



Handheld 3D scanners

Every scan you need. Now at your fingertips.

Hexagon's range of handheld 3D scanners deliver versatile, portable scanning solutions that combine accuracy and speed with ease of use.

Whether you are taking your first steps into 3D scanning or moving into new applications, Hexagon's handheld 3D scanners put new possibilities and lasting value into your hands.

Inspection
Prototyping
Reverse engineering

Productivity
Automation
Flexibility and freedom



Industries

Productivity and return on investment

Hexagon handheld 3D scanners are trusted across industries where accuracy and efficiency are critical. From everyday manufacturing and automotive assembly to aerospace, energy, and education, our scanners help engineers, designers, and quality professionals work faster, reduce errors, and innovate with confidence. Wherever precision matters, Hexagon delivers tools that adapt to enhance your workflow.

General manufacturing

Everyday inspection and prototyping.

Automotive

Body parts, assemblies, sheet metal.

Aerospace and energy

Critical component QA, MRO.

Tooling and moulds

Validation of tooling.

Metrology services

Fast, flexible scanning for client needs.

Education

Accessible tools for industry-ready training.



Applications

Versatility and ease of use

Hexagon handheld 3D scanners support a wide range of applications across the product lifecycle, from design and prototyping through to inspection, maintenance, and training. By combining speed, accuracy, and ease of use, they give teams the flexibility to capture data wherever it's needed and turn it into reliable, actionable results.

Inspection and QA

Fast validation, fewer rejects, reduced downtime.

Reverse engineering

Scan-to-CAD workflows for redesign and legacy replacement.

Prototyping and innovation

Accelerate R&D cycles and shorten time-to-market.

Tooling and mould validation

Ensure tools match CAD intent, reduce costly rework.

Maintenance, Repair and Overhaul (MRO)

Capture worn or damaged parts for repair or replacement.

Education and research

Affordable access to professional-grade scanning for students.

3D printing

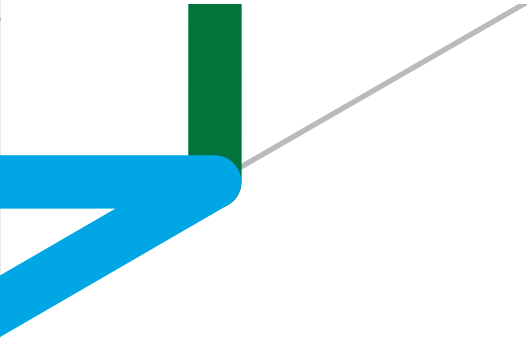
Faster iterations, quicker validation, reduced development cost.



HYPERSCAN
MARVELSCAN
ATLASCAN Max
ATLASCAN Pro

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Hexagon’s range of handheld 3D scanners provides a complete scalable solution.



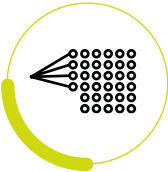
Complete freedom of movement

With handheld 3D scanners that work in tight spaces, it’s simple to capture hidden areas and deep cavities without line-of-sight limits. Instead of moving parts into a quality room, inspection happens where the work is done, and with the optional wireless module, there is even more freedom.



Accuracy in any environment

Dynamic scanning makes precision possible even when the part is moving, while vibration on the shop floor is no obstacle to reliable results. Alignment can be achieved against surrounding reference points or with on-part targets.



Productivity built in

Scanning that adapts to the task at hand. Mode changes at your fingertips, for large-scale coverage, fine feature inspection, or access to hard-to-reach areas. Data from different modes is automatically combined into a single point-cloud or mesh, and instant LED feedback shows when the scanner is within the correct working distance.



A handheld 3D scanner for every application

The Hexagon handheld 3D scanner range brings together four complementary solutions, each built with a distinct purpose to push the boundaries of what 3D scanning can achieve in production workflows. From versatile all-round capability to metrology-grade precision, from target-free operation to reliable performance in challenging environments, the portfolio delivers the right scanner for every need.

HYPERSCAN



Any part, any place

Versatile, high-performance scanning solution engineered for real-world conditions.

