INFINITI
ELECTRO-OPTICS

VIS/NIR Zoom
Cameras Brochure

Infiniti's Visible/Near-Infrared Camera Options

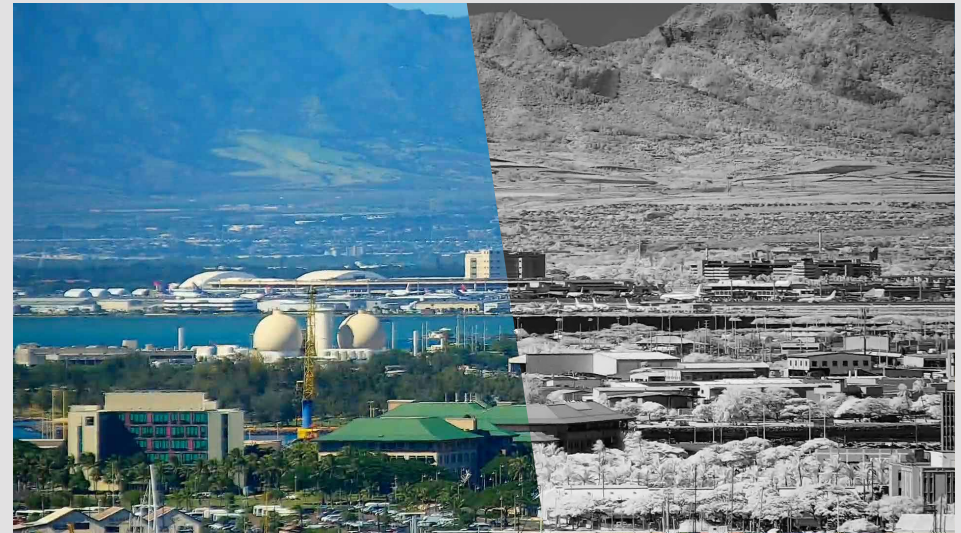# VIS/NIR Sensors & Fog Filter

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Infiniti's VIS/NIR zoom cameras utilize high-end CMOS sensors to offer excellent spectral sensitivity in the visible and near-infrared wavelengths of light. Optimized for long-range surveillance, they are designed with industry-leading performance and quality, offering high-quality images with resolutions ranging from HD 2MP (1080p) to UltraHD 8K/33MP.

Standard Color Visible Image
(Optical Fog Filter Disabled)

NIR Image
(Optical Fog Filter Enabled)

Image Processing

Infiniti's zoom cameras integrate the latest technology in real-time image processing such as WDR (Wide Dynamic Range), BLC (Backlight Compensation), HLC (Highlight Compensation), EIS (Electronic Image Stabilization), 3D DNR (Digital Noise Reduction), Digital Defog/Haze Reduction, etc. These allow users to achieve the best image quality possible in various applications with minimal operator intervention.

Optical Fog Filter (NIR Only Mode)

While all of our surveillance sensors offer a nighttime NIR + visible mode for optimized sensitivity in low light, the cameras equipped with our NIR bandpass filter (also referred to as a "fog filter") allow users to isolate the NIR (near-infrared) wavelength of light during the day for clearer long-range daytime imaging.

Long-range imaging needs to see through large amounts of atmosphere which often contains particulates like smoke, haze/fog, and other atmospheric distortions. Cutting out the visible wavelength and isolating the NIR can mitigate the effects of smoke, haze and light fog, producing an image with better contrast and less distortion. Our optical fog filter lenses incorporate a motorized filter that is used with the camera's monochrome mode and de-haze image processing to see through smoke, smog and haze.

