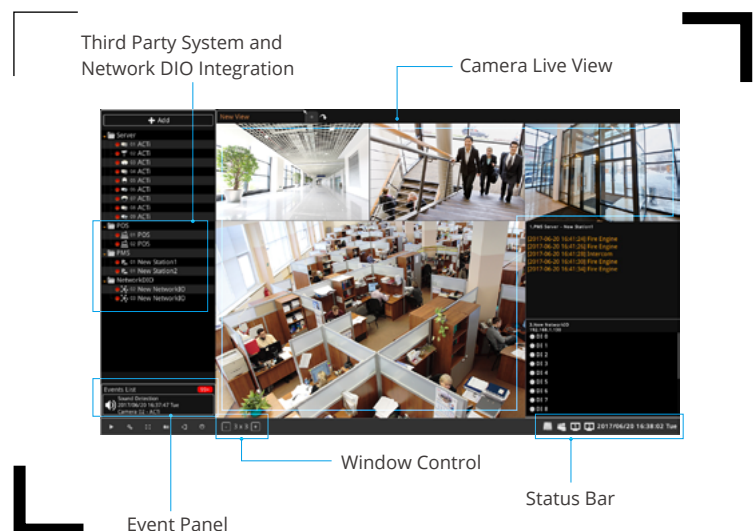
Access control with RFID and face recognition to identify visitors and open door automatically



Employee attendance management with arrival and leaving data registered by RFID

ENR GENERATION 3

// For more information → P.50



Special Features

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

Alternative Solution to Software NVR 3

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

Options for You

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

*Please visit our website at www.acti.com for the product availability.

Q93 & Q94 PEOPLE COUNTING CAMERAS

// For more information → P.10



Key Features

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

Bi-directional Counting

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

Retail Applications



Customer Footfall

Optimize customer shopping experience and maximize marketing campaign efficiency.



Conversion Rate

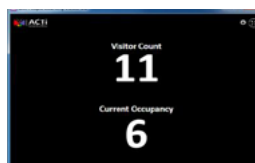
Enhance selling strategy with combined people counting and POS data.



Staff Allocation

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

Application Software



Free Live People Counting Viewer

Enjoy the real-time counting by simply connecting the camera and specifying your

ceiling height for fully automatic configuration!



People Counting Camera Selector

Find the most suitable counting camera for specific installation environment!

 www.acti.com/countingviewer

 www.acti.com/peoplecountingselector

COVERT CAMERAS

// For more information → P.12



Key Features

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

Discreet Monitoring and Face Identification



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

Applications and Installations



Elevator
(Corner Mount)



ATM
(Bracket)



Mobile Vehicle
(Tiltable Surface Mount)



Exhibition
(L-shaped Flush Mount)



Vending Machine
(Flush Mount)



Office
(Tiltable Flush Mount)



Mobile Vehicle
(Windshield Mounting Bracket)



Entrance
(Height Strip)

Q22 MICRO BOX CAMERA

// For more information → P.11



Key Features

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

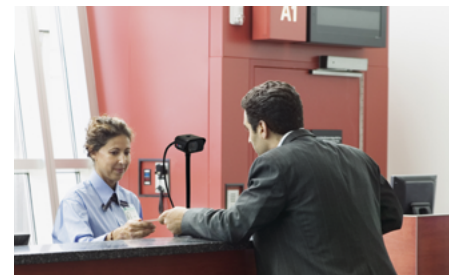
Audio Recording



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

Applications and Installations

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



Service Counter (Heavy Magnetic Base)

Popular Product: Q22-K1



Security Check
(Edge Clamp)



Patient Monitoring
(Pole Mount)

DIGITAL SIGNAGE SOLUTION

// For more information → P.47

Real-time and Effective Communication

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

Applications



Live View Monitoring

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

Emergency Instructions Broadcast

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



Workflow Optimization

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

Personal Communication

Provide personalized information, including ads, instructions and greetings.



Targeted Advertising

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



Proximity Advertising

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

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



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

	Covert				Pinhole Covert			
								
Model	Q11	Q12	Q19	Q110	Q14	Q14-K1	Q112	Q112-K1
Maximum Resolution	2MP	2MP	5MP	5MP	2MP	2MP	5MP	5MP
Application Environment	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
Bundled Accessories	No	No	No	No	No	Tilttable Flush Mount (PMAx-1017)	No	Tilttable Flush Mount (PMAx-1017)
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
Day / Night	No	No	No	No	No	No	No	No
Low Light Sensitivity	Superior	Superior	Standard	Standard	Superior	Superior	Standard	Standard
Minimum Illumination	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
Lens	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
Lens Mount	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
Horizontal Viewing Angle	86.6°	110.3°	82.3°	126.9° (overview area), 77.4° (high detail area)	84.5°	84.5°	70.2°	70.2°
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
Frame Rate vs. Resolution	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
Horizontal Resolution	1100 TVL	1100 TVL	1350 TVL	1350 TVL	1100 TVL	1100 TVL	1350 TVL	1350 TVL
View Mode	-	-	-	-	-	-	-	-
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	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)
Digital Noise Reduction	DNR	2D + 3D DNR	DNR	2D + 3D DNR	DNR	DNR	DNR	DNR
S/N Ratio	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB
Audio	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)
Digital Input / Output	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
Serial Port	RS-232	RS-232	RS-232	RS-232	RS-232	RS-232	RS-232	RS-232
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)
Power Source	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
Environmental Casing	Vibration proof (EN50155)	Vibration proof (EN50155)	Vibration proof (EN50155)	Vibration proof (EN50155)	Vibration proof (EN50155)	Q14: Vibration proof (EN50155)	Vibration proof (EN50155)	Q112: Vibration proof (EN50155)
Mount Type	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Tilttable Flush Mount	Bracket, Flush, Tilttable Flush Mount, Corner Mount	Tilttable Flush Mount
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Operating Temperature	-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)
Approvals	CE, FCC, EN50155	CE, FCC, EN50155	CE, FCC, EN50155	CE, FCC, EN50155	CE, FCC, EN50155	Camera: CE, FCC, EN50155	CE, FCC, EN50155	Camera: CE, FCC, EN50155



 	L-Shaped Pinhole Covert		Fisheye Covert		
					
Model	Q113	Q115	Q13	Q13-K1	Q111
Maximum Resolution	2MP	5MP	2MP	2MP	5MP
Application Environment	Indoor	Indoor	Indoor	Outdoor	Indoor
Bundled Accessories	No	No	No	Flush mount	No
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	No	No	No	No	No
Low Light Sensitivity	Superior	Standard	Superior	Superior	Standard
Minimum Illumination	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
Lens	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
Lens Mount	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
Horizontal Viewing Angle	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)
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	30 fps at 1920 x 1080	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
Horizontal Resolution	1100 TVL	1350 TVL	1100 TVL	1100 TVL	1350 TVL
View Mode	-	-	Fisheye View	Fisheye View	Fisheye View
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	Basic WDR (75 dB)	Basic WDR (74 dB)	Basic WDR (75 dB)	Basic WDR (75 dB)	Basic WDR (74 dB)
Digital Noise Reduction	2D + 3D DNR	DNR	DNR	DNR	2D + 3D DNR
S/N Ratio	52 dB	52 dB	52 dB	52 dB	52 dB
Audio Type	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)
Digital Input/Output	1/1	1/1	1/1	1/1	1/1
Serial Port	RS-232	RS-232	RS-232	RS-232	RS-232
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2	DC 12V; PoE Class 2
Environmental Casing	Vibration proof (EN50155)	Vibration proof (EN50155)	Vibration proof (EN50155)	Weatherproof (IP66); Vandal resistant (IK09); Vibration proof (EN50155)	Vibration proof (EN50155)
Mount Type	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
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes
Operating Temperature	-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)
Approvals	CE, FCC, EN50155	CE, FCC, EN50155	CE, FCC, EN50155	Camera: CE, FCC, IP66, NEMA 4X, IK09, EN50155	CE, FCC, EN50155

