SHINING 3D

EinScan TRAK

Wireless Marker-Free Tracking System

Trak in, Markers out



Detachable Scanner | Wireless | Marker-Free

EinScan Trak
Wireless Marker-Free Tracking System

EinScan Trak is the world's first wireless, dual-form, marker-free tracking system. Its detachable handheld scanner seamlessly transforms into an independent wireless laser scanner, delivering greater flexibility across diverse scanning tasks. The marker-free tracking system captures large surfaces directly without markers, while the handheld scanner supports marker-free blue laser scanning for feature-rich surfaces, streamlining workflows from large-scale objects to detailed parts. With three laser scanning modes, flexible form factors, and versatile scanning modes, EinScan Trak delivers a portable, professional 3D digitization solution for reverse engineering, cultural heritage preservation, automotive customization, and large-object digitization.

One System, Two Work Modes

Choose the right setup for your applications—detachable, easy to calibrate,and ready with one-click startup. Enables seamless switching and flexible combination of tracking mode and handheld scanner mode, supporting real-time adjustment during scanning and cross-mode resolution merging.

Handheld Scanner Mode

Handle the Hard-to-reach Areas

Handheld scanner mode reaches narrow spaces beyond the coverage of tracking mode and provides a lighter, more flexible experience for scanning hard-to-reach areas and small size objects.

Tracking Mode

Expansive Scanning for Large Objects

Fast, expansive scanning for medium to large objects(e.g.,speedboat). Move the tracker freely to extend your coverage and reduce costs.

Inside Tracking System

How the Units Collaborate for Efficiency

Tracking Volume: 15m³

15m³ Large Volume Wireless Scanning

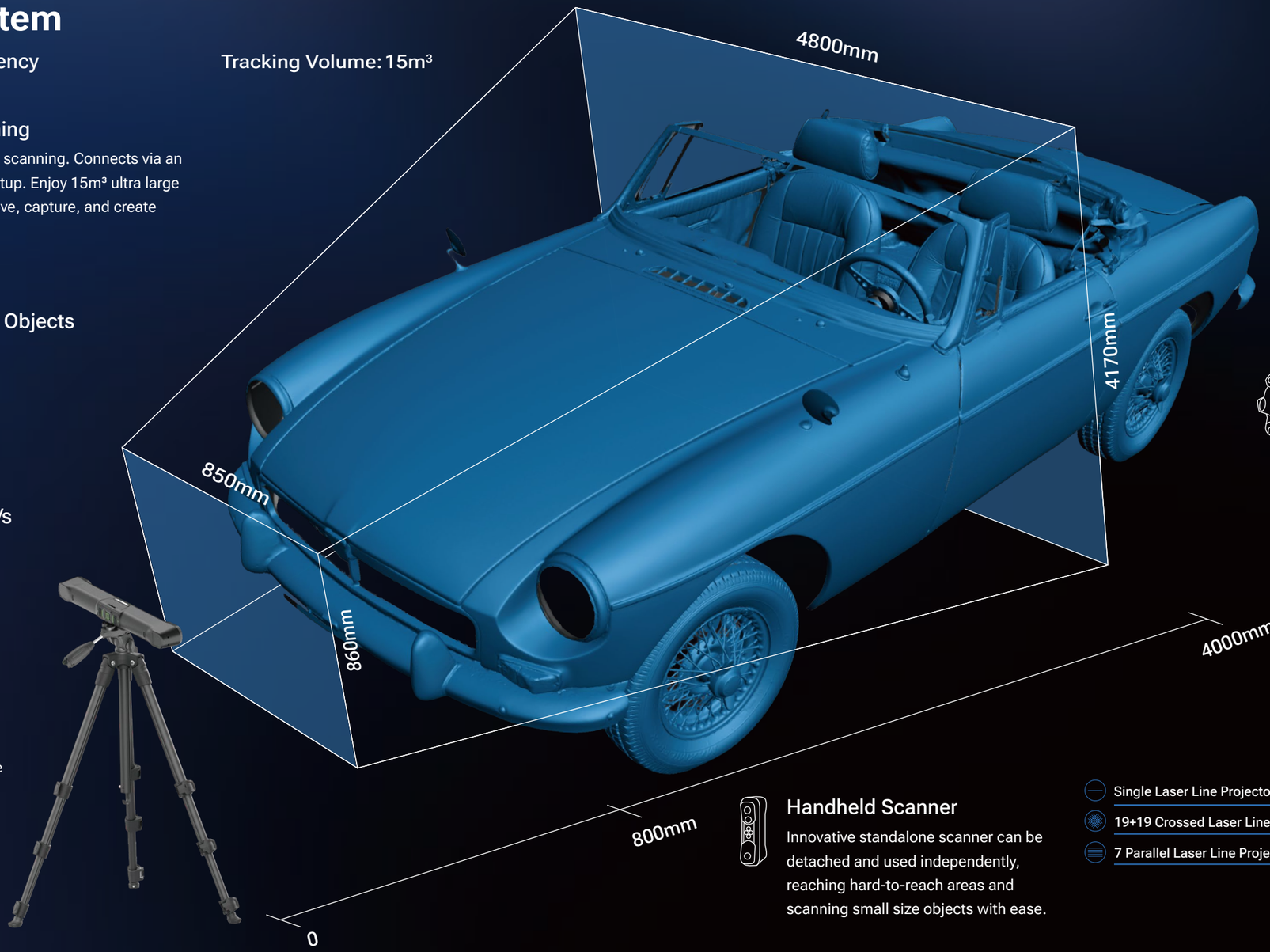
Equipped with Wi-Fi 6 module supports wireless scanning. Connects via an independent LAN and pairs automatically at startup. Enjoy 15m³ ultra large tracking volume, giving you more freedom to move, capture, and create with higher efficiency.

