



## NERIO-LR 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° 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.

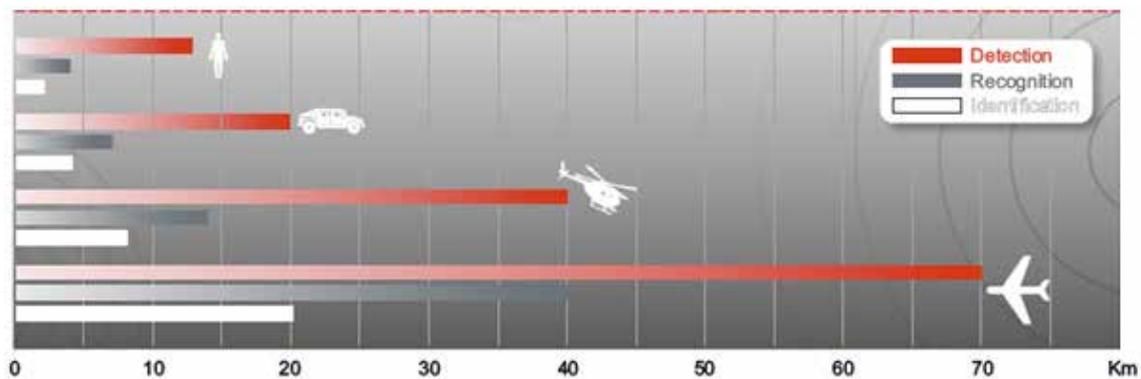
Performance of the SLX-Hawk TI camera enables the identification of threats at ranges typically beyond the effective range of the threat's typical weapon system.

Additionally to the SLX-Hawk TI camera, the standard NERIO-LR sensor payload configuration includes a high-definition 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 be tailored to meet specific customer performance, cost and capability needs. Additional special to role modules, e.g. illuminators and dazzle sources, can also be readily integrated to meet specific operational needs.

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 dismantled observation post operations if required.

## RANGE PERFORMANCE (ACTUAL TARGETS)



## 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° 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 CAPABILITIES

- Gyro stabilised or unstabilised NERIO-LR variants are available
- GVA Interface Module (GIM) enabling NERIO-LR to interface directly with the UK MoD's Generic Vehicle Architecture open-systems defence standard
- Fast-Fit mounting adaptor enabling rapid de-mount and re-mount
- 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°
Angular speed	60°/s (max)
Pointing accuracy	0.056° 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	1280 x 720 High-Definition
Optical field of view	Continuous zoom: 47° to 1.7° (horizontal)
Auto focus	On demand and zoom triggered

### Eyesafe LRF (optional)

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

### System and environmental

Power supply	18v - 32v dc
Operating temperature range	-32°C to +71°C



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