

Electro-Optical Observation and Tracking System

MIRADOR is a compact, fast and highly accurate Electro-Optical observation and tracking system. MIRADOR provides accurate target tracking data for precise fire control of weapon systems against high maneuvering air and surface targets. It comprises three TV cameras, one IR camera, an eye-safe Laser Range Finder and an electro-optical VideoTracking Unit (VTU). In addition MIRADOR provides visual information to the Combat Management System (CMS).

- Passive day and night observation system
- Support ship defence by EO tracking under radar silence
- Accurate high speed air target and surface target tracking
- Full multi-spectral sensor suite
 - IR camera
 - Black and White TV tracking camera
 - Colour Zoom TV camera
 - Class 1M Laser Range Finder

MIRADOR

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Main features

- High precision fire control for small to medium caliber guns and short range missile systems.
- Ship's defence against conventional and asymmetric threats. Fire Control support against missiles, fighter aircraft, helicopters and surface targets.
- Automatic sector search with automatic tracking.
- Support for Maritime Safety and Security such as law enforcement, anti-smuggling, illegal immigration, Search and Rescue.
- Sensor LRU based maintenance. High system reliability.
- Provision of videos of its sensors to enable visual observation, classification and identification of targets by the operator. The videos can also be used for engagement monitoring.
- No emission of RF energy. The system can be used during radar silence.
- Jamming by Electronic Counter Measure (ECM) systems is impossible by the use of electro-optical sensors.
- Optical surveillance mode for improved situational awareness and early threat detection.
- Easy maintenance through Built-In Tests and repair by replacement.
- Qualified and proven system in full series production.

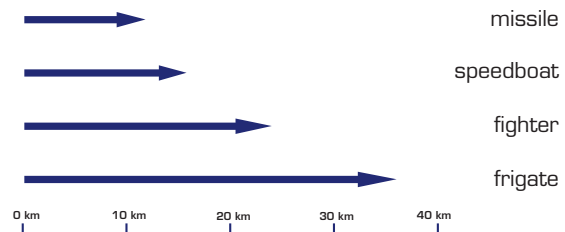
Functional aspects

- Optical Surveillance of air and surface targets
- Sector search
- Target acquisition
- Target Tracking

Automatic, semi-automatic and manual modes are available for sector search, target acquisition and target tracking.

Technical characteristics

Performance



Director Platform:

- Rigid carbon fiber shell structure
- Direct-drive servo system
- Three sensor LRU slots for easy replacement
- Cable winder for high reliability
- Bearing coverage: 360°
- Elevation coverage: -30° to +120°
- Slewing:

	speed	acceleration
- Training	5 rad/s	5.5 rad/s ²
- Elevation	4 rad/s	15 rad/s ²

Tracking cameras

- IR camera: (night and day)
 - Fields of view: 2° x 1.5° and 7.2° x 5.4°
 - Detector elements: 384 x 288 CMT
 - 8-12 μm camera is optional
- Black and White TV camera: (day)
 - Spectral bandwidth: Visible light
 - Field of view: 2° x 1.5°
 - Dynamic range: 1 - 200,000 lux

Observation cameras

- Colour Zoom TV camera:
 - Field of view: 1.6° x 1.2° (x 26 zoom)
 - Dynamic range: 2 - 200,000 lux
- Laser Range finder:
 - Diode pumped Nd:YAG/OPO class 1M eye safe
 - Repetition rate: 6 Hz average
 - Instrumented range: 100 m – 40 km
 - Range accuracy: 2.5 m



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