SeaEagle®
Maritime Systems

CHESS DYNAMICS

A COHORT PLC COMPANY

SERVICE-PROVEN EXCELLENCE

Chess Dynamics is a market leading supplier of surface ship stabilised electro optical systems. The company's naval system engineering team, which includes image processing and ballistics specialists, has many years of collective experience, making it the UK's centre of excellence for electro optical sensor and weapon control solutions.

Chess Dynamics' electro-optical systems are used by more than 10 navies around the world, and provide a variety of capabilities, including:

- Surveillance and target acquisition: Chess Dynamics' SeaEagle systems can detect and track targets at long ranges, even in low-light or adverse weather conditions.
- Fire control: SeaEagle systems can provide accurate fire control solutions for any in service gun.
- Situational Awareness: the systems provide greater awareness with automatic identification, classification, and automatic multiple target tracking

SEAEAGLE ELECTRO OPTICAL SYSTEMS

SeaEagle is a family of electro-optical systems that meets a broad range of maritime surveillance and gun fire control applications. System solutions are available for all classes of surface vessels; from fast interceptors and patrol boats, to major warships.

Applications include

- Surveillance and situational awareness
- Target detection and tracking
- Target identification and classification
- Fire control
- Navigation
- Search and Rescue

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SeaEagle systems are backed by a proven record of performance and reliability.

SeaEagle EOTS Electro-Optical Targeting System

The SeaEagle EOTS is an automated stabilised surveillance system that provides a high level of situational awareness. It uses a high-performance thermal imager and TV camera, to scan a programmable azimuth sector and automatically detect targets. The SeaEagle EOTS employs advanced image processing techniques to provide a high level of automated operation during surveillance and target tracking. It can produce both a panoramic image of the operating area and high magnification, still, and moving images of detected targets. The system can also be set to alarm on pre-defined target types and associated behaviour. This means that the SeaEagle EOTS can help you to reduce operator workload and training, while still providing you with the high level of performance.

SeaEagle EOSS-D Electro-Optical Surveillance System Digital

The SeaEagle EOSS-D is a modular system that can be customised to meet the specific needs of different users. Flexible and adaptable, it can be integrated with a wide range of sensors, making it ideal for a variety of mission profiles. The digital architecture of the SeaEagle EOSS-D ensures high levels of operational availability and reliability.

SeaEagle FCEO-A Fire Control Electro-Optical Analogue

The SeaEagle FCEO-A is our proven fire control system that provides precision fire control for any naval gun. It is in service with over 10 navies around the world. SeaEagle FCEO-A is a stabilised electro-optical fire control system that is optimised for the control of naval guns against air, surface, and shore targets. It can control any in-service naval gun and provides surveillance and 24-hour detection, acquisition, tracking, identification, and engagement of air and surface targets through its thermal and TV sensors. Target range is provided by a high repetition laser rangefinder.

SeaEagle FCEO-D Fire Control Electro-Optical Digital

The SeaEagle FCEO-D is our next-generation stabilised fire control system for naval ships. It is a fully digital, high resolution precision fire control tracking director. FCEO-D automatically tracks targets via the integrated digital video tracker to either direct the weapon or provide real-time accurate surveillance and fire control solutions to the Combat Management System (CMS). This allows the CMS to direct numerous weapons and effectors to engage surface, shore, and air targets successfully. The FCEO-D can be used for a variety of non-tactical tasks, such as security, search and rescue, infrared search and track (IRST), navigation, aircraft control, and mine avoidance.

SeaEagle FCRO Fire Control Radar-Optical System

The SeaEagle FCRO is a stabilised radar and electro-optical fire control system optimised for the control of naval guns against air, surface and shore targets. It is capable of controlling any ‘in-service’ naval gun directly or via a CMS. The system provides 24-hour, long range, detection, acquisition, tracking and engagement of air and surface targets using advanced Ku-Band fire control radar with target identification provided by thermal imager and daylight TV camera.

ADVANCED IMAGE PROCESSING

SeaEagle systems feature a video processing system that provides a high level of automation to the surveillance, acquisition and tracking functions.

Key Features

- Programmable horizon and sector scanning with automatic target detection
- Multiple target detection and acquisition
- Panoramic display of the scanned sector with detected targets labelled
- Automatic slewing to radar contact target indications
- Real time target tracking with automatic selection of tracking algorithm to suit target/background parameters
- Automatic cueing of multiple targets within field of view
- Automatic capture of target ‘snapshot’ images
- Graphical display of all system, target and ship data
- Digital video and data recording
- Artificial Intelligence & Auto Target Classification

FIRE CONTROL

SeaEagle systems can be configured for control of any in-service naval gun in various anti-air, anti-surface and naval gunfire support engagements.

A range of interface formats are available to match both new build and earlier design mountings.

Chess provides a full installation and trials service, including live firing trials and analysis.

- Range table based ballistic prediction including compensation for meteorological effects
- Surface (ASuW) engagements with semi-automated splash spotting
- Air (AAW) engagements in area and self-defence modes
- Naval Fire Support (NFS) engagements in direct and indirect modes with crest clearance
- Ability to conduct surface engagements using track-while-scan data from a surface search radar
- Ability to fire extended range ammunition
- Graphical display of all system, weapon, target, ship, and meteorological data
- The system can be integrated into and controlled from a Combat Mission System multi-function console, or supplied with its own dedicated console or workstation

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