

NERIO-ULR

ULTRA-LONG RANGE SURVEILLANCE AND TARGET ACQUISITION SYSTEM



NERIO-ULR is a state of the art 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-ULR offers the ultimate in range performance. For the lowest size, weight and power (SWaP) performance see the NERIO-VLR.

Applications include:

- Border security and Critical National Infrastructure protection
- Rapidly deployable STA and Reconnaissance
- Coastal surveillance
- Air Defence and Counter-UAS

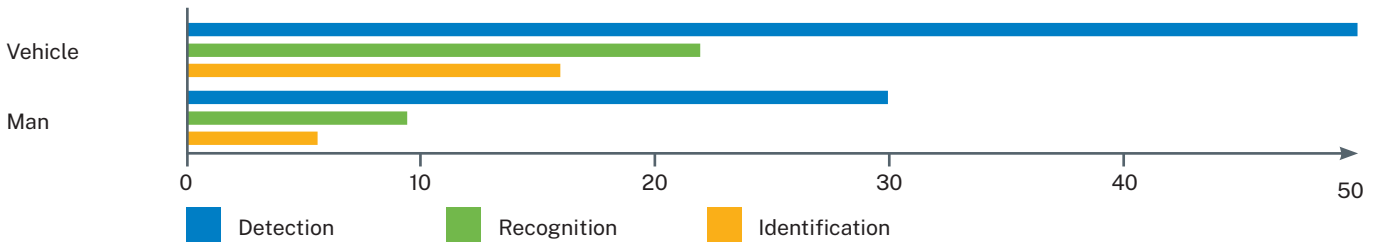
NERIO-ULR integrates world class EO sensors together with a gyro-stabilised director mechanism enabling unparalleled capability for a range of applications. The NERIO-ULR boasts a two axis Pan and Tilt head with a high reliability slip ring to provide a continuous 360° by ± 60° Field of Regard. It can optionally operate in a multi-point tracking mode utilising a closed loop low latency embedded video auto-tracker.

NERIO-ULR utilises the high reliability HORIZON Thermal Imaging (TI) camera for provision of a 24hr operational capability, with 11° to 0.9° zoom field-of-view. Performance of the HORIZON TI camera delivers the best range performance in its class, enabling early counteraction to be initiated.

In addition to the HORIZON TI camera, the standard NERIO-ULR includes a high-definition colour day TV camera with a compatible zoom field of view, an eye-safe Laser Rangefinder (LRF) and integrated GPS to supplement the surveillance capability and enable target identification and geospatial location. Both video sources can be viewed simultaneously via dual HD-SDI outputs and/or as compressed video of 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 ULR easy to operate.

RANGE PERFORMANCE (KM)



NERIO-ULR is also included as part of the Falcon Shield Counter-Unmanned Air System (C-UAS). For applications relating to C-UAS please see the website for more information on the capabilities of the Falcon Shield system.

KEY FEATURES AND BENEFITS

GYRO-STABILISED EO PAYLOAD

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

CONTINUOUS 360° X ±60° COVERAGE

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

HORIZON THERMAL IMAGER

World-Class true HDTI performance coupled with a full range continuous 11° to 0.9° zoom lens enabling high-performance, 24hr operation.

OPEN-STANDARDS, IP BASED CONTROL INTERFACES

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

RUGGED DESIGN

Enables NERIO-ULR to be utilised against a broad range of operational requirements across a global environment.

HIGH AVAILABILITY

50,000 hour long life cooling engine of the HDTI enables extended maintenance free operation with high reliability.

OPTIONAL CAPABILITIES

- Automatic Target Detection and Tracking
- Modular system control and display solutions.
- Operational deployment solutions

TECHNICAL SPECIFICATION

Gyra stabilised head

| | |
|-----------------------------------|----------------------------------|
| Field of regard: | Continuous 360° (Az) x ±60° (El) |
| Angular speed: | 120°/s (max) |
| Pointing accuracy: | ±0.5 mrad in both axis |
| Stabilisation performance: | ±0.31 (Az) / ±0.12 (El) mrad RMS |

Horizon

| | |
|-------------------------------|--|
| Resolution: | 1280 x 720 (720p) |
| Operating waveband: | 3µm to 5µm |
| Sensitivity: | 27mK NETD (Typical) |
| Optical field of view: | Continuous zoom: 11° x 6.2° to 0.9° x 0.5° |
| Autofocus: | On demand |

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: | 20v-30v DC |
| Operating temperature range: | -32°C to +55°C |

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