



Key Features

- True Day Night 24/7 Security and Surveillance
- Ability to see through fog, smog, and smoke
- Thermal camera for 2.9km human and 8.8km vehicle detection
- Rugged extreme weather IP 66 vandal proof thermal camera
- Extreme heater/blower for operation in -50°C to 60°C
- Long range and wide area situational awareness
- Requires no illumination and is unaffected by light
- Uncooled VOX thermal imager for long life and high ROI
- Digital Detail Enhancement (DDE) for high-contrast images
- Easy integration with video analytics and 3rd party systems
- Can be mounted on vehicles or buildings to suit any application
- IP H.264 to stream and store video over WAN and LAN networks

Overview

The Guardian

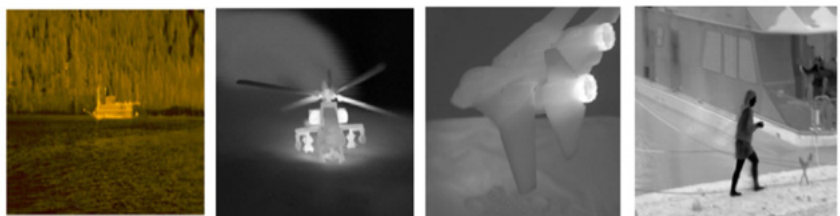
The Guardian is comprised of military grade, precision engineered components and is manufactured using unique processes to offer absolute performance. The stylish, compact design allows for this camera to be installed in many different environments discreetly. The housing is a rugged IP 66 rated enclosure constructed of high strength aluminum alloy that is vandal proof. The internal heater/blower allows the Guardian to withstand the harshest climates and the most brutal assaults. The GUI interface allows you to program the DDE, sensitivity, imaging modes, and virtually every aspect of the camera through network or USB to suit any application.

Advanced Thermal Core

The Guardian incorporates the latest thermal VOX core with a pixel size of 17UM to render images that are over 30% sharper than standard 25UM sensors. Proprietary noise reduction provides high contrast images resulting in greater distance and clarity than traditional thermal imagers. The VOX thermal core is immune to the damage caused by direct sunlight and parasitic light that plagues many thermal cores, and leads to expensive repairs and down time. The Guardian thermal has a variety of imaging modes such as heat variance, false color hot and cold, and spot highlights allowing an integrator to optimize the performance of the camera in any application. This makes the Guardian an industry leading thermal camera in both performance and features.

Remote Connectivity

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 our DVRs and IP cameras can record at one resolution, stream at another, and have integrated VBR and CBR to manage the amount of data and bandwidth used by each camera individually to ensure smooth operation on any network.



Thermal Camera

Guardian Thermal

The thermal detector Focal Plane Array (FPA) is based on a FLIR VOX core that comes in 2 resolutions, a 336x240 and a 640x480, with sensitivity of 50MK at f/1.0. Not only does the thermal range boast an impressive core, it also comes with a variety of precision engineered germanium lenses ranging from 9mm to 100mm for razor sharp images that maintain a low f-stop for real-time performance without lag.

Feature Packed

To improve image clarity the Guardian has FLIR priority noise reduction, which increases contrast. 2X and 4X digital zoom ensures you have vision on even the most minute details. The cores have solar protection and self heal from damage caused by direct sunlight. The Guardian thermal has a variety of imaging enhancing features such as BPR, NUC, and AGC'd.

Thermal Imaging

Thermal cameras, unlike traditional visible cameras, use heat rather than light to see an object, giving them a huge advantage over other imaging technologies. Using minute differences in Infrared Radiation (IR) they produce a high-contrast thermal image in complete darkness. It is unaffected by bright light and has the ability to see through obstructions such as smoke, dust, and light fog. This makes thermal ideal for a number of applications including but not limited to surveillance & security, search and rescue, fire, marine and land navigation, machine vision, and wide area situational assessment.

See It All

Everything above absolute zero (-273°C) emits thermal radiation. The Guardian thermal camera converts this into a digital image that can be displayed, distributed, and recorded. Humans, animals, and vehicles are very hot in contrast to a background and trespassers hiding in shadows or bushes are easily spotted.

