



# CUSTOM LONG-RANGE CAMERA SYSTEMS

ZLID • VISIBLE • IR • THERMAL • SWIR • GYRO



[WWW.INFINITIOPTICS.COM](http://WWW.INFINITIOPTICS.COM)

1-866-969-6463

[INFO@INFINITIOPTICS.COM](mailto:INFO@INFINITIOPTICS.COM)

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 and longest-range electro-optics systems in the world including 1400mm MWIR thermal lenses, 5500mm visible/NIR lenses, 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

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



**GENERAL DYNAMICS**

Thailand Navy

RCMP & Police

**BAE SYSTEMS**



**Shell Oil**

Cape Canaveral  
Air Base

Australian  
Consulate

أرامكو السعودية  
**Saudi Aramco**

AMERICA'S  
**NAVY**



**Raytheon**

**THALES**

South Korea  
Navy

**LOCKHEED MARTIN**

**WÄRTSILA**



**JOHNS HOPKINS  
UNIVERSITY**



**leidos**



Hanwha



Sandia  
National  
Laboratories

**NORTHROP GRUMMAN**

**CBS**

**SAIC**

**U.S. AIR FORCE**

**MOD  
Vietnam**

Victoria Airport



PORT of  
**vancouver**

US & Canadian Nuclear Facilities

Army South Africa

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.



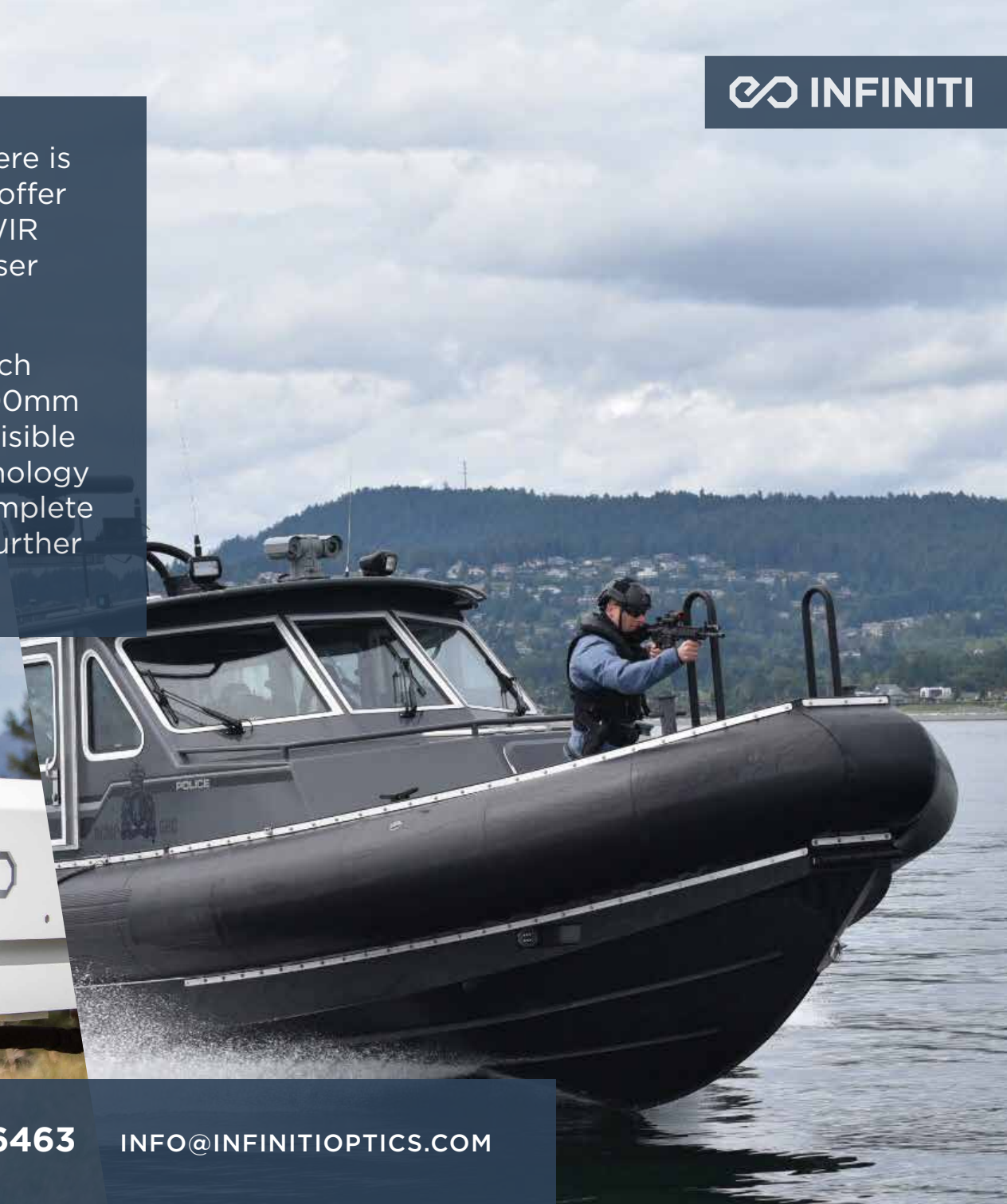
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Long range surveillance relies on a wide range of technologies; there is no “one size fits all” approach. The core imaging technologies we offer for long-range security and surveillance are: visible, NIR, SWIR, LWIR uncooled and MWIR cooled thermal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

