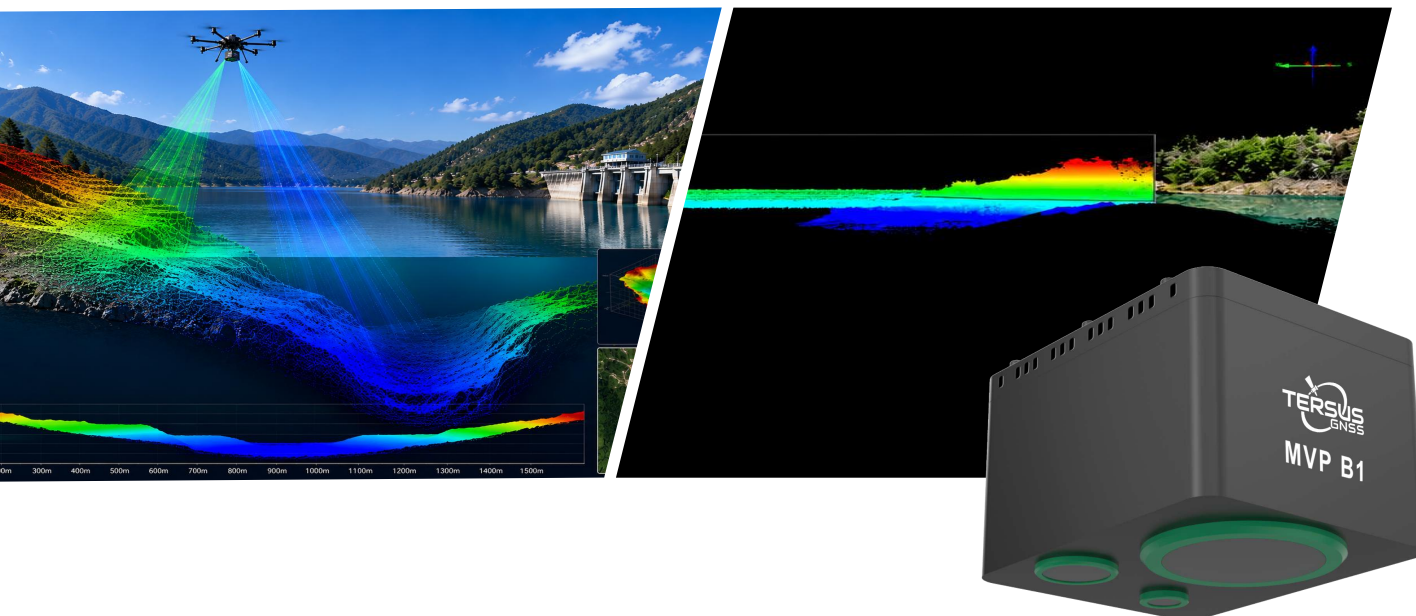


Tersus MVP B1

Dual-Wavelength Airborne Topo-Bathymetric LiDAR



Overview

The Tersus MVP B1 is a single-body dual-wavelength airborne topo-bathymetric LiDAR that integrates the laser scanner, RGB camera, and POS in one factory-calibrated unit, mapping both land and water in a single pass — built for reservoir-capacity, shoreline-erosion, and waterway surveys.

Its green channel (532 nm) penetrates the water column to capture the water bed, while a near-infrared channel (1064 nm) independently resolves the water surface. Both returns fuse into one seamless land-water dataset, ready for survey deliverables.

Key Features

- Dual-wavelength design
- Ranging precision 5 mm @ 50 m (1σ)
- Integrated POS
- Industrial-grade 12 kg body
- Open software workflow
- 2.5 Secchi-depth penetration
- ≥ 7 returns
- 12 MP RGB camera
- IP64 protection

The GNSS Expert Right to the Point

Tersus GNSS Inc.
▲ 18F, Tower 1, No. 235, Yubei Road, Pudong New District, Shanghai, China
T +86-21-50803061 E sales@tersus-gnss.com



Tersus MVP B1

Dual-Wavelength Airborne Topo-Bathymetric LiDAR

Optical Parameters

Laser Class	Class 3B (Avoid direct beam exposure)
Laser Wavelength	532 nm + 1064 nm
Beam Divergence	~0.5 mrad
Depth Penetration	2.5 Secchi depths
Pulse Repetition Rate	50-300 kHz
Scanning FOV	Cross-track 40° / Along-track 28°
Angular Resolution	0.001°
Ranging Method	Pulse-phase
Scan Line Rate	100 lines/s

Laser Measurement

Precision (1 σ)	5 mm @ 50 m Normal incidence — 532 & 1064 nm
Returns (Echoes)	≥7
Intensity	8-bit

RGB Camera

Resolution	12 MP
Focal Length	18 mm
Field of View	90° (long) × 67° (short)

POS (Position & Orientation)

Attitude Accuracy (RMS)	R 0.03° / P 0.03° / H 0.01°
Post-Processed Accuracy	H 0.01 m / V 0.01 m

System & Data

Weight	12 kg
Dimensions (L×W×H)	350 × 283 × 232 mm
Operating Temperature	-10°C to +45°C
Humidity	Non-condensing
Ingress Protection	IP64

Power & Interface

Voltage	24 VDC 20-30 V input range
Power Consumption	180 W
Data Interface	TCP/IP, Gigabit Ethernet
GNSS Antenna	SMA (internal-thread, male pin)

Software & Workflow

Integrated Sensors	LiDAR + RGB + POS Single-body, factory-calibrated
Data Fusion	Land-water seamless point cloud
Colorization	RGB true-color (onboard camera)
Platform	Open & integration-friendly UAV, survey & GIS platforms

Deliverables

Point Cloud	Georeferenced, colorized
Water Surface	1064 nm-derived
Water Bed / Bathymetry	532 nm-derived
Imagery	Real-scene RGB

Note:

- (1) Achievable water penetration depends on water clarity (Secchi depth), turbidity, bottom reflectivity, and ambient conditions.
- (2) Bathymetric performance is stated relative to Secchi depth and varies by site and water body.
- (3) Actual size and weight may vary with manufacturing process and measurement method.
- (4) Post-processed accuracy assumes adequate GNSS conditions and proper PPK/PPP correction.

Website: www.tersus-gnss.com

Sales Inquiry: sales@tersus-gnss.com

Technical Support: support@tersus-gnss.com

Information is subject to change without notice.

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