*A router is required and included as standard.

Hybrid Leapfrog Function for Large Objects

Move the tracker with marker-based alignment to extend the scanning range for large objects, only 4 markers needed for per tracking range, balancing the accuracy and efficiency of large objects modelling.

High Speed up to 2,630,000 Points/s





Spherical Scanner

Tracked by the tracker, its specialized spherical design allows for smooth and stable tracking without any other accessories.



Tracker

Constantly tracking the spherical scanner's position in space with extreme precision, eliminating the need for preparation.

Handheld Scanner

Innovative standalone scanner can be detached and used independently, reaching hard-to-reach areas and scanning small size objects with ease.

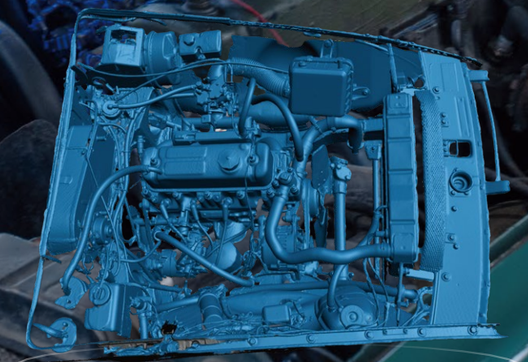


Three Scanning Modes

Built for Diverse Needs

19+19 Crossed Laser Lines
For High Efficiency

Acquires high-quality data from large objects quickly, delivers workflow efficiency and scanning flexibility.



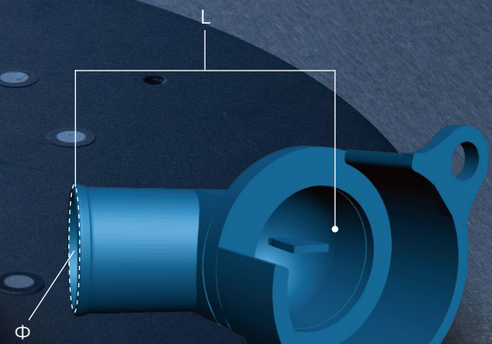
Scan Data

7 Parallel Laser Lines
For Fine Details

Captures lines and sharp edges on automotive components with greater clarity.

