

# RHT Un-Cooled LR Thermal Cameras

## Medium to Long Range Smart Un-Cooled LR Thermal Cameras

The smart uncooled LR thermal cameras offer a real alternative to cooled thermal cameras. With Image Stabilisation and Autofocus as standard, the LR thermal camera range is designed to provide the perfect thermal surveillance solution especially when partnered with the Jaegar/Osiris PT platforms.

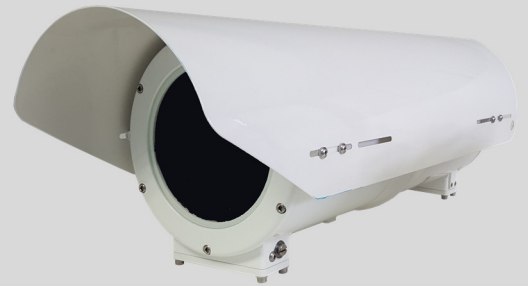
The RHT un-cooled thermal camera range employ proven high resolution 640x480 thermal cameras. The 12 $\mu$ m uncooled VOx thermal technologies can provide human detection up to 11.9km and vehicle detection up to 18.8km. The thermal cameras feature image contrast enhancement aligned with optical zoom lenses. As with all Silent Sentinel systems, all models are available with analogue or IP outputs ensuring they can be integrated into any security infrastructure.

The RHT cameras 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 aluminium housings are rated to IP67 and are constructed from Iridited aluminium and powder coated to withstand harsh environmental conditions including marine. The RHT un-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.

### Key Features

- 12 $\mu$ m Vox un-cooled thermal technologies.
  - High sensitivity at 30mK (comparable to cooled thermal cameras).
  - High resolution 640x480.
  - Smart technologies including image stabilisation and Autofocus.
  - Thermal camera contrast enhancements.
  - Up to 300mm optical zoom thermal lens.
  - Up to 11.9km human detection and 18.8km vehicle detection.
  - IP and analogue output options.
  - Fully cable managed solution.
  - Unique rapid release mechanism allows cameras to be quickly changed in the field.
  - Unique boresight positioning for fast alignment.
  - Optional heater for extra low temperature operation.
  - ONVIF Profile S compliant.
  - Highly ruggedised for extreme and marine environments.
  - IP67, REACH, ROHS & CE Compliant.
- Options include: Protective Window Flap/Cover and Heater.



Boresight Adjustment



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](http://www.silentsentinel.com)



# RHT Un-Cooled LR Thermal Cameras

## Uncooled Medium to Long Range Smart Thermal LR Zoom Lens Cameras

Lens					
Focal Length	15mm to 75mm	15mm to 100mm	25mm to 150mm	25mm to 225mm	40mm to 300mm
Optical Zoom (Continuous)	5x, Motorised	6.6x, Motorised	6x, Motorised	9x, Motorised	7.5x, Motorised
F Number	F1.2	F1.4	F1.4	F1.5	F1.5
Horizontal Field of View	28.7° (W) to 5.9° (T)	42.2° (W) to 6.2° (T)	17.5° (W) to 3.0° (T)	17.5° (W) to 2.0° (T)	11.0° (W) to 1.5° (T)
Focus	Manual motorised focus with push autofocus and Athermalization				

Camera	
Detector Type	Uncooled VOx Microbolometer
Resolution	640 x 480
Pixel Size	12 µm
Spectral Band	7.5 to 13 µm (LWIR)
Sensitivity	< 30 mK (NETd) f/1.0 @ room temperature
Frame Rate	25 Fps
Frequency	25Hz
Digital Zoom and Pan	4x Digital zoom, Region of Interest
Image Stabilisation	Yes
Image Enhancement	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

Detection, Recognition and Identification Ranges*					
Detection (Human / Vehicle)	3920m / 7490m	5290m / 6760m	7760m / 14170m	10070m / 16400m	11970m / 18850m
Recognition (Human / Vehicle)	750m / 3100m	1320m / 1690m	1660m / 6180m	2320m / 8490m	3070m / 10980m
Identification (Human / Vehicle)	510m / 2100m	810m / 1040m	1020m / 4190m	1440m / 5870m	1910m / 7750m

\* 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)				
Power	28-32VDC, 1.2A, 33W Peak (excludes heater at 65W)				
Window	Germanium thermal optical quality glass, with a Low Reflection Hard Carbon (HCLR) coating				
Fixing Material	Stainless steel with external fall protection				
Housing Material	Iridited aluminium				
Housing Finish	White powder marine grade paint finish (other colours are available upon request)				
Housing Model	HT07				
Weight	Typically 14Kg / 30.9lb				
Dimensions (mm)	L700 x W254 x H226				
Part Number (Camera Only)	RHT07ILB15Z750FW	RHT07ILB15Z100FW	RHT07ILB25Z150FW	RHT07ILB25Z225FW	RHT07ILB40Z300FW

# RHT Un-Cooled LR 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

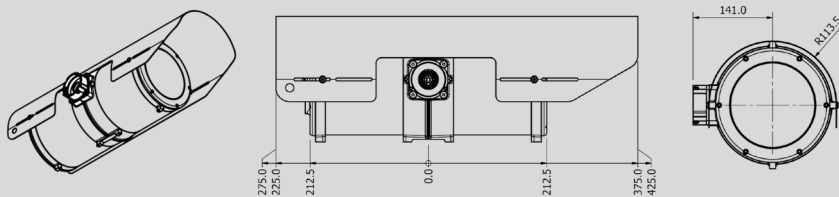
## Image Processing

Video Compression	H.264/MPEG4 Part 2, M-JPEG (H.265 option available up on request)
H.264 Performance (standard)	Total D1@390 fps Examples: 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 and Heater Please contact us if you have a specific requirement that is not mentioned.

HT07 Camera housing with quick release mechanism



Without quick release mechanism

