

Multi-Modal Sensor Pod

With Wide-Area Motion Imagery, Hyperspectral Sensing, and Agile Inspection Sensors



MMSP-WAHSAI

Our platform-flexible Multi-Modal Sensor Pod (MMSP) houses three sensors in one compact pod, all with onboard processing and storage. By combining wide-area motion imagery, hyperspectral imaging, and a high resolution agile inspection sensor, operators can access multi-layered correlated information, in real-time, without requiring additional mission payloads or adversely impacting airborne endurance.



Payload Size, Weight, and Power

- **Pod Size:** 63 in (160 cm) L x 16 in (40 cm) W x 19 in (48 cm) H
- **Pod Weight:** < 100 lbs (45 kg)
- **Pod Power:** < 600 W
- **GCS Size:** 43 in (110 cm) L x 27 in (70 cm) W x 27 in (70 cm) H
- **GCS Weight:** < 250 lbs (115 kg)
- **GCS Power:** < 1 kW

Wide-Area Motion Imagery (WAMI) Performance

- **Collection sensor:** Large-format CCD camera with custom fore-optic
- **Pointing and stabilization:** Compact low-SWaP 2-axis gimbal
- **Image refresh rate:** 2.2 km² at 5,000 ft (1,500 m) AGL, 8.7 km² at 10,000 ft (3,000 m) AGL
- **Coverage refresh:** 2 Hz
- **GSD:** 0.2 m at 5,000 ft (1,500 m) AGL, 0.4 m at 10,000 ft (3,000 m) AGL
- **Camera type:** CCD/CMOS silicon sensor with custom electronics
- **Array type:** > 50 Mpx EO focal plane array

Wide-Area Hyper-Spectral Imagery (HSI) Performance

- **Collection sensor:** Solid-block single-slit spectrometer with VIS-SWIR CCD camera and custom fore-optic
- **Pointing and stabilization:** Dual-use (both HSI and AIS) agile fast-steering mirrors
- **Coverage rate:** >150 km²/hour at 10,000 ft (3,000 m) AGL
- **GSD:** 1.0 m at 5,000 ft (1,500 m) AGL, 2.0 m at 10,000 ft (3,000 m) AGL
- **Camera type:** CCD/CMOS InGaAs sensor (COTS)
- **Array type:** 640 x 480 VIS-SWIR focal plane array
- **Spectrograph:** f/2.4 Offner imaging spectrometer

Agile Inspection Sensor (AIS) Performance

- **Collection sensor:** Ultra-high-definition CCD camera with integrated fore-optic and splitter
- **Pointing and stabilization:** Dual-use (both HSI and AIS) agile fast-steering mirrors
- **Coverage rate:** > 150 km²/hour at 10,000 ft (3,000 m) AGL
- **GSD:** 5 cm at 5,000 ft (1,500 m), 10 cm at 10,000 ft (3,000 m) AGL
- **Camera type:** CCD/CMOS silicon sensor (COTS-UHD)
- **Array type:** 12 Mpx EO focal plane array

Defense

Law Enforcement

Border Security

About Logos Technologies

Founded in 1996, Logos Technologies LLC is a diversified science, engineering and technology company specializing in the fields of advanced sensors, wide-area motion imagery, advanced analytics and processing of large, multisource datasets. Logos serves government customers, including the Department of Defense, Intelligence Community and Department of Homeland Security, as well as a range of customers in commercial and international markets.

Learn more at:

www.logos-technologies.com



2701 Prosperity Avenue, Suite 400
Fairfax, Virginia 22031
+1.703.584.5725

Embedded Processor System Performance

- **Cross-sensor cueing:** Auto-cueing (tasking) of AIS via WAMI alerts and HSI detections
- **WAMI image streams:** Unique streaming video windows (Up to 10 depending on data-link bandwidth)
- **WAMI tracks, watchboxes, alerts:** Over full-scene
- **HSI detections and identifications:** Real-time anomaly/signature detections (compared to on-board library)
- **HSI derived images:** False-color chip-outs (for HSI detected items of interest)
- **AIS inspection images:** High-resolution images (for WAMI and HSI auto-cued items/locations of interest)
- **AIS multi-plexed image streams:** Multi-plexed motion videos for multiple user-defined locations
- **Transmission to mobile devices:** Provided over internal fully integrated datalink
- **Onboard data archival:** Configured for > 4 hrs, expandable to 8 hrs

MMSP-WAHSAI Sensor Attributes and Autonomous Tasking

