

TERSUS MVP S2

Mobile SLAM 3D Laser Scanner
A Real-time 3D Reconstructor



MVP S2

MVP S2 is a device that can be handheld and wearable which allows various operation methods. The scanner is widely used in various fields, such as real 3D, topographic mapping, water conservancy surveys, traffic surveys, mine surveys, facade surveys, underground space mapping, earthwork calculation, power inspections, forestry surveys, etc.



MVP S2 Features

Real-time Scanning, Real-time Results

See your 3D data come to life as you scan. Eliminate reshoots and boost field productivity with real-time point cloud visualization.

Remove Moving Objects, Cleaner Point Cloud

Intelligent moving object filtering removes distractions for sharper, cleaner point cloud.

Hot-Swap Battery, Nonstop Operation

Work as long as you do—up to 3 hours per battery set, with hot-swappable support for uninterrupted missions.



Handheld or Backpack, Flexible Choice

Supports both handheld and backpack modes, allowing flexible configuration based on operational needs for easy scanning.

1 CM Thickness, 3 CM Absolute Accuracy

High-density point clouds with 1 cm thickness, capturing fine structural details. 3 cm absolute accuracy, making it meets the requirements of high-precision 3D mapping applications.

All-in-One System, Diverse Application Scenarios

Fully equipped with LiDAR, panoramic imaging and RTK, it is ideal for smart city mapping, BIM modeling, transportation infrastructure, and geospatial surveys in complex environments.

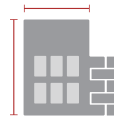
Application



Topographical Mapping



Agricultural & Forestry Survey



Engineering Survey



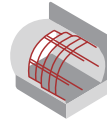
Geological Exploration



Volume Calculation



Emergency Mapping



Underground Space



Smart City

Scenario



Indoor structures, underground parking area



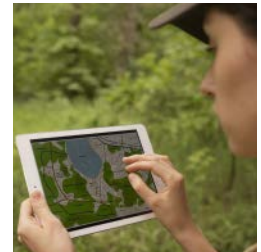
Urban streets, rural roads



Building facades



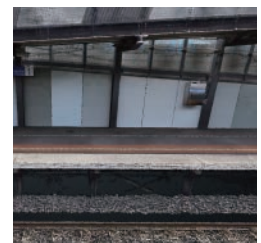
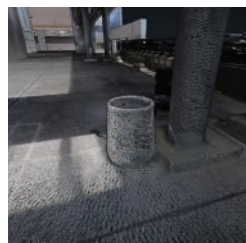
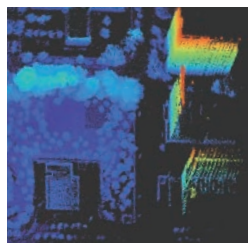
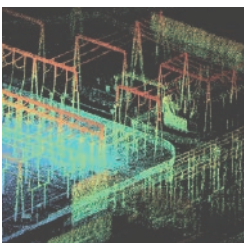
Railways, roads, pipelines



Forest tree distribution survey

Software

We offer three professional software solutions designed to meet the needs of field data collection and point cloud post-processing. Tersus MVP Capture software is used in conjunction with our MVP S2 product to carry out field scanning tasks. Tersus MVP Mapper can automatically process data, support coordinate transformation, removal of moving objects, and introducing GCP. Tersus MVP Viewer support interaction display of real images and point clouds, point cloud measurement and clip, flexible roaming view following the trajectory, etc.



Software Features

- Real time viewing of point cloud while scanning
- Supporting point cloud measurement, cropping
- Instant loading of massive data
- Display of real images and point clouds, roaming view following the trajectory

Technical Specifications

MVP S2



System Platform

| | |
|-----------------------------|--------------------------------------|
| Relative Accuracy | 1cm |
| Absolute Accuracy | 3cm |
| Point Cloud Thickness | 1cm |
| Field of View | 360°* 270° |
| Weight | 2.1kg (handheld) 8.7kg (backpack) |
| Battery Single Use Duration | Up to 3 hours |
| Operating Temperature | -25°C ~ +65°C |
| Data Storage | 1TB |

Scanner Performance

| | |
|-------------------|--------------------|
| Laser Class | Class 1 Eye Safe |
| Laser Channels | 32 |
| Wavelength | 905 nm |
| Measurement Range | 120m |
| Scan Rate | 640,000 pts/sec |
| Frame Rate | 5 Hz, 10 Hz, 20 Hz |

Scanner Performance - continued

| | |
|-----------------------|--|
| Horizontal Resolution | 0.09°(5Hz) 0.18°(10Hz) 0.36°(20Hz) |
|-----------------------|--|

Returns Supported

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|--|
| Single Return (Last, Strongest, First) Dual Returns |
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| | |
|---------------------------|------------|
| Vertical Resolution | 1.3° |
| LiDAR Accuracy/ Precision | 10mm / 5mm |

Software

| | |
|-------------------|--|
| TersusMVP Capture | Real-time point cloud |
| TersusMVP Mapper | moving objects filtering, GCP |
| TersusMVP Viewer | Image and point cloud interaction point cloud measurement and clip flexible roaming view |

Optional Accessories

Camera Module

21 million pixels, 1inch SONY CMOS*2, 360°FOV

RTK Module

| | |
|-----------------|--|
| Signal Tracking | GPS L1/L2/L5 BeiDou B1I/B2I/B3I/B1C/B2a GLONASS L1/L2 QZSS L1/L2/L5 SBAS supports WAAS, EGNOS, GAGAN, SDCM, MSAS L-band |
|-----------------|--|

Real Time Kinematic Accuracy (RMS)

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|----------|------------|
| Horizon | 0.8cm+1ppm |
| Vertical | 1.5cm+1ppm |

PPP(TAP) Accuracy (RMS)

| | |
|----------|-------|
| Horizon | 1.5cm |
| Vertical | 3cm |

Tersus GNSS Inc. Right to the point.

Tersus GNSS is a leading Global Navigation Satellite System (GNSS) solution provider. Our offerings and services aim to make centimeter-precision positioning affordable for large-scale deployment.

Founded in 2014, we have been pioneers in design and development GNSS RTK products to better cater to the industry's needs. Our portfolios cover GNSS RTK & PPK OEM boards, David GNSS Receiver, Oscar GNSS Receiver and inertial navigation systems.

Designed for ease of use, our solutions support multi-GNSS and provide flexible interfaces for a variety of applications, such as UAVs, surveying, mapping, precision agriculture, lane-level navigation, construction engineering, and deformation monitoring.

Descriptions, specifications and related materials are subject to change.

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To learn more, please visit: www.tersus-gnss.com

Sales inquiry: sales@tersus-gnss.com

Technical support: support@tersus-gnss.com