SHINING 3D METROLOGY

V-GER METROLOGY

RobotScan Series

Robotic Intelligent 3D Inspection System



Integrated Design for Flexibility and Scalability

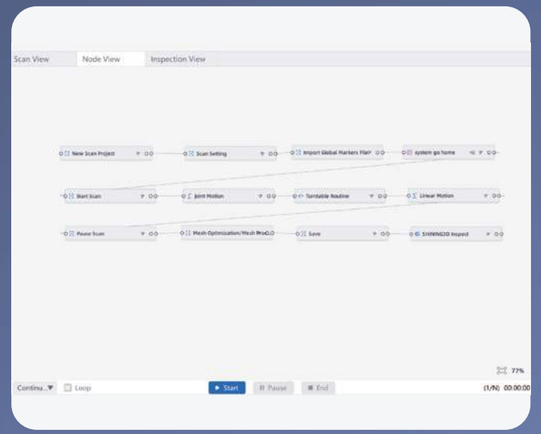
RobotScan series is engineered for high-volume 3D inspection in modern manufacturing environments. Replacing manual operations with robotic automation, it enables fully automated and standardized 3D scanning to rapidly acquire precise geometric data of workpieces, perform real-time in-line inspection, and automatically generate detailed inspection reports.

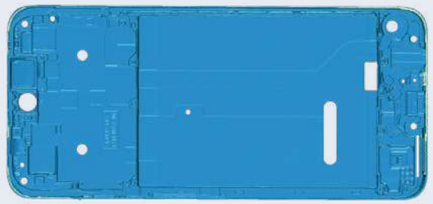
Developed by SHINING 3D, the system supports customized configurations tailored to specific inspection requirements. It can be seamlessly integrated with MES systems for real-time feedback of inspection results and secure data management, establishing a traceable inspection workflow that enhances the efficiency and quality of intelligent manufacturing processes.

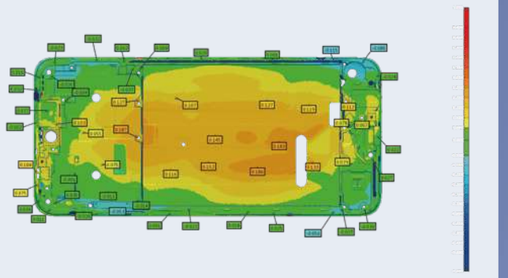
- **High Compatibility**
- **High-Accuracy Full-Field Measurement**
- **Easy Operation**
- **Enhanced Inspection Efficiency**

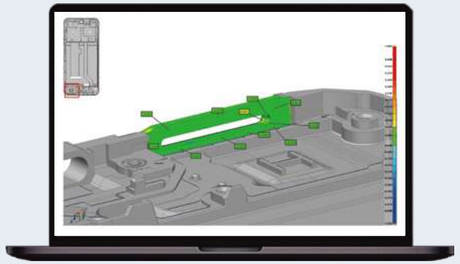
Workflow

Path Teaching → **Automated 3D Measurement** → **Automated 3D Inspection** → **Automated Report Generation**









Standard Solutions

RobotScan series supports both high precision fringe projection and handheld laser scanners. High precision fringe projection scanners deliver high accuracy, superior resolution, and excellent stability, ideal for electronics, electrical components, and civil aviation manufacturing. Handheld laser scanners offer fast scanning speeds, strong adaptability, and ease of operation, making them well-suited for automotive production and general mechanical industries.

All paired scanners are calibrated within SHINING 3D's Accuracy Laboratory, accredited by CNAS in accordance with ISO 17025, to ensure consistent and reliable measurement accuracy.



