



SPYNEL

→ Night&amp;day maritime and low air target tracking



# Spynel-X

WIDE AREA

SURVEILLANCE SYSTEM

## ➤ 360° INTRUSION DETECTION, ANYWHERE, ANYTIME

Spynel is the impressive system for all-weather, 24/7 surveillance of ports, ships, platforms at sea, ideal for the surveillance of perimeters ranging over several kilometers. Capturing videos with an unequalled resolution of up to 120 Mpix, Spynel-X provides powerful situation awareness over 360 degrees, with the highest detection range in its category. Associated with Cyclope advanced motion detection software, it provides unprecedented real-time security against conventional and asymmetrical threats, in the whole surroundings, up to the horizon.

## ➤ EARLY WARNING OF ASSYMETRICAL THREATS

Compact and robust, Spynel can be quickly deployed to perform early intrusion alert over extremely large areas in total darkness, fog, smoke. Unaffected by sea clutter, this surveillance device is highly effective when tracking small crafts, RIBs, wooden boats and even swimmers. As a completely passive system, it is invisible to intruders, cannot be tricked by camouflage nor jamming. It operates 24/7, whatever the weather. Using a high-end MWIR sensor, Spynel-X exhibits high performance, including in warm and humid regions.

## ➤ APPLICATIONS

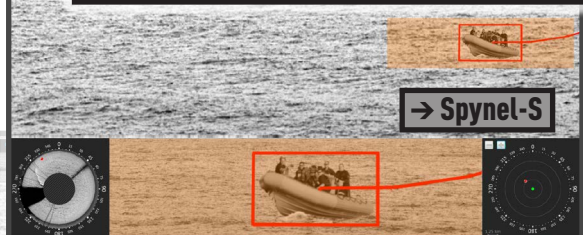
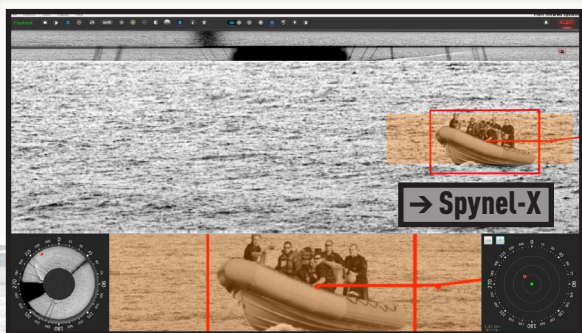
- Maritime wide area surveillance
- Asymmetrical threats detection
- Seaports and harbors protection

- Coastal and border passive surveillance
- Offshore platforms and oil rigs security
- UAV, USV, low air target tracking
- Self-protection of ships
- Fight against piracy
- Fight against smuggling and drug trafficking
- Night time navigation
- Search and rescue

## ➤ BENEFITS

- High-end system in the Spynel series
- Cost effective and reliable surveillance system
- Full 360-degree panoramic coverage with a single sensor
- Long range surveillance up to the horizon
- Day and night panoramic scrutiny even in adverse weather conditions
- Automatic, simultaneous tracking of all threats with superior image quality
- Compact, robust, lightweight equipment, for a fast deployment
- Fully passive system, totally undetectable

→ SPYNEL series: automatic detection, recognition, identification

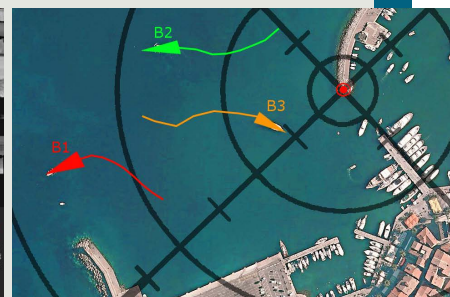
[www.hgh-infrared.com](http://www.hgh-infrared.com)→ SPYNEL-X  
ROTATING SENSOR



→ SPYNEL-X with V-LRF option



→ 360-degree site security



→ Tracks displayed on situation map

## TECHNICAL

### SENSOR

	Spynel-X 3500	Spynel-X 6000	Spynel-X 8000
Horizontal FOV	360°	360°	360°
Vertical FOV	20°	10°	5°
Vertical adjustable tilt (motorized)	± 45° (motorized)	± 45° (motorized)	± 45° (motorized)
IFOV	0.3 x 0.3 mrad x mrad	0.15 x 0.15 mrad x mrad	0.08 x 0.08 mrad x mrad
Scanning speed	2 rps (360°/0.5sec)	1 rps (360°/sec)	0.5 rps (360°/2sec)
Detector type	MWIR megapixel FPA	MWIR megapixel FPA	MWIR megapixel FPA
Cooling	Stirling microcooler	Stirling microcooler	Stirling microcooler
Image resolution	23 000 (H) x 1280 (V)	46 000 (H) x 1280 (V)	92 000 (H) x 1280 (V)
Video output and control	IP	IP	IP
Dimensions(Dia x H)	385 mm x 580 mm	385 mm x 580 mm	385 mm x 580 mm
Weight	< 40 kg	< 40 kg	< 40 kg
Operating temperature	-40°C to +71°C	-40°C to +71°C	-40°C to +71°C
Protection standard	IP 66	IP 66	IP 66
Power supply	24V DC / 10 Amps	24V DC / 10 Amps	24V DC / 10 Amps
Detection range for			
human :	Up to 3.5 km	Up to 6 km	Up to 8 km
RIB :	Up to 7 km	Up to 12 km	Up to 15 km
ship :	Up to 21 km	Up to 25 km	Up to 30 km

### V-LRF OPTION

Visible full HD camera with continuous optical zoom and/or Laser Range Finder

Detection ranges according to Johnson criterium and STANAG standards

### CONTROL AND DISPLAY SOFTWARE

Operating system: PC Windows – multiple screen and touch screen capabilities

Software functions: Get full advantage of Spynel sensor with Cyclope software. Cyclope provides, at a glance, **real time panoramic display** (360° strip, annular, radar & zoom views), **designation and tracking** of an unlimited number of targets, immediate **threat location** (azimuth, elevation, distance), GPS, AIS and radar **data integration**, automatic **control of PTZ** systems for target identification, **forensic capabilities** (timeline, sequence storage and playback), spatial and temporal bookmarks, multiple **threats displayed on situation map**, fine **image stabilization** and more...



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