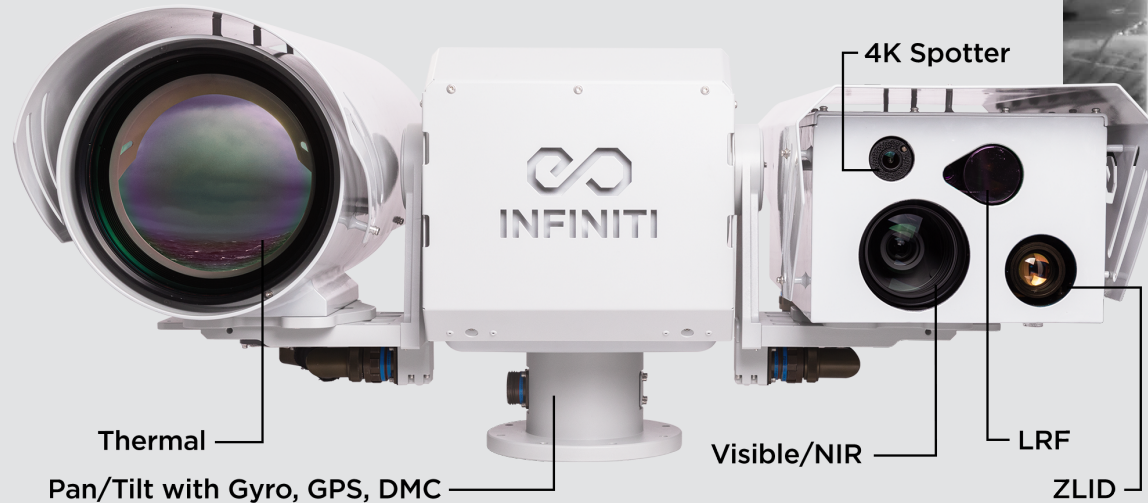
Infiniti provides some of the longest range optics in the world which are unparalleled in the surveillance industry. These include our 1400mm and 1200mm HD cooled thermal lenses, along with our 2075mm visible lenses which can be paired with our ZLID™ laser illumination technology to provide identification-level 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

