DELAIR INTRODUCES INDUSTRY'S MOST ADVANCED FIXED-WING UAV FOR LIDAR-BASED AERIAL SURVEYING AND 3D MAPPING

New Delair DT26X LiDAR drone combines LiDAR sensing with RGB camera data to enable highly accurate and high-resolution 3D representation and measurement over large areas with minimal flights and in challenging environments

DENVER, Colo. – February 5, 2018 – Delair, a leading supplier of drone solutions for commercial industries, today introduced the next generation of its high-performance Delair DT26X LiDAR UAV, the industry's first long-range fixed wing drone to combine highly accurate Light Distance and Ranging (LiDAR) sensing capabilities with an integrated high resolution RGB (red, green, blue) camera, dramatically increasing the precision, efficiency and cost effectiveness of surveying and 3D mapping. Details of the new model, which builds on Delair's proven expertise in long distance, BVLOS UAV operations, were revealed at the International Lidar Mapping Forum, in Denver.

Aerial-based LiDAR allows for extremely detailed and accurate collection of elevation data of the ground, even in large and vegetated areas, but is typically performed with specialized, single function platforms or expensive manned aircraft surveys with long lead times. Camera-enabled drones offer a complementary solution for collecting imagery that can augment the LiDAR-based models. Most projects therefore require multiple mapping flights and separate UAVs, with initial missions using LiDAR sensors and subsequent flights equipped with RGB-cameras to enhance the digital rendering. The Delair DT26X LiDAR's combined payload of a lightweight sensor and integrated camera allows the acquisition of LiDAR and photogrammetry data in a single flight, which drastically reduces cost and immediately provides an extremely detailed digital model of the inspected assets. The LiDAR sensor is specifically designed for UAV use, adding little weight or bulk to the Delair frame. The fully-integrated smart RGB camera enables real-time camera sensor control and in-flight photo review with automated quality checks.

The new platform delivers increased accuracy in 3D mapping and modeling of terrain and corridors in challenging physical environments (e.g. mountainous, inaccessible by road or foot, dense vegetation) and with difficult visibility, lighting or weighting conditions. Its long range flying capabilities – allowing coverage of up to

2,400 square acres, communication range of 30 kilometers and 100 minutes of flight time - improve the efficiency of aerial mapping operations over large areas. As a result, the Delair DT26X LiDAR is well suited for uses such as environmental and land surveys, forestry monitoring, infrastructure surveillance, powerline and pipeline inspections, and road and rail construction.

“The combination of a sophisticated LiDAR sensor and an industrial grade RGB camera removes the ‘either/or’ decision of choosing between LiDAR and imagery data acquisition for geospatial professionals. This is the most versatile and cost-effective UAV solution for large area, long range mapping and surveying where accuracy and detail are required,” said Chase Fly, Geospatial Product Manager at Delair. “It provides the precision and visibility required by the most demanding use cases and allows data acquisition and advanced digitization not possible through terrain-based or satellite 3D mapping techniques, or with limited short-range UAVs. With this configuration, users can acquire all the data required for a colorized point cloud from a single flight, which eases the point cloud classification process back in the office, saving significant time and money.”

New LiDAR sensor for more accurate mapping

Delair DT26X LiDAR is the first fixed wing UAV to incorporate the new RIEGL miniVUX-1DL LiDAR sensor, a specially designed device for the needs of UAV use. The small form factor sensor includes a downward looking and optimized field of view specifically geared for corridor mapping tasks. The wedge prism scanner construction produces a field of view of 46°, and the circular scan pattern provides a very high point density and point distribution.

It offers a high scan speed of up to 150 scans/sec and a measurement rate of up to 100,000 measurements/sec. It is effective in penetrating poor lighting conditions or dense foliage. The LiDAR sensor makes use of RIEGL*'s* unique Waveform-LiDAR technology, allowing echo digitization and online waveform processing. It supports multiple-target resolution – up to five target echoes per laser shot.

“The new Delair UAV is typically the type of drone RIEGL had in mind when designing the RIEGL miniVUX-1DL, and represents another step toward completing our UAV LiDAR equipment product portfolio. The scanner’s specific wedge prism scanning mechanism generates a circular scan pattern, resulting in high point densities and therefore is especially well suited when deploying the scanner from fast moving acquisition platforms such as fixed-wing UAVs. The FOV (Field of View) of the miniVUX-1DL is 46deg, resulting in optimized efficiency for downward-looking, linear acquisition set-ups likecorridor mapping applications, for example. We are pleased to have such an innovative company like Delair as an esteemed OEM integration partner, bringing our sensing technology to key market sectors that require a flexible LiDAR solution,” commented Michael Mayer, Managing Director, RiCOPTER UAV GmbH.

RiCOPTER UAV GmbH is a subsidiary of RIEGL Laser Measurement Systems GmbH, an internationally leading provider of cutting edge technology in airborne, mobile, terrestrial, industrial and unmanned laser scanning solutions. RiCOPTER UAV GmbH commercializes RIEGL’s turnkey LiDAR UAV solution and laser scanning payloads dedicated for UAV integration.

Read more about the Delair DT26X LiDAR solution here: http://delair.aero/dt26x-lidar/ and more about RIEGL, at http://www.riegl.com/

About DELAIR

Delair is a leading provider of drone-based solutions that enable enterprises to monitor and digitize their physical assets from the air and turn the collected data into valuable business insights. Its solutions are used globally by customers in industries such as utilities, construction, agriculture, transportation, mining and oil and gas. The company is one of the world’s most experienced providers of industrial drone solutions, combining its high performance, long range UAV hardware with sophisticated analytics technology and operational services. A

strategic partnership with Intel and its Intel Insight initiative is driving the two companies toward the industry's most scalable platform for drone imagery storage and business intelligence. Founded in 2011 by experts in the aerospace industry, the company is headquartered in Toulouse, France, and has offices in Ghent, Belgium, Los Angeles and Singapore. Its solutions are sold in more than 70 countries by a network of resellers. For more information about Delair and its brand-new generation of beyond-visual-line-of-sight (BVLOS) drones with 3G/4G communications, go to www.delair.aero and on twitter @DelairTech

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