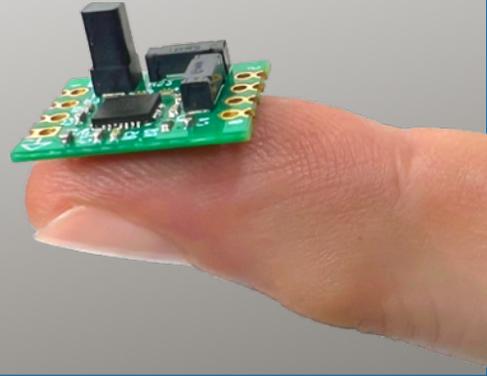


May 2024

## RM3100-CB

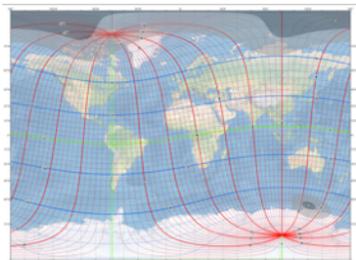
compact board-mounted magnetometer

The building block to navigate effectively *without GPS*



Ruggedized to **withstand extreme vibration**, it offers the benefits of the RM3100 on a tiny, easy-to-handle board for quick and simple installation.

**Getting accurate navigation and position data** to augment or supplant GPS depends on having highly accurate and stable magnetic field measurements to begin with.



**Start with the right magnetometer** Unlike other COTS (Commercial Off the Shelf) magnetic sensors, the RM3100-CB magnetometer has **over 23 times better resolution and 33 times less noise** resulting in far more precise data outputs.

**Most Discriminating.** The RM3100-CB can detect fields as low as 2.7 nT at 1Hz, with a noise floor of 4pT/ $\sqrt{\text{Hz}}$  at 1Hz. It also has a linear response over a range of 100,000 nT. It's

been tested for various environmental conditions, such as thermal shock,



mechanical shock, radiation, and thermal cycles, and has shown strong performance and stability.

**Great for space.** RM3100-CB is ideal for use in situations which involve significant vibration including space



launches. Using the MIL-STD-810H test method 514.8 for general transportation ruggedness, the RM3100-CB magnetometer has demonstrated robustness

against intense vibration at 50gs rms.

**Plays well with others:** The RM3100-CB delivers impeccable signal-to-noise, drift-free, precise magnetic field measurements, ideal for underwater, ground, air, and space applications. It delivers pinpoint resolution with low power, low mass, small size and large dynamic range. Its components are working in over tens of millions of devices worldwide, and are



trusted by leading military and commercial companies for use in key equipment.

For more information, please visit [www.pnicorp.com/RM3100-CB](http://www.pnicorp.com/RM3100-CB)

# Technical Specifications



**Easy Installation:** The RM3100-CB has I2C and SPI interfaces for system design flexibility and connects easily to Arduino, Raspberry Pi, and other microcontroller boards.

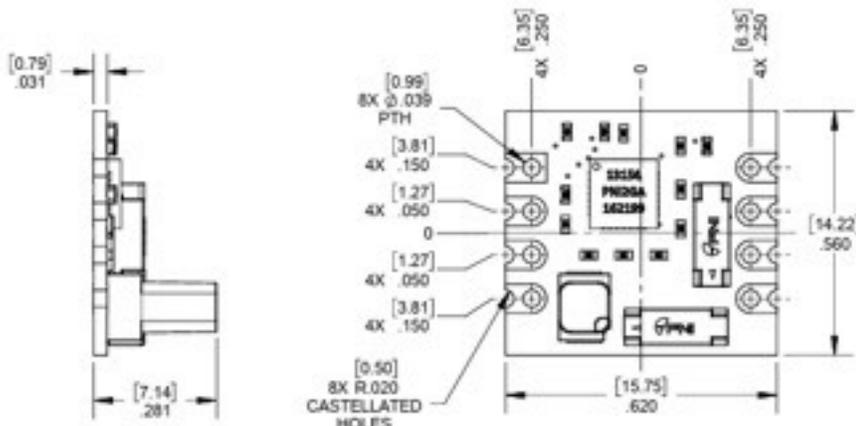
## About PNI

PNI is a positioning and navigation product and technology company that provides highly accurate, precise position and navigation data to systems using proprietary sensors, algorithms and Edge AI.

Building on decades of patented sensor and algorithm development, PNI offers the industry's highest-performance geomagnetic sensor in its class, location and motion coprocessors, high-performance modules, sensor fusion algorithms, and complete sensor systems.

US-based PNI has worked with many notable companies serving the DOD and is experienced in meeting the high standards of the military sector. PNI was selected as the 2023 XTech/ Search 7 winner.

Sensitivity	13nT
Noise	15nT
Linearity over +/- 200 uT	0.5%
Field Measurement Range	+/- 1100 uT
Current @ 8Hz, 3 Axes	260 uA
Interface	SPI and I <sup>2</sup> C
Operating Temperature	-40°C to +85°C
Size (L x W x H) mm	14.22 x 15.75 x 7.1



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