Trimble Introduces GNSS Inertial Boards for High Precision Applications

Trimble has introduced a new family of Trimble BD GNSS boards for high-precision guidance and control applications. The BD boards' connectivity and configuration allow system integrators and OEMs to easily add GNSS positioning and orientation—with the ability to upgrade its capabilities—using the same board footprint, connectors and software interface for specialised and custom hardware solutions.

The boards include a broad range of receiver capabilities, from high-accuracy GNSS only to full GNSS-Inertial features for positioning and 3D orientation. Firmware options are upgradeable, allowing functionality to be added as requirements change. Product manufacturers in markets such as unmanned aerial vehicles (UAVs), autonomous vehicles, fleet management and aviation now have the ability to offer customers an extensive range of capabilities to meet all their needs.

The low-power BD family of boards includes the BD940 GNSS and GNSS-Inertial boards and all new top-of-the-line BD990 GNSS, GNSS-Heading and GNSS-Inertial boards, enabling customers to choose the most appropriate receiver for their applications. In addition, the BX940 and BX992 are available in a rugged enclosure for applications used in harsh environments.

Integrating Trimble RTX technology, which enables precise and robust location worldwide without the use of a base station, the BD boards are ideal for flexible positioning. It also enables users to subscribe to a complete portfolio of real-time correction services that deliver varying levels of accuracy depending on the user's application requirements.

By integrating inertial sensors onto the GNSS boards, users can experience more robust performance in a variety of challenging environments such as urban canyons, tunnels, heavy canopy or other GNSS-denied environments. Robust centimetre-level, real-time kinematic (RTK) positioning is achieved through the combination of multi-frequency GNSS—full triple-frequency support of all available GNSS satellite constellations—and onboard inertial sensors. System integrators and OEMS also have the ability to detect interference with the included RF Spectrum Monitoring and Analysis tool embedded in the receiver. The GNSS engine with 336 channels is capable of tracking L1/L2/L5 frequencies from the GPS, GLONASS, Galileo and BeiDou constellations.

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