Zoom Lenses, Video Formats & OEM Modules
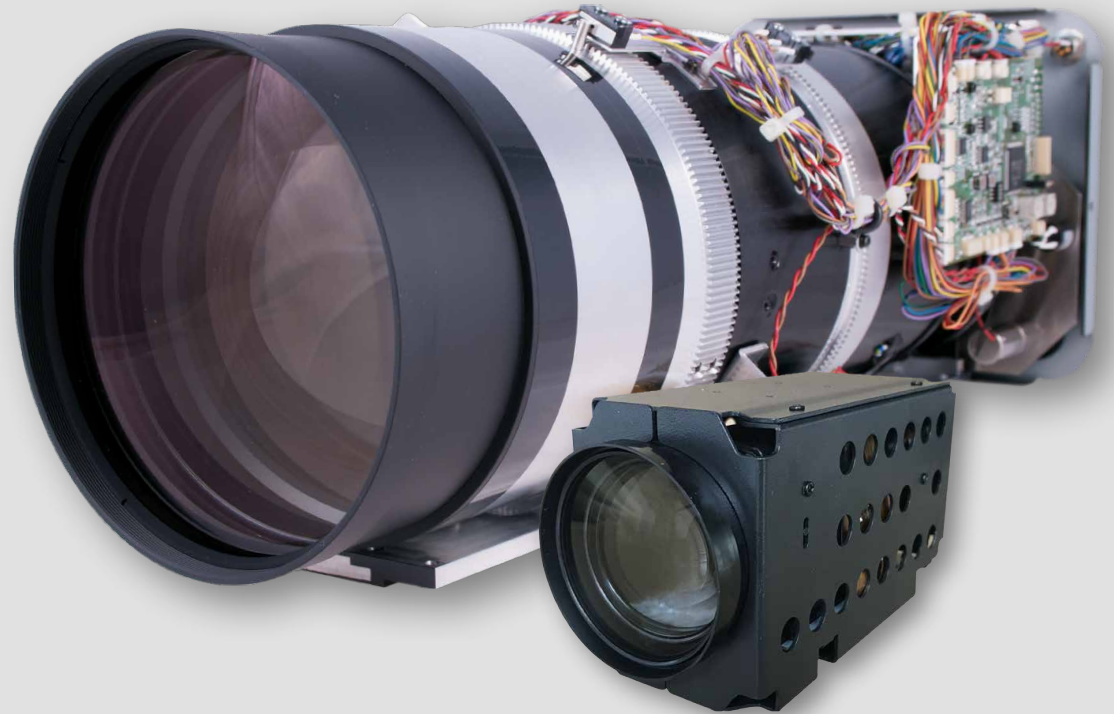
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Continuous Zoom Lenses

Infiniti's precision engineered IR-corrected zoom lenses are built with high quality optical glass and feature integrated rapid auto focus. We offer a wide range of focal lengths with optical zoom factors from 24X up to 135X zoom and a maximum focal length of 2075mm. Paired with the surveillance-optimized 1/2″ sensor, our 2075mm lens has the equivalent field of view of a "full-frame" DSLR camera with a 10,000mm lens.

Video Formats

Infiniti's network zoom cameras feature RTSP video streams for compatibility with most VMS and C2 softwares. Video streams can be accessed anywhere in the world using a variety of devices including mobile phones and tablets. When paired with our Octagon platform, advanced control of zoom cameras, pan/tilts, ZLID™ illuminators, LRFs, and other devices can all be performed over standard IP networks.

Network zoom cameras are often preferred for their flexibility and ease of transmission over wired or wireless networks. However, Infiniti also recognizes the need to support existing infrastructure and installations where an IP solution is not preferable; for these applications we offer a selection of SDI and LVDS zoom cameras which provide real-time uncompressed video without the need for any network infrastructure.

OEM Modules, Enclosures or PTZ Systems

The lens and sensor options in this brochure are offered either as open frame OEM modules, integrated into IP66 weatherproof enclosures, or in complete EO/IR systems with optional white light or ZLID™ infrared illumination for high-detail night vision.
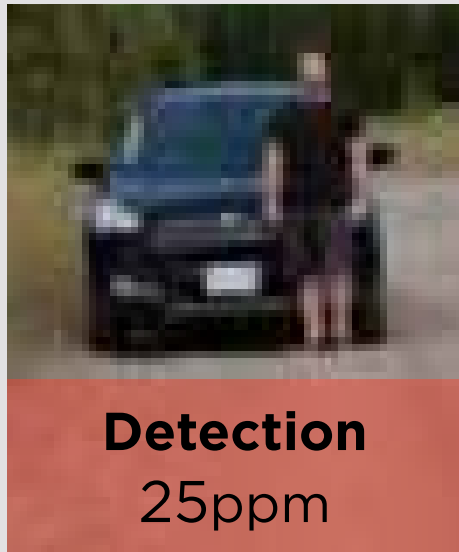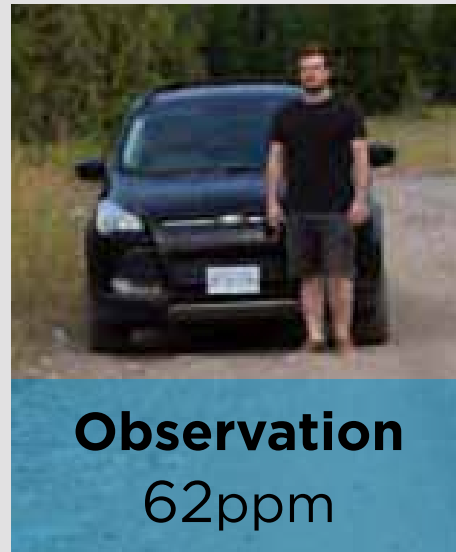
DORI Ratings

