ECLIPSE

All-Weather Long-Range PTZ Camera

INFINITI

The Eclipse boasts numerous zoom lens options up to 272mm, and multiple sensor resolutions available from Full-HD up to 8MP 4K. Paired with up to 2000m of ZLID illumination or a day/night thermal imaging camera up to 120mm, this camera system offers remarkable nighttime surveillance performance. All of these sensors are integrated into a rugged IP66 weatherproof housing constructed of strengthened aluminum. The Eclipse can withstand some of the harshest climates, making it ideal for perimeter security, homeland defense, and coastal protection.

Key Features:

- Long-Range Day/Night PTZ Camera System
- 2MP, 4MP, 5MP or 8MP High-Resolution CMOS Sensor
- HD Lens with 30X, 32X, 36X, 38X or 49X Optical Zoom
- Optical Field of View Options ranging from 36° to 1.2°
- ZLID™ for up to 2km Night Vision in Complete Darkness
- LWIR Thermal Imaging for Long-Range Detection up to 3km*
- Integrated Heater for Operation in -30°C to +60°C
- Wiper and Rugged IP66 Weatherproof Housing
- High Resolution Pan/Tilt for Smooth Operation
- Pelco-D and RS485 Control
- Integrated Optical Fog Filter on select models

Optional Features:

- Magnetic Mount
- Vibration Mount
- Laser Rangefinder
- GPS & 4G Cellular Transmission
- Integrated Internal Storage
- Wide-Angle 90° 4K Spotter Camera

THE ECLIPSE'S

Visible/NIR HD Zoom Camera

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VIS/NIR Optical Camera

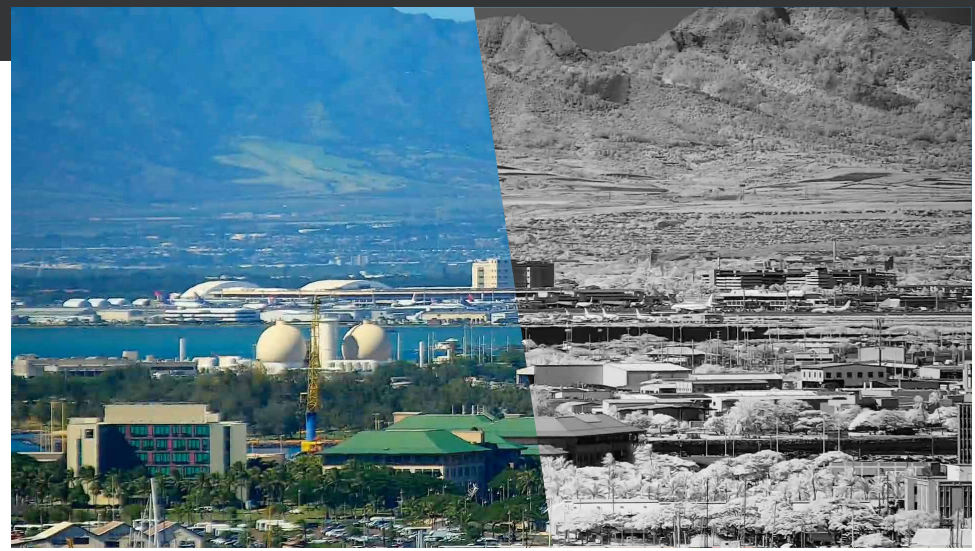
Infiniti's VIS/NIR zoom cameras utilize the visible and near-infrared bands of light to provide high-quality images optimized for long-range surveillance. They are designed to provide industry-leading performance and quality, with image resolutions ranging from HD 2MP (1080p) to UltraHD 4K/8MP.

Sensors

The Sony progressive scan CMOS sensors offer excellent spectral sensitivity for both visible and NIR wavelengths. We use various sensor sizes depending on the application. Our 1/2.8" sensor is often selected for maximum range as the smaller sensor maximizes the long-range zoom capabilities of the camera, while still offering good low-light performance. Our 1/2" and larger sensors offer even better low-light performance and increase the effectiveness of our ZLID™ illumination.

Continuous Zoom Lenses

The Eclipse's precision engineered IR-corrected zoom lenses offer a wide range of focal lengths with zoom factors from 20X up to 49X optical zoom. Infiniti's zoom optics are built with the highest quality Japanese fluorite ELD low dispersion glass, and the integrated rapid auto focus allows long-range surveillance of targets without operator intervention.



Standard Color Visible Image
(Optical Fog Filter Disabled)

NIR Image
(Optical Fog Filter Enabled)

Optical Fog Filter (NIR Only Mode)

While all of our 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, it is available on our -NX models.

