All the performance of radar...
...with the precision of laser

Mini RadaScan is an advanced position reference sensor for use in marine Dynamic Positioning (DP) applications. Mini RadaScan accurately measures the range and bearing of one or more intelligent microwave targets called responders, allowing for the calculation of vessel position and heading. Based on radar technology it overcomes many of the limitations associated with DGPS, traditional laser, acoustic and taut-wire systems.

**Key Features**
- Operating range up to 600m
- All weather operation
- Reliable tracking from uniquely coded responders
- Single or dual responder capability
- Auto target detection
- Full 360° scanning

**Applications**
Mini RadaScan is suitable for applications which use fixed structures such as:
- Platform and Offshore supply
- Wind farms servicing
- Accommodation barge operation
- Crew boats station-keeping
- Heavy lift activities
- Dive and ROV support

Mini RadaScan is also suitable for applications with mobile structures such as:
- Track and ship-follow
- Shuttle tanker loading
- Pipe and cable laying
- Rock dumping
- Replenishment at sea
**Unique Features**

- **Mini RadaScan Console**
- **Mini RadaScan Sensor**
- **Mini RadaScan Responders**

**Mini RadaScan Console**

The Mini RadaScan Console’s clear display and intuitive user interface enable DP operators to use the Mini RadaScan safely and effectively. The same user interface is used on our CyScan Console, helping to make sure that CyScan trained operators will already be familiar with Mini RadaScan controls.

**Mini RadaScan Sensor**

The Mini RadaScan Sensor’s rotating antenna transmits a beam of radio energy and detects the returned signal. Unlike conventional radar, Mini RadaScan ignores the ‘clutter’ typically reflected by an off-shore platform, and only ‘sees’ the returns from responders. Each responder adds its own unique ID to the returned signal, enabling the sensor to distinguish between multiple responders. The sensor’s continuous 360° rotational scan maintains target-lock during vessel turns, without the need to reset the sensor. This enables Mini RadaScan to be used ‘hands free’, even during the most critical part of a manoeuvre.

For added redundancy and precise heading control, the Mini RadaScan sensor can lock onto two responders simultaneously. Every responder can be used simultaneously by any number of Mini RadaScan equipped vessels.

**Global Support**

Guidance Marine has identified the need for rapid response and have invested significantly in a Global Support Network of Authorised Service Partners (ASPs).

**Service and Support**

Guidance Marine engineers have personally provided all the ASPs with comprehensive technical training in order to fully support Guidance’s range of products.

"I must say that it is very seldom (if ever) to see a company with such lightning-speed of customer service response. Thanks and congratulations"
# Mini RadaScan Specification

## Sensor Details

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transceiver Type</td>
<td>Frequency Modulated Continuous Wave (FM CW)</td>
</tr>
<tr>
<td>Frequency Band</td>
<td>9.2 to 9.3 GHz</td>
</tr>
<tr>
<td>Maximum Power Output</td>
<td>3W</td>
</tr>
<tr>
<td>Maximum Operating Range*</td>
<td>600m</td>
</tr>
<tr>
<td>Minimum Operating Range</td>
<td>10m</td>
</tr>
<tr>
<td>Range Accuracy**</td>
<td>0.25m (1σ) up to 600m</td>
</tr>
<tr>
<td>Angular Accuracy**</td>
<td>0.2° (1σ) up to 600m</td>
</tr>
<tr>
<td>Operating Field of View</td>
<td>360°</td>
</tr>
<tr>
<td>Target Detection</td>
<td>Automatic</td>
</tr>
<tr>
<td>Vertical Beam Height</td>
<td>22°</td>
</tr>
<tr>
<td>Multiple Target Capability</td>
<td>Up to 4 (With version 3.0 sensor software installed)</td>
</tr>
</tbody>
</table>

## Vessel Interface

- **Sensor Power**: 85 to 264v AC 45-65 Hz 5A
- **Sensor Control**: 1 x Ethernet 100Base-T
- **Sensor DP Feed**: 1 x RS422
- **Supported DP Systems**: Includes Kongsberg, GE Energy (Converteam), L-3, Marine Technologies, Rolls Royce, Navis, Becker Radio
- **Sensor Control**: Up to 9 control consoles (Master & Slaves)
- **Sensor Control Protocol**: Ethernet TCP/IP
- **Supported DP Telegram Formats**: Includes MEL single/multi-target and NMEA 0183 to IEC 61162-1:2010(E), Custom formats also available on application

## Environmental

- **Operating Temperature Range**: -25 to +55°C
- **Atmospheric Conditions**: Operates in fog, heavy rain, snow and ice conditions
- **Water and Dust Protection**: IP66 certified
- **RF Immunity**: Resistant to S and X band Radar when installed as recommended

## Sensor Weight and Dimensions

- **Diameter**: 0.5m
- **Height**: 0.4m
- **Weight**: 21kg

## Flight Case Weight and Dimensions

- **Dimensions**: 620 x 620 x 730 mm
- **Weight**: 63kg (Typical) including computer, monitor, mouse and cables

## Notes

* Operating ranges measured with Part number 20-0174-0 Mini RadaScan sensor
** Accuracy is defined as a measurement of repeatability. Data obtained from various worldwide locations in different sea states, locations include the North Sea and Gulf of Mexico.