Strengths: Real-time dynamic tracking, multi-mode, unstable environments, automation ready.

Key value: Delivers accuracy and high-speed scanning even in challenging or unpredictable conditions.

MARVELSCAN



Target-free innovation

Patented target-free handheld 3D scanner with built-in photogrammetry.

Strengths: Reduces setup time, with intelligent device interactivity and built-in accuracy.

Key value: Saves time and delivers accurate medium-sized object scanning across varied environments. Ideal for manufacturers and service providers.

ATLASCAN Max



Precision and flexibility

Target-based scanner for precise inspection of small-to-medium-sized complex parts.

Strengths: Multi-mode laser scanning for detail and wide coverage, robust industrial design.

Key value: Delivers accuracy and versatility for industrial environments where repeatability matters most.

ATLASCAN Pro



Accessible professional power

Affordable entry point to professional handheld scanning.

Strengths: Portability, ease of use, versatile for both reverse engineering and inspection tasks.

Key value: Makes professional-grade scanning accessible to SMEs, R&D labs, and educators without premium-level investment.



Any part, any place

High-performance scanning for real-world conditions.

- Production QA
- Enterprise manufacturing
- Automotive
- Aerospace
- Automation-ready environments

HYPERSCAN

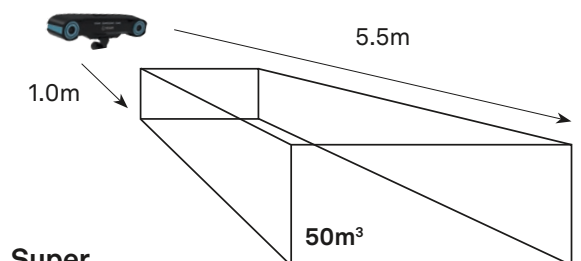
HYPERSCAN is the high-performance handheld solution engineered for challenging environments. With target-free dynamic tracking, it scans accurately even with movement or vibration. Certified accuracy, high throughput, and automation-ready design make it the ultimate enterprise-ready scanner.

- **Scan without limits**
Dynamic optical tracking handles vibration and movement
- **Faster, smarter workflows**
8.3M pts/s throughput with 610 × 640 mm coverage
- **Adaptable performance**
Multi-mode scanning: standard, fine, single line, hole flash capture, edge detection
- **Ready for automation**
Integrates with robotic arms, turntables, and Automated Quality Control (AQC) processes
- **Enterprise confidence**
Accuracy validated to VDI/VDE 2634-3 and ISO 17025
- **Adjustable scan coverage**
Available in two variants (Ultra and Super) to adapt to smaller or larger scanning ranges

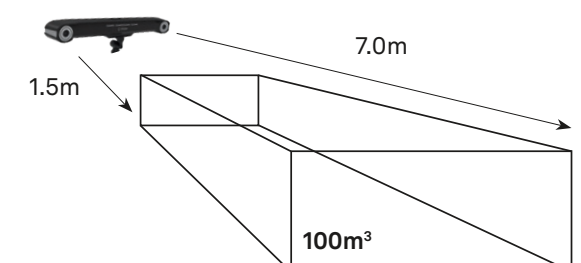
Highlight

Smart optical tracking 3D scanner that excels in unstable environments with multi-scanning mode and high-speed scanning.

Ultra



Super





Target-free innovation

No targets. No wasted time.
Just fast, accurate scanning.

- Service providers
- MRO
- Tooling
- Medium-to-large parts

MARVELSCAN

MARVELSCAN eliminates setup delays with patented target-free scanning. Built-in photogrammetry ensures accuracy, while wireless portability makes it ideal for service providers and mobile teams. Flexible and efficient, it delivers precise results in less time.

- **Target-free innovation**
Eliminate target placement, save valuable time
- **Integrated optical measurement system**
Delivers volumetric accuracy of 0.02+0.02 mm/m
- **Versatile applications**
From inspection to reverse engineering to MRO



Highlight

Patented target-free handheld 3D scanner with built-in photogrammetry. Scan with or without targets, especially useful where flexibility is needed.