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



	Speed Dome					Speed Dome with H.265
	 20x	 30x	 30x	 20x	 30x	 20x
Model	B916	B917	B934	B945	B949	Z950
Maximum Resolution	2MP	2MP	2MP	2MP	2MP	2MP
Application Environment	Outdoor	Outdoor	Indoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes	Yes	Yes
Low Light Sensitivity	Superior	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	Color: 0.03 lux, B/W: 0 lux (IR LED on) at F1.5
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes	Yes
IR LED	No	No	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	-	-	-	100m	150m	100m
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, f5.2-104mm / F1.5-3.0, Auto focus
Zoom Ratio	20x optical	30x optical	30x optical	20x optical	30x optical	20x optical
Zoom Application	Camera Installation; Auto Zoom by Event; Manual Operation	Camera Installation; Auto Zoom by Event; Manual Operation	Camera Installation; Auto Zoom by Event; Manual Operation	Camera Installation; Auto Zoom by Event; Manual Operation	Camera Installation; Auto Zoom by Event; Manual Operation	Camera Installation; Auto Zoom by Event; Manual Operation
Panning and Tilting Range	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: 0°-180°	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: -20°-200°	Pan: 0°-360° endless; Tilt: -15°-90°
Horizontal Viewing Angle	62°-2.8°	61.4°-3.6°	62.4°-3.5°	62°-2.8°	61.4°-3.6°	61.9°-3.5°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.265, 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	30 fps at 1920 x 1280
Horizontal Resolution	1450 TVL	1450 TVL	1450 TVL	1450 TVL	1450 TVL	-
Multi-Streaming	Triple streams	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)	Advanced WDR
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	No
S/N Ratio	56 dB	56 dB	56 dB	56 dB	56 dB	52 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)	2-way (Mic-in, Line-in, Line-out)
Digital Input / Output	4/2	4/2	2/2	4/2	4/2	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 (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	DC 24V; AC 24V
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	Weatherproof (IP66); Vandal proof metal casing (IK10)
Built-in Analytics	Yes	Yes	Yes	Yes	Yes	No
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	No
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	No
Heater	Yes	Yes	No	Yes	Yes	Yes
Fan	Yes	Yes	No	Yes	Yes	No
Operating Temperature	-52°C ~ 60°C (-61.6°F ~ 140°F) @ AC 24V -40°C ~ 60°C (-40°F ~ 140°F) for High PoE	-52°C ~ 60°C (-61.6°F ~ 140°F) @ AC 24V -40°C ~ 60°C (-40°F ~ 140°F) @ High PoE	-20°C ~ 50°C (-4°F ~ 122°F)	-40°C ~ 55°C (-40°F ~ 131°F)	-40°C ~ 55°C (-40°F ~ 131°F)	-40°C ~ 65°C (-40°F ~ 149°F)
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)	CE, FCC, IP66, IK10 (metal casing)

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



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

	Outdoor Mini Dome				Outdoor Mini Dome with H.265		
					 Combo Kits p.58	 Combo Kits p.58	
Model	E926	E928	E933	E933M	A92	Z91	Z92
Maximum Resolution	10MP	3MP	2MP	2MP	3MP	4MP	4MP
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	Superior	Superior	Superior	Superior	Superior
Minimum Illumination	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.05 lux, B/W: 0 lux (IR LED on) at F2.2	Color: 0.05 lux, B/W: 0 lux (IR LED on) at F2.2	Color: 0.1 lux, B/W: 0.01 lux at F1.85 (AGC on)	Color: 0.02 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.02 lux, B/W: 0 lux (IR LED on) at F2.0
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	15m	15m	15m	15m	30m	30m	15m
Lens	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f2.55mm / F2.2, Fixed iris, Fixed focus	Fixed focal, f2.55mm / F2.2, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F2.0, Fixed iris, Fixed focus
Viewing Angle Adjustment	Pan: ±90°; Tilt: 35°-90°	Pan: ±90°; Tilt: 35°-90°	Pan: ±90°; Tilt: 35°-90°	Pan: ±90°; Tilt: 35°-90°	Pan: ±120°; Tilt: 30°-90°	Pan: ±175°; Tilt: 0°-90°; Rotate: ±175°	Pan: ±30°; Tilt: 25°-90°; Rotate: 0°-360°
Horizontal Viewing Angle	101.4°	85.7°	110.3°	110.3°	100°	101.8°	101.8°
Compression	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
Frame Rate vs. Resolution	7 fps at 3648 x 2736 30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	60 fps at 1920 x 1080	60 fps at 1920 x 1080	30 fps at 2048 x 1536	20 fps at 2592 x 1520 30 fps at 2048 x 1520	20 fps at 2592 x 1520 30 fps at 2048 x 1520
Horizontal Resolution	1450 TVL	1250 TVL	1100 TVL	1100 TVL	1300 TVL	-	-
Multi-Streaming	Dual streams	Dual streams	Triple streams	Triple streams	Dual streams	Triple streams	Triple streams
Wide Dynamic Range	Basic WDR (70 dB)	Superior WDR (110 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Advanced WDR (72 dB)	Extreme WDR (120 dB)	Extreme WDR (120 dB)
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	Yes	Yes	Yes	No	No
Defogging	No	No	Yes	Yes	Yes	Yes	Yes
S/N Ratio	52 dB	52 dB	56 dB	56 dB	56 dB	55 dB	55 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)	No	2-way (Mic-in, Line-in, Line-out)	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)
Network Connector	RJ-45	RJ-45	RJ-45	M12	RJ-45	RJ-45	RJ-45
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)	MicroSDXC (card not included)	MicroSDXC (card not included)
Power Source	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	DC 12V; PoE Class 3	DC 12V; PoE Class 3	DC 12V; PoE Class 3
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)	Weatherproof (IP66); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP66); Vandal proof (IK10)
Built-in Analytics	No	No	Yes	Yes	No	No	No
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	No	No
ONVIF Compliant	Yes	Yes	Yes	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)	-20°C ~ 50°C (-4°F ~ 122°F)	-35°C ~ 60°C (-31°F ~ 140°F)	-35°C ~ 60°C (-31°F ~ 140°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	CE, FCC, IP66, IK10	CE, FCC, IP67, IK10	CE, FCC, IP66, IK10