Extreme Long Range Detection

The Guardian is a Long-Wave Infrared (LWIR) camera which means it operates on 7-14UM (7000nm-14000nm) wavelengths where terrestrial temperature targets emit most of their infrared energy. It has unparalleled performance and is able to detect humans at 2.9km and vehicles at 8.8km with just a 100mm lens. While the Guardian is a significant investment, its superior range and performance allows it to replace and outperform other solutions, making it a viable option for a variety of applications.

Thermal Advantages Over Optical

Ascendent's thermal cameras let you see further than any other night vision technology. All CCTV cameras require light which means using either expensive image intensifiers, which produce blurry lagging video, or the cameras have to be illuminated using LED arrays that are only effective for about 200m. Furthermore, LEDs only illuminate a small portion of the cameras Field-of-View (FOV) where a thermal image can see everything, day or night. Even during the day there are situations where thermal is better as CCTV cameras can be rendered useless by direct/reflected sunlight or areas where contrast is poor.





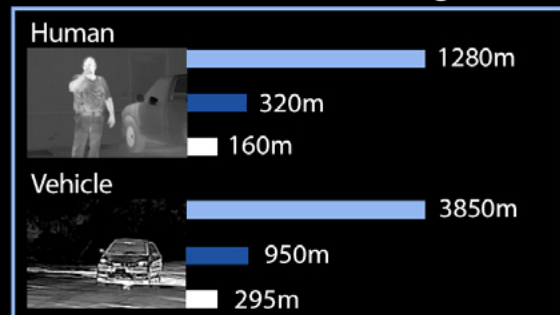
Specifications subject to change without notice

336 V2 FLIR Thermal Imager (640 Optional)

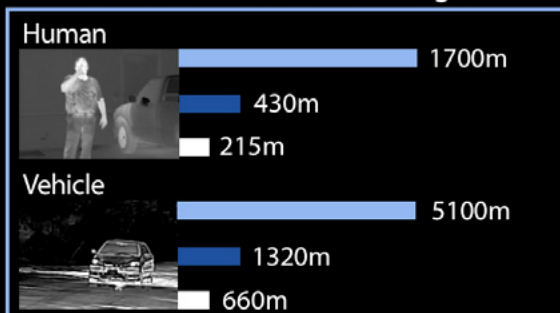
Lens	9mm, 19mm, 35mm, 50mm, 100mm, and 150mm
Image Sensor	FPA, uncooled Vanadium Oxide micro-bolometer (cooled core available) 7.5Hz NTSC, 8.3Hz PAL CMOS 8-14 Bit (2nd Generation)
Picture Elements	324(H) x 256(V) pixels (640x480 optional with 8X zoom)
Scene Temperature	-40°C to +160°C (High and Low Gain)
Pixel Pitch	17µm (32% sharper image over 25µm sensors) FLIR's proprietary noise reduction
Image Optimizations	BPR, NUC, & AGC'd user configurability via SDK, GUI
Digital Zoom	2X & 4X dynamic zoom/pan with dyanamic range switching
Thermal Sensitivity/Response	36 mk @ f1.0 / 85mk @ f1.6 7.5-14 micron
Image Display Modes	White hot, black hot, false color, and color & monochrome palettes (LUTs)
Programming/Set Up	Network or USB
Physical	
Construction	High strength aluminum alloy
Standard Colors	Black (others optional)
Weight	1.2KG 2.6lbs
Viewing Window	Germanium glass (thermal)
Environmental	
Operational Temperature	-50°C to +60°C
Environmental	IP 66, NEMA 4X outdoor weather ring
Electrical	
Input Voltage	12VDC
Power Consumption	4W (without heater), 12W (heater option)
Available Options	
Mounting	Upright mount or inverted
IP-Pro Server (with X4/X5 software)	Converts camera into IP camera to distribute video over wireless networks
Image Stabilization/ Fog Filter	Available
Video Analytics	Virtual fence, object classification, trip wire, abandoned object, etc

Legend: Detection Recognition Identification

35mm Lens 320x240 Imager



50mm Lens 320x240 Imager



100mm Lens 320x240 Imager