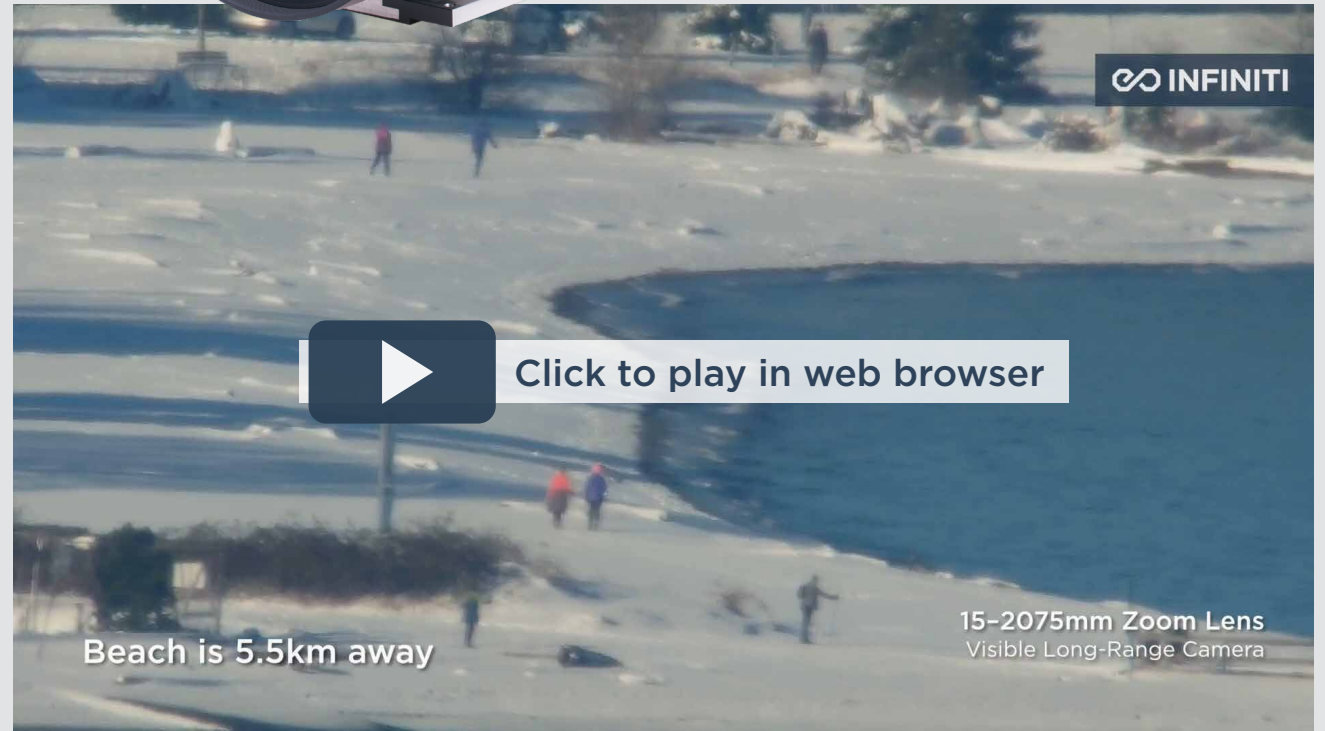


When combined with a 1/2.8" HD sensor, our 2075mm zoom lens has the field of view equivalent to a DSLR with a 13,500mm lens!

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 2075mm zoom lens is built for HD sensors and includes our integrated zoom extender (IZE) technology that is built-in to the lens as an adjustable optical element, not simply added on to the back of the lens like most doublers.

This approach ensures maximum image quality as well as smooth switching between fields of view without image blackouts.



15-2075mm Zoom Lens  
Visible Long-Range Camera

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TECHNOLOGY

# Surveillance Optimized VIS/NIR Imaging

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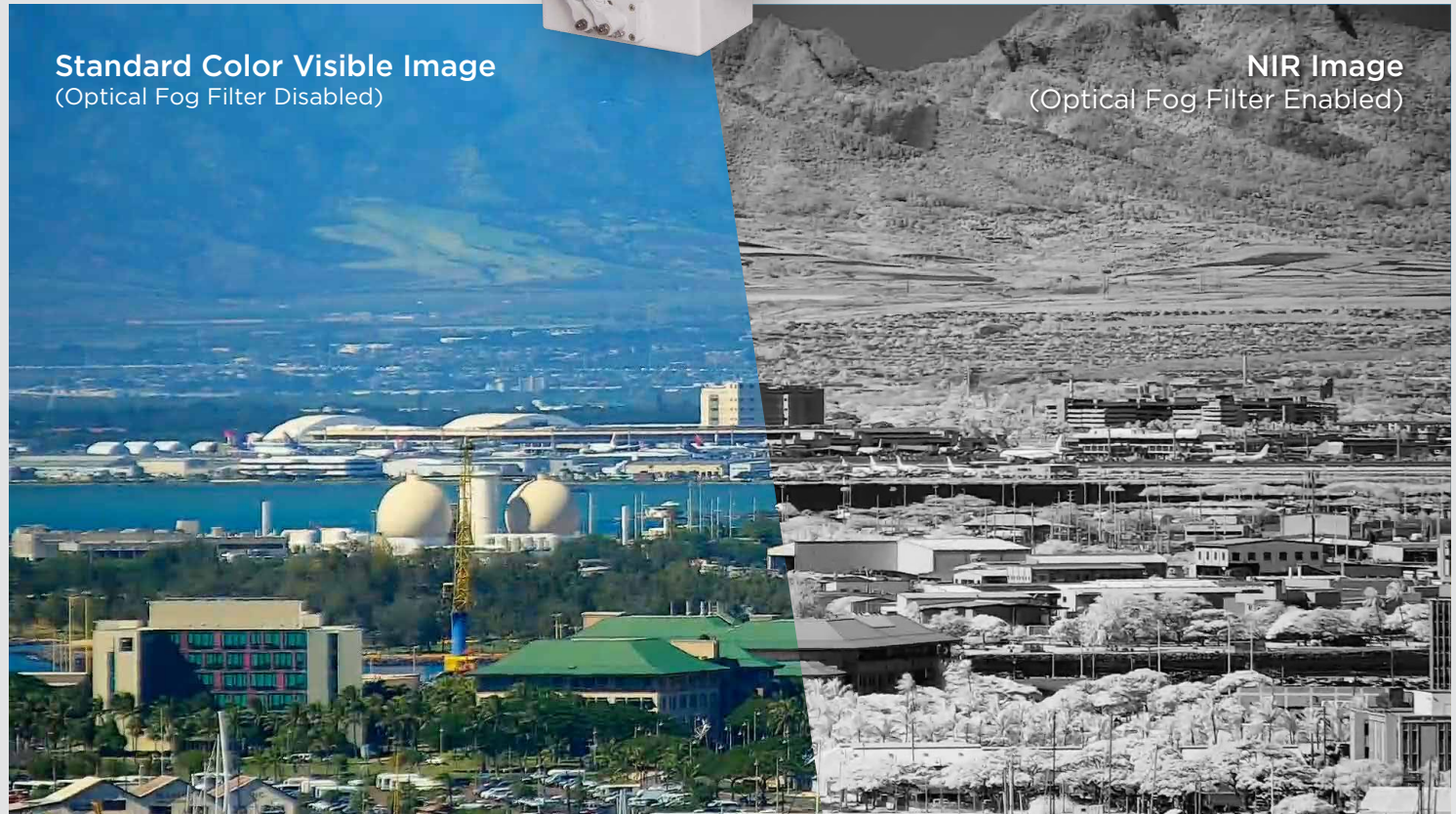


Infiniti's long-range zoom cameras utilize the visible and near-infrared (VIS/NIR) light wavelengths to provide high-quality images optimized for surveillance. We use the latest cutting-edge sensor technology to provide industry-leading quality and performance.

