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.

### Speed

**Scanning speed**

High-speed laser scanning engine collects 8.3 million pts/sec, 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 sensor head and start scanning, multi camera tracking capability extends scanning volume & efficiency.


### Versatility

**Multi-mode scanning**

Switch between Standard, Fine, Line, or Hole Flash modes to match surface conditions, part size, or required detail, all from one device.

**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

| Model | | 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 (sensor only)[1] | | Up to 0.02mm | |
| Volumetric accuracy[2] (by tracking distance) | 3.5 m (13 $m^3$) | 0.060 mm | 0.05 mm |
| | 4.2 m (22 $m^3$) | 0.075 mm | 0.05 mm |
| | 5.5 m (50 $m^3$) | 0.09 mm | 0.075 mm |
| | 6.3 m (74 $m^3$) | N/A | 0.09 mm |
| | 7 m (100 $m^3$) | N/A | 0.14 mm |
| Hole Flash Capture accuracy | | 0.03 mm | |
| Edge Detection accuracy | | Up to 0.05mm | |
| Galaxy leap | | Supported | |
| Stand-off distance (by scanning mode) | Fine Scan | 150-250 mm | |
| | Standard & Single laser | 200-450 mm | |
| | Long range | 200-750 mm | |
| Tracker frequency | | 100 Hz | |
| HYPERSCAN main unit | Weight | 1.5 kg | |
| | Dimensions | 204 × 263 × 280mm | |
| HYPERTRACK main unit | Weight | 5.7 kg | 7.4 kg |
| | Dimensions | 678 × 159 × 125mm | 1078 × 159 × 125mm |
| Wireless scanning module | | Supported | |
| Part size range (recommended) | | 0.1-8 m | 0.1-12 m |
| Connection standard | | USB 3.0//Ethernet | |
| Working temperature | | -10 to 40°C | |
| Working humidity (non-condensing) | | 10-90% RH | |
| Export formats | | .asc, .stl, .obj, .ply, .txt, .xyz, customisable | |
| Compatible software | | Hexagon (Inspire, PC-DMIS, DESIGNER, Geomagic) Third-party software (PolyWorks, Metrologic and any other software that can import point clouds or STL file format) | |

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.

## Typical industry sectors

Railway

General manufacturing

Energy

Automotive

Construction

Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that use data from design and engineering, production and metrology to make manufacturing smarter.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at hexagon.com and follow us @HexagonAB.