

SeaEAGLE FCRO

All-Weather Fire-Control Radar and Optics System



SeaEAGLE FCRO is an all-weather fire-control system enhancing the performance of traditional electro-optical systems by providing a Doppler tracking radar in combination with a full electro-optical sensor suite. All in a compact and low-weight design.

The all-weather capability provides improved long-range target tracking commensurate with any naval gun in all kinds of weather (fog, high humidity, sand, rain).

The SeaEAGLE FCRO provides accurate multiple-target tracking by radar, EO sensors or combined as well as built-in ballistic predictors with muzzle velocity input for precise fire control of any in-service naval gun, against both air and surface targets.

The SeaEAGLE FCRO is a highly reliable system based on modular solid state transmitter technology, allowing for graceful degradation.

APPLICATIONS

- Policing and law enforcement missions
- Peacekeeping missions
- Littoral/asymmetric missions
- War/combat missions (AAW, ASuW, NGS)

BENEFITS

- All-weather fire-control of weapon systems
- Fast target acquisition and precision gun fire
- Increased survivability against SSM attacks
- Advanced ECCM capability
- 360° panoramic EO surveillance
- Horizon surveillance by radar
- Muzzle velocity input for precise gun firing
- 3D target tracking for CIWS/SAM

INCREASED SURVIVABILITY

The Doppler radar is based upon Weibel's patented technology using continuous wave (CW) in combination with multi-frequency CW (MF-CW) and frequency-modulated CW (FM-CW).

The radar always uses two waveforms simultaneously, with automatic switching between MF-CW and FM-CW waveforms according to the tactical situation. The result is superior clutter suppression and accurate velocity, range and angle measurements, leading to increased survivability, e.g. against stealthy low flying threats such as sea skimming missiles.

ADVANCED ECCM CAPABILITIES

Low probability of intercept (LPI) and ECCM capabilities are achieved through:

- Low power output
- Frequency agility
- Least jammed – auto selection
- Track-on jam

SILENT OPERATIONS

EMCON and sector control is available to control the microwave output of the tracking radar. During silent operations, the available laser range finder provides distance to the target.

PANORAMIC SURVEILLANCE & TRACKING

The SeaEAGLE FCRO is also an advanced radar and electro optical surveillance and identification system for 24h passive operation. The continuous rotation director provides true 360° radar and panoramic EO surveillance, tracking and visual target identification through use of color and infrared zoom cameras. The EO Surveillance is based on Chess' family of service-proven Sea Eagle naval EO systems.

OPERATIONAL CAPABILITIES

- Sector search (passive/active)
- Multiple target detection and tracking
- Missile launch detection
- Target gun fire detection
- Auto data selection (radar/EO/comb.)
- Pre-action calibration (PAC)
- Miss distance indication (MDI)
- Kill assessment support
- Simultaneous incoming and outgoing target tracking

RADAR	CW, MF-CW and FM-CW
	X-band (NATO J-band)
	Microstrip antenna
	Solid state
RANGE	Radar: 100 km (instrumented)
EO	Color zoom camera
	Infrared zoom camera
	Laser range finder (optional)
DIRECTOR	Fully stabilized platform
	Speed: 3 rad/s (elev. & azim.)
	Training: 360° (unlimited)
	Elevation: -30° to +85°
FC COMPUTER	Ballistic predictor (up to 3 guns)
	Correction for muzzle velocity radar input
INSTALLATION	W: 785, L: 1160, H: 638 mm
	Weight: < 150 kg
	Power: 230 VAC / 50 Hz / 2.2 kW



The SeaEAGLE FCRO can be operated from a separate operator console or be integrated for control and operation by any third party CMS/C2 or command system. The operation is highly automated and requires minimum training to use.

The SeaEAGLE FCRO is a joint product by Weibel Scientific and Chess Dynamics.