ROBOTIC INTELLIGENT 3D INSPECTION SYSTEM

RobotScan Series

Automated 3D Inspection Cells with a Robot, a Turntable and a SHINING 3D Scanner

RobotScan replaces manual scanning with a robot. A collaborative arm, a turntable and a SHINING 3D scanner on one controller base run the same scan path on every part, then compare the data to CAD and write the report. Choose the OptimScan Q12, FreeScan UE Pro2 or FreeScan Combo+ as the sensor.



≤ 500 mm	≤ 20 kg	3
OBJECT SIZE	TURNTABLE LOAD	STANDARD SENSORS

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



One cell, four parts: the robot arm, the 3D scanner (here a FreeScan Combo+), the turntable and the controller base that ties them together.

Integrated Design for Flexibility and Scalability

Built for high-volume inspection: every part is scanned the same way, checked in-line and reported automatically. Results can feed your MES for real-time, traceable feedback.

Path teaching. Teach the robot path once.

Automated 3D measurement. The robot and turntable run the scan.

Automated 3D inspection. Scan data is compared against CAD.

Automated report generation. A finished report for every part.

Standard Solutions

One cell per sensor. The fixed blue light Q12 gives the highest accuracy and detail; the handheld laser scanners add speed and material flexibility for automotive and machinery.



RobotScan Q12: fringe projection for small, detailed parts such as airfoils, connectors, gears and electronics.



RobotScan UE Pro2: blue laser for black, shiny or reflective sheet metal, castings and mold parts.



RobotScan Combo+: hybrid light source for cost-effective batch inspection of castings and machined parts.

Certified Accuracy: ISO/IEC 17025 Laboratory

Every scanner paired with a RobotScan cell is calibrated in the SHINING 3D Accuracy Laboratory, accredited by CNAS to ISO/IEC 17025. Each sensor is verified to its own standard: VDI/VDE 2634 Part 2 for the OptimScan Q12, Part 3 for the FreeScan UE Pro2 and Combo+.



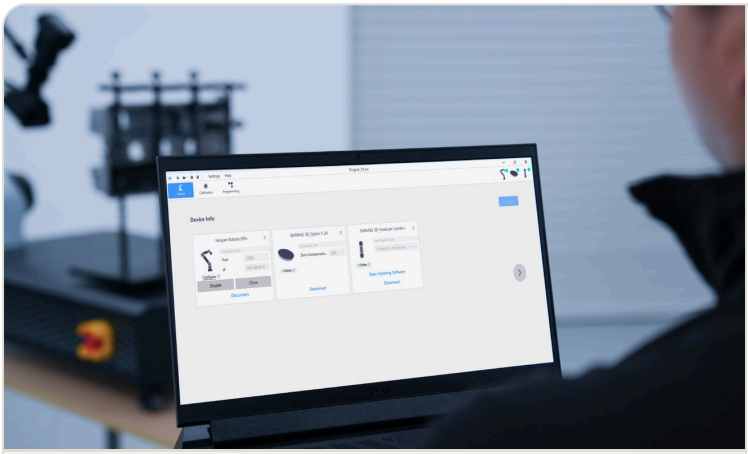
Large-volume hall: traceable reference scale bars for accuracy tests.



Long-range rail: working distance verified along a calibrated track.



Calibration benches: each scanner is verified before pairing.



RobotScan Control on the laptop next to the cell. One interface drives the robot, the turntable and the scanner.

RobotScan Control

Automation software built for industry. It drives collaborative robot arms, servo turntables and 3D scanners through the full workflow, from path programming to scanning and inspection. The process-based interface is intuitive and quick to learn.

SHINING3D Inspect

Inspection software certified by PTB for measurement accuracy. It turns scan data into 3D comparisons, measurements and reports, with reliable, traceable results for production quality control.



SHINING 3D rendering of custom cells for car doors: a robot on a mobile base, door fixtures and fixed scanners, with deviation maps on the screens.

Customized Solutions

Every component can be tailored to the application: robot arm, scanner, turntable, fixtures, and control and inspection software. RobotScan Control integrates industrial and collaborative robots from mainstream brands, including KUKA, Han's Robot and Elite Robots, for automotive, civil aviation, machinery and general manufacturing.

Built for the Production Line

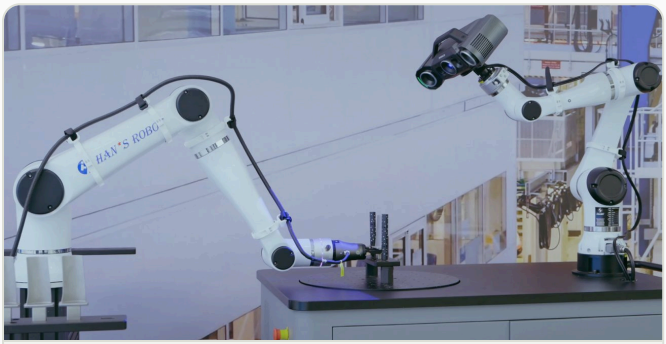
Examples SHINING 3D shows of RobotScan cells in production settings, from a standard cell on the shop floor to custom layouts.



RobotScan Combo+ on the shop floor, inspecting a casting on a marker fixture next to the line.



RobotScan UE Pro2 standard cell: the robot, turntable and controller base on one frame, ready to set on a bench.



Automated loading and unloading: a second robot feeds parts to the Q12 cell for hands-off batch runs.



Servo gantry configuration: robots on a gantry reach across a full car body for large-part inspection.

Specifications

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

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Rev.1 TECHNOLOGIES