	Outdoor Mini Fisheye Dome					
						
Model	E921	E921M	E923	E925	E925M	E927
Maximum Resolution	5MP	5MP	10MP	5MP	5MP	10MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	No	No	No	Yes	Yes	Yes
Low Light Sensitivity	Standard	Standard	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, 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
Mechanical IR Cut Filter	No	No	No	Yes	Yes	Yes
IR LED	No	No	No	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	-	-	-	15m	15m	10m
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, f1.19mm / 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
Viewing Angle Adjustment	Rotate: ±90°	Rotate: ±90°	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)	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)
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	15 fps at 2592 x 1944	15 fps at 2592 x 1944	7 fps at 3648 x 2736	15 fps at 2592 x 1944	15 fps at 2592 x 1944	7 fps at 3648 x 2736
Horizontal Resolution	1350 TVL	1350 TVL	1450 TVL	1350 TVL	1350 TVL	1450 TVL
View Mode	Fisheye View	Fisheye View	Fisheye View	Fisheye View	Fisheye View	Fisheye View
Multi-Streaming	Dual streams	Dual streams	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 (74 dB)	Basic WDR (74 dB)	Basic WDR (70 dB)
Digital Noise Reduction	DNR	DNR	DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
S/N Ratio	52 dB	52 dB	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)	1-way (Mic-in, Line-in)	1-way (Mic-in, Line-in)
Network Connector	RJ-45	M12	RJ-45	RJ-45	M12	RJ-45
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	PoE Class 1	PoE Class 1	PoE Class 1	PoE Class 2	PoE Class 2	PoE Class 2
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)	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	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	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)	-20°C ~ 50°C (-4°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)
Approvals	CE, FCC, CB, IP68, IK10, NEMA 4X, EN50155, UL Listed	CE, FCC, CB, IP68, IK10, NEMA 4X, EN50155, UL Listed	CB, IP68, IK10, NEMA 4X, EN50155, UL Listed	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC, IP68, IK10, NEMA 4X, EN50155	CE, FCC, IP68, IK10, NEMA 4X, EN50155

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



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

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



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

Outdoor Zoom Dome with H.265						
   3x  4.3x  2.8x  4.3x  4.4x  4.4x						
Model	B89	A81	A82	A83	Z81	Z82
Maximum Resolution	3MP	3MP	5MP	2MP	2MP	4MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes	Yes	Yes
Low Light Sensitivity	Superior	Superior	Superior	Extreme	Superior	Superior
Minimum Illumination	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.3	Color: 0.05 lux, B/W: 0.005 lux at F1.4 (AGC on)	Color: 0.1 lux, B/W: 0.05 lux at F 1.5 (AGC on)	Color: 0.05 lux, B/W: 0.005 lux at F1.4 (AGC on)	Color: 0.02 lux, B/W: 0 lux at F1.4	Color: 0.02 lux, B/W: 0 lux at F1.4
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	40m	30m	30m	30m	30m	30m
Lens	Zoom, f3-9mm / F1.3-2.2, DC iris, Auto focus	Zoom, f2.8-12mm / F1.4-2.8, P-Iris, Auto focus	Zoom, f3.6-10mm / F1.5-2.8, P-Iris, Auto focus	Zoom, f2.8-12mm / F1.4-2.8, P-Iris, Auto focus	Zoom, f2.7-12mm / F1.4, Auto focus	Zoom, f2.7-12mm / F1.4, Auto focus
Zoom Ratio	3x optical	4.3x optical	2.8x optical	4.3x optical	4.4x optical	4.4x optical
Zoom Application	Camera installation; Auto zoom by event; Manual operation	Camera installation	Camera installation	Camera installation	Camera installation	Camera installation
Viewing Angle Adjustment	Pan: ±175°; Tilt: 5°-175°; Rotate: ±175°	Pan: ±135°; Tilt: 0°-90°; Rotate: ±90°	Pan: ±135°; Tilt: 0°-90°; Rotate: ±90°	Pan: ±135°; Tilt: 0°-90°; Rotate: ±90°	Pan: 0°-360°; Tilt: 15°-90°; Rotate: 0°-360°	Pan: 0°-360°; Tilt: 15°-90°; Rotate: 0°-360°
Horizontal Viewing Angle	97.5°-34.2°	90.6°-32.7°	79.5°-38.1°	88°-25°	102°-32°	91°-27°
Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
Frame Rate vs. Resolution	30 fps at 2048 x 1536 60 fps at 1920 x 1080	30 fps at 2048 x 1536	30 fps at 2592 x 1944 60 fps at 1920 x 1080	30 fps at 1920 x 1080	30 fps at 1920 x 1080	20 fps at 2592 x 1520 30 fps at 1920 x 1080
Horizontal Resolution	1450 TVL	1300TVL	1650 TVL	1100 TVL	-	-
Multi-Streaming	Triple streams	Dual streams	Triple streams	Dual streams	Triple Streams	Triple Streams
Wide Dynamic Range	Extreme WDR (145 dB)	Extreme WDR (142dB)	Extreme WDR (100 dB)	Extreme WDR (100 dB)	Extreme WDR (120 dB)	Extreme WDR (120 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	No	No
Defogging	Yes	Yes	Yes	Yes	Yes	Yes
S/N Ratio	56 dB	56 dB	56 dB	56 dB	52 dB	52 dB
Audio	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	1-way (Built-in Microphone)	1-way (Built-in Microphone)
Digital Input / Output	2/2	1/1	1/1	1/1	No	No
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC (card not included)	MicroSDHC (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
Environmental Casing	Weatherproof (IP68); Vandal proof (IK10); Built-in dehumidifier	Weatherproof (IP66); Vandal proof (IK10)	Weatherproof (IP66); Vandal proof (IK10)	Weatherproof (IP66); Vandal proof (IK10)	Weatherproof (IP67)	Weatherproof (IP67)
Built-in Analytics	Yes	No	No	No	No	No
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	No	No
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes
Heater	Yes	No	No	No	No	No
Fan	No	No	No	No	No	No
Operating Temperature	-40°C ~ 60°C (-40°F ~ 140°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 50°C (-40°F ~ 122°F)	-40°C ~ 60°C (-40°F ~ 140°F)	-40°C ~ 60°C (-40°F ~ 140°F)
Approvals	CE, FCC, IP68, IK10, NEMA 4X	CE, FCC, IP66, IK10, NEMA 4X	CE, FCC, IP66, IK10, NEMA 4X	CE, FCC, IP66, IK10, NEMA 4X	CE, FCC, IP67	CE, FCC, IP67