RobotScan Q Series

- Fringe projection technology with the best accuracy and highly detailed data
- Ideal for small-sized part measurement with complex surfaces, geometries, or sharp edges
- Fine-detail components such as airfoils, brackets, connectors, gears, housings, and electronic components
- Automated optical 3D measurement solution with high repeatability and high efficiency for mass-production inspection



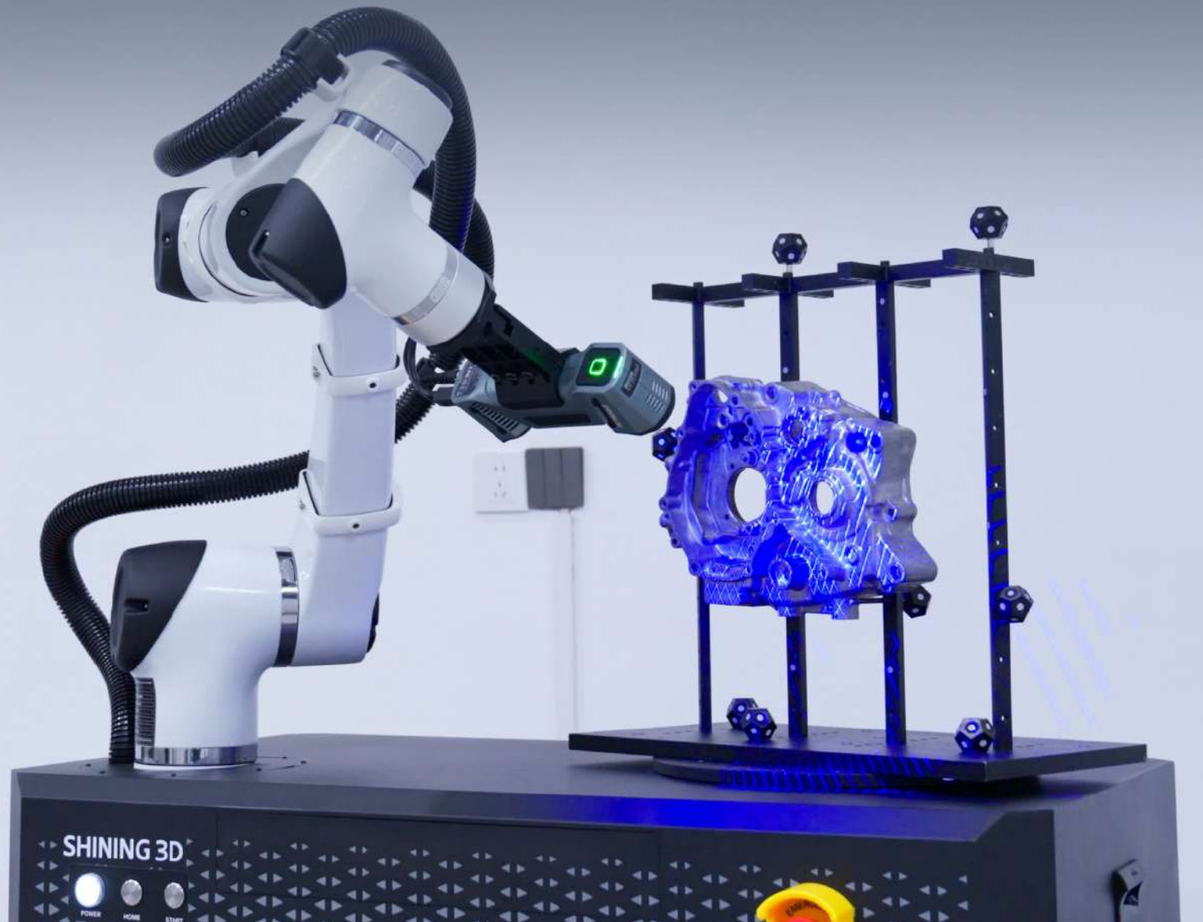
RobotScan UE Pro2

- Handheld blue laser technology with strong material adaptability to black and reflective surfaces
- Suited for small and medium sized sheet metal parts, casting housing, machining parts, mold components
- Wireless and Wired connectivity for flexible on-site integration
- Automated optical 3D measurement solution with excellent balance of high accuracy and high efficiency