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The DORI standard (based on the IEC EN62676-4: 2015 International Standard) defines different levels of detail for Detection (25PPM), Observation (62PPM), Recognition (125PPM), and Identification (250PPM). By using these PPM (pixel per meter) values as guidelines, it is possible to select a specific camera sensor/lens combination and know that it will provide the performance needed in each application. Below are examples of each level of DORI detail.
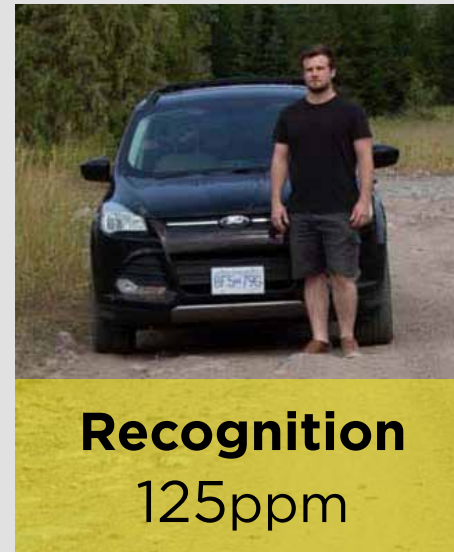
Note that while Infiniti believes that DORI provides a good general guideline, every application is unique and customers may find more or less detail is necessary for their objectives.
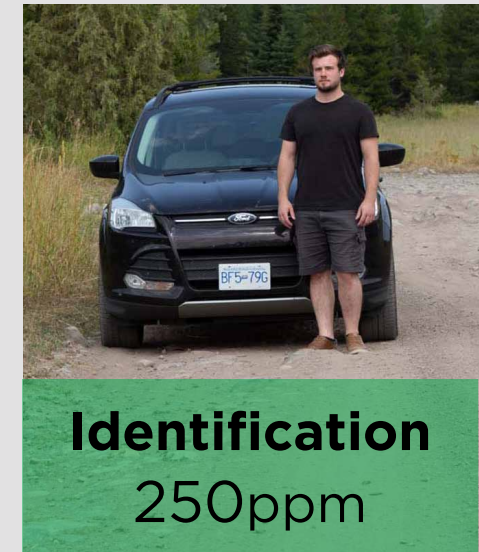
Detection
25ppm

An operator will be able to determine a human presence, although few details about that human will be visible.

Observation
62ppm

Some characteristic details of the individual, such as distinctive clothing, can start to be seen.

Recognition
125ppm

Verify with a high degree of certainty whether an individual is the same as someone you know. License plates become legible under good conditions.

Identification
250ppm

The ability to positively identify a person beyond reasonable doubt. Provides sufficient image quality to identify an individual or clearly read a license plate.

The examples here simulate the amount of detail if you were to digitally zoom into the image. **Please note that these image simulations assume optimum imaging conditions, however many factors such as atmospheric conditions, heat waves, available light, subject motion or camera shake can degrade image clarity, and most of these issues are amplified at longer distances.**

LONG-RANGE SURVEILLANCE MODULE
Specifications

INFINITI ELECTRO-OPTICS

		2075-LSM	1000-LSM	500-LSM
Simulated FOV @ 1km	*Click image to preview FOV with different distances and objects in our lens calculator.*			
Pixels Per Meter @ 1km		553ppm	267ppm	133ppm
DORI	D: 25ppm	22,133m Detection	10,667m Detection	5,333m Detection
	O: 62ppm	8,925m Observation	4,301m Observation	2,151m Observation
	R: 125ppm	4,427m Recognition	2,133m Recognition	1,067m Recognition
	I: 250ppm	2,213m Identification	1,067m Identification	533m Identification
Output Resolution		2MP/1080p @ 60fps (1920×1080)	2MP/1080p @ 60fps (1920×1080)	2MP/1080p @ 60fps (1920×1080)
Image Sensor		2.0 Megapixel 1/2″ W CMOS	2.0 Megapixel 1/2″ W CMOS	2.0 Megapixel 1/2″ W CMOS
Lens	Focal Length	15.4–2075mm (with IZE doubler)	30–1000mm	10–500mm
	Zoom	135X Optical Zoom, 4X Digital Zoom	33X Optical Zoom, 4X Digital Zoom	50X Optical Zoom, 4X Digital Zoom
	Angle of View	27°–0.2° Horizontal (0.05° with 4X Digital Zoom)	13.7°–0.41° Horizontal (0.1° with 4X Digital Zoom)	39.6°–0.83° Horizontal (0.2° with 4X Digital Zoom)
	Focus	Auto / Manual	Auto / Manual	Auto / Manual
Minimum Illumination @ f/1.2		Color: 0.006 Lux, B&W: 0.0006 Lux	Color: 0.006 Lux, B&W: 0.0006 Lux	Color: 0.006 Lux, B&W: 0.0006 Lux
Optical Fog Filter (NIR)		Yes		
NDAA Compliant		Yes		
Video Network	Video Out	IP		
	Compression	H.265 / H.264 / MJPEG		
	Protocol	ONVIF, HTTP, RTSP, RTP, TCP, UDP		
Image Stabilization		Electronic Image Stabilization (EIS)		
Image Enhancements		Auto White Balance, 120dB WDR, 3D DNR, BLC		
Edge Storage		Supports MicroSD Card up to 256GB		
Environmental		IP66 Rugged Weatherproof Enclosure		
Dimensions		795mm × 365mm × 245mm**	530mm × 200mm × 200mm**	430mm × 200mm × 200mm**
Weight		Approx 20kg**	Approx 8kg**	Approx 6kg**

