Leica HDS6200
Latest generation of ultra-high speed laser scanner

Max scan rate › 1mio points/ second

- when it has to be **right**

Leica Geosystems

Leica HDS6200
Compact, next-generation, ultra-high speed laser scanner

The Leica HDS6200 unlocks the full potential of ultra-high speed, "phase-based" laser scanning technology for fast, productive as-built surveys. "Next-generation" advances in speed, portability, data quality at range, temperature capabilities and tilt sensor integration all combine to deliver significantly lower project costs. The Leica HDS6200 lets users profit from the inherent speed advantage of phase-based scanners for a wider range of as-built and site surveys.

Leica HDS6200: The "next-generation" phase-based scanner

Advanced features

Advanced features provide productivity benefits, while also expanding the types of projects where phase-based scanning can be used.

Several advanced features and enhancements in the Leica HDS6200 contribute to its overall technology leadership:

- **Higher accuracy** – high distance and angle accuracy extend the range at which scan data meet project requirements

- **Less noise** – major reductions in scan data noise allow more objects to be accurately modeled to meet a project's precision requirements

- **Higher sensitivity** – the Leica HDS6200 can better detect laser returns from dark surfaces, oblique surfaces, and surfaces further from the instrument

- **Higher scan density** – increases the range at which smaller objects and targets can be accurately modeled

- **Scan speed** – up to 1,016,727 points per second

- **Added context** – the ability to calculate return data out to 79 m can provide added context for the primary high-accuracy, close range data

Fully Integrated for Faster Set-ups

A major breakthrough in the Leica HDS6200 is its full integration: scanner, controller, data storage and battery in a single instrument. Setting up and moving the scanner is fast and easy. Users can operate the scanner from a simple, side touch panel. An optional PDA or laptop with Leica Cyclone SCAN software provide added scanner control and valuable field QA. Wireless LAN (WLAN) is also fully integrated.
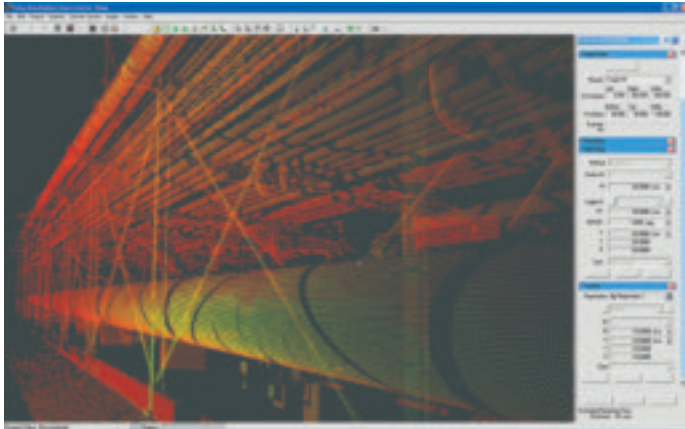
Versatile Leica Cyclone Software

Cyclone SCAN is the only software that controls both ultra-high speed, phase-based laser scanners and versatile, pulsed laser scanners (Leica ScanStation C10, Leica ScanStation 2, Leica ScanStation, Leica HDS3000, etc). Leica Cyclone REGISTER lets users benefit from rigorous, target-based registration and efficient, target-less "cloud-to-cloud" registration, especially effective in plant applications.

Fewer Setups and Targets

The Leica HDS6200's full dome, 360° x 310° field-of-view (FOV), high scan density and 5 mm positional accuracy at 25 m range translate directly into fewer instrument setups and scan targets that need to be placed, scanned, and surveyed. A built-in, dual-axis (tilt) sensor offers similar potential. If indicated tilt changes are nil or insignificant, then users can apply Leica Cyclone SCAN software's resection, backsighting, and traverse workflows to further reduce the number of targets needed.

