TRUE VIEW 645/650

Survey-Grade Mapping Senson

GeoCue
AUSTRALIA

WWW.GEOCUEAUSTRALIA.COM

I am now very convinced that the True View product and software you have is some of the finest tech around. We have had some unbelievable results with the unit when we have compared it to our normal terrestrial survey.

Phillip J Mathieson
• PRICE MERRETT CONSULTING

TRUE VIEW 645/650 LIDAR SYSTEM

GeoCue offers a new survey-grade 3D imaging system that includes a LiDAR sensor and two cameras that is more compact, lighter and able to be used with more drones, including the DJI M300. The system delivers colourized LIDAR deliverables with an accuracy of better than 3cm RMSE for the True View 645, and better than 2cm for the True View 650.

TRUE VIEW 645/650

The True View® 645/650 is GeoCue's second-generation RIEGL integration built with the miniVUX-3UAV and dual mapping cameras for high accuracy mapping with excellent vegetation penetration and wire detection in a lightweight payload package.

WHAT'S INCLUDED

HARDWARE

- True View 645/650 3D Imaging Sensor with Integrated Control Box

ACCESSORIES/PARTS

- External Power Adaptor (Drone Specific, M300 Cable Pictured)
- USB
- GNSS Antenna
- Sensor Hardcase

SOFTWARE

- True View EVO Processing Software
  Includes Applanix POSPac Cloud, Metashape for EVO, StripAlign for EVO

DATA MANAGEMENT

- True View Reckon Data Management Portal

SUPPORT

- 1 year of hardware and software support
- 2 day of free training/ support

TRUE VIEW 645/650 FEATURES

DUAL CAMERAS

Two GeoCue Mapping Cameras provide a 120° field of view, coincident with the laser scanner track. The 25° oblique mounting ensures the sides of objects are imaged, allowing a true 3D colorization of all LIDAR points.

LIDAR SCANNER

The RIEGL miniVUX-3UAV laser scanner provides range of up to 120m with up to
five returns per outgoing pulse. The laser scanner can focus 200,000 points per second into the True View 120° cross-track field of view.

GOOGLE PROCESSOR

A Google® Coral TensorFlow Processing
Unit provides exceptional power as the True View Central Control Unit (CCU). The CCU coordinates all on-board functions of the system.

APPLANIX POSITIONING

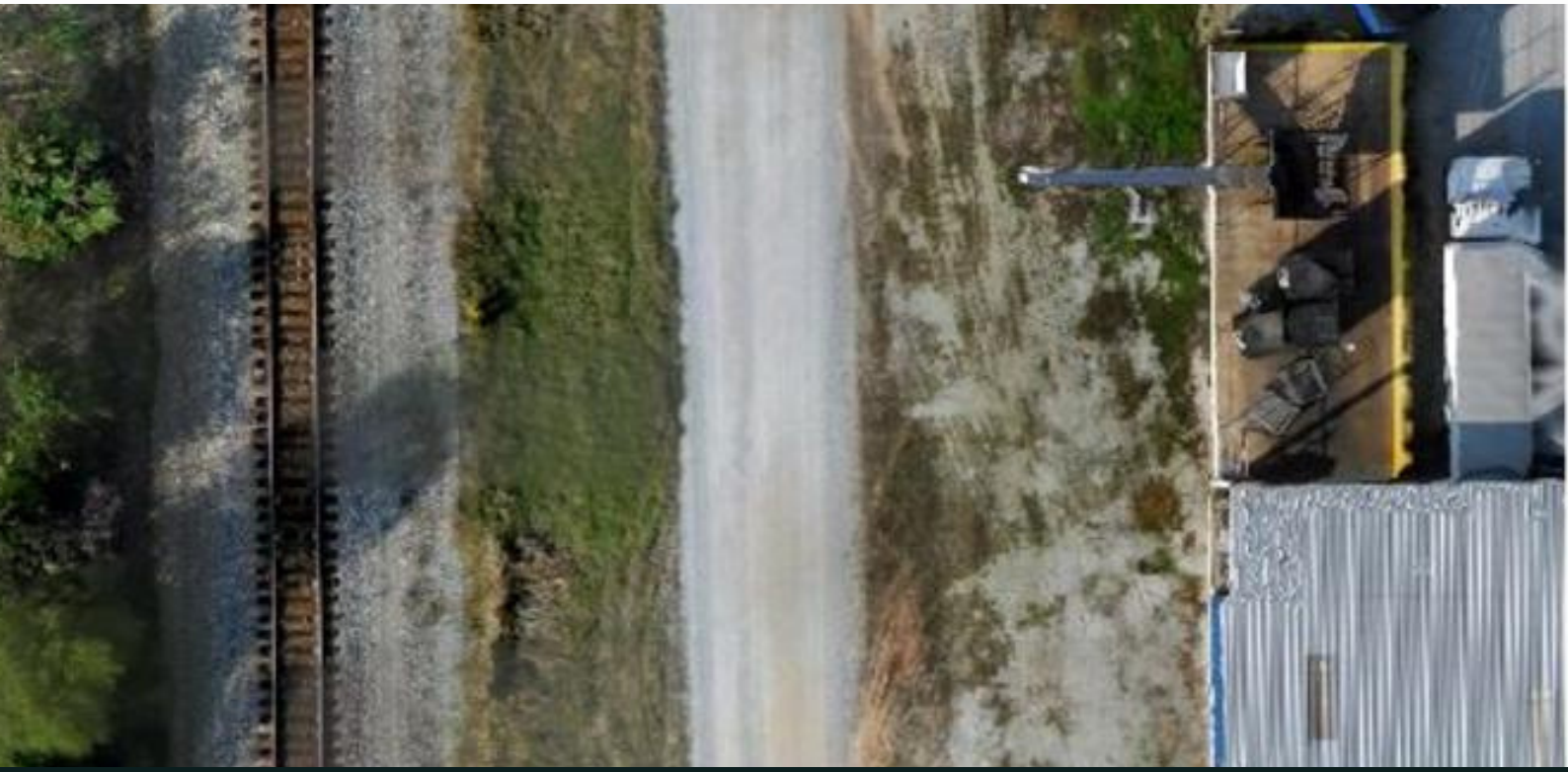
A sensor can be no more accurate than the position and orientation system. GeoCue incorporates the industry's most accurate and reliable POS – the Applanix APX series. APX post-processing is accessed via the included True View Evo software, providing "pay-as-you-go" access to SmartBase and Trimble PP-RTX positioning services.