Patented 3-in-1 workflow

1. 3D scanning



Using on-part targets, MARVELSCAN allows for high-productivity 3D scanning inspection, including dynamic scanning of unsecured objects.

2. Target-free 3D scanning

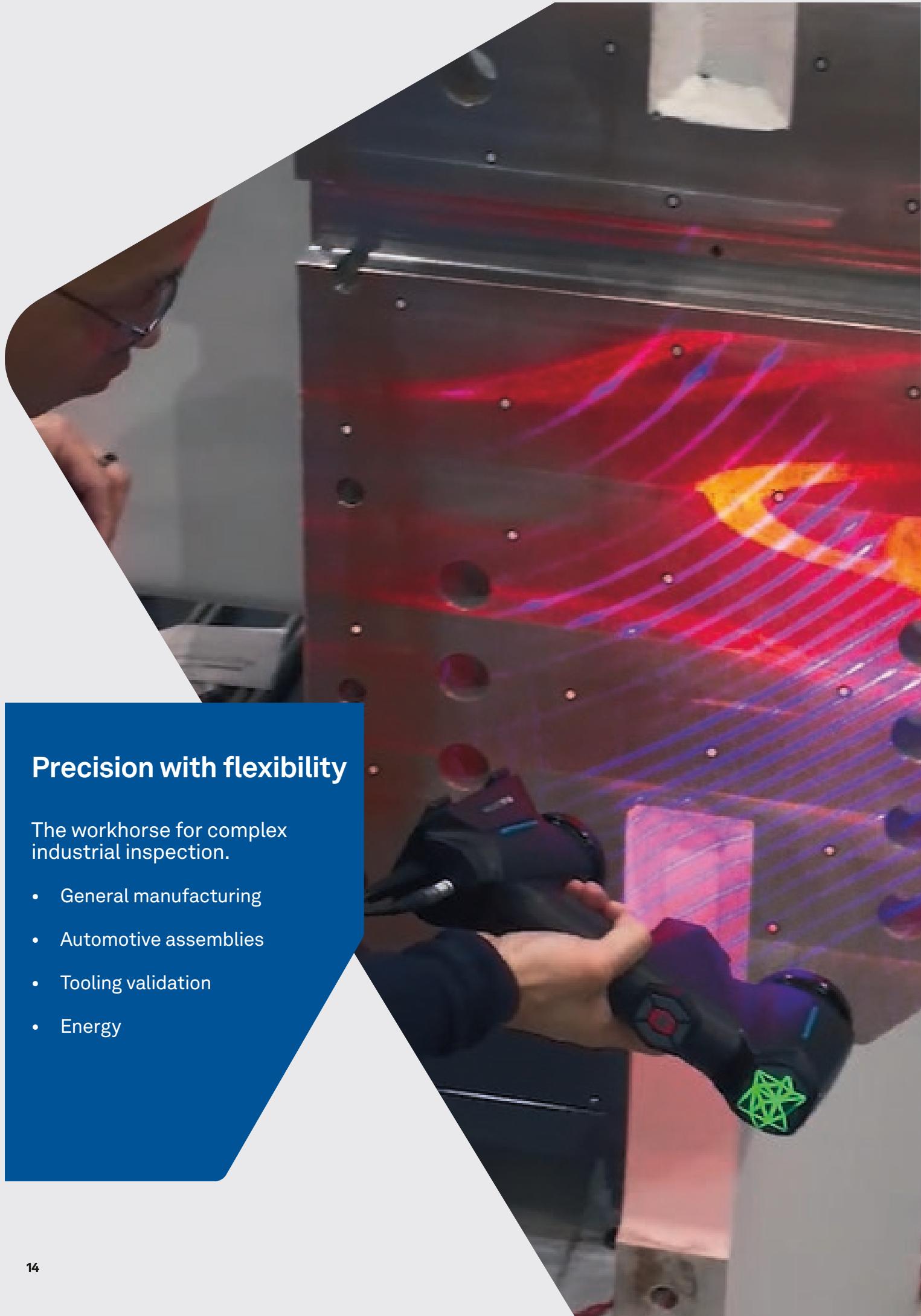


With its built-in photogrammetry system, MARVELSCAN can inspect without targets on the part by using a specially-installed target wall for referencing.

