Trimble Acquires UAV Manufacturer Gatewing

Trimble, USA, has acquired privately held Gatewing of Ghent, Belgium, a provider of lightweight unmanned aerial vehicles (UAV) for photogrammetry and rapid terrain mapping applications. The acquisition broadens Trimble's platforms for surveying solutions. Financial terms have not been disclosed. The Gatewing business will be reported as part of Trimbleâ€™s Engineering and Construction segment.

UAVs in combination with photogrammetry are an emerging technology providing an innovative platform for flexible aerial imagery acquisition. Easy to use and flexible, UAVs provide users the ability to create orthophotos and Digital Surface Models (DSM) from aerial imagery for mid-sized areas previously only accessible at higher costs and with longer planning cycles. UAVs are used in a variety of applications including preliminary surveys for corridors and rights-of-way, volumetric surveys, high-level topographic surveys, land fill inspection, and much more.

Gatewing’s solutions include the X100 UAV and Stretchout desktop software for digital image processing and analysis. The X100 is an ultra-light, 2kg (approximately 4.4lbs) class UAV that allows fast and simple image acquisition. It consists of an airframe; an integrated GPS, inertial system and a radio; a 10 megapixel camera; and battery. Using the Trimble Yuma tablet computer, a predefined area is planned and the flight of the UAV is fully automated from launch to landing. The terrain is mapped through parallel flight paths and consecutive, overlapping camera shots during flight. The ground control station (GCS) is used to monitor the mission and allows an on-site image quality check. In addition, the GCS provides the operator with the option to intervene and abort the flight if needed. The image set consists of a number of digital images that are tagged with the GPS coordinates.

Designed to be intuitive and easy to use, Gatewing's Stretchout desktop software uses advanced computer vision technology which automates raw image processing to deliver georeferenced orthophotos and accurate DSM. As an alternative to the desktop software, users can upload images to Gatewing's cloud solution, which automatically processes the images based on the users’ requirements. After a few hours, users can download their georeferenced orthophotos and DSMs from the cloud server including feedback about the results for quality assurance.

Anders Rhodin, director of Trimble’s Survey Business, says that the combination of UAVs and low-altitude photogrammetry as an image collection platform opens up new opportunities for surveyors to use aerial imagery for the rapid acquisition of high-density geospatial data.

Maarten Vandenbroucke, CEO and one of three founders of Gatewing, added that for Trimble to see the value in unmanned aerial systems for surveying and mapping applications means that the industry is truly ready for this new technology: “We are enthusiastic about how UAVs can revolutionise the landscape and open a complete new spectrum in remote sensing applications. I believe that being a part of Trimble will accelerate the pace in which UAVs will further be adopted by professionals."