TRAKKA SYSTEMS

CRITICAL VISION TECHNOLOGY

TC-300

NEW-GENERATION COMPACT HIGH PERFORMANCE MULTI SENSOR SURVEILLANCE SYSTEM

For air, maritime and land missions including law enforcement, search and rescue, civil protection, military ISR and force protection, on a variety of manned and unmanned platforms or installations

KEY BENEFITS

- Performance better than 10" competitors, and approaching that of bigger systems, but at lower price / lower mass
- Advanced sensors, superior in size class:
  - Full suite of 6 sensor channels to provide multi-spectral coverage (TI, HDTV, low light HDTV, LRF, LP, LI)
  - Continuous optical zoom on all imaging channels for maximum situational awareness
  - Best-in-class narrow FOVs, no need for separate spotter scopes
  - Choice of MCT or InSb thermal imagers
  - Open upgradeable architecture for incorporation of new technology sensors
- Advanced real-time digital HD image processing engine embedded in gimbal – no additional electronics unit required:
  - Moving Target Detection
  - Target Tracking
  - Image Blending
  - Digital Contrast Enhancement
  - Local Area Contrast Processing
  - Edge Sharpening
  - Image Noise Reduction
  - Picture in Picture / Split Screen
- High performance 4-axis active gyro stabilisation with integrated 6-axis passive isolation

- Fully integrated IMU/INS providing Geo Location and Geo Hold, with easy Moving Maps integration
- Innovative advanced system aesthetic and ergonomic design
- Compact Single-LRU configuration
- Non-ITAR exportable product
- RTCA DO-160 Tested for Environmental, Electromagnetic and Mechanical compliance

TRAKKA SYSTEMS TC SERIES

The new TC series from Trakka Systems features advanced technology and ergonomic industrial design to set new standards for compact high performance systems in non-ITAR single-LRU configuration.

The EO/IR sensors are augmented with sophisticated image processing allowing users to see through conditions of fog, haze, low light and darkness. Image blending is used to exploit images from the different sensors to extract features that would otherwise go undetected by a single sensor.

All systems can be interfaced with moving map systems and secure data links. These attributes enable operators and command centres to share mission critical information in real time whilst providing enhanced situational awareness via augmented reality overlays or pure synthetic views.

Features

The TC-300 includes an advanced high-speed digital video engine embedded directly within the single-LRU gimbal which provides a number of standard and optional functions to improve image quality under adverse conditions and to significantly improve operator performance and reduce workload:

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

GIMBAL SPECIFICATIONS	
Weight	<19 kg (42.5 lb)
Diameter	300mm (11.8")
Azimuth	Continuous Azimuth
Elevation	+90° to -120° Elevation
Stabilization	4 axis, active gyro-stabilization
Thermal Imager	
Type	3-5µm MWIR array
Resolution	640x512 (720p)
Fields of View	30° to 1.28°, continuous zoom
Sensor Type	MCT or InSb
Colour HDTV	
Type	HD CMOS Global Shutter
Resolution	3.2 MPixels (1080p)
Fields of View	36.6° to 0.94° continuous zoom
Low Light HDTV Channel	
Type	HD CMOS Global Shutter to 1000nm NIR cut-off
Resolution	3.2 MPixels (1080p)
Fields of View	36.6° to 0.94° continuous zoom
Laser Range Finder (Standard)	
Wavelength	1535 nm, Eye-safe
Range	30m to 12km
Repetition Rate	1 Hz or Single-Shot Modes
Laser Range Finder (Optional)	
Wavelength	1535 nm, Eye-safe
Range	30m to 20km
Repetition Rate	1 Hz or Single-Shot Modes
Laser Pointer	
Type	Class 3B
Wavelength	852nm
Output Power	100 mW
Laser Illuminator	
Type	Class 3B
Wavelength	860nm
Output Power	450 mW

ELECTRICAL REQUIREMENTS	
Max power	250W 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, Interface to Aircraft INS/GPS, Metadata, Moving Maps & Augmented Reality, Remote Control, Search-light Slaving, MTI, Image Blending, Radar Slaving, Data Links & Video Downlinks

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