HERAKLES

Multi Function radar designed to be a naval vessel’s sole radar

Herakles is one of the most advanced naval radars worldwide. A true multifunction radar, it has convincingly demonstrated its capabilities on board of the Formidable class and FREMM class vessels. The system offers high-performance ECCM features as well as low radar cross section to optimize vessel stealth. Herakles represents the state-of-the-art in naval radar technology with integrated IFF with mode 5 and mode S. Being fully solid-state and with redundancies for vital functions, it offers an unmatched availability.

- Designed to be the sole radar on-board high-value ships
- Long range surveillance concurrently with area and self-defence in one single mode
- Multi-beam surveillance for optimized dwell-time over full sector
- Excellent littoral performance
- Optimal integration with ASTER missiles, qualified with live firings
HERAKLES
Phased Array Multi Function Radar

Functional Aspects
- Smart management of the phased array antenna and use of a wide variety of waveforms to perform concurrently
  - medium and long range coverage 3D air and surface
  - area defence
  - target tracking
  - raid analysis and target classification support
  - weapon, missile and gun control (splash-spotting).
- Integrated IFF (mode 1, 2, 3/A, C, 4 or NSM, mode 5 and mode S)
- Automatic fast track creation process: early detection, confirmation, and first track creation to optimise defence system reaction time in threat zones
- Huge firing power
- Non cooperative target recognition
- Simple to operate
- Easy maintenance - minimum personnel training.

Performance data

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<table>
<thead>
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<tbody>
<tr>
<td>3D air domain</td>
<td>250 km</td>
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<tr>
<td>Surface domain</td>
<td>80 km</td>
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<tr>
<td>Coverage</td>
<td>0 to 250 km, 360° in azimuth, 0 to 70° in elevation</td>
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<td>Track capacity</td>
<td>&gt; 400 air + surface</td>
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<td>Monopulse + dedicated tracking for all air targets</td>
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<tr>
<td>Splash spotting function for fire control on surface targets</td>
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<td>Fully compatible with Aster 15/30 missiles</td>
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Technical Data

Only one mode to perform Surveillance and Anti Air Warfare with ASTER in all weather conditions

Antenna
- Antenna rotation speed: 60 rpm
- Two axis mono pulse phased array
- Air cooling

Transmitter
- Frequency band: E/F band (S-band)
- Solid-state technology

Processing
- State of the art technology
- Digital pulse compression
- Finite Impulse Response Doppler filtering (FIR)
- Rapid loop to support ASTER guidance

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