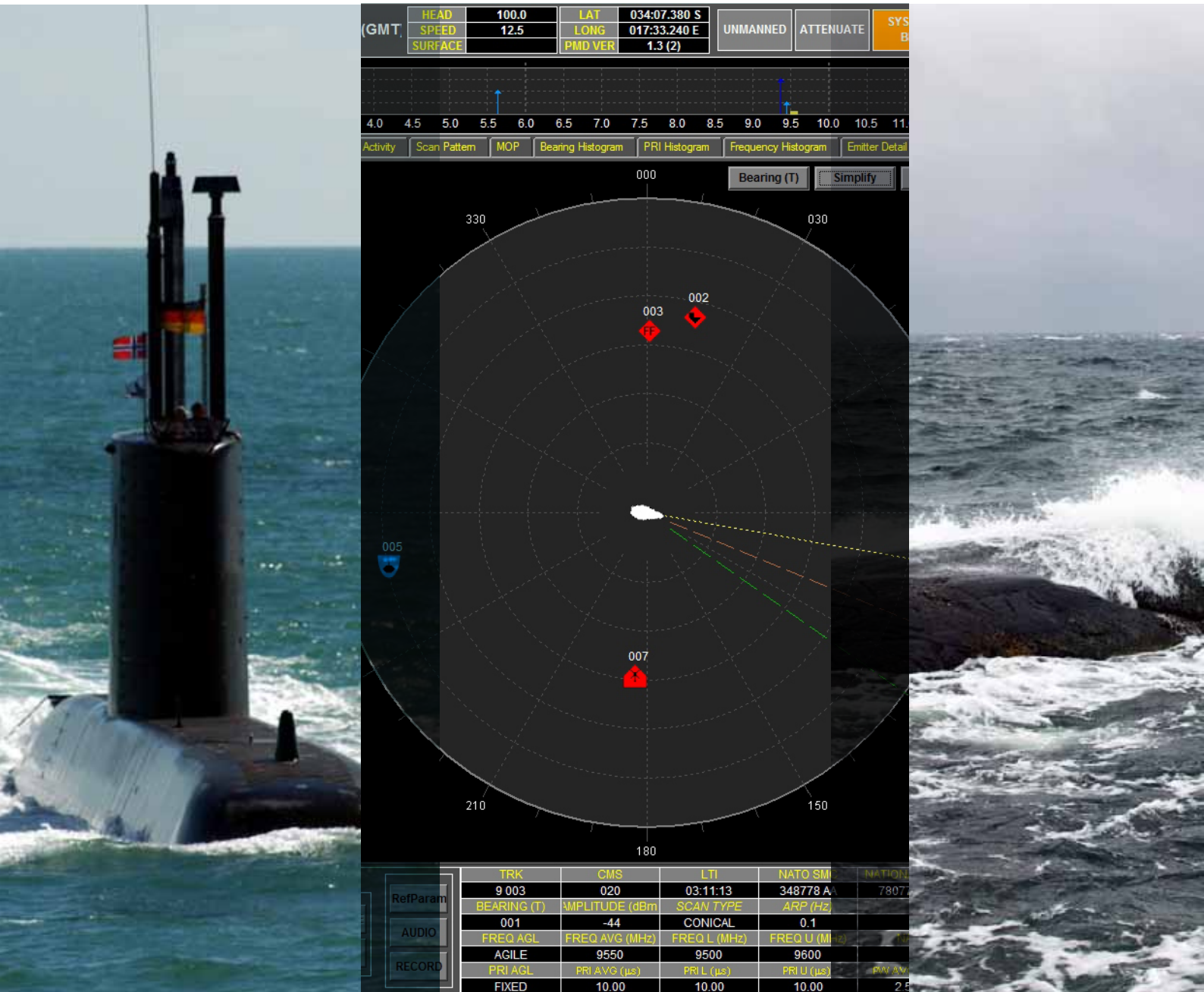




SAAB

SUBMARINE TACTICAL ESM AND ELINT SYSTEMS



SUBMARINE TACTICAL ESM AND ELINT SYSTEMS

The UME product range consists of high performance ESM and ELINT systems, capable of meeting today's stringent operational ESM requirements that are required for submarines operating in dense signal environments.