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

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



	Outdoor Vari-Focal Dome					
						
Model	E82A	E83A	E84A	E86A	E89	D82A
Maximum Resolution	3MP	5MP	2MP	3MP	10MP	3MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes	Yes	Yes
Low Light Sensitivity	Standard	Standard	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	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	Yes	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	30m	30m	30m	30m	30m	-
Lens	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus	Vari-focal, f3.1-13.3mm / F1.4, Fixed iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, Fixed iris, Manual focus
Viewing Angle Adjustment	Pan: 0°-350°; Tilt: 17°-163°; 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°
Horizontal Viewing Angle	70.5°-28.2°	69.2°-28.2°	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	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	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	1350 TVL	1350 TVL	1100 TVL	1250 TVL	1450 TVL	1350 TVL
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
Wide Dynamic Range	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (75 dB)	Superior WDR (110 dB)	Basic WDR (70 dB)	-
Digital Noise Reduction	DNR	DNR	DNR	DNR	DNR	DNR
S/N Ratio	52 dB	52 dB	52 dB	52 dB	52 dB	52 dB
Audio	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Digital Input / Output	1/1	1/1	1/1	1/1	2/2	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)
Power Source	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2
Environmental Casing	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)	Weatherproof (IP67); Vandal proof (IK10)
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	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)	-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, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X	CE, FCC, IP67, IK10, NEMA 4X

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



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

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



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

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



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

	Indoor Fisheye Dome		
			
Model	B54	B55	B56
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	 10x	 10x
Model	I42	I45	I47	I48	B44	B45
Maximum Resolution	2MP	2MP	4MP	2MP	1.3MP	2MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes	Yes	Yes
Low Light Sensitivity	Extreme	Extreme	Superior	Superior	Superior	Superior
Minimum Illumination	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.55	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.6	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	40m	40m	40m	40m (120m with maximum exposure)	40m	40m
Lens	Zoom, f4.6-165.6mm / F1.55-5.0, DC iris, Auto focus	Zoom, f4.3-129mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.3-129mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.5-148.5mm / F1.6-5.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.8-3.0, DC iris, Auto focus	Zoom, f4.9-49mm / F1.8-3.0, DC iris, Auto focus
Zoom Ratio	36x optical	30x optical	30x optical	33x optical	10x optical	10x optical
Zoom Application	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation	Camera installation; Auto zoom by event; Manual operation
Horizontal Viewing Angle	62.7°-2.7°	65.6°-2.07°	66.4°-2.14°	69.3°-3°	52.1°-5.7°	57.8°-6.9°
Compression	H.264, MJPEG	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	30 fps at 1920 x 1080	15 fps at 2688 x 1520 30 fps at 1920 x 1080	60 fps at 1920 x 1080	30 fps at 1280 x 960 60 fps at 1280 x 720	30 fps at 1920 x 1080
Horizontal Resolution	1800 TVL	1800 TVL	1850 TVL	1800 TVL	1400 TVL	1450 TVL
Multi-Streaming	Triple streams	Dual streams	Dual streams	Triple streams	Dual streams	Dual streams
Wide Dynamic Range	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Advanced WDR (75 dB)	Extreme WDR (145 dB)	Basic WDR (88 dB)	Basic WDR (75 dB)
Digital Noise Reduction	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	DNR	DNR
Digital Image Stabilizer	Yes	Yes	Yes	Yes	No	No
Defogging	Yes	Yes	Yes	Yes	No	No
S/N Ratio	56 dB	56 dB	56 dB	56 dB	52 dB	52 dB
Audio	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Digital Input / Output	1/1	1/1	1/1	1/1	1/1	1/1
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
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
Environmental Casing	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)
Built-in Analytics	Yes	No	No	Yes	No	No
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes
Heater	Yes	Yes	Yes	Yes	Yes	Yes
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)	-40°C ~ 50°C (-40°F ~ 122°F)
Approvals	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing), UL Listed	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)

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



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

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



	Vari-Focal Bullet						
							
Model	E41	E42B	E43B	E44A	E46A	E48	D42A
Maximum Resolution	1MP	3MP	5MP	2MP	3MP	10MP	3MP
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	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	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	Yes	Yes	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	30m	30m	30m	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	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	69.8°-19.1°	70.5°-28.2°	69.2°-28.2°	92.5°-35.9°	70.5°-28.8°	100.5°-25.8°	70.5°-28.2°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	30 fps at 1280 x 720	15 fps at 2048 x 1536 30 fps at 1920 x 1080	15 fps at 2592 x 1944 30 fps at 1920 x 1080	30 fps at 1920 x 1080	20 fps at 2048 x 1536 30 fps at 1920 x 1080	7 fps at 3648 x 2736 30 fps at 1920 x 1080	15 fps at 2048 x 1536 30 fps at 1920 x 1080
Horizontal Resolution	700 TVL	1350 TVL	1350 TVL	1100 TVL	1250 TVL	1450 TVL	1350 TVL
Multi-Streaming	Dual streams	Dual streams	Dual streams	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 (75 dB)	Superior WDR (110 dB)	Basic WDR (70 dB)	-
Digital Noise Reduction	DNR	DNR	DNR	DNR	DNR	DNR	DNR
S/N Ratio	52 dB	52 dB	52 dB	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)	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	1/1	1/1	1/1
Local Storage	No	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	PoE Class 2	PoE Class 2	PoE Class 2	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 (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP68); Vandal proof metal casing (IK10)
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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)	-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, IK10 (metal casing)	CE, FCC, IP68, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)

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



 	Fixed Bullet			Fixed Bullet with H.265		
						 Combo Kits p.58
Model	E38	E39	D32	A31	A32	Z31
Maximum Resolution	2MP	2MP	3MP	3MP	3MP	4MP
Application Environment	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Day / Night	Yes	Yes	Yes	Yes	Yes	Yes
Low Light Sensitivity	Superior	Extreme	Standard	Superior	Superior	Superior
Minimum Illumination	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F2.0	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.85	Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	Color: 0.1 lux, B/W: 0.01 lux at F1.85 (AGC on)	Color: 0.1 lux, B/W: 0.01 lux at F2.0 (AGC on)	Color: 0.02 lux, B/W: 0 lux (IR LED on) at F1.8
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes	Yes
IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	30m	30m	20m	30m	30m	30m
Lens	Fixed focal, f2.93mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f4.2mm / F1.8, Fixed iris, Fixed focus	Fixed focal, f2.8mm / F1.85, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F2.0, Fixed iris, Fixed focus	Fixed focal, f3.6mm / F1.8, Fixed iris, Fixed focus
Horizontal Viewing Angle	99°	90.6°	62.7°	106.9°	80°	76.8°
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
Frame Rate vs. Resolution	60 fps at 1920 x 1080	60 fps at 1920 x 1080	15 fps at 2048 x 1536 30 fps at 1920 x 1080	30 fps at 2048 x 1536	30 fps at 2048 x 1536	20 fps at 2592 x 1520 30 fps at 2048 x 1520
Horizontal Resolution	1100 TVL	1100 TVL	1350 TVL	1300 TVL	1300 TVL	-
Multi-Streaming	Triple streams	Triple streams	Dual streams	Dual streams	Dual streams	Triple streams
Wide Dynamic Range	Extreme WDR (145 dB)	Extreme WDR (145 dB)	-	Advanced WDR (72 dB)	Advanced WDR (72 dB)	Extreme WDR (120 dB)
Digital Noise Reduction	2D + 3D DNR	2D + 3D DNR	DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
Digital Image Stabilizer	Yes	Yes	No	Yes	Yes	Yes
Defogging	Yes	Yes	No	Yes	Yes	Yes
S/N Ratio	56 dB	56 dB	52 dB	56 dB	56 dB	55 dB
Audio	No	2-way (Built-in Microphone, Mic-in, Line-in, Line-out)	No	No	No	No
Digital Input / Output	No	1/1	No	No	No	No
Local Storage	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	No	No	No	No
Power Source	PoE Class 2	DC 12V; PoE Class 3	PoE Class 2	DC 12V; PoE Class 3	PoE Class 3	DC 12V; PoE Class 3
Environmental Casing	Weatherproof (IP67); Vandal proof metal casing (IK10)	Weatherproof (IP68); Built-in dehumidifier; Vandal proof metal casing (IK10)	Weatherproof (IP66)	Weatherproof (IP66); Vandal proof metal casing (IK10)	Weatherproof (IP66)	Weatherproof (IP67)
Built-in Analytics	Yes	Yes	No	No	No	No
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	No
ONVIF Compliant	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)	-30°C ~ 50°C (-22°F ~ 122°F)	-20°C ~ 50°C (-4°F ~ 122°F)	-35°C ~ 60°C (-31°F ~ 140°F)
Approvals	CE, FCC, IP67, NEMA 4X, IK10 (metal casing)	CE, FCC, IP68, NEMA 4X, IK10 (metal casing)	CE, FCC, IP66	CE, FCC, IP66, NEMA 4X, IK10 (metal casing)	CE, FCC, IP66	CE, FCC, IP67

