JAEGAR RANGER

EVO²

Powered by NexOS

HIGH PERFORMANCE PAN AND TILT UNIT
HD LOW LIGHT VISIBLE ZOOM LENS SENSORS
SD LWIR UNCOOLED THERMAL ZOOM LENS SENSORS

The JAEGAR RANGER EVO2 is a high performance, multi sensor platform which utilises long range uncooled LWIR thermal sensors with a range of zoom lens options up to 20-300mm, alongside the latest low light HD visible sensors with zoom lens options up to 20-2400mm.

The NexOS EVO2 range employs the latest 12μm thermal sensor technology and has NexOS intelligent capabilities as standard.

Combining advanced motor control technology along with harmonic drive gears, all Jaegar camera platforms are able to position our longest-range sensors accurately and quickly. This is complimented with advanced NexOS features* such as video tracking, target classification, dynamic bore-sighting and gyro. The Jaegar benefits from a fixed through shaft, which can enable payloads such as a RADAR to be mounted directly above the Jaegar PTU director.

KEY FEATURES

- Thermal camera detection ranges up to 9.31km (human) **
- 640x512 12μm thermal sensors with zoom lens options up to 300mm
- HD visible sensors with zoom lens options up to 2400mm
- NexOS intelligence allows advanced image processing and motor control
- NexOS Advanced Macros and Pelco Query Builder allow complex configurations
- Push, continuous and ROI autofocus, electronic image stabilisation and digital zoom (20x) as standard
- 360° Continuous rotation with pan and tilt speeds between 0.001° and 200° per second
- High level of camera positioning accuracy: 0.0001° / 0.0017 mRad
- Unique cable managed, rapid release mechanism with precise bore sighting allowing a quicker installation in the field
- Through shaft enabling fixed payloads to be mounted above the Jaegar PTU director
- System configuration and sensors can be chosen to suit the specific requirements
- Ideally suited for single mast deployments such as mobile, border and maritime applications

Above: Typical Jaegar Ranger, wiper optional (models will vary)

* Requires the NexOS performance pack and the gyro options
** Johnsons Criteria, (Human at 1.8m x 0.5m, Detection at 2 pixels, Recognition at 8 pixels and Identification at 13 pixels. 50% probability subject to environmental conditions). Based on the JPTX-EVO2-300-W.

RUGGEDISED
Suitable for marine and extremely challenging environments

HIGH ACCURACY
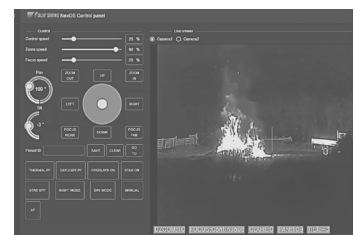Designed for long range surveillance applications

THROUGH SHAFT
Enables fixed payloads to be mounted above the Jaegar PTU

RAPID RELEASE MECHANISM
Allows quick changing and bore-sighting of payloads

NEXT GENERATION
Unrivalled intelligence and hardware control from NexOS

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TECHNICAL SPECIFICATION

THERMAL SENSORS	JPTX-EVO2-100-W	JPTX-EVO2-105-W	JPTX-EVO2-150-W	JPTX-EVO2-180-W	JPTX-EVO2-225-W	JPTX-EVO2-300-W
Focal Length	20mm to 100mm	26mm to 105mm	30mm to 150mm	30mm to 180mm	25mm to 225mm	20mm to 300mm
Horizontal FOV	22° (W) to 4.4° (T)	16.9° (W) to 4.2° (T)	14.7 (W) to 2.9° (T)	14.7° (W) to 2.4° (T)	17.6° (W) to 2.0° (T)	22.0° (W) to 1.5° (T)
F Number	F1.1	F1.6	F1.2	F1.2	F1.5	F1.5
Optical Zoom (Continuous)	5x, Motorised	4x, Motorised	5x, Motorised	6x, Motorised	9x, Motorised	15x, Motorised
Digital Zoom	20x					
Focus	Push autofocus, continuous autofocus, continuous autofocus with automatic ROI, manual					
Detector Type	Uncooled VOx microbolometer, ≤50mK (at 25°C, F1.0), 50Hz, 12μm, 640 x 512					
Spectral Band	7.5 to 14μm (LWIR / 8 to 14μm)					
Image Processing	Correction (NUC), noise filtering, polarity control, Digital Detail Enhancement (DDE), polarity: white hot / black hot, 18x colour palettes					
Housing Weight (Typical)	18.3kg / 40.3lb				25kg / 55.1lb	
Housing Size (Typical)	L740 x W298 x H249mm				L1000 x W319x H292mm	

