

Wide Area Long Range Surveillance Sensor



The Wide Area Long Range Surveillance Sensor (WALRSS) is a cooled, highly sensitive mid-wave IR camera designed for long-range surveillance and security applications. WALRSS is offered in three motorized continuous zoom lens configurations – 75-550 mm, 143-1,000 mm and 200-1,200 mm – providing scalability to user requirements. A Cincinnati Electronics (CE) designed and fabricated 640 x 512 InSb MWIR sensor, mated with a continuous zoom lens and our enhanced image processing features, allows the user to achieve man detection capability at ranges beyond 20 km.

FEATURES

- High resolution, mid wave InSb sensor
- Continuous zoom lens
- Compact structure
- Patented CE image enhancement processing
- Superior ruggedization
- Critical IR sensor technology is 100% designed, manufactured, and supported by CE
- Multiple system control interfaces and video outputs
- Integration flexibility
- High sensor reliability

BENEFITS

- Offers state-of-the-art image quality and exceptional detection, recognition, and identification capability
- Allows the operator to frame the field of regard to suit the surveillance need and achieve superior imaging capability at long ranges.
- Provides small size, light weight and low power consumption
- Enables the user to discriminate the target from background & clutter at longer ranges
- Extends operational life – proven in the harshest environments – reducing life cycle costs
- Ensures long term support and reduced obsolescence issues
- Offers flexibility and easy fielding – ideal for upgrades of legacy systems or integration into new designs
- Operates as a stand-alone IR camera or as part of an integrated multi-sensor system
- Higher operational availability, reduced maintenance, lower life-cycle costs

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CAMERA SYSTEM PARAMETERS

Sensor Type	MWIR InSb reticulated
Sensor Size	640 x 512 pixels, 20µm pitch
Spectral Band	3.6-5.0µm with CO ₂ notch
System Control	RS-422 Serial Interface
Video Format	RS-170A (Analog) HOTLINK-II (Digital) CCIR (Optional) Firewire IEEE 1394 Camera Link (Optional) NTSC or PAL

LENS PARAMETERS

Focal Lengths	
75-550 mm Continuous Zoom	
Wide FOV	75 mm (9.3°x 7.0°)
Narrow FOV	550 mm (1.3°x 1.0°)
143-1,000 mm Continuous Zoom	
Wide FOV	143 mm (4.9°x 3.7°)
Narrow FOV	1,000 mm (0.7°x 0.6°)
200-1,200 mm Continuous Zoom	
Wide FOV	200 mm (3.7°x 3.0°)
Narrow FOV	1,200 mm (0.6°x 0.5°)

MECHANICAL/ENVIRONMENTAL

Weight	25+ lbs. (configuration dependant)
Size (inches)	24.6 L x 12.0 W x 12.0 H 29.0 L x 12.0 W x 12.3 H (Alum. Enclosure)
Operating Temperature	-40°C to +65°C

POWER REQUIREMENTS

Power Source	+28 VDC (Mil-704E Normal Conditions)
Power at Steady State	35 Watts

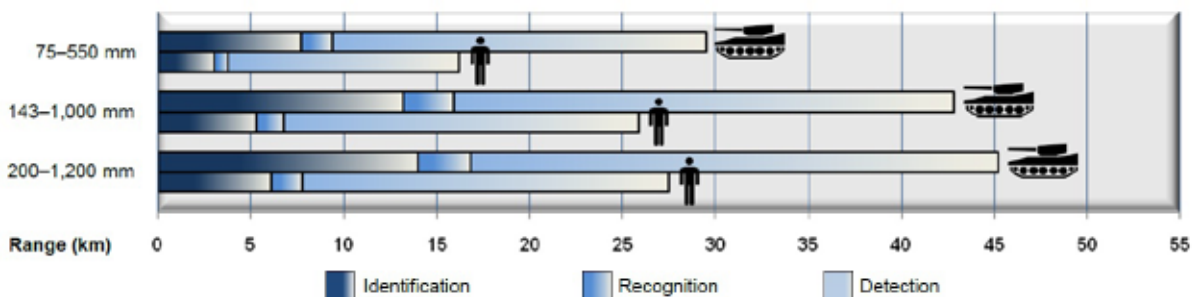
FEATURES AND CAPABILITIES

WALRSS provides many advanced features including:

- Local area contrast enhancement – proprietary detail enhancement algorithm



- Interpolated electronic zoom up to 4x
- Operator guided self-calibration via 3 or 5 point non-uniformity correction (NUC)
- Auto focus
- Image stabilization
- Edge enhancement



WALRSS integrated onto NightHawk EO/IR Surveillance System

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