



CUSTOM LONG-RANGE CAMERA SYSTEMS

ZLID • VISIBLE • IR • THERMAL • SWIR • LRF • GYRO



WWW.INFINITIOPTICS.COM

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Version 4.01.270917

Infiniti specializes in EO/IR cameras from mobile, marine, and ATEX to ultra long-range PTZ cameras with high performance optics in the visible, NIR, SWIR, LWIR, and MWIR thermal wavelengths.

Infiniti has built a reputation on custom engineering EO/IR camera solutions for mission critical applications and we work with our clients to design solutions based their mission objectives, application, and budget.



Infiniti Electro-Optics is a division of Ascendent Technology Group who has been a provider of CCTV, PC-based DVRs/NVRs and IR night vision CCTV cameras in North America founded in 2000. Ascendent was a pioneer in long-range IR illumination by integrating our Zoom Laser IR Diode (ZLID) technology into turnkey PTZ systems. In 2014 Ascendent realized the need for a focused division specifically dedicated to the R&D, support, and production of long-range electro-optics solutions. This led to the creation of Infiniti Electro-Optics in 2015.

Infiniti has provided some of the longest-range electro-optics systems in the world including our 1400mm MWIR thermal lenses, 2050mm telescope lens, 5km ZLID illumination, and advanced pan/tilt systems with Elliptical Synchronous Drive technology and gyro stabilization.

When you choose Infiniti we will work with you from the design stage through to the integration of the full solution. Our sales team will first select the best imaging technologies, pan/tilt positioner, and the control/display system to design an engineered solution while considering the region, application, budget, and cost of ownership to deliver the highest value and performance.



Applications

- › Long-Range 24/7 Day/Night Surveillance
- › ISR & Tactical Imaging
- › Border Protection & Perimeter Security
- › Coastal Surveillance & Port and Harbor
- › Anti-UAV / CUAS / UGV / USV

- › Critical Infrastructure Protection
- › Mobile, Fixed & Marine
- › Military & Law Enforcement
- › Search & Rescue
- › Smart City AI Integration



INFINITI'S
Clients



GENERAL DYNAMICS

MOD
Vietnam

Cape Canaveral
Air Base

IAMGOLD®

BAE SYSTEMS



Shell Oil

EXXON

RCMP & Police



CUBIC™

AMERICA'S
NAVY

LOCKHEED MARTIN



Raytheon

THALES

Australian
Consulate

South Korea Navy

Teck



JOHNS HOPKINS
UNIVERSITY



CBS



Hanwha



leidos



Sandia
National
Laboratories

NORTHROP GRUMMAN



PORT of
Vancouver

SAIC®



U.S. AIR FORCE

Thailand
Navy

FBI



US & Canadian Nuclear Facilities

Victoria Airport

IVANHOE
MINES

Army South Africa

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INFINITI'S

Installations



Infiniti excels at using its experience and expertise to configure customized surveillance configurations ideal for your specific scenario, with field-proven experience in fixed installations, mobile, and marine deployments. Infiniti systems have been deployed in many environments ranging from arctic to desert installations where heat, cold, and water ingress are critical factors.

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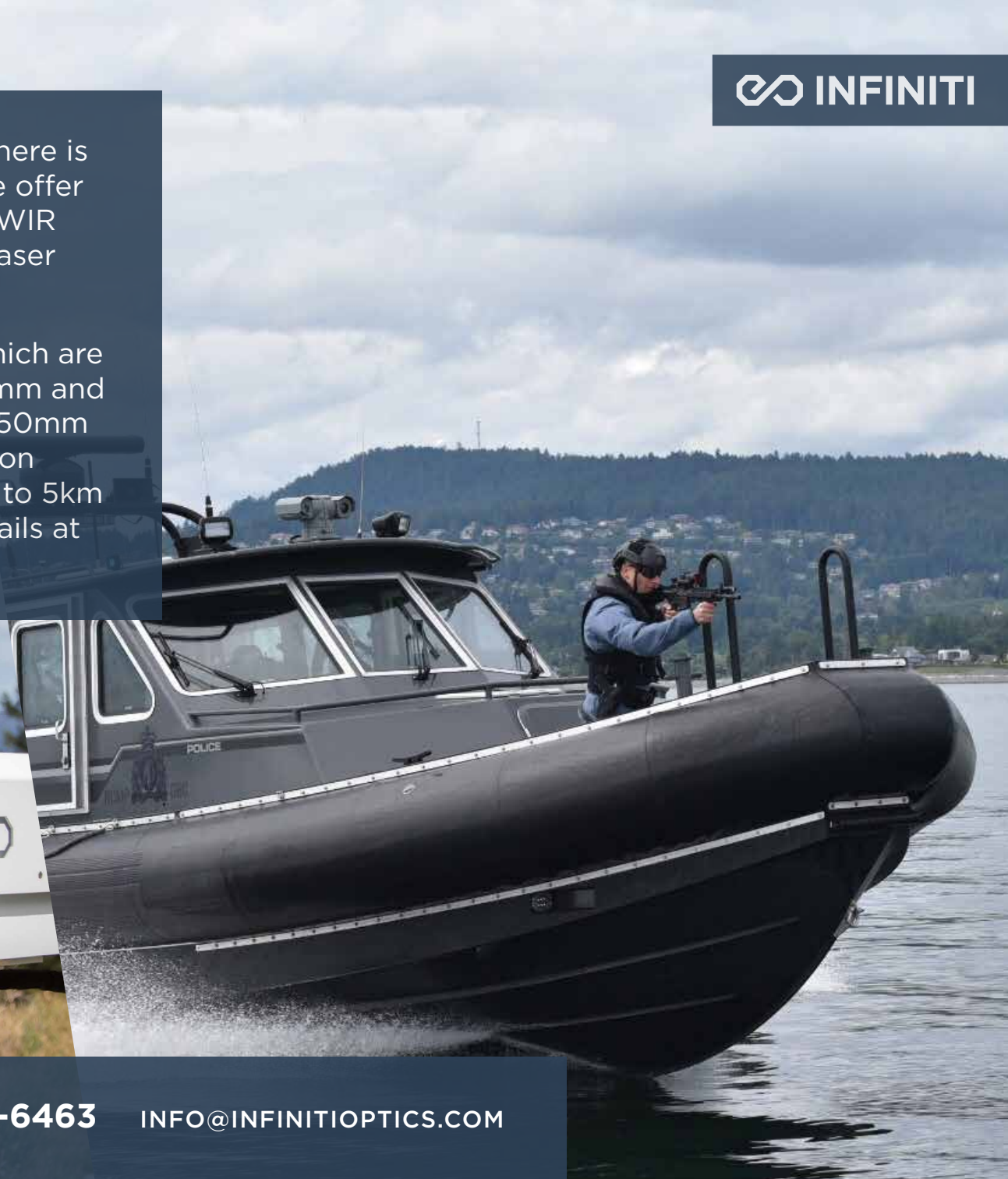
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Long range surveillance relies on a wide range of technologies; there is no “one size fits all” approach. The core imaging technologies we offer for long-range security and surveillance are: visible, NIR, SWIR, LWIR uncooled and MWIR cooled thermal imaging, as well our ZLID™ laser illumination, LRFs and radar.