3. Photogrammetry



MARVELSCAN's standalone photogrammetry system enhances scanning accuracy for medium to large part sizes.



Precision with flexibility

The workhorse for complex industrial inspection.

- General manufacturing
- Automotive assemblies
- Tooling validation
- Energy

ATLASCAN Max

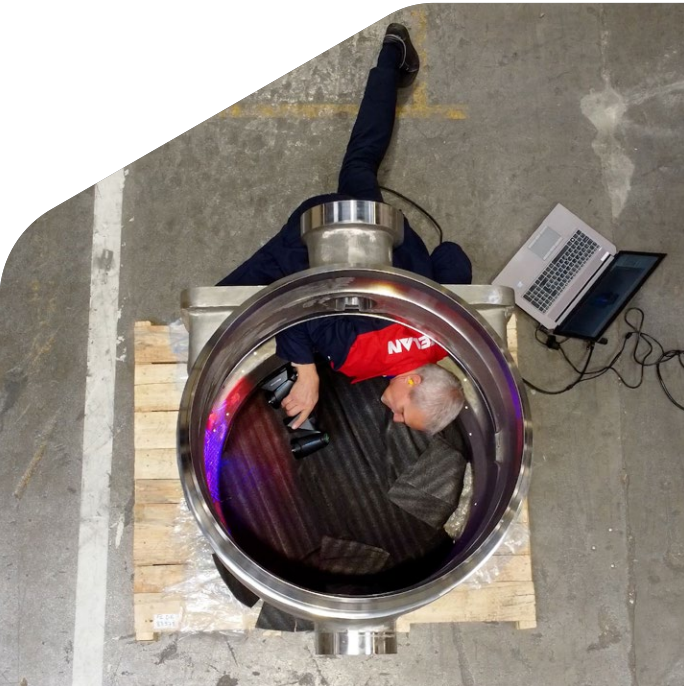
ATLASCAN Max is built for environments where precision and repeatability are critical. With target-based scanning and five versatile scanning modes, it captures fine details and large surfaces in a single workflow. Robust and ready for the shop floor, it is trusted across the aerospace, automotive, and tooling industries.

- **Precision for complex parts**
High accuracy to validate tight-tolerance components
- **Versatile multi-mode scanning**
Standard, fine, single line, edge detection, and hole flash capture
- **Confidence at scale**
Handle fine-detail inspection and larger parts with one device
- **Built for industrial environments**
Reliable, robust, and durable for factory conditions
- **Wireless freedom**
Powered by FREEBox for cable-free mobility and continuous operation



Highlight

Metrology-grade handheld 3D scanner, great for quality control and complex surfaces. Suitable for multi-site use.





Accessible professional power

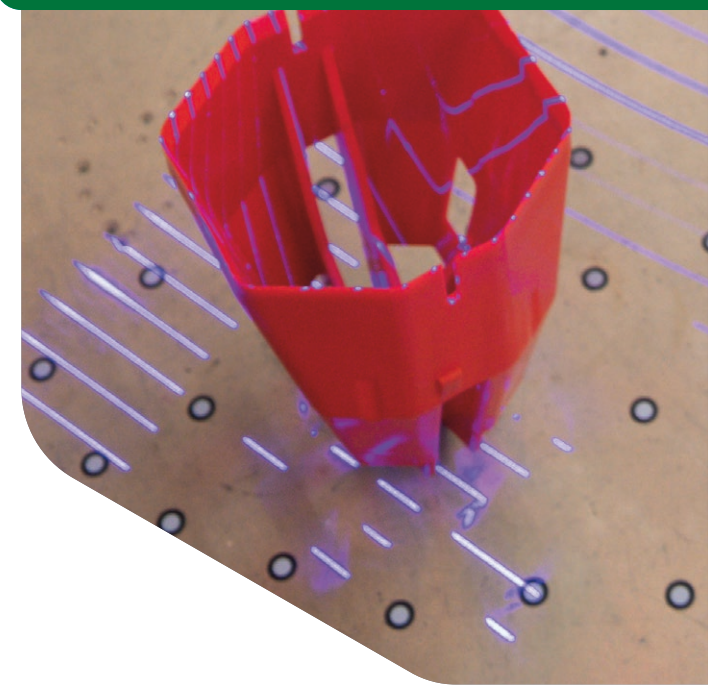
Professional-grade handheld 3D scanning for SMEs, R&D and education.

