	I44	I45	A41	A42	B415	B416
Model	I44	I45	A41	A42	B415	B416
Product Type	Zoom Bullet	Zoom Bullet	Zoom Bullet	Zoom Bullet	Zoom Bullet	Zoom Bullet
Maximum Resolution	1MP	2MP	3MP	5MP	2MP	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
Sensor Size	1/2.8 "	1/2.8 "	1/2.8 "	1/1.8 "	1/2.8 "	1/2.8 "
Effective Pixels	1944(H) X 1224(V) (2.38 MP)	1944(H) X 1224(V) (2.38 MP)	2065(H) X 1533(V)	3096(H) X 2080(V)	1944(H) X 1224(V) (2.38 MP)	1944(H) X 1224(V) (2.38 MP)
Day / Night	Yes	Yes	Yes	Yes	Yes	Yes
Low Light Sensitivity	Extreme	Extreme	Superior	Superior	Superior	Superior
Minimum Illumination	Color: 0.1 lux at F1.6 (30 IRE, 2400 K); B/W: 0 lux at F1.6 (IR LED on)	Color: 0.1 lux at F1.6 (30 IRE, 2400 K); B/W: 0 lux at F1.6 (IR LED on)	Color: 0.05 lux at F1.4; 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: 0.1 lux at F1.6 (30 IRE, 2400 K); B/W: 0 lux at F1.6 (IR LED on)	Color: 0.1 lux at F1.6 (30 IRE, 2400 K); B/W: 0 lux at F1.6 (IR LED on)
Mechanical IR Cut Filter	Yes	Yes	Yes	Yes	Yes	Yes
IR LED	Adaptive IR LED x 27 (850 nm)	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED	Adaptive IR LED
IR Working Distance	40m (0 lux, 30IRE, Gain 255, Auto shutter mode)	40m	30m	30m	40m	40m
Horizontal Resolution (TV Lines)	1450 TVL	1800 TVL	1300 TVL	1650 TVL	1450 TVL	1450 TVL
S/N Ratio	56 dB	56 dB	56 dB	56 dB	56 dB	56 dB
Focal Length	Zoom, f4.3-129mm	Zoom, f4.3-129mm	Zoom, f2.8-12mm	Zoom, f3.6-10mm	Zoom, f4.7-94mm	Zoom, f4.5-135mm
Aperture	F1.6-F5.0	F1.6-F5.0	F1.4-F2.8	F1.5-F2.8	F1.6-F3.5	F1.6-F4.4
Zoom Ratio	30x optical	30x optical	4.3x optical	2.8x 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	Camera Installation, Auto Zoom by Event, Manual Operation	Camera Installation, Auto Zoom by Event, Manual Operation
Iris	DC iris	DC iris	P-Iris	P-Iris	DC iris	DC iris
Focus	Auto focus	Auto focus	Auto focus	Auto focus	Auto focus	Auto focus
Lens Mount	Board mount	Board mount	Board mount	Board mount	Board mount	Board mount
Horizontal Viewing Angle	65.6° - 2.07°	65.6° - 2.07°	88° - 25°	90° - 34°	60.8° - 3.4°	59.8° - 2.34°
Compression	H.264 (Baseline/ Main/ High profile), MJPEG	H.264 (Baseline/ Main/ High profile), MJPEG	H.265, H.264 (Baseline/ Main/ High profile), MJPEG	H.265, H.264 (Baseline/ Main/ High profile), MJPEG	H.264 (Baseline/ Main/ High profile), MJPEG	H.264 (Baseline/ Main/ High profile), MJPEG
Maximum Frame Rate vs. Resolution	30 fps at 1280 x 720 30 fps at 800 x 600 30 fps at 640 x 480 15 fps at 320 x 240	30 fps at 1920 x 1080 30 fps at 1280 x 720 30 fps at 800 x 600 30 fps at 640 x 480 15 fps at 320 x 240	30 fps at 2048 x 1536 30 fps at 1920 x 1080 30 fps at 1280 x 720 30 fps at 800 x 600 30 fps at 640 x 480 30 fps at 320 x 240	30 fps at 2592 x 1944 30 fps at 2560 x 1920 30 fps at 1920 x 1080 30 fps at 1280 x 960 30 fps at 1280 x 720 30 fps at 720 x 576 30 fps at 640 x 480 30 fps at 640 x 360 30 fps at 320 x 240 30 fps at 320 x 180	60 fps at 1920 x 1080 60 fps at 1280 x 720 30 fps at 640 x 480 30 fps at 320 x 240	60 fps at 1920 x 1080 60 fps at 1280 x 720 30 fps at 640 x 480 30 fps at 320 x 240
