SUPERYACHT PERIMETER SECURITY

NiDAR™

360° AIR, SURFACE & UNDERWATER PROTECTION
**SIMPLIFIED SITUATIONAL AWARENESS**

NiDAR is an advanced long range surveillance system protecting vessels from air, surface and underwater approaches.

NiDAR delivers enhanced situational awareness by integrating multiple sensor and data feeds to generate a 360° perimeter security shield around an asset.

**INTELLIGENT ASSET PROTECTION**

Smart software algorithms autonomously and intelligently detect, classify and respond to multiple air, surface and underwater objects determining potential threat levels and triggering alerts.

The NiDAR multi-touch Command & Control interface presents an easy to understand situational awareness picture to operators with a focus on intuitive operation to aid rapid decision making and response.

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**EVENT TIMELINES**
- Geo-located and time stamped data storage for playback and review

**REAL TIME TRACKING**
- Multiple (1000+) known & unknown air, surface & underwater objects

**SMART ALERTS**
- Real-time visual and sound alarms immediately notify crew and security teams

**COUNTERMEASURES**
- Selection and activation of countermeasures based on the type of target

**PROTECTION ZONES**
- Customisable user defined warning and alarm zones around vessel

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**BACKGROUND**
- Satellite image and electronic map backdrop

**MULTI-TOUCH CONTROL**
- Intuitive operation of cameras and deployment of countermeasures

**LIVE VIDEO FEEDS**
- Automated tracking of multiple objects & seamless handover between cameras

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SYSTEM INTEGRATION

THE NiDAR SYSTEM IS MODULAR, SCALEABLE AND FULLY CUSTOMISABLE TO AN INDIVIDUAL VESSEL AND SECURITY REQUIREMENT

DETECT

- LONG RANGE SURFACE NAVIGATION RADAR
- MEDIUM RANGE SURFACE SECURITY RADAR
- SURFACE INFRARED OPTICAL CAMERAS
- RF MONITORING FOR DRONE DETECTION
- UNDERWATER DIVER DETECTION SONAR
- ASSET TRACKERS AND TRANSPONDERS

C2

- NiDAR SERVER AND C2 INTERFACE
- NiDAR MOBILE COMMAND

COUNTERMEASURES

- SURFACE LOUDHAILE & LASER DAZZLER
- SURFACE SEARCHLIGHT
- UNDERWATER LOUDHAILE
INTEGRATION OF SENSOR & DATA FEEDS

NiDAR integrates sensors including cameras, radar, sonar and radio frequency monitoring plus AIS, VHF, tracker and transponder inputs to detect and monitor unknown and known air, surface and underwater objects.

Air detection >5km
Surface detection >20km
Underwater detection ~1.5km

SMART SOFTWARE ANALYSIS & ALERTS

Advanced software algorithms classify unknown objects in the vicinity by analysing behaviour patterns, shape, size, history and external factors such as weather and location.

NiDAR intelligently ranks potential threat levels, automatically activating smart alerts when user determined warning and alarm zones are breached.

DECISION SUPPORT & COUNTERMEASURES

Seamless automated tracking or manual control of cameras within NiDAR aids observation and decision making.

Automated or manual deployment of integrated countermeasures such as searchlights, loudhailers and underwater loudhailers deter potential approaches and de-escalate threats.
## TECHNICAL SPECIFICATIONS

### USER INTERFACE HARDWARE
- **Multitouch screens**: iOS, Windows 10, Linux Ubuntu supported
- **Multiple control stations**: 100+ approved mobile and fixed on vessel plus remote access

### PROTECTION ZONES/LEVELS
- **Customisable protection zones**: 100+ user defined circular, polygon and blanking zones
- **Security levels**: Pre-set user defined zones and system sensitivity

### SMART TRACKING
- **Simultaneous tracking**: 1000+ known & unknown air, surface & underwater objects tracked in real time
- **Track merging**: Multiple radar, AIS or underwater sonar tracks merged into one track

### INTUITIVE CAMERA CONTROL
- **Multiple target tracking**: Multiple camera feeds independently tracking different targets in real time
- **Position Anticipation**: Automatically places target object at the centre of the video screen whilst tracking
- **Camera Handover**: Automatic camera selection and handover for seamless 360 coverage
- **Daylight/IR autoswitch**: Automatically switching IR and DLTV depending on time/date/location
- **Camera Beacons**: Automatic slew to and hold fixed point irrespective of vessel movement/location
- **Manual operation**: Touch screen camera selection and control option

### INTELLIGENT ALARMS & COUNTERMEASURES

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td><strong>Risk Score</strong></td>
<td>Automatically allocated to objects based on risk level, alerts prioritised based on risk score</td>
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<tr>
<td><strong>Audible Alarm</strong></td>
<td>Audio alarms provides type, source and direction of threats</td>
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<tr>
<td><strong>Countermeasures</strong></td>
<td>Selection and readying of countermeasure type based on target nature</td>
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</tbody>
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### SPECIFICATIONS

<table>
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<tbody>
<tr>
<td><strong>Recording</strong></td>
<td>90+ days storage, event timeline for playback of alarms, video, timestamp and location</td>
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<tr>
<td><strong>System Stability</strong></td>
<td>Continuous system monitoring with auto sensor restart and full server/console redundancy</td>
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<tr>
<td><strong>Support &amp; training</strong></td>
<td>Optional 24/7 remote support and system health status monitoring. Quick start guide within system</td>
</tr>
<tr>
<td><strong>OS</strong></td>
<td>Linux</td>
</tr>
<tr>
<td><strong>Encryption</strong></td>
<td>AES-256 (configurable)</td>
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<tr>
<td><strong>Export</strong></td>
<td>Commercial off the shelf components, system free of any export control restrictions. e.g. ITAR (excluding sensors)</td>
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</tbody>
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*Please note that detection ranges and system capability are subject to sensor specifications and local environmental conditions. This document is non contractual, NRE and integration costs may apply.*