AERON LRF

LWIR THERMAL LENS OPTIONS:

15mm to 100mm
26mm to 105mm
25mm to 150mm

8KM LASER RANGE FINDER

Above: Aeron LRF 150.
Other models will vary.

The Aeron LRF is an accurate, rugged, continuous rotation PTZ camera utilising an uncooled LWIR thermal sensor with a range of zoom lenses up to 150mm, an HD visible sensor and an LRF module. The integration the LRF allows for target ranging upon EO or thermal imaging detection at ranges up to 8km.

These sensors are housed within the Aeron's rugged enclosure, which also provides fast and accurate camera positioning. Tested to an IP67 level of environmental protection and hard anodised, the Aeron can be used in the most harsh and challenging applications such as maritime, border security and vehicle mount installations.

KEY FEATURES

- Thermal camera detection* ranges up to 3.29km (human) and 10.1km (vehicle)
- Uncooled LWIR thermal sensors with zoom lens options up to 150mm
- 30x zoom HD visible sensor with a wiper as standard
- LRF measurement range up to 8km
- 360° continuous rotation with pan and tilt speeds up to 160° per second
- High levels of camera positioning accuracy: 0.01°
- Absolute feedback, virtually zero backlash with automatic self position correction
- Compact and ruggedised for extreme and marine environments
- IP67 rating
- Mounting options include inverted, upright or inclined
- Suitable for mobile and vehicle mounted applications

FLEXIBLE MOUNTING
Options include inverted, upright, or inclined

WIPER AS STANDARD
The visible HD camera comes with a wiper as standard

LONG RANGE LRF
LRF with a range up to 8km within a compact housing

* Johnsons Criteria,
(Human at 1.8m x 0.5m, vehicle at 2.3m², Detection at 2 pixels, Recognition at 8 pixels and Identification at 13 pixels. 50% probability subject to environmental conditions). Based on RANGER 25-150.

Specifications may be subject to change without notice.
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SILENT SENTINEL
VISION & MOTION CONTROL

AERON RANGER LRF

Above: Aeron Ranger 25-150mm.
Other models will vary.

THERMAL SENSOR – 640 x 480, 17µm PIXEL PITCH

Part Number	RANGER-100	RANGER-105	RANGER 25-150
Focal Length	15 to 100mm	26 to 105mm	25 to 150mm
Horizontal FOV	42.2° (W) - 6.2° (T)	25.3° (W) - 5.9° (T)	25.4° (W) - 4.1° (T)
Optical Zoom	6.6x, motorised	4x, motorised	6x, motorised
F Number	F1.4	F1.6	F1.4
Sensitivity	<50 mK (NETd) f/1.0 at room temperature		
Detector Type	Uncooled VOx microbolometer		
Resolution	640 x 480, 17µm		
Spectral Band	8 to 14 µm (LWIR)		
Frequency	25Hz (9Hz, 30Hz options)		
Focus	Manual (push autofocus cost option)		
Digital Zoom	4x digital zoom (8x optional)		
Image Stabilisation	Yes, electronic (cost option)		
Image Processing	Polarity control, tunable contrast enhancement		

HD VISIBLE SENSOR

Focal Length	4.3mm to 129mm
Image Sensor	1/2.8" CMOS Exmor (2.13MP), full HD 1080p (1920 x 1080)
F-Number	F1.6 to F4.7
Horizontal FOV	63.7° (W) to 2.32° (T)
Optical Zoom	30x
Digital Zoom	12x
Focus	Automatic, manual
Min. Sensitivity	Colour 0.01 lux, mono 0.0008 lux (high sensitivity mode)
Other Features	De-fog, digital noise reduction, WDR, image stabilisation, boresight adjustment

LASER RANGE FINDER (6019)

Range performance on beamfilling target	8,000m (Reflectivity 60%, Observer visibility 50 km, typical)
Range performance (NATO target)	5,200m (Target size 2.3 × 2.3 m, Reflectivity 30%, Observer visibility 25 km, typical)
Range performance on man size target	3,000 m (Target size 1 × 1 m, Reflectivity 10%, Observer visibility 10 km, typical)
Accuracy up to: 80% of range (1σ) 100% of range (1σ)	 ± 1 m ± 2 m
Repetition rates	1Hz (full range performance) 5Hz (approx. 85 % of full range performance) 10Hz (approx. 80 % of full range performance)
Multiple target detection	Up to 5 targets
Wavelength	1,550nm
Divergence	0.5 mrad
Pointer wavelength (optional)	830nm

AERON PAN AND TILT UNIT

Pan Range; Pan Velocity	360° continuous; 0.01° to 80.0° per second
Tilt Range; Tilt Velocity	-45° to +90°; 0.01° to 80.0° per second (upright)
Accuracy	0.01° / 0.17 mRad
Repeatability	0.05° / 0.87 mRad
Actuation	Custom stepper motors

IMAGE PRESENTATION

Video Output	IP, ONVIF, RTSP (Composite (PAL / NTSC) and HD-SDI are cost options)
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 28VDC (24-32VDC)
Power Consumption	Typical: 60W, peak: 100W (with heater)
Housing Material	Anodised aluminium, white powder marine grade paint finish (other colours are available upon request)
Camera Weight	10.6kg / 23.3lb
Camera Turning Diameter	340mm / 13.40" normal - 370mm / 14.57" offset
Height	370mm / 14.57" normal - 340mm / 13.86" offset

ENVIRONMENTAL

IP Rating	IP67
Temperature Range	-30°C (-22°F) up to 65°C (149°F) (-40°C with optional heater)

OPTIONS

Automatic Tracking	Hardware based target acquisition and tracking capability.
Stabilisation	Electronic image stabilisation (for the thermal)
GYRO	2-AXIS GYRO stabilisation
4K Visible Camera	4K colour camera, 4.4-88.4mm Lens, 20x optical zoom, 12x digital zoom, colour 0.4 lux; colour 0.06 lux (slow shutter on). Replaces HD visible camera
Storage	Up to 64GB in total via SD/MMC (32GB available per channel if using thermal and video / 2x cameras)