Single Laser Line
For Deep Holes

For challenging deep hole scanning, the single laser line reaches deeper to capture fine details with 1:4 diameter- depth ratio, supporting applications such as vehicle reverse engineering.



All-Scenario Marker-Free 3D Scanning

Less Prep. Faster Setup. Higher Productivity.

Marker-Free Tracking System

EinScan Trak features built-in retroreflective markers on its spherical scanner module, enabling the wireless tracker to precisely monitor the scanner's position in real time. This supports a more flexible scanning workflow and stable data capture without relying on object features or placing markers on the surface.



Marker-Free Laser Scanning in Handheld Scanner Mode

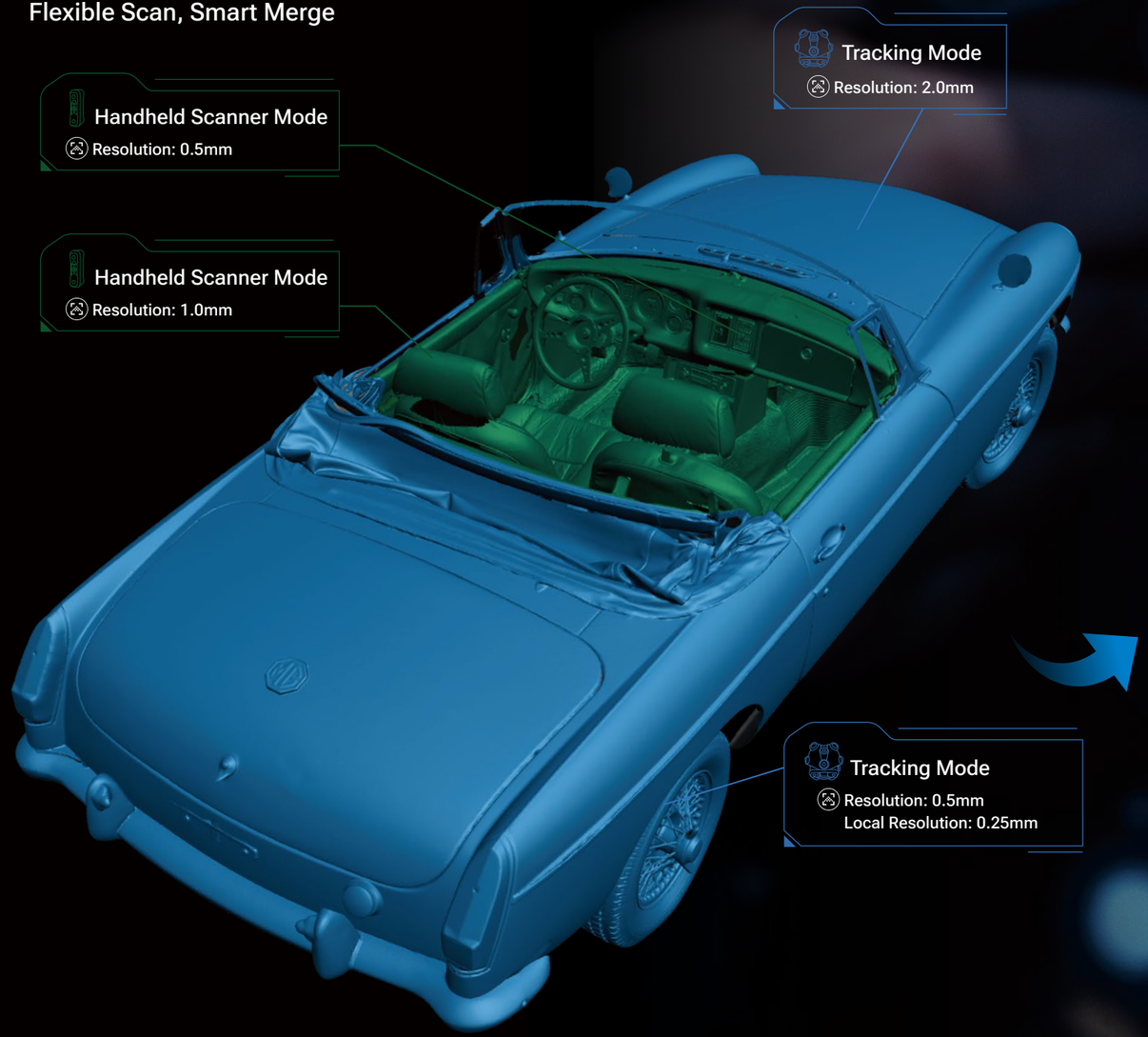
For feature-rich surfaces, handheld scanner mode delivers a smooth, marker-free scan experience.