RobotScan Combo+

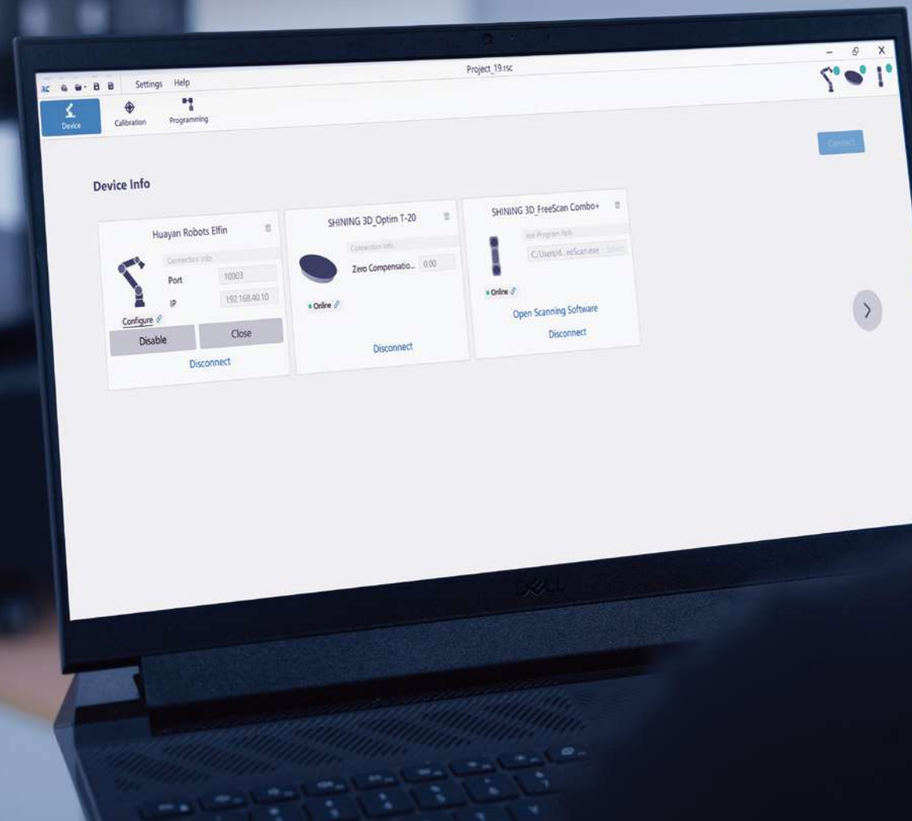
- Hybrid light source delivers excellent versatility across different part types.
- Efficient batch inspection of small-to-medium-sized castings and machined parts
- Mixed-size components such as covers, trim pieces, assemblies, medium castings
- Cost-effective automated 3D scanning solution for manufacturers with diverse inspection needs.



