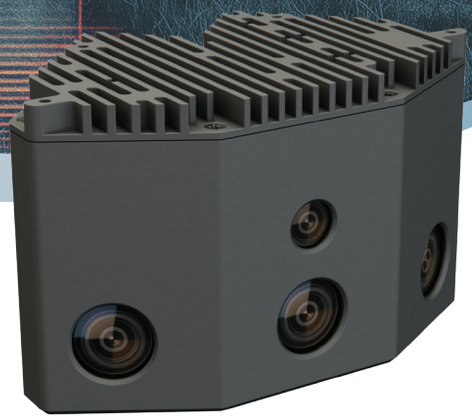


Peridot Night

Panoramic Day & Thermal Imaging with AI-Enhanced Situational Awareness



Peridot Night is a night-vision solution that delivers unmatched situational awareness across defense and homeland security domains.

Built on Maris' Jupiter-AI edge computing platform, the ruggedized system generates a panoramic view from three thermal cameras as well as a full-HD view. Integrated AI enables real-time object detection and classification. Peridot Night also supports transmission to the host observation system.

Compact and modular, Peridot Night offers a 90° FOV (field of view) module, ideal for vehicle applications. Adding a second module provides 180° view for border protection, and combining four modules delivers 360° FOV for achieving full terrain dominance. Its versatility allows seamless deployment on ground and maritime platforms, as well as fixed installations.

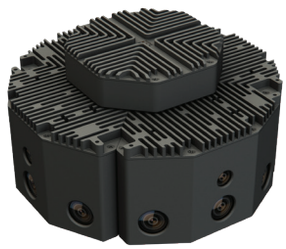
Markets and Applications

Military
Armored vehicle driver assistance, situational awareness, terrain dominance, UGV payloads

Homeland Security
Border surveillance, fixed-site monitoring

Key Benefits

- Panoramic situational awareness
- Clear vision day and night
- Real-time threat alerts
- Adapts to any platform
- Reliable in harsh conditions
- Enables fusion integration between the day and thermal panoramic views

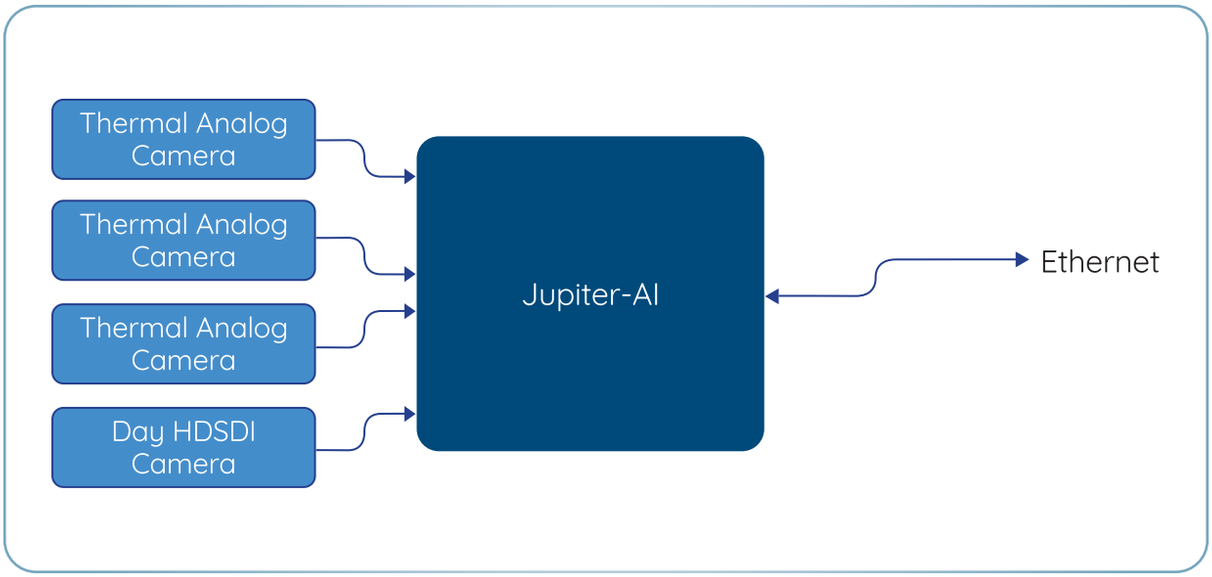


Optional four modules for a 360° system

Key Features

- Three thermal cameras (32° FOV each) with partial overlap for seamless 90° thermal coverage
- One FHD day camera with 90° FOV, mounted above thermal array
- Integrated Jupiter-AI video board with YOLO software for object detection and classification
- Modular design: combine up to four units for 360° coverage
- Compact and ruggedized; optimized for land, sea, air, and fixed-site deployments

Block Diagram



Technical Specifications

Thermal Cameras	3 × analog, uncooled detectors, 640×512 resolution, 32° FOV each
Day Camera	HDSDI, 1080p60 resolution, 90° FOV
Effective Coverage	90° per module (thermal + day fusion)
Extended Coverage	Up to 360° with four combined modules
AI Processor	Jupiter-AI board with YOLO detection software
Outputs	Combined video stream with real-time AI functionality
Enclosure	Ruggedized, compact, for land/sea platforms

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