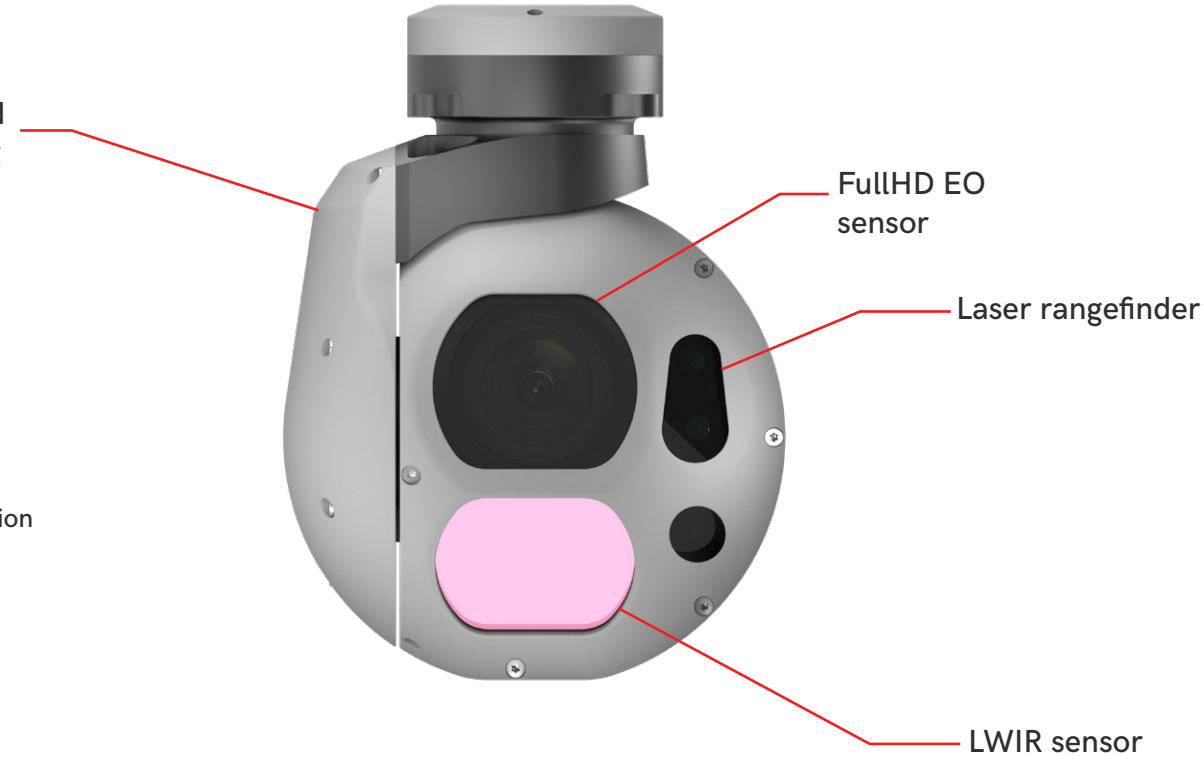
Orca 130

THREOD SYSTEMS

Non-ITAR, high performance 4 sensor gyro stabilized payload for Intelligence, Surveillance and Reconnaissance missions.

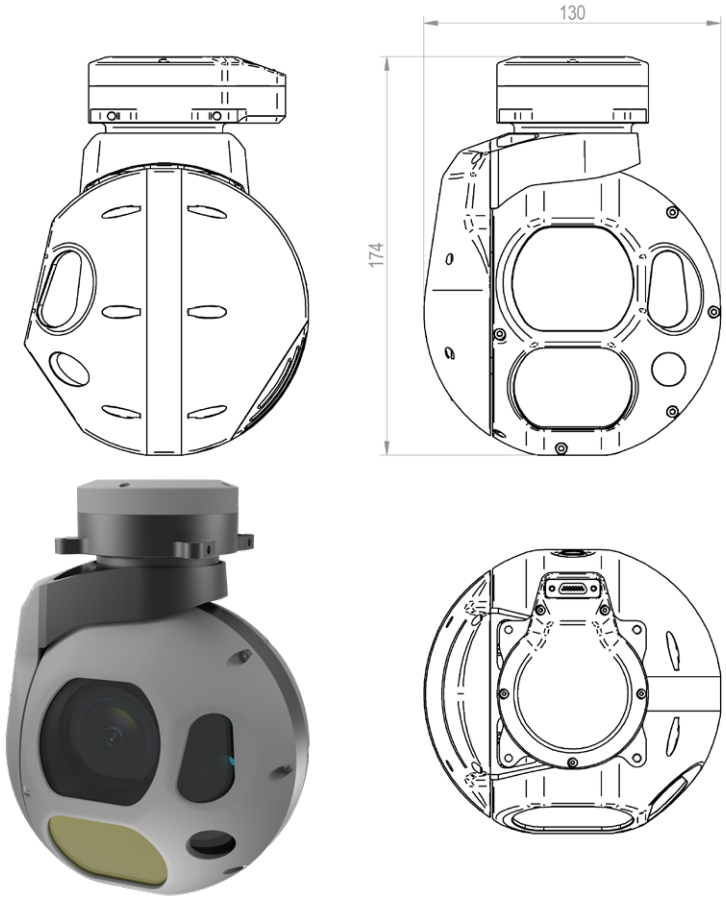


Key features:

