

GIA30 Multi-Spectral Electro-Optical Pod

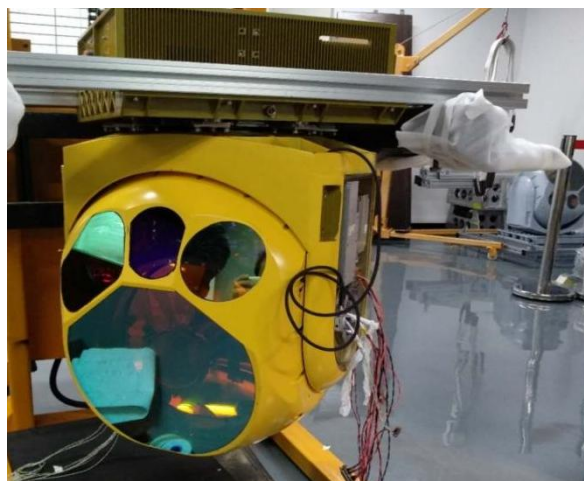
1. Product Profile

Our cutting-edge electro-optical pod delivers unmatched multi-spectral intelligence across demanding airborne missions. Featuring a common aperture design, it integrates high-resolution visible, IR, and laser sensors for simultaneous multi-spectral imaging and targeting. Engineered for long-endurance ISR (Intelligence, Surveillance, and Reconnaissance), the system provides persistent, real-time battlefield awareness and supports multi-target designation in complex environments.

Optimized for diverse airborne installations, including aerostats, fixed-wing aircraft, and UAV platforms, the pod excels in high-altitude surveillance and precision strike coordination. Its ruggedized housing ensures reliability in extreme conditions while maintaining precision optics for identification beyond standard ranges.

Ideal for: Border security, critical infrastructure monitoring, and combat operations.

2. Product Picture



Picture 1 product

3. Product Features

Multi-Sensor Imaging/Lasing Payload Options

Supports up to 8 payload items simultaneously

LWIR&MWIR, HD daylight and HD NIR cameras

SWIR camera images designator spot

Thermal/SWIR /HD NIR image fusion

High speed step-staring scan

High-magnification step-zoom FOV of thermal/SWIR

Continuous wide-angle zoom of HD daylight cameras

High-sensitivity color imaging

Compact, efficient, reliable laser target designator with small divergence beam for maximum range

Laser spot tracker

High Performance Gimbal • 5-axis stabilized

- Macro and micro multistage stabilization servo platform base on FSM minimizes spot jitter
- Sharp optics and excellent stabilization performance
- IMU mounted to optical bench for high target location accuracy
- INS auto-align to aircraft

Simplified Aircraft Integration • Built-in vibration isolation

- GPS receiver built into electronics unit
- No calibration required for LRU swap out