- Reverse engineering
- Education and training
- SME QA
- R&D

ATLASCAN Pro

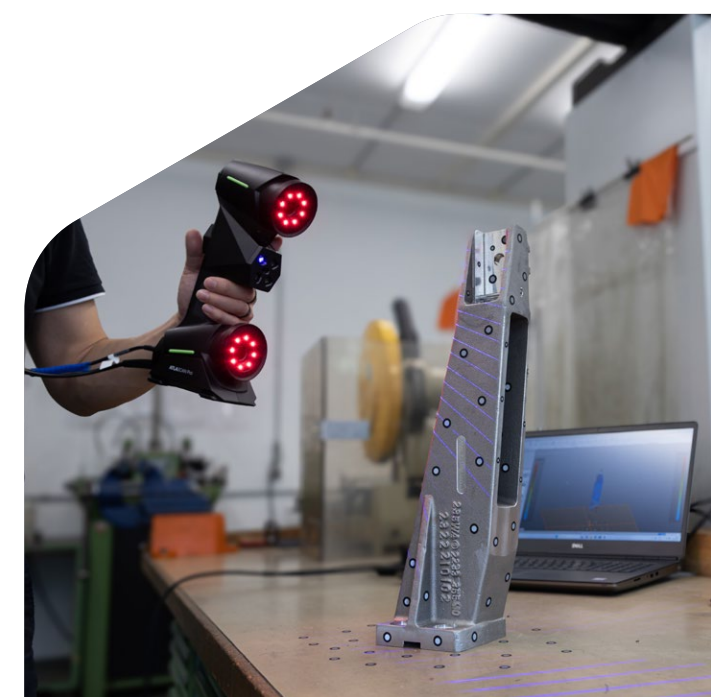
ATLASCAN Pro lowers the barrier to entry for handheld 3D scanning. Portable and easy to use, it empowers SMEs, R&D teams, and educators to adopt professional-grade scanning without premium costs. When combined with Geomagic Design X, ATLASCAN Pro turns complex parts into workable CAD models with minimal effort.

- **Accessible professional-grade scanning**
High-value scanning at a cost that makes sense for new applications
- **Reverse engineering made simple**
Direct scan-to-CAD workflows reduce rework and downtime
- **Reliable inspection and QA**
Accurate, consistent data to validate parts
- **Portability and usability**
Lightweight, ergonomic, easy to use in labs, classrooms, and on shop floors
- **Future-proof investment**
Start with ATLASCAN Pro, scale with Hexagon as needs grow



Highlight

All-round performance handheld 3D scanner, ideal for reverse engineering applications and on-demand inspection.



Automation

Hexagon's handheld 3D scanners are all automation-ready, available within Hexagon's PRESTO turnkey solutions or with integrator kits. Moving into robotics is fast and simple.



HYPERSCAN

built for automated inspection

HYPERSCAN excels in automated systems. Its smart optical tracking keeps results stable when conditions of vibration or movement could disrupt scanning.

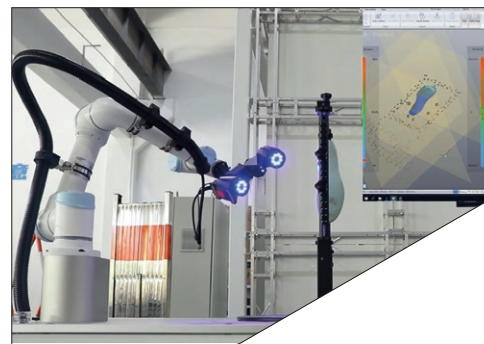
In PRESTO Quality Stations, HYPERSCAN combines dynamic referencing with robotic handling, ensuring every scan is aligned automatically without manual repositioning. Advanced multi-scanning modes capture full parts quickly, even when they are large or complex.

