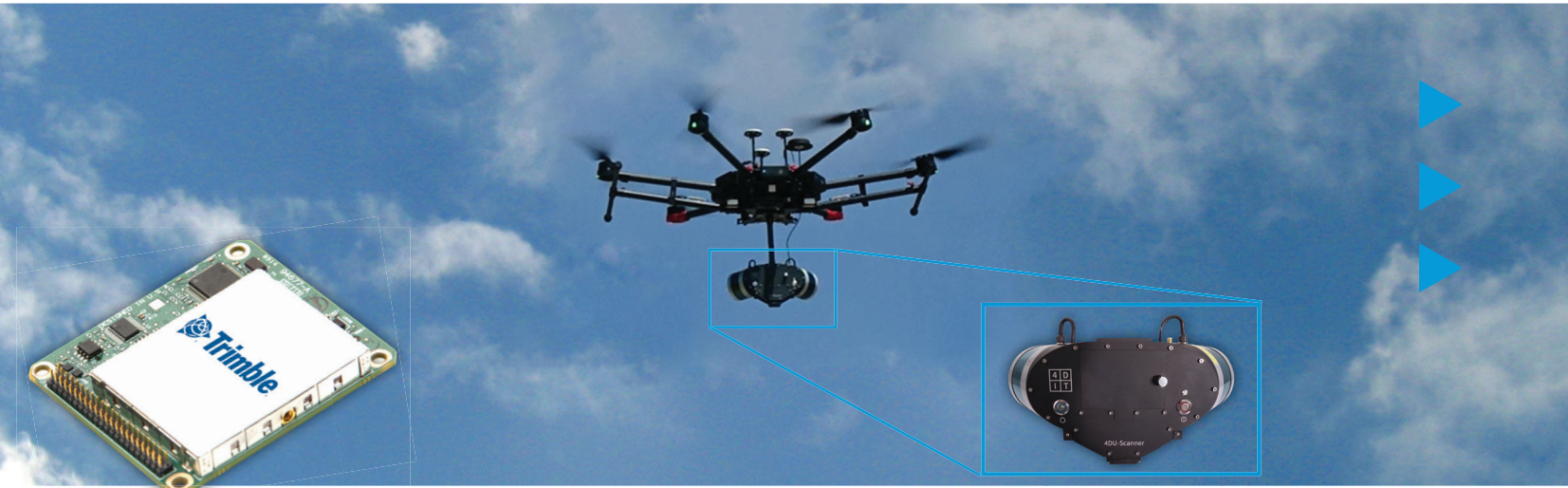




4D-IT and Applanix Partner on Colour 3D Data Collection Solution



THE 4DU-SCANNER, INTEGRATED WITH TRIMBLE'S APX-15 UAV SOLUTION AND POSPAC UAV SOFTWARE, OFFERS HIGH-RESOLUTION COLOUR 3D DATA ACQUISITION.

4D-IT GmbH wanted to create a solution for high-resolution, high-accuracy, colour 3D data acquisition. To do this, they partnered with Applanix' team of engineers to take advantage of their Direct Georeferencing (DG) capabilities and expert knowledge of airborne mapping and sensor integrations. Using the APX-15 UAV and POSPac UAV for post-processing with a 32-channel profiling scanning system and RGB-sensors, the 4DU-Scanner was developed for many documentation and mapping tasks.

AN INTEGRATED SOLUTION: LIDAR, RGB, AND APPLANIX DG

The combination of the LiDAR and RGB sensors with Applanix' industry-leading sensor technology offers a cost and time-efficient solution for various applications such as terrain modeling, vegetation mapping, geological mapping, documentation of pit-mining activities, land slide monitoring, and for high-quality 3D documentation of building facilities, industrial sites, or archaeology.

In the case of many applications, especially in topography-related environments with vegetation, LiDAR-based sensors are superior to camera-based systems because they are able to capture objects below the canopy. The weight of these sensors, as well as the typically higher demand on georeferencing, has been prohibitive for UAV-based applications of LiDAR in many cases, until now. The 4DU-Scanner overcomes these drawbacks with its low-weight construction, capturing of 32 simultaneous profiles with different incidence angles, and supported by the capabilities of the lightweight APX-15 UAV solution.

