## Leica HDS6200

Latest generation of ultrahigh speed laser scanner





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# Compact, next-generation, ultra-high speed laser scanner

The Leica HDS6200 unlocks the full potential of ultrahigh 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.

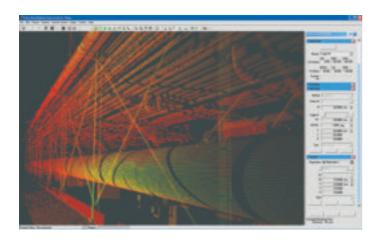
Several advanced features and enhancements in the Leica HDS6200 contribute to its overall technology leadership:

- **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	eica 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	Position*	5 mm, 0.4 m to 25 m range; 9 mm to 50 m range		
measurement	Distance*	ce* ≤2 mm at 90% alb edo up to 25 m; ≤3 mm at 18% albedo up to 25 r		
		≤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	1 mm at 25 m; 2 mm at 50 m, for 90% albedo; one sigma			
precision**/noise	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<sup>TM</sup> 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.

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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.







**Leica HDS6200** Product information and specifications



**Leica ScanStation C10** Product information and specifications



C10 Leica Cyclone SCAN Product information



**Leica Cyclone MODEL** Product information



**Leica Cyclone REGISTER** Product information

