Trimble's Compact GNSS Board Adds Flexibility and High-Precision Positioning to Unmanned Aerial Systems

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SUNNYVALE, Calif., Oct. 23, 2019 /PRNewswire/ -- Trimble (NASDAQ:TRMB) introduced today a compact, high-precision Global Navigation Satellite System (GNSS) board specifically designed for unmanned aerial systems (UAS)—the Trimble® UAS1. The board's simple connectivity and configuration allow UAS system integrators to easily add satellite-based positioning—with the ability to upgrade its capabilities—using rugged connectors and Trimble's easy-to-use software interface.

The new UAS1 incorporates the latest Trimble Maxwell™ technology with advances in high-precision GNSS positioning. The GNSS engine with 336 channels is capable of tracking L1/L2 frequencies from the GPS, GLONASS, Galileo and BeiDou constellations for robust centimeter-level, real-time kinematic (RTK) positioning.

The compact Trimble UAS1 board includes a broad range of receiver capabilities—from high-accuracy GPS only to full GNSS features for positioning. Firmware options and features are password upgradeable, allowing functionality to be added as requirements change. The receiver also supports Fault Detection and Exclusion (FDE) and Receiver Autonomous Integrity Monitoring (RAIM). System integrators also have the ability to detect interference with the included RF Spectrum Monitoring and Analysis tool embedded in the receiver.

"UAS manufacturers demand high performance, reliability and high-quality customized support for their positioning solutions," said Thomas Utzmeier, general manager of Trimble's Integrated Technologies Division. "The new UAS1 board delivers the latest GNSS technology in an easy-to-integrate form factor for UAV / UAS applications."

Designed for easy integration and rugged dependability, the Trimble UAS1 has a Remote Network Driver Interface Specification (RNDIS) that enables manufacturers to access the web UI with the USB connector. As with similar Trimble embedded boards and modules, easy-to-use software commands can simplify integration and reduce development times. Features also include integrated Trimble RTX® technology, an industry-standard camera hot-shoe interface to geo-position photographs and LED indicators for status checks. The Trimble UAS1 can also output to RINEX, a common post-processing format.

The Trimble UAS1 supports Trimble CenterPoint® RTX GNSS corrections, which enable precise and robust positioning without the use of a base station via a subscription service. CenterPoint RTX allows users to achieve better than 2 centimeter horizontal and 5 centimeter vertical accuracy.

Trimble's UAS1 is ideal for UAS applications requiring centimeter accuracy in a small package. Manufactured and tested to Trimble's highest quality standards, the compact design allows for easy setup, configuration and installation in a customers' system. Using a full metal shield (71mm x 46mm x 13mm form factor), the board's design enables high-precision GNSS signal protection from electromagnetic interference (EMI) on the host UAS platform. In addition, the receiver is FCC and CE certified, which speeds compliance for the customer's overall system and can reduce time to market.

The Trimble UAS1 is available now through Trimble's Integrated Technologies Precision GNSS Sales Channel. For more information, visit: www.trimble.com/Precision-GNSS/UAS1-Board.

About Trimble Integrated Technologies

Trimble's Integrated Technologies Division provides high-precision OEM GNSS modules for positioning and navigation solutions that serve a broad range of applications such as land and marine surveying, dredging, meteorology, transportation, asset tracking, oil and gas research, ground vehicle navigation and other geopositioning/georeferencing applications. Easy to integrate radio and high-precision GNSS modules offer OEMs and system integrators the ability to differentiate their products and gain a competitive edge in the marketplace. For more information, visit: https://www.trimble.com/Precision-GNSS.

About Trimble

Trimble is transforming the way the world works by delivering products and services that connect the physical and digital worlds. Core technologies in positioning, modeling, connectivity and data analytics enable customers to improve productivity, quality, safety and sustainability. From purpose built products to enterprise lifecycle solutions, Trimble software, hardware and services are transforming industries such as agriculture, construction, geospatial and transportation and logistics. For more information about Trimble (NASDAQ:TRMB), visit: www.trimble.com.

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