RHT Cooled Thermal Cameras

Álava Ingenieros
GRUPO ÁLAVA

Medium to Ultra Long Range Cooled Thermal Cameras

The RHT cooled thermal cameras are designed to provide high resolution them image and create the perfect thermal surveillance options when partnered with the Jaegar/Osiris PT platforms.

They can detect small targets at extreme ranges making them highly suited for long applications in challenging weather conditions. Using cooled detectors sensitive to the MWIR and with resolutions at 640x512 and up to 1280x720 (HD) these are the thermal cameras of choice when only the best will suffice; Perfect for coastal, borders and any other high security applications.

The RHT cameras (excluding the HD version) are supplied with a rapid release mechanism that provide both cable management and means all models are interchangeable. When mounted on the Osiris/Jaegar PT platforms, the cameras are able to scan the targets with pin point accuracy.

The robust housings are rated to IP67 and are designed to withstand harsh environmental conditions including marine. The RHT MWIR cooled thermal cameras are usually partnered with the RHT video cameras and these can be boresighted together with the unique Silent Sentinel internal boresight mechanism. This ensures both cameras simultaneously view the same object at a set distance.

Boresight Adjustment

Key Features

- Latest cooled thermal sensor technologies.
- Long life coolers.
- 640x512 to 1280x720 (HD) resolutions are available.
- 300mm, 690mm, 900mm and 960mm optical zoom lenses available.
- Up to 30.3km human detection and 50km vehicle detection is achievable.
- Smart technologies including image stabilisation and turbulence mitigation.
- IP and analogue output options.
- Optional heaters for extra low temperature operation.
- Fully cable managed solutions.
- Unique rapid release mechanism allows cameras to be quickly changed in the field.
- Unique boresight positioning for fast alignment on HT07 housings.
- ONVIF Profile S compliant.
- Highly ruggedised for extreme and marine environments.
- IP67, REACH, ROHS & CE Compliant.

- Options include: Protective Window Flap/Cover, Heater

Rapid Release Mechanism

The Silent Sentinel Range

Silent Sentinel offer an extensive range of camera and lens configurations to meet your exact surveillance requirements

Tel: +44 (0) 1920 871 734
www.silentsentinel.com

CE 🇬🇧

SILENT SENTINEL
VISION & MOTION CONTROL

OCULUS   AERON   OSIRIS   JAEGAR

RHT Cooled Thermal Cameras

Lens

Focal Length	15mm to 300mm	35mm to 690mm	45mm to 900mm	80mm to 960mm
Optical Zoom (Continuous)	20x, Motorised	19.7x, Motorised	20x, Motorised	12x, Motorised
F Number	F4.0	F4.0	F4.0	F4.0
Horizontal Field of View	35.5° (W) to 1.83° (T)	15.6° (W) to 0.8° (T)	12.2° (W) to 0.61° (T)	11.0° (W) to 0.9° (T)
Focus	Manual motorised focus with push autofocus and Athermalization			

Camera

Detector Type	Cooled InSb FPA	CMT
Resolution	640 x 512	1280 x 720 **HD**
Pixel Size	15 µm	12 µm
Spectral Band	3.4 to 5.1 µm (MWIR)	3.7 to 4.95 µm (MWIR)
Sensitivity	< 25 mK (NETd) @ room temperature	27.5 mK (NETd) Typical
Frame Rate / Frequency	25Hz (30Hz option)	60Hz
Cooler Type	Stirling cycle, integrated (20,000hrs)	Long life linear (50,000hrs)
Cool Down Time	< 10 Minutes, 6 minutes typical	3 to 4 Minutes typical
Image Enhancement	Linear AGC, CLAHE, LAP	Linear, lace, edge enhancement
Digital Zoom	4x	8x
Turbulence Mitigation	-	Yes
Image Stabilisation	Yes	
Image Control	Noise reduction, sharpen, alpha-blend. Palettes: Black-hot, white-hot, ironbow, rainbow + more	Polarity: White-hot / black-hot

Detection, Recognition and Identification Ranges*

Detection (Human / Vehicle)	10970m / 20110m	21610m / 29400m	24170m / 31170m	30300m / 50000m
Recognition (Human / Vehicle)	2360m / 8790m	5380m / 19040m	6950m / 22670m	8000m / 20600m
Identification (Human / Vehicle)	1440m / 5960m	3300m / 13350m	4280m / 16830m	6300m / 16900m

* Ranges are based upon 50% probability on a MODTRAN standard atmosphere. Detailed NVIPM calculation notes available upon request.

