

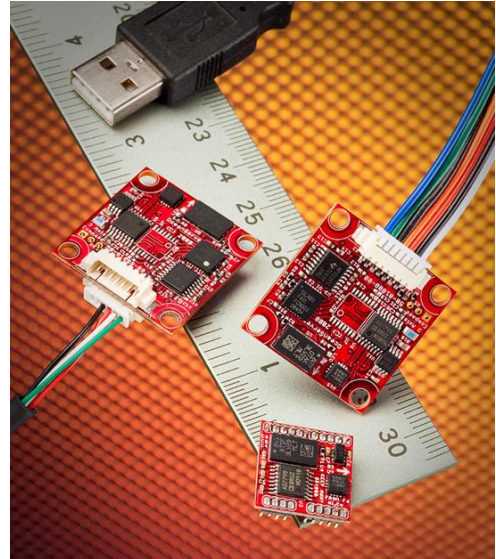


## OceanServer Digital Compass Products

### OS5000 Family of 3-Axis Solid State OEM Compasses

#### Data Sheet

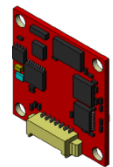
The OS5000 family of low cost compasses provides a wide range of connection options within a tiny 1 inch square footprint. Compasses can be connected via RS232 or USB. Every unit combines industry leading 3-axis magnetics with 3-axis accelerometers giving OEM users a very accurate attitude, tilt compensated heading, and pitch and roll information suitable for a wide range of applications. Compass units offer a ASCII interface that includes both hard-iron and soft iron compensation and simple, user-configurable data formatting.



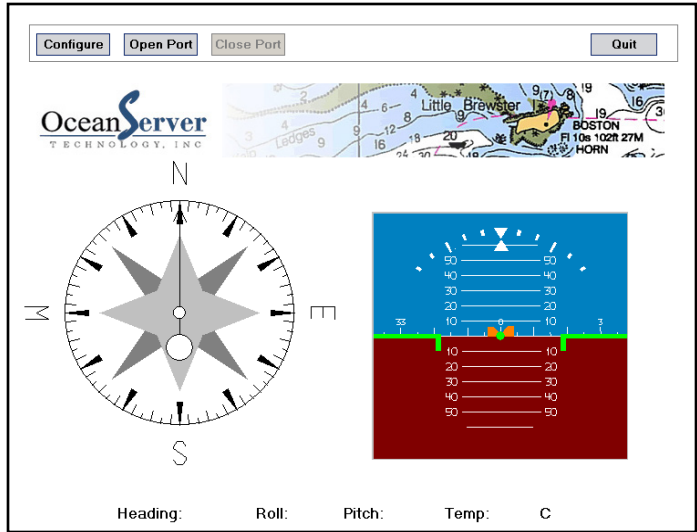
## Specifications

- > Tiny size, 1" x 1"x 0.3"; weighs less than 2 grams
- > Compass accuracy, 0.5 deg RMS Level Heading,  
1° Typical RMS accuracy <  $\pm 30^\circ$ ,  $1.5^\circ < \pm 60^\circ$ ,  
0.1 Degree Resolution
- > Roll & Pitch full rotation operation,  
Typical  $1^\circ$  accuracy <  $\pm 30^\circ$  tilt
- > Tilt-compensated (electronically gimballed)
- > Low power consumption, <20ma @3.3V
- > Hard and soft-iron compensation routines
- > Optional support for a high resolution depth or altitude sensor (24 bit A/D)
- > Serial Interface: RS232, USB or TTL (Electrical Protocol)
- > 50 MIPS processor supporting IEEE floating point math
- > Baud rate programmable: 4,800 to 115,000 baud
- > Rugged design (10,000 G shock survival)
- > Operating temperature:  $-20^\circ\text{C}$  to  $70^\circ\text{C}$  ( $-40^\circ\text{C}$  to  $85^\circ\text{C}$  storage)
- > ASCII sentence output in several formats; NMEA checksum
- > High data update rate to 40HZ
- > Support for True or Magnetic North output
- > Precision components:
  - 3 Axis magnetic sensors from Honeywell
  - 3 Axis accelerometers from ST Microelectronics
  - 24 bit differential Analog to Digital converters from Analog Devices

3D Models & Mechanical  
Drawings Available for  
Download



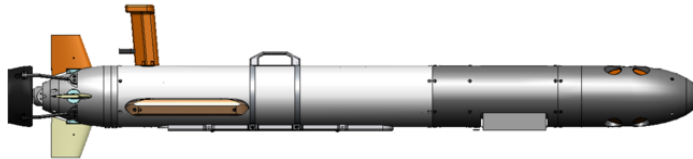
OceanServer compasses are suitable for operation in the following OS environments: Microsoft Windows®, Mac OS and Linux. The compass evaluation kits include a Windows application demo program for testing and configuring compass settings. Compasses can also be connected to a host system using Microsoft Hyperterm® or other terminal programs.



### Windows Demo Application

#### Applications ~

Robotics, Navigation/GPS Integration, Instrumentation, Attitude Referencing, Survey, Platform Leveling, Antenna Positioning, Man Portable Devices



### OS5000 Family Part Numbers

Ordering Part Number	Description	Interface	RoHS Compliant	Depth Option
OS5000-S	Board Only	RS232	Yes	No
OS5000-SK	Kit *	RS232	Yes	No
OS5000-USD	Board Only	RS232 & USB	Yes	Yes
OS5000-USDK	Kit *	RS232 & USB	Yes	Yes

\* Evaluation Kits include a compass module with cables, battery holder and CD.

For pricing and availability, visit our online store at:

<http://www.oceanserver-store.com/>

Phone: (508) 678-0550 | Web: [www.ocean-server.com](http://www.ocean-server.com)

April 2015 Specifications subject to change without notification

