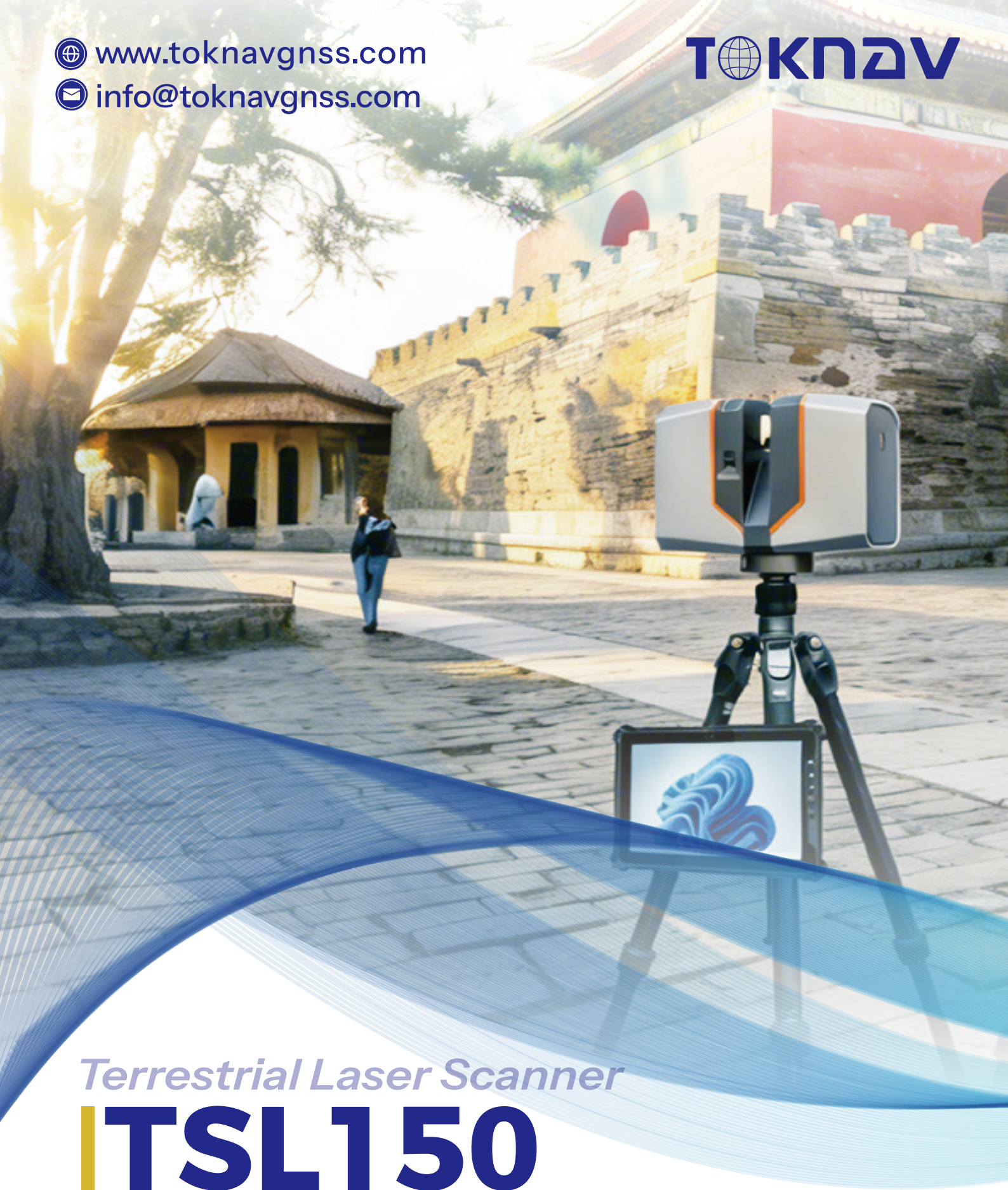
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TOKNAV



Terrestrial Laser Scanner

TSL150

Integrated HDR Imaging and High-Precision Ranging System

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TSL150 Terrestrial Laser Scanner

The TSL150 features a lightweight design with a high-precision ranging system and an integrated HDR panoramic imaging system,enabling rapid acquisition of dense 3D point clouds with high-resolution color texture. Equipped with an integrated field processing software,the system supports scanning control,real-time point cloud registration, automatic multi-station adjustment,visual measurement,and point cloud colorization,providing a seam- less end-to-end workflow from data capture to deliverable output. By transferring key office processing tasks directly to the field, TSL150 delivers an accurate and efficient 3D scanning solution for demanding project.