Electrical and Mechanical

Boresight	Yes			-
Rapid Release Mechanism	Yes			-
Video Output	IP and Composite (PAL / NTSC)			
IP rating	IP67			
Temperature Range	-30°C (-22°F) Up to 65°C (149°F) (-40°C with optional heater)			-32°C (-25°F) Up to 55°C (131°F)
Power	28-32vDC, 1.7A, 49W Peak (excludes heater at 65W)			28vDC, 0.9A, 25W Peak
Window	Vanadium thermal optical quality glass, with a Low Reflection Hard Carbon (HCLR) coating			Silicon Window Enhanced Diamond Like Carbon (EDLC) coating
Fixing Material	Stainless steel with external fall protection			Black anodised aluminium alloy
Housing Material	Iridited aluminium			Glass fibre polyester resin & gelcoat
Housing Finish	White powder marine grade paint finish (other colours are available upon request)			Gloss white polyurethane finish
Housing Model	HT07			HT07 Custom
Weight	Typically 14Kg / 30.9lb		Typically 20Kg / 44.1lb	Typically 23Kg / 50.7lb
Dimensions (mm)	L700 x W254 x H226	L521 x W231 x H257	L600 x W279 x H279	L597 x W299 x H299
Part Number (Camera Only)	RHT07IGB15Z300FW	RHT07IGB35Z690FW	RHT07IGB45Z900FW	RHT07HB80Z960FW

SILENT SENTINEL
VISION & MOTION CONTROL

OCULUS AERON OSIRIS JAEGAR

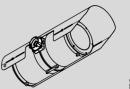# RHT Cooled Thermal Cameras

Telemetry

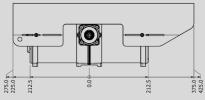|	
Protocols	Pelco D, SSP, ONVIF Profile-S
Parameter Programming	Via RS485 or RS422
Privacy Zones	4
Additional features	Programmable text within picture (camera ID), parameter control (RS232 or RS485) TCP/IP prepared

Network

Ethernet	10/100 Base-T
Connectivity	Cat5e via multicore cable tail/PSU (RJ45)
Configuration	Via web browser
Network Protocols	Networking: IPv4/v6, UDP, TCP, IGMP, ARP, DHCP, DNS, NT Streaming: RTSP, RTP, HTTP, Web Sockets Management: HTTP, HTTPS, Bonjour, ONVIF, PSIA, ION API, SNMP, SMTP Security: Basic / Digest Authentication, SSL
Latency	Can reach less than 100ms latency

Image Processing

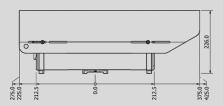|	
Video Compression	H.264/MPEG4 Part 2, M-JPEG (H.265 option available up on request)
H.264 Performance (standard)	Total D1@390 fps or Full HD 1080p@65 fps Examples: 2x 1080p at 30 fps (HD thermal) or 2x D1 at 30 fps (thermal / SD)
Image Processing	Image resizing and scaling ratio, noise reduction, edge enhancement (sharpness), ROI based video compression
Software Update	Remote / IP accessible
Other Features	Email notifications, text overlay

Options

Analogue	Analogue composite camera alternatives are available upon request
Storage	Up to 64GB in total via SD/MMC (32GB available per channel if using thermal and video / 2x cameras)
Additional Optional Modules	Window flap/cover, heater (both options unavailable on the HD version) Please contact us if you have a specific requirement that is not mentioned

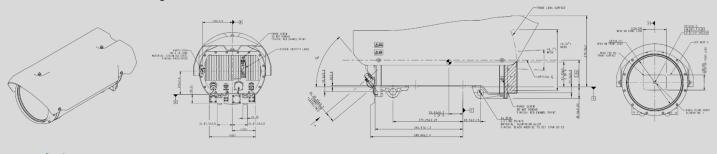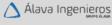### HT07 Camera housing with quick release mechanism

Without quick release mechanism

HT07 Custom camera housing

Álava Ingenieros
GRUPO ÁLAVA

tel: +34 915 679 700
www.alavaingenieros.com | alava@grupoalava.com

SILENT SENTINEL
VISION & MOTION CONTROL

OCULUS   AERON   OSIRIS   JAEGAR