## 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



## 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  $-196^{\circ}\text{C}$  (InSb) or  $-123^{\circ}\text{C}$  (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.



280mm  
LWIR

1400mm  
MWIR

19mm  
LWIR

# LWIR Uncooled Thermal

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

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  $17\mu\text{m}$  LWIR camera.



TECHNOLOGY

# MWIR Cooled Thermal

 INFINITI

Infiniti offers cooled thermal in SD or HD options. Our 15 $\mu$ m 640 $\times$ 480 InSb or MCT sensors are comparable to the standard MWIR offerings in the industry. Our 10 $\mu$ m 1280 $\times$ 1024 HD X-Hot sensor provides 400% higher resolution and 50% longer range than traditional 15 $\mu$ m sensors. This means a 400mm lens on our X-Hot sensor is equivalent to a 600mm lens on a traditional 15 $\mu$ 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 $^{\circ}$ C (InSb) or -123 $^{\circ}$ 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 $^{\circ}$ -2.0 $^{\circ}$  HFOV) with SD resolution to a 92-1200mm f/4.0 zoom lens (7.9 $^{\circ}$ -0.61 $^{\circ}$  HFOV) with HD resolution, capable of human detection at over 50km based on DRI ratings in ideal conditions.



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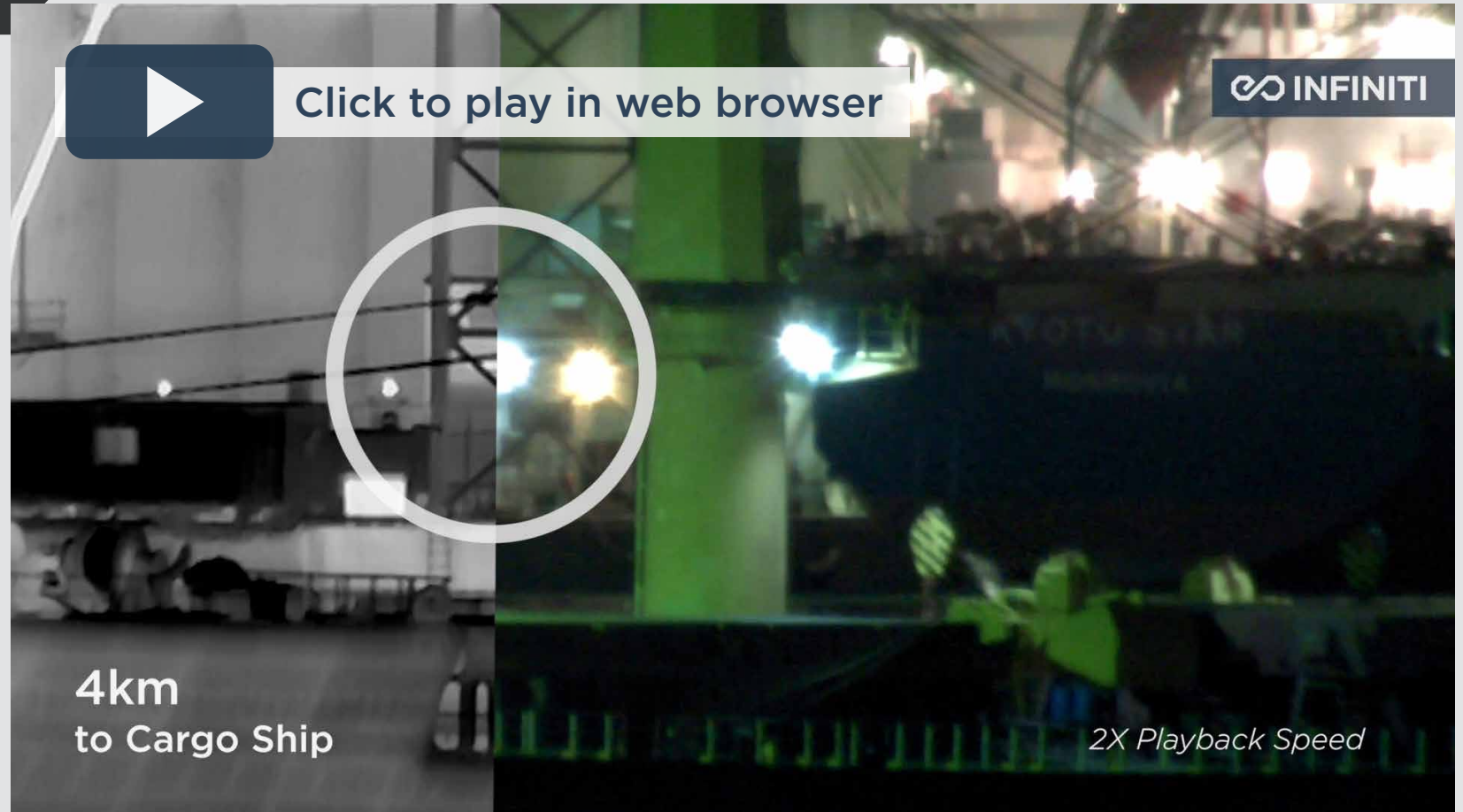
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# Long-Range Surveillance Options: Visible vs Thermal