*Lens measurements, angle of view and PPM/DORI numbers are accurate to ±10% due to back focus distances, sensor sizes, lens manufacturing, etc. **Dependent on full system configuration.

NETWORK CAMERA
Specifications

INFINITI ELECTRO-OPTICS

		8M-95X	8M-53X	8M-53X-OS	79X
Simulated FOV @ 1km *Click image to preview FOV with different distances and objects in our lens calculator.*					
Pixels Per Meter @ 1km		508ppm	400ppm	400ppm	329ppm
DORI	D: 25ppm	20,300m Detection	16,000m Detection	16,000m Detection	13,173m Detection
	O: 62ppm	8,815m Observation	6,452m Observation	6,452m Observation	5,312m Observation
	R: 125ppm	4,060m Recognition	3,200m Recognition	3,200m Recognition	2,635m Recognition
	I: 250ppm	2,030m Identification	1,600m Identification	1,600m Identification	1,317m Identification
Output Resolution		8MP/4K @ 30fps (3840×2160)	8MP/4K @ 30fps (3840×2160)	8MP/4K @ 30fps (3840×2160)	2MP/1080p @ 30fps (1920×1080)
Image Sensor		8.4 Megapixel 1/1.8″ W CMOS	8.4 Megapixel 1/1.8″ W CMOS	8.4 Megapixel 1/1.8″ W CMOS	4.1 Megapixel 1/2″ W CMOS
Lens	Focal Length	10.6–1015mm	15–800mm	15–800mm	15.5–1235mm
	Zoom	95X Optical Zoom + 16X Digital	53X Optical Zoom + 16X Digital	53X Optical Zoom + 16X Digital	79X Optical Zoom + 16X Digital
	Angle of View	42.0°–0.43° Horizontal (0.05° with 8X Digital Zoom)	28.7°–0.55° Horizontal (0.14° with 4X Digital Zoom)	28.7°–0.55° Horizontal (0.14° with 4X Digital Zoom)	27.0°–0.33° Horizontal (0.08° with 4X Digital Zoom)
	Focus	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual
Minimum Illumination		Color: 0.1 Lux @ f/2.1; B&W: 0.01 Lux @ f/2.1	Color: 0.1 Lux @ f/1.5; B&W: 0.01 Lux @ f/1.5	Color: 0.1 Lux @ f/1.5; B&W: 0.01 Lux @ f/1.5	Color: 0.05 Lux @ f/2.1; B&W: 0.005 Lux @ f/2.1
Optical Fog Filter (NIR)		Yes	Yes	Yes	Yes
Heatwave Mitigation		Yes	Yes	Yes	Yes
NDAA Compliant		No	Yes	Yes	Optional
Video Network	Video Out	IP, LVDS/SDI optional	IP, LVDS/SDI optional	IP, LVDS/SDI optional	IP, LVDS/SDI optional
	Compression	H.265/H.264/MJPEG			
	Protocol	ONVIF, HTTP, RTSP, RTP, TCP, UDP			
Image Stabilization		Electronic Image Stabilization (EIS)	Electronic Image Stabilization (EIS)	Optical Stabilization & EIS	Electronic Image Stabilization (EIS)
Image Enhancements		Auto White Balance, 100dB WDR, 2D/3D DNR, BLC, HLC, Digital Defog			
Edge Storage		Supports MicroSD Card up to 256GB			
Dimensions & Weight		384mm × 144mm × 150mm, 5.6kg	320mm × 110mm × 110mm, 3.1kg	320mm × 110mm × 110mm, 3.1kg	384mm × 144mm × 150mm, 5.6kg

*Lens measurements, angle of view and PPM/DORI numbers are accurate to ±10% due to back focus distances, sensor sizes, lens manufacturing, etc.