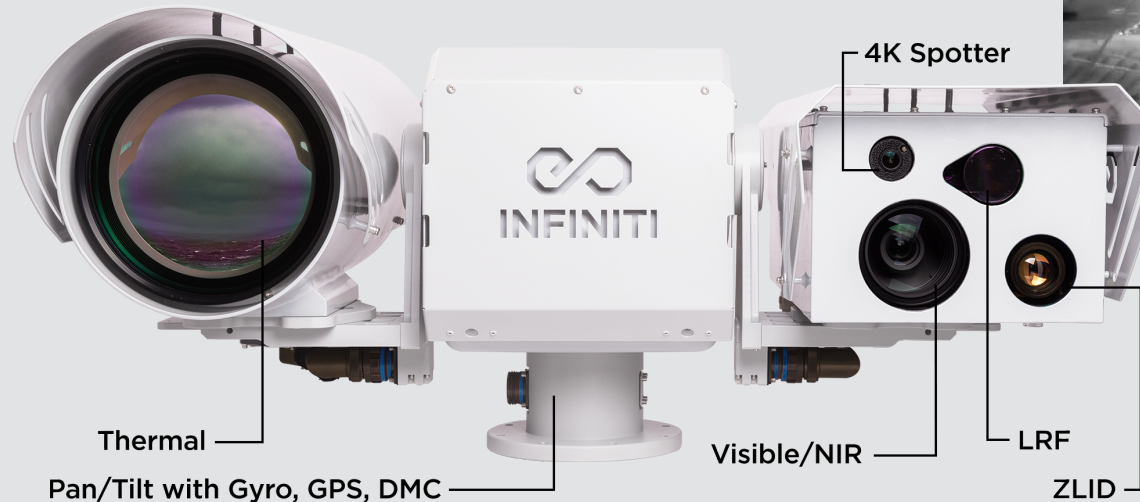
Infiniti provides some of the longest range optics in the world which are unparalleled in the surveillance industry. These include our 1400mm and 1200mm HD cooled thermal lenses, along with our 8M-61X or 2050mm visible lenses which can be paired with our ZLID™ laser illumination technology to provide identification-level details at distances up to 5km in complete darkness, allowing us to offer identification level details at much further distances than competing technologies.



Multi-Sensor Imaging

Infiniti's sales and engineering teams collaborate with our clients to determine the best combination of these technologies for each application, ensuring high performance and high value in all our solutions by weighing the pros and cons of each technology.

We use our expertise and experience to combine multiple sensors into a single system and maximize the data on the target. This may include LWIR or MWIR thermal imaging, NIR and long-range ZLID™ illumination, SWIR imaging, laser rangefinders, and of course standard visible color imaging.



Each imaging technology has advantages and disadvantages; viewing the various video feeds side-by-side allows the viewer to quickly spot aspects of the scene that could be of interest.

These sensors can be integrated with our weapons-grade pan/tilts to offer the high-precision accuracy required for long-range optics, with the optional added performance of gyro stabilization and radar paired slew-to-cue automation.

TECHNOLOGY

Long-Range High-Definition VIS/NIR Lenses

 INFINITI



When combined with the 1/1.8" 4K sensor, our 2050mm telescope lens has the field of view equivalent to a DSLR with a 9,600mm lens!

Our long range visible/NIR cameras utilize high-definition compact sensors that maximize zoom range and performance paired with industry leading high-definition long range optics. Many manufacturers will advertise high definition sensors, but then pair those sensors with standard-definition lenses.

As an example, our 8M-61X-OS zoom module has been designed for peak surveillance performance in every facet. The precision-engineered 20-1225mm lens is optimally paired with a 4K/8MP sensor geared towards low light and long-range capabilities with maximum detail acquisition. Built-in

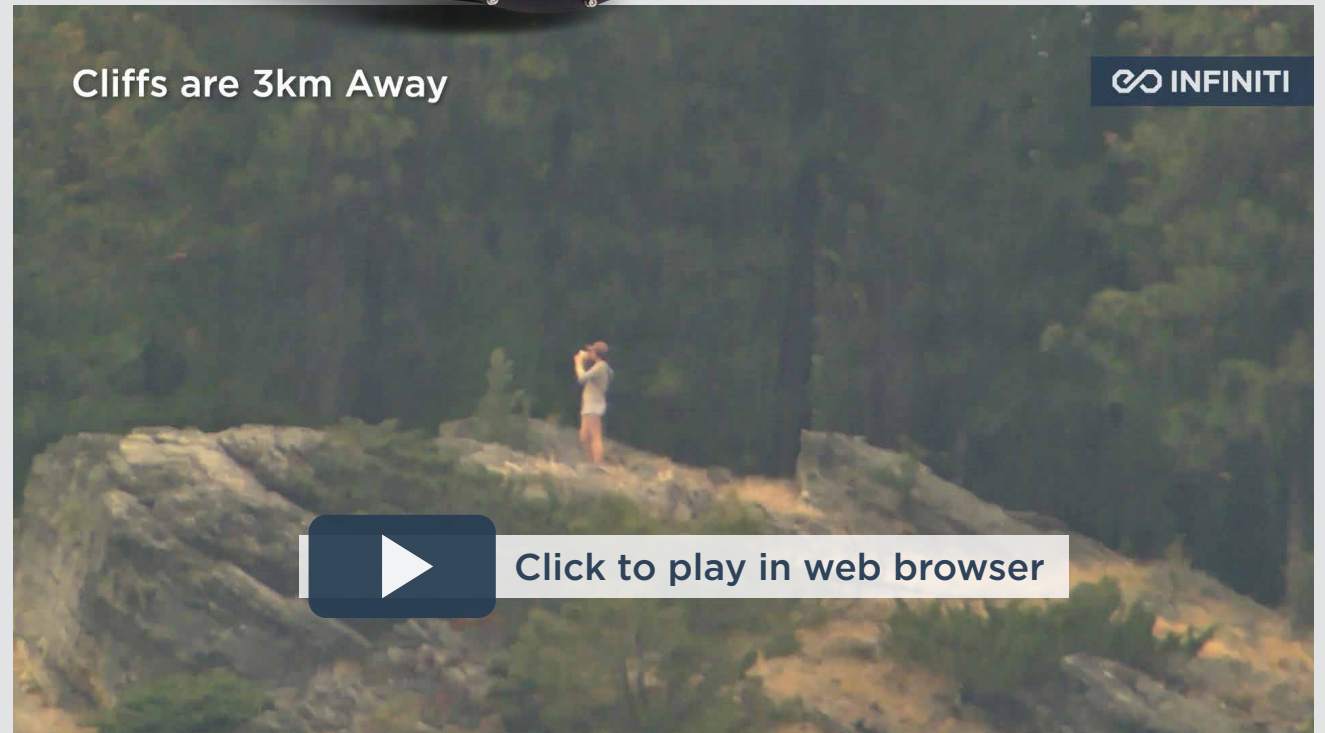
Optical and Electronic stabilization ensure a more reliable image at maximum zoom, and features like a motorized NIR filter allow for optimal

performance in any weather conditions. Finally, our Instant Rapid Autofocus minimizes times of obscured detail whenever zooming the camera.



