



LANTIS/RD-UC



**Medium range Visual & Un Cooled Thermal Imaging
Surveillance System**

LANTIS/RD-UC

Medium range Visual & Un Cooled Thermal Imaging Tracking & Reconnaissance System SWIR Camera and LRF Optional

The RP Optical USA unique LANTIS/RD-C system.

The LANTIS-D-C integrates easily with main systems to accurately:

- Acquire and track inbound targets
- Predict target's future position
- Slew main system modules to the correct position

The EO payload combines thermal cameras, SWIR cameras as option, Visual modules and LRF module all providing exceptional performance designed to meet the user's needs

LANTIS/RD-C CONFIGURATION

The standard system is comprised of the following modules:

- The EO unit comprises of:
 - 2 Axes PT unit (optionally stabilized)
 - Electro-Optical Payload with uncooled Thermal Imager and Visual
 - Optional SWIR channel
 - Optional Eye Safe Laser Range Finder
- Control (& optional tracking) embedded SW inside EO payload
- H.264 Video over IP for all observation channels over 100BT / 1G ethernet channel
- API's and interfaces to 3rd parties C4I systems.



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Medium Range Thermal / Visual surveillance system

LANTIS/PR-C SPECIFICATION

THERMAL ZOOM CAMERA SPECIFICATION		
ORCHID – C225 F/1.5 25-225mm		
Continuous Zoom Thermal LWIR UnCooled Imaging Camera		
PARAMETER	VALUE	NOTES
SYSTEM		
Video Format	NTSC, PAL	
Communication Protocol	RS-232/RS-422 Full Duplex	Baud rate 115,200
Controls	Fully Remote controlled	
Electronic Zoom	X2 / X4	
Focus control	Manual / Automatic	
Shock and Vibrations	Per applicable standard	
Sealing	As per IP65	IP66/IP67 available on request
SENSOR		
Detector FPA	Thermal Imaging LWIR UnCooled 640X480 pixels, 17 um pitch	
Sensitivity	< 100mK	
OPTICAL		
Focal length	25-225mm	Focal length
F#	F/1.5	F#
Spectral Range	8-14 μ m	Spectral Range
FOV	Wide FOV: 24.5°(H) x 18.4° (V) Narrow FOV: 2.8° (H) x 2.1° (V)	FOV
Focus / Zoom mechanism	Motorized, remotely controlled	Focus / Zoom mechanism
OPTIONAL -> SWIR MODULE SPECIFICATIONS		
Magnolia 30X10CZ Continuous Zoom SWIR Camera		
PARAMETER	VALUE	NOTES
SYSTEM		
Video Format	NTSC, PAL	
Communication Protocol	RS-232/RS-422 Full Duplex	Baud rate 115,200
Controls	Fully Remote controlled	
Electronic Zoom	X2 / X4	
Focus control	Manual / Automatic	
Mount / Mechanical Interface	Please refer to Mechanical ICD	Customized interfacing - available
Shock and Vibrations	Per applicable standard	
Sealing	As per IP65	IP66/IP67 available on request
SENSOR		
Detector FPA	640X512 pixels, 15 um pitch	
OPTICAL		
Focal length	30-300mm	
F#	F/2.85-4.5	
Spectral Range	0.9-1.7 μ m	
FOV	Wide FOV: 18.18°(H) x 14.58° (V) Narrow FOV: 1.83° (H) x 1.46° (V)	
Focus / Zoom mechanism	Motorized, remotely controlled	



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VISUAL ZOOM CAMERA SPECIFICATION		
HD Zoom Day module		
PARAMETER	VALUE	NOTES
SYSTEM		
Video Format	NTSC, PAL, or High Definition (HD)	
Communication Protocol	RS-232/RS-422 Full Duplex	Baud rate 115,200
Controls	Fully Remote controlled	
Electronic Zoom	Available for some models, please consult RP.	
Focus control	Manual / Automatic	
Shock and Vibrations	Per applicable standard	
Sealing	As per IP65	IP66/IP67 available on request
SENSOR		
Image Device	CMOS 1/2.8"	
White Balance	Auto / ATW / Manual	
Gain	Auto / Manual	
Exposure Control	Auto / Manual	
OPTICAL		
Spectral Range	400 – 700nm	400 – 1,000 nm available on request
Focus / Zoom mechanism	Motorized, remotely controlled	

P/T MODULE SPECIFICATION		
2 AXES (STABILISED) PEDESTAL SPECIFICATIONS		
SYSTEM		
Type	2 Axes pedestal	
Communication Protocol	RS-422 Full Duplex	Baud rate 115,200
Power Requirements	24-32 VDC, 220W at peak	Average nominal power
Controls	Fully Remote controlled	
Total pedestal Weight	Approx. 45 Kg without SWIR. 55 Kg with SWIR C600: ~ 11.5Kg / C330, D435: ~10Kg	
Mount / Mechanical Interface	Please refer to Mechanical ICD	
Operating / Storage Temp	-20°C to +60°C / -40°C to +71°C	Additional configurations available
Shock and Vibrations	Per applicable standard	
Sealing	As per IP65	IP66/IP67 available on request
DYNAMICS		
Azimuth range	N x 360 °	Via Slipring
Elevation range	-30° to +60°	
Azimuth angular rate	30 °/Sec	Faster versions available
Elevation angular rate	30 °/Sec	Faster versions available
Stabilization	Optional feature	Please consult RP



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Optional: Laser Range Finder

The system is equipped with an eye safe laser range finder (LRF) helping you to locate the suspected target, and the distance to the target

LRF (Telemeter) typical specification*	Detail
Type	Eye safe (WL 1.535microns)
Measuring resolution	5m at 2 sigma distributions;
Measuring range	from 75 m to 10 km; Additional configurations available.

* Additional LRF alternatives are available, please consult RP

DRI (Detection / Recognition / Identification ranges)

The following table provides typical DRI values for the **thermal channel** under the following atmospheric / target conditions:

- Atmospheric extinction coefficient: 0.2 /km
- Ambient temperature: 300°K (= 23°C)
- Target delta T from ambient: 3°K

Target type	Detection (50% probability)	Recognition (50% probability)	Identification (50% probability)
Vehicle target (2.3 x 2.3m)	10.1 Km	5.26 Km	2.83 Km
Human target (1.7 x 0.5m)	6.06 Km	2.28 Km	1.16 Km

System ordering information:

Model	P/T	Thermal channel	Day HD channel	SWIR channel	LRF	Video tracking
Base model: LANTIS/RD-UC		Included		X	X	X
With options		LANTIS/RD-UC/		S	L	V



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