Multi-Streaming	Simultaneous dual streams	Simultaneous dual streams	Simultaneous dual streams	Multiple streams	Simultaneous triple streams	Simultaneous triple streams
Wide Dynamic Range	Extreme WDR (145 dB)	Extreme WDR (145 dB)	Extreme WDR (130 dB)	Extreme WDR (90 dB)	Extreme WDR (145 dB)	Extreme WDR (145 dB)
Image Enhancement	White Balance, Brightness, Contrast, Sharpness, Automatic gain control, Flickerless, Defogging	White Balance, Brightness, Contrast, Sharpness, Automatic gain control, Flickerless, Digital Image Stabilizer, Defogging, (To be available through future firmware upgrade)	White Balance, Brightness, Contrast, Sharpness, Automatic gain control, Flickerless, Digital Noise Reduction, Defogging	Digital Image Stabilizer, Defogging	Digital Image Stabilizer, Defogging	Digital Image Stabilizer, Defogging
Digital Noise Reduction	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR	2D + 3D DNR
Privacy Mask		32 configurable 3D privacy masks	4 configurable regions	7 configurable regions	20 configurable 3D privacy masks	20 configurable 3D privacy masks
Built-in Analytics			Tamper, (some of the algorithms may not be available in the first release, can be upgraded for free later)	Tamper, (some of the algorithms may not be available in the first release, can be upgraded for free later)	Tamper, Shock Detection, Line Crossing, Enter Area, Missing Object, Unattended Object, Loitering	Tamper, Shock Detection, Line Crossing, Enter Area, Missing Object, Unattended Object, Loitering
VMS-based Analytics	Face Detection, Object Based Motion Detection, Tamper, People Counting, Line Crossing, Enter Area, Exit Area, Appear in Area, Missing Object, Direction Detection, License Plate Recognition, Vehicle Counting, Heat Map, Speed Estimation, Crowd Detection, Unattended Object	Face Detection, Object Based Motion Detection, Tamper, People Counting, Line Crossing, Enter Area, Exit Area, Appear in Area, Missing Object, Unattended Object, Crowd Detection, Direction Detection, Vehicle Counting, Heat Map, License Plate Recognition, Speed Estimation, (require PC-based or standalone IVS or ALPR Server)	Face Detection, Object Based Motion Detection, Tamper, People Counting, Line Crossing, Enter Area, Exit Area, Appear in Area, Missing Object, Unattended Object, Crowd Detection, Direction Detection, Vehicle Counting, Heat Map, License Plate Recognition, Speed Estimation, (require PC-based or standalone IVS or ALPR Server)	Face Detection, Object Based Motion Detection, Tamper, People Counting, Line Crossing, Enter Area, Exit Area, Appear in Area, Missing Object, Unattended Object, Crowd Detection, Direction Detection, Vehicle Counting, Heat Map, License Plate Recognition, Speed Estimation, (require PC-based or standalone IVS or ALPR Server)	Face Detection, Object Based Motion Detection, Tamper, People Counting, Line Crossing, Enter Area, Exit Area, Appear in Area, Missing Object, Unattended Object, Crowd Detection, Direction Detection, Vehicle Counting, Heat Map, License Plate Recognition, Speed Estimation, (require PC-based or standalone IVS or ALPR Server)	Face Detection, Object Based Motion Detection, Tamper, People Counting, Line Crossing, Enter Area, Exit Area, Appear in Area, Missing Object, Unattended Object, Crowd Detection, Direction Detection, Vehicle Counting, Heat Map, License Plate Recognition, Speed Estimation, (require PC-based or standalone IVS or ALPR Server)