Cliffs are 3km Away

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Click to play in web browser

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TECHNOLOGY

Surveillance Optimized VIS/NIR Imaging

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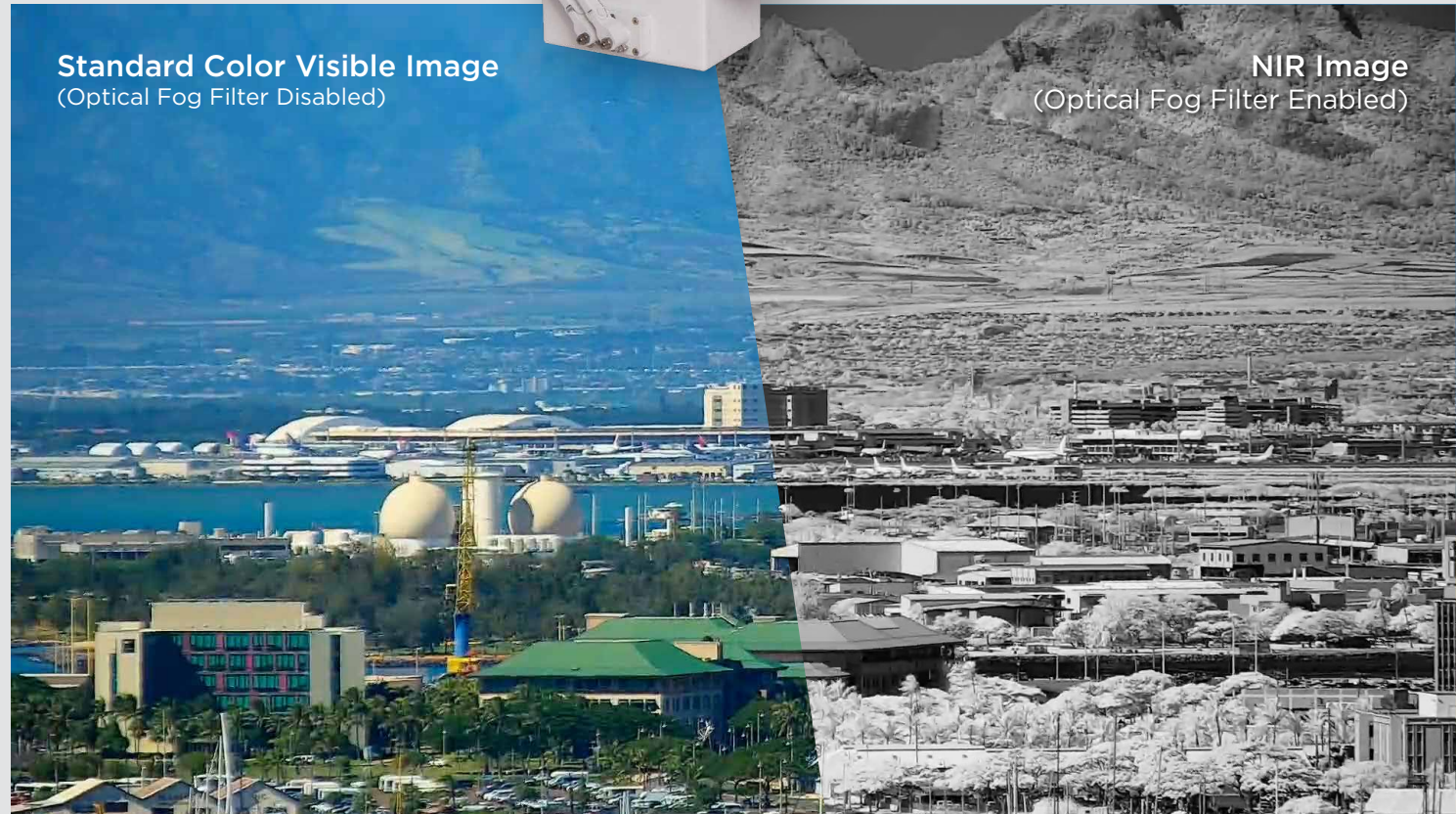


Infiniti's long-range zoom cameras utilize the visible and near-infrared (VIS/NIR) light wavelengths to provide high-quality images optimized for surveillance. We use the latest cutting-edge sensor technology to provide industry-leading quality and performance.

NIR Advantages

While most surveillance sensors offer a nighttime NIR+visible mode for optimized sensitivity in low light, we add an NIR bandpass filter (also referred to as a "fog filter") allowing users to isolate the NIR (near infrared) wavelength of light during the day for clearer long-range imaging in adverse conditions.

Long-range imaging needs to see through large amounts of atmosphere. 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. See the comparison on the right for an example.



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TECHNOLOGY

ZLID™ Illumination

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IR Illumination up to 5km

Most IR illumination technologies have limited ranges of just a few hundred meters. ZLID™ combines laser diode technology with optical collimators to provide invisible long-range illumination up to 5 kilometers (3 miles). Synchronizing IR intensity and the area of illumination with the motorized zoom lens allows for outstanding active IR performance, eliminating the overexposure, washout, and hot spots that often plague similar systems.

With the ability to see through glass, and a much lower cost while utilizing higher resolution sensors and longer range lenses than thermal, ZLID™ is the ultimate solution for long-range identification up to 5km in complete darkness.



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Thermal Infrared Imaging

We work with both uncooled and cooled thermal imaging cameras, using radiated heat to achieve an image instead of light. This can have great advantages, especially for long-range detection of threats at night.

With thermal imaging, warm objects like humans, vehicles and animals become more obvious against a colder background. Warmer objects like these can be easily located and tracked with thermal imaging technology regardless of light and shadow conditions, making it far more likely to spot a threat at long distances, especially in darkness.

Another advantage of thermal over visible cameras is its immunity to bright lights. With standard surveillance camera systems at night, bright lights from objects like handheld flashlights or vehicle headlights can cause overexposures and light flares on the images, making it difficult or impossible to see details about objects or activities around those lights. Thermal imaging is unaffected in this way and maintains a clear and detailed image even around bright light sources.

Our uncooled LWIR cameras use large aperture lenses to allow the most heat to reach the sensor, resulting in a clearer, sharper image. Uncooled thermal cameras do not require regular maintenance as there is no cooler to replace.

MWIR sensors use integrated cyro-coolers to chill the sensors down to -196°C (InSb) or -123°C (X-Hot). This greatly increases the sensitivity of the thermal camera allowing it to use even smaller and/or more powerful lenses than what's possible with uncooled LWIR cameras.



LWIR Uncooled Thermal

Infiniti uses cutting-edge 12 μ m LWIR VOx uncooled thermal sensors with resolutions from 384 $\times$ 288 up to 1280 $\times$ 1024 HD. The 12 μ m pixel pitch provides a narrower field of view without changing the lens. This means we are able to achieve 40% further range than 17 μ m and 25% further range than 15 μ m sensors while delivering a sensitivity of 0.05 $^{\circ}$ C.

