

# JAEGAR ULR

**HD COOLED MWIR THERMAL ZOOM LENS:  
80mm to 960mm**



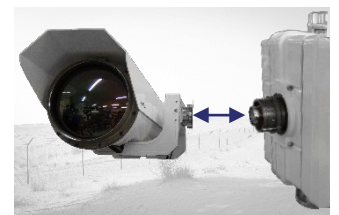
The Jaegar Ultra Long Range (ULR) camera is a high performance, HD multi sensor platform which utilises a long range cooled MWIR HD thermal sensor (1280 x 720 resolution) with a 80-960mm zoom lens alongside a HD visible sensor with a 16.7-2000mm lens (2000mm with 2x extender on).

Combining advanced motor drive technology along with harmonic drive gears, all Jaegar camera platforms are able to position our longest range sensors accurately and quickly. The Jaegar benefits from a fixed through shaft, which can enable payloads such as a RADAR to be mounted directly above the PT director.

With an IP67 level of environmental protection and hard anodised housings, the Jaegar is suitable for the most harsh and challenging applications.

## KEY FEATURES

- Thermal camera detection\* ranges up to 30.3km (human) and 50.0km (vehicle)
- Cooled MWIR thermal sensor with 80-960mm zoom lens
- HD visible sensor with a 16.7-1000mm zoom lens (up to 2000mm /120x zoom with 2x extender on)
- Through shaft enabling fixed payloads to be mounted above the PT director
- 360° continuous rotation with pan and tilt speeds between 0.002° and 100° per second
- High level of camera positioning accuracy: 0.0002°
- Absolute feedback, virtually zero backlash with automatic self position correction
- Unique cable managed, rapid release mechanism and bore sighting allows cameras to be quickly installed and changed in the field
- Ruggedised for extreme and challenging environments
- IP67 rating
- Ideally suited for single mast deployments such as mobile, border and maritime applications



**RAPID RELEASE MECHANISM**  
Allows quick changing of payloads



**THROUGH SHAFT**  
Enables fixed payloads to be mounted above the PT Director



**HD THERMAL**  
Providing HD thermal images with a 1280 x 720 resolution

\*Ranges are based upon the NVThermIP model and associated DRI criteria of 2.7, 14.5 and 18.8 cycles at 50% probability on a MODTRAN standard atmosphere.

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## HD COOLED MWIR THERMAL ZOOM LENS CAMERA



### THERMAL SENSOR – HD, 1280 x 720, 12µm PIXEL PITCH

Focal Length	80mm to 960mm
Horizontal Field of View	11.0° (W) to 0.9° (T)
Optical Zoom (Continuous)	12x, Motorised
F Number	F4.0
Sensitivity	27.5 mK (NETd) typical
Detector Type	CMT; long life linear (50,000 hours). Cool down 3-4 minutes typical.
Resolution	12µm, 1280 x 720
Spectral Band	3.7 to 4.95 µm (MWIR)
Frequency	60Hz
Focus	Push autofocus, manual
Digital Zoom	8x
Image Stabilisation	Yes, electronic
Image Processing	Linear, lace, edge enhancement
Image Control	Palettes: White-hot / black-hot
Housing Weight	Typically 23Kg / 50.7lb
Housing Size (mm)	L597 x W299 x H299

### HD VISIBLE SENSOR

Focal Length	16.7mm to 1000mm (up to 2000mm with (x2) extender on)
Image Sensor	1/1.9" CMOS Sensor (2.38 MP), full HD 1080p (1920 x 1080)
F Number	F3.5 to F16, (up to F32 with (x2) extender on)
Horizontal FOV	21.2° (W) to 0.45° (T) (up to 0.23° (T) with (x2) extender on)
Optical Zoom	60x motorized (up to 120x with (x2) extender on)
Digital Zoom	-
Focus	Push autofocus, manual
Image Stabilisation	Yes (cost options) (optical image stabilisation or electronic image stabilisation)
Min. Sensitivity	Colour 0.05 lux F1.2 gain of up to 60dB / 0.005 lux F1.2 / AGC @ 42dB (accumulation 25 times) Mono 0.002 lux F1.2 gain of up to 60dB / 0.0002 lux F1.2 / AGC @ 42dB (accumulation 25 times)
Housing Weight	Typically 17Kg / 37.4lb
Housing Size (mm)	L800 x W258x H231

### JAEGAR PAN AND TILT UNIT (PTU)

Part Number	JPT-MK2-136080W
Pan Range; Velocity	360° continuous / 0.002° - 100.0° per second
Tilt Range; Velocity	-90° to +90° / 0.002° - 100.0° per second
Accuracy	0.0002° / 0.0035 mRad
Repeatability	0.0002° / 0.0035 mRad
Actuation	Custom stepper motors
Speed Control	Zoom dependent speed control (subject to payload)
PTU Weight	22kg / 48.5lb (excl. mounts, through shaft and payloads) payload capacity 50kg
PTU Size (mm)	H434 x W343 x D343 (excluding mounts, through shaft and payloads)

### PART CODES

JPT-H-ULTRALRC-960-W	Jaegar Ultra Long Range Camera (ULR) - High powered PT, with a HD 1280 x 720, 80-960mm thermal camera and a HD, 16.7mm to 1000mm video camera
Options	All cable, ancillary and optional part numbers are available upon request

### IMAGE PRESENTATION

Video Output	IP, ONVIF, RTSP
Video over IP	Integrated IP encoders provide simultaneous H.264 RSTP (H.265 optional) and ONVIF Profile-S

### TELEMETRY

Presets	127x Preset positions, 16x preset tours
Protocols	Pelco D, Pelco D Extended, ONVIF Profile S
Interface	RS485, ONVIF Profile-S, Serial <-> IP
Positioning	Absolute positioning feedback

### INTERFACES

Ethernet	Command and control of all functions incl. streaming of H.264 Video (ONVIF)
RS485	Command and control of all functions and firmware upgrade

### ELECTRICAL AND MECHANICAL

Input Voltage	Nominal 48VDC (36-72VDC)
Power Consumption	Typical: 60W, Peak: 170W (including thermal and visible sensor payloads)
Housing Material	Anodised aluminium, white powder marine grade paint finish
System Weight	62kg / 137lb (Including payloads)

### ENVIRONMENTAL

IP Rating	IP67
Temperature Range	-32°C (-25°F) up to 55°C (131°F)

### OPTIONS

Automatic Tracking	Hardware based target acquisition and tracking capability
Ultra Low Light HD Sensor	2/3" CMOS sensor (2.2MP) Colour 0.005 lux at F1.4, mono 0.000000001 lux at F1.4
4K Visible Sensor	4K colour sensor, 4.4-88.4mm Lens Colour 0.4 lux (colour 0.06 lux with slow shutter on)
Visible Lens	Up to 2400mm lens
Laser Range Finders	Up to 20km
Illuminators (White + IR)	Up to 2km
Long Range Acoustic Hailer	Up to 2km
Digital Magnetic Compass	Optionally available
GPS	Optionally available
Laser Dazzlers	1W and 5W Laser dazzler module
Long Range Acoustic Hailer	Up to 1700m
Aux Connectors (4 slots)	Optionally available for a selection of the following: Power outputs - 12vDC, 6A / 24vDC, 15A / 48vDC, 10A Network output - Cat5e, 10/100 Base T Antenna connections - Cellular, GPS, WiFi, IP Radio, GPS Compass
Top Mount	Top mount extension / plate (for RADAR or top mount payload)
Storage	Up to 64GB in total via SD/MMC (32GB available per channel if using thermal and video / 2x cameras)