PRESS RELEASE

For immediate publication

Movella Adds Visual Inertial Odometry Through Partnership with Fixposition

- *New Xsens Vision Navigator module is the first vision-enabled inertial navigation product to result from the Fixposition partnership*
- *Xsens Vision Navigator provides outstanding positioning and heading performance even in GNSS-deprived areas*

Enschede, The Netherlands – **02 December 2022** – Movella™, a leading full-stack provider of sensors, software, and analytics that enable the digitization of movement, has formed a partnership with precise positioning sensor manufacturer Fixposition (www.fixposition.com) to accelerate the development and commercialization of GNSS inertial navigation sensors that implement visual inertial odometry.

Fixposition has pioneered the implementation of visual inertial odometry in positioning sensors, while Movella is a world leader in inertial navigation modules. Movella has today introduced the first product to emerge from the partnership between the two companies: the Xsens Vision Navigator, available worldwide immediately, integrates position inputs from three high-accuracy sources:

- Dual-antenna RTK GNSS receivers which can receive signals from all constellations
- Inertial measurement unit incorporating a three-axis accelerometer, three-axis gyroscope and magnetometer
- Visual inertial odometry system

The Xsens Vision Navigator can also optionally accept inputs from an external wheel speed sensor. This positioning sensor achieves centimeter-level accuracy when operating in GNSS mode with an RTK fix. When deprived of GNSS signals, the Xsens Vision Navigator alone achieves class-leading accuracy of 2% of travel distance, or just 0.75% when supplemented by wheel speed. In open field, orientation accuracy is 0.4 degree with one meter baseline between two GNSS antennas, and velocity measurements are accurate to ±0.05m/s. This high performance with and without GNSS signals makes the Xsens Vision Navigator ideal for outdoor positioning applications such as:

- Materials handling equipment
- Commercial and specialist vehicles
- Last-mile delivery
- Inspection equipment
- Inspection Drones
- Agricultural equipment
- Mining and construction equipment

Existing GNSS-enabled Xsens modules such as the MTi-680G use dead reckoning in GNSS-deprived areas to maintain accurate positioning data. Fixposition's visual inertial odometry technology complements this positioning, producing very low drift over time, and excellent dead reckoning results over distance.

Peter Xie, Vice President of Sensor Modules at Movella, said: "The combination of Fixposition's visual technology with the outstanding Xsens IMU and GNSS+RTK performance gives extremely high dead reckoning performance in any outdoor application that has to operate in the temporary absence of, or degraded, GNSS signals. Additional vision-enabled Xsens inertial navigation products are in development and are scheduled for release in 2023. We are very excited to work with Fixposition to add this new vision-based inertial navigation module product family to address fast growing applications such as vehicle and robot automation".

Zhenzhong Su, CEO of Fixposition, said: "The partnership brings together the combination of the quality and reputation of the Xsens range of inertial sensor modules with Fixposition's vision fusion technology that helps to remove the time-accumulated drift in inertial navigation system. We believe this allows Fixposition to expand its market reach much faster by aligning with Movella's extensive global sales channels and market reach."

System developers can evaluate the Xsens Vision Navigator now with the Xsens Vision Navigator Starter Kit (part number XVN-090D-1A-SK), which is available worldwide directly from Movella or from any authorized distributor of Xsens products. The kit includes an Xsens Vision Navigator in its enclosure, an aluminum mounting system with suction cups, two dual-band GNSS antennas, a Wi-Fi® radio antenna, power, Ethernet, I/O and antenna cables, and a battery with charger.

To enquire about the Xsens Vision Navigator module or Starter Kit, contact sales@movella.com or any authorized distributor.

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About Movella

Movella™ is a leading global full-stack provider of integrated sensors, software, and analytics that enable the digitization of movement. Our solutions accelerate innovation and enable our customers, partners, and users to create extraordinary outcomes. Movella powers real-time character movement in digital environments, transforms movement into digital data that provides meaningful and actionable insights, renders digitized movement to enable the creation of sophisticated and true-to-life animated content, creates new forms of monetizable IP with unique biomechanical digital content, and provides spatial movement orientation and positioning data. Partnering with leading global brands such as Electronic Arts, EPIC Games, 20th Century Studios, Netflix, Toyota, and Siemens and over 2,000 customers in total, we currently serve the entertainment, health and sports, and automation and mobility markets.

To learn more, visit https://www.movella.com.

About Fixposition

Fixposition™ is a Swiss company developing high-precision global positioning products, combing computer vision techniques and satellite navigation to deliver accuracy in open field and in GNSS challenging environments. The technology is a key enabler for the mass-market adoption of autonomous solutions. Fixposition provides "Precise Global Position Everywhere™".
More at www.fixposition.com

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