TRUE TRACK® FLIGHTLINES

Post-processing software uses positioning system information to perform roll compensation at the individual scan line level. This allows reduced overlap between flight lines, increasing platform flight efficiency.

TRUE TIME SYNCHRONIZATION

Fusing sensor data requires exceptional timing synchronization among the positioning system and all sensors. True View's System Synchronization Unit (a GeoCue designed Master Clock), ensures sensor coordination
at the microsecond level.



TRUE VIEW ECO SYSTEM

The True View® product series use a common hardware and software foundation for a family of sensors. It allows for fast and easy, automated generation of true 3D colorized point clouds, oblique imagery and orthophotos from a single drone flight.

DATA COLLECTION

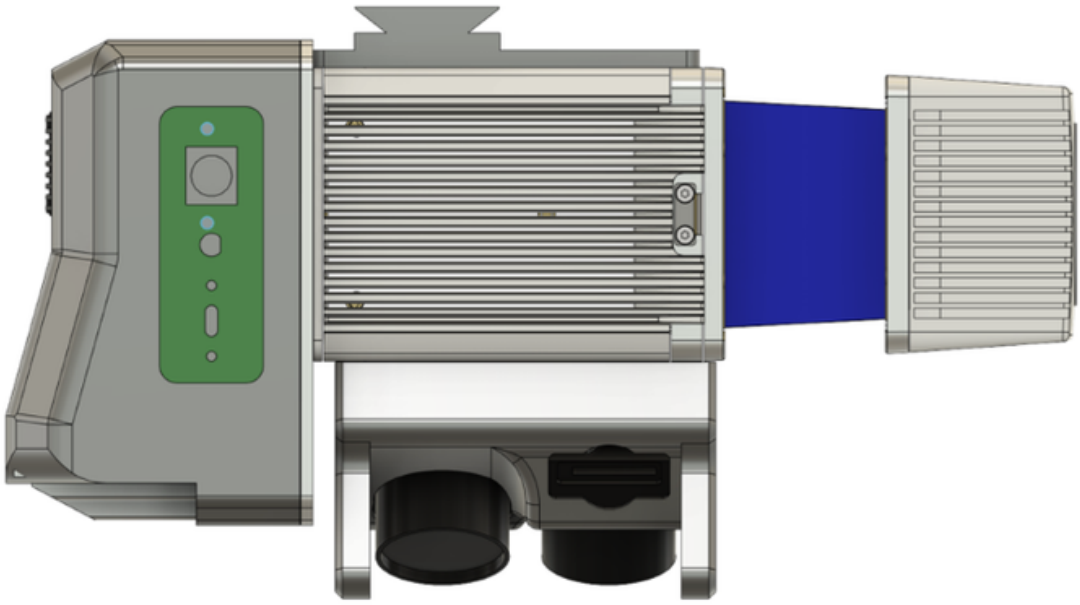
Powerful LIDAR + dual camera sensor integration give users the ability to collect drone LIDAR and photogrammetry in a single flight. True View 3DIS can be mounted on just about any rotary drone platform!

DATA PROCESSING

True View EVO software is bundled with every True View 3DIS. EVO will generate a 3D LIDAR point cloud in LAS format, colorize the point cloud, and geotag the images collected.

DATA MANAGEMENT

True View Reckon, an Amazon Web Services hosted platform, provides a range of services from sensor calibration management to product data hosting and visualization.



SPEC SHEET

Specification	Value
LIDAR Scanner	RIEGL miniVUX-3UAV
LIDAR Beams/Returns	Up to 5 per outgoing pulse
LIDAR Range - usable	100 m for targets with > 20% reflectivity
Positioning and Orientation System	(645) Applanix APX-15 | (650) Applanix APX-20
Pulse Repetition Rate	Up to 300,000 pulses/s within active FOV
Position & Orientation System	Position & Orientation System
Accuracy	(645) Better than 3 cm RMSE | (650) Better than 2 cm RMSE
Precision	(645) Better than 2.5 cm at 1 σ | (650) Better than 2 cm at 1 σ
Dual Cameras (Port, Starboard)	Dual Cameras (Port, Starboard)
Camera Sensor	Sony 1" CMOS IMX-183 1" mechanical shutter, hardware mid-exposure pulse, 20 MP, RGB
Mass	(645) 2.1 kg with battery | (650) 2.25 kg with battery
Data Collection	LIDAR + Imagery

The ongoing support from GeoCue Austalia and GeoCue head office ensures that technical and processing challenges can be resolved quickly and efficiently. Having said that the TrueView range of LiDAR scanners have been extremely reliable with simple routine work flows.

Peter Evans
MineLidar