



## OCTANS

### FIFTH GENERATION SURVEY-GRADE SURFACE GYROCOMPASS AND MOTION SENSOR

The fifth generation **OCTANS** is an all-in-one gyrocompass and motion sensor for diverse challenging applications. The new **OCTANS** raises the industry standard in measurement accuracy for roll, pitch, heave, and heading while making available inertial navigation system (INS) product upgrade path and IMO-HSC certification. **OCTANS** is built on **iXBlue**'s trusted and unique ultimate-performance Fiber Optic Gyroscope (FOG) technology (thousands of units manufactured).

#### FEATURES

- New generation of algorithms, including heading, Smart Heave™ and real-time heave (30sec period)
- State-of-the-art **iXBlue** FOG, strap-down technology (no spinning elements)
- Ethernet, web-based GUI and compatibility with survey software suites
- IMO and IMO-HSC certification
- ITAR free (CJ) and O&G license eligibility

#### BENEFITS

- Highly accurate real-time output for roll, pitch, true heading, heave, surge, sway, acceleration and rate of turn, even under no GPS/GNSS environment; INS product upgrade path
- Industry's best performance-value offering with unrivaled reliability, backed by 5 year warranty
- Ease-of-use and integration
- Robust heading performance for high-speed vessel with high rate-of-turn
- Ease of export

**APPLICATIONS** • Survey (MBES/Lidar) • DP (Dynamic Positioning) • Motion monitoring • Platform stabilization  
• Safe robust navigation, including environments without GPS (e.g. tunneling, defense)



Courtesy of Ampelmann



Courtesy of Boskalis



# OCTANS

## TECHNICAL SPECIFICATIONS



IMO Certified  
N° 09807

### PERFORMANCE

<b>Heading Accuracy</b> <sup>(1)(2)(4)</sup>	0.1° seclat (Autonomous) / 0.05° seclat (with GPS input)
Settling time (typical)	5mn
Full accuracy settling time (all conditions)	< 15 min
Resolution	0.01 deg
<b>Heave / Surge / Sway Accuracy</b>	5 cm or 5% (whichever is greater)
<b>Delay Heave / Surge / Sway Accuracy</b>	2.5 cm or 2.5% (whichever is greater)
<b>Heave / Surge / Sway periods</b>	<b>up to 30sec</b>
<b>Roll / Pitch / Yaw Dynamic accuracy</b> <sup>(2)</sup>	0.01 deg
Resolution	0.001 deg

### OPERATING RANGE / ENVIRONMENT

<b>Rotation rate dynamic range</b>	Up to 750 deg/s
<b>Acceleration dynamic range</b>	±15 g
<b>MTBF</b>	100 000 hours
<b>Operating / storage temperature</b>	-20 °C to +55 °C / -40 °C to +80 °C
<b>Heading / roll / pitch</b>	0 to +360 deg / ±180 deg / ±90 deg
<b>No warm-up effects</b>	
Shock and vibration proof	

### PHYSICAL CHARACTERISTICS

Dimensions (L x W x H)	275 x 136 x 150 mm
Weight in air	4.5 Kg
Water proof	IP66 & IPx7
Material	Aluminum
Same footprint & dimensions as 4 <sup>th</sup> generation OCTANS	

### INTERFACES

User interface	Web based Graphical User interface
Serial RS232 / RS422 port	3 outputs / 2 inputs / 1 configuration port
Ethernet port <sup>(3)</sup>	UDP / TCP client / TCP server
Pulse port	PPS input for < 100µs time synchronization
Input / Output formats	Industry standards: NMEA0183, ASCII, BINARY
Baud rates	600 bauds to 460kbaud
Data output rate	0.1 Hz to 200 Hz real measurements
Timing	Fix latency 2.35ms, < 200µs jitter
Power supply	24 VDC
Power consumption <sup>(5)</sup>	18 W
Same connectors and protocols as 4 <sup>th</sup> generation OCTANS	

(1) Secant latitude = 1 / cosine latitude

(2) RMS values

(3) All input /output serial ports can be duplicated on Ethernet ports

(4) Maximum error = 3RMS err

(5) Typical value @24 V and ambient temperature