

# NERIO-VLR

## VERY LONG RANGE SURVEILLANCE AND TARGET ACQUISITION SYSTEM



NERIO-VLR is a modular Electro-Optical (EO) Surveillance, Target Acquisition (STA) and Reconnaissance system designed to satisfy a broad range of current and emerging customer requirements. As part of the NERIO family of products, the NERIO-VLR offers the lowest size, weight and power (SWaP) performance in the NERIO range.

Applications include:

- Mobile STA and Reconnaissance
- Border security and Critical National Infra-Structure protection
- Coastal surveillance
- Air Defence and Counter-UAS

NERIO-VLR integrates world class EO sensors as part of a fully flexible payload together with a gyro-stabilised director mechanism enabling capability, cost and performance to be optimised according to specific customer needs. The NERIO-VLR boasts a two axis Pan and Tilt head with a high reliability slip ring to provide a continuous 360° by ± 60° Field of Regard. It can optionally operate in a multi-point tracking mode utilising a closed loop low latency embedded video auto-tracker.

NERIO-VLR utilises the SLX SuperHawk Thermal Imaging (TI) camera for provision of a 24hr operational capability, with 21.5° to 1.5° zoom field-of-view.

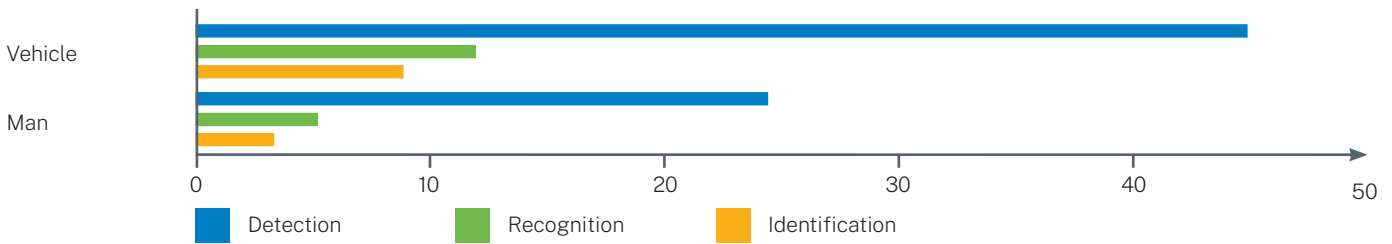
Performance of the SLX SuperHawk TI camera delivers exceptional range performance, enabling early counteraction to be initiated.

In addition to the SLX SuperHawk TI camera, the standard NERIO-VLR configuration includes a high-definition colour day TV camera, an eye-safe Laser Rangefinder (LRF) and integrated GPS to supplement the surveillance capability and enable target identification and geospatial location. Thanks to a dual HD-SDI output both video sources can be viewed by HD-SDI output and/or compressed video over IP.

Both the TI Camera and the day TV camera are equipped with automatic image optimisation features, which maximise target detection, reduces operator workload, and makes the NERIO-VLR very easy to operate by personnel with a wide range of skill levels from first time users, to experienced observers.

Additional special to role modules, e.g. illuminators and dazzle sources, can also be offered to meet specific operational needs. For applications relating to Counter Unmanned Air Systems (C-UAS) please see the Leonardo website for more information on the capabilities of the Falcon Shield system.

## RANGE PERFORMANCE (KM)



## KEY FEATURES AND BENEFITS

### GYRO-STABILISED EO PAYLOAD

Enables operation on fixed installation and optimised performance in mast/tower mounted applications.

### FIELD OF REGARD: CONTINUOUS 360° X ±60°

Provides a solution for ultra-long-range surveillance and target identification and geolocation.

### SLX SUPERHAWK THERMAL IMAGER

High definition performance coupled with a full range continuous 21.5° to 1.5° zoom lens enabling high-performance, 24hr operation.

### MODULAR PAYLOAD ARCHITECTURE

Enables the NERIO-VLR 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-VLR to be easily interfaced with customer specific security or mission system solutions, including the network enabled operation.

### RUGGED DESIGN

Enables NERIO-VLR to be utilised against a broad range of operational requirements across a global environment, including static or mobile and land or coastal environment.

### HIGH AVAILABILITY

40,000 hour long life cooling engine of the SLX Superhawk camera enables extended maintenance free operation with high reliability.

### OPTIONAL CAPABILITIES

- Video Autotracker
- Control, display and deployment solutions
- Special-to-role EO sensor configurations for bespoke customer requirements
- Lower SWaP-C SLX SuperHawk camera variant

## TECHNICAL SPECIFICATION

### GYRO STABILISED HEAD

- Field of regard: Continuous 360° x ±60°
- Angular speed: 120°/s (max)
- Pointing accuracy: 0.056° 1σ in both axis
- Stabilisation performance: 200 μrad (1σ)
- Integrated GPS

### SLX SUPERHAWK

- Resolution: 1280 x 720 (720p)
- Operating waveband: 3μm to 5μm
- Optical field of view: Continuous zoom: 21.5° to 1.5° (horizontal)
- Autofocus: On demand

### VIDEO AUTOTRACKER

- Channels: TI and Day Camera

### COLOUR DAY TV CAMERA

- Resolution: 1280 x 720
- Optical field of view: Continuous zoom: 9.3° to 0.28° (horizontal)
- Auto focus: On demand and zoom triggered

### EYESAFE LRF

- 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