

The all-in-one coprocessor that meets Marshmallow's sensor demands

SENtral A2
SENSOR FUSION COPROCESSOR for ANDROID™

SENtral-A2™ is the newest member of PNI's SENtral® Sensor Fusion Coprocessor product family.

SENtral-A2 is a tiny, ultra-low power coprocessor that offers the most expansive algorithm feature set and development framework of any product of its kind. Freeing designers from the burden of algorithm creation, SENtral-A2 gives wearables and smartphones designers a faster way to give consumer more personalized, contextual experiences with their devices.

Algorithm Context Framework – enables customer-specific feature extraction for activity, context and gesture, speeding design-to-delivery of new applications.

Support for Google CTS (Compatibility Test Suite) – SENtral-A2 successfully runs Google CTS, the test suite guarantees Google Android apps will run on a mobile device.

More On-Board Memory – allows designers to add more algorithms and batch more data.



Small Size – a 1.7mm x 1.7mm chip, SENtral-A2 is pin compatible with earlier versions of SENtral.

Ultra-low Power – routinely runs over 140,000 floating point operations per second at $\approx 200\mu\text{Amps}$; average current consumption at 1.8V



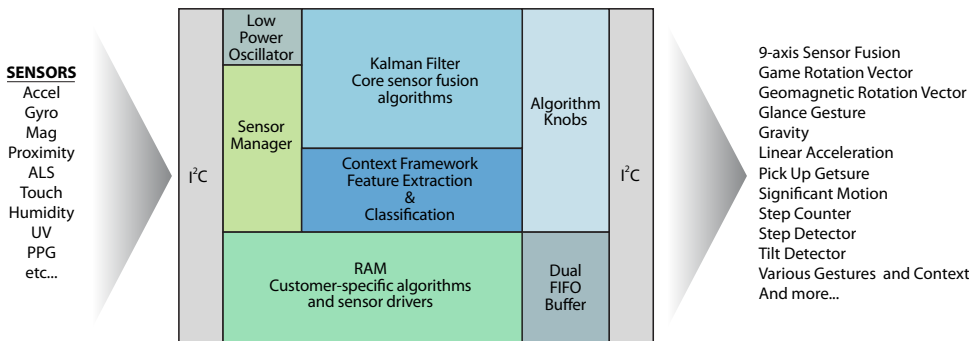
Performance specifications*

Heading Accuracy	2° RMS	
Max Data Output Rate	200 Hz (simultaneous output)	
Outputs	<ul style="list-style-type: none"> • Accelerometer, Magnetometer, Gyroscope • Orientation (azimuth / pitch / roll) • Rotation Vector (9DOF) • Game Rotation Vector (Accel+ Gyro) • Geomagnetic Rotation Vector (Mag+Accel) • Linear Acceleration • Step Detector • Step Counter • Significant Motion • Tilt Detector • Context - Walk, Jog, Run, Still • Context - Bicycle, Vehicle • Pick Up Gesture 	
Current Consumption	9-axis sensor fusion	<150 µA at 7Hz Kalman Update Rate Mag @ 7Hz Accel @ 100 Hz Gyro @ 95 Hz
	Standby	5 µA
Dimensions	1.7 x 1.7 x 0.5 mm	
*subject to change		

-  **9-AXIS (3:3:3)**
-  **MARSHMALLOW 6.0 OPTIMIZED**
-  **LOW POWER**
-  **HIGH RESOLUTION**

PNI SENSOR

is the leader in the exacting science of producing pinpoint location, heading and orientation technology for the consumer, military, and scientific communities. Building on decades of patented sensor and algorithm development, PNI offers highly accurate geomagnetic sensors and sensor fusion technology. Its products are used in consumer electronics, including the Wii U Game Pad, and robotics, surveying, navigation and automotive applications across the globe. To learn more, please visit www.pnicorp.com.



Availability

Please contact sales@pnicorp.com.