HEXAGON

Data sheet

HYPERSCAN

Key features

HYPERSCAN enhances productivity across a wide range of manufacturing environments with fast, accurate scanning for parts of all sizes, even in unstable or dynamic conditions. Combining real-time dynamic tracking, multi-mode scanning, and target-free operation in a compact, user-friendly system, it streamlines workflows, reduces setup time, and delivers reliable results in both manual and automated applications. Optional contact probing supports hidden point measurement and alignment tasks when required.

Speed

Scanning speed

High-speed laser scanning engine collects 8.3 million pts/s, enabling rapid inspection of even large or detailed parts.

Target-free

Features a target-less scanning system that uses an optical tracking unit.

Intelligent voice assistant

Simplify user operation with voice control and enable the user to focus on what is needed.

Uninterrupted tracking

Just pick up the scanner and start scanning, multi camera tracking capability extends scanning volume & efficiency.





Versatility

Multi-mode scanning

Switch between standard, fine, single line, edge detection or hole flash capture modes to match surface conditions, part size, or required detail, all from one device.

Optional contact probing

Extends the HYPERSCAN workflow with optional contact measurement for hidden points and alignment tasks, using the same coordinate system.

Handheld and fixed

Supports dual-mode operation, functioning seamlessly in both handheld and automated robot configurations.

Portable

Its lightweight, ergonomic design and real-time dynamic tracking enable mobile use.

Resistance to instability

Real-time dynamic tracking allows the user to scan in confidence in unstable and vibration conditions.

Freedom to move around

New heights in scanning - eliminates cables through Wi-Fi connection powered by battery autonomy.

Automation

Robot integration

Seamlessly integrates with robotic arms or automated systems for unattended scanning.

Real-time tracking

Maintains real-time tracking of moving parts or turntables, ensures continuous scanning without disruptions.

Smart scanning

Within a single workflow, delivering flexibility without added complexity.

Turnkey solution

HYPERSCAN is compatible with Hexagon's PRESTO system (automated scanning inspection cell).

Technical specifications

Models		HYPERSCAN Ultra	HYPERSCAN Super
Measurement rate		8 300 000 pts/s	
Scanning area		Up to 610 × 640 mm	
Light source		81 blue laser lines + extra single laser line + 34 blue laser lines	
Resolution		Up to 0.02 mm	
Accuracy (scanner only) [1]		Up to 0.02 mm	
Volumetric accuracy [2] (by tracking distance)	3.5 m (13 m³) 4.2 m (22 m³) 5.5 m (50 m³) 6.3 m (74 m³) 7 m (100 m³)	0.060 mm 0.075 mm 0.09 mm N/A N/A	0.05 mm 0.05 mm 0.075 mm 0.09 mm 0.14 mm
Hole flash capture accuracy		0.03 mm	
Edge detection accuracy		Up to 0.05 mm	
Galaxy LEAP		Supported	
Stand-off distance (by scanning mode)	Fine scan Standard and single laser Long range	150-250 mm 200-450 mm 200-750 mm	
Tracker frequency		100 Hz	
HYPERSCAN main unit	Weight Dimensions	1.5 kg 204 × 263 × 280 mm	
HYPERTRACK main unit	Weight Dimensions	5.7 kg 678 × 159 × 125 mm	7.4 kg 1078 × 159 × 125 mm
Part size range (recommended)		0.1-8 m	0.1-12 m
Connection standard		USB 3.0 (or wireless)	
Working temperature		-10 to 40°C	
Working humidity (non-condensing)		10 to 90%	
Export formats		.stl, .ply, .obj, .txt, .xyz, .asc. etc., customisable	
Compatible software		Hexagon (Inspire, PC-DMIS, DESIGNER, Geomagic, BendingStudio XT) Third-party software (PolyWorks, Metrologic and any other software that can import point clouds or STL file format)	

Models	HYPERPROBE (Optional contact probing)	
Probe accuracy [3]	0.03 mm	
Volumetric accuracy [3]	0.06-0.09 mm	0.05-0.14 mm
Measurement distance	1-5.5 m	1.5-7 m
Dimension of the probe	250 x 150 x 98 mm	
Weight	0.72 kg	
Working temperature	-10 to 40°C	
Working humidity	10 to 90%	
Connection standard	Bluetooth®	
Number of targets	12 targets	

Defining accuracy: Having a reliable basis for the stated accuracy of our optical tracking 3D scanner systems is vital. That is why we measure every scanner against our defined Scanner Acceptance Test. Based on VDI/VDE Guideline 2634 Part 3, this Scanner Acceptance Test uses these quality parameters to ensure users have full confidence in the accuracy of their Hexagon optical tracking 3D scanner.

[1] Probing error size [PS]: Local quality parameter. Deviation from the fitted sphere radius to the calibrated radius.
[2] Sphere spacing error [SSE]: Global quality parameter. Deviation from distance of fitted spheres to calibrated distance.
[3] Based on ISO 10360-12

Hexagon is the global leader in measurement technologies. We provide the confidence that vital industries rely on to build, navigate, and innovate. From microns to Mars, our solutions ensure productivity, quality, safety, and sustainability in everything from manufacturing and construction to mining and autonomous systems.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,800 employees in 50 countries and net sales of approximately 5.4bn EUR.

Learn more at hexagon.com

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