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



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

	Vari-Focal Box						Vari-Focal Box with H.265	
								
Model	E21VA	E22VA	E23B	E24A	E222	E271	A23	A24
Maximum Resolution	1MP	5MP	2MP	3MP	2MP	10MP	3MP	5MP
Application Environment	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor
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
Day / Night	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Low Light Sensitivity	Standard	Standard	Superior	Standard	Superior	Standard	Superior	Superior
Minimum Illumination	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)
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IR LED	No	No	No	No	No	No	No	No
Lens	Vari-focal, f2.8-12mm / F1.4, DC iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, DC iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, DC iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, DC iris, Manual focus	Vari-focal, f2.8-12mm / F1.4, DC iris, Manual focus	Vari-focal, f3.1-13.3mm / F1.4-4.0, DC iris, Manual focus	Vari-focal, f2.8-12mm / F1.4-2.8, P-iris, Auto back focus	Vari-focal, f3.6-10mm / F1.5-2.8, P-iris, Auto back focus
Horizontal Viewing Angle	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°
Compression	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
Frame Rate vs. Resolution	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
Horizontal Resolution	700 TVL	1350 TVL	1100 TVL	1250 TVL	1100 TVL	1450 TVL	1300 TVL	1650 TVL
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams	Triple streams	Dual streams	Dual streams	Triple streams
Wide Dynamic Range	Basic WDR (74 dB)	Basic WDR (74 dB)	Basic WDR (75 dB)	Superior WDR (110 dB)	Extreme WDR (145 dB)	Basic WDR (70 dB)	Extreme WDR (142 dB)	Extreme WDR (100 dB)
Digital Noise Reduction	DNR	DNR	DNR	DNR	2D + 3D DNR	DNR	2D + 3D DNR	2D + 3D DNR
Digital Image Stabilizer	No	No	No	No	Yes	No	Yes	Yes
Defogging	No	No	No	No	Yes	No	Yes	Yes
S/N Ratio	52 dB	52 dB	52 dB	52 dB	56 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)	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	1/1	1/1	1/1	1/1
Serial Port	No	No	RS-485, RS-422	No	RS-485, RS-422	No	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)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)	MicroSDHC/MicroSDXC (card not included)
Power Source	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 2	PoE Class 3	PoE Class 2	DC 12V; PoE Class 3	DC 12V; PoE Class 3
Environmental Casing	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66)	Optional housing (IP66-IP68)	Optional housing (IP68)
Built-in Analytics	No	No	No	No	Yes	No	No	No
GPS Position	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting	Manual setting
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Operating Temperature	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-10°C ~ 50°C (14°F ~ 122°F)	-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	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC

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

 	Video Encoder						
	1 Channel	1 Channel	1 Channel	4 Channels	4 Channels	8 Channels	16 Channels
							
Model	V11	V21	V22	V23	V24	V31	V32
Compression	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG	H.264, MJPEG
Frame Rate vs. Resolution	30 fps at 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
Multi-Streaming	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams	Dual streams
Audio	2-way (Line-in x 1, Line-out x 1)	2-way (Line-in x 1, Line-out x 1)	2-way (Line-in x 1, Line-out x 1)	2-way (Line-in x 4, Line-out x 1)	2-way (Line-in x 4, Line-out x 1)	2-way (Line-in x 8, Line-out x 1)	2-way (Line-in x 16, Line-out x 1)
Analog Video Input	BNC x 1	BNC x 1	BNC x 1	BNC x 4	BNC x 4	BNC x 8	BNC x 16
Analog Video Output	No	BNC x 1	BNC x 1	No	No	No	No
Digital Input / Output	No	1/1	1/1	4 (DI/DO configurable)	4 (DI/DO configurable)	8 (DI/DO configurable)	16 (DI/DO configurable)
Serial Port	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
Local Storage	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)
Power Source	DC 7V-20V; PoE Class 3	DC 7V-20V; PoE Class 3	DC 7V-20V; PoE Class 3	DC 7V-20V; PoE Class 3	DC 7V-20V; PoE Class 3	AC 100V-240V	AC 100V-240V
Environmental Casing	No	No	Vibration proof (NEMA TS2-ready, without certificate)	No	Vibration proof (NEMA TS2-ready, without certificate)	No	No
Mount Type	Surface	Surface	Surface	Surface	Surface	Rack mount	Rack mount
Rack Space	-	-	-	-	-	1U	1U
Remote Access	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client	Web Client, Mobile Client
Event Trigger	Video motion detection (3 regions), Video loss, Sound detection, Video Recovery, Scheduler, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully	Video motion detection (3 regions), External device through digital input, Sound detection, Video loss, Video Recovery, Scheduler, Storage removed, Failed to write storage, System is going to reboot, System booted successfully
Event Response	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
Client PC Operating System	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
PC Web Browser	IE 11	IE 11	IE 11	IE 11	IE 11	IE 11	IE 11
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fan	No	No	No	No	No	Yes	Yes
Operating Temperature	-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)
Approvals	CE, FCC	CE, FCC	CE, FCC, NEMA TS2-ready (without certificate)	CE, FCC	CE, FCC, NEMA TS2-ready (without certificate)	CE, FCC	CE, FCC



