

THE TRITON+

30X Visible & Thermal Mobile PTZ Camera



The Triton is a rugged, all-weather portable turn-key PTZ camera system. Its 30X HD day/night zoom camera provides both wide angle and long range capabilities with a horizontal field of view ranging from 62 to 2.3 degrees. Its 19mm thermal infrared camera provides excellent detection capabilities with a horizontal field of view of 19.3 degrees. The visible feed has available SDI and IP ONVIF S video outputs allowing it to work over the internet with a VMS or NVR as well as legacy broadcasting and transmission equipment. The thermal feed is analog which can be used with an IP encoder or connected to a DVR or HVR.

All of this comes in a rugged aluminum IP 66 –40° to +65°C enclosure that is low profile and weighs under 7kg, making the Triton+ a clear choice for marine and vehicle rapid deployment for police, navy and militaries around the world.

Key Features:

- › Rugged IP66 and –40°~+65°C camera system
- › SWAP—Low Size Weight and Power
- › Lightweight < 7kg package (roughly 15 pounds)
- › 1920×1080 progressive scan CMOS day/night network or SDI camera
- › 30X optical 4.3-129mm HD IR-corrected continuous zoom lens
- › Visible field of view from 67.8° to 2.77°
- › 386×286 17µm VOx LWIR Thermal Imager
- › 19mm f/1.0 Athermalized Germanium Lens
- › 19.3° Thermal Field of View
- › User defined WDR, HLC, BLC, AWB, Dehaze/Defog via web client
- › Integrated active IR LED illumination for night vision
- › Micro-step technology for quick, accurate pan/tilt better than 0.05°
- › Rugged IP67 design with optional magnetic mount system
- › Military connector supplies video, power and telemetry over 1 cable



Waterproof

4.3-129mm
Zoom Lens

2MP Sensor

Uncooled
Thermal

PTZ Controls

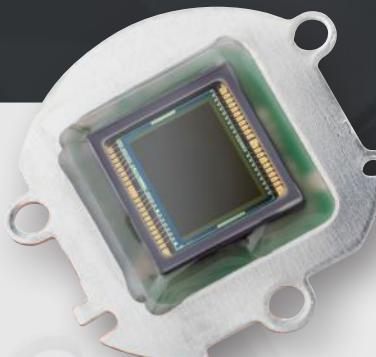
Military
Connectors

Mobile

THE TRITON'S Optical HD Camera

Visible Optical Camera

The optical camera was designed and optimized for long-range surveillance. It uses a 1/2.8" progressive scan CMOS sensor with an HD resolution of 1920×1080 and a fantastic signal to noise ratio of 55dB. The 1/2.8" sensor has excellent spectral sensitivity for both visible and NIR wavelengths and features an automatic IR cut filter, making it a true day/night camera providing clear colour images by day and black and white images at night. The 1/2.8" sensor provides the best balance between light sensitivity and maximum zoom, making it particularly suited for long range surveillance. The Triton also integrates the latest technology in real-time image processing such as BLC, HLC, DWDR, EIS, ROI, 3D DNR, ABF, Defog/Haze etc. Each of these image enhancements can be automatic or user-defined and calibrated based on the application requirements. Since the camera is native IP, all of these settings can be changed and configured remotely, along with remote PTZ and zoom control.



Approximate FOV at 1km

Versatile 30X Zoom Lens

The 30X Triton comes equipped with a precision engineered 4.3-129mm telephoto IR-corrected zoom lens offering continuous zoom from a wide 67° angle through to a narrow 2.7° field of view. The 1/2.8" sensor paired with the 129mm lens renders a field-of-view equivalent to a full-frame (35mm) DSLR camera with a 800mm lens. 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 recognition and identification of targets without operator intervention. Infiniti's HD Zoom camera is a perfect synergy between precision craftsmanship, state of the art sensor hardware and the latest image processing for unparalleled range and performance.

Based on an average SUV length of 5.25m, at maximum zoom it would occupy the following percentage of the screen width at these specified distances.

6% of screen width at 2km



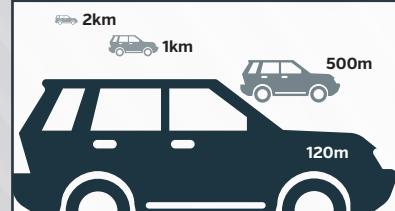
12% of screen width at 1km



25% of screen width at 500m



100% of screen width at 120m



THE TRITON'S Thermal Camera

See It All

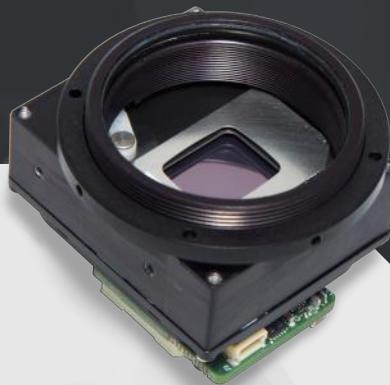
Infiniti's thermal cameras let you detect threats faster than any other night vision technology. Thermal cameras, unlike traditional visible cameras, use heat rather than light to see an object. Humans, animals, and vehicles are generally much warmer in contrast to most backgrounds, making trespassers hiding in shadows or bushes easy to spot. Thermal images are also unaffected by bright lights and have the ability to see through atmospheric obstructions such as smoke, dust, and light fog. This makes it an ideal technology for a number of applications, including but not limited to surveillance and security, search and rescue, fire suppression, marine and land navigation, and wide area situational assessment.

