



OVERWATCH
IMAGING

TK-8 SMART SENSOR



Wide-area, multi-domain mapping and ISR

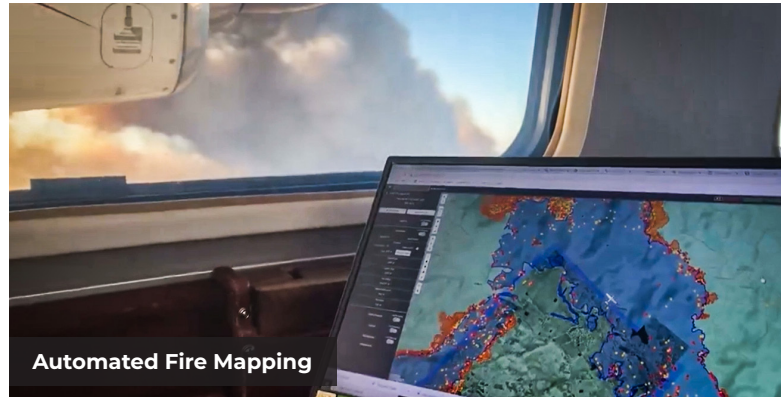
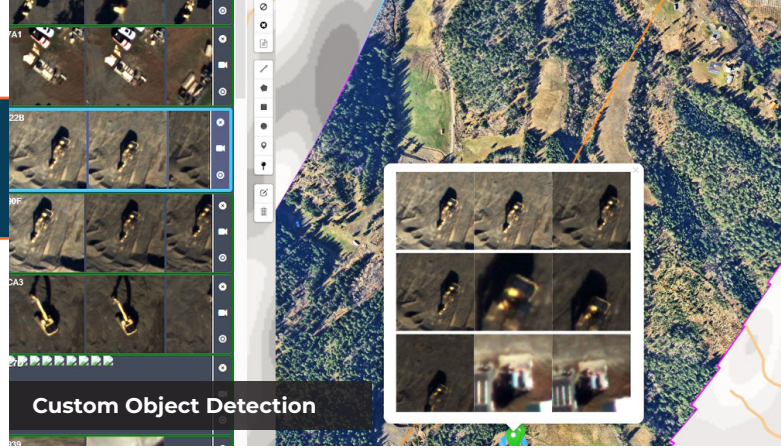
The **TK-8 SMART SENSOR** payload is optimized for mission versatility by delivering high-quality imagery over wide-areas, from varying altitudes, day or night. Best-in-class sensors across five spectral bands (RGB, NIR, SWIR, LWIR and MWIR) provide an unparalleled depth of scene detail and are operated by powerful onboard AI software that automates payload operation and important mission-specific mapping, detection, and analysis tasks.

Key Features

- Cover up to hundreds of thousands of acres an hour
- Image simultaneously in five spectral bands
- Day & night capabilities
- Horizon-to-horizon coverage
- Powerful suite of onboard AI

TK-8

- Nadir-oriented step-stare imaging across roll axis for optimal coverage and resolution
- Unrestricted roll motion allows widest-area imaging
- Onboard image rectification and stitching
- Low bandwidth requirements
- Powerful suite of mission-specific AI modules
- Cursor on Target network communication (CoT)



Applications and use cases: Automated fire mapping, tactical intelligence, border security, search and rescue, automated change detection, custom object detection, flood mapping, oil spill mapping, 3D modeling, terrain mapping, linear infrastructure inspection, border patrol, ISR, surveillance, vegetation analysis and MORE.

BASIC SPECIFICATIONS



Size
48.7 x 17.5 x
19.5 cm



Weight
25 lbs.



Power
28V DC 140w
avg draw



Geolocation
GPS + on-board
IMU



Connection
Ethernet
2.5 GBS



Mounting
External



Control
Browser-based
hosted on
payload



Data Storage
2TB internal SSD



Cameras
RGB, NIR, LWIR,
MWIR, SWIR



3rd party gimbal collaboration

Example Flight Profiles

| | | |
|-----------------|----------------------|---------------------|
| Flight Altitude | 5,000' AGL | 10,000' AGL |
| Aircraft speed | 100kts | 200kts |
| GSD RGB | 3.3" / 8.4 cm | 6.5" / 16.5 cm |
| GSD NIR | 4.1" / 10.4 cm | 8.2" / 20.8 cm |
| GSD SWIR | 11.9" / 30.2 cm | 23.9" / 60.7 cm |
| GSD MWIR | 11.9" / 30.2 cm | 23.9" / 60.7 cm |
| GSD: LWIR | 11.9" / 30.2 cm | 23.9" / 60.7 cm |
| Swath Width | 1.85 miles / 2.97 km | 3.7 miles / 5.95 km |
| Coverage | 87,100 acres/ hr | 348,400 acres/ hr |



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Automated Imaging Solutions
for Time-Critical Missions
in Challenging Environments