Optronics Systems

LONG RANGE SURVEILLANCE AND THREAT ACQUISITION SYSTEM

NERIO-LR is a state of the art modular Electro-Optical (EO) Surveillance, Threat Acquisition (STA) and Reconnaissance system designed to satisfy a broad range of current and emerging customer requirements.

These include:

- Border security and Critical National Infrastructure protection
- Vehicle based STA and Reconnaissance operational from both wheeled and tracked vehicle platforms
- Coastal surveillance
- Ship borne STA and Situation Awareness.

NERIO-LR integrates world-class EO sensors as part of a fully flexible payload configuration together with a gyro-stabilised director mechanism enabling capability, cost and performance to be optimised according to specific customer needs.

Utilising the SLX-Hawk Thermal Imaging (TI) camera for provision of a 24/7 operational capability, NERIO-LR combines a 24° to 1.8° TI zoom field of view with a 360° x +60°/-90° system field of regard.

This breadth of imaging coverage and performance capability enables customers to conduct surveillance acquisition operations at both very short and long-range with a single EO system asset.

Performance of the SLX-Hawk TI camera enables the identification of threats at ranges typically beyond the effective range of the threat's typical weapon system.

Additionally to the SLX-Hawk TI camera, the standard NERIO-LR sensor payload configuration includes a colour day TV camera and optional, eye-safe Laser Rangefinder (LRF) to supplement the surveillance capability and enable the capability for geospatial threat location.

The modular payload and communication architecture of NERIO-LR enables the Day TV Camera and LRF solutions to tailored to meet specific customer performance, cost and capability needs. Additionally the NERIO-LR may be operated with an optional Auto Video Tracker to provide closed-loop sight-line control.

NERIO-LR

NERIO-LR is designed to facilitate use in direct or mast mounting to platforms, or static tower mounted applications. An optional Fast-Fit mast mount adaptor also enables NERIO-LR to be rapidly de-mounted from and re-mounted to mobile reconnaissance platforms enabling the system to be used off-platform as part of dismounted observation post operations if required.

KEY FEATURES AND CUSTOMER BENEFITS

Gyro-stabilised EO payload
Enables operation on moving platforms and optimised performance in mast/tower mounted applications.

Continuous 360° x +60°/-90° coverage
Provides a solution for both close-in, e.g. urban canyons, and long-range surveillance and threat identification.

SLX-Hawk TI Camera
World-Class TI performance coupled with a full range continuous 24° to 1.8° zoom lens enabling high performance, 24/7 operation.

Modular payload architecture
Enables the NERIO-LR system level capability to be optimised for customer specific cost, capability and performance needs and accommodate special to role payloads for specific operational applications.

Open-standards, IP based control interfaces
Enables NERIO-LR to be easily interfaced with customer specific security or mission system solutions, including the UK MoDs GVA Defence Standard.

Rugged design
Enables NERIO-LR to be utilised against a broad range of operational requirements across a global environment, including; static or mobile and land or ship borne environment.

OPTIONAL CAPABILTIES

- Gyro stabilised or unstabilised variants are available
- Automatic Threat Detection and Tracking
- Modular system control and display solutions
- Operational deployment solutions
- Special to role EO modules, e.g. illuminator and dazzle sources.

TECHNICAL SPECIFICATION

GYRO-STABILISED HEAD	
Field of regard	Continuous 360° x +60°/-90°
Angular speed	60°/s (max)
Pointing accuracy	0.06° 1σ in both axis
Stabilisation performance	200µrad (1σ)

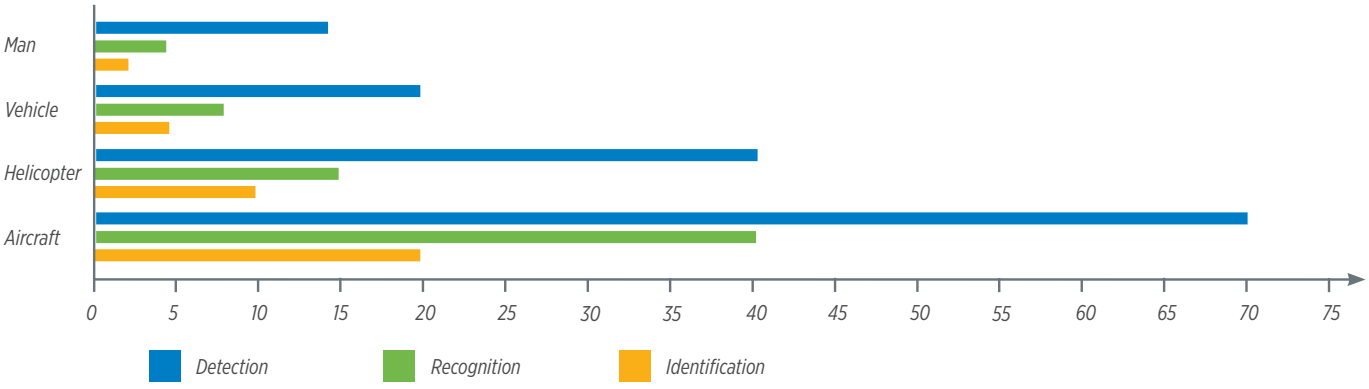
SLX-HAWK THERMAL IMAGER	
Resolution	640 x 512 pixels (Optional microscan to 1280 x 1024)
Operating waveband	3µm to 5µm
Sensitivity	17mK NETD (typical)
Optical field of view	Continuous zoom: 24° x 19° to 1.8° x 1.4°

COLOUR DAY TV CAMERA	
Resolution	976 x 582 pixels
Optical field of view	Continuous zoom: 46° to 1.7° (horizontal)
Auto focus	On demand and zoom triggered
Sensitivity	10mLux (25% video, f/1.9)

EYESAFE LRF (OPTIONAL)	
Laser type	Er Glass
Laser safety	Class 1
Wavelength	1540mm
Range	80m to 20km
Accuracy	±5m (1σ)

SYSTEM AND ENVIRONMENTAL	
Power supply	18v – 32v dc
Operating temperature range	-32°C to +71°C

RANGE PERFORMANCE (KM)



LEONARDO
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