

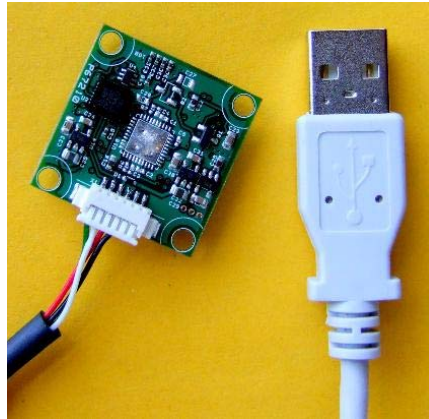


OceanServer USB & Serial 3 Axis Digital Compass

OS5000-US Solid State Tilt Compensated Compass with Roll, Pitch and Multiple Connection Options

Data Sheet

The OS5000-US is an extremely small form factor (1" x 1") three axis, tilt compensated digital compass. The flexible design allows customers to use either a USB or RS232 Serial connection for system integration. The OS5000-US provides precise heading, roll and pitch data ideal for rapid attitude measurement. The digital compass offers an easy to use ASCII interface which includes hard-iron calibration and simple data configuration for your application.

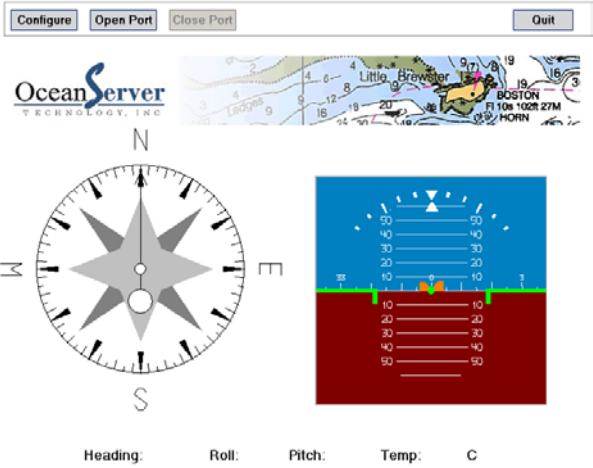


RoHS Compliant

Specifications

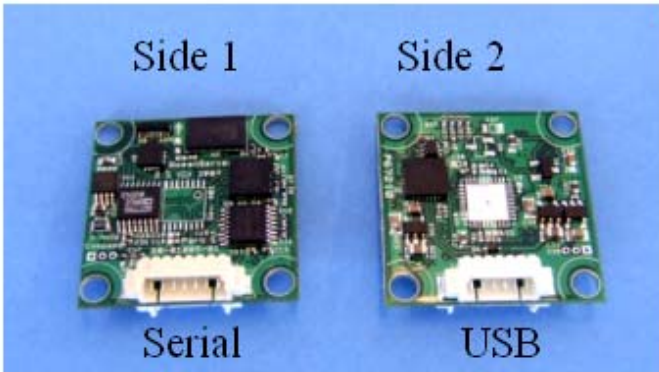
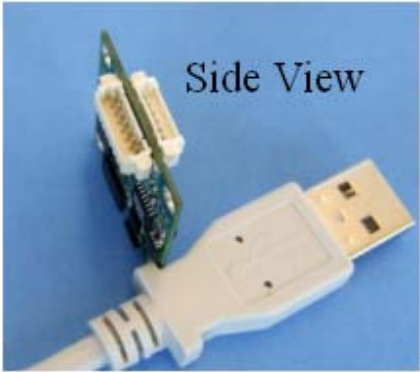
- > **Ultra Low Cost Design**
- > **Size : 1" x 1" PCB**
- > **Precision Compass – Tilt Compensated**
- > **3 – Axis Honeywell Magneto Resistive Sensors**
- > **3 – Axis STM Accelerometer for Full Range Roll & Pitch Angle Measurement**
- > **Update Rate Programmable from .01 to 40 Hz**
- > **Simple to use ASCII Interface includes Hard-Iron Calibration and Data Configuration**
- > **24-bit A/D Converters with Digital Filters**
- > **USB to Serial Driver or Direct Serial Connection**
- > **Accuracy: 1 Degree Azimuth, Resolution: 0.1 Degree**
- > **Roll and Pitch: 0.1 Degree Resolution**
- > **Compass Auto Detects Serial or USB Connection**

OceanServer compasses include Microsoft Windows®, Mac or Linux compatible software for evaluation and testing. The software installation kit includes a USB to serial port driver, facilitating a 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, Instrumentation, Survey



Additional Sensor Information

Includes 3 axis magnetic field sensors utilizing Honeywell chipsets for X, Y field sensing and for the Z-axis. The measurement of the roll and pitch angle of the compass is accomplished by using a STM 3-axis 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.

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