

Absolute Scanner AS1

Key features

The combination of Absolute Scanner AS1 and Leica Absolute Tracker offers the perfect match to ensure hundreds of millions of accurate points on virtually any surface, from matte black to highly reflective, even carbon fiber all without any special preparation.



High accuracy

Measurement accuracy to within just 50 microns.

High-density data

Collect up to 1.2 million points per second (300 lines per second).

Large scale measurement

High-performance measurement at up to 30 metres from the tracker.

Automation ready

Fewer scan passes and higher speed data collection make AS1 our fastest automated laser scanning solution yet.

User-friendly design

Programmable Quick Access Buttons allow easy switching between measurement modes and execution of macros and other software functions.

Direct digital I/O allows robot movement and scanning tasks to be managed by the scanner controller.

Modular scanner concept allows for easier and faster serviceability.

Completely portable

Lightweight design of the scanner carries through to the controller, which can be mounted directly on the tracker stand.

SHINE performance

Maximum frame rate, maximum scan width and full scanning performance whatever the surface with Systematic High-Intelligence Noise Elimination. Go from glossy black to matte white to shiny chrome and all the way back in a single scan pass with no need to change the default scanning setting and no reduction in performance.

Cross-platform scanning

Compatible with both Absolute Tracker and Absolute Arm measurement, with no realignment required when switching.

Real-time monitoring

Fully compatible with HxGN SFx | Asset Management, which allows users to securely monitor and manage tracker and scanner performance and location data in real time.

Leica Absolute Tracker AT960 with AS1

Key characteristics



Portable versatility

Designed for easy portability, the AT960 is lightweight and ergonomic, while hot-swappable battery operation allows manual scanning to move quickly and easily between quality room and shop floor as needed.

Unbeatable accuracy

The tracker's AIFM and the AS1 scanner allow for non-contact measurement accuracy to within just 50 microns at a distance of up to 30 metres.

Multi-range measurement

Choose the right model for your application, whether you need no more than 5 metres between your tracker and automation setup or full-range high-accuracy reflector measurement at up to 80 metres from the tracker.

Intelligent zoom

The multiple zooming lenses of the built-in mini variozoom camera account for distance to the 6DoF sensor. This delivers a constant clear image of the LED target configuration that allows for improved system orientation accuracy over larger distances.

Accelerated data

With the AS1 laser scanner, the AT960 can collect up to 1.2 million points every second at a market-leading 300 lines per second.

Automation ready

The AT960 is fully ready for automated inspection, assembly and production within a robotic setup when paired with the AS1 and the scanner controller's direct digital input/output functionality.

24-month warranty

As standard on all Absolute Tracker systems.

Worldwide service

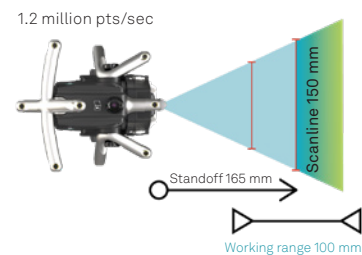
Our network of Hexagon service centres around the world can provide local support and servicing for trackers and all compatible sensors.

Length measurement (length test)

Measurement distance	AT960		AS1	
	Typical	MPE	Typical	MPE
5 m	±32 µm	±64 µm	±25 µm	±50 µm
10 m	±53 µm	±106 µm	±25 µm	±50 µm
20 m	±96 µm	±191 µm	±25 µm	±50 µm

Other accuracies

Absolute angular performance $e_t^{1)}$	±15 µm + 6 µm/m
Length measurement AS1 $E_{\text{Uni:ODR:LT,MPE}}$	±50 µm
AIFM absolute distance performance	±0.5 µm/m
Dynamic lock-on	±10 µm
Inclination sensor	±1.0 arcsec
Orient to gravity U_z	±15 µm + 8 µm/m
Timestamp accuracy	< 5 µsec



All accuracies stated as Maximum Permissible Error (MPE). Typical values half of MPE.

¹⁾Angular Performance Transverse e_t according to ISO 10360-10:2016 Annex E, with respect to an MPE for the Location Error ($L_{\text{Data:2x5:PBR:LT,MPE}}$) in accordance with chapter 6.3 of ISO 10360-10:2016 of 30 µm + 12 µm/m.

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

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

Hexagon's Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter. For more information, visit hexagonmi.com.

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