HD VISIBLE SENSORS						
Focal Length	4.3mm to 129mm			15.2mm to 500mm		
Horizontal FOV	63.7° (W) to 2.32° (T)			23.42° (W) to 0.78° (T)		
F Number	F1.6 to F4.7			F3.0 to F32		
Optical Zoom (Continuous)	30x, Motorised			33x, Motorised		
Digital Zoom	20x					
Focus	Push autofocus, continuous autofocus, continuous autofocus with automatic ROI, manual					
Image Sensor	1/2.8" CMOS Exmor (2.13MP), full HD 1080p (1920 x 1080)			1/1.9" CMOS Sensor (2.38 MP), full HD 1080p (1920 x 1080)		
Min. Sensitivity	Colour 0.01 lux / Mono 0.0008 lux (high sensitivity mode)			Colour 0.05 lux F1.2 gain of up to 60dB / 0.005 lux F1.2 / AGC @ 42dB / Mono 0.002 lux F1.2 gain of up to 60dB / 0.0002 lux F1.2 / AGC @ 42dB (accumulation 25 times)		
Image Processing	Digital noise reduction					
Housing Weight (Typical)	17Kg / 37.5lb			17.5Kg / 38.6lb		
Housing Size (Typical)	L740 x W298 x H249mm					

NexOS*	
NexOS Core (Standard)	NexOS Core includes: Push autofocus, continuous autofocus, continuous autofocus with automatic ROI, digital zoom, image contrast enhancements, CLAHE, de-fog, electronic image stabilisation (2D), static overlays, remote upgrades, remote diagnostics
NexOS Performance Pack (Cost Option)	In addition to NexOS Core, includes: Electronic image stabilisation (3D), target tracking, target classification, event detection, dynamic overlays, dynamic boresight, dynamic absolute positioning, edge recording
NexOS Gyro Pack (Cost Option)	In addition to the NexOS Performance Pack, includes: Jaegar NexOS Gyro Pack
NexOS GPS Positioning Pack (Cost Option)	In addition to the NexOS Performance Pack, includes: Jaegar NexOS GPS Positioning Pack

JAEGER PAN AND TILT UNIT (PTU)*	
Pan Range / Velocity	360° Continuous; 0.001° - 200° per second**
Tilt Range / Velocity	-90° to +90°; 0.001° - 200° per second**
Accuracy	0.0001° / 0.0017 mRad
Repeatability	0.0001° / 0.0017 mRad
Actuation	Custom stepper motors
Speed Control	Zoom dependent speed control (subject to payload)
Presets Types	Procedural, Positional
Number of Presets	255
Protocols	Pelco D, ONVIF Profile-S (custom available on request)
Interface	RS485, ONVIF Profile-S, Serial <> IP
Positioning	Absolute positioning feedback
Through Shaft	Yes
PTU Weight (Typical)	26.4kg / 58.2lb (excluding mounts, brackets, through shaft and payloads)
PTU Size (Typical)	H434 x W275 x D336mm (excluding mounts, brackets, through shaft and payloads)

ELECTRICAL AND MECHANICAL	
Video Output	RTSP, ONVIF from PTU (H.264, H.265 and MJPEG)
Ethernet	Command and control of all functions including streaming of H.264, H.265 and MJPEG video
RS485	Pelco D command and control with custom procedural extensions
Boresight with Rapid Release Mechanism	Anodised aluminium, quick release bracket with micro adjustment boresight mechanism
Input Voltage	48VDC
Housing Material and Finish	Anodised aluminum, thermal and visible sensors (only) are nitrogen purged, hydrophobic coating on visible sensor window, white powder marine grade paint finish (other colours are available upon request)
IP Rating	IP67
Temperature Range	-32°C (-25°F) up to 65°C (149°F) (-40°C/°F with optional Cold Weather Pack)

OPTIONALLY AVAILABLE	
HD Low Light Visible Sensor	16.7mm to 2000mm (21.2° W to 0.23° T) (with x2 extender on) 1/1.9" CMOS Sensor (2.38MP), full HD (1920 x 1080), colour 0.005 lux at F1.2 / 42dB mono 0.0002 lux at F1.2 / 42dB
HD Ultra Low Light Visible Sensor	15.2mm to 500mm (32.39° W to 1.0° T) or 20mm to 2400mm (24.87° W to 0.23° T) (with x2 extender on) 2/3" CMOS Sensor (2.2MP), full HD (1920 x 1080), colour 0.005 lux at F1.4 / 50IRE, mono 0.000000001 lux at F1.4 / 50IRE
4K Visible Sensor	4.4mm to 88.4mm (70.2° W to 4.1° T) 1/2.5" CMOS Sensor (8.51MP), 4K/QFHD (3840 x 2160), colour 0.4 lux (colour 0.06 lux with slow shutter on)
Technologies	Long range white light (up to 3.5km) or infra-red illuminators (up to 2.5km), laser illuminators, long range acoustic hailer (up to 2km), digital magnetic compass, SWIR sensors, LRF (laser range finders) up to 20km, wiper for visible sensor
Jaegar PTU Aux Payload Connectors	QTY 2x External connectors allowing for a selection of the following: Power outputs -12vDC, 6A / 24vDC, 15A / 48vDC, 10A Network output – Cat5e, 10/100 Base T
Top Mount	Top mount extension / plate (for RADAR or top mount payload)

* Subject to payload types.
** Maximum pan and tilts speeds may be restricted depending on the payload types.

REACH RoHS CE UK UK Manufacturer

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VISION & MOTION CONTROL

Specifications may be subject to change without notice 09/04/24 V4.2