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NETWORK CAMERA
Specifications

INFINITI ELECTRO-OPTICS

		4M-95X	4M-53X	4M-53X-OS	95X
Simulated FOV @ 1km	*Click image to preview FOV with different distances and objects in our lens calculator.*				
Pixels Per Meter @ 1km		327ppm	274ppm	274ppm	255ppm
DORI	D: 25ppm	13,064m Detection	10,944m Detection	10,944m Detection	10,187m Detection
	O: 62ppm	5,268m Observation	4,413m Observation	4,413m Observation	4,108m Observation
	R: 125ppm	2,613m Recognition	2,189m Recognition	2,189m Recognition	2,037m Recognition
	I: 250ppm	1,306m Identification	1,094m Identification	1,094m Identification	1,019m Identification
Output Resolution		4MP @ 30fps (2688×1520)	4MP @ 30fps (2688×1520)	4MP @ 30fps (2688×1520)	2MP/1080p @ 30fps (1920×1080)
Image Sensor		4.1 Megapixel 1/1.7" W CMOS	4.1 Megapixel 1/1.7" W CMOS	4.1 Megapixel 1/1.7" W CMOS	2.4 Megapixel 1/2" W CMOS
Lens	Focal Length	10–955mm	15–800mm	15–800mm	10–955mm
	Zoom	95X Optical Zoom + 16X Digital	53X Optical Zoom + 16X Digital	53X Optical Zoom + 16X Digital	95X Optical Zoom + 16X Digital
	Angle of View	42.9°–0.47° Horizontal (0.12° with 4X Digital Zoom)	29.4°–0.56° Horizontal (0.14° with 4X Digital Zoom)	29.4°–0.56° Horizontal (0.14° with 4X Digital Zoom)	39.6°–0.43° Horizontal (0.11° with 4X Digital Zoom)
	Focus	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual
Minimum Illumination		Color: 0.05 Lux @ f/2.1; B&W: 0.005 Lux @ f/2.1	Color: 0.05 Lux @ f/2.8; B&W: 0.005 Lux @ f/2.8	Color: 0.05 Lux @ f/2.8; B&W: 0.005 Lux @ f/2.8	Color: 0.02 Lux @ f/2.0; B&W: 0.001 Lux @ f/2.0
Optical Fog Filter (NIR)		Yes	Yes	Yes	Yes
Heatwave Mitigation		Yes	Yes	Yes	No
NDAA Compliant		No	No	No	Optional
Video Network	Video Out	IP, LVDS/SDI optional	IP, LVDS/SDI optional	IP, LVDS/SDI optional	IP, LVDS/SDI optional
	Compression	H.265/H.264/MJPEG			
	Protocol	ONVIF, HTTP, RTSP, RTP, TCP, UDP			
Image Stabilization		Electronic Image Stabilization (EIS)	Electronic Image Stabilization (EIS)	Optical Stabilization & EIS	Electronic Image Stabilization (EIS)
Image Enhancements		Auto White Balance, 100dB WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, 100dB WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, WDR, 2D/3D DNR, BLC, HLC, Digital Defog
Edge Storage		Supports MicroSD Card up to 256GB			
Dimensions & Weight		396mm × 146mm × 150mm, 5.6kg	320mm × 110mm × 110mm, 3.1kg	320mm × 110mm × 110mm, 3.3kg	396mm × 146mm × 150mm, 5.6kg

*Lens measurements, angle of view and PPM/DORI numbers are accurate to ±10% due to back focus distances, sensor sizes, lens manufacturing, etc.

Specifications

INFINITI ELECTRO-OPTICS

		3M-53X-OS	59X	59X-OS	8M-49X
Simulated FOV @ 1km *Click image to preview FOV with different distances and objects in our lens calculator.*					
Pixels Per Meter @ 1km		228ppm	214ppm	214ppm	136ppm
DORI	D: 25ppm	9,128m Detection	8,550m Detection	8,550m Detection	5,440m Detection
	O: 62ppm	3,680m Observation	3,447m Observation	3,447m Observation	2,194m Observation
	R: 125ppm	1,826m Recognition	1,710m Recognition	1,710m Recognition	1,088m Recognition
	I: 250ppm	913m Identification	855m Identification	855m Identification	544m Identification
Output Resolution		3MP @ 55fps (2048×1536)	2MP/1080p @ 30fps (1920×1080)	2MP/1080p @ 30fps (1920×1080)	8MP/4K @ 30fps (3840×2160)
Image Sensor		3.2 Megapixel 1/1.8″ CMOS	4.1 Megapixel 1/1.7″ W CMOS	4.1 Megapixel 1/1.7″ W CMOS	8.4 Megapixel 1/1.8″ W CMOS
Lens	Focal Length	15–800mm	14.8–875mm	14.8–875mm	5.6–272mm
	Zoom	53X Optical Zoom + 16X Digital	59X Optical Zoom + 16X Digital	59X Optical Zoom + 16X Digital	49X Optical Zoom + 16X Digital
	Angle of View	26.9°–0.51° Horizontal (0.13° with 4X Digital Zoom)	29.8°–0.51° Horizontal (0.13° with 4X Digital Zoom)	29.8°–0.51° Horizontal (0.13° with 4X Digital Zoom)	75°–1.62° Horizontal (0.2° with 8X Digital Zoom)
	Focus	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual
Minimum Illumination		Color: 0.05 Lux @ f/2.8; B&W: 0.005 Lux @ f/2.8	Color: 0.05 Lux @ f/2.8; B&W: 0.005 Lux @ f/2.8	Color: 0.05 Lux @ f/2.8; B&W: 0.005 Lux @ f/2.8	Color: 0.05 Lux @ f/1.4; B&W: 0.005 Lux @ f/1.4
Optical Fog Filter (NIR)		Yes	Yes	Yes	Yes
Heatwave Mitigation		Yes	Yes	Yes	No
NDAA Compliant		No	Optional	Optional	Yes
Video Network	Video Out	IP, LVDS/SDI optional	IP, LVDS/SDI optional	IP, LVDS/SDI optional	IP
	Compression	H.265/H.264/MJPEG			
	Protocol	ONVIF, HTTP, RTSP, RTP, TCP, UDP			
Image Stabilization		Optical Stabilization & EIS	Electronic Image Stabilization (EIS)	Optical Stabilization & EIS	Electronic Image Stabilization (EIS)
Image Enhancements		Auto White Balance, WDR, 2D/3D DNR, BLC, HLC, Digital Defog			
Edge Storage		Supports MicroSD Card up to 256GB			
Dimensions & Weight		320mm × 110mm × 110mm, 3.3kg	320mm × 110mm × 110mm, 3.1kg	320mm × 110mm × 110mm, 3.3kg	176mm × 73mm × 78mm, 900g