CHARACTERISTIC

High Precision and Long Range

The TSL150 delivers exceptional ranging performance with a maximum range of up to 150 meters. It achieves an accuracy of 2mm (1σ) at 50 meters and maintains 3mm (1σ) at 100 meters. Whether for medium-range architectural facade scanning or long-range topographic surveying, it provides a reliable data foundation to meet various high-precision engineering measurement requirements.

High-Efficiency Data Acquisition

With a pulse repetition rate of 1.2 MHz and a scan speed of 100 lines/sec, it rapidly captures dense point clouds, significantly boosting field productivity.

On-Site Intelligent Processing

Integrated field software enables real-time point cloud registration and automatic multi-station leveling via dual-axis tilt compensation (±5°). This minimizes office post-processing and ensures data integrity on site.

Lightweight and Portable Design

Weighing only approximately 3.3kg (battery included) and measuring just 216mm × 168mm × 105mm, the device features a compact structure. It supports both upright and inverted mounting, allowing flexible deployment in various spatial conditions. Whether working at heights or in confined areas, it is easy to carry and set up, offering great convenience for field operations.

Multi-Sensor Fusion and Imaging

It features a 100 MP HDR panoramic camera (with exposure bracketing), IMU, and multi-GNSS (BDS, GPS, GLONASS, GALILEO, QZSS, NavIC, SBAS). Combined with dual-axis tilt compensation, it delivers precisely georeferenced and color-rich point clouds for advanced applications.

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TSL150 Terrestrial Laser Scanner

Integrated HDR Imaging and High-Precision Ranging System

Weight: **3.3kg**
Dimensions: **21.6*16.8*10.5cm**

Pulse repetition rate: 1.2 MHz
Scan speed: 100 lines/sec

HDR Panoramic Camera

An effective resolution of approximately 100 MP

Flexible Scanner Control

Wireless, Wired, and Button
Upright/Inverted

High Precision

Accuracy of 2mm (1σ) at 50 meters and maintains 3mm (1σ) at 100 meters

Dual-axis tilt compensation (±5°)



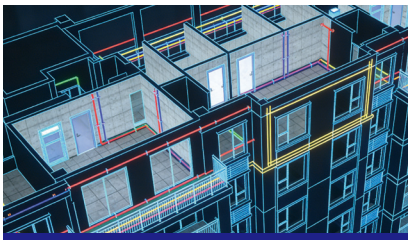
TERRESTRIAL 3D LASER SCANNER

With embedded high-definition cameras and two smart battery.

5mm point cloud accuracy and pixel-level colorization.

One-click to collect data, it can calculate and splice data automatically.

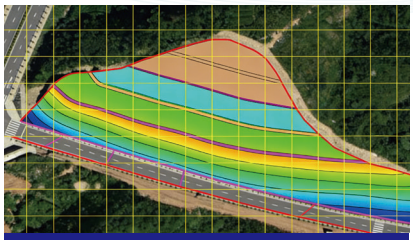
Application Scenarios



BIM Modeling Application



Pipeline Survey



Earthwork Calculation



Cultural Heritage Preservation



Landslide Site Investigation



Building & Foundation Deformation Monitoring

SPECIFICATION

GENERAL

Weight	Approx. 3.3kg(Battery Included)
Dimensions	216mm×168mm×105mm
Power Consumption	Typical 50W
Operating Temperature	-20~+50°C
Storage Temperature	-30~+60°C
Data Storage	Internal SSD:1 TB External USB Drive:256 GB
IP Rating	IP54
Laser Product Classification	Class 1, Eye-safe
Wavelength	NIR
FoV	Horizontal 360°; Vertical 300°(-60~+90°)
Scan Speed	100 Lines, 1.2M pts/s
Maximum Pulse Repetition Rate	1.2MHz
Scanner Control	Wireless, Wired, and Button
Mounting Orientations	Upright/Inverted

RANGING

Max. Range	150m
Precision(1σ)	1.5mm@50m; 2.5mm@100m
Accuracy(1σ)	2mm@50m; 3mm@100m

INTERNAL CAMERA

Unit	2
Resolution	4000×3000
Effective Resolution of Panoramic Image	Approx. 100 MP
High Dynamic Range (HDR)	Exposure Bracketing 3×/5×

POWER

Internal Battery	2×Internal, Rechargerable Li-Ion Batteries Weight 235g/pc 3300mAh Operating Temperature -20~+60°C
External	Hot-swappable

INTERFACE

Communication	Gigabit Ethernet
Integration& Development	Supported

OTHERS

Tilt-compensation	Dual-axis ± 5°
Inertial Navigation System	MEMS IMU
GNSS Signal Tracking	BDS, GPS, GLONASS, GALILEO, QZSS, NavIC, SBAS Supported
Tripod	Carbon Fiber Tripod

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Manufacturers may update parameters at any time, please refer to the latest product information.

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