

INTEGRATED MISSION AND COMBAT MANAGEMENT SYSTEMS



LIGHT FRIGATES
CORVETTES
OFFSHORE PATROL VESSELS
FAST ATTACK CRAFT
AUXILIARY SUPPORT VESSELS

As a leading naval systems capability provider, both to the Royal Navy and internationally, Ultra Electronics has developed **OSIRIS®**, an integrated mission solution for all types of minor warship or patrol vessel.

OSIRIS® is a modular and scalable system designed on open architecture principles, providing the flexibility to integrate selected subsystems into one rugged, reliable and user friendly system that meets specific operational requirements. This modularity also permits capability expansion over time as new requirements and equipments emerge.

OSIRIS® is equally suitable for new-build vessels or for older ships that require upgrading to meet present day demands for which they may not originally have been designed. The open architecture of **OSIRIS®** enables existing legacy subsystems to be integrated into the overall system solution thus minimising upgrade costs.

Ultra has extensive experience of supplying and supporting integrated system solutions for naval platforms. Our approach is to liaise closely with the customer to ensure complete understanding of the operational needs and the technology and equipment available to match these.

OSIRIS® provides a low risk cohesive electronics system solution that meets the specific demands generated by the differing and complex mission profiles required by today's navies and coastguards.

OSIRIS® - A TRULY INTEGRATED 'SYSTEM OF SYSTEMS'



SYSTEM FUNCTIONALITY

OSIRIS® is built around one or more Multi Function Consoles (MFC) linked via a CMS Network to sensors, weapons or effectors to provide the following functionality:

- Tactical picture compilation providing intuitive situational awareness via correlated sensor data, such as radar(s), EO, ESM, AIS, IFF
- Display of tactical picture in common digital chart format to support tactical operations and SAR planning
- High levels of automation, including patrol route planning, tactical areas/restricted zones with trip alarms and automatic target cueing, detection, acquisition and identification
- Tactical evaluation tools such as Situation, Threat Assessment, Resource Management (STARM) to aid decision making and target indication to weapon systems for precision anti-air and anti-surface engagements
- Direction and control of weapons and effectors including display of weapon arcs, bearing lines, safety traces and splash spotting
- Record and playback CMS Database (system tracks, routes etc)
- Tactical data aids, with smart areas and ability to create Search and Rescue plans
- Simulated tracks for training with multiple scenario set-ups to allow rapid transition between real and training environments.

BASELINE SOLUTION

The following baseline system solution meets the basic operational requirements of a coastguard patrol vessel:

• Electro Optical Tracking & Fire Control System

Ultra produces two EO tracking and fire control systems (see separate brochure):

- **SERIES 2500** – a full naval EOFCS capable of multiple target detection and tracking and control of all calibres of gun in AA, ASuW and NGS modes OR
- **SERIES 1500** – a lightweight EOFCS designed specifically for EEZ patrol applications and capable of controlling 25mm to 40mm guns in surface and self defence engagements