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.

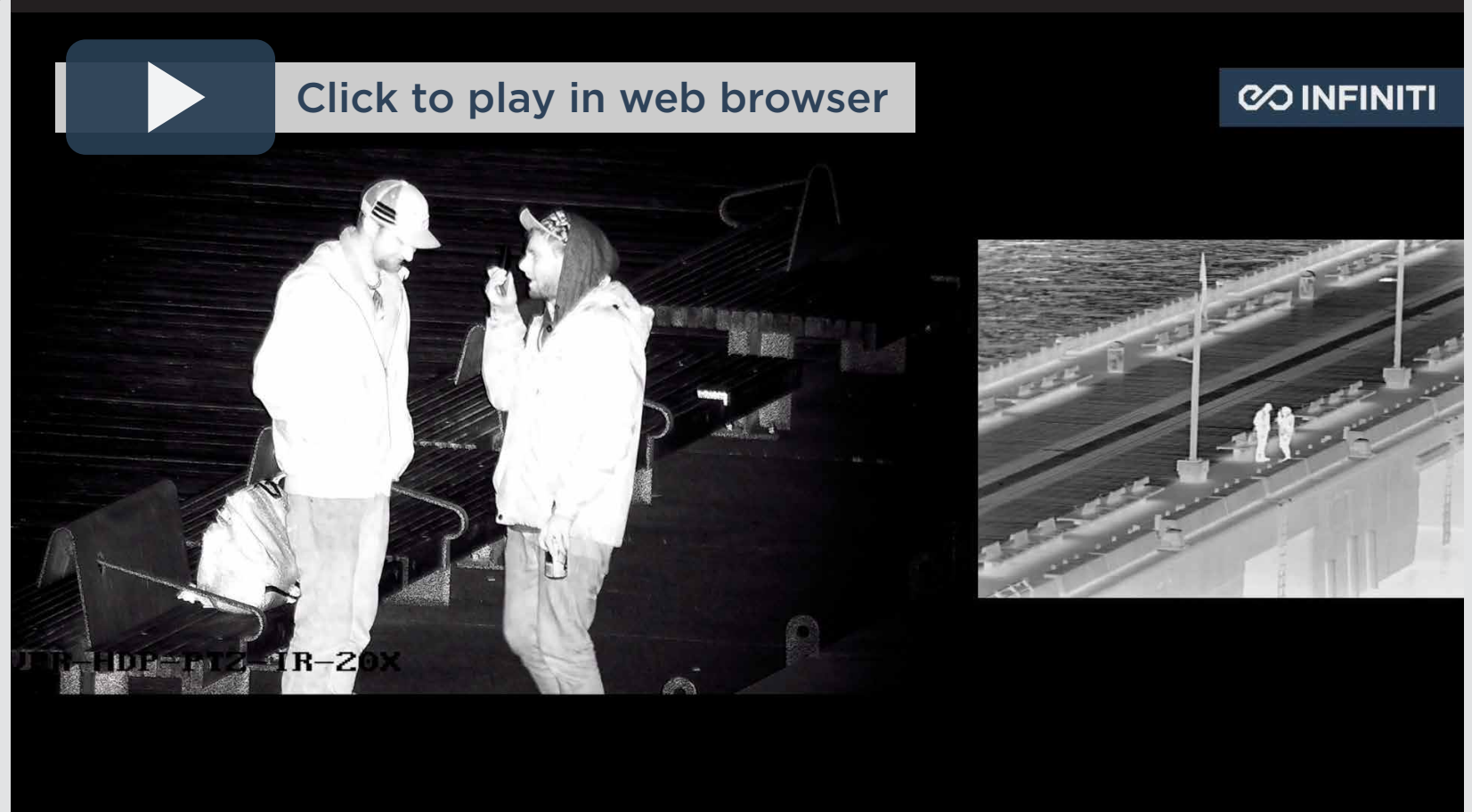


# Long-Range Nightvision Options: ZLID™ vs Thermal

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.





# 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 $\mu$ J at a wavelength of 1535nm ( $\pm$ 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.

