AERON EVO2 LRF

Above: Aeron EVO2 25-150mm LRF. Other models will vary.

UNCOOLED LWIR THERMAL FIXED AND ZOOM LENS OPTIONS:

55mm 25 to 75mm
75mm 26 to 105mm
100mm 25 to 150mm

The Aeron EVO2 LRF range utilises the very latest in both thermal sensor and lens technology, providing advanced surveillance capabilities in the most extreme conditions. Available with either zoom or fixed FoV lenses, the Aeron EVO2 range also benefits from a choice of two thermal sensor resolutions; **640 x 512 (12µm) and XGA 1024 x 768 (12µm).** The integration the LRF allows for target ranging upon EO or thermal imaging detection at ranges up to 9.7km.

The Aeron EVO2 is an accurate, rugged, continuous rotation dual sensor PTZ camera utilising an uncooled LWIR thermal sensor with a range of fixed lenses (up to 100mm), zoom lenses (up to 150mm), and a HD visible sensor.

The camera 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 detection* ranges up to 4.6km (human) and 14.3km (vehicle)
- Uncooled LWIR thermal sensors:
  - Fixed lens options up to 100mm
  - Zoom lens options up to 25-150mm
- Range of resolutions up to 1024 x 768 (XGA)
- Pixel pitch down to 12µm (improves range by up to 20%)
- Push autofocus as standard on selected thermal zoom lenses
- 30x zoom HD visible sensor with a wiper as standard
- LRF measurement range up to 9.7km
- 360° continuous rotation with pan and tilt speeds up to 160° per second
- High level 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

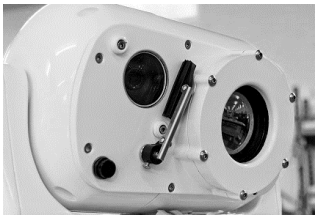
*Johnsons Criteria, Human at 1.8m x 0.5m, vehicle at 2.3m², Detection at 2 pixels, Recognition at 8 pixels and Identification at 13 pixels. 50% probability subject to environmental conditions. Based on RC4-51IYJ30X-EC25Z150FW.

FLEXIBLE MOUNTING

Options include inverted, upright, or inclined

WIPER AS STANDARD

The visible HD camera comes with a wiper as standard



360° ROTATION

The Aeron EVO2 offers continuous 360° rotation

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UK Manufacturer

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

AERON EVO2 LRF

UNCOOLED LWIR THERMAL FIXED / ZOOM LENS CAMERAS

Above: Aeron EVO2 26-105mm.
Other models will vary.

THERMAL IMAGER – 640 x 512, 12µm PIXEL PITCH

Part Number	RC4-51IYJ30X-EB08FW	RC4-51IYJ30X-EB05FW	RC4-51IYJ30X-EB04FW	RC4-51IYJ30X-EB25Z75FW	RC4-51IYJ30X-EB26Z105FW	RC4-51IYJ30X-EB25Z150FW
Focal Length	55mm	75mm	100mm	25 to 75mm (3x optical zoom)	26 to 105mm (4x optical zoom)	25 to 150mm (6x optical zoom)
Horizontal Field of View	8.0°	5.9°	4.4°	17.6° (W) to 5.9° (T)	16.9° (W) to 4.2° (T)	17.6° (W) to 2.9° (T)
F Number	F1.0	F1.0	F1.0	F1.2	F1.6	F1.4
Focus	Fixed	Manual		Push autofocus, manual		Manual

THERMAL IMAGER – 1024 x 768, 12µm PIXEL PITCH

Part Number	RC4-51IYJ30X-EC12FW	RC4-51IYJ30X-EC09FW	RC4-51IYJ30X-EC07FW	RC4-51IYJ30X-EC25Z75FW	RC4-51IYJ30X-EC26Z105FW	RC4-51IYJ30X-EC25Z150FW
Focal Length	55mm	75mm	100mm	25 to 75mm (3x optical zoom)	26 to 105mm (4x optical zoom)	25 to 150mm (6x optical zoom)
Horizontal Field of View	12.8°	9.3°	7.0°	28.5° (W) to 9.3° (T)	27.1° (W) to 6.7° (T)	28.2° (W) to 4.7° (T)
F Number	F1.0	F1.0	F1.0	F1.2	F1.6	F1.4
Focus	Fixed	Manual		Push autofocus, manual	Manual	

