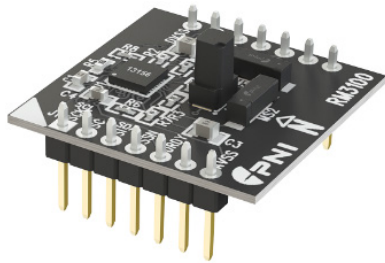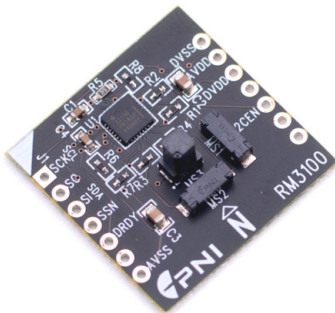# Product Catalogue
Digital Compass Modules

RM3100 Evaluation Board

The RM3100 Evaluation Board integrates PNI's magnetic sensors and MagI2C ASIC onto a single PCB. The Evaluation Board includes header pins for easy mounting.

RM3100 Breakout Board

PNI's RM3100 Breakout Board integrates PNI's 3-axis industry-leading magnetic sensor suite and MagI2C ASIC on a single PCB. This allows for easy testing and evaluation of our patented high-performance magnetic sensors.

TargetPoint-TCM

TargetPoint TCM is a new product that incorporates magnetometers, accelerometers and gyroscopes for unmatched performance in real-world conditions. It features optional DMC or AHRS mode with magnetic anomaly rejection, new and improved user calibration for higher accuracy, and supports PNI's TCM and TRAX family interface protocols.
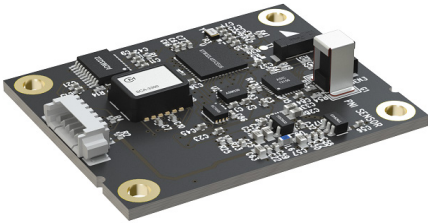
TRAX2

TRAX2 is the only orientation module that provides two different modes: AHRS or digital compass. TRAX2's dual-mode capability supports a wide range of applications including drones, robotics, ocean buoys, manned and unmanned vehicles, among others.
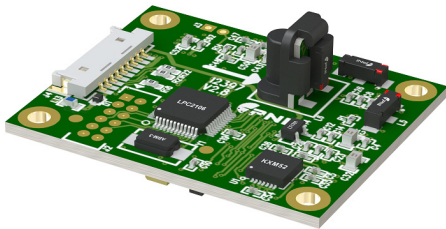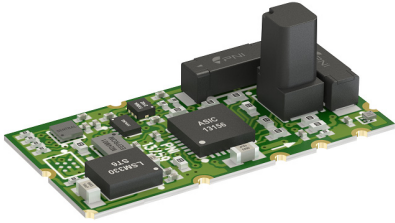
TCM-XB

TCM-XB is a high-performance, low-power consumption, tilt-compensated electronic 6-axis digital compass module with 0.3° RMS heading accuracy. It incorporates PNI's advanced magnetic distortion compensation and calibration scoring algorithms to provide industry-leading heading accuracy.

TargetPoint-SX

TargetPoint-SX provides better heading accuracy and offers magnetic anomaly rejection.

UNITRONIC GmbH
Hellersbergstraße 10a
41460 Neuss

Telefon 02131 – 7529180
Telefax 02131 – 75291850
info@unitronic.de

M&M Module

For system designers looking for accurate motion tracking and Android sensor outputs, PNI's 9- and 10-axis motion and measurement modules are small form-factor boards that integrate PNI's high performance magnetic sensors, its low-power motion coprocessors with embedded sensor fusion algorithms and MEMS motion sensors.
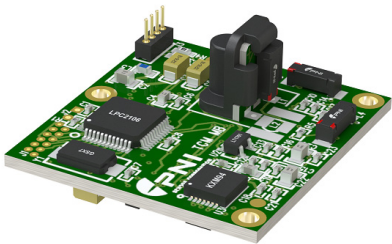
TCM-MB

TCM-MB offers the same features and accuracy as the TCM-XB in a smaller footprint with TTL output.
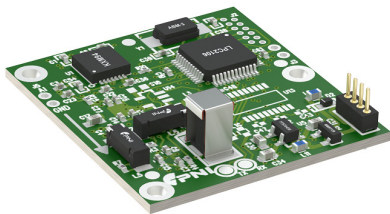
PRIME

PNI's Prime provides pitch, roll, and compass heading everywhere, including where GPS is compromised or unavailable, such as underwater, underground, beneath bridges, or inside buildings

UNITRONIC GmbH
Hellersbergstraße 10a
41460 Neuss

Telefon 02131 – 7529180
Telefax 02131 – 75291850
info@unitronic.de

Sensor High Performance Module Summary

UNITRONIC ///

	TCM-XB	TCM-MB	TargetPoint TCM	TargetPoint SX	Prime	Prime TTL	TRAX2
Heading Accuracy (full range calibration)	< 0.3° rms	< 0.3° rms	< 0.25° rms	< 0.25° rms	1° rms	1° rms	< 0.3° rms (compass) < 2° rms (AHRS)
Tilt Accuracy	< 0.2° rms	< 0.2° rms	< 0.2° rms	< 0.2° rms	1° rms	1° rms	0.2° (compass) 2° (AHRS)
Average Current Draw (max sample rate/ 8 Hz sample rate)	20mA / 16mA	17mA / 13mA	17mA / 13mA	11mA	18mA	18mA	20 mA
Sleep Mode Current Draw	0.1 mA	0.1 mA	0.5 mA	0.7 mA	0.25 mA	0.25 mA	0.5 mA
Supply Voltage (regulated/unregulated)	3.8 - 9 VDC	3.3 - 9 VDC	3.7 - 9 VDC	4.5 - 5.5 VDC	3.6 - 5 VDC	3.15 - 6.5 VDC	3.7 - 8 VDC
Communication Interface	RS232 UART	CMOS/TTL UART	TTL UART	Serial Port, 5V TTL	Binary RS232	CMOS/TTL UART	RS232/TTL UART
Time to Retrieve Data (initial power up/ sleep mode)	210ms / 80ms	210ms / 80ms	210ms / 80ms	210ms / 80ms	<180 ms / <60ms	<180 ms / <60ms	210ms / 80ms
Maximum Sample Rate Hz	~30	~30	~30	20	10	10	~30
Dimensions (L x W x H) mm	35 x 43 x 13	35 x 43 x 13	33 x 31 x 13.8	33 x 31 x 13.5	33 x 31 x 13	33 x 31 x 13	35 x 43 x 8.4
Weight gm	6.8	5.3	15	17	5	5	7
Operating Temperature	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C