Control & Inspection Software

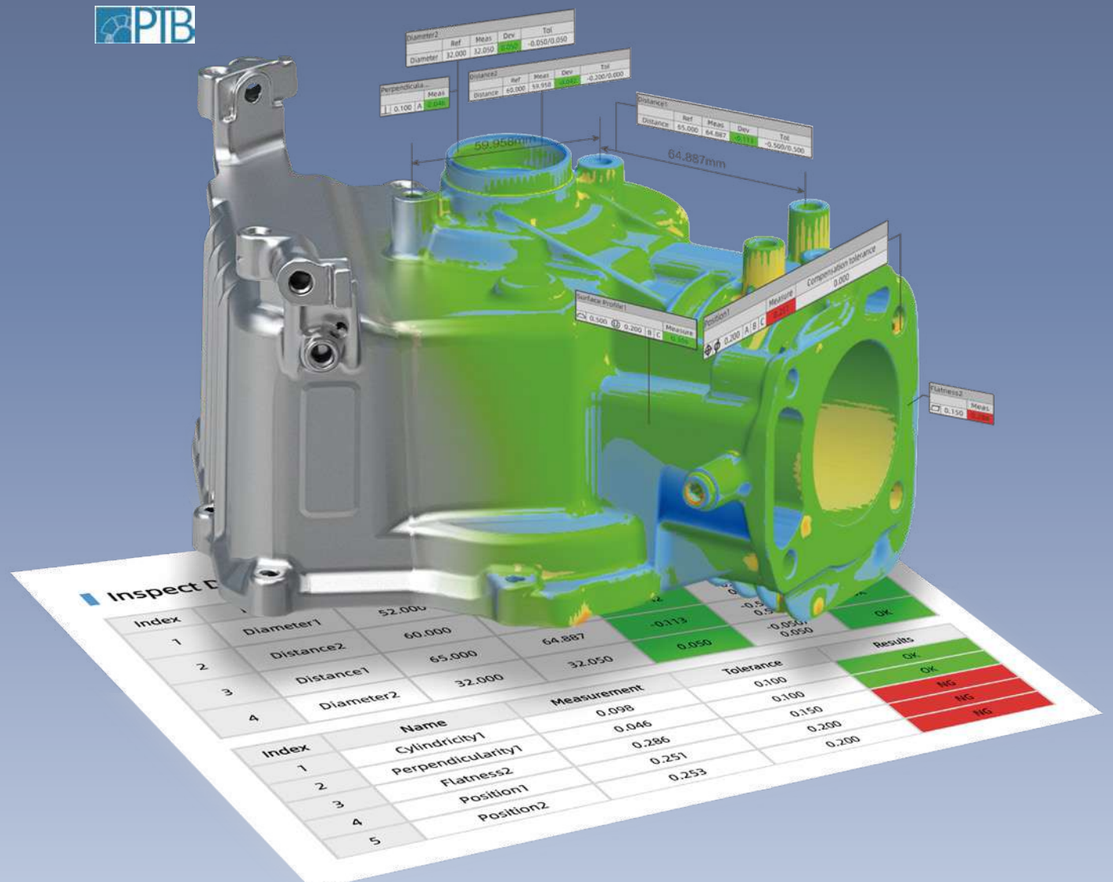
RobotScan Control

RobotScan Control is a professional automation software built for industrial control applications. Integrated with mainstream collaborative and industrial robot arms, this single-software governs the entire automation system to execute complete workflows — from path planning and 3D scanning through to inspection via visual programming methods. Featuring a process-oriented interface, the software delivers intuitive operation with a low learning curve, significantly boosting automation efficiency and operational stability.