These sensors are paired with precision-engineered germanium lenses from wide-angle to long-range views. Our lenses have large apertures of f/1.0-f/1.3 compared to the standard f/1.5-f/1.6, allowing up to 2.3 times more heat to reach the sensor. This results in higher sensitivity, sharper images, and longer ranges making LWIR one of the most cost-effective long-range imaging solutions. Infiniti offers some of the longest range LWIR cameras with a 410mm lens currently in development which is equivalent to a 580mm lens on a traditional 17 μ m LWIR camera.



TECHNOLOGY

MWIR Cooled Thermal

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Infiniti offers cooled thermal in SD or HD options. Our 15 μ m 640 $\times$ 480 InSb or MCT sensors are comparable to the standard MWIR offerings in the industry. Our 10 μ m 1280 $\times$ 1024 HD X-Hot sensor provides 400% higher resolution and 50% longer range than traditional 15 μ m sensors. This means a 400mm lens on our X-Hot sensor is equivalent to a 600mm lens on a traditional 15 μ m sensor allowing it to provide a narrower angle for more detail at long distances.

MWIR sensors use integrated cyro-coolers to cool the sensors down to -196°C (InSb) or -123°C (X-Hot). This exponentially increases the sensitivity of the thermal camera. This allows MWIR cameras to use smaller and more powerful lenses than uncooled LWIR cameras, however the cyro-coolers do require maintenance at regular intervals of approximately 8000-25,000 hours.

Our wide variety of MWIR sensors and lenses range from a 19-275mm f/5.5 zoom (28.4°-2.0° HFOV) with SD resolution to a 92-1200mm f/4.0 zoom lens (7.9°-0.61° HFOV) with HD resolution, capable of human detection at over 50km based on DRI ratings in ideal conditions.



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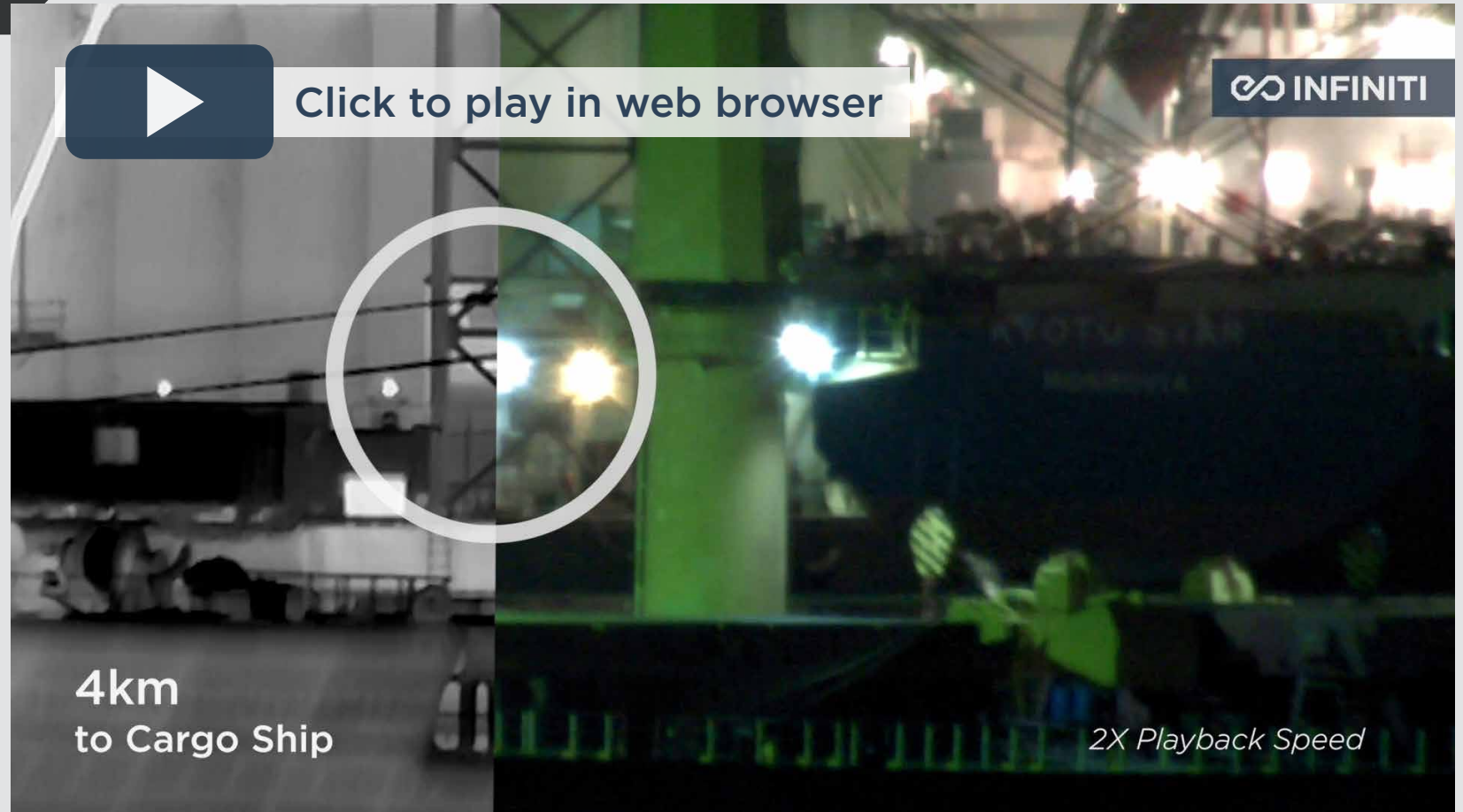
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Long-Range Surveillance Options: Visible vs Thermal

This video shows some of the key differences between thermal and visible imaging at night. Thermal excels at detecting targets that are warmer than their environment, as shown in the areas circled on the video. It is also unaffected by bright lights at night.

One disadvantage to thermal, however is not being able to read visible printed information like signage and vehicle/vessel identifiers, which can be seen in the video with the visible camera.

This is why we often recommend and sell multi-sensor systems with both thermal and visible imaging, giving users the advantages of both imaging technologies.



Long-Range Nightvision Options: ZLID™ vs Thermal

ZLID illumination uses glass lenses and the sensor of the visible camera while thermal cameras typically use germanium lenses which are very expensive, especially for longer ranges lenses.

Due to the higher resolution and image information in the visible light wavelength, high detail levels are much easier to achieve at night with ZLID illumination at distances up to 5km. However thermal imaging is superior to ZLID for detection of humans and vehicles, due to the narrow angles used by ZLID and long range visible cameras.

ZLID excels in being able to see details like printed lettering, which often lack temperature contrast, especially at night.



Wide-Angle Spotter

With fields of view as small as 0.15° , our long-range zoom cameras can capture incredible amounts of long-range detail but are limited to viewing a very small portion of the area in front of the camera when in full zoom. For a relatively minimal cost increase, adding a wide-angle spotter camera to the system can ensure that the operator maintains a wide situational awareness at all times.