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

Video Management System					
Mini Standalone NVR					
				 Combo Kits p.58	 Combo Kits p.58
Model	ENR-010P	ENR-020P	INR-100	ZNR-120P	ZNR-121P
Maximum Number of Video Devices	4	9	16	4	8
Additional Computing Power	No	No	Yes	No	No
Maximum Number of Clients	1 local, 2 remote	1 local, 2 remote	1 local, 5 remote	1 local, 2 remote	1 local, 2 remote
Free License	4	9	16	4	8
Video Resolution	Up to 4-Megapixel (Local display), Up to 12-Megapixel (Remote display)	Up to 4-Megapixel (Local display), Up to 12-Megapixel (Remote display)	Support all ACTi cameras in all resolution	Up to 8-Megapixel(Local display), Up to 12-Megapixel (Remote display)	Up to 8-Megapixel(Local display), Up to 12-Megapixel (Remote display)
Compression	H.264	H.264	H.265, H.264, MPEG-4, MJPEG	H.265, H.264	H.265, H.264
Audio	No	No	2-way (Mic-in, Line-out)	2-way (Line-in, Line-out)	2-way (Line-in, Line-out)
Built-in PoE Connectors	4 Ports	8 Ports	No	4 Ports	8 Ports
Power Source	DC 48V	DC 48V	AC 100-240V	DC 48V	DC 52V
Scheduled Recording	Yes	Yes	Yes	Yes	Yes
Event Recording	Yes	Yes	Yes	Yes	Yes
Manual Recording	Yes	Yes	Yes	Yes	Yes
Speed Up	Yes	Yes	Yes	No	No
Dual Stream Management	Yes	Yes	Yes	No	No
Recording Throughput	16 Mbps	36 Mbps	300 Mbps	40 Mbps	60 Mbps
HDD Interface	Maximum 1 SATA disk	Maximum 1 SATA disk	Maximum 1 SATA disk	Maximum 1 SATA disk	Maximum 1 SATA disk
External Storage Interface	No	No	eSATA, iSCSI	No	No
RAID Level	No	No	No	No	No
Digital Zoom	Yes	Yes	Yes	Yes	Yes
Event Status	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client
Instant Playback	Instant Playback in live view window (Remote client)	Instant Playback in live view window (Remote client)	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window
e-Map	No	No	Yes	No	No
PTZ Control	Yes	Yes	Yes	Yes	Yes
Playback Control	Continuous forward and backward playback with speeds 0.5x / 1x / 2x / 4x / 8x / 16x / 32x; pause; stop	Continuous forward and backward playback with speeds 0.5x / 1x / 2x / 4x / 8x / 16x / 32x; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 0.125x / 0.25x /0.5x / 1x / 2x / 4x / 8x / 16x / 32x / 64x / 128x/ 256x; pause; stop	Continuous forward and backward playback with speeds 0.125x / 0.25x /0.5x / 1x / 2x / 4x / 8x / 16x / 32x / 64x / 128x/ 256x; pause; stop
Synchronized Playback	4 channels	9 channels	9 channels (Local),16 channels (Remote)	4 channels	8 channels
Local Access	HDMI monitor; USB keyboard & mouse	HDMI monitor; USB keyboard & mouse	HDMI/DVI/Display port for monitor; Joystick; Keyboard & mouse	HDMI/VGA monitor; USB keyboard & mouse	HDMI/VGA monitor; USB keyboard & mouse
Remote Access	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Web Client	Web Client
Permission Control	Unlimited number of users, Customizable permissions for user groups	Unlimited number of users, Customizable permissions for user groups	Unlimited number of users, Active Directory, Customizable permissions for user groups, Account lockout, Automatic logout after idle, Playback password protected, Password validity period	128 Remote users, Customizable permissions for user groups	128 Remote users, Customizable permissions for user groups
GPS Position	No	No	Manual setting	No	No
Video Export	RAW, AVI	RAW, AVI	RAW, AVI, EXE	MP4	MP4
Server Operating System	Embedded Linux	Embedded Linux	Embedded Windows 7	Embedded Linux	Embedded Linux
Client PC Operating System	Windows 8, Windows 7	Windows 8, Windows 7	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 8, Windows 7	Windows 8, Windows 7
PC Web Browser	IE 11	IE 11	IE 11	IE 10 or newer, Firefox, Chrome, Opera	IE 10 or newer, Firefox, Chrome, Opera
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	-10°C ~ 55°C (14°F ~ 131°F)	-10°C ~ 55°C (14°F ~ 131°F)
Approvals	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC



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



Video Management System

Desktop Standalone NVR

Lockbox Standalone NVR



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

 	Video Management System Rackmount Standalone NVR					
						
Model	ENR-190	INR-440	INR-450	INR-460	GNR-410	ZNR-421
Maximum Number of Video Devices	16	200	200	200	64	32
Additional Computing Power	No	No	Yes	No	No	No
Maximum Number of Clients	1 local, 2 remote	1 local, 5 remote	1 local, 5 remote	1 local, 5 remote	1 local, 4 remote	1 local, 2 remote
Free License	16	64 (64 for ACTi and 1 for third-party video device)	64 (64 for ACTi and 1 for third-party video device)	64 (64 for ACTi and 1 for third-party video device)	64 (64 for ACTi and 1 for third-party video device)	32
Video Resolution	Up to 4-Megapixel (Local display). Up to 10-Megapixel (Remote display)	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions	Support all ACTi cameras in all resolutions	12MP
Compression	H.264	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264, MPEG-4, MJPEG	H.265, H.264
Audio	No	No	No	2-way (Min-in, Line-out)	2-way (Mic-in, Line-in, Line-out)	2-way (Line-in, Line-out)
Power Source	AC 100-240V	AC 100-240V	AC 100-240V	AC 100-240V	AC 100-240V	DC 12V
Redundant Power Supply	No	Yes	Yes	No	No	No
Rack Mount	Rack Mount (1U)	Rack Mount (2U)	Rack Mount (2U)	Rack Mount (2U)	Rack Mount (2U)	Rack Mount (1U)
Scheduled / Event / Manual Recording	Yes	Yes	Yes	Yes	Yes	Yes
Dual Stream Management	Yes	Yes	Yes	Yes	Yes	No
Recording Throughput	48 Mbps	300 Mbps	300 Mbps	300 Mbps	300 Mbps	320 Mbps
HDD Interface	Maximum 4 SATA disks	Maximum 12 SATA disks (without storage disks)	Maximum 12 SATA disks (without storage disks)	Maximum 8 SATA disks (without storage disks)	Maximum 8 SATA disks (1 system disk included)	Maximum4 SATA disks (1 system disk included)
External Storage Interface	No	SAS, iSCSI	eSATA, iSCSI, USB	eSATA, iSCSI	eSATA, iSCSI, USB	No
RAID Level	No	Hardware RAID 0, 1, 5, 6, 10, 50, 60	Hardware RAID 0, 1, 5, 6, 10, 50, 60	Hardware RAID 0, 1, 5, 10	Software RAID 0, 1	No
Event Status	Display event status upon alarm or upon connection loss or recovery between server and client	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	Display event status upon alarm or upon connection loss or recovery between server and client
Instant Playback	Instant Playback in live view window (Remote client)	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window	Instant Playback in live view window
e-Map	No	Yes	Yes	Yes	Yes	No
PTZ Control	Yes	Yes	Yes	Yes	Yes	Yes
Playback Control	Continuous forward and backward playback with speeds 0.5x / 1x / 2x / 4x / 8x / 16x / 32x; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 1x/2x/4x/8x/16x or frame-by-frame; pause; stop	Continuous forward and backward playback with speeds 0.125x / 0.25x /0.5x / 1x / 2x / 4x / 8x / 16x / 32x / 64x / 128x/ 256x; pause; stop
Synchronized Playback	16 channels	9 channels (local), 64 channels (remote)	9 channels (local), 64 channels (remote)	9 channels (local), 64 channels (remote)	9 channels (local), 64 channels (remote)	16 channels
Local Access	HDMI monitor; USB keyboard & mouse	VGA port for monitor; USB joystick; keyboard & mouse	VGA port for monitor; USB joystick; keyboard & mouse	DVI/VGA/Display port for monitor; USB joystick; keyboard & mouse	HDMI/VGA/Display port for monitor; USB joystick, keyboard & mouse	HDMI/VGA monitor; USB keyboard & mouse
Remote Access	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	Web Client
Video Export	RAW, AVI	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE	RAW, AVI, EXE	MP4
Server Operating System	Embedded Linux	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7	Embedded Linux
Client PC Operating System	Windows 8, Windows 7	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 8, Windows 7
PC Web Browser	IE 11	IE 11	IE 11	IE 11	IE 11	IE 10 or newer, Firefox, Chrome, Opera
ONVIF Compliant	Yes	Yes	Yes	Yes	Yes	Yes
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	-10°C ~ 55°C (14°F ~ 131°F)
Approvals	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC

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





Video Management System

Stanalone CMS



Standalone TV Wall



Model	CMS-100	CMS-200	TVW-100
Product Application	-	-	-
Maximum Number of Video Devices	800	1600	-
Maximum number of Monitors	-	-	4
Free License	100	200	-
Compression	H.265, H.264, MJPEG, MPEG-4	H.265, H.264, MJPEG, MPEG-4	H.265, H.264, MPEG-4, MJPEG
Audio	2-way (Mic-in, Line-out)	2-way (Mic-in, Line-out)	2-way (Mic-in, Line-out)
Power Source	AC 100~240V	AC 100~240V	AC 100~240V
Rack Mount	-	Rackmount (1U)	-
Third-party Integration	Point of Sale (POS), Access Control, Network I/O, Parking Management Station (PMS)	Point of Sale (POS), Access Control, Network I/O, Parking Management Station (PMS),	-
Manual Recording	Yes	Yes	-
Dual Stream Management	Yes	Yes	
HDD Bay	Maximum 1 SATA disk (without storage disks)	Maximum 1 SATA disk (without storage disks)	Maximum 1 SATA disk (without storage disks)
USB	Yes	Yes	Yes
Maximum display layout	64	64	64 (per monitor)
Digital Zoom	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	-
Instant Playback	Instant Playback in live view window	Instant Playback in live view window	-
e-Map	Yes	Yes	Yes
PTZ Control	PTZ Control, Speed Control	PTZ Control, Speed Control	-
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	-
Synchronized Playback	9 channels (Local), 64 channels (Remote)	9 channels (Local), 64 channels (Remote)	-
Local Access	HDMI/DVI/Display port for monitor; Keyboard & mouse	DVI/VGA/Display port for monitor; Keyboard & mouse	HDMI/DVI/VGA/Display port/Mini display port for monitor; Keyboard & mouse
Remote Access	Workstation, Web Client, Mobile Client	Workstation, Web Client, Mobile Client	-
Server Operating System	Embedded Windows 7	Embedded Windows 7	Embedded Windows 7
Client PC Operating System	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008	Windows 10, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012, Windows Server 2008
PC Web Browser	IE 11	IE 11	IE 11
ONVIF Compliant	Yes	Yes	-
Fan	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)
Approvals	CE, FCC	CE, FCC	CE, FCC

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

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

METADATA GENERATOR BOX

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

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

MISSION CRITICAL SOLUTION PACKAGES

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



Discover more solutions:



www.acti.com/products/solution-packages

POPULAR SOLUTIONS

Retail Solutions

People Counting Package

Foot traffic reports.
Live total occupancy.



Digital Signage Package

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



Demographics Package

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



Access Control Solutions

Access Control Package with RFID Card

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



Access Control Package with RFID & Face Snapshot

RFID card detection together
with face snapshot as an evidence.



Access Control Package with Face Recognition

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



Digital Enterprise

Attendance Management with Card & Snapshot

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



Fleet Management

Fleet Management Package

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



Parking Lot Management

Parking Lot Management Package

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



IP COMBO KITS

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

ZNR-120P-K1

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



ZNR-120P-K2

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



ZNR-120P-K3

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



* All Bundled 1TB HDD

ZNR-121P-K1

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



ZNR-121P-K2

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



ZNR-121P-K3

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



* All Bundled 2TB HDD

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

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

ACCESS CONTROL SOLUTION DEMO KITS

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

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

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

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

MARKET APPLICATION SUITE

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

Customized Solutions for Different Markets



Retail

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

Business Intelligence

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

Operation Management

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



Parking Lot

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

Operation Management

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



Logistics

Traffic management of multiple warehouses and goods tracking.

Operation Management

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



Mobile Vehicle

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

Operation Management

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



Factory

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

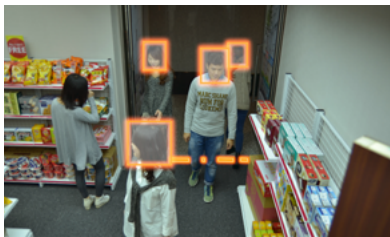
Operation Management

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

VIDEO ANALYTICS

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

Popular Algorithms



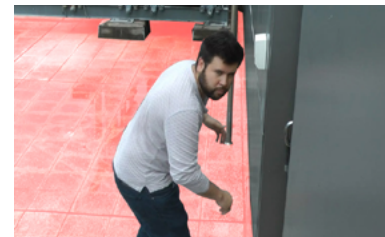
People Counting

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



Missing Object

Detect objects that have suddenly disappeared from a marked area.