# Wide-Angle Spotter

With fields of view as small as  $0.15^\circ$ , 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  $90^\circ$  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.



Cargo Ship at 19km



# Compact, Mobile PTZ Cameras

## Key Features:

- › 2MP Progressive Scan 1/2.8" CMOS Sensor
- › 30X Optical Zoom 4.5-135mm HD Zoom Lens
- › Visible Camera HFOV from 67.8° to 2.4°
- › 14µm 640×512 or 17µm 384×288 VOx Thermal Imager
- › 13mm, 19mm, 25mm or 50mm f/1.0 Athermalized Ge Lens
- › 7.5° to 37° Thermal HFOV, Depending on Lens and Sensor
- › Optional Active IR LED Illumination or ZLID Illumination (replaces thermal) for 50 to 750m of Night Vision
- › Rugged Mobile-Ready Design with Optional Magnetic Mount
- › Military Connector Supplies Video, Power and Telemetry
- › Rugged IP66/67 and -40° to +65°C Camera System

## Optional Features:

- › GPS & 4G Cellular Transmission
- › Integrated Internal Storage
- › Magnetic Mount
- › Vibration Mount



In addition to our long range systems, Infiti 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.



Rugged & Mobile Ready



PTZ Controls



Weatherproof Construction



Rugged Military Connectors



30X Optical Zoom 4.5-135mm



Optional IR Illumination up to 750m



Optional Thermal up to 50mm Zoom

NEPTUNE



# All-Weather Gyro Stabilized PTZ

## Key Features:

- › Long-Range Day/Night PTZ Camera System
- › 2MP, 4MP or 8MP High-Resolution CMOS Sensor
- › HD Lens with 22X, 30X, 36X, 38X or 49X Optical Zoom
- › Optical Field of View Options ranging from 70° to 1.2°
- › ZLID™ for up to 2km Night Vision in Complete Darkness
- › Thermal Imaging for Long-Range Detection up to 20km\*
- › Designed for Operation in -30°C to +60°C
- › Rugged IP67 Weatherproof Housing
- › High Resolution Pan/Tilt for Smooth Operation
- › Control via RS485/Pelco-D or Octagon Bridge/API Commands
- › Integrated Optical Fog Filter on select models

## Optional Features:

- › Gyro Stabilization
- › GPS & 4G Cellular
- › Marine Joystick
- › Wide-Angle 4K Spotter Camera
- › Slew-to-Cue via NMEA 0183
- › Integrated Internal Storage



The Neptune PTZ is designed for mobile and marine applications with optional 2-axis gyro stabilization and various EO/IR payload configurations. Numerous visible zoom lens options up to 272mm, and multiple sensor resolutions available from Full-HD 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 275mm thermal imaging camera, the Neptune system offers remarkable nighttime performance as well. These sensors are integrated into a rugged IP67 weatherproof housing constructed of strengthened aluminum.

Rugged & Mobile Ready	PTZ Controls	Optional Gyro Stabilization	Weatherproof Construction	Rugged Military Connectors	Multiple Zoom Lens Options up to 272mm	Optional IR Illumination up to 2km	Optional Thermal up to 275mm Zoom

\*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.infiniioptics.com/dri](http://www.infiniioptics.com/dri)

ECLIPSE

INFINITI ELECTRO-OPTICS

# All-Weather Rugged PTZ

## 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
- › Thermal Imaging for Long-Range Detection up to 11km\*
- › 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
- › Wide-Angle 90° 4K Spotter Camera



30X ZOOM

35 mm LWIR

32X ZOOM

50 mm LWIR

36X ZOOM

300m ZLID™

120 mm LWIR

38X ZOOM

1km ZLID™

26mm-75mm LWIR

49X ZOOM

2km ZLID™

19mm-275 MWIR



Rugged & Mobile Ready



PTZ Controls



Weatherproof Construction



Rugged Military Connectors

Multiple Zoom Lens Options up to 272mm

Optional IR Illumination up to 2km

Optional Thermal up to 275mm Zoom

The Eclipse series PTZs encompass our mid-range options and offer a range of customized options. These include 49X visible lenses with up to 272mm focal lengths and resolutions of 2 to 12 Megapixels. For night vision we can offer 2km of ZLID illumination, 940nm “stealth” illumination, and white light illumination. Thermal can be added with 12µm pixel-pitch sensors. These offer about 50% more detail/longer range compared to older 17µm sensors with the same focal length.

