phantomIR

Advanced Sighting Systems by ELCAN

ELCAN Optical Technologies

A Raytheon Company

LIGHTWEIGHT, RUGGED, INFRARED BINOCULAR

System Overview:

PhantomIR by ELCAN is a rugged lightweight infrared binocular system that uses the latest in low-power, compact, un-cooled thermal technology. Unlike image intensification night-vision devices that only magnify existing light, thermal imaging cuts through darkness, through smoke, dust and most fogs. It cannot be defeated by artificial light or adverse visible conditions. Despite its advanced technology, PhantomIR is surprisingly affordable for small or large-scale deployment. The PhantomIR was designed for the following applications:

- Military operations
- Border security
- Commercial and military perimeter security
- Man-portable or multifunction surveillance and targeting system.

System Benefits:

Latest 320 x 240 FPA Technology

Using the latest uncooled microbolometer technology ensures our customers obtain the clearest images for their detection and surveillance needs.

Rugged Design

The PhantomIR is contained within a cast aluminum housing surrounded by a rugged santoprene cover. It was designed to meet stringent military standards for operation in harsh environments, but still weights < 1.54 kg.

Easy to Use – No Menus

Operator has easy access to key function buttons, allowing the operator to maintain visual contact during operation of the system.

2X and 4X Electronic Zoom

Electronic zoom capabilities enhance the standard detection capability of the system. Easily accessible zoom button controls allow the user to obtain more detailed information of an object without losing visual contact.

Flexibility

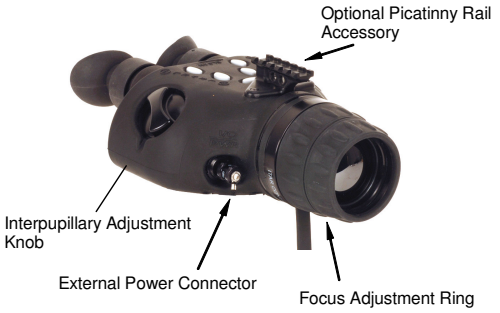
The PhantomIR was designed with enough flexibility to serve both as a man-portable binocular and a multi-function surveillance and targeting system.

- Digital magnetic compass, tilt and azimuth readings
- Tripod mount attachment
- Laser Range Finder option on MIL-STD-1913 Rail Adapter
- Standard video output for remote viewing

PhantomIR Specifications

Performance Specifications	PhantomIR – 50mm (Standard Configuration)	PhantomIR – 103mm (Optional Configuration)
Detect Man		
Stationary (1.5m x 0.5m)	> 1000 meters (+)	> 2000 meters (+)
Detect Vehicle		
Stationary (2.3m x 2.3m)	> 2000 meters (+)	> 4000 meters (+)
Note: 70% Probability of Detection		
Optics	50mm f1, f/1	103mm f1, f/1
Field of View (Wide)	11° x 8.25°	5.4° x 4°
Magnification: Standard	2.2X	2.2X
With 2X Electronic Zoom	4.4X	4.4X
With 4X Electronic Zoom	8.8X	8.8X

General System Specification	PhantomIR 50mm and 103mm
Detector	
FPA Format	320 x 240
Type and Material	Uncooled Amorphous Silicon Microbolometer
Spectral Responsse (Waveband)	7 – 14 µm
NETD (Thermal Sensitivity)	50 – 80 mK (0.05°C – 0.08°C)
Physical Features	
Size	305mm (L) x 178mm (W) x 89mm (H)
Display Type	640 x 480 Color VGA Display
Weight	< 1.54 kg with batteries (< 3.4 lbs)
Operational Temperature Range	- 20°C to 60°C (Note: - 32°C available upon request)
Environmental	MIL-STD-810F environmental tests
Rugged Design	Aluminum housing surrounded by Santoprene cover
Tripod Mounting	¼ - 20 tripod mounting thread
Accessory Rail Adapter	MIL-STD-1913 Rail available (optional) for Laser Range Finder or Illuminator/Designator
Video Output	NTSC or PAL format via BNC connector
Power Requirements	
Internal Power	4 AA Lithium Batteries – 5 hours @ 25°C 4 AA NiMH Rechargeable Batteries – 3 hours @ 25°C
External Power	Optional AC / DC power adapater capability
Power Save Mode	Yes: 10 hours operation at 50% duty cycle
Low Battery Indicator	Yes
Startup (from off or power save)	< 5 seconds standard
Additional Features	
Electronic Compass	Azimuth, Elevation and Tilt Readings (± 3° accuracy)
Reticle options (user changeable)	Mil-Dot Style option, with size adjusted to zoom setting. Cross Hair Style option No Reticle option
Polarity Control	Black Hot / White Hot
Gain / Level Control	Manual Mode, Full Field Automatic and Spot Automatic
Calibration	Both Automatic and Operator Directed
Solar Protection	Mechanical shutter closes when system is in power off
Operator / System Interface	Easy direct access keypad for use during operation



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