THE ECLIPSE'S

ZLID™ & Thermal Technologies

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See in the Dark with ZLID™

IR illumination allows for detailed video when there isn't enough natural light, however common IR LED illuminators have very limited ranges. For long-range illumination, a laser is needed. Many laser illuminators overexpose the center of the screen and leave the edges dark. Infiniti's ZLID (Zoom Laser IR Diode) technology synchronizes the IR intensity and area illumination with the zoom lens for outstanding active IR performance, eliminating over-exposure, washout, and hot-spots for clear images in complete darkness.

See Further with Thermal

An optional thermal imager lets you see further than any other night vision technology. Unlike traditional visible cameras, thermal imaging uses heat rather than light to see objects. Humans, animals, and vehicles are hot in contrast to most backgrounds, making trespassers hiding in shadows or bushes easy to spot. Thermal images are also unaffected by bright light and have the ability to see through atmospheric obstructions such as smoke, dust, and light fog. This makes it an ideal technology for many applications, including surveillance and security, search and rescue, fire, marine and land navigation, wide area situational assessment and much more.

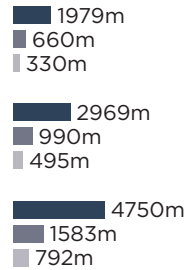
12µm VOx Thermal Imager

The Eclipse utilizes a cutting-edge 12µm VOx uncooled sensor, giving the camera a narrower field of view without changing the lens. The smaller 12µm pixel pitch achieves a 40% further range than 17µm sensors or 200% further range than older 25µm sensors. The high sensitivity sensor detects differences in temperature as small as ±0.05°C, and its no-maintenance VOx design, unlike ASI and other thermal cores, is self healing and resistant to solar damage.

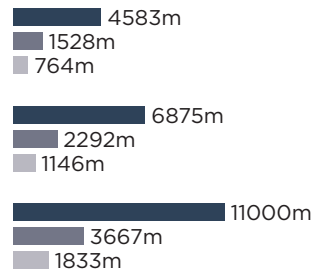
Germanium Lenses

Our germanium optics boast industry-leading aperture sizes. These larger apertures allow more thermal energy to reach the sensor, reducing image noise and further increasing clarity and performance.

Human DRI:



Vehicle DRI:



DETECTION*
RECOGNITION*
IDENTIFICATION*

*DRI detection ratings are based on industry-wide standards (Johnson's Criteria) that can be misleading if not properly understood. For more information, please see our whitepaper about understanding DRI measurements at: www.infinitioptics.com/dri

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Visible Camera Options

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		8M-49X(-NX)	38X	4M-49X(-NX)	8M-30X	49X(-NX)	5M-30X	36X(-NX)	32X
Output Resolution		4K @ 30fps (3840×2160)	2MP @ 30fps (1920×1080)	4MP/1080p @ 60fps (2560×1440)	8MP/4K @ 30fps (3840×2160)	2MP/1080p @ 30fps (1920×1080)	5MP @ 30fps (2560×1920)	2MP/1080p @ 30fps (1920×1080)	2MP/1080p @ 30 or 60fps (1920×1080)
Pixels Per Meter @ 1km		145ppm	93ppm	97ppm	92ppm	78ppm	64ppm	62ppm	48ppm
Simulated FOV @ 1km									
DORI	D: 25ppm	5,819m Detection	4,335m Detection	4,492m Detection	3,638m Detection	3,418m Detection	2,567m Detection	2,484m Detection	1,954m Detection
	O: 62ppm	2,346m Observation	1,748m Observation	1,811m Observation	1,467m Observation	1,378m Observation	1,035m Observation	1,002m Observation	788m Observation
	R: 125ppm	1,164m Recognition	867m Recognition	898m Recognition	728m Recognition	684m Recognition	513m Recognition	497m Recognition	391m Recognition
	I: 250ppm	582m Identification	434m Identification	449m Identification	364m Identification	342m Identification	257m Identification	248m Identification	195m Identification
Image Sensor		1/1.8" 8.4 Megapixel CMOS	1/2.8" 2.4 Megapixel CMOS	1/1.8" 4.1 Megapixel CMOS	1/1.7" 12.4 Megapixel CMOS	1/1.9" 2.1 Megapixel CMOS	1/1.8" 6.4 Megapixel CMOS	1/1.9" 2.1 Megapixel CMOS	1/2.8" 2 Megapixel CMOS
Lens*	Focal Length	5.6–272mm f/1.4–4.5	7.2–270mm f/1.6–6.0	5.6–272mm f/1.4–4.5	6–180mm f/1.5–4.3	5.6–272mm f/1.4–4.5	6–180mm f/1.5–4.3	6–218mm f/1.5–4.8	4.4–142mm f/1.6–4.4
	Optical Zoom	49X Zoom	38X Zoom	49X Zoom	30X Zoom	49X Zoom	30X Zoom	36X Zoom	32X Zoom
	Angle of View	71°–1.5° Horizontal	43°–1.2° Horizontal	62°–1.6° Horizontal	63°–2.5° Horizontal	58.4°–1.4° Horizontal	61°–2.3° Horizontal	62°–1.9° Horizontal	61.8°–2.2° Horizontal
	Focus	Auto / Manual	Auto / Manual	Auto/Manual	Auto/Manual	Auto/Manual	Auto/Manual	Auto/Manual	Auto/Manual
S/N Ratio		≥55dB	≥55dB	≥55dB	≥55dB	≥55dB	≥55dB	≥55dB	≥50dB
Minimum Illumination		Color: 0.1 Lux @ f/1.4; B&W: 0.01 Lux @ f/1.4	Color: 0.005 Lux @ f/1.6; B&W: 0.0005 Lux @ f/1.6	Color: 0.001 Lux	Color: 0.1 Lux; B&W: 0.01 Lux	Color: 0.001 Lux	Color: 0.05 Lux; B&W: 0.005 Lux;	Color: 0.001 Lux; B&W: 0.0001 Lux	Color: 0.05 Lux; B&W: 0.005 Lux
Optical Fog Filter (NIR)		Optional	No	Optional	No	Optional	No	Optional	No
Video Network	Compression	H.265/H.264/MJPEG							
	Protocol	ONVIF, HTTP, RTSP, RTP, TCP, UDP							
EIS		Electronic Image Stabilization (On/Off)							
Image Enhancements		White Balance, 100dB WDR (32X option is 120dB with optional 150dB), 2D/3D DNR, BLC, HLC, Digital Defog							
Digital Zoom		4x Digital Zoom (32X option has 32x Digital Zoom)							
Edge Storage		Supports MicroSD Card up to 256GB							