Our visible wide-angle spotter camera is typically an 8MP or 12MP resolution 4K camera with a 90° or greater horizontal field-of-view. This difference in angles can create an optical zoom factor of 600X or more, while being able to view both camera feeds simultaneously.

Of course our custom build approach allows us to tailor the system to your project's needs, so if a different field of view is desired—or even a wide-angle thermal imager—we can make that happen.



TECHNOLOGY

Customization Options

 INFINITI

OEM Modules, Enclosures or PTZ Systems

The lens and sensor options in this brochure are available as open frame OEM modules or integrated into IP66 weatherproof enclosures. They can also be part of a complete EO/IR PTZ system with optional thermal imaging and/or ZLID™ infrared illumination for high-detail night vision and more.

To see our many camera system options, visit our main website at infinitioptics.com



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LRF and Other Sensors

LRF

Laser Rangefinders use advanced technology to accurately measure the distance to a target. Infiniti uses weapons-grade LRFs that provide an accuracy of 1-7m, with ranges up to 20km in good conditions. These LRFs are used in a host of applications such as weapon targeting, advanced tracking, autonomous cars and geo locking surveillance.

Our EDPSS erbium-glass diode-pumped solid-state SWIR micro lasers provide short, high-pulse-energy pulses, with diffraction-limited beam quality and low divergence, resulting in superior range and performance. Our EDPSS eye-safe lasers range in power from 100-735 μ J at a wavelength of 1535nm (± 2) with single- and multi-pulse while offering industry-leading SWaP.



Gyro, GPS & DMC

Our optional sensor fusion board is a 9-axis IMU/MEMS sensor that includes a 3-axis accelerometer, 3-axis DMC (digital magnetic compass) and 3-axis MEMS gyroscope. The MEMS rate gyroscope senses motion, the accelerometer detects acceleration, and the DMC detects the magnitude of the local magnetic field, each component detecting in the X, Y, and Z axes.

Our custom fusion board aggregates our IMU/MEMS sensors or third-party systems and combines that data with the range information of the LRF and GPS geolocation of targets for extremely accurate heading and positioning. The sensor fusion board continuously calibrates each sensor to ensure the readings are accurate by cross-referencing the results. The data can also be accessed for other operations such as improving DIS (Digital Image Stabilization) with the MEMS sensor data, accounting for ferrous metals affecting the compass, or keeping track of the orientation of the pan/tilt.

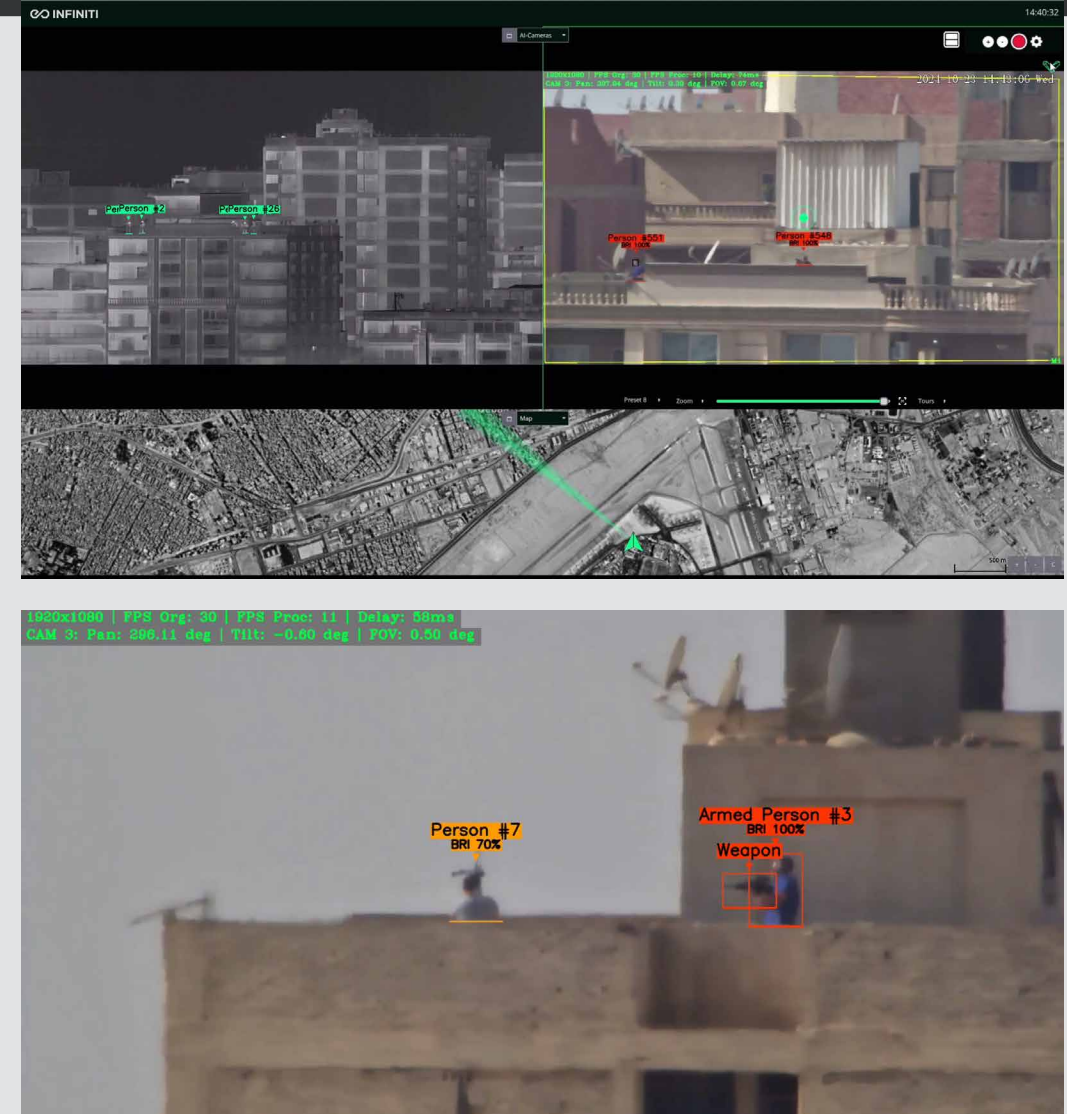


Aegis AI – Analytics

Infiniti's **Aegis AI** is a state-of-the-art perimeter security solution that employs a highly trained artificial intelligence designed for comprehensive situational awareness and threat detection. **Aegis AI** contextualizes sensor data by pairing machine learning with Infiniti's industry-leading EO/IR PTZ cameras, which feature integrated visible, thermal, NIR, and ZLID™ illumination technologies.

Aegis AI provides fully automated proactive security solutions designed to detect and identify threats in real time. Optional active deterrents include LRADs, high powered spotlights, and laser dazzlers to deter intruders and ensure the safety and security of the premises.