SHINING3D Inspect

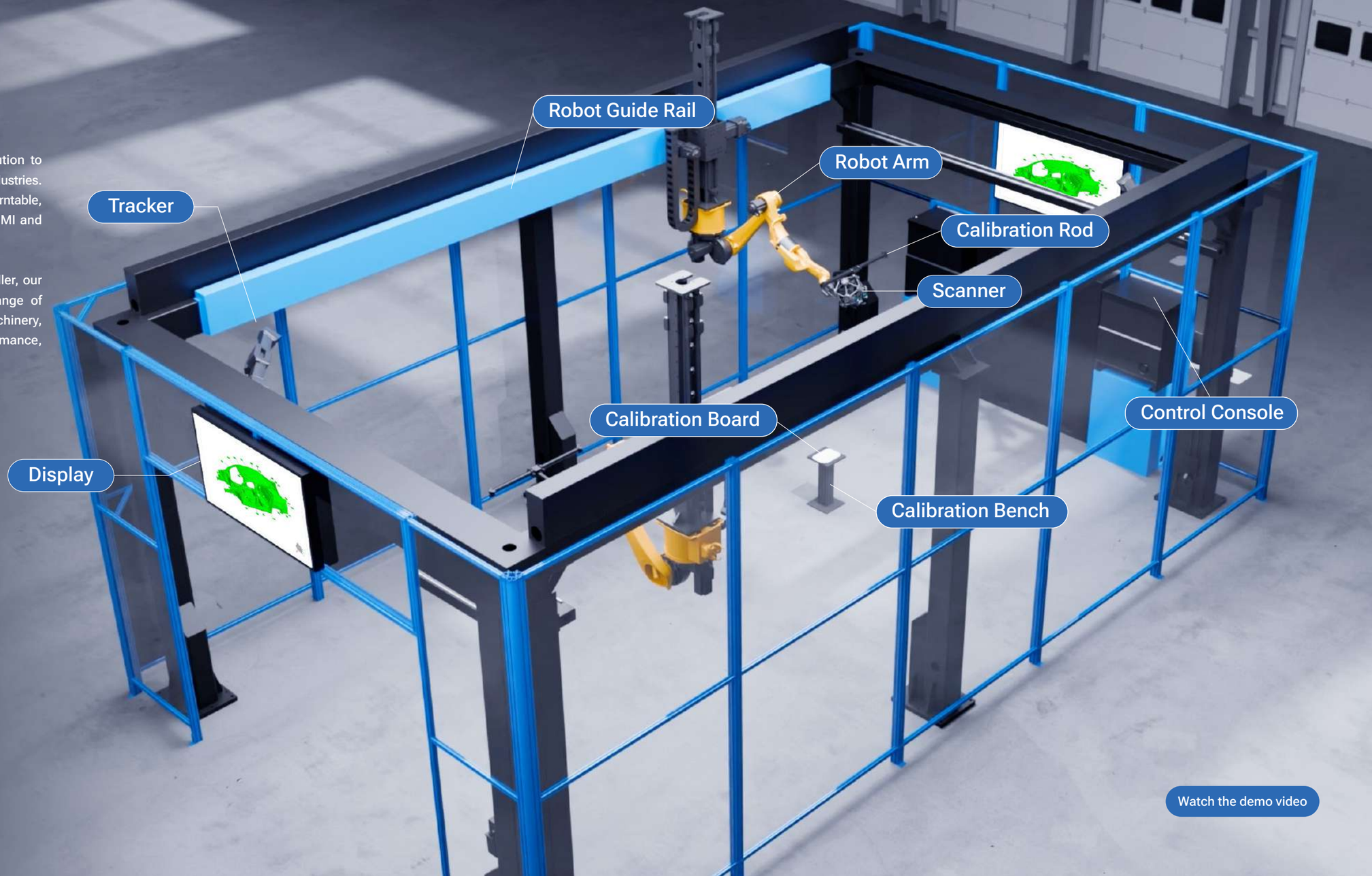
SHINING3D Inspect is an industrial inspection software certified by PTB for measurement accuracy. It processes high-accuracy 3D scan data to perform detailed 3D comparison, measurement, and inspection report generation. The software delivers reliable, traceable inspection results that meet the stringent demands of modern manufacturing and quality control.



Customized Solutions

SHINING 3D offers a fully customizable automation solution to meet the diverse 3D measurement needs of multiple industries. Components include robotic arm, SHINING 3D scanner, turntable, customized fixture, servo gantry, industrial PLC and HMI and inspection software.

Using RobotScan Control software as the main controller, our customized system adapts effortlessly to a wide range of industrial environments: automotive, civil aviation, machinery, and general manufacturing, delivering optimized performance, reliability, and measurement efficiency.