■ **Integrated battery and data storage**
Unmatched portability

■ **Ultra-high speed scanning with > 1 million points/second**
Reduces time needed for scanning

■ **Built-in control panel**
Easy, standalone use without laptop or PDA

■ **Integrated dual-axis (tilt) sensor**
Better QA plus efficient traverse workflows that require fewer scan targets

Key Leica HDS6200 Performance Specifications			
Instrument type	Compact, phase-based, dual-axis sensing, ultra-high speed laser scanner, with survey-grade accuracy and full field-of-view		
User interface	Onboard touch panel, or external notebook or Tablet PC, or PDA		
Data storage	Integrated hard drive		
Accuracy of single measurement	Position*	5 mm, 0.4 m to 25 m range; 9 mm to 50 m range	
	Distance*	≤2 mm at 90% alb edo up to 25 m; ≤3 mm at 18% albedo up to 25 m	
		≤3 mm at 90% albedo up to 50 m; ≤5 mm at 18% albedo up to 50 m	
	Angle (Horizontal/vertical)	125 µrads/125 µrads (7.9 mgon/7.9 mgon) one sigma	
Spot size	3 mm at exit (based on Gaussian definition) + 0.22 mrad divergence; 8 mm @25 m; 14 mm @50 m;		
Modeled surface precision**/noise	1 mm at 25 m; 2 mm at 50 m, for 90% albedo; one sigma		
	2 mm at 25 m; 4 mm at 50 m, for 18% albedo; one sigma		
Target acquisition***	2 mm std. deviation		
Dual-axis sensor	Selectable on/off; Resolution 3.6"		
Laser scanning system	Range	79 m ambiguity interval	
		79 m @90%; 50 m @18% albedo	
	Scan Rate	Up to 1,016,727 points/sec, maximum instantaneous rate	
	Scan density	**@10 m**	**@50 m**
	"Preview"	50.6 x 50.6 mm	250 x 250 mm
	Middle (4x)	12.6 x 12.6 mm	62 x 62 mm
	High (8x)	6.3 x 6.3 mm	31.4 x 31.4 mm
	Super High (16x)	3.1 x 3.1 mm	15.8 x 15.8 mm
	Ultra High (32x)	1.6 x 1.6 mm	7.9 x 7.9 mm
Laser Class	3R (IEC 60825-1)		
Lighting	Fully operational between bright sunlight and complete darkness		
Power supply	24 V DC; integrated Li-ion battery (2.5 hrs) and/or optional external DC power supply (4 hrs) or AC supply		
Power consumption	65W max.		
Temperature	Operation: -10° C to +45° C; Storage: -20° C to +50° C		

All specifications are subject to change without notice   All +/- accuracy specifications are one sigma unless otherwise noted
* At 127,000 pts/sec scan rate, one sigma   ** At 127.000 pts/sec scan rate, one sigma; subject to modeling methodology for modeled surface   *** Algorithmic fit to planar HDS gray & white targets

Whether you're designing a modification to a complex refinery piping system, surveying a site or documenting a historic building, you need reliable measurements. High-Definition Surveying™ scanning systems and software by Leica Geosystems provide you with exact data of what's there.

When your as-built information has to be right, rely on Leica Geosystems, the company that professionals trust for their scanning solutions. Leica Geosystems is best known for pioneering scanning technology with trustworthy, total solutions: versatile, accurate laser scanners, industry standard point cloud software, and a full complement of accessories, training and support.

Precision, quality and service from Leica Geosystems.

When it has to be right.

TQM
ISO 9001 / ISO 14001

Total Quality Management – our commitment to total customer satisfaction.

Ask your local Leica Geosystems dealer for more information about our TQM program.

Scanner:
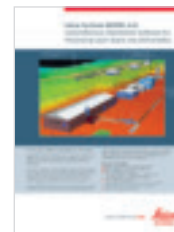Laser class 3R in accordance with IEC 60825-1 resp. EN 60825-1

Leica HDS6200
Product information and specifications

Leica ScanStation C10
Product information and specifications

Leica Cyclone SCAN
Product information

Leica Cyclone MODEL
Product information

Leica Cyclone REGISTER
Product information

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www.leica-geosystems.com/hds

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