Quadrans is a fully strapdown gyrocompass and attitude reference system. IMO and IMO-HSC certified, it provides all the necessary data for demanding navigation and control applications. High customizability and Ethernet/Serial connectivity provides a very easy integration on any platform.

Based on a state-of-the-art interferometric fiber-optic gyroscope technology (iFOG*), Quadrans does not require any maintenance during its unlimited service life. Quadrans is the ideal replacement for any mechanical gyro for whom is focused on total cost of ownership and maximizing availability and safety of their ships.

**FEATURES**

- Compact and plug & play system
- AHRS: All in one Gyrocompass & MRU
- Unique strap-down technology, interferometric FOG (iFOG*)
- Embedded Man Machine Interface (no proprietary CDU)
- IMO Certification
- Heave, Surge, Sway measurement

**BENEFITS**

- Fast settling time
- Maintenance-free
- Easy integration
- Stabilization and pointing capability
- Automatic speed and latitude correction
- Works in high sea state
- Allows restart at sea

**Sea proven technology**

Quadrans is based on a unique iFOG design* which has been in use in the **harshest environment for 15 years**. From land application to space environment through all main European navies first ranks platforms.

Quadrans has been in use for 5 years in many navies (French, Chile, UK, Portugal,...) and multiple DP operators. In addition, Quadrans has also been the obvious choice for most competitors in the America’s cup and the Vendée Globe, proving its performances in any sea state and its reliability.

**Reliability and through life cost**

The **return of experience** on iXblue iFOG technology shows a MTBF of more than **150.000h**, without any kind of maintenance (neither on board nor with factory return), and a **life expectation** that have already proven to be superior to 15 years. All this combined makes Quadrans a true install and forget equipment with an unbeaten low cost through the life of your ship. As a token of our confidence, Quadrans comes with a **5 years warranty**.

**An opened architecture**

The Quadrans solution, as every iXblue product, is an opened architecture, ready to interface with any other component. It includes, in addition to standard NMEA, a large library of open source protocols, to give autonomy to the user in the integration of the Quadrans in the life of the ship.

*discover more on iXblue iFOG on our website

contact@ixblue.com | www.ixblue.com
EMEA +33 1 30 08 88 88 | Americas +1 781 937 8800 | APAC +65 6747 4912
TYPICAL CONFIGURATIONS

Quadrans standalone configuration

- Speed log
- GNSS
- Compass
- Magnetic

Cable connection

- Ship EDDU
- Repeaters

Dry contacts

- Up to 16 repeaters
- ECDIS, ETC, VDR

Quadrans

CDU, Fail safe

Gyro alert management

Quadrans has been approved by Bureau Veritas in accordance with Marine Equipment Directive (MED) and fulfills the following:

- MED
- IMO A.424 (XI) - A.821 (19) - A.694 (17)
- ISO 8728 - ISO 16328
- MSC 36(63) - MSC.97(73) - MSC.191(79)
- IEC 60945 - IEC 61162-1 & -2

Navbox

Gyro alert management

Type Approval

Quadrans + Navbox + Repeaters various configurations have a type approval certificate emitted by Bureau Veritas for the following:

- MED
- IMO A.424 (XI) - A.821 (19) - A.694 (17)
- ISO 8728 - ISO 16328
- MSC 36(63) - MSC.97(73) - MSC.191(79)
- IEC 60945 - IEC 61162-1 & -2

REPEATERS

- Digital Compass
- Tape Compass
- Steering
- Pelorus Bearing
- Rate of turn indicator

Other brands and models are available.

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## TECHNICAL SPECIFICATIONS

### Dynamic & Static performances

<table>
<thead>
<tr>
<th>Quadrans</th>
<th>Navbox</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heading accuracy</td>
<td>0.23 deg RMS secant latitude</td>
</tr>
<tr>
<td>Roll/Pitch accuracy</td>
<td>0.1 deg RMS</td>
</tr>
<tr>
<td>Settling time</td>
<td>&lt; 30mn (all conditions) , 0.7° in 15mn</td>
</tr>
<tr>
<td>ROT</td>
<td>0.01 deg / sec</td>
</tr>
<tr>
<td>Heave</td>
<td>10 cm / 10% whichever is higher</td>
</tr>
</tbody>
</table>

### Operating range/environment

<table>
<thead>
<tr>
<th>Quadrans</th>
<th>Navbox</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heading/Roll/Pitch</td>
<td>0 to +360 deg/±180 deg/±90 deg</td>
</tr>
<tr>
<td>Latitude</td>
<td>+/- 85’</td>
</tr>
<tr>
<td>Max Rate</td>
<td>250°/s</td>
</tr>
<tr>
<td>Operating/Storage Temperature</td>
<td>-20°C to 55°C / -40°C to 80°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>IP66</td>
</tr>
</tbody>
</table>

### Physical characteristics

<table>
<thead>
<tr>
<th>Quadrans</th>
<th>Navbox</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>2.8kg</td>
</tr>
<tr>
<td>Dimensions (LxWxH)</td>
<td>160 x 160 x 113mm</td>
</tr>
<tr>
<td>Connections</td>
<td>Fisher connectors</td>
</tr>
</tbody>
</table>

### Interfaces

| Inputs (*) | 2 inputs serial or Ethernet 1 configuration port |
| Outputs (*) | 2 outputs serial and/or 5 on Ethernet |
| Pulse port | 4 inputs and 2 outputs, 5V (TTL Level) |
| Alerts | 5 dry contacts |
| Input/Output formats | Industry standards: NMEA 0183, ASCII, BINARY |
| Data output rate | 0.1 Hz to 200 Hz |
| Power supply | 24 VDC (15 to 32VDC) |
| Power consumption | 15 W |

### Integrated logistic services

<table>
<thead>
<tr>
<th>Quadrans</th>
<th>Navbox</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTBF</td>
<td>150,000 hours</td>
</tr>
<tr>
<td>Warranty</td>
<td>5 years</td>
</tr>
<tr>
<td>Calibration interval</td>
<td>None required</td>
</tr>
</tbody>
</table>

(*) All input/output serial ports are available and can be duplicated on Ethernet ports

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