Image Orientation	Flip, Mirror	Flip, Mirror	Mirror, Flip, Rotation	Mirror, Flip, Rotation	Rotation	Rotation
Audio Type	2-way, Line-in, Line-out	2-way, Line-in, Line-out	2-way, Mic-in, Line-in, Line-out	2-way, Mic-in, Line-in, Line-out	2-way, Line-in, Line-out	2-way, Line-in, Line-out
Network Protocol & Service	TCP, UDP, HTTP, HTTPS, DHCP, PPPoE, RTP, RTSP, IPv4/v6, NTP, ICMP, ARP, IGMP, SMTP, FTP, UPnP, SNMP, Bonjour, DNS, DDNS	TCP, UDP, HTTP, HTTPS, DHCP, PPPoE, RTP, RTSP, IPv6, DNS, DDNS, NTP, ICMP, ARP, IGMP, SMTP, FTP, UPnP, SNMP, Bonjour	IPv4/v6, TCP, UDP, HTTP, HTTPS, SMTP, FTP, NTP, DNS, DDNS, DHCP, ARP, Bonjour, UPnP, RTSP, RTP, RTCP, IGMP, PPPoE, ICMP, SNMP, QoS, IEEE 802.1X, (To be available through future firmware upgrade)	IPv4/v6, TCP, UDP, HTTP, HTTPS, SMTP, FTP, NTP, DNS, DDNS, DHCP, ARP, Bonjour, UPnP, RTSP, RTP, RTCP, IGMP, PPPoE, ICMP, SNMP, QoS, CoS, IEEE 802.1X, (To be available through future firmware upgrade)	TCP, UDP, HTTP, HTTPS, DHCP, PPPoE, RTP, RTSP, IPv6, DNS, DDNS, NTP, ICMP, ARP, IGMP, SMTP, FTP, UPnP, SNMP, Bonjour	TCP, UDP, HTTP, HTTPS, DHCP, PPPoE, RTP, RTSP, IPv6, DNS, DDNS, NTP, ICMP, ARP, IGMP, SMTP, FTP, UPnP, SNMP, Bonjour
Ethernet Port	1 x RJ-45 connector	1 x RJ-45 connector	1 x RJ-45 connector	1 x RJ-45 connector	1 x RJ-45 connector	1 x RJ-45 connector
Analog Video Output			1 x CVBS, BNC connector	1 x CVBS, BNC connector		
Digital Input/Output	1/1	1/1	1/1	1/1	1/1	1/1
Local Storage	MicroSDHC, MicroSDXC memory card slot (card not included)	MicroSDHC, MicroSDXC memory card slot (card not included)			MicroSDHC, MicroSDXC memory card slot (card not included)	MicroSDHC, MicroSDXC memory card slot (card not included)
Power Source	DC 12V, PoE Class 3 (IEEE802.3af)	DC 12V, PoE Class 3 (IEEE802.3af)	DC 12V, PoE Class 3 (IEEE802.3af)	DC 12V, PoE Class 3 (IEEE802.3af)	DC 12V, PoE Class 3 (IEEE802.3af)	DC 12V, PoE Class 3 (IEEE802.3af)
Power Consumption	7.68 W (PoE, heater and IR on)	7.68 W (PoE)	10 W (PoE)	10 W (PoE)	12.95 W (PoE)	12.95 W (PoE)
Environmental Casing	Weatherproof (IP67), Vandal proof metal casing (IK10)	Weatherproof (IP67), Vandal proof metal casing (IK10)	Weatherproof (IP66), Vandal proof metal casing (IK10)	Weatherproof (IP66), Vandal proof metal casing (IK10)	Weatherproof (IP67), Vandal proof metal casing (IK10)	Weatherproof (IP67), Vandal proof metal casing (IK10)
Bundled Accessories	Integrated bracket	Integrated bracket	Integrated bracket	Integrated bracket	Integrated bracket	Integrated bracket
Mount Type	Ceiling Bracket, Gang box, Integrated bracket, Pole Mount	Ceiling Bracket, Gang box, Integrated bracket, Pole Mount	Wall Mount, Ceiling Bracket, Pole Mount	Wall Mount, Ceiling Bracket, Pole Mount	Ceiling Bracket, Gang box, Integrated bracket, Pole Mount	Ceiling Bracket, Pole Mount, Gang box, Integrated bracket
