



ThermalGuard\IR™ Series

Infrared Thermal Imaging Camera And Day/Night Camera Systems



Applications:

- Military
- Law Enforcement
- Security and Surveillance
- Wildland and Structure Fire
- Portable
- Mobile
- Fixed mount
- Marine

Features:

- User Friendly
- Rugged And Compact
- Day Or Night Full Image Resolution
- Selectable Polarity, White Or Black Hot
- SunTect\IR™ Sun Protection Technology
- Selectable Zoom
- 640 X 480 Image Display
- Optional Spot Temperature Display
- Detection To Two Miles And Beyond*
- Full Motion Real Time Video
- External Power And Video Jacks
- Detachable Recon Handheld Camera Option
- Two Year Warranty



* with optional lens enhancement

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The camera enclosures are unique and designed for quick disconnect from the positioning platform. Cameras can be “swapped” at will without any change to the system GUI interface, all camera functions are available immediately when the cameras are installed. Each camera enclosure is fully sealed and pressurized to assure moisture free operation and long lifetime.



The optional controller was specifically designed to manage a network of imaging nodes. The powerful digital controller is capable of managing all camera functions and up to 9 nodes, yet is very affordable.

Features:

- Compact and Rugged Design
- Quick-change Camera Modules (blocks) with True Plug ‘n Play
- Controlled by Network, Computer or Dedicated Controller
- Universal Operating Protocol, Unaffected by Camera Changes
- Mil-STD-810F, IP66, Sealed and Pressurized Camera Housings
- 10-30 VDC Operation
- Choices of Cameras
- Continuous 360° Pan Rotation
- Mobile and Invertable
- No exposed wiring
- Full Two-Way Communication
- Programmable Stow Position



ThermalGuard\IR™ Series Specifications



Thermal Camera Specifications

Thermal Imaging Performance

Start-up Time	~4 seconds
Contrast/Brightness	Advanced Image Processing
Polarity	Selectable White or Black Hot
Zoom	2X, 4X, 6X, 8X, 10X Selectable

Focal Plane Array

Detector	Amorphous Silicon Microbolometer 320 x 240 pixel array
Output Resolution	640 x 480 pixels NTSC, 768 x 574 pixels PAL
Spectral Response	7-14 microns (filter bandwidth)
Thermal Sensitivity	< 50 mK
Refresh Rate	Real-time 30Hz

Optics

FOV (H x V)	3° x 2.25°	6° x 4.5°	12° x 9°	25° x 19°	50° x 37.5°
Range to detect a person (Up to)	9843' (3000m)	6130' (1860m)	3330' (1015m)	465' (445m)	775' (235m)
Focus Method	Manual - Temperature stabilized				
Iris	Automatic Electronic				

Video

Analog Output Frame Rate	NTSC: 30hz , PAL: 25hz
Optional Absolute Color	3 selectable color points can be mapped (factory preset) to selectable absolute temperatures

Power

Power Source	12 VDC
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Environmental Characteristics

Operating Temperature	-4° F to 185°F (-20° C to 85° C)
Storage Temperature	-40° F to 221°F (-40° C to 105° C)

Mechanical Positioner Specifications

Voltage	12 VDC with reverse polarity
Pan Range	360° Continuous
Pan Speed	0.25°-100°/sec
Tilt Range	-90° to +90° Non-continuous
Motor Type/Drive	Steppers with belt drive
Connector	Mil Spec, bottom pigtail or side mount (height increase) connector
Weight	Less than 22lbs (10kg) with dual cameras
Microprocessor Control	32 presets, 2 tours, 2 memory tours
Control Formats	Serial RS422 485/autobank
Limits	Fixed tilt hard limit, adjustable soft limits
Repeatability	0.25°
Materials	Aluminum housing, stainless steel hardware
Marine Resistant	Paint, bearings, gasket
Enclosures	IP66, sealed, pressurized camera housings
Operating Temp. Range	-32° to 55°C (-25.6° to 131°F)
Position Feedback	.01 degree

Visual Camera Specifications

Image Device	1/4 type Super HAD
Effective Picture Elements	Approximately 680,000 pixels
Lens	26X zoom, f=3.5 mm (wide) to 91.0 mm (tele), F1.6 to F3.8
Digital Zoom	12X (312X with optical zoom)
Min. Illumination	2.0 lx (typical) (F1.6, 50 IRE)
S/N Ratio	+50 dB
Electronic Shutter	1/1 to 1/10,000 s, 22 steps
White Balance	Auto, ATW, Indoor, Outdoor, One-push, Manual
Gain	Auto/Manual (-3 to 28 dB, 2 dB steps)
AE Control	Auto, Manual, Priority mode, Bright, EV compensation, Back-light compensation
Privacy Zone Masking	On/Off (24 positions)
Flicker Cancel	Auto
Focusing System	Auto (Sensitivity: normal, low), One-push AF, Manual, Infinity, Interval AF, Zoom Trigger AF
Camera Operation Switch	Zoom tele, Zoom wide