Aegis AI continuously scans a perimeter based on user-defined zones, using long range thermal sensors to detect humans, vehicles, and other potential threats, day or night. When a threat is detected, the **WARDN (Wide Area Recognition and Defense Node)** scanning camera or a secondary EO/IR system with a high resolution long-range visible camera auto-tracks the subject using sub-pixel neural networks and automatically zooms in for more detail. At night, Infiniti's ZLID technology provides laser illumination at distances up to 6km, allowing for high definition night vision. Once the visible camera has zoomed in, **Aegis AI's GLASS (Gun Locator & Analysis Surveillance System)** weapons detection module's algorithms can determine whether a subject is armed, enabling an operator to identify security threats and deploy active countermeasures.



TECHNOLOGY

Pan/Tilts and Octagon

 INFINITI

The Sigma and Arc pan/tilts support our largest and heaviest payloads. The Arc also provides very high precision for long-range targets, offering micro-step movements down to 0.0002°.

It also meets MIL-810 standards, is IP66/67 weatherproof rated, and features rugged military connectors for simple and secure setup and connectivity.

The Arc's high-performance harmonic drive system can also provide mechanical 2-axis gyro stabilization which can be critical for long-range surveillance.

Both systems feature our Octagon server which integrates all of the components into one point of communication and control.



An optional Octagon Bridge can take standard Pelco-D serial commands and convert them into a format that can be sent to a network connected Infiniti camera system. This allows for easy operator control, and can also be customized to include dedicated controls for special functions such as: enabling fog filters, gyro stabilization, ZLID illumination, or thermal palettes.

 OCTAGON
ENABLED ✓



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TRITON & ATLAS

Compact, Mobile PTZ Cameras

 **INFINITI** LITE

Note: As an Infiniti Lite systems, the Triton and Atlas are built for hands-on manual control via joystick or mouse and does not support our Octagon API for network control. Step up to the Octagon-Enabled Rogue series when you need absolute positioning, radar slew-to-cue, or full API/network integration for control.

Key Features:

- › Single-Sensor or Multi-Sensor Integrated PTZ System
- › Impressive Visible Zoom Options from 3X to 30X
- › Optical Field of View Options from 74° to 2.2°
- › 12µm 640×480 VOx Uncooled Thermal Imager or Optional 384×288 Resolution
- › Active IR LED for 50m of Covert Illumination or Optional ZLID Illumination for up to 500m of Night Vision
- › Rugged Mobile-Ready Design
- › Military Connector Supplies Video, Power and Telemetry Over a Single Cable
- › Rugged IP66 and -40° to +65°C Weather Resistance

Optional Features:

- › Magnetic Mount
- › GPS & 4G Cellular Transmission
- › Vibration Mount
- › Integrated Internal Storage
- › Nano Coating for Viewing Window

Atlas Specific:

- › 30X 8MP 6-180mm Zoom Lens Option
- › 55mm LWIR Thermal Lens Option
- › Up to 150m LED / 750m ZLID Illumination
- › 940nm “Stealth” ZLID Option



5mm-
40
8X 8MP

13
mm
LWIR

4.8mm-
144
30X 2MP

50m

19
mm
LWIR

5mm-
120
24X 4MP

300m
ZLID™

25
mm
LWIR



Rugged
& Mobile
Ready



Basic Remote
Pan/Tilt/Zoom
Control



Weatherproof
Construction



Rugged
Military
Connectors

4.7mm-
141
30X 4MP

Multiple Zoom
Lens Options
up to 141mm

500m
ZLID™

Optional IR
Illumination
up to 500m

35
mm
LWIR

Optional
Thermal
Imaging

In addition to our long range systems, Infiniti has developed this range of rugged mobile products that are suitable for commercial fleets, police/law enforcement, military vehicles, and rapid deployment kits.

The Triton and Atlas cameras offer high quality optics in a small rugged package which can be combined with IR and ZLID illumination, or thermal sensors.

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ROGUE

Rugged, Mobile Surveillance



Key Features:

- › Up to 12MP 4K High Resolution Sensors
- › Impressive Visible Zoom Options from 3X to 30X
- › Optical Field of View Options from 74° to 2.14°
- › 12μm 640×480 VOx Uncooled Thermal Imager or Optional 384×288 or 1024×768 Thermal Resolutions
- › Eye Safe Active IR LED Illumination up to 180m or Optional ZLID Illumination for up to 750m of Night Vision
- › Integrated LRF (Laser Rangefinder) Rated up to 21km
- › Video, Power and Telemetry Over a Single Rugged Cable
- › Rugged IP66 and up to -30° to +65°C Weather Resistance

Optional Features:

- › Magnetic Mount
- › 940nm “Stealth” ZLID™ Illumination
- › Vibration Mount
- › Nano Coating for Viewing Window
- › Internal Storage
- › Zoom White Light LED Illumination



5mm-
40
8X 8MP

5mm-
120
24X 4MP

6.6mm-
132
20X 8MP

4.7mm-
141
30X 4MP

4.8mm-
144
30X 2MP

180m

500m
ZLID™

750m
ZLID™

25mm
LWIR

35mm
LWIR

55mm
LWIR

4.2km

7.1km

21km



Rugged
& Mobile
Ready



Remote Pan/
Tilt/Zoom
Control



Advanced
Custom PTZ
Control



Weatherproof
Construction



Rugged
Military
Connectors

Multiple Zoom
Lens Options
up to 144mm

Optional IR
Illumination
up to 750m

Optional
Thermal
Imaging

Optional LRF
up to 21km
Ext. Range

The Rogue provides a high level of customizability, offering multiple night vision options, 12MP/4K spotter modules, and LRFs rated for distances up to 21km. For enhanced night vision, it can be equipped with SD or HD thermal sensors, enabling vehicle detection up to 5km. The visible sensor also seamlessly integrates with either ZLID™ laser IR, ZIR (Zoom LED IR), or ZWL (Zoom White Light) illumination, providing high-definition nighttime performance up to 750m in complete darkness. The Rogue is our most compact PTZ that supports our Octagon API with absolute positioning, this enables radar slew-to-cue and other basic tracking applications.

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NEPTUNE

All-Weather Gyro Stabilized PTZ



Key Features:

- › Long-Range Day/Night PTZ Camera System
- › 3MP, 4MP or 8MP High-Resolution CMOS Sensor
- › HD Lens with 20X, 30X, 36X or 49X Optical Zoom
- › Optical Field of View Options ranging from 75° to 1.18°
- › ZLID™ for up to 2km Night Vision in Complete Darkness
- › Thermal Imaging for Long-Range Detection up to 35km*
- › Optional LWIR Uncooled or MWIR Cooled Thermal
- › Designed for Operation in -30°C to +60°C with IP67 Housing
- › High Resolution Pan/Tilt with 2-Axis Gyro Stabilization
- › Control via RS485/Pelco-D or Octagon Bridge/API Commands
- › Optional Integrated Optical Fog Filter

Optional Features:

- › GPS & 4G Cellular
- › Slew-to-Cue via NMEA 0183
- › Laser Rangefinder
- › Military Vibration/Shock Mount
- › Marine Joystick
- › Wide-Angle 4K Spotter Camera



