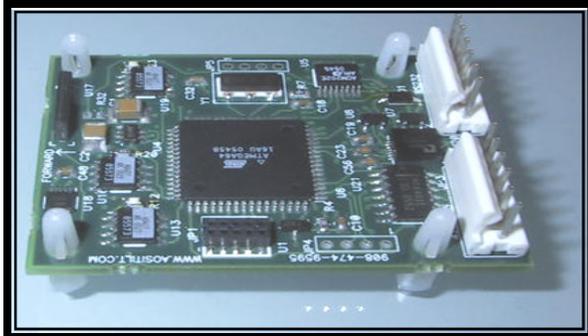 **KuSaBa Engineers Pvt. Ltd.**

 EZ-COMPASS-3A-360_B

Continuous Roll Tilt Compensated High Resolution Compass / Linear Dual Axis Tilt System:

SOLID STATE High Accuracy advanced Pitch / Roll / Temperature compensated COMPASS / MAGNETOMETER system is built around a state of the art CMOS microcontroller utilizing AOSI's proprietary algorithm on a 1.5" x 2" assembled PCB with a total height including tilt sensing elements of less than 0.5".

The unit outputs continuous heading, magnetic field, dual axis tilt and temperature data over the standard RS-232 and RS-422 and RS-485* interfaces. The AZIMUTH is generated from a 3 axis semiconductor magnetometer with 12 bit (0.08 deg) resolution, & the accuracy can be achieved equal to or better than 0.25^0 . The LINEAR tilt information is available with 12 bit resolution for ±90arcdeg in Pitch axis and FULL 360arcdeg in Roll axis. COMPASS/TILT module is perfectly suitable for numerous applications like navigation, research and other precision orientation, navigation and leveling applications.

The COMPASS is able to output multi-sensor information in NMEA-0183 mode and responds to numerous generally used commands. Easy link through the Hyper Terminal Windows accessory facilitates custom calibration, hard iron compensation, data acquisition, and data averaging, scan delay, dumping factor and data display.

Parameter	Specification	Units/description
Azimuth Range	0--360	deg, continuous
Azimuth Resolution	12 (0.08)	bit (deg)
Azimuth Repeatability	< 0.20	deg, typical horizontal
Azimuth Accuracy*	≤ 0.25	deg, typical horizontal
Magnetic Field	+-2	Gauss typical
Magnetic Resolution	< 1	mGauss typical
Pitch Range	±90	arcdeg after linear correction
Roll Range	±180	arcdeg after linear correction
Weight	11	grams
Dynamic Range	10	reading/sec
Tilt Resolution	12	bit full scale, both axis
Tilt Repeatability	<2	bits
Temperature	-40 to +85	deg C
Communication	1200-38400 baud, 8, N, 1	RS-232 and RS-422 standards
Supply	6---15	Vdc
Size	1.5"W x 2"L x 0.5"H	PCB Board
NMEA-0183 mode	5 select modes	1999 Revision

 * = Only after software calibration.
RS-485 is activated upon special request.
SOFT NORTH: North direction could be manually reset by software to compensate for local declination angle

Specifications of sensors may change without notice.