

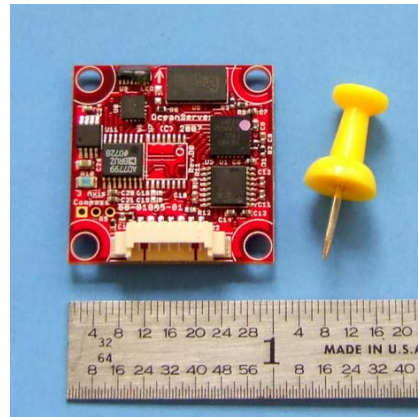


## ***OceanServer Serial 3 Axis Tiny Digital Compass***

### **OS5000-S Solid State Tilt Compensated Compass with Serial Connection**

#### ***Data Sheet***

The OS5000-S is an extremely small form factor (1" x 1") 3-axis, tilt compensated digital compass. The the compass is connected via a RS232 Serial connection. The OS5000-S provides precise heading, roll and pitch data ideal for rapid attitude measurement. The OS5000-S offers an easy to use ASCII interface which includes hard-iron calibration and simple data configuration for your application.

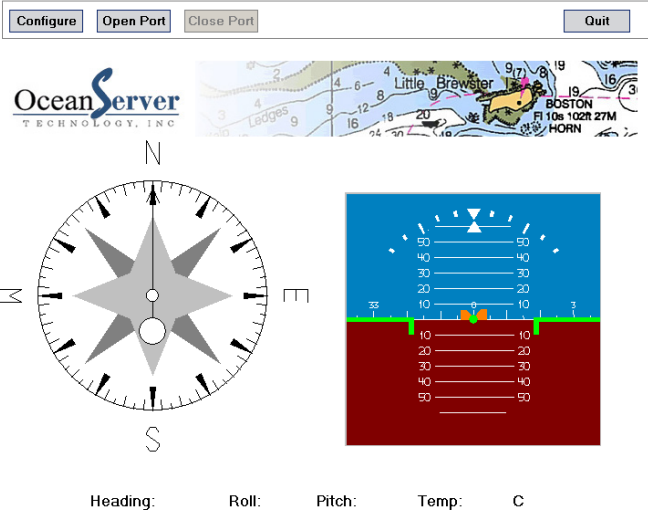


**RoHS Compliant**

#### ***Specifications***

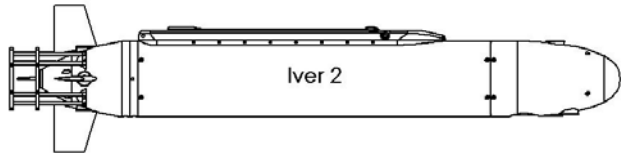
- > **Ultra Low Cost Design**
- > **Tiny Size : 1.0" x 1.0" PCB**
- > **Precision Compass – Tilt Compensated**
- > **3 – Axis Honeywell Magneto Resistive Sensors**
- > **3 – Axis STM Accelerometer for Full Range Roll & Pitch Angle Measurement**
- > **Update Rate Programmable from .01 to 40 Hz**
- > **Easy to use ASCII Interface includes Hard-Iron Calibration and Data Configuration**
- > **24-bit A/D Converters with Digital Filters**
- > **Direct RS232 Serial Connection**
- > **Low Power Circuit Consumption (Power: 3.3V regulated, 3.3-5V unregulated)**
- > **Accuracy: 1 Degree Azimuth, Resolution: 0.1 Degree**
- > **Roll and Pitch: 0.1 Degree Resolution**
- > **Solid State Components have 10,000 G Survival Rating**

OceanServer compasses include Microsoft Windows®, Mac and Linux compatible software for evaluation and testing. The software installation kit includes a serial cable with a DB-9 connector and 3.6V battery connector for quick connection between the compass and your system. The compasses can also be connected to a host system using Microsoft Hyperterm®.



**Windows Demo Application**

**Applications ~ Robots, Navigation/GPS Integration, Instrumentation, Attitude Referencing, Survey, Platform Leveling, Antenna Positioning**



**Additional Sensor Information**

Includes 3 axis magnetic field sensors utilizing Honeywell chipsets for X,Y field sensing and Z-axis sensing. The measurement of the roll and pitch angle of the compass is accomplished by using a full range STM Accelerometer. The device measures the acceleration of the force of gravity downward in the X,Y and Z directions. Please see the OS5500 for the option for direct connection to a pressure sensor for measurement of the depth in the water column.

**Key Specifications for Magnetic Sensors**

Max Field Range	+/- 6	Gauss
Typical Resolution	120	uGauss
Typical Linearity	0.1	%FS
Typical Repeatability err	0.1	%FS
Max X,Y sensor Orthogonally	0.01	degrees
Bandwidth	5	Mhz