SPACEPOINT
9-axis sensor system

standard motion
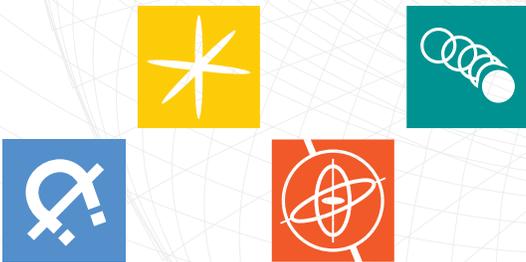pointing systems

SPACEPOINT

THAT'S THE
POINT, EXACTLY.

Build a remote control with 9-axis Exact Gesture Responsiveness™ – and get no loss, lag or latency.

New gesture-controlling sensor systems for TVs and set-top boxes are on their way. Because of the exponential increase in on-screen content offerings, customers need more responsive ways to navigate than those offered by the old Up-Down-Left-Right sequential buttons.

SpacePoint with Exact Gesture Responsiveness™ is the first 9-axis sensor system that eliminates the inaccuracy of 6-axis systems, and delivers and maintains absolute pointing accuracy at all times. **No lag,** no getting lost off screen. No trailing off. No interruptive recalibrations. And **no magnetic anomalies.**

SpacePoint with EGR follows the movement of handheld devices, exactly.

PNI
SENSOR CORPORATION
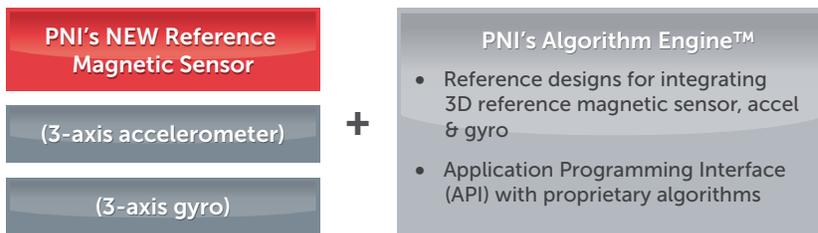
SPACEPOINT
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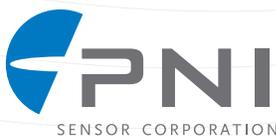
Real control is in your hands.

In use, 6-axis gesture-control systems have notable flaws. Point a 6-axis sensor-based device offscreen, and the pointer gets lost. Point it to an onscreen target, and it drifts off or points out of alignment. It lags behind when you move the pointer. It needs resetting. It leaves your users feeling frustrated and hamstrung. To get it to work right, a user has to "recalibrate." And your customer service department gets a whole new set of headaches.

SpacePoint with EGR™ — that's the point, exactly.

SpacePoint outputs Exact Gesture Responsiveness™ data using three separate 3-axis sensors, fused by the proprietary Point-Tracking Engine software — which **autocalibrates and maintains accurate heading** at all times. Proprietary Kalman-filtered algorithms fuse the gyro and accelerometer outputs with precise directional data from the PNI Reference Magnetic Sensor, delivering instant heading and orientation and **eliminating loss, lag and latency**.

And unlike other 9-axis sensor systems, **SpacePoint is impervious to magnetic interference,** keeping pointers on track through all kinds of environments.

9-AXIS (3:3:3)

MAGNETIC IMMUNITY

MOTION TRACKING

LOW LATENCY

PNI's NEW Reference Magnetic Sensor	+	PNI's Algorithm Engine™
(3-axis accelerometer)		• Reference designs for integrating 3D reference magnetic sensor, accel & gyro
(3-axis gyro)		• Application Programming Interface (API) with proprietary algorithms

The SpacePoint 9-axis sensor system consists of 3 separate sensors that are driven by PNI's Algorithm Engine for Exact Gesture Responsiveness.

A complete SpacePoint® 9-axis sensor system requires:

- Three 3-axis sensors
  - PNI's new patented Reference Magnetic Sensor RM3000*
  - A 3-axis accelerometer
  - A 3-axis gyro
- SpacePoint's Algorithm Engine software, including hardware reference design and Application Programming Interface (API) with proprietary algorithms*

  * available only from PNI

FEATURES

- One-piece solution: no need to install a sensor bar or camera

- Absolute accuracy with very low latency: below human perception

- 9 axes of motion tracking: 3-axis magnetometer, 3-axis gyroscope, 3-axis accelerometer

- Proprietary Kalman filtering algorithms to fuse sensor outputs into reliable orientation data

- Point-Tracking Engine outputs are quaternion, Hpos, Vpos

- Available as a complete system or separately as individual components for easy integratoin into controllers and systems.

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

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PNI SENSOR CORPORATION is America's leader in the exacting science of making complex inertial sensors work together in small consumer devices. Building on decades of patented research, PNI offers today's most reliable integrated sensor systems, enabling pinpoint accurate heading and pointing applications unencumbered by magnetic distortion and gyro drift.

Serving a demanding, wide-ranging list of industries (including such clients as the US Military, General Motors, Ford and iRobot), PNI's U.S. based team of physicists, engineers, researchers and quality control experts can help speed your time to market and ensure marketplace success with algorithm and application support. Nimble and responsive, PNI offers a multitude of sensors and the sensor engineering talent to help integrate them into the next mobile, gaming or personal computing device.

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