4. Applications

Aerostat, Fixed-Wing, UAV , etc

5. Main Technical Parameters

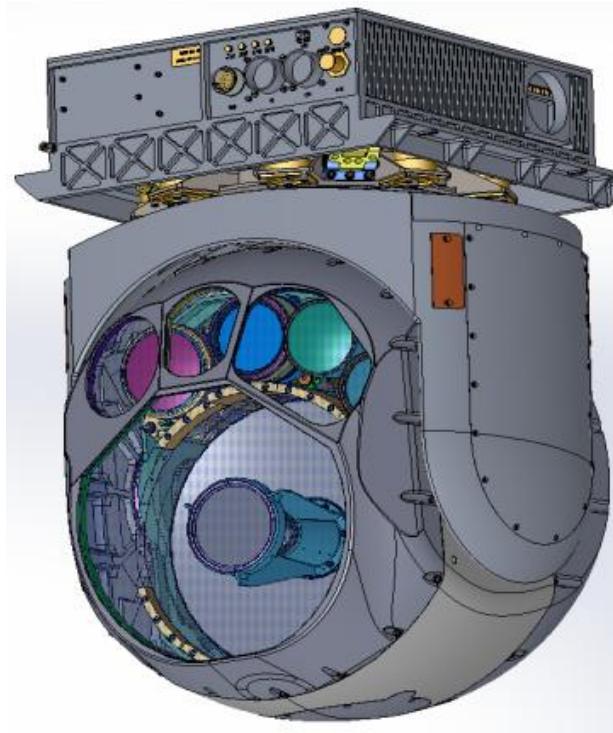
Model	GIA30
Sensor #1 - LWIR Imager	
Type	7.7-9.5μm staring array
Resolution	640×512@15μm@F#2
Diagonal FOV	44.5°, 3.52°, 1.17° (selectable 2×Ezoom (1080p))
Sensor #2 – MWIR Imager	
Type	3-5μm staring array
Resolution	640×512@15μm@F#3
Diagonal FOV	20.4°, 7°, 2.35°, 0.78° selectable 2×Ezoom (1080p)
Sensor #3a - Daylight Continuous Zoom	
Type	1080P Color HD
FOV	15.2 °to 0.76°
Sensor #3b - Haze penetration Zoom: (Requires Sensor #3a)	
Type	Electron Multiplied CMOS (Mono) 1080P
FOV	15.2° to 0.76°
Sensor #4 – HD Visible/NIR	
Type	2K×2K CMOS(Color/Mono
FOV	0.5°×0.5°
Sensor #5 - SWIR Spotter	
Type	640×512 InGaAs@15μm
FOV	3.52 °,1.17 °,0.29 °
Sensor #6 - Laser Spot Tracker	
Type	Quadrant Detector
Wavelength	1064nm
Code Compatibility	≥16
Range	≥12Km (under visibility ≥15Km)
Sensor #7a – Laser Rangefinder (LRF)	
Laser Type	DPL Nd: YAG

Wavelength	1064nm@80mJ@10ns
Pulse Rate	1/5/20 pulses/s
Range	≥ 80km
Range Accuracy	±2m
Sensor #7 b – Laser Rangefinder (LRF)2	
Laser Type	Er glass
Wavelength	1535nm @2mJ@10ns
Pulse Rate	1 & 5 pulses/s
Range	≥ 30km
Range Accuracy	±2m
Sensor #8 – Laser Designator	
Laser Type	DPL Nd: YAG
Wavelength	1064nm@80mJ@10ns
Pulse Rate	10 & 20 pulses/s
Range	≥ 15km
Turret Specifications	
Line-of-sight Stabilization	≤4 μradians (Consult factory for performance under specific vibration conditions)
AZ/EL Slew Rate	45 °/ s
LOS Pan Range	Continuous 360°
LOS Tilt Range	+30° to -120°
Wight	≤ 125kg (all the system)
Turret Size	≤580mm(D) x 980mm(H)
Electronic Cabin Size	≤480mm (L) ×480mm×220mm(H)
Operator Interfaces	Moving Map Interface Serial Remote Control Moving Map system GEO-Pointing
Power	900W (Max)
Angular speed of step-staring scan	≥18°/s
Memory capacity	10Tb
Image fusion wavelength	LWIR/MWIR/SWIR/NIR/Visible

6. Ruggedness

- MIL spec environmental, EMC, and power quality qualification
- Built-in vibration isolator protects internal payload components and common aperture designed to minimizes vibration-induced boresight shifts
- Rigorous environmental stress screening (ESS)
- Designed to minimize maintenance requirements and simplify repair

Channel	Wavelength (μm)	FOV(°)		FPA	Resolution (μrad)
Common aperture	LWIR 7.7-9.5	Narrow	0.73×0.9 2	640×512	25
	MWIR 3-5		0.49×0.6 1	640×512	16.7
	SWIR 0.9-1.7		0.18×0.2 3	640×512	6.25
	Visible/NIR 0.48-0.9		0.5×0.5	2K×2K	4.17
	LRF 1.064 /1.54	-	-	-	-
Double FOV SWIR	0.9-1.7	Middle	0.73×0.9 2	640×512	25
		wide	2.2×2.75		75
SOPTER	1.064	4		Quadrant Detector	-
Continuous Zoom TV	Daylight TV	27.1×15.2 ~ 1.36×0.76		1080P	25.4~12.7
	Haze penetration				
Three FOV MWIR	MWIR 3-5	Middle	1.47×1.8 3	640×512	37.5
		Wide	4.4×5.48		112.5
		Navigation	13.1×16.2		833
Double FOV LWIR	LWIR 7.7-9.5	Middle	2.2×2.75	640×512	75
	LWIR 8-14	Navigation	31.6×37.5	640×512	1200



Picture 2 Product 3D