THERMAL SENSOR

Sensitivity	≤50mK at 25°C, F1.0	
Detector Type	Uncooled VOx microbolometer	
Spectral Band	7.5 to 14µm (LWIR / 8 to 14µm)	
Frequency	50Hz (640 x 512 imager only)	30Hz (1024 x 786 imager only)
Digital Zoom	1x to 8x (0.1 steps) (640 x 512 imager only)	1x to 4x (0.1 steps) (1024 x 786 imager only)
Image Stabilisation	Yes, electronic (cost option)	
Image Processing	Non-Uniform Correction (NUC), noise filtering, polarity control, Digital Detail Enhancement (DDE)	
Image Control	Polarity: White hot / black hot (18x colour palettes) Orientation: Invert / revert	

HD VISIBLE SENSOR

Focal Length	4.3 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)

Maximum range	15,000m
Range Performance on Beamfilling Target	≥ 9,700m (Reflectivity 60 %, observer visibility 25 km)
Range Performance on 2.3 × 2.3m Target Size	≥ 6,500m (Reflectivity 30 %, observer visibility 25 km)
Range Performance on 1 × 1m Target Size	≥ 3,700m (Reflectivity 10 %, observer visibility 25 km)
Range Accuracy (1 σ)	± 1m
Repetition Rates	Full range performance – 1Hz Approx. 90 % of full range performance – 3Hz Approx. 80 % of full range performance – 5Hz Approx. 70 % of full range performance – 10Hz
Multiple Target Detection	Up to 5 targets
Wavelength	1550nm
Divergence	0.45mrad
Pointer Wavelength	830nm
Eye Safety per IEC 60825-1	Laser Class 1
Pointer Eye Safety per IEC 60825-1	Laser Class 1 (Low Power Pointer) Laser Class 3B (High Power Pointer)

AERON PAN AND TILT UNIT

Pan Range; Pan Velocity	360° Continuous; 0.01° to 160° per second
Tilt Range; Tilt Velocity	-30° to +90°; 0.01° to 160° per second (upright) -90° to +30°; 0.01° to 160° per second (inverted) -68° to +90°; 0.01° to 160° per second (inclined)
Accuracy	0.01° / 0.17 mRad
Repeatability	0.05° / 0.87 mRad
Actuation	Custom stepper motors
Interfaces	Ethernet (control + video), RS485 (control and firmware upgrade)

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

ELECTRICAL AND MECHANICAL

Input Voltage	Nominal 28VDC (24-32VDC)
Power Consumption (Typical)	Typical: 60W, peak: 100W (with heater)
Housing Material	Anodised aluminium, white powder marine grade paint finish (other colours are available upon request)
Camera Weight (Typical)	10.6kg / 23.3lb
Camera Turning Diameter (Typical)	340mm / 13.40" Normal - 370mm / 14.57" offset
Height (Typical)	370mm / 14.57" Normal - 340mm / 13.86" offset
Core Modules	Visible sensor boresight, wiper

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 sensor)
Gyro	2-Axis gyro stabilisation
Thermal Imager	340 x 288 and 1280 x 1024 (HD options available upon request)
4K Visible Sensor	4K colour sensor, 4.4mm to 88.4mm lens, 20x optical zoom, 12x digital zoom, colour 0.4 lux; colour 0.06 lux (slow shutter on). Replaces the HD visible sensor
Storage	Up to 64GB in total via SD/MMC (32GB available per channel if using thermal and video / 2x sensors)

PART CODES

Available upon request