

MANTA

Radar Electro-Optical Tracking System

Mastering Control, Securing Seas

MANTA represents a basic groundbreaking radar and electro-optical fire control system, intricately engineered to provide precise command over naval assets in their operations against surface and coastal targets. Through a meticulously designed fusion of FMCW radar and EO technologies, this system serves to elevate naval capabilities, delivering peak performance in the critical tasks of tracking and neutralizing a wide array of threats encountered at sea and along shorelines.

Key Features

-  Multi-Sensor Integration for a comprehensive target tracking and identification.
-  Range Measurement using radar signal.
-  Surveillance Mode with adjustable scan sector for the camera.
-  Day and Night Target Identification by high performance Day and Thermal Camera.
-  Low Probability of Intercept (LPI) through low transmitter power

Technical Specifications

Parameter	Specification	Parameter	Specification
Radar		Thermal Camera	
Radar Type	Frequency Modulation Continuous Wave (FMCW) Low Probability on Intercept (LPI) Radar	Focal Length	300 mm, 9.3x Continuous Optical Zoom
Frequency Band	X-Band (9400 MHz $\pm$ 40 MHz)	FOV	1.8° x 1.4° ~ 15.5° x 14.8°
Detection Work Sector	1° to 360° in azimuth	Pixel	640 x 512
Detection Distance (max.)	30 km (16 NM)	Spectrum Range	Mid-wave Infrared (MWIR): 3.7 ~ 4.8 μ m
Peak Power Transmit	10 Watts	Monitoring Distance (km)	17.0 km [Object (2.5 km x 2.5 km)]
Rotator		Tilt Motor	
Angle	360° Azimuth	Angle	-45° to +45°
Speed	0.01° ~ 72°/s Azimuth	FOV	0.01° ~ 60°/s Elevation
Period Rotation	5 seconds per rotation	Dimension and Weight	
Weight	5kg	Dimension	1356 mm (H) 2548 mm (W) 500 mm (D)
Camera		Weight	150 kg
HD EO Camera			
Focal Length	300mm, 50x Continuous Optical Zoom, 200x Digital Zoom		
FOV	1.3° ~ 61.9°		
Resolution	1920 x 1080		
Monitoring Distance (km)	4.0 km [Object (2.5 km x 2.5 km)]		

