TrakkaCam®
TC-300M-SWIR

A NEW-GENERATION OF COMPACT HIGH PERFORMANCE MULTI SENSOR SURVEILLANCE SYSTEMS

Ideally suited for naval and coastguard maritime missions including coastal and riverine patrol, search and rescue, illegal immigration protection, drug interdiction, economic exclusion zone (EEZ) protection, anti-piracy, maritime patrol, naval ISR and naval vessel force protection, manned and unmanned platforms and installations.

TRAKKA SYSTEMS TC SERIES

The new TC series from Trakka Systems features advanced technology in an ergonomic industrial design, that sets new standards for compact high-performance multispectral imaging, in a non-ITAR single-LRU configuration.

The EO/IR sensors are augmented with sophisticated image processing, allowing users to see through conditions such as fog, haze, low light, and total darkness. Image blending allows operators to exploit imagery from the different sensors and extract details that would otherwise go undetected by a single sensor. A host of image processing features to improve operator performance and reduce workload, such as Moving Target Detection (MTI), are embedded right into the system.

TC-300M-SWIR's shortwave IR camera is uniquely suited for high humidity, fog, and maritime fire fighting, allowing the user to see through the smoke of a burning vessel or structure.

The TC-300M-SWIR enables operators and command centers to share mission-critical information in real-time while providing enhanced situational awareness via augmented reality overlays or pure synthetic views.

KEY BENEFITS

- Performance better than 10" competitors, and approaching that of bigger systems
- Advanced sensors, superior in size class:
  - Available with a full suite of 6 payload options: (IR, SWIR, HDTV, LRF, A/T, IMU/GPS)
  - Continuous optical zoom on all imaging channels for maximum situational awareness
  - Choice of MCT or InSb thermal imagers
  - Open upgradeable architecture for incorporation of new technology sensors
- The advanced real-time digital HD image processing engine is embedded into the gimbal and requires no additional electronics unit
- Moving Target Indicator (MTI) is embedded directly into the system
- High performance 4-axis active gyro stabilization with integrated 6-axis passive isolation for superior image stabilization
- Fully Integrated IMU/INS with dual GPS capability for static navigation operations
- Innovative and ergonomic system design provides flexible platform and installation options
- Compact Single-LRU configuration is easy to install, integrate and requires no junction box
- Non-ITAR exportable product
- MIL-STD & IP66 Tested for Environmental, Electromagnetic and Mechanical compliance, and capable of withstanding the harshest environments

TC-300M-SWIR

The TC-300M-SWIR includes an advanced high-speed digital video engine embedded directly within the single-LRU gimbal, providing several standard and optional functions to enhance image quality under adverse conditions, improve operator performance, and reduce workload. Unlike competing imagers, the TC-300M-SWIR integrates advanced features like dual-stream H.264 video with KLV metadata over ethernet right into the system, removing the need for external encoders and enabling simplified integration with Moving Map and datalink systems.

GIMBAL SPECIFICATIONS

Weight	~20 kg (44 lb)
Diameter	300mm (11.8”)
Azimuth	Continuous Azimuth
Elevation	+120° to -20° Elevation
Stabilization	4 axis, active gyro-stabilization with integrated 6 axis passive isolation

THERMAL IMAGER

Type	3-5µm MWIR array
Resolution	640x512
Fields of View	27° to 1.3° (HD Option 40° to 2.4°), Continuous Zoom

HDTV CAMERA

Type	HD CMOS Global Shutter
Resolution	3.2 MPixels
Fields of View	35° to 1.3° (720p)
LLTV Mode	Yes

SWIR

Type	InGaAs Photodiode Array
Resolution	640x512
Fields of View	47° to 7.0° (720p), continuous zoom

LASER RANGE FINDER

Wavelength	1535 nm, Eye-safe
Range	50m to 12km
Repetition Rate	1 Hz or Single-Shot Modes

ELECTRICAL REQUIREMENTS

Max power	320W Maximum Power
Steady State Power	100W Steady State
Input Voltage	22-36V Wide-Range Input Voltage

OPTIONS

Interface Types	SMPTE HD video outputs and H.264 over Ethernet (MISB 0601.7 Compliant), RS422, RS232
Functional Interfaces & Features	Auto Tracking, Geo-Location with integrated IMU/INS, Metadata, Moving Maps & Augmented Reality, Remote Control, Searchlight Slaving, Radar Slaving, AIS and other NMEA 0183 Interfaces, Data Links & Video Downlinks

ENVIRONMENTAL

Standards	MIL-STD 461, MIL-STD 810, RTCA DO-160, IP66

Note: All FOVs are 720p

FEATURES

- Moving Target Indicator (option)
- Object Tracking / Scene Tracking Modes (option)
- Digital Contrast Enhancement
- Local Area Contrast Processing
- Edge Sharpening
- Image Noise Reduction
- Picture in Picture / Split screen
- 4x Electronic Continuous Zoom
- Graphical On-Screen Display for Intuitive Operation

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