*Lens measurements, angle of view and PPM/DORI numbers are accurate to ±10% due to back focus distances, sensor sizes, lens manufacturing, etc.

		88X	8M-36X	4M-49X	38X
Simulated FOV @ 1km *Click image to preview FOV with different distances and objects in our lens calculator.*					
Pixels Per Meter @ 1km		128ppm	109ppm	93ppm	93ppm
DORI	D: 25ppm	5,100m Detection	4,360m Detection	3,721m Detection	3,716m Detection
	O: 62ppm	2,056m Observation	1,758m Observation	1,500m Observation	1,498m Observation
	R: 125ppm	1,020m Recognition	872m Recognition	744m Recognition	743m Recognition
	I: 250ppm	510m Identification	436m Identification	372m Identification	372m Identification
Output Resolution		2MP/1080p @ 30fps (1920×1080)	8MP/4K @ 30fps (3840×2160)	4MP @ 30fps (2688×1520)	2MP/1080p @ 30fps (1920×1080)
Image Sensor		8.4 Megapixel 1/1.8" W CMOS	8.4 Megapixel 1/1.8" W CMOS	4.1 Megapixel 1/1.7" W CMOS	2.4 Megapixel 1/2.8" CMOS
Lens	Focal Length	5.8–510mm	6–218mm	5.6–272mm	7.2–270mm
	Zoom	88X Optical Zoom + 16X Digital	36X Optical Zoom + 16X Digital	49X Optical Zoom + 16X Digital	38X Optical Zoom + 16X Digital
	Angle of View	65.2°–0.86° Horizontal (0.22° with 4X Digital Zoom)	65.2°–2.02° Horizontal (0.51° with 4X Digital Zoom)	76.3°–1.66° Horizontal (0.42° with 4X Digital Zoom)	43.5°–1.18° Horizontal (0.3° with 4X Digital Zoom)
	Focus	Auto / Manual	Auto/Manual	Auto / Manual	Auto / Manual
Minimum Illumination		Color: 0.05 Lux @ f/1.4; B&W: 0.005 Lux @ f/1.4	Color: 0.1 Lux @ f/1.5; B&W: 0.01 Lux @ f/1.5	Color: 0.005 Lux @ f/1.4; B&W: 0.0005 Lux @ f/1.4	Color: 0.005 Lux @ f/1.6; B&W: 0.0005 Lux @ f/1.6
Optical Fog Filter (NIR)		Yes	Yes	Yes	No
Heatwave Mitigation		Yes	No	No	No
NDAA Compliant		Optional	Yes	No	Optional
Video Network	Video Out	IP, LVDS/SDI optional	IP	IP, LVDS/SDI optional	IP
	Compression	H.265/H.264/MJPEG			
	Protocol	ONVIF, HTTP, RTSP, RTP, TCP, UDP			
Image Stabilization		Electronic Image Stabilization (EIS)			
Image Enhancements		Auto White Balance, WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, 100dB WDR, 2D/3D DNR, BLC, HLC, Digital Defog
Edge Storage		Supports MicroSD Card up to 256GB			
Dimensions		176mm × 73mm × 78mm, 900g	139mm × 66mm × 76mm, 410g	176mm × 73mm × 78mm, 900g	146mm × 54mm × 64mm, 620g

*Lens measurements, angle of view and PPM/DORI numbers are accurate to ±10% due to back focus distances, sensor sizes, lens manufacturing, etc.