- High quality Full HD gimbal for ISR operations
- Excellent zoom capability down to 0.7° FOV
- Stable video image due to additional optimized digital stabilization
- Integrated video overlays
- Operator and Moving Map software solutions available
- Multiple hand controller options available
- Full customer platform integration support

Orca 130 Specifications

Standard FullHD EO/LWIR/LRF



Note! Orca 130 has multiple sensor, software and packaging configurations. Contact Thread Systems for available options and quotations.

LWIR Fixed Focal Length Thermal Camera	
Type	Uncooled long wave infrared sensor (LWIR)
Sensor	Uncooled VOx Microbolometer
Resolution	640 x 512 pixels
Pixel Pitch	12 µm
Spectral Range	Between 7 and 14 µm
Lens Aperture	F1.0
Focal Length	24 mm
Field of View	HFOV 18°
Digital Zoom	1-8X (continuous digital)
Frame Rate	30 Hz
NETD	40,50,60mK (options)
DRI	Human: 1280/320/160m Vehicle/NATO: 3850/950/295m
HDTV Continuous Zoom Color Camera	
Sensor	1/2.8 CMOS
Resolution	1920 x 1080 pixels
Wavelength	Visible + NIR
Lens Aperture	F1.6-4.7
Focal Length	4.3 mm - 129 mm
Lens Diameter	37 mm
Field of View	HFOV 63.7° - 2.3°
Zoom Factor	1-30X (continuous optical)
Digital Zoom	1-3X (continuous digital)
Frame Rate	30 Hz
Sensitivity (VIS)	0.01 lx @ 30 Hz, 0.0013 lx @ 4Hz
Sensitivity (NIR)	0.0015 lx @ 30Hz, 0.0008 lx @ 4Hz
DRI	Human: 14/6/2.5km Vehicle/NATO: 22/12/6km
Laser Range Finder	
Wavelength	1550 nm
Divergence	1 mrad
Safety	Laser Class 1 per IEC 60825-1
Typical Accuracy	± 0.75 m
Range	3300 m beam filling 2500 m NATO target
Dimensions	
Weight	1 kg
Dimensions	Ø 130 x 174 mm (Diameter x Height)
Rotation Range	360° Pan, -100° to + 30° Tilt
Mounting Orientation	Pan-Tilt by default, Roll-Tilt option available
Electrical	
Supply Voltage	18-30 VDC
Current Draw	23W nominal
Interfaces	
Control/Video	Ethernet
Optional Control	Serial TTL (RS232, RS422 optional)
Mechanical	Quick mount system allows fast changing of payloads
Video	
Supported Formats	H.264 (MPEG4 AVC - Advanced Video Codec) H.265 (MPEG-H HEVC – High Efficiency Video Coding)
Resolution	1080p/720p/SD *(adjustable according to bitrate/datalink restrictions)*
Metadata	KLV according to STANAG 4609
Environmental	
Operating Temperature	-20 °C to +50 °C *(sustained operation when airflow is present)*
Altitude	5000 m / 16000 ft AMSL
Airspeed	100 km/h / 54 KTS
Standards	
Environmental	MIL-STD-810G
Video/Metadata	NATO STANAG 4609 (FMV, KLV)
Other	Compatible with STANAG 4703 AEP-83
Features	
Picture-in-Picture	
Moving Target Indicator	
Image Enhancements (contrast, color, gain, histogram equalization, sharpness, denoise, defog)	
Symbology (on screen display)	
Automatic Video/Target Tracker (moving and stationary targets)	
Scene Steer	
Geolocation (Realtime target coordinates and distance calculations and display in WGS84 and MGRS format using LRF or DEM data)	
Geo-pointing	
On-board Recording	
Electronic Stabilization (horizontal, vertical and roll)	
Gyro Stabilization	
Continuous 360° pan, +10° to -100° tilt	
On-board snapshots, single shot and burst. PNG, JPEG, TIFF.	
Fully Featured Mission Software (moving map, video recording and DVR features, reporting tool, fire support tool, POI-s, click-to-point on map, video clip extraction, video footprint, video on map)	
LWIR	Pseudo color, NUC, FFC, AGC (automatic gain control) with adjustments, AGC ROI, brightness, detail and contrast adjustment
HDTV	ICR cutoff (NIR/low light/night mode), colour gain adjustment, colour hue adjustment, auto/manual focus, auto/manual aperture, iris and gain control, auto/manual white balance adjustment, denoise, defog
Handgrip Controller	
Interface	USB, Ethernet, PoE
Variants	Contact Thread for options
Options	
Integrated INS	With Single or Dual channel (RTK) inputs for external GNSS antennas
Vibration Mount	Custom design available per platform
Gimbal Retract	Custom design with built-in dampening

THREOD SYSTEMS
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