The sub-surface systems comprise the UME-100 and the UME-200 systems with various configurable options. The UME-100 is a tactical ESM System, with designated ELINT analysis capability and amplitude direction finding, whereas the UME-200 is a tactical ESM System with full parallel ELINT Analysis capability, and phase interferometer based direction finding.

The systems are all capable of operating in blue water or in the littorals, and feature a multi-receiver parallel architecture, with integrated CW Immunity, that provides the capability of rapid reaction time, at high pulse densities with high sensitivity, and ELINT analysis capability, without jeopardizing platform safety.



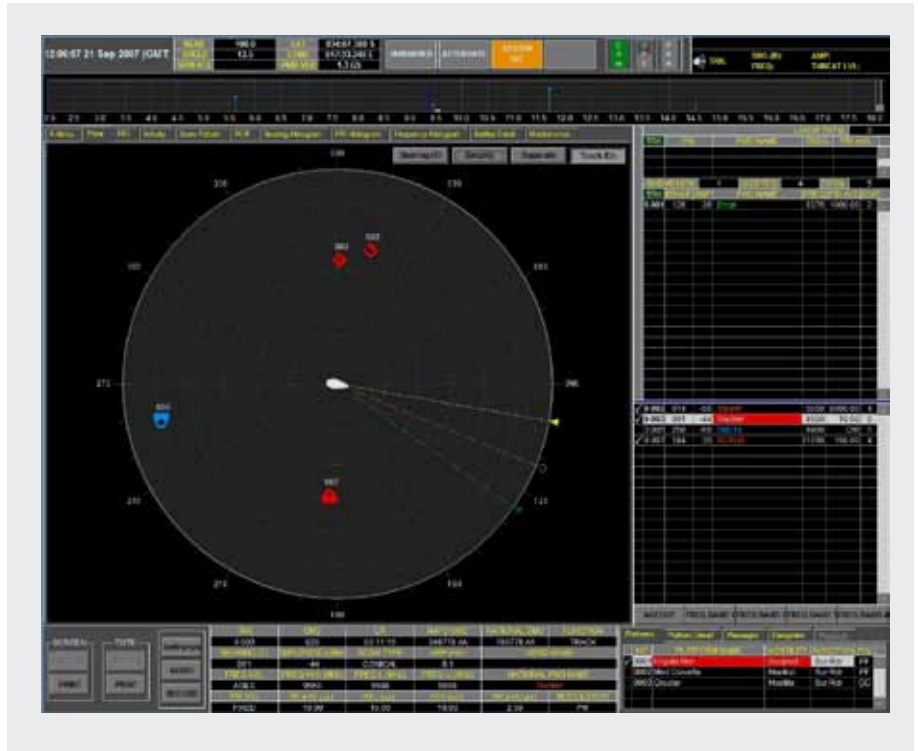
UME-100 System installed onboard South African Navy Type 209 submarine.



The advanced processing capability provides automatic interception and analysis of radar signals, resulting in classification against one or more library databases, and presentation to the operator of the classification and parametric data. Extracted parameters include basic parametric data, and time varied frequency, phase, amplitude and PRI modulation schemes. All processed data is automatically recorded, including all self test results, and platform data. Raw pulse buffer data is recorded on operator request.

The compact nature of the wet and inboard equipment allows ease of installation and maintenance. In particular the Amplitude DF Antenna providing better than 5° DF accuracy is able to be installed on the optronics mast without degradation of the line of sight of the optronics.

System integration is made simple with the low box count, and variety of available installation options, including equipment racks, wet cable systems, operator's consoles and intermediate junction boxes.



Display, Polar view.

UME-100 SYSTEM COMPONENTS

- Radar Warning Receiver Antenna (RWRA)
- ESM antenna (ESMA)
- Signal Distribution Units (SDU)
- Electronic Warfare Controller (EWC)
- Mini Display and Control Unit (MDCU)



UME-100 System.