Specifications

INFINITI ELECTRO-OPTICS

		8M-30X	3M-49X	4M-36X	49X
Simulated FOV @ 1km	*Click image to preview FOV with different distances and objects in our lens calculator.*				
Pixels Per Meter @ 1km		90ppm	78ppm	75ppm	73ppm
DORI	D: 25ppm	3,600m Detection	3,103m Detection	2,982m Detection	2,900m Detection
	O: 62ppm	1,452m Observation	1,251m Observation	1,202m Observation	1,170m Observation
	R: 125ppm	720m Recognition	621m Recognition	596m Recognition	580m Recognition
	I: 250ppm	360m Identification	310m Identification	298m Identification	290m Identification
Output Resolution		8MP/4K @ 30fps (3840×2160)	3MP @ 55fps (2048×1536)	4MP @ 60fps (2688×1520)	2MP/1080p @ 60fps (1920×1080)
Image Sensor		8.4 Megapixel 1/1.8" W CMOS	3.2 Megapixel 1/1.8" CMOS with Global Shutter	4.5 Megapixel 1/1.7" W CMOS	2.1 Megapixel 1/2" W CMOS
Lens	Focal Length	6–180mm	5.6–272mm	6–218mm	5.6–272mm
	Zoom	30X Optical Zoom + 16X Digital	49X Optical Zoom + 16X Digital	36X Optical Zoom + 16X Digital	49X Optical Zoom + 16X Digital
	Angle of View	65.2°–2.44° Horizontal (0.3° with 8X Digital Zoom)	71.4°–1.51° Horizontal (0.38° with 4X Digital Zoom)	66.4°–2.07° Horizontal (0.51° with 4X Digital Zoom)	71.5°–1.52° Horizontal (0.38° with 4X Digital Zoom)
	Focus	Auto / Manual	Auto/Manual	Auto/Manual	Auto/Manual
Minimum Illumination		Color: 0.1 Lux @ f/1.5; B&W: 0.01 Lux @ f/1.5	Color: 0.005 Lux @ f/1.4; B&W: 0.001 Lux @ f/1.4	Color: 0.005 Lux @ f/1.5; B&W: 0.0005 Lux @ f/1.5	Color: 0.001 Lux @ f/1.6; B&W: 0.0001 Lux @ f/1.6
Optical Fog Filter (NIR)		No	Yes	Yes	Yes
Heatwave Mitigation		No	No	No	No
NDAA Compliant		Yes	No	Yes	Optional
Video Network	Video Out	IP	IP	IP	IP, LVDS/SDI optional
	Compression	H.265/H.264/MJPEG			
	Protocol	ONVIF, HTTP, RTSP, RTP, TCP, UDP			
Image Stabilization		Electronic Image Stabilization (EIS)			
Image Enhancements		Auto White Balance, 100dB WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, 100dB WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, 100dB WDR, 2D/3D DNR, BLC, HLC, Digital Defog
Edge Storage		Supports MicroSD Card up to 256GB			
Dimensions & Weight		126mm × 56mm × 70mm, 410g	176mm × 73mm × 78mm, 900g	139mm × 66mm × 68mm, 410g	176mm × 73mm × 78mm, 900g

*Lens measurements, angle of view and PPM/DORI numbers are accurate to ±10% due to back focus distances, sensor sizes, lens manufacturing, etc.