Watch the demo video

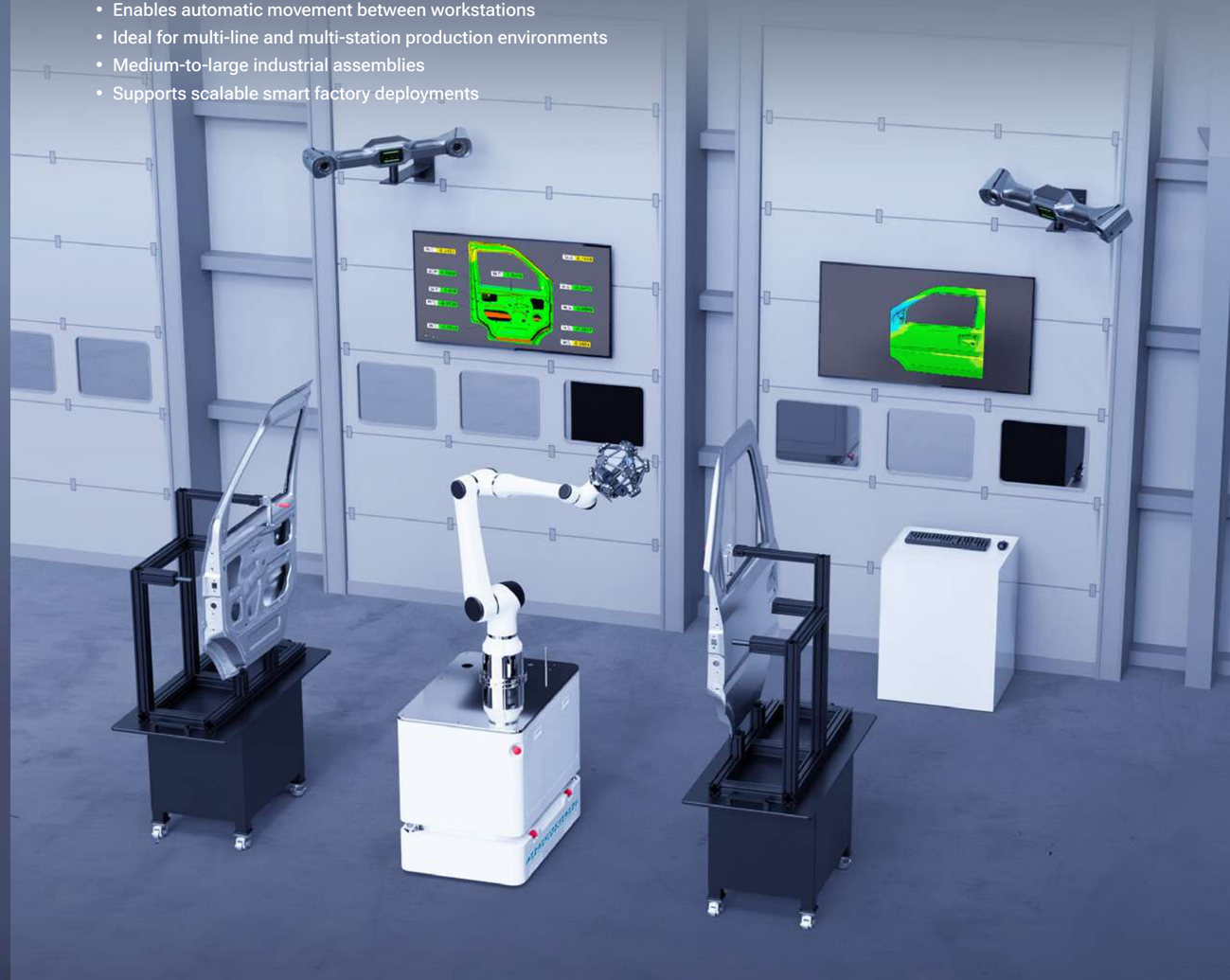
RobotScan Trak Nova

- Features a larger turntable supporting bigger and heavier parts, making it ideal for medium-to-large industrial components.
- Equipped with an extended-reach robotic arm for maximum scanning volume.
- A mobile tracking cart enables flexible workstation arrangements, fast deployment, and easy relocation between inspection areas for small-to-medium-sized workpieces.



RobotScan with AGV

- Integrates robotic scanning with autonomous transportation
- Enables automatic movement between workstations
- Ideal for multi-line and multi-station production environments
- Medium-to-large industrial assemblies
- Supports scalable smart factory deployments