The Solution

- ▶ Turnkey professional UAV mapping system with Trimble APX-15 UAV
- ▶ Low weight and easy UAV-integration
- ▶ Greater area flown per mission, due to single-board GNSS-inertial DG solution which eliminates the need to survey extensive Ground Control Points (GCPs)¹ and reduces the amount of sidelap needed
- ▶ Powerful post-processing software (POSPac UAV), including Applanix InFusion™ technology and support for SmartBase™
- ▶ 3D point-clouds ready to be fused with those acquired by other terrestrial or airborne sources

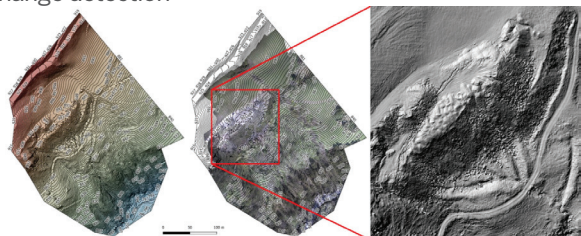
¹ Dependent upon desired ground accuracy and sensor geometry



APPLICATIONS

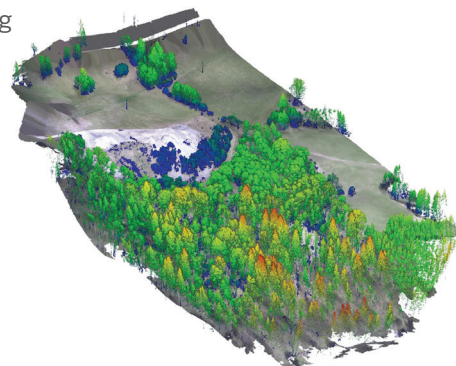
Topography

- ▶ Efficient and high-resolution terrain modeling
- ▶ Geological mapping and documentation
- ▶ Landslide monitoring
- ▶ Change detection



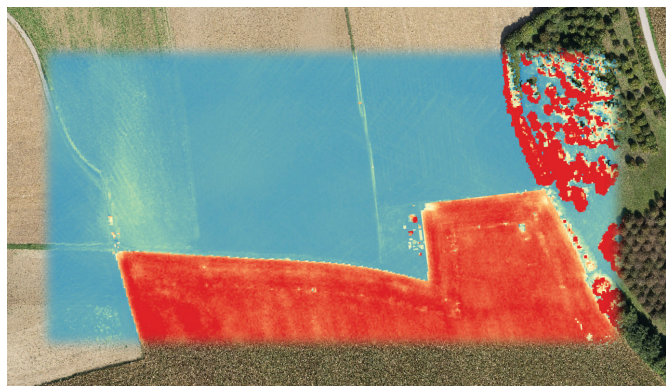
Forestry

- ▶ Tree position and volume estimation
- ▶ Growth monitoring



Agriculture

- ▶ Crop size estimation
- ▶ Plant monitoring



Infrastructure

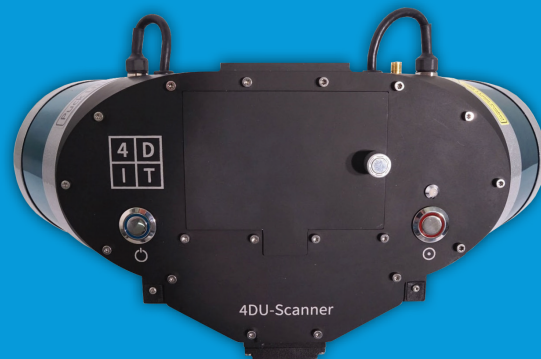
- ▶ Dam construction documentation
- ▶ Change detection



*on behalf of LUBW

4DU-SCANNER AND APX-15 UAV CAPABILITIES

- ▶ Small, lightweight, and low-power GNSS-inertial components (6 x 6.7 cm, and only 60 grams), plus no separate IMU
- ▶ Centimeter-level accuracy and 5 cm point sampling distance
- ▶ Easy integration with commonly used UAVs, such as the DJI Matrice 600 Pro
- ▶ Complete solution including 4DU-S-Processor software for 2.5D and 3D modeling, analysis, and visualization



APPLANIX HEADQUARTERS
85 Leek Crescent
Richmond Hill
ON Canada
L4B 3B3
+1-905-709-4600 Phone
+1-905-709-6027 Fax
airborne@applanix.com
www.applanix.com

4D-IT GMBH
Emil Kögler-Gasse 13
A-2511 Pfaffstätten
Austria
+43-680-2153115 Phone
office@4d-it.com
4d-it.com

© 2019, Trimble Inc. All rights reserved. Trimble, the Globe & Triangle logo are trademarks of Trimble Inc., registered in the United States and in other countries. Applanix, and the Applanix logo are trademarks of Applanix Corporation registered in the Canadian Patent and Trademark Office and other countries. InFusion, SmartBase and POSPac are registered trademarks of Applanix Corporation. All other trademarks are the property of their respective owners.