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For more information, please see our whitepaper about understanding DRI measurements at: [www.infiniioptics.com/dri](http://www.infiniioptics.com/dri)

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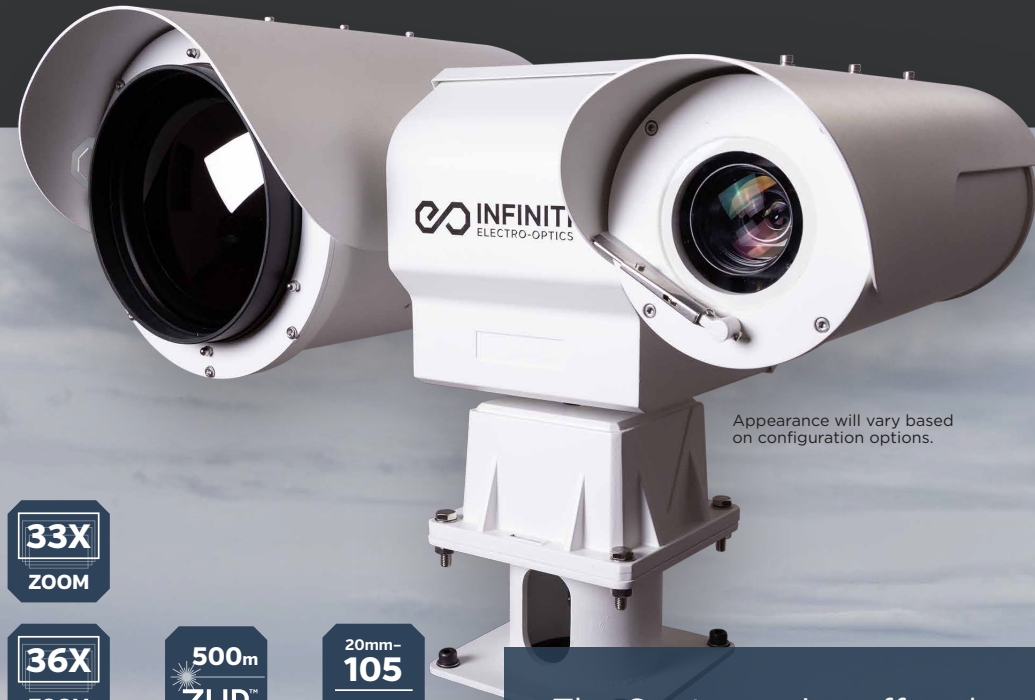
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SENTRY

INFINITI ELECTRO-OPTICS

# Rugged, Long-Range Multi-Sensor PTZ



Appearance will vary based on configuration options.

## 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 33X to 95X
- › Visible/NIR Field of View Options from 62° to 0.32°
- › 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
- › Dynamic Image Contrast Enhancement (DICE) for a Clear Thermal Image
- › Up to 16km Human Detection and 27km Vehicle Detection with Thermal (using Johnson Criteria DRI standards)\*
- › Endless 360° Pan and ±90° Tilt, with pan speeds up to 60°/s
- › Micro-Step Technology for Quick, Accurate Pan/Tilt Control
- › IP66 Military-Grade Design with Military Cable Connectors
- › Designed for Fixed, Marine or Mobile Applications

33X ZOOM

36X ZOOM

38X ZOOM

49X ZOOM

95X ZOOM

500m ZLID™

1km ZLID™

2km ZLID™

3km ZLID™

20mm-105 LWIR

32mm-155 LWIR

26mm-230 LWIR

18mm-435 MWIR



Rugged & Mobile Ready



PTZ Controls



Weatherproof Construction



Rugged Military Connectors

Multiple Zoom Lens Options up to 1000mm

Optional IR Illumination up to 3km

Optional Thermal up to 435mm Zoom

The Sentry series offers larger lenses and longer range illumination options in rugged housings and features self-locking gearing systems suitable for marine and vehicle deployments in harsh conditions. Visible options range from our 49X 272mm camera modules up to the 1000mm 2 megapixel long range lenses. 3km ZLID illumination can be added to the Sentry, as well as uncooled thermal lenses up to 230mm, and HD cooled thermal up to 415mm.

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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



Appearance will vary based on configuration options.

**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



Optional Gyro Stabilization



Weatherproof Construction



Rugged Military Connectors



Optional InGaAs LRF



Optional SWIR Imaging

**49X**  
ZOOM

Multiple Zoom Lens Options up to 272mm

**2500m**  
ZLID™

Optional IR Illumination up to 2.5km

**18mm-435**  
MWIR

Optional Thermal up to 435mm Zoom

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).

VEGA



# Ultra Long-Range Multi-Sensor PTZ

## Key Features:

- › 15.4-2075mm HD IR-Corrected Zoom Lens (with IZE doubler)
- › 27°-0.2° Horizontal Field of View gives a 135X Zoom Range
- › 550X Zoom Ratio with 110° Wide-Angle Spotter Camera
- › 640x480 15µm InSb or MCT Cooled Thermal Imager
- › Numerous Thermal Lens and Sensor Options Available
- › 7.5° to 37° Thermal HFOV, Depending on Lens and Sensor
- › Optional ZLID™ Illumination for up to 4km of High Definition NIR Imaging in Complete Darkness
- › Endless 360° Rotation Pan/Tilt with Speeds from 0.001-60°/s
- › Up to 0.00036° Resolution Pan/Tilt with Zero Backlash
- › Rugged IP66/67 and -50° to +65°C with Anti-Corrosion Finish

## Optional Features:

- › 23km Rated LRF
- › 1280x1024 HD Cooled Thermal
- › HD SWIR Camera
- › GPS & DMC for Accurate Positioning
- › Gyro Stabilization
- › Many Other Customizations Available



Appearance will vary based on configuration options.

