



MANTIS-1

MULTI-SENSOR PORTABLE SURVEILLANCE SYSTEM

SYSTEM DESCRIPTION

MANTIS-1 is a lightweight multi-sensor, remotely-controlled covert surveillance system designed for Special Operations and Force Protection.



WEIGHT: ~ 3 kg.

FIELD OF VIEW: 120°

RANGE: 140 m

APPLICATIONS

The FIREFLY family is the optimal cost effective solution for:



Army
Surveillance
Units



Intelligence
Units



Maneuvering
Troops



Perimeter
Security

MANTIS MAIN TECHNICAL FEATURES

- Autonomous Unattended Covert Surveillance
- Thermal and Day Cameras, 90 FOV, 1KM Human Detection
- Seismic Sensors
- Tough Book + Control Unit
- Onboard Wi-Fi, Cellular, Wired, and Satellite (optional) Communication Active Wi-Fi Antennas
- Onboard VMD, GPS and Compass
- Easy Integration to Remote-Control Unit
- Energy Efficient
- High Endurance - Operates in any weather condition
- Easily Camouflaged - In All Weather Conditions
- Designed To Blend Into The Landscape

SYSTEM PERFORMANCE

Thermal Camera	LENS 75MM	LENS 60MM
Thermal Camera Detection Range	2.3Km	1.8Km
FOV	8.3 x 6.2	10.2°x 7.8°
Focus	Motorized	Athermal
Resolution Pixel size	640x480 , Pitch: 17µm	640x480, Pitch: 17µm
Zoom – Night camera	Digital: x2, x4	
NEDT Camera engine	35mK (F1)	
Day Camera		
Effective pixel count	752x582	
FOV (Field Of View)	Optical: 1.7 20.4 ÷ Digital: x8	
Lens	10mm to 122.4mm	
Pan & Tilt		
Pan full range	90 45	
Tilt full range	25	
Pan/Tilt velocity	0.1 to 2 [FOV/sec]	
Software Features		
Built-In-Test (BIT)	Startup / Scheduled / User request	
Video recording on ROSS	100h of video (64GB)	
Mechanical		
Size	Ø166 x 267mm Connector bulge at the back of the ROSS	
Weight	+82x25x31mm (WxRxH) bulge	
ROSS Environmental Conditions		
Operation Temp.	-30 to 55°C	
Storage Temp.	-40 to 65°C	
MTBF	8,760 h	
Communications Channels		
IP Communication Protocols	TCP/IP, ICMP, UDP, TFTP, FTP	
Wireless External Antennas Range	Up to 20km LOS	
Cellular (GSM/3G/LTE) Protocols	GPRS/EDGE/UMTS/HSDPA	
Ethernet (LAN)	IEEE 802.3 (10BaseT) IEEE 802.3u (100BaseT)	
GPS	20m accuracy	
Interfaces (wired)		
External Input Voltage	9-20V with 0.2V ripple (Imax=2A)	
Battery Voltage	9÷12.6V	Built-In Li-Ion battery
Dry contact	2 pin, 1A / 25V	Normally Open
Microphone Voltage out	3.3V	(Normally Closed upon request)
Electric Power		
External source	9 - 20V with 0.2V ripple (Imax=2A)	Voltage Cutoff @ 8.50.5 V