

Industry news and developments | GPS | Galileo | GLONASS

» UAVS



▲ Parrot's quadcopter Bebop Drone has Furuno inside.

Furuno Receiver Adopted for Parrot Bebop

Furuno Electric Co.'s latest multi-GNSS receiver module, GN-87, has been adopted for the new quadcopter Bebop Drone, made by Parrot SA. The GN-87 can receive GPS, GLONASS, SBAS and QZSS concurrently, which significantly improves positioning success rate and robustness against interferences by using different frequency bands, Furuno said.

Parrot Bebop Drone, equipped with a 14-megapixel fisheye lens camera, takes video and pictures in a 180-degree field. The drone integrates mechanical and digital systems, like shock absorbers that cushion engine vibrations and algorithms for three-axis image stabilization, meaning that the angle of the view remains fixed without distortion, regardless of the inclination of the drone and movement caused by turbulence. The combination of numerous sensors gives the drone impressive stability and great maneuverability when piloted via Wi-Fi with a smartphone and a tablet, or with its Wi-Fi extender, Parrot Skycontroller.

Furuno's GN-87 supports sensing for autonomous flying according to flight routes preset on the map application by user, automatic return to takeoff position, and recording flight-path data for 3D modeling on a Parrot Academy map. According to Parrot, selecting Furuno's GN-87 multi-GNSS receiver module enabled simple integration with a high-performance GNSS receiver module while guaranteeing high quality and high volume supply availability.

Phantom 3 Equipped with Indoor Positioning

DJI's new Phantom 3 comes in two variations, Professional and Advanced, both of which provide greater control and creative options than the Phantom 2.

Both Phantom 3 versions feature the strongest professional control features DJI has developed so far. Using DJI's Visual Positioning system, the Phantom 3 can hold its positioning indoors without GPS and can easily take off and land with the push of a button. With Vision Positioning technology, visual and ultrasonic sensors scan the ground beneath the Phantom 3 for patterns, enabling it to identify its position and move accurately.



▲ DJI held three simultaneous events on April 8 in London, Munich, and New York to mark the release of the Phantom 3.

» SURVEY

NovAtel Launches Relay RTK Radio Module

NovAtel's new Relay RTK radio module is a docking station that provides radio connectivity for its SMART6-L L-band capable GNSS receiver.

The Relay RTK module combined with NovAtel's SMART6-L receiver creates a compact, easy to integrate positioning solution, NovAtel said. It is available in four radio versions:



400 MHz UHF licensed band; 900 MHz UHF unlicensed band; HSPA (3G) cellular; and CDMA (1xRTT/

EV-DO) cellular. The CDMA version is approved for use on the Verizon cellular network.

The 400 MHz and 900 MHz versions support both base and rover configurations. The base station is configured via the web-server/Wi-Fi access point using the web browser on a personal computer, tablet or smartphone. The cellular radio versions support reception of NTRIP and RTK corrections over the cellular network.

» SURVEY & MAPPING

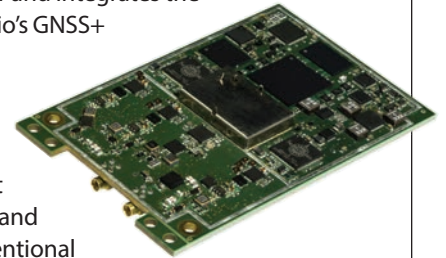
SBG Systems Selects Septentrio AsteRx4 for Apogee Series

SBG Systems has selected the Septentrio AsteRx4 OEM GNSS receiver to equip its Apogee product line.

Apogee is a new product line of high-accuracy inertial navigation systems based on robust and cost-effective MEMS technology. The INS/GNSS solution combines the latest generation of MEMS sensors and the OEM version of the AsteRx4, a newly introduced high-precision GNSS receiver from Septentrio. The Apogee series is suitable for applications such as hydrography, mobile mapping and aerial survey where survey-grade positioning measurements are required.

Introduced in April, the AsteRx4 OEM is a multi-frequency and multi-constellation dual-antenna receiver

that incorporates the latest innovative GNSS tracking and positioning algorithms from Septentrio. The AsteRx4 is scalable to 1 centimeter and integrates the entire suite of Septentrio's GNSS+ algorithms to maintain tracking during heavy vibration of machines. This assures position accuracy under difficult ionosphere conditions and mitigates or rejects intentional or unintentional interference with GNSS signals.



▲ SEPTENTRIO'S AsteRX4 OEM

» MARINE / SURVEY

Hemisphere GNSS Offers RTK-Capable Antenna

Hemisphere GNSS is offering a new RTK-enabled Vector V320 GNSS compass. The Vector V320 smart antenna supports multi-frequency GPS, GLONASS, Galileo (future firmware upgrade required) and BeiDou, and Hemisphere GNSS says it's "the first of its kind."

