Trusted Positioning delivers continuous, accurate, affordable positioning and navigation platform solutions using ADI's *i*Sensor MEMS inertial sensing technology

Trusted Positioning
Positioning Everywhere

Trusted Positioning's inertial/wireless navigation software platform solves a fundamental problem with many of today's navigation and positioning systems: the ability to have continuous, accurate, and affordable capabilities that support GPS-challenged applications deployed indoors or in urban outdoor environments. Trusted Positioning targets machine control and guidance applications that would benefit from the improved performance realized by integrating an affordable inertial system, or applications currently using expensive high grade inertial systems such as FOGs (fiber optic gyroscopes) that may tolerate a performance allowance of about 20% in exchange for a solution that is a fraction of the cost. The product portfolio utilizes wireless systems, such as global navigation satellite systems (GNSS) or WiFi, and Analog Devices MEMS inertial sensing technology.

The company's trusted vehicle navigator (T-VN) and trusted machine navigator (T-MN) products utilize Analog Devices ADIS16485 *i*Sensor® MEMS inertial measurement unit (IMU) for highly precise motion measurement. Even in locations where GPS is unavailable or interrupted, a continous flow of accurate positioning data is maintained, closing the performance gap between the capabilities afforded by expensive fiber optic gyroscopes (FOGs) and more cost-effective MEMS inertial sensing technology.

The ADIS16485 MEMS IMU offers a complete inertial sensing system that includes a tri-axis digital gyroscope (±450°/sec dynamic range, <±0.05° orthogonal alignment, 6°/hr in-run bias stability) and a tri-axis digital accelerometer (±5 *g*), combining ADI's industry-leading MEMS technology and signal conditioning expertise for optimal dynamic performance. Factory calibration characterizes each sensor for sensitivity, bias, alignment, and linear acceleration effect to yield dynamic compensation formulas that provide highly accurate sensor measurements.

The ADIS16485 offers a simple, cost-effective, highly integrated motion measurement solution as compared with the complexity and investment associated with a discrete components design. The ADIS16485's tight orthogonal alignment simplifies the inertial frame alignment for Trusted Positioning's systems, and the SPI and register structure provide a simple interface for data collection and configuration control, reducing overall design complexity considerably.

"The ADIS16485 *i*Sensor MEMS IMU enables Trusted Positioning to provide customers uncompromising precision and performance for their unique positioning and navigation applications—at a more affordable cost than with high end FOGs."

Chris Goodall, CEO/CTO, Trusted Positioning Inc.