

EXAVISION NEMOSYS XR HD™

AN EQUANS COMPANY



NEMOSYS XR HD™ is an EO/IR optronic solution integrated on an accurate Pan & Tilt, used for 24/7 applications. This product range combines continuous optical zooms on both Full HD colour and HD thermal cameras.

NEMOSYS XR HD™ brings new users' benefits, such as longer range and deep learning algorithms, significantly improving surveillance, detection and identification capabilities.

This solution has been designed and developed to provide customers with robust, easy-to-use and performing systems.

Associated to VIGISENS software suite, with automatic target detection, classification and video tracking algorithms, and linked to radar or detection devices, NEMOSYS XR HD™ range is dedicated to civilian and military applications.

- Sensitive and Critical Infrastructure Protection (CIP) as military camps and airports
- Border surveillance
- Coastal, maritime surveillance and VTS
- Counter UAV applications
- Deep learning classification
- Automatic target detection and video tracking
- Solution designed and manufactured in France, no export restrictions linked to a third country
- Qualified and field proven in maritime & coastal applications.



CAMIR Cooled Thermal camera

Sensor	Cooled, snapshot FPA	
FPA Format	1280 x 720 pixels	
Pitch	10 µm	
Spectral Band	3 to 5 µm	
System NETD	28 mK typical (<30 mK)	
Focus control	Auto (Global or on ROI) / Manual	
2 available configurations	CAMIR-HD-690	CAMIR-HD-900
Continuous optical zoom	14x – F=50 to 690 mm	13x – F=70 to 900 mm
HFoV (+/-5%)	14.59° to 1.06°	10.45° to 0.81°
iFOV	199 – 14 µrad	142 – 11 µrad
F/#	F/4	

DRI

NATO target (2.3m x 2.3m)	Detection (1 pl)	26.8 km	28.5 km
	Recognition (3 pl)	16.7 km	19.4 km
	Identification (6 pl)	10.4 km	12.6 km
Human Being target (0.5m x 1.8m)	Detection (1 pl)	18.9 km	21.7 km
	Recognition (3 pl)	8.9 km	11 km
	Identification (6 pl)	5.0 km	6.2 km

DRI according to STANAG 4347 / TRM4 Software / 50% Probability / ΔT = 2 K / σ = 0.18 per km

CAMEZOOM Day camera

Sensor	CMOS sensor – Approx 2.1 Mpixels			
Resolution	1920 x 1080 (1080 p)			
Minimum Illumination (sensor)	5 mLux real time (@25fps) – ICR ON (B&W)			
Spectrum selection	Visible, Near Infrared (Defog), Visible + Near Infrared			
Focus control	Auto / Manual			
Digital zoom	2x – 8x			
4 available configurations	CAMEZOOM-350	CAMEZOOM-500	CAMEZOOM-1030	CAMEZOOM-2000
Continuous optical zoom	35x -F=10 to 350 mm	33x -F=15.2 to 500 mm	64x – F=16 to 1030 mm	60x – F=16.7 to 1000 mm (x2) F=33.4 to 2000 mm
WFoV (HxV) (+/-5%)	31.1° x 17.8°	20.7° x 11.7°	19.6° x 11.1°	22.4° x 12.7° (x2) 11.3° x 6.3°
NFoV (HxV) (+/-5%)	0.9° x 0.5°	0.6° x 0.3°	0.3° x 0.2°	0.4° x 0.2° (x2) 0.2° x 0.1°
F/#	1.6 – 3.7	3.0 – 6.4	2.8 – 9.6	3.5 – 8.8 (x2) 7 - 18

External Communication

Control protocols	Extended PELCO-D protocol ONVIF Profile S protocol Dedicated protocol for high-speed communication VIGISENS software ICD
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Pan & Tilt Platform: PT-610

Pan Range	N x 360°
Tilt Range	+/-90° with software and mechanical stops
Pan speed	0.03°/s to 60°/s
Tilt speed	0.03°/s to 40°/s
Position Accuracy	<0.1° (1.75 mrad) typical
Resolution	0.005° (87 µrad)

Physical characteristics

Sealing	IP67
Operating Temperature	-32°C to +55°C (C2 & A1 Climates according to MIL-STD-810G)
Storage Temperature	-40°C to +71°C
Environment	Compliant to standard MIL-STD-810 for maritime applications
Maximum size (with option)	< 890 (w) x 800 (d) x 850 (h) mm <i>for most performing configuration</i>
Maximum total weight	< 80 kg for most performing configuration

Options: C2 / Radar integration – Windows cleaning system – VIGISENS software suite