**38X**  
ZOOM

35mm-**695**  
Ge ZOOM

**49X**  
ZOOM

**1km**  
ZLID™

38mm-**875**  
MWIR

**88X**  
ZOOM

**2km**  
ZLID™

65mm-**1000**  
Ge ZOOM

**95X**  
ZOOM

**4km**  
ZLID™

92mm-**1200**  
MWIR<sup>HD</sup>

**135X**  
ZOOM

**5km**  
ZLID™

85mm-**1400**  
MWIR

The Vega offers the highest level of customization with the ability to integrate various technologies and sensors including ZLID illumination up to 5km, LRFs (Laser Range Finders) rated up to 20km, 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.



Optional Gyro Stabilization



Weatherproof Construction



Built to Military Standards



Rugged Military Connectors



Optional InGaAs LRF

Multiple Zoom Lens Options up to 2075mm

Optional IR Illumination up to 5km

Long-Range Thermal up to 1400mm Zoom



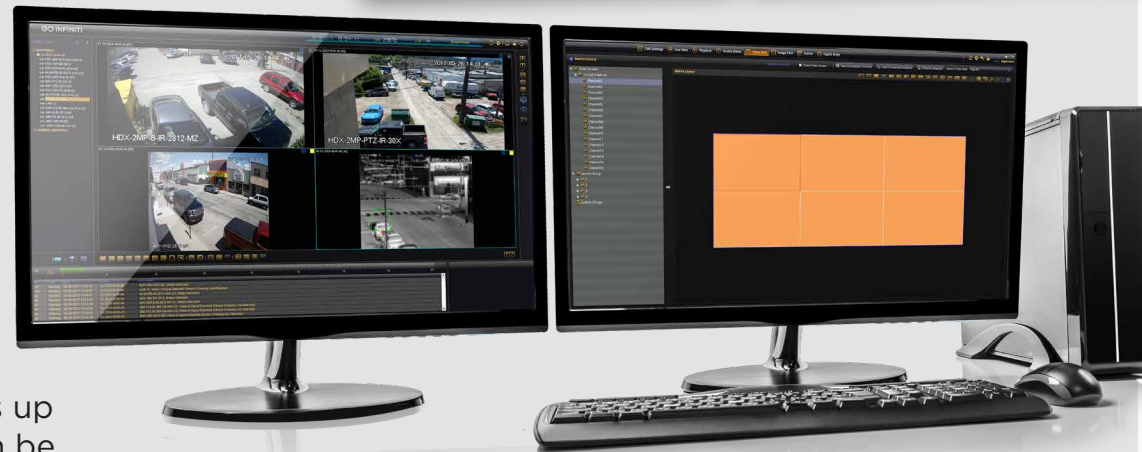
# Display & Recording

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.

ACCESSORIES

# 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.



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# Visual Lens Simulator

Our online lens calculator provides a simple visual estimation of lens performance, making it easy to compare the specifications of different lenses and sensors and get an idea of what level of detail you might see at different ranges with specific camera and lens options.

*Access to this calculator is available upon request.*

## LENS CALCULATOR (BETA)

To simulate the zoom performance of a camera at a specific distance, the following information is needed:

### Sensor & Lens:

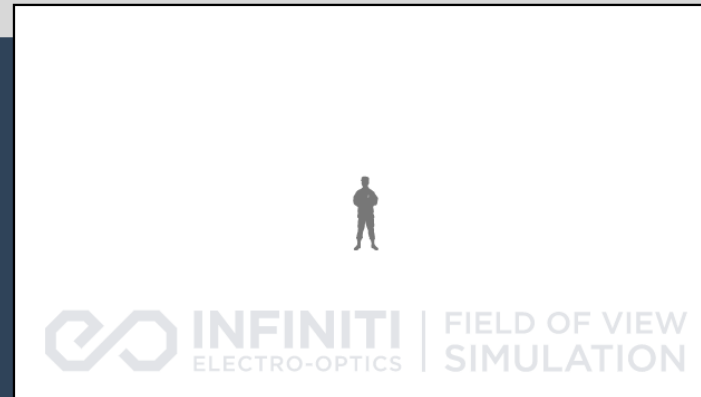
Sensor Size:

Resolution:

Lens Focal Length:  mm

Subject Size:

### Subject Size & Distance:



### CALCULATION RESULTS:

108 ppm

#### FIELD OF VIEW:

1.01° HFoV	0.57° VFoV
17.7 m HFoV	9.97 m VFoV

#### PIXELS ON TARGET:

54 HPoT	195 VPoT
10,530 Total PoT	

SUBJECT DISTANCE:  
(Adjust using slider below)

1000 m



0.62 miles 3,281 feet



Contact us today:

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