Specifications

INFINITI ELECTRO-OPTICS

		4M-30X	4M-24X	36X	30X
Simulated FOV @ 1km *Click image to preview FOV with different distances and objects in our lens calculator.*					
Pixels Per Meter @ 1km		72ppm	60ppm	58ppm	50ppm
DORI	D: 25ppm	2,873m Detection	2,394m Detection	2,325m Detection	1,982m Detection
	O: 62ppm	1,158m Observation	965m Observation	938m Observation	799m Observation
	R: 125ppm	575m Recognition	479m Recognition	465m Recognition	396m Recognition
	I: 250ppm	287m Identification	239m Identification	233m Identification	198m Identification
Output Resolution		4MP @ 30fps (2688×1520)	4MP @ 30fps (2688×1520)	2MP/1080p @ 60fps (1920×1080)	2MP/1080p @ 60fps (1920×1080)
Image Sensor		4.1 Megapixel 1/2.9″ CMOS	4.1 Megapixel 1/2.9″ CMOS	2.1 Megapixel 1/2″ W CMOS	2.4 Megapixel 1/2.8″ CMOS
Lens	Focal Length	4.7–141mm	5–120mm	6–218mm	4.8–144mm
	Zoom	30X Optical Zoom + 16X Digital	24X Optical Zoom + 16X Digital	36X Optical Zoom + 16X Digital	30X Optical Zoom + 16X Digital
	Angle of View	67.9°–2.14° Horizontal (0.54° with 4X Digital Zoom)	56.6°–2.57° Horizontal (0.64° with 4X Digital Zoom)	61.9°–1.89° Horizontal (0.48° with 4X Digital Zoom)	69.8°–2.22° Horizontal (0.56° with 4X Digital Zoom)
	Focus	Auto/Manual	Auto/Manual	Auto/Manual	Auto/Manual
Minimum Illumination		Color: 0.005 Lux @ f/1.5; B&W: 0.0005 Lux @ f/1.5	Color: 0.005 Lux @ f/1.5; B&W: 0.0005 Lux @ f/1.5	Color: 0.001 Lux @ f/1.5; B&W: 0.0001 Lux @ f/1.5	Color: 0.005 Lux @ f/1.5; B&W: 0.0005 Lux @ f/1.5
Optical Fog Filter (NIR)		No	No	Yes	No
Heatwave Mitigation		No	No	No	No
NDAA Compliant		Yes	Yes	Optional	Yes
Video Network	Video Out	IP, LVDS/SDI optional	IP, LVDS/SDI optional	IP	IP, LVDS/SDI optional
	Compression	H.265/H.264/MJPEG			
	Protocol	ONVIF, HTTP, RTSP, RTP, TCP, UDP			
Image Stabilization		Electronic Image Stabilization (EIS)			
Image Enhancements		Auto White Balance, WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, 100dB WDR, 2D/3D DNR, BLC, HLC, Digital Defog	Auto White Balance, WDR, 2D/3D DNR, BLC, HLC, Digital Defog
Edge Storage		Supports MicroSD Card up to 256GB			
Dimensions & Weight		97mm × 52mm × 59mm, 285g	97mm × 52mm × 59mm, 285g	127mm × 56mm × 70mm, 415g	96mm × 54mm × 60mm, 300g

*Lens measurements, angle of view and PPM/DORI numbers are accurate to ±10% due to back focus distances, sensor sizes, lens manufacturing, etc.

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Specifications

INFINITI ELECTRO-OPTICS

		8M-8X	12M-3X	33M-24
Simulated FOV @ 1km *Click image to preview FOV with different distances and objects in our lens calculator.*				
Pixels Per Meter @ 1km		27.5ppm	9.4ppm	5.1ppm
DORI	D: 25ppm	1,101m Detection	390m Detection	205m Detection
	O: 62ppm	444m Observation	157m Observation	83m Observation
	R: 125ppm	220m Recognition	78m Recognition	41m Recognition
	I: 250ppm	110m Identification	39m Identification	20m Identification
Output Resolution		8MP/4K @ 30fps (3840×2160)	12MP/4K @ 20fps (4000×3000)	8K @ 15fps (7680×4320)
Image Sensor		8.4 Megapixel 1/2.8" CMOS	12.9 Megapixel 1/2.3" CMOS	33 Megapixel 24×36mm CMOS
Lens	Focal Length	5–40mm	3.9–14.5mm	24mm (other options available)
	Zoom	8X Optical Zoom, 16X Digital	3.5X Optical Zoom, 16X Digital	32X Digital Zoom
	Angle of View	58.3°–8.0° Horizontal (1.0° with 8X Digital Zoom)	74.6°–24.0° Horizontal (3.0° with 8X Digital Zoom)	62.1° Horizontal (3.9° with 16X Digital Zoom)
	Focus	Auto/Manual/Semi-Auto	Auto/Manual/Semi-Auto	Auto/Manual
Minimum Illumination		Color: 0.01 Lux @ f/1.5; B&W: 0.001 Lux @ f/1.5	Color: 0.5 Lux @ f/2.4; B&W: 0.05 Lux @ f/2.4	Color: 0.015 Lux @ f/1.4; B&W: 0.0015 Lux @ f/1.4
Optical Fog Filter (NIR)		No	No	No
Heatwave Mitigation		No	No	No
NDAA Compliant		Yes	Yes	Yes
Video Network	Video Out	IP	IP	IP
	Compression	H.265/H.264/MJPEG		
	Protocol	ONVIF, HTTP, RTSP, RTP, TCP, UDP		
Image Stabilization		Electronic Image Stabilization (EIS)	Electronic Image Stabilization (EIS)	None
Image Enhancements		Auto White Balance, WDR, 2D/3D DNR, BLC, HLC, Digital Defog		Auto White Balance, DWDR, BLC
Edge Storage		Supports MicroSD Card up to 256GB		
Dimensions & Weight		65mm × 42mm × 51mm, 146g	56mm × 30mm × 40mm, 55g	120mm × 119mm × 262mm, 2.75kg

*Lens measurements, angle of view and PPM/DORI numbers are accurate to ±10% due to back focus distances, sensor sizes, lens manufacturing, etc.