



AM-CELL C200

Optical Automated 3D Measurement System

Standardized System, Explorer for Efficient Automated Measurement



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AM-CELL C200

AM-CELL C200 is the all-in-one optical automated 3D measurement system designed for measuring medium-sized parts, taking measurements to the next level. Its modular design allows for flexible layouts and speedy assembly. The system, which can be used without a physical fender, is crafted with an active safety system to avoid safety hazards. It is safe to work directly alongside the operators, suiting well for measurements on the shop floor, in CMM rooms and in educational settings. It offers an automated measurement solution for full life-cycle quality control, giving companies the possibility to increase automation, enhance intelligent manufacturing and upgrade the business.



Optical Tracker E-Track

*Dual-camera system for large-volume tracking



TrackScan Series 3D Scanner

- *Intelligent optical tracking
- *Fast 3D scanning without targets
- *Aerospace-grade carbon fiber
- *Accuracy of up to 0.025 mm
- *Measurement rate of up to 2,600,000 mps



Positioner

- 200KG payload*
- Equipped with servo-machinist*
- Smooth and precise motion*
- Circular and rectangular measurement trays*
- Trays made in 7 series aerospace-grade aluminum alloy*



Efficient and Easy to Operate



Flexible Layouts



Active Safety System



Vast Applications



Lightweight Standardized Product

AM-CELL C200, which is 70% lighter and 60% smaller than its predecessor, is a standardized 3D solution to measure parts for product development and inspection. Its components can be integrated to form the final system easily within 2 days by one operator. This plug-and-play solution supports labor-free automated measurement and manual robot teaching for quick path planning, which lowers the threshold for professional operations.

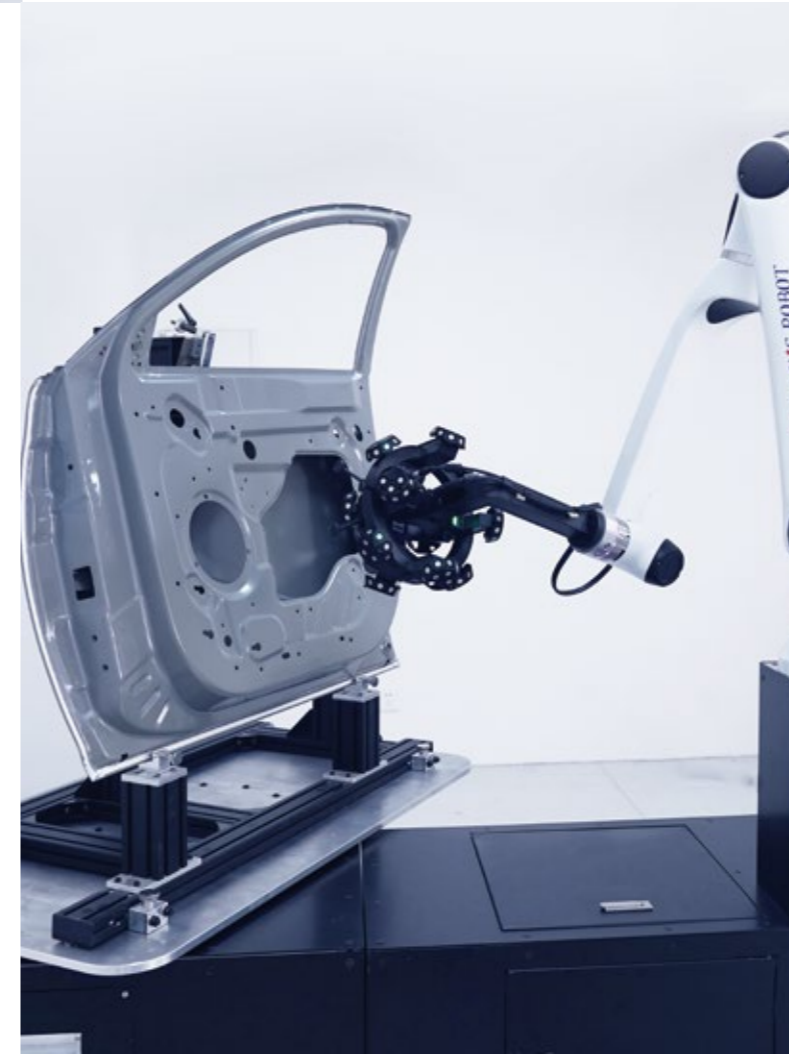
Innovation to Keep You Safe

The system is crafted with an active safety system. Its robot and turntables are equipped with servo-mechanisms with force feedback to avoid safety hazards. There is no need for a physical fence as it comes with a ten-grade collision detection. Therefore, human operators and the measurement system can share the workplace without compromising safety.



Modular Design and Flexible Layouts

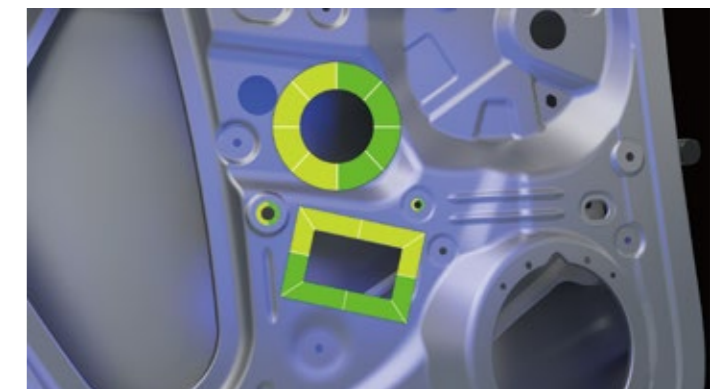
Thanks to its modular functional design and small footprint, C200 can be deployed in L-shaped, I-shaped, T-shaped, and separate layouts to fit in various working areas. Its standard interfaces can be connected with different external devices to enable flexible measurements. Its cobot can work with multiple positioners so that operators can change the part on one positioner while the others are working. Therefore, manufacturers can minimize downtime, significantly increasing measurement efficiency.



