



EOIR GUN FIRE CONTROL SYSTEM

MEDUSA MK4/B is a lightweight Electro-Optical and Infra Red Gun Fire Control System (EOIR GFCS). Medusa can be used as stand alone GFCS for remote control of small/medium calibre guns, as well as an additional line of sight and, in general, for maritime operations where a passive capability is required.

Medusa Mk4/B belongs to the last generation of Gun Fire Control Systems and is based upon state-of-the-art processing unit and last generation EO/IR sensors. The GFCS is designed for maritime operations during day and night, and to minimize outdoor and indoor space and weight. Medusa is ease of operation and can be controlled by an operator at the Control Desk (provided with HD display, keyboard and joystick), which can be located in a sheltered area.

MEDUSA MK4/B can be fitted with up to four sensors including B/W or Colour TV, Laser, IR. Full situational awareness is provided through the man machine interface, which displays the TV/IR images and presents the target data (including bearing and range) in addition to the navigation data.

The man machine interface can be integrated within any combat management system. The system also provides a panoramic view to improve situational awareness at sea. Open to get target designations from external sources as Target Designation Sights, radars and combat management system. The high reliability of the system promotes low maintenance costs.

ARCHITECTURE

The system is composed of the following units:

- An unmanned self-stabilized pedestal integrating the optronic sensor suite (TV, Laser and IR sensors) for automatic target tracking
- A Power Distribution and Computer Unit including a state-of-the-art tracking and ballistic computer
- A Control Desk (for the basic configuration) provided with monitor, keyboard and joystick or an operator console.

MEDUSA MK4/B

MAIN OPERATIONAL FUNCTIONS

MEDUSA MK4/B performs the main following tasks:

- EO/IR surveillance and search
- Target detection, recognition and identification
- Target tracking by means of the Automatic Video Tracker
- Gun fire control
- Panoramic search
- Video recording/play-back.

Status

The MEDUSA MK4/B System is a fully developed item. It belongs to the MEDUSA EO System family, that is operational on board many international navies. MK4/B is designed following international regulations and using COTS components. The system can be installed on board small fast boats (both patrol and attack ones).



TECHNICAL CHARACTERISTICS

SELF-STABILIZED SENSOR HEAD

Training limit	Unlimited (slip ring)
Training max speed	2 rad/s
Acceleration	6 rad/sec ²
Elevation limits	Unlimited (slip ring)
Elevation max speed	2 rad/s
Acceleration	6 rad/sec ²
Elevation useful arc	- 30° to + 210°

TV CAMERA

Target	CCD
Sensitivity	10 to 200,000 lux
Lens	Continuous zoom

IR CAMERA

Detector	FPA
Spectral band	3-5µm
Two optical FoVs	Wide
	Narrow
Cooling	Closed cycle cooling system

LASER RANGE FINDER

Type	Eyesafe
Range accuracy	1m (RMS error)
Instrumental range	300 to 20,000m
High frequency data rate	

INSTALLATION DATA

DIRECTOR (SENSORS INCLUDED)

Dimension (h)	650mm (above deck)
	330mm (below deck)
Diameter	550mm
Weight	95kg

CONTROL KEYBOARD

Dimension (h w d)	117x635x264mm
Weight	6.5kg

DISPLAY

Dimension (h w d)	520x380x180mm
Weight	15kg

POWER DISTRIBUTION AND COMPUTER UNIT

Dimension (h w d)	575x473x600mm
Weight	40kg