JAEGAR SEARCHER

Powered by NexOS

HIGH PERFORMANCE PAN AND TILT UNIT
HD LOW LIGHT VISIBLE ZOOM LENS SENSORS
SD MWIR COOLED THERMAL ZOOM LENS SENSORS

The JAEGAR SEARCHER is a high performance, multi sensor platform which utilises long range cooled MWIR thermal sensors with a range of zoom lens options up to 43.6-785mm, alongside the latest low light HD visible sensors with zoom lens options up to 20-2400mm.
The NexOS SEARCHER range employs the latest 15µm 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 and dynamic bore-sighting.
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 24.3km (human) **
- 640x512 15µm thermal sensors with zoom lens options up to 785mm
- 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 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 Searcher, wiper optional (models will vary)

* Requires the NexOS performance pack option
** * Ranges are based upon 50% probability. Detailed NVIPM calculation notes available upon request. Based on the JPTX-SEARCHER-785-W.

RUGGEDISED
Suitable for marine and extremely challenging environments

MOBILE DEPLOYMENTS
Suitable for mobile and vehicle mounted 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

TECHNICAL SPECIFICATION

THERMAL SENSORS	JPTX-SEARCHER-300-W	JPTX-SEARCHER-550-W	JPTX-SEARCHER-785-W
Focal Length	**16mm to 300mm**	**30.5mm to 550mm**	**43.6mm to 785mm**
Horizontal FOV	32.0° (W) to 1.8° (T)	18.0° (W) to 1.0° (T)	12.6° (W) to 0.7° (T)
F Number	F4.0	F4.0	F4.0
Optical Zoom (Continuous)	18x, Motorised	18x, Motorised	18x, Motorised
Digital Zoom	20x		
Focus	Push autofocus, continuous autofocus, continuous autofocus with automatic ROI, manual		
Detector Type	XBn, 20mK (NETd) @ room temperature, <30mK (Temporal NETd) @ room temperature, 30Hz, 15µm, 640 x 512 (extended 50,000 hour (MTBF) cooler is a cost option)		
Spectral Band	3 to 5µm (MWIR)		
Image Processing	Adaptive histogram equalization, linear AGC, manual gain and offset, sharpness control, edge enhancement, 7x colour palette options including monochrome		
Housing Weight (Typical)	18.5kg / 40.8lb	19kg / 41.9lb	35kg / 77.2lb
Housing Size (Typical)	L740 x W298 x H249mm		L1000 x W319 x H292mm

HD VISIBLE SENSORS		
Focal Length	**15.2mm to 500mm**	**16.7mm to 1000mm (to 2000mm with (x2) extender)**
Horizontal FOV	23.42° (W) to 0.78° (T)	21.2° (W) to 0.45° (T) (to 0.23° (T) with x2 extender)
F Number	F3.0 to F32	F3.5 to F16 (to F32 with (x2) extender)
Optical Zoom (Continuous)	33x, Motorised	60x, Motorised (120x with (x2) extender)
Digital Zoom	20x	
Focus	Push autofocus, continuous autofocus, continuous autofocus with automatic ROI, manual	
Image Sensor	1/1.9" CMOS Sensor (2.38 MP), full HD 1080p (1920 x 1080)	
Min. Sensitivity	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	
Optical Image Stabilisation	-	Yes (cost option)
Housing Weight (Typical)	17.5Kg / 38.6lb	23Kg / 50.7lb
Housing Size (Typical)	L740 x W298 x H249mm	L900 x W290 x H246mm

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 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	0.1° / 1.7 mRad
Repeatability	0.1° / 1.7 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	**4.3mm to 129mm (63.7° W to 2.32° T)** 1/2.8" CMOS Sensor (2.13MP), full HD (1920 x 1080), colour 0.01 lux and mono 0.0008 lux (in high sensitivity mode)
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.

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PLEASE CONTACT US FOR A SPECIFIC CONFIGURATION

Specifications may be subject to change without notice 02/27/25 V4.3

UK Manufacturer

SILENT SENTINEL
VISION & MOTION CONTROL