Enter Area

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



Line Crossing

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



Unattended Object

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



Automatic License Plate Recognition

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



Face Recognition / Age and Gender Detection

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

POS INTEGRATION

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

Applications



Employee Theft

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



Sweethearting

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



Conversion Rate

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



VIP Service

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

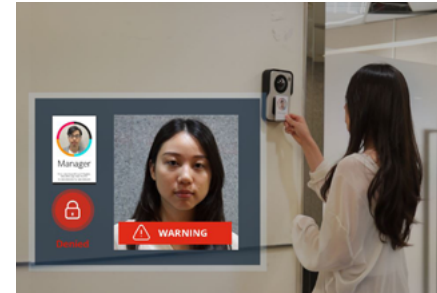
ACCESS CONTROL SYSTEM

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



Tailgating and Piggybacking

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



Identity Fraud

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

PARKING LOT MANAGEMENT SYSTEM

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



Access Control at the Entrance

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



Payment Calculation at the Exit

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



Car Locator at the Parking Spot

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

MOBILE CLIENT

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

Download ACTi Mobile Client now on your iOS or Android device for free! ▶▶▶



Main Features



Live View and Playback

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



Zoom and PTZ Control

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



Digital Input / Output

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



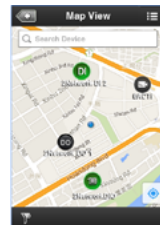
Video Push

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



Search Video Recordings

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



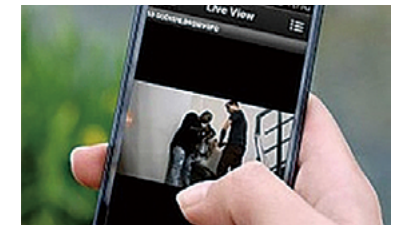
Google Maps

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



3rd Party System Integration

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

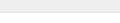
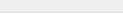
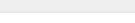


Notification Push

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

	Optional Lenses																	
																		
Model	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	
Product Type	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	
Day / Night	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	
Lens Mount	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	
Focal Length	Fixed focal, f4.2mm	Fixed focal, f4.2mm	Fixed focal, f2.8mm	Vari-focal, f2.8-12mm	Fixed focal, f2.93mm	Fixed focal, f2.93mm	Vari-focal, f2.8-12mm	Fixed focal, f4.0mm	Vari-focal, f3.1-13.3mm	Vari-focal, f4.1-9mm	Vari-focal, f3.1-9m	Vari-focal, f7.5-50mm	Vari-focal, f2.8-8.5mm	Fixed focal, f1.9mm	Fixed focal, f2.55mm	Fixed focal, f8.0mm	Fixed focal, f6.0mm	
Iris	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	
Focus	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	
Supported Models	E12A E13A	D92	-	-	-	-	-	-	-	-	-	E23B	E23B	A21 A23	-	-	D92	D92

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

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

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

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

Mounting Accessory Matrix																					
Camera Type	Camera Installation Series		Example Models	Target Surface	Mounting Method																
					Surface	Tilttable Surface Mount	Gang Box	Flush	Tilttable Flush Mount	Wall Mount	Tilted Mount	Pendant	Pole Mount	Corner Mount	Bracket	Integrated Bracket	Ceiling Bracket	Height Strip	Converter for NPT Standard Mounts	Desktop Mount	Edge Clamp
Box	Micro Box		Q22	Desktop																Y	
				Edge																	Y
				Ceiling											Y						
				Wall											Y						
				Pole									Y								
	Indoor Box		A2x, B2x, E2x, I2x,	Ceiling											Y						
				Wall											Y						
				Pole									Y (w/Housing)								
				Corner										Y (w/Housing)							
	Outdoor-Ready Box		KCM-5611, KCM-5211E	Wall											Y						
				Pole									Y								
				Corner										Y							
Bullet	Mini Bullet		E38	Ceiling												Y					
				Wall												Y					
	Bullet with Integrated Bracket		A3x, A4x, B4x, E39, E41x, E44A, E46A, I4x	Ceiling			E39, E4x, I48 only										Except B4x, I4x	B4x, I4x only			
				Wall			Except A3x, A4X									Y					
				Pole									Y								
	Bullet with Bundled Removable Bracket		D3x, D4x, E3x, E41A ~ E43A,	Ceiling											Y						
				Wall											Y						
				Pole									Y								
				Corner										Y							
	Thermal Bullet		Q31	Wall												Y					
				Pole									Y								
Covert	Covert		Q11, Q12, Q13, Q111, Q14, Q112	Ceiling				Y	Y						Y						
				Wall				Y	Y						Y						
				Corner										Except Fisheye Covert							
	L-shape Pinhole Covert		Q113, Q115	Ceiling	Y	Y		Y										Y			
				Wall	Y	Y		Y			Y										
	Outdoor Fisheye Covert		Q13-K1	Windshield											Y						
Cube	Cube with Bundled Removable Bracket		E1x	Ceiling											Y						
				Wall											Y						
Door Station	Door Station		Q950	Wall	Y		Y														



Mounting Accessory Matrix

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

* For more mounting solutions, please refer to the Mounting Selector on www.acti.com/mountingselector

2018 Camera Roadmap Matrix

A / C / D / E / Z Series

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

2018 Camera Roadmap Matrix

KCM / B / I / Q Series

Product Type			In-Wall Box	Micro Box	Zoom Box		Zoom Bullet		Mini Dome		Dome				Fisheye Dome	Hemispheric Dome		Mini PTZ	PTZ		Speed Dome		Covert	Fisheye Covert		L-Shape Pinhole Covert	Pinhole Covert	Door Station
																												
Application Environment			Outdoor	Outdoor	Indoor/ Outdoor	Outdoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor		Indoor	Indoor	Outdoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Indoor	Indoor	Outdoor	Indoor	Indoor	Outdoor		
Lens			Fixed focal	Fixed focal	Zoom	Zoom	Zoom	Fixed focal	Fixed focal	Fixed focal	Zoom	Fixed focal	Fixed focal	Fixed focal	Zoom	Zoom	Zoom	Zoom	Zoom	Fixed focal	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													Q110 Q12	Q13	Q13-K1	Q113	Q14 Q14-K1			
		3MP						Q920 Q921 Q922 Q923																				
Day & Night	Standard	4MP									KCM-7111					B910 (10x)												
		5MP					B46 (10x)			B51	B61 (3x)		B81 (3x) B82 (2.4x)	B54			B96A (10x)											
		10MP			B210 (10x)		B410 (10x)			B52				B55														
	Super Low Light	1.3MP					B44 (10x)									B94A (10x)												
		2MP					B45 (10x)				B65 (3x)		B85 (3x)				B95A (10x)											
	Complicated Light	3MP			B23 (10x)		B49 (10x)			B53	B67 (3x)		B87 (3x)	B56			B97A (10x)											
	Complicated Light and Super Low Light	1MP						Q93 Q94																				
		2MP			B214 (20x) I28 (33x) I29 (36x)	KCM-5611 (18x)	B415 (20x) B416 (30x) I42 (36x) I45 (30x) I48 (33x)				B63 (3x)		B83 (3x)	Q51			I92 (30x) I94 (30x)	B934 (26x)	B916 (20x) B917 (30x) B945 (20x) B949 (30x) I96 (30x) I97 (33x) I98 (33x) I99 (36x) I915 (36x)									
		3MP	Q250		B26 (36x)		B412 (10x) B421 (36x)				B612(3x)	B71	B89 (3x)			B911 (10x)			B923 (30x)	B943 (36x)								
		4MP			I27 (30x)	KCM-5211E (18x)	I47 (30x)				KCM-3311 (3.6x)		KCM-7311 (3.6x)				I912 (33x)		I910 (33x)									
		5MP					B419 (10x) B420 (36x) B43 (30x)									I51 I71	B912 (10x)			B913 (30x)								
		6MP														B57A I73										Q950 Q951		
		8MP														B59A B74A												
		12MP														B511A B76A												



ACTi Corporation

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

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SEG-180207-000

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