THALES

- The ULPV (Ultra Low Profile Variant) Optronic Mast represents the latest advancement in next generation submarine above-water electro-optic surveillance systems. Combining innovative design with the latest proven technology to provide operational advantage and exceptional performance under all conditions, the ULPV is suitable for all Submarine Platforms.
 - Advanced non hull-penetrating submarine visual system
 - Low visual profile reduces counter detection risk
 - High definition sensors extend range advantage
 - Advanced stealth features minimise signatures
 - Mission configurable payloads provide enhanced operational capability
 - Full combat system integration
 - Suitable for new build and retrofit programmes

OPTRONICS

OPTRONIC MAST

ULPV (Ultra Low Profile Variant)







OPTRONICS

OPTRONIC MAST

ULPV (Ultra Low Profile Variant)

A non hull-penetrating electronic imaging system, which incorporates a broad range of multispectrum sensors, support for basic GPS and Omni Warning RF sensors and advanced signal and image processing technology.

The ULPV Optronic Mast system can be controlled and operated either from a dedicated console or from a remote Multi-Function Console equipped with high-resolution displays. In either case the simple yet comprehensive Man/Machine Interface allows the command team to gain a complete above-water picture. The ULPV Optronic Mast can be fully integrated into the submarine's combat and data systems allowing provision of the complete tactical picture at the console and enabling the operator to easily provide updates.

The increased functionality and extended range provided by this system leads to radically improved operational performance, when compared with conventional periscope systems. Alternative sensor fits are available as options ensuring the closest match between the system and the operator's needs.

Features and Benefits

High Performance Sensors

- · 3-Axis stabilised
- (U)HDTV Colour Camera, Low Light TV & TI options
- Single Window for all Sensors

Image Processing

- Real time image processing
- Rapid/precise target analysis on live or recorded images

Platform Benefits

- Flexible Installation
- Reduced maintenance

Stealth Features

• Reduced acoustic, visual, radar and thermal signature in a low profile sensor head

System Elements Based on Proven Technology

- · Optimised reliability/availability
- High MTBF/Low MART

Programmable Modes of Operation

- All Round Look
- Continuous view
- Snapshot
- Enables reduced mast exposure

Advanced Man/Machine Interface (MMI)

- · Simple and intuitive
- Adaptable to specific user requirements or consoles
- In-built operator training
- Supports periscope operation

Summary of Sensor Head Features

HWCTV $3-5\mu m$ IR LLTV 3-axis **ESM** Single Ultra Low Visual Backwards Stabilisation Window Compatibility Signature **ULPV**

Standard Equipment

ESM includes GPS and Omni Warner