*For high-accuracy requirements, global markers are still recommended.



Build Complete 3D Models Efficiently

Flexible Scan, Smart Merge



Smart Data Merge Across Modes and Resolutions

Merge data captured in tracking mode and handheld scanner mode within one project, with compatibility across different laser modes and resolutions. Reduce redundant data and build more complete 3D models faster.

Real-Time Adjustment During Scanning

During scanning, you can switch between different resolutions in one scan and customize areas that require more details in the local resolution function. It delivers a resolution of up to 0.05 mm and supports a scanning range of up to 4 meters.



Highly Adaptable, Flexible Wireless Workflow

Reliable Outdoor Scanning Performance with Longer Battery Life

Ideal for Various Materials

Scan black and reflective surfaces(e.g.,car rims) effortlessly without any data loss.

Multi-Environment Adaptability

Reliable scanning outdoor & indoor, supports scanning under strong outdoor light up to 110,000 lux.

No Battery Anxiety

Up to 5.5 hours of battery life in tracker mode, with hot-swappable batteries for uninterrupted operation. Handheld scanner mode supports up to 3.5 hours of use.

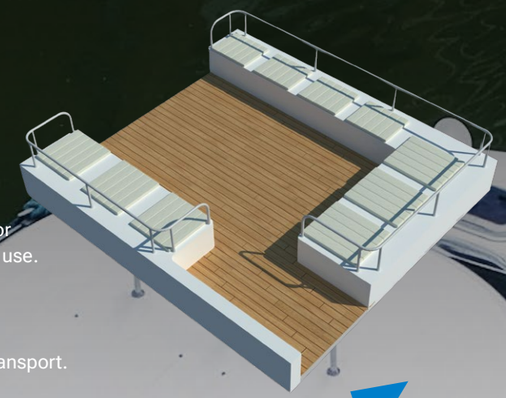
Safe to Transport, Easy to Carry

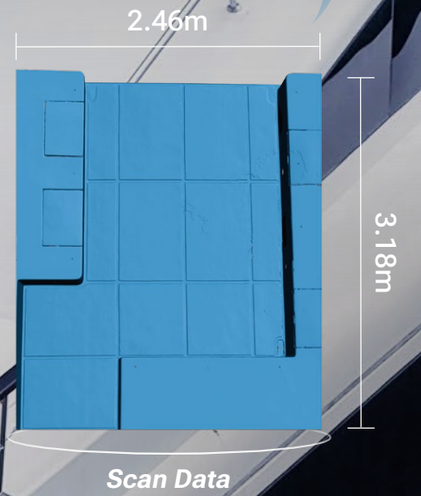
High-strength CFFIM carbon fiber, built for shock resistance and worry-free transport.

5-10 Minutes Calibration, Built for Changing Environments

Quickly calibrate the full system and maintain reliable performance from -10°C to 40°C, with fewer recalibrations and greater workflow efficiency.

