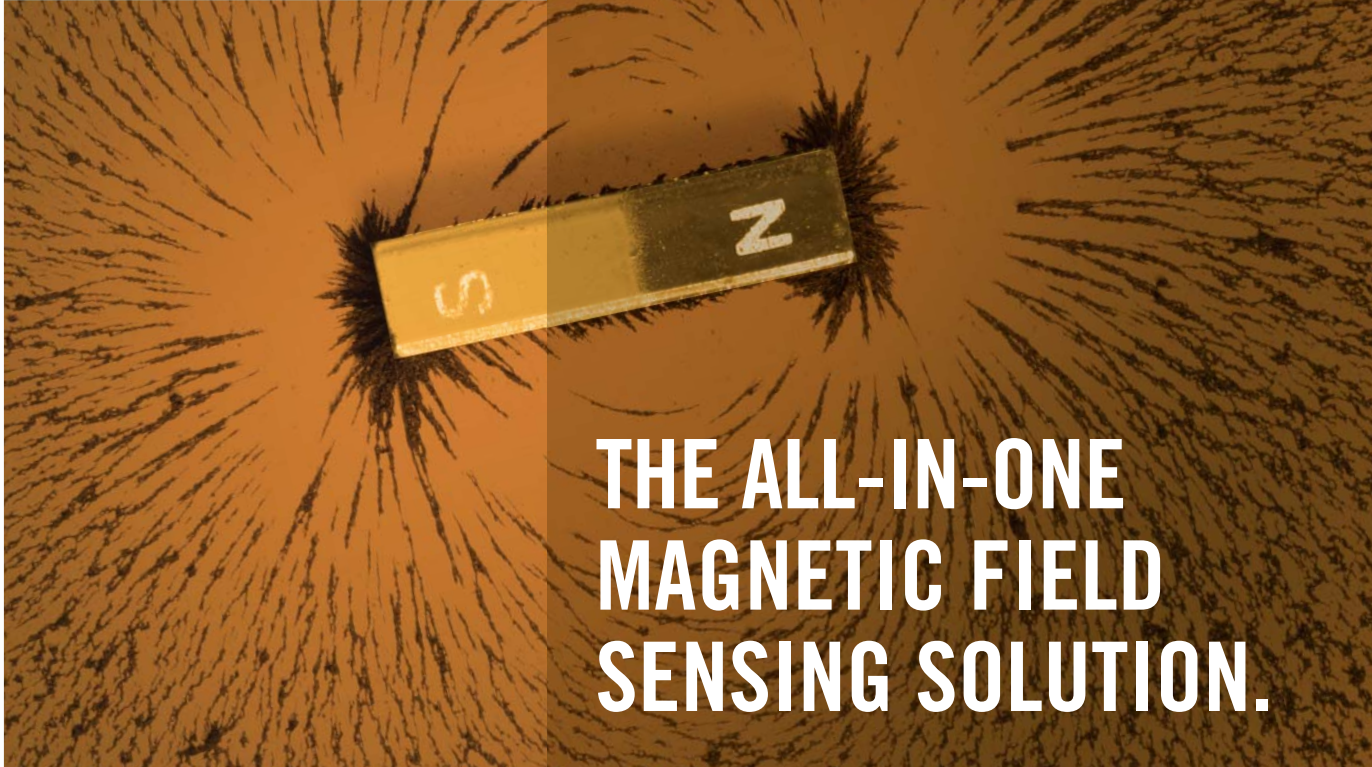
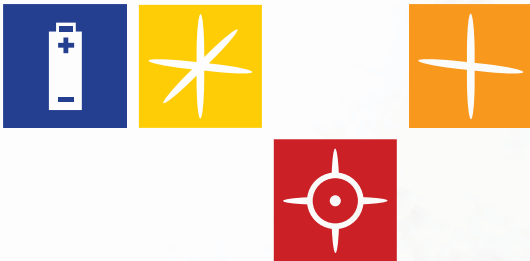


SmartSens **MicroMag**

Magnetic field sensing modules



THE ALL-IN-ONE MAGNETIC FIELD SENSING SOLUTION.



TO ENABLE FAST DEVELOPMENT CYCLES, PNI'S

SmartSens MicroMag combines sensors and ASIC in an all-digital module that requires no additional circuitry.

