

# JAEGAR RANGER LR

## LR UNCOOLED LWIR THERMAL ZOOM LENS OPTIONS:

- 25mm to 150mm
- 25mm to 225mm
- 40mm to 300mm



Above: Jaegar Ranger LR 25-225mm.  
Other models will vary.

The Jaegar Ranger LR is a high performance, multi sensor platform which utilises advanced LR uncooled thermal sensors with zoom lenses up to 40-300mm alongside a HD visible sensor with a 15.2-500mm lens. The LR range is designed to bridge the gap between cooled and uncooled thermal sensor performance. With high sensitivity and enhanced contrast levels, the LR range features image stabilisation, autofocus and CLAHE video processing as standard.

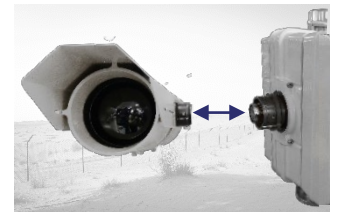
Combining advanced motor drive technology along with harmonic drive gears, all Jaegar camera platforms are able to position our longest range sensors accurately and quickly. The Jaegar benefits from a fixed through shaft, which can enable payloads such as a RADAR to be mounted directly above the PT director.

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 11.9km (human) and 18.8km (vehicle)
- LR advanced uncooled LWIR 12 $\mu$ m, 640 x 480 thermal sensors with zoom lens options up to 40-300mm
- HD visible sensor with a 15.2 to 500mm (33x) zoom lens
- 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

\* Ranges are based upon 50% probability on a MODTRAN standard atmosphere.  
Detailed NVIPM calculation notes available upon request. Based on the RANGER-LR-300.



### RAPID RELEASE MECHANISM

Allows quick changing of payloads



### THROUGH SHAFT

Enables fixed payloads to be mounted above the PT Director



### 12 $\mu$ m SENSOR

Longer range performance from an uncooled thermal

Specifications may be subject to change without notice  
E&EO 22/07/21 V4.0



# JAEGAR RANGER LR

## LR UNCOOLED LWIR THERMAL ZOOM LENS CAMERAS



Above: Jaegar Ranger LR 25-225mm.  
Other models will vary.

### THERMAL SENSOR - 640 x 480, 12µm PIXEL PITCH

Part Code	RANGER-LR-150	RANGER-LR-225	RANGER-LR-300
Focal Length	25 to 150mm	25 to 225mm	40 to 300mm
Field of View	17.5° (W) to 3.0° (T)	17.5° (W) to 2.0° (T)	11.0° (W) to 1.5° (T)
Optical Zoom	6x, motorised	9x, motorised	7.5x, Motorised
F Number	F1.4	F1.5	F1.5
Sensitivity	<30 mK (NETD) f/1.0 at room temperature*		
Detector Type	Uncooled VOx microbolometer		
Resolution	12µm, 640 x 480		
Spectral Band	7.5 to 13µm (LWIR)		
Frequency	25Hz (9Hz option)		
Focus	Push autofocus, manual		
Digital Zoom	4x		
Image Stabilisation	Yes, electronic		
Image Processing	CLAHE / LAP Alpha blending		
Image Control	Polarity: White hot / black hot, various user palettes. Orientation: Invert / revert. Shutter and scene based NUC. Spatial / temporal de-noise. Automatic gain control.		
Housing Weight	Typically 12Kg / 26.4lb	Typically 18.3Kg / 40.4lb	
Housing Size (mm)	L572 x W258 x H226	L580 x W282 x H257	

### HD VISIBLE SENSOR

Focal Length	15.2mm to 500mm	
Image Sensor	1/1.9" CMOS Sensor (2.38 MP), full HD 1080p (1920 x 1080)	
F-Number	F3.0 to F32	
Horizontal FOV	23.42° (W) to 0.78° (T)	
Optical Zoom	33x, Motorised	
Digital Zoom	-	
Focus	Push autofocus, manual	
Image Stabilisation	Yes (cost option) (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)	
Other Features	Defog, digital noise reduction	
Housing Weight	Typically 14Kg / 30.9lb	
Housing Size (mm)	L572x W258x H231	

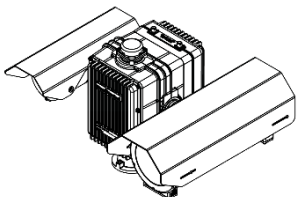
### JAEGAR PAN AND TILT UNIT (PTU)

Pan Range / Velocity	360° continuous / 0.002° to 100.0° per second
Tilt Range / Velocity	-90°-to +90° / 0.002° to 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
PTU Weight	22kg / 48.5lb (excl. mounts, through shaft and payloads) (payload capacity 50kg)
PTU Size (mm)	H434 x W343x D343 (excluding mounts, through shaft and payloads)

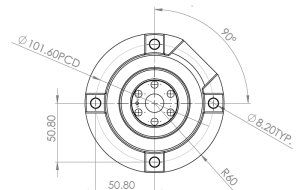
### PART CODES

JPT-H-RANGER-LR-150-W	Jaegar Ranger LR 150 - High powered PT, with a 640x480, 12µm, 25Hz, 25-150mm, F1.4 thermal camera and a HD, 15.2-500mm (33x optical zoom lens) video camera, white colour
JPT-H-RANGER-LR-225-W	Jaegar Ranger LR 225 - High powered PT, with a 640x480, 12µm, 25Hz, 25-225mm, F1.5 thermal camera and a HD, 15.2-500mm (33x optical zoom lens) video camera, white colour
JPT-H-RANGER-LR-300-W	Jaegar Ranger LR 300 - High powered PT, with a 640x480, 12µm, 25Hz, 40-300mm, F1.5 thermal camera and a HD, 15.2-500mm (33x optical zoom lens) video camera, white colour
Options	All cable, ancillary and optional part numbers are available upon request

### TYPICAL JAEGAR CAMERA PLATFORM\*\*



Jaegar PT Platform Mounting



\*As measured after image post-process techniques were applied  
\*\* Illustrations are indicative and subject to the final configuration/model.

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VISION & MOTION CONTROL