Heater	Yes	Yes			Yes	Yes
Starting Temperature	-40 °C ~ 50 °C (-40 °F ~ 122°F) within 30 minutes	-40 °C ~ 50 °C (-40 °F ~ 122°F) within 30 minutes	-20 °C ~ 50 °C (-4 °F ~ 122 °F)	-20 °C ~ 50 °C (-4 °F ~ 122 °F)	-30 °C ~ 50 °C (-22 °F ~ 122°F) within 30 minutes	-30 °C ~ 50 °C (-22 °F ~ 122°F) within 30 minutes
Operating Temperature	-40 °C ~ 50 °C (-40 °F ~ 122 °F)	-40 °C ~ 50 °C (-40 °F ~ 122 °F)	-20 °C ~ 50 °C (-4 °F ~ 122 °F)	-20 °C ~ 50 °C (-4 °F ~ 122 °F)	-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), UL (for optional PoE injector and power adapter)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing), UL (for optional PoE injector and power adapter)	CE, FCC, IP66, IK10 (metal casing)	CE, FCC, IP66, IK10 (metal casing)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing), UL (for optional PoE injector and power adapter)	CE, FCC, IP67, NEMA 4X, IK10 (metal casing), UL (for optional PoE injector and power adapter)
Warranty	3 Year(s)	3 Year(s)	3 Year(s)	3 Year(s)	3 Year(s)	3 Year(s)
Software Development Kit (SDK)	Yes	Yes				
GPS Position	Manual setting	Manual setting			Manual setting	Manual setting
ONVIF Compliant	Yes, Profile S, Profile G, (To be available through future firmware upgrade)	Yes, Profile S, Profile G, (To be available through future firmware upgrade)	Yes, Profile S	Yes, Profile S	Yes, Profile S, Profile G	Yes, Profile S, Profile G
Web Browser	IE 9.0 or newer, Firefox with VLC, Chrome with VLC, Safari with QuickTime	IE 9.0 or newer, Firefox with VLC, Chrome with VLC, Safari with QuickTime	IE 9.0 or newer	IE 9.0 or newer	IE 9.0 or newer, Firefox with VLC, Chrome with VLC, Safari with QuickTime	IE 9.0 or newer, Firefox with VLC, Chrome with VLC, Safari with QuickTime
Auto Firmware Upgrade	Yes	Yes			Yes	Yes
Extended Warranty	2 Year(s)	2 Year(s)	2 Year(s)	2 Year(s)	2 Year(s)	2 Year(s)
IVS performance			Certain algorithms may require more computing power, which may limit the number of algorithms that can be concurrently used in the camera. Please test the actual performance before using in a project.	Certain algorithms may require more computing power, which may limit the number of algorithms that can be concurrently used in the camera. Please test the actual performance before using in a project.	Certain algorithms may require more computing power, which may limit the number of algorithms that can be concurrently used in the camera. Please test the actual performance before using in a project.	Certain algorithms may require more computing power, which may limit the number of algorithms that can be concurrently used in the camera. Please test the actual performance before using in a project.
Product Availability	Discontinued Model	ACTi : Now Distributor : Now	ACTi : Now Distributor : Now	ACTi : TBC Distributor : TBC	ACTi : 2016.05.20 Distributor : 2016.05.27	ACTi : 2016.05.20 Distributor : 2016.05.27
MSRP (USA, reference only)		USD$1,638	USD$1,137	USD$1,264 *Preliminary Price	USD$1,379 *Preliminary Price	USD$1,448 *Preliminary Price