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

ZLID™ Illumination Options

	150m IR	150m White	300m ZLID	500m ZLID	750m ZLID	1000m ZLID	1500m ZLID	2000m ZLID
Illumination Distance	150m	150m	300m	500m	650m	1000m	1500m	2000m
Wavelength	808nm	White Light	808nm	850nm	808nm	808nm	940nm	808nm
NOHD	0m (eye safe at any distance)		15m	18.5m	26m	50m	41m	226m

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Thermal Camera Options

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	19mm Fixed	35mm Fixed	50mm Fixed	75mm Fixed	120mm Fixed	26–75mm Zoom Lens
Image Sensor	Uncooled Vanadium Oxide (VOx) Microbolometer, 30Hz or 9Hz upon request					
Resolution	640×512/640×480 pixels or 384×288					
Scene Temperature	-40°C to +160°C (High and Low Gain)					
Pixel Pitch	12µm (Over 200% further range than 25µm sensors, 40% further range than 17µm sensors)					
Lens	19mm	35mm	50mm	75mm	120mm	26–75mm Continuous Zoom
Focus	Athermalized	Athermalized	Motorized Focus	Motorized Focus	Motorized Focus	Motorized Autofocus
Field of View on 640×512	22.9° Horizontal FOV	12.5° Horizontal FOV	8.8° Horizontal FOV	5.9° Horizontal FOV	3.7° Horizontal FOV	16.8°–5.9° Horizontal FOV
Field of View on 384×288	13.8° Horizontal FOV	7.5° Horizontal FOV	5.3° Horizontal FOV	3.5° Horizontal FOV	2.2° Horizontal FOV	10.1°–3.5° Horizontal FOV
Image Optimizations	DICE, BPR, NUC, & AGC user configurable via SDK, GUI					
Digital Zoom	2X & 4X dynamic zoom/pan with range switching					
Spectral Range	7,000–14,000nm					
Thermal Sensitivity	50mK					
Image Display Modes	White Hot, other color palettes available upon request					

Additional System Specifications

Pan/Tilt Mechanical	
Pan Angle & Speed	Endless 360° Continuous Rotation, 0.4°/s to 60°/s
Tilt Angle & Speed	-90° to +90°, 0.4°/s to 40°/s
Minimum Increment	0.01°
Proportional Pan/Tilt	Auto adjusts pan/tilt speed based on zoom level
Physical	
Construction	High Strength Aluminum Alloy
Weight	< 8.5 kg
Environmental	
Operational Temperature	-30°C to +60°C, <90% Relative Humidity
Environmental	IP66 Weatherproof Housing
Electrical	
Input Voltage	12VDC
Power Consumption	< 50W

Optional Features: LRF (Laser Rangefinder), Wide-Angle 4K Spotter Camera, Reflective Paint or Customized Paint Finish, Joystick (Pelco-D or IP 3-axis joysticks), Solar Power, Wireless Analog or IP Radios P2P or mesh

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Additional Images

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