



AERON EVO2 LRF

UNCOOLED LWIR THERMAL FIXED AND ZOOM LENS OPTIONS:

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



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

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



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

*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 RC4-511YJ30X-EC25Z150FW.

Specifications may be subject to change without notice.
03/11/23 V4.1



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 | RC4-51YJ30X-EB08FW | RC4-51YJ30X-EB05FW | RC4-51YJ30X-EB04FW | RC4-51YJ30X-EB25Z75FW | RC4-51YJ30X-EB26Z105FW | RC4-51YJ30X-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 | RC4-51YJ30X-EC12FW | RC4-51YJ30X-EC09FW | RC4-51YJ30X-EC07FW | RC4-51YJ30X-EC25Z75FW | RC4-51YJ30X-EC26Z105FW | RC4-51YJ30X-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

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|------------------|---|
| 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 x 2.3m Target Size | ≥ 6,500m (Reflectivity 30 %, observer visibility 25 km) |
| Range Performance on 1 x 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) |

PART CODES

Available upon request

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) |