With seamless integration and major industrial robot compatibility, HYPERSCAN enables scalable, flexible deployment across inspection and production environments.

ATLASCAN Pro ATLASCAN Max MARVELSCAN

flexible entry points

MARVELSCAN, ATLASCAN Max and ATLASCAN Pro can be seamlessly integrated with cobots or robots for repeatable and automated inspection tasks. Their dynamic scanning capability ensures high accuracy even in unstable environments, while the use of a turntable significantly enhances productivity.



HYPERSCAN

Built for automated inspection



Product comparison

Find the scanner that makes your work flow



Scanner	Key strengths	Core applications	Accuracy	Recommended part size	Portability	Dynamic scanning/tracking	Best for
HYPERSCAN Smart optical tracking 3D scanner	Real-time dynamic tracking, suitable for manual use, motion capture and automation inspection. Wide-areas scan coverage with stable tracking.	Production QA, enterprise manufacturing, aerospace, automotive	High	0.1-12m (Super) 0.1-8m (Ultra)	Semi-fixed setup	Yes	Large or moving objects (above 4m), unstable environments and automated inspection
MARVELSCAN Patented target-free handheld 3D scanner with built-in photogrammetry	Scan with or without targets, built-in photogrammetry enhancing accuracy on medium-sized objects. Handheld, portable. Ideal for industrial applications.	Service providers, MRO, tooling, medium-to-large parts	High	0.1-6m	High	Yes	Medium-sized object scanning (up to 6m), especially where flexibility is needed
ATLASCAN Max Metrology-grade handheld 3D scanner	Metrology-grade accuracy, great for quality control and complex surfaces with multi-mode scanning. Compact and portable for multi-site use.	Aerospace QA, automotive assemblies, tooling validation	High	0.1-4m	High	Yes	Small to medium (up to 4m) parts needing accuracy and high detail
ATLASCAN Pro All-round performance handheld 3D scanner	Great for reverse engineering and complex surfaces. On demand inspection and portable for multi-site use. Available bundled with Geomagic Design X Go (reverse engineering software).	Reverse engineering, prototyping, SME QA, education	Medium	0.1-4m	High	Yes	Small-to-medium parts that need reverse engineering and have larger tolerances

Accessories

Find the accessories that make your work flow

FREEBox

- Wireless scanning module
- WiFi connection
- Hot swappable batteries for cable-free scanning
- New generation, compatible with all scanner models

FREEBox-S for

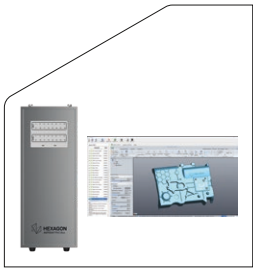
HYPERSCAN
MARVELSCAN
ATLASCAN Max
ATLASCAN Pro
sensors



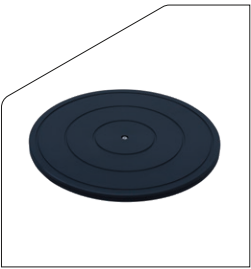
FREEBox-T for

HYPERSCAN
tracking unit

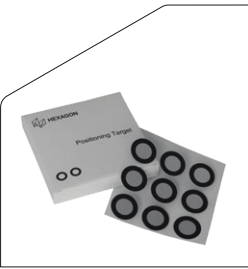




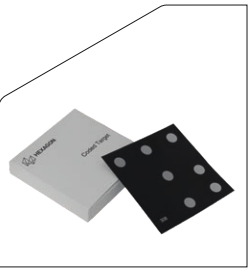
Integration Kit
AUTOMETRIC box and software for automated scanning without programming



Scanning turntable
full 360° coverage with less effort and repeatable setup



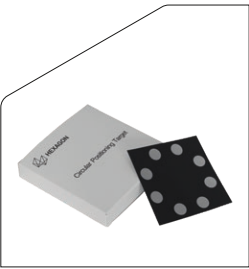
Range of target sizes
ease of setting up different part sizes



Magnetic targets
faster setup, reliable positioning and reusability



Ball bar
ensures quick verification of system accuracy



Rectangular scalebar
for better control of volumetric accuracy

Metrology software

Driving the tools of high-end inspection

Hexagon is the largest software developer in the metrology industry and offers a wide range of individually customisable software packages. Hardware solutions from Hexagon support this with a foundation of cross-platform compatibility, designed for perfect functionality with both the many advanced platforms developed in-house and the best third-party programs on the market.