Ship Modification Design





Scan Data



Scan Data

5MP Texture

High-Definition. True-Color.

5MP HD texture scanning accurately captures object colors and material details. It breaks the stereotype that laser tracking 3D scanning lacks color, bringing the efficiency of tracking systems to cultural heritage, research, and other fields.

Flexible Scanning, Precise Measurement, Streamlined Reverse Engineering

EXScan Trak+EXModel Series+EXMeasure

EXScan Trak is a scanning software for EinScan Trak Series, designed to support complex 3D data acquisition with a flexible and efficient workflow.

- Smart Merge of Different Modes and Resolutions
- Real-Time Laser and Resolution Switching
- Rapid & Diverse Data Editing Tools
- Real-Time Feedback Scan Interface

EXModel Series is a powerful gateway that simplifies CAD modeling, from 3D scanning to manufacturing. It provides a comprehensive set of tools that enable you to transform a mesh into a professional-quality CAD solid model in just a few simple steps.

3D Scan Mesh (.stl) › Extracting information › CAD Modeling › Verifying › Exporting Final Model

Analysing Feedback

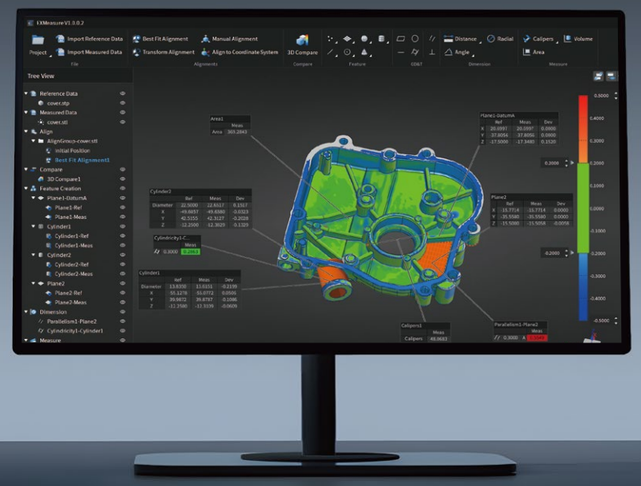
EXMeasure is a measurement software designed to work seamlessly with EinScan Trak Series, supporting digital dimensional analysis from scan data to verification.

- Flexible Alignment
- One-click Feature Extraction
- GD&T Inspection
- Color Map Comparison
- Visual Reports

