

TrueView

410



The True View® 410 is the industry's first integrated LIDAR/camera fusion platform designed from the ground up to generate high accuracy 3D colorized LIDAR point clouds. Featuring dual GeoCue Mapping Cameras, a Quanergy M8 Ultra laser scanner and Applanix Position and Orientation System (POS), the result is a true 3D imaging sensor (3DiS). With its wide 120° fused field of view, the True View 410 provides high efficiency 3D color mapping with vegetation penetration in a payload package of 2.2 kg.

Sensor Fusion starts here...

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 Quanergy M8 Ultra laser scanner provides range of up to 100m with three returns per outgoing pulse.



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.



Complete Workflow Software Included

GeoCue's True View Evo software, bundled with every system, provides a complete post-processing workflow solution from project creation through final products.

Data are written to a USB memory stick on the True View 3DiS and imported into True View Evo using a simple import wizard. Immediately upon import, you are presented with a map view of the project, showing the entire flight line. Another wizard directly in Evo takes you through the Applanix POSPac flow, creating the high accuracy trajectory that will be used to position imagery and LIDAR points. Automated tools are included that make short work of defining the segments of the trajectory that you want to process into flight lines. Generation of LAS points and colorization are fully automatic. The system is so efficient you can move from raw data import to colorized point cloud for a 20 hectare/50-acre site in less than 20 minutes.

Assessing, correcting and reporting geometric accuracy is critical to metric mapping workflows. True View Evo contains tools to assess/report network accuracy according to American Society for Photogrammetry and Remote Sensing (ASPRS) standards, measure hard surface precision and geometrically adjust LIDAR data.



3D Colorized Point Cloud

Evergreen Subscription Service

(Currently Available in the USA and Canada)

GeoCue has introduced a unique business model that allows customers to acquire their True View 410 under an "Evergreen" Hardware as a Service subscription model. This model includes all processing software, maintenance and support in the per-minute charge to ensure your project is completed with full success.

The general parameters of the Evergreen subscription are customers pay by the number of minutes the sensor is in motion. At the start of each month, customers receive 3,250 "timed" True View points. These points convert into flight minutes based on usage and choice of positioning solution. With 3,250 True View points, customers can typically fly 20 sites of 50 acres each per month. Additional True View Points can be purchased as needed. These extra points never expire and can be used towards the purchase of flight minutes, or on True View products and services.

Under this model, you are effectively subscribing to the full True View solution. GeoCue understands that some projects take less/more time than others. We offer subscription periods as short as 1 month. During your subscription period you will receive both software and hardware updates as they occur. This keeps your technology in an "evergreen" state, and if you end up realizing that a traditional purchase is more practical for the future, your subscription can be terminated to allow the system purchase at a time that fits your schedule.

Not only does this model allow you to explore drone LIDAR mapping at very low risk, it is also an excellent model for seasonal use and surge capacity.

True View 410 Product Specifications

Specification	Value
LIDAR Scanner	Quanergy M8 Ultra
LIDAR Range - usable	75 m
Cross-track Field of View (FOV) - usable	90°
LIDAR Beams/Returns	8/3
Pulse Repetition Rate	420 kHz
Accuracy	Better than 5 cm RMSE
Precision	Better than 5 cm at 1 σ
Dual Cameras (Port, Starboard)	$\pm 25^\circ$ cross-track oblique
Camera Sensor	1" mechanical shutter, hardware mid-exposure pulse, 20 MP, RGB
Camera Lens	28 mm f, 2.8 Max F Stop, fixed focus
Camera Cross-track FOV	120°, total
Camera Trigger	Interval or Distance
Mass	2.25 kg
Operating Time (per battery)	~ 1.5 hours
Dimensions	12.5" x 6.5" x 7"



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