Intelligent 3D Optical Measurement

C200, compatible with Scantech's TrackScan-P series optical tracking 3D systems, can automatically measure parts without sticking targets. Thanks to its enhanced stability, users can measure hundreds of parts efficiently and stably with reliable and repeatable results.

C200 allows users to inspect edges automatically and its sophisticated gray value measurement ensures precise results. Users can obtain accurate 3D data of closed features such as holes, slots, and rectangles of stamping parts and machined parts on the site.

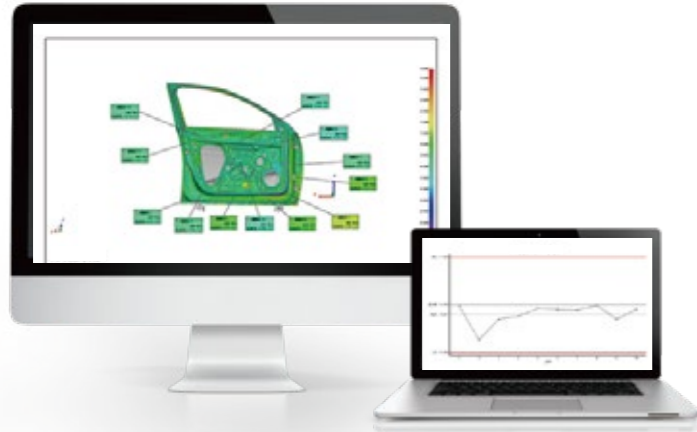


Information-driven Quality Control

C200 can work with different MES systems and various automated quality control software used throughout industry production. With a one-button-start, users can invoke templates, calculate data, generate inspection reports, and analyze the statistics to gain insights that can boost production efficiency and ensure precise quality control.

For R&D

C200 features a measurement rate 5 times faster than that of traditional CMM, which is essential to accelerate the research and development, reduce the time of ramp up and speed up the time-to-market of new products.



For Manufacturing

It supports single-part inspection, multiple-part inspection and trend analysis of batch inspection. This way, users can monitor the evolution of batches, forecast the trend of defective products, reduce the rejection rate, and ensure the stability of manufacturing.

Vast Applications Deliver New Experiences

Maximum Object Size: D=Φ1500 mm

Object Payload: 200KG (medium-sized parts)

Power Supply: Mains electricity

Shop Floor

The measurement cell allows for on-site measurement on the shop floor regardless of lighting and temperature variations. It can measure parts precisely under harsh conditions on the shop floor.



CMM Room

The system can safely and steadily run without special requirements for settings. Physical fencer is optional depending on the requirements of the users.

Educational Settings

With multiple programming methods, teachers and even students without much expertise can learn how to operate the measurement system safely in a short timeframe. It shows our commitment to creating a talent cultivation ecosystem in the way of industry-university-research integration.



Technical Specification

Type	AM-CELL C200
Object Payload	200KG (440.9 lb)
Maximum Object Size	D=Φ1500 mm, H=1500 mm (D=Φ59.1 in, H=59.1 in)
Total Power	2.5KW
Robot Unit Dimension	976×566×945 mm (38.4 × 22.3 × 37.2 in)
Positioner Unit Dimension	1300×800×570 mm (51.2 × 31.5 × 22.4 in)
TrackStation Dimension	820×820×2300 mm (Max 3300 mm) (32.3 × 32.3 × 90.6 in, Max 129.9 in)
Control System	Siemens S7 Series
Robot	Han's E10-L
Minimum Computer Configuration	10th Gen Intel Processor with 8 Cores & 16 Threads/ Nvidia 4G Discrete Graphics Card/32G RAM/1T SSD
Operating Voltage	220 VAC (Single-phase Electric Power) ⁽¹⁾
Time to Install and Test	2 Days ⁽²⁾

(1) Scantech offers transformers to customers in low-voltage areas.

(2) The calculation is based on the single-position layout provided that all the arrangements for installation are in place.

Technical Parameter

Type	TrackScan-Sharp 49	
Scan mode	Ultra-fast scanning	21 blue laser crosses
	Hyperfine scanning	7 blue parallel laser lines
	Deep-hole scanning	1 blue laser line
Accuracy ⁽¹⁾	Up to 0.025 mm (0.0009 in)	
Measurement rate up to	2,600,000 measurements/s	
Scanning area up to	500 mm × 600 mm (19.7 in × 23.6 in)	
Laser class	Class II (eye-safe)	
Resolution up to	0.020 mm (0.0008 in)	
Volumetric accuracy (with MSCAN photogrammetry system)	0.044 mm + 0.012 mm/m (>6m) (0.0017 in + 0.00014 in/ft)	
Hole position accuracy	0.050 mm (0.0020 in)	
Stand-off distance	300 mm (11.8 in)	
Depth of field	400 mm (15.7 in)	

(1) ISO 17025 accredited: Based on VDI/VDE 2634 Part 3 standard and JJF 1951 specification, probing error (size) (PS) performance is evaluated.