TRAK EXScan

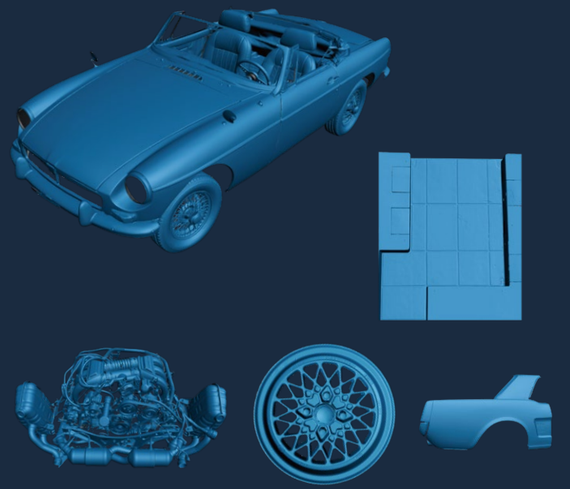
EX Model

EX Measure

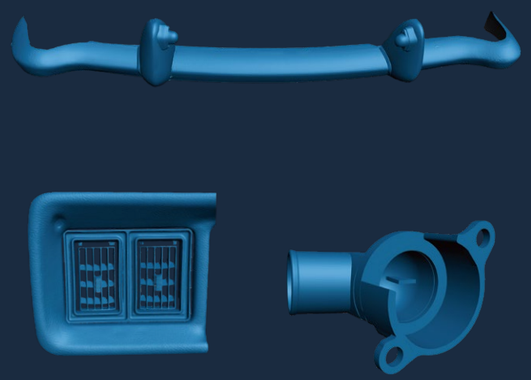


Applications

- Industry-Specific Customization



- Product & Industrial Design



- Heritage Preservation & Art



- AR, VR & Digital Content



- Education & Scientific Research



SPECIFICATIONS

EinScan TRAK

Work Mode	Tracking Mode	Handheld Scanner Mode	
Scan Mode	Laser	Laser	
Light Source	19+19 Crossed Laser Lines / 7 Parallel Lines / Single Line		
Volumetric Accuracy	Up to 0.1 mm		
Resolution	0.05 ~ 10 mm		
Scanning Speed	2,630,000 Points/s		
Working Distance	Tracking Distance: 800 - 4000 mm	100 - 500 mm	
MAX FOV	4796mm × 4174mm @ 4000 mm	547mm × 463mm @ 500 mm	
Tracking Volume	15 m³	/	
Alignment Mode	Tracking / Global Marker	Marker / Global Marker / Feature	
Camera Resolution	Tracker Cameras: 5MP * 2	Depth Cameras: 2MP * 2; Texture Camera: 5MP * 1	
Output Formats	STL, OBJ, PLY, 3MF, ASC		
Laser Class	Class 2		
Operation Conditions	Temperature: -10°C ~ 40°C		
Certifications	CE, FCC, ROHS, WEEE, FDA, SRRC, IP50		
MIN Configurations for PC	OS: Win 10/11, (64-bit); Graphics card: NVIDIA GeForce RTX 3060 Laptop GPU; VRAM: 6 GB or above; RAM: 32 GB or above, DDR5 dual-channel; Interface: USB 3.0; LAN; Processor: 13th Gen Intel® Core™ i7-13650HX / AMD Ryzen7 7735H series or above		
Power Source	5.5 hours of continuous use (Tracker 5400 mAh Batteries * 2; Scanner 5400 mAh Batteries * 2)	3.5 hours of continuous use (5400 mAh Battery * 1)	
Interface	USB type-C * 2	USB type-C * 1	
Dimension	Tracker: 462 × 68 × 54 mm / 18.15" × 2.68" × 2.13"	Scanner: 199 × 193 × 172 mm / 7.83" × 7.59" × 6.77" (Handheld Scanner) 244 × 186 × 238 mm / 9.57" × 7.32" × 9.37" (Spherical Scanner)	
Net Weight	1.02 kg / 2.23 lbs	1.46 kg / 3.21 lbs (Spherical Scanner)	0.48 kg / 1.17 lbs (Handheld Scanner)

EinScan Trak - EN 20260908-V0.38

SHINING 3D Tech Co., Ltd.

Hangzhou, China P: +86-571-82999050
No. 1398, Xiangbin Road, Wenyan, Xiaoshan, Hangzhou, Zhejiang, China, 311258

Hong Kong, China P: +852 2334 8468
Flat 303B, 3/F, Tower 2, Enterprise Square 1, 9 Sheung Yuet Road, Kowloon Bay, KLN, HK, China

SHINING 3D Technology GmbH

Stuttgart, Germany P: +49-711-28444089
Breitwiesenstraße 28, 70565, Stuttgart, Germany

Barcelona, Spain
Calle 27, 10-16, Sector BZ, 08040 Barcelona, Spain

SHINING 3D Technology Inc.

California, USA P: +1(888) 597-5655
2450 Alvarado St #7, San Leandro, CA 94577

Florida, USA
2807 W Busch Blvd, Suite 200, Tampa, FL 33618

SHINING 3D Technology Japan Inc.

Tokyo, Japan P: 03-6380-7622
Tradepia Odaiba, 2-3-1 Daiba, Minato-ku, Tokyo

Follow us on

Facebook | Instagram | Youtube | Community | Amazon | Web-Einstar