While it's engineered to drastically reduce the time and expense of designing a system from components, the MicroMag doesn't sacrifice performance. In addition to its industry-leading low power use, it provides high-resolution magnetic field sensing with high dynamic range, no hysteresis, inherent temperature stability, and superior large-signal noise immunity.

MicroMag's virtually "plug and play" integration makes it ideal for the prototyping of high-volume consumer electronics, as well as vehicle detection, metal detection and low-cost orientation applications.

All-in-one . . .

PNI's MicroMag product family incorporates 2 or 3 SmartSens magneto-inductive sensors and PNI's ASIC or MagIC controller on a single PCB, to provide a complete magnetic field sensing solution. The SPI interface provides an output signal which is inherently digital with best-in-class resolution and noise immunity; and, it can be fed directly into a microprocessor, eliminating the need for additional signal processing. Additionally, MicroMag products offer twice the field measurement range of competitive technologies, which allows for superior performance in the presence of magnetic distortions.



...for magnetic field sensing applications.

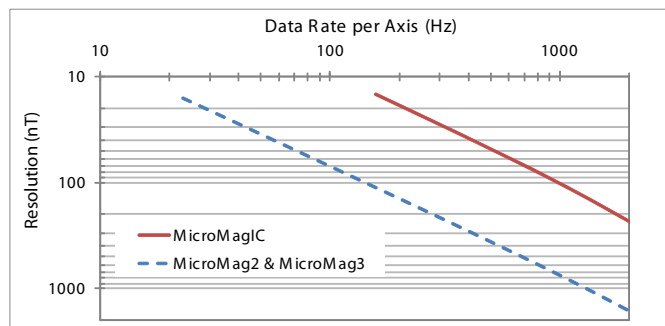
The MicroMag family consists of three models. The MicroMag2 and MicroMag3 are 2-axis and 3-axis models, respectively, for compassing or other magnetic field sensing applications. The MicroMagIC is a 3-axis product incorporating PNI's MagIC high-speed ASIC controller, and is ideal for applications such as video gaming and remote device control that require high refresh rates. All are available as evaluation kits that include the MicroMag module plus a communication board, cable, and evaluation software.

Specifications¹

	MicroMag2	MicroMag3	MicroMagIC
Axes Measured	X & Y	X, Y, & Z	
Communication Interface	SPI Protocol		
Field Measurement Range	-11 Gauss to +11 Gauss		
Linearity, over ± 200 mT	0.6% over $\pm 200 \mu\text{T}$		
Average Current Per Axis (PS=1024)	0.6 mA rms @ 8 Hz		3.6mA @ 35Hz
Idle Current	<1 μA rms		55 μA rms
Temperature Range	Operation	-20°C to +70°C	-40°C to +85°C
	Storage	-40°C to +85°C	
Mounting Method	SMT ²	Through-Hole Pinout	
Footprint [mm]	11.9x15.2 ²	25.4 x 25.4	27.9 x 31.8

1. Specifications are typical values

2. MicroMag2 also available on carrier board with same dimensions and mounting method as MicroMag3



Ordering Information

	MicroMag2	MicroMag3	MicroMagIC
Module Part #	11594	12349	12800
Module on Carrier Board Part #	11709	NA	NA
Evaluation Kit Part #	90023	90024	90032

For detailed ordering information and most current specifications, please visit www.pnicorp.com

SmartSens MicroMag

Magnetic field sensing modules



LOW POWER



HIGH RESOLUTION



2-AXIS



3-AXIS

PNI MAGNETO-INDUCTIVE POSITION SENSORS can tell you if something is up or down, sideways or facing east. They can tell you where in space your handheld is. They can track movement... whether you've moved across a screen or down a ravine. They're reliably accurate underwater, in space, in a car, and at extreme temperatures — all with pin-point accuracy, and using far less power than other technologies.

PNI uses the existing power of the earth's magnetic field to detect position, applying its patented Magneto-Inductive technology in each of its proprietary sensors and modules.

Many of today's leading companies are using PNI technology in their marquee products and across a wide spectrum of applications, including compassing, surveying equipment, sonar, robotics, vehicles and oceanography equipment.