UME-200 SYSTEM COMPONENTS

- Radar Warning Receiver Antenna (RWRA)
- ELINT antenna (ETA)
- ETA Signal Distribution Units (ETA-SDU)
- Equipment Rack (EQR)
- Electronic Warfare Processor (EWP)



UME-200 System.

SUPPORT EQUIPMENT

Integrated Test Bench, ITB

The purpose of the ITB is to facilitate system testing of UME systems in a controlled environment. The system testing philosophy is aimed at system level verification, and diagnostic testing dependant on the system level test outcomes.

The ITB provides the functionality required to emulate radar signals, and measure the ESM system-under-test response to the emulated signals, evaluate system interfaces, provide test bench assisted fault finding capability, and generate system failure reports in response to the test outcomes.

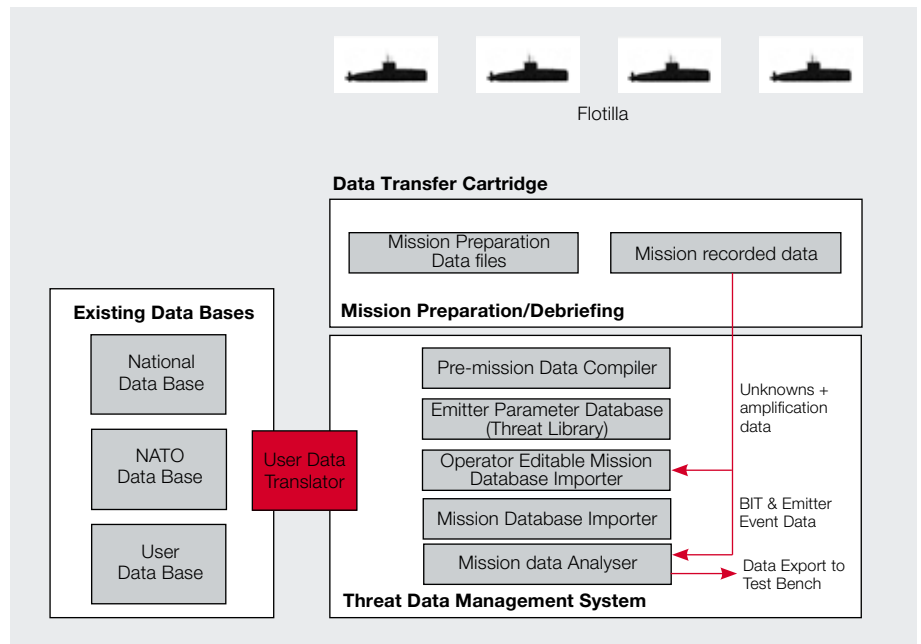


Integrated Test Bench (ITB)

Threat Data Management Systems, TDMS

The TDMS consist of hardware and software components, it is a collection of tools that enable the user to capture threat emitter data, prepare pre-mission data, playback and extensively analyse recorded information.

The information can be transferred to the platform prior to a mission, it can be utilized to define pre-mission data files as well as be utilized for pre-mission training. On completion of a mission all post mission data can be downloaded onto the existing database.



Threat Data Management Systems (TDMS)

TECHNICAL DATA

KEY PARAMETER	UME-100	UME-200
Architecture	ESM with ELINT functionality and comprising parallel: <ul style="list-style-type: none"> • Acquisition Receiver • ESM Receiver 	Simultaneous ESM and ELINT System with parallel: <ul style="list-style-type: none"> • Acquisition Receiver • ESM Receiver • ELINT Receiver • Integrated LPI Receiver
Frequency range: Standard Options	2 – 18 GHz 0.6 – 2.0 and 18 – 40 GHz	2 – 18 GHz 0.6 – 2.0 and 18 – 40 GHz
Probability of Intercept	100 %	100 %
Direction finding: Method Accuracy	Amplitude 5 degrees rms	Phase and Amplitude 2 degrees rms

Specifications subject to change without notice