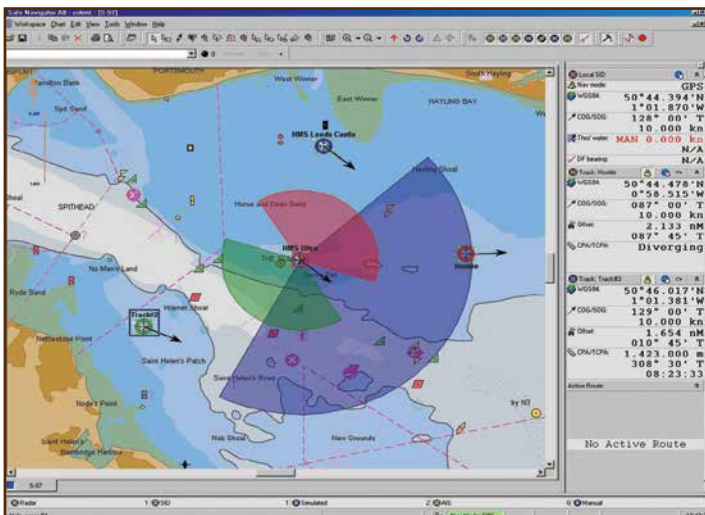
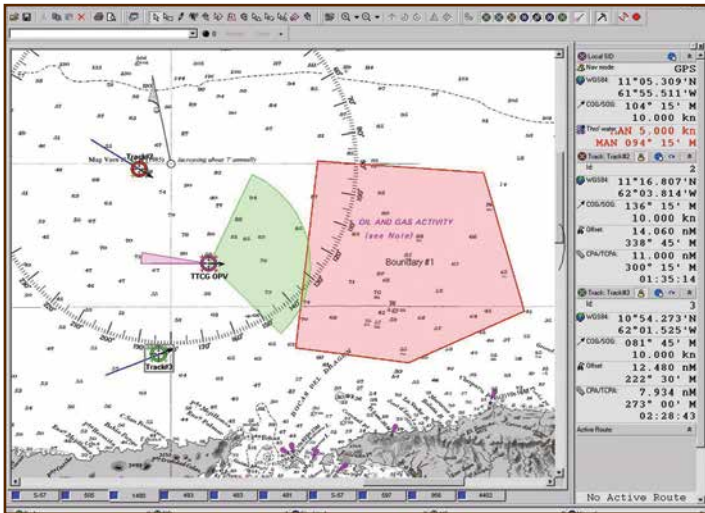
• X-Band Navigation / Surface Search Radar

This can either be supplied as part of the system or can be an existing navigation radar controlled from its own bridge console and integrated on the CMS Network with a display input to the OSIRIS® MFC

• Multi-Function Console

A single MFC with dual display, QWERTY keyboard, trackball and joystick provides:

- Tactical chart display with track overlay
- EOFCS/Gun control, gun tote & fire pedal.



SYSTEM EXPANSION OPTIONS

The following system expansion options will improve the surveillance capability and operational flexibility of the ship, providing a more comprehensive tactical picture that better informs command decision making and response.

These can be new subsystems supplied as part of an integrated OSIRIS® CMS with their HCI hosted on the MFCs or, for ship upgrade programmes, existing legacy equipment can be utilised and integrated with the CMS via a System Interface Unit (SIU).

• S-Band Surface Search Radar

Additional surface search capability is provided by a second navigation radar

• 2D/3D Air/Surface Surveillance Radar

Long range area surveillance is provided by an X-Band Air/Surface Radar

• IFF Transponder / Interrogator

- An IFF transponder enables the ship to transmit its identity to friendly forces
- An IFF interrogator will provide a secondary surveillance radar (SSR) capability

• Electronic Support Measures (ESM)

An ESM provides additional radar surveillance and precision DF as well as communications intelligence to improve situational awareness of longer range targets and threats to support self protection

• Target Designation System

The TDS provides target designation to other sensors and emergency gun control

• Additional EO Tracker

360° tracking and additional fire control capability can be provided by a second EO tracker

• Hull Mounted Sonar (HMS)

A HMS provides an underwater surveillance capability. This can be displayed as a single underwater picture and/or as an overlay with all other relevant tactical warfare domains