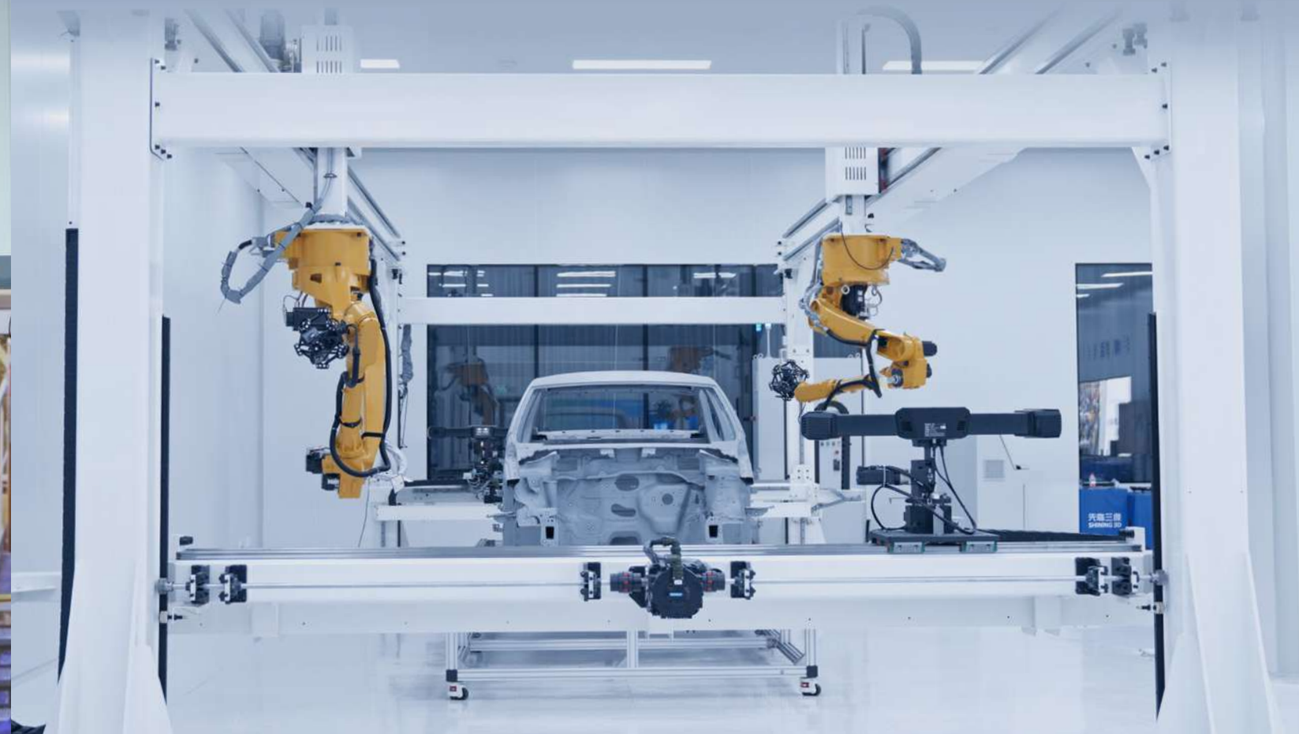
Automated Loading & Unloading System

- Fully automated material handling from part loading to 3D scanning and unloading
- Reduced manual intervention for a more efficient, safe, and consistent inspection workflow
- Designed for continuous batch inspection and high-throughput manufacturing environments
- Seamless integration with factory conveyors, AGVs, and production lines



RobotScan with Servo Gantry

- Significantly larger measurement volume than standard robot cells
- Ideal for oversized parts beyond robot-arm reach
- Excellent repeatability over long travel distances
- High-precision positioning across large workspaces
- Flexible multi-axis gantry configurations



SPECIFICATIONS

RobotScan Standard Series			
Measurable object size	≤ 500 mm		
Turntable load capacity	≤ 20 kg		
Robot type	Cobot, Industrial Robot		
Robot working radius	800 mm		
Dimensions	1030 × 670 × 270 mm		
Weight	70 kg		
Power supply	100~240V (Single-phase, 10A)		
Safe working space	2400 × 2400 × 1600 mm		
Installation type	Desktop / Floor-mounted		
Supported sensors	OptimScan Q12, FreeScan Combo+, FreeScan UE Pro2		
Working temperature	0-40 °C		
	RobotScan Q12	RobotScan UE Pro2	RobotScan Combo+
System power	Rated power 220 W, Peak power 370 W	Rated power 135 W, Peak power 260 W	Rated power 125 W, Peak power 260 W
Connection	2.5G Ethernet port, USB 3.0		

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V·GER
COMPETENCE IN 3D SCANNING

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