Designed for the professional marine and marine survey markets, the Vector V320 is the a multi-frequency, multi-GNSS, all-in-one smart antenna capable of both RTK-level positioning accuracy and better than 0.2-degree heading accuracy in a simple-to-install package.



The Vector V320 is the latest in a line of GPS/GNSS compasses, including the multi-frequency, multi-GNSS Vector VS330 receiver as well as the Vector V102, Vector V103 and Vector V104 compass smart antennas.

» MARINE / SURVEY

Applanix Offers Three New Marine Products

Applanix has expanded its portfolio of marine georeferencing and motion compensation products. The new line-up offers high-performance solutions to a broader cross-section of the hydrographic survey industry.

All Applanix Marine products benefit from the optimal integration of GNSS and inertial observables, with access to Trimble GNSS technology for performance advantages. The entry-level POS MV SurfMaster incorporates Applanix's proprietary SmartCal inertial calibration techniques to deliver robust georeferencing for small platforms, both manned and unmanned. SurfMaster is fully supported by Applanix' post-processing software POSpac MMS, and can deliver roll and pitch accuracy to 0.03 degrees, regardless of latitude or rate of vessel motion. The POS MV WaveMaster II and POS MV OceanMaster use newly developed inertial technology.



▲ THE POS MV SurfMaster.

» AVIATION

Cobham Aeroflex Tester Used for ADS-B

Cobham AvComm, formerly the Aeroflex AvComm business unit, has introduced the ATC-5000NG NextGen ATC/DME Test Set. Designed for engineering development, design validation, manufacturing and return-to-service test applications, the ATC-5000NG is the replacement product for the legacy SDX-2000 and the ATC-1400A/S-1403DL. The software-defined radio architecture supports more transponder RTCA DO-181E test capability than the legacy products did and

has new capability needed to support the Federal Aviation Administration's NextGen test requirements including ADS-B (RTCA DO-260B) and UAT (RTCA DO-282). ADS-B is the Automatic Dependent Surveillance-Broadcast for next-generation (NextGen) aircraft navigation.



BUSINESS BRIEFS

U.S. Navy to Deploy Underwater Drones from Subs

The U.S. Navy plans to deploy underwater drones from submarines later this year. Rear Adm. Joseph Tofalo, director of undersea warfare, said the deployment will include the use of the Remus 600 unmanned underwater vehicles (UUVs) to perform undersea missions around the globe.



Rohde & Schwarz Tests ERA-GLONASS

The Certification Center Svyaz-Certificate in Russia is now using the R&S CMW500 to certify ERA-GLONASS systems. The independent test lab is the only lab in Russia accredited to certify these systems. Effective Jan. 1, 2015, all new car models introduced to the Russian market must be equipped with an automatic ERA-GLONASS emergency call system.

Honeywell Passes Galileo Search-and-Rescue Test

Honeywell's Global Tracking solution has passed the final acceptance test for use on the Galileo search and rescue program by demonstrating dramatically reduced emergency



response times, Honeywell said. Honeywell Global Tracking is working with the Aerospace & Defense division of Capgemini to deliver a high-precision positioning system compatible with the international Cospas-Sarsat standard.

Telit Module Designed for Harsh Environments

Telit Wireless Solutions' new positioning module, the SE868-V3, combines GPS, GLONASS, Beidou, Galileo and SBAS, which enables the creation of high-performance position reporting and navigation solutions. It can track GPS and GLONASS or GPS and Beidou constellations simultaneously and is Galileo-ready.

u-blox Module Supports All Satellites

u-blox is offering the CAM-M8C, a small, low-profile GNSS positioning module with an integrated wideband chip antenna for reception across the entire L1 band. The module offers simultaneous GNSS operation for GPS/GLONASS, GPS/BeiDou, or GLONASS/BeiDou.

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» **EVENTS** For detail, see www.gpsworld.com/events.

6th China Satellite Navigation Conference

May 21–23, Xi'an, China; <http://182.92.190.247/english/about.asp>

GEO Business 2015

May 27–28, London; geobusinessshow.com

HxGN LIVE: Hexagon's International Conference

June 1–4, Las Vegas; hxgnlive.com

TU-Automotive Detroit

June 3–4, Novi, Michigan; www.tu-auto.com/detroit/



Joint Navigation Conference

June 22–25, Orlando, Florida; <http://ion.org/jnc/index.cfm>

IGNSS Society 2015 Symposium & Exhibition

July 14–15, Gold Coast, Queensland, Australia; www.ignss.org

ION GNSS+ 2015

September 14–18, Tampa, Florida; <http://ion.org/gnss/index.cfm>

International Symposium on GNSS 2015

November 16–19, Kyoto, Japan; www.isgnss2015.org