Handheld 3D scanners	Hexagon platforms	Geomagic Design X	Inspire	PC-DMIS	DESIGNER
	Third-party platforms	PolyWorks®	Metrologic	and more	

Geomagic Design X

Reverse engineering made simple



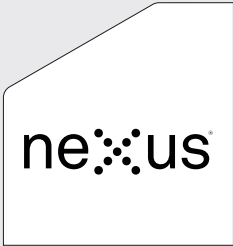
Geomagic Design X is the industry’s most comprehensive reverse engineering software. Combining history-based CAD with 3D scan data processing, you can create parametric, editable solid models compatible with your existing CAD software. Optimised for handheld 3D scanning workflows, it combines mesh processing, surface fitting, and feature extraction to bridge the gap between physical parts and digital design. Geomagic Design X enables accurate reconstruction of components for manufacturing, repair, or redesign.

Geomagic delivers:

- Direct scan-to-CAD workflows that minimise errors and rework.
- Automated and guided tools for efficient reverse engineering.
- Accurate geometry for product development, replacement parts, and quality validation.

Nexus

Centralise manufacturing within an open and integrated digital reality platform



Nexus connects people, technology, and data to drive faster innovation in manufacturing. By breaking down silos, it enables seamless collaboration across disciplines, allowing you to put your data to work.

Nexus delivers:

- **Speed**
Accelerate time to market with smooth collaboration and automated data sharing
- **Efficiency**
Save time and costs with better visibility and faster decisions
- **Productivity**
Boost output with quicker feedback loops throughout the product life cycle
- **Optimal data sharing**
Share only the data needed to solve specific challenges

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 0.02 mm		
Volumetric accuracy ² (by tracking distance)	3.5 m (13 m³)	0.060 mm	0.05 mm	
	4.2 m (22 m³)	0.075 mm	0.05 mm	
	5.5 m (50 m³)	0.09 mm	0.075 mm	
	6.3 m (74 m³)	N/A	0.09 mm	
	7 m (10 m³)	N/A	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	150-250 mm		
	Standard and single laser	200-450 mm		
	Long range	200-750 mm		
Tracker frequency		100 Hz		
HYPERSCAN main unit	Weight	1.5 kg		
	Dimensions	204 x 263 x 280 mm		
HYPERTRACK main unit	Weight	5.7 kg	7.4 kg	
	Dimensions	678 ×159 × 125 mm	1078 × 159 × 125 mm	
Part size range (recommended)		0.1-8 m	0.1-12 m	

Model		MARVELSCAN	
Scanning modes		Standard, single line, fine, edge detection and hole flash capture	
Measurement rate		Standard and single line: 2 100 000 pts/s Fine: 900 000 pts/s	
Scanning area		Up to 600 × 550 mm (single line mode: 300 mm)	
Light source		22 blue laser lines + single blue laser line (standard mode) + 5 parallel blue laser lines (fine mode)	
Resolution		Up to 0.02 mm	
Accuracy ¹		Up to 0.02 mm	
With targets	Volumetric accuracy-standard ²	0.02 + 0.04 mm/m	
	Volumetric accuracy with scale bar ³	0.02 + 0.03 mm/m	
	Hole accuracy ⁴	Up to 0.03 mm	
	Hole volumetric accuracy ⁴	0.03 + 0.04 mm/m	
	Volumetric accuracy + photogrammetry	0.02 + 0.02 mm/m	
Target-free	Volumetric accuracy-standard	0.05 + 0.02 mm/m	
	Hole volumetric accuracy	0.06 + 0.02 mm/m	
Built-in photogrammetry ⁵	Volumetric accuracy	0.020 mm/m	
	Average deviation	0.007mm	
	Depth of field	600-2500 mm	
Stand-off distance		Standard and line: 300 mm/Fine: 150 mm	
Depth of field		Standard and line: 450 mm/Fine: 150 mm	
Depth of field (at furthest range)		550 mm	
Weight		1.3 kg	
Dimensions		300 × 150 × 75 mm	
Part size range (recommended)		0.1-6 m	