Rugged
& Mobile
Ready



Advanced
Custom PTZ
Control



2-Axis Gyro
Stabilization



Weatherproof
Construction



Rugged
Military
Connectors



Multiple Zoom
Lens Options
up to 272mm



Optional
Thermal up to
260mm Zoom



Optional IR
Illumination
up to 2km



6.6mm-
132
20X 8MP

4.7mm-
141
30X 4MP

6mm-
218
36X 4MP

5.6mm-
272
49X 3MP

6mm-
218
36X 8MP

5.6mm-
272
49X 8MP

20mm-
105
LWIR

15mm-
235
MWIR

18mm-
230
MWIR^{HD}

16mm-
305
MWIR^{HD}


4.2km


7.1km


21km

Optional LRF
up to 21km
Ext. Range


500m
ZLID™


1km
ZLID™


2km
ZLID™

The Neptune PTZ is designed for mobile and marine applications with 2-axis gyro stabilization and various EO/IR payload configurations. Numerous visible zoom lens options up to 272mm, and sensor resolutions available from up to 8MP/4K make the Neptune a high performance day camera. When paired with up to 2000m of ZLID illumination or up to a 305mm HD cooled thermal imaging camera, the Neptune system offers remarkable nighttime surveillance performance as well. All of these sensors are integrated into a rugged IP67 weatherproof housing constructed of strengthened aluminum.

*While DRI ratings are based on the industry-standard Johnson's Criteria, they represent theoretical maximums under ideal conditions that typically exceed real-world performance. Additionally, a "Detection" rating means that a target will appear only as a tiny speck of pixels, rather than as a clearly defined or recognizable object.

For more information, please see our whitepaper about understanding DRI at: www.infinitioptics.com/dri

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SENTRY

Rugged, Long-Range Multi-Sensor PTZ



Key Features:

- › Multi-Sensor Visible and Thermal Integrated PTZ System
- › HD or UHD Progressive Scan CMOS Day/Night IP Camera
- › Long-Range Visible Zoom Options from 36X to 95X
- › Visible/NIR Field of View Options from 75° to 0.36°
- › 12μm 640×512 VOx Uncooled Thermal Imager or Optional SD or 1280×1024 HD Cooled Thermal Imager
- › Uncooled VOx Thermal Imaging Options up to 310mm
- › SD and HD Cooled Thermal Options up to 705mm
- › Up to 33km Human Detection and 55+km Vehicle Detection with Thermal (using Johnson Criteria DRI standards)*
- › Endless 360° Pan and ±90° Tilt, with pan speeds up to 60°/s
- › IP66 Military-Grade Design with Military Cable Connectors
- › Designed for Fixed, Marine or Mobile Applications



Appearance will vary based on configuration options.

6mm-
218
36X 8MP

5.6mm-
272
49X 8MP

20mm-
105
LWIR

15mm-
800
53X 4MP

750m
ZLID™

25mm-
130
LWIR

30mm-
430
MWIR

15mm-
800
53X 8MP

1km
ZLID™

32mm-
155
LWIR

30mm-
460
MWIR^{HD}

10.6mm-
1015
95X 8MP

2km
ZLID™

34mm-
185
LWIR

36mm-
700
MWIR

20mm-
1225
61X 8MP

4km
ZLID™

26mm-
230
LWIR

60mm-
705
MWIR^{HD}

The Sentry is a modular multi-sensor PTZ that can be configured with our long range visible, ZLID™, and thermal camera options. These include our 4K/8 Megapixel 20-1225mm 61X zoom day/night camera, thermal imaging cameras up to 705mm, and up to 4km of ZLID™ illumination.

Combining these multiple sensors allows for accurate detection, recognition, and identification of potential threats. Active deterrence measures such as LRADs, spotlights, and laser dazzlers can also be integrated to ensure threats are not just detected, but mitigated.



Rugged
& Mobile
Ready



Advanced
Custom PTZ
Control



Weatherproof
Construction



Rugged
Military
Connectors

Multiple Zoom
Lens Options
up to 1225mm

Optional IR
Illumination
up to 4km

Uncooled
Thermal Zoom
up to 230mm

Optional
Cooled
Thermal

*While DRI ratings are based on the industry-standard Johnson's Criteria, they represent theoretical maximums under ideal conditions that typically exceed real-world performance. Additionally, a "Detection" rating means that a target will appear only as a tiny speck of pixels, rather than as a clearly defined or recognizable object.

For more information, please see our whitepaper about understanding DRI at: www.infinitioptronics.com/dri

WWW.INFINITIOPTICS.COM

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LEOS

Gyro-Stabilized Mobile Multi-Sensor PTZ

Key Features:

- › Gyro-Stabilized Multi-Sensor PTZ System
- › HD or UHD CMOS Day/Night IP Camera
- › Long-Range Visible Zoom Options from 30X to 49X
- › Optical Field of View Options ranging from 36° to 1.2°
- › 12μm 640x512 VOx Uncooled Thermal Imager or Optional SD or HD Cooled Thermal Imager
- › 105mm, 155mm or 230mm Germanium Zoom Lens Options or optional 435mm SD or 415mm HD Cooled Thermal
- › Up to 16km Human Detection and 27km Vehicle Detection with Thermal (using Johnson Criteria DRI standards)*
- › Endless 360° Pan and ±60° Tilt
- › IP66 Military-Grade with Military Cable Connectors
- › Designed for Fixed, Marine or Mobile Applications

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Optional Gyro
Stabilization



Weatherproof
Construction



Rugged
Military
Connectors



Optional
InGaAs LRF



Optional
SWIR
Imaging



Multiple Zoom
Lens Options
up to 272mm



Optional IR
Illumination
up to 2.5km



Optional
Thermal up to
435mm Zoom



30X
ZOOM

20mm-
105
LWIR

36X
ZOOM

500m
ZLID™

32mm-
155
LWIR

38X
ZOOM

1km
ZLID™

26mm-
230
LWIR

49X
ZOOM

2500m
ZLID™

18mm-
435
MWIR



Appearance will
vary based on
configuration
options.

The LEOS series is a high performance 2-Axis gyro stabilized electro-optic system specifically designed for military vehicles and marine vessel deployments.

The rugged design is optimized for multi-sensor configurations including visible, NIR, SWIR, cooled or uncooled thermal, and laser range finders (LRFs).