Thermal Imager

The Triton contains a 17 μ m uncooled VOx sensor with a resolution of 386×286 and a sensitivity able to detect differences in temperature as small as $\pm 0.06^{\circ}\text{C}$. The sensor's no-maintenance VOx design, unlike ASI and other thermal cores, is self healing and resistant to solar damage.

Germanium Lens

We pair the uncooled VOx core with our precision-engineered germanium lenses. Our germanium optics boast an industry-leading f1.0 aperture, compared to most others at f1.6. This means they allow more thermal energy to reach the sensor, further increasing range and performance.



DRI Ranges:

640m

Human Detection*

1950m

Vehicle Detection*

*DRI detection ratings are based on industry-wide standards (Johnson's Criteria) that should be fully understood for proper expectations. For more information, please see our whitepaper about understanding DRI measurements at www.infinitioptics.com/dri



*Visible image (on left) shown next to a thermal image (on right) of the same scene.
Note the number of people detectable in each image.*

THE TRITON'S Other Features

Pan-Tilt Resolver

The heavy-duty PTZ driver is designed for extreme performance in the most demanding applications. It features endless 360° panning and Micro-Step technology for precise pan and tilt positioning with speeds of 0.5°-80°/sec. Advanced features, such as preset and auto-cruise, will complement almost any existing equipment by means of Pelco-D and Pelco-P protocols with optional absolute positioning.

ONVIF IP PTZ Solution

Although the Triton is an extremely sophisticated piece of equipment, it is operated by an intuitive, user friendly interface with multiple control options such as touch screen and mouse. It can also be controlled by a 3-axis joystick via Pelco-D or web client and is simple to operate without prior training.

The Triton's visible camera is a IP network system that utilizes the latest ONVIF Profile S protocol, allowing the video to be distributed over wired, wireless and cellular networks. ONVIF ensures integration with the widest range of NVRs, VMSs and video storage and devices. IP allows for real time control and configuration of the cameras allowing you to optimize the camera from anywhere in the world.

View all of your cameras instantly and remotely, and control them through the internet in real-time from anywhere in the world using Ascendent Remote Management Software (ARMS) on your laptop, iPhone, or Android device. Internet is often limited to low bandwidth satellites which is why we allow for dual steaming so you record at one resolution, stream at another, and have integrated VBR and CBR to manage the amount of data and bandwidth used by camera so that optixe the camera for the limitations of the network.

Designed for Mobile

The Triton is designed for maximum portability. It can be mounted upright or inverted, weighs under 5 pounds, and has a low power draw. It can be configured with an optional magnetic mount for easily securing on vehicles. It also can be built into a Rapid Deployment Kit (RDK) that includes, power, wireless networking, recording, display and tripod to create a complete integrated rapid deployment solution.

This camera is designed to be the ultimate mobile solution for marine, military and law enforcement and can be used both autonomously as well as part of a larger solution.

OPTIONAL ACCESSORIES:



PTZ Controller



Mobile NVR with GPS



Rapid Deployment Kit



Magnetic
Mount

TRI-30X-IR-TI

Specifications



Visible Camera

Image Sensor	1/2.8" Progressive Scan CMOS
Resolution	1920x1080 Full HD
Iris	Auto/Manual: f1.6-f4.4
Minimum Illumination (at f1.6)	Color: 0.03 Lux / B&W: 0.01 Lux
Shutter Speed	Auto/Manual: 1/6 - 1/10,000 Sec
Lens	4.5-135mm HD Continuous Zoom Lens
Field of View	62°-2.3° Horizontal FOV
Zoom	30X Optical
Focus Mode	Auto
Day/Night	IR Cut filter with auto switch (ICR)

Thermal Camera

Lens	19mm Athermalized Germanium Lens
Aperture	f/1.0
Image Sensor	Zero Maintenance Uncooled VOx Microbolometer (LWIR)
Array Format	386x286, 17µm pixel pitch
Thermal Sensitivity (Room Temp. @ f/1.0)	< 60 mK

Communication & Presets

Visible Video Output	IP Ethernet, ONVIF Profile -S (other available)
Thermal Video Output	BNC Analog
Visible Video Compression	H.264 Main Profile/MJPEG
Visible Video Streaming	Triple Streams
Presets	Up to 255 presets, 6 preset tours
Patterns	Up to 4 patterns, less than 10 minutes
Serial Control	RS485, Pelco-P/D Standard
Ethernet Protocols	TCP/IP, HTTP, DHCP, DNS, DDNS, RTP, RTSP, PPPoE, SMTP, NTP, UPnP, SNMP, FTP, 802.1x, QoS, HTTPS, IPv6

Pan/Tilt

Drive Unit	Integrated micro-step resolver
Pan/Tilt	360° Continuous Pan, up to 80°/sec / -20° to 90° Tilt, up to 60°/sec
Preset Accuracy	0.01° (Micro-Step) with closed loop control
Power Loss Recovery	Supported

Physical

Construction	High Strength Aluminum Alloy w/anti-corrosive coating
Weight	< 7kg
Dimensions	197mm x 197mm x 317mm

Environmental

Operational Temperature	-40°C to +60°C, <90% RH
Environmental	IP67, TVS 4000V Lightning Protection

Electrical

Input Voltage	DC 12V-24V, wide voltage input
Power Consumption	<45W

*Specifications subject to change.

Optional Features: Magnetic Mount, Vibration Mount, 4G Cellular Transmission, Battery Backup