Model		ATLASCAN Max	
Scanning modes		Standard, single line, fine, edge detection and hole flash capture	
Measurement rate		Standard and single line: Up to 5 220 000 pts/s Fine: 1 720 000 pts/s	
Scanning area		Up to 720 x 640 mm (single line mode: 300 mm)	
Light source		34 blue laser lines + single blue laser line + 14 blue laser lines	
Resolution		Up to 0.01 mm	
Accuracy ¹		Up to 0.02 mm	
With targets	Volumetric accuracy-standard ²	0.02 + 0.04 mm/m	
	Volumetric accuracy with scale bar ³	0.02 + 0.03 mm/m	
	Hole accuracy ⁴	Up to 0.03 mm	
	Hole volumetric accuracy ⁴	0.03 + 0.04 mm/m	
Stand-off distance (by scanning mode)	Fine scan	150-250 mm	
	Standard and single laser	200-450 mm	
	Long range	200-750 mm	
Weight		1 kg	
Dimensions		295 × 135 × 75 mm	
Part size range (recommended)		0.1-4 m	

Model		ATLASCAN Pro	
Scanning modes		Standard, single line and fine	
Measurement rate		Standard and single line: Up to 4 000 000 pts/s Fine: 1 720 000 pts/s	
Scanning area		Up to 720 x 640 mm (single line mode: 300 mm)	
Light source		26 blue laser lines + single blue laser line + 14 blue laser lines	
Resolution		Up to 0.01 mm	
Accuracy ¹		Up to 0.03 mm	
With targets	Volumetric accuracy-standard ²	0.03 + 0.05 mm/m	
	Volumetric accuracy with scale bar ³	0.03 + 0.035 mm/m	
Stand-off distance (by scanning mode)	Fine scan	150-250 mm	
	Standard and single laser	200-450 mm	
	Long range	200-750 mm	
Weight		1 kg	
Dimensions		295 x 135 x 75 mm	
Part size range (recommended)		0.1-4 m	

Model		All
Connection standard		USB 3.0 (or wireless)
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, Oqton, Metrologic) and any other software that can import point clouds or STL file format)
Laser class		Class II (eye safe)
Available scanning modes		Standard, single line, fine, edge detection and hole flash capture (except ATLASCAN Pro: standard, single line and fine)
Battery operating time		Up to 2 hours

Notes

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 Rectangle scale bar for Galaxy mode.
⁴ Hole flash capture mode.
⁵ Scale bar included in standard package.

Defining accuracy: Having a reliable basis for the stated accuracy of our handheld 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 handheld 3D scanner.

Certifications:

- ISO 17025 – Calibration in accredited laboratories
- VDI/VDE 2634-3 – Accuracy validation for handheld 3D scanners

Service and support

Hexagon handheld 3D scanners come backed by world-class service and support. With ISO-certified calibration centres, global reach, and local expertise, Hexagon ensures maximum uptime and confidence.

From warranty and maintenance through to repair, recertification, and operator training, our Customer Care Packages are designed to match your needs.

Global centres



World-class products to rely on

Drawing on decades of research and development experience, handheld 3D scanning from Hexagon's Manufacturing Intelligence business is built on a long history of outperforming technological innovation.



Warranty and serviceability

Every major product in this brochure comes with at least a 12-month factory warranty as standard, as well as a guaranteed 5 years of serviceability through official Hexagon service channels.



World-class support delivered locally

With the largest dedicated service team of any metrology equipment manufacturer and an emphasis on locally delivered solutions, Hexagon support is unmatched from service, repair, certification and calibration through operator training and software maintenance and upgrades.



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](https://www.hexagon.com)