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ARC

Ultra Long-Range Multi-Sensor PTZ

INFINITI

Key Features:

- › 20-1225mm 4K/8MP 61X Day/Night Zoom Camera
- › Other camera options with zoom ranges up to 95X
- › 1280×1024 or 640×480 Cooled/Uncooled Thermal options
- › Thermal lens options available up to 1215mm in HD resolution or 1400mm in SD resolution
- › Optional ZLID™ illumination for up to 6km of High Definition NIR imaging in complete darkness
- › Military Grade pan/tilt with speeds from 0.007-100°/s
- › Up to 75kg (165lbs) payload handling
- › Rugged IP66/67 and -40° to +65°C with Anti-Corrosion Finish

Optional Features:

- › 30km Rated LRF
- › 1280×1024 HD Cooled Thermal
- › HD SWIR Camera
- › GPS & DMC for Accurate Positioning
- › Auto Tracking
- › Laser Dazzler or Spot/Strobe Light
- › Laser Pointer
- › Other customizations available



Built to
Military
Standards



Advanced
Control



Optional Gyro
Stabilization



Rugged
Military
Connectors



Optional
InGaAs LRF

5.6mm-
272
49X 8MP

40mm-
365
LWIR^{HD}

15mm-
800
53X 8MP

72mm-
905
MWIR

1km
ZLID™

10.6mm-
1015
95X 8MP

73mm-
915
MWIR^{HD}

2km
ZLID™

2050
mm
8MP

100mm-
1215
MWIR^{HD}

4km
ZLID™

20mm-
1225
61X 8MP

85mm-
1400
MWIR

6km
ZLID™

Multiple Lens
Options up to
2050mm

Long-Range
Thermal up to
1400mm Zoom

Optional IR
Illumination
up to 6km

Appearance will vary based
on configuration options.

The Arc offers the highest level of customization with the ability to integrate various technologies and sensors including ZLID illumination up to 6km, LRFs (Laser Range Finders) rated up to 30km, radar Slew-to-Cue integration for automated tracking, and GPS telemetry. Heavy duty gearing systems ensure that the systems are self-locking even when not in operation. Weatherproof military connectors and corrosion resistant anodized aluminum is available for enclosures, ensuring these systems will stand up to any environment.

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ACCESSORIES

Display & Recording

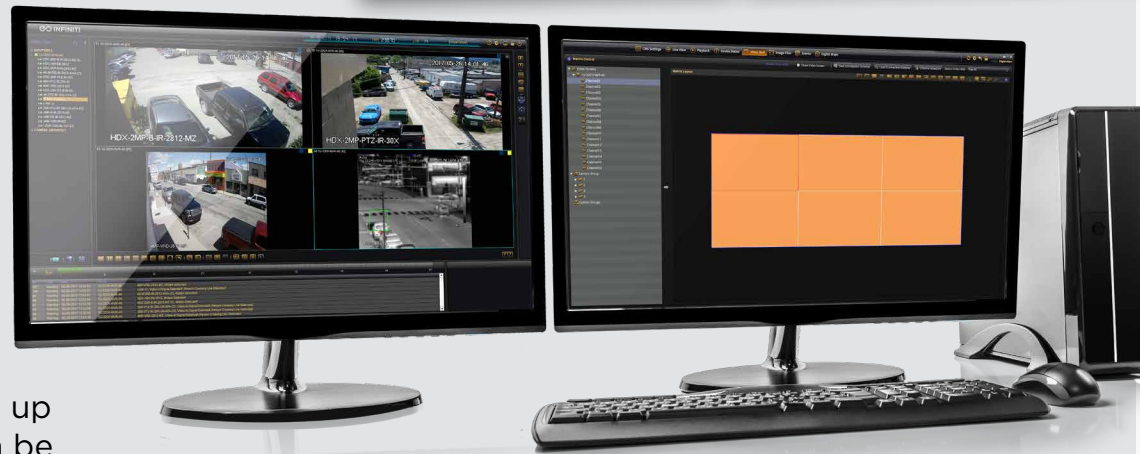
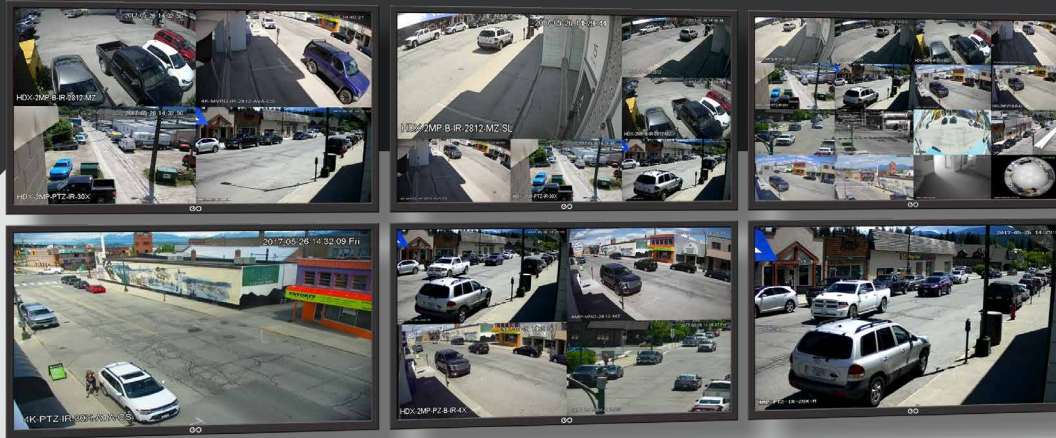


All security and surveillance systems require some form of display, recording, or transmission solution.

Recording & Transmission

The vast majority of systems have now moved to IP and we work with our customers to provide network solutions including PoE (Power over Ethernet) switches and injectors and long-range IP radios for communication at distances up to 100+ kilometers. These systems can be fully configured and pre-tested prior to shipping, allowing for a smooth, simple integration process.

Many applications also run on legacy analog/coax installations or require SDI systems for low-latency or security needs. We are able to provide solutions for these types of systems as well.



Display & Monitoring

Display solutions vary a lot based on the application; sometimes only a single monitor is required for one operator, other times there is a complex design with many users needing access to the video streams. We work with clients to ensure that all aspects are covered and can provide full video wall setups, proxy servers to balance throughput requirements when large numbers of video streams must be distributed over a network.

Rapid Deployment Kits

Our RDK (Rapid Deployment Kit) allows for a portable, quick setup monitoring and control solution.

These kits can be completely customized to match the project needs and can include everything from simple monitoring and PTZ control to wireless networking, video recording, remote access, power management and more.



Lens FOV Previews

Explore the full range of Infiniti Electro-Optics' lens and sensor capabilities with our interactive preview tool. Designed to take the guesswork out of system integration, this calculator allows you to define target size and distances to visualize Field of View (FOV) and pixel density. By calculating Pixels-Per-Meter (PPM) in real-time, the tool also provides a simulated detail preview, allowing end customers to get a rough idea of potential zoom and detail levels of a chosen camera before the costly process of purchase and installation.

[View FOV Previews Page >](#)

Visible/NIR Module Options

Our full selection of Visible/Near Infrared camera module options.

Pro Tip: On desktop computers you can hold down the shift key while scrolling your mouse wheel to scroll sideways to see more options.

20mm-
1225
61X 8MP

10.6mm-
1015
95X 8MP

15mm-
800
53X 8MP

15mm-
800
53X 4MP

15mm-
800
53X 3MP

5.6mm-
272
49X 8MP

6mm-
218
36X 8MP

5.6mm-
272
49X 3MP

6mm-
218
36X 3MP

Subject Size:
Human (0.5m × 1.8m)

Subject Distance:
1000m 0.6 miles 3,281 ft

8M-61X-OS



1000m
0.6 miles
3,281 feet

612.5 ppm



600ppm Example



Contact us today: [CONTACT FORM](#)

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