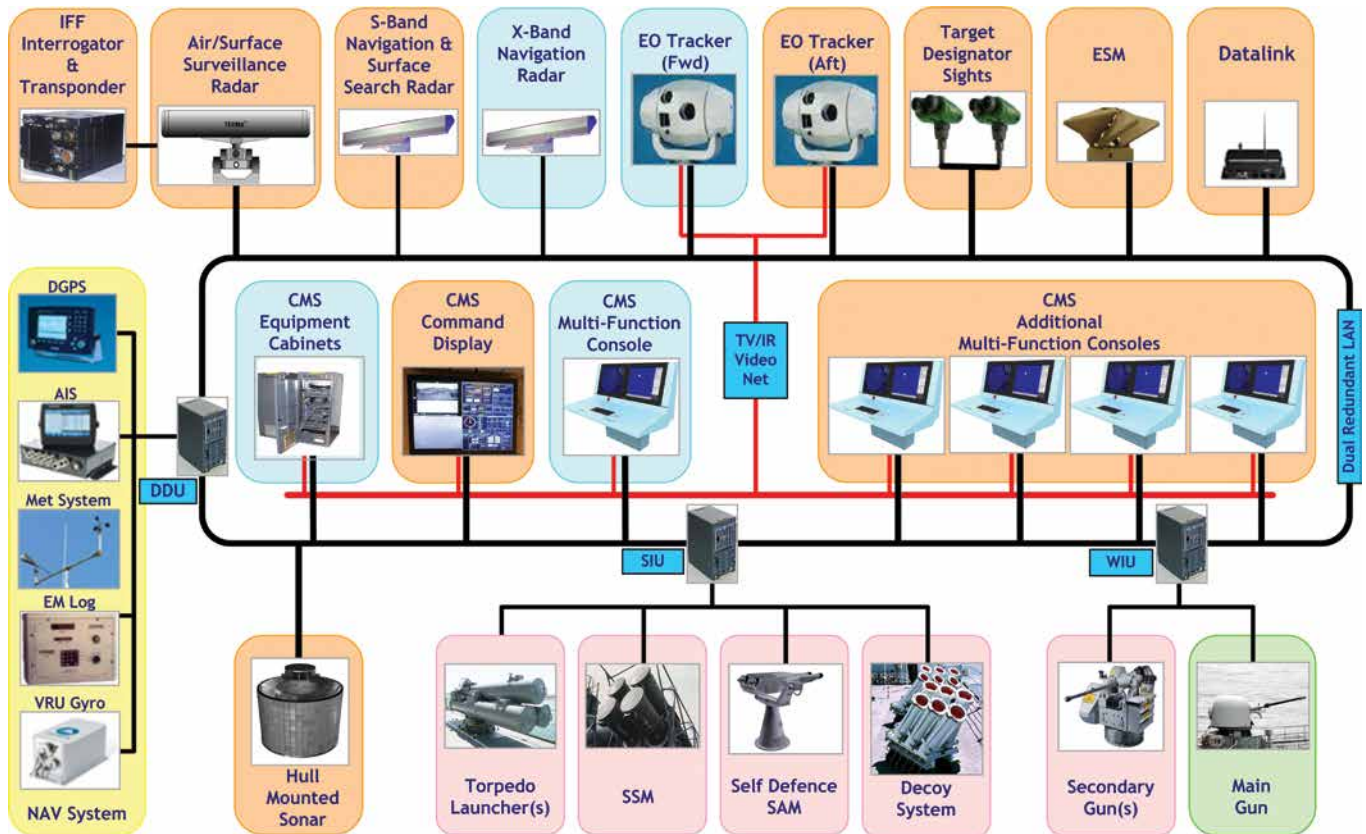
• Tactical Data Link

The Ultra Over-The Horizon (OTH) Track Relay System is a secure flexible and configurable data link that allows tactical data to be shared in a common operating picture, enabling safe and effective operation of multiple assets, such as RHIBs and seaboats

• Additional Consoles and Displays

- Additional MFCs, as required, depending on system architecture and operational needs
- A large bulkhead mounted screen can be supplied to display a single compiled surface/sub-surface/air command picture.

OSIRIS[®] MODULAR SOLUTIONS



OSIRIS[®] Combat Management System



making a difference

Ultra Electronics
 COMMAND & CONTROL SYSTEMS
 Knaves Beech Business Centre
 Loudwater, High Wycombe
 Buckinghamshire HP10 9UT
 England
 Tel: +44 (0) 1628 530000
 Fax: +44 (0) 1628 524557
 Email: sales@ultra-ccs.com
 www.ultra-ccs.com
 www.ultra-electronics.com

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