

# HDS7000 Laser Scanner

## Ultra-high Speed with Extended Range

> 1 million  
points/sec

> 180m  
range



### HDS7000 Benefits –

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**1) Higher Productivity**  
Ultra-high speed scanning and a 360x320 field-of-view combine with longer useful range for fewer setups and less scanning time
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**2) More Robustness**  
Operate with confidence from -10°C to +45°C, in harsh environments with a reliable, “encapsulated mirror” design and a safe class 1 laser
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**3) Better Data Quality**  
Best combination of high accuracy and low scan noise at longer ranges for any phase-based scanner.
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**4) Better Useability**  
A user friendly touch screen and compact design with integrated battery and data storage make it easy to use.

**Because productivity matters!**

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.**

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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.

**Laser plummet:**

Laser class2 in accordance with IEC 60825-1 resp. EN 60825

**Scanner:**

Laser class1 in accordance with IEC 60825-1 resp. EN 60825



**Leica Scanstation C10**  
Product information and specifications



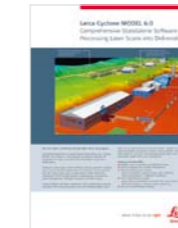
**Leica HDS6200**  
Product information and specifications



**Leica HDS8800**  
Product information and specifications



**Leica Cyclone REGISTER**  
Product information



**Leica Cyclone MODEL**  
Product information

**Distributed by**

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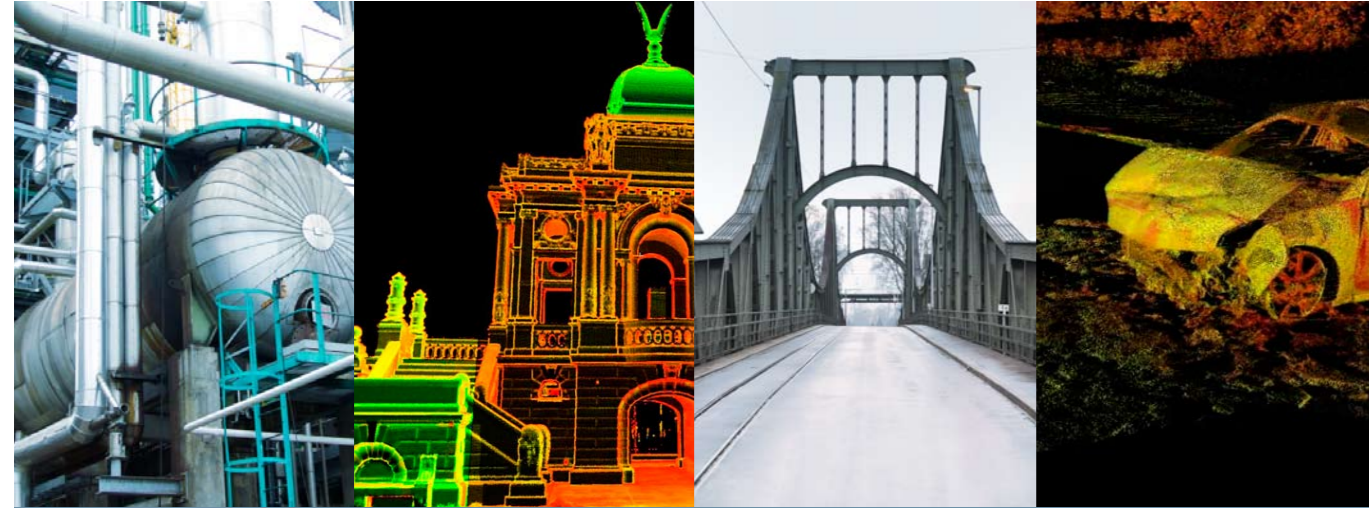
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# HDS7000 – Ultra-high Speed Laser Scanning for Demanding Professionals

Within the practice of using 3D laser scanners to remotely capture detailed, “as-is” geometry of structures, sites and scenes, phase-based scanners are known for their ultra-high scan speeds and their high level of detail. Adding to this basic speed capability (>1 million points/second), the HDS7000 phase-based scanner provides important “next level” performance features for demanding professionals.

## Multiple application areas



### Plant

- Industrial design
  - Manufacturing
  - Fabrication
- Ultra-high speed scans and low noise data for industrial as-built documentation.

### Building

- Architecture
  - Building Information Modeling (BIM)
  - Heritage
- Extended range and a wide field of view captures more challenging, taller structures with fewer setups.

### Civil

- Infrastructure
  - Engineering
  - Construction
- Wide operating temperature range and rugged system design allow for any outdoor application.

### Forensic

- Crime Scene Investigation (CSI)
  - Accident documentation
  - Security
- Fast, contact-free documentation of any scene with an easy-to learn, stand-alone system.



#### Smart Data Management

Flexible Scan file storage on internal flash drive or external USB stick

#### Integrated battery and data storage

Unmatched portability and standalone use without additional accessories

#### Intuitive Operation

Colour touchscreen with intuitive graphics user interface for easy learning

#### Ultra-high speed scanning with more than 1 million points/second

Reduced time needed for scanning

#### 360° x 320° Field-of-view

Provides more flexibility in scanner placement and covers biggest full dome scan area

#### Dual-axis tilt compensator

Each full scan can be tilt compensated, corrections enable traverse field-methods

#### Robustness and Endurance

Industrial-grade, rugged design for high quality scanning

HDS7000 Key Performance Specifications				
<b>Instrument type</b>	Compact, phase-based, dual-axis compensated, ultra-high speed laser scanner, with survey-grade accuracy, range, field-of-view and laser plummet			
<b>User interface</b>	Onboard control, notebook or tablet PC, PDA			
<b>Type</b>	Phase-shift			
<b>Color / Wavelength</b>	Invisible, 1.5 µm			
<b>Laser Class</b>	1 (IEC 60825-1)			
<b>Range</b>	187 m ambiguity interval 0.3 m minimum range 0.1 mmm resolution			
<b>Linearity error<sup>1</sup></b>	≤1 mm			
<b>Spot size</b>	~3.5 mm @ 0.1 m distance (Gaussian-based)			
<b>Beam divergence</b>	< 0.3 mrad			
<b>Scan rate</b>	Up to 1,016,727 points/sec, maximum instantaneous rate			
<b>Range noise</b>	Range	Black 14%	Gray 37%	White 80%
	10 m <sup>1,2</sup>	0.5 mm rms	0.4 mm rms	0.3 mm rms
	25 m <sup>1,2</sup>	1.0 mm rms	0.6 mm rms	0.5 mm rms
	50 m <sup>1,2</sup>	2.7 mm rms	1.2 mm rms	0.8 mm rms
	100 m <sup>1,2,3</sup>	10 mm rms	3.8 mm rms	2.0 mm rms
<b>Scan resolution</b>	7 pre-set spacings selectable			
<b>Field-of-view</b>	max. 360° x 320° (horizontal/vertical)			
<b>Angular accuracy</b>	125 µrad / 125 µrad (horizontal/vertical)			
<b>Data storage</b>	64 GB flash drive (integrated), 2 x 32GB USB flash drive (external)			
<b>Onboard display</b>	Touchscreen control with stylus, full color graphic display, VGA (640 x 320 pixels)			
<b>Dual-axis compensator</b>	Selectable on/off, resolution 3.6", measurement range +/- 30", accuracy < 2"			
<b>Temperature</b>	Operation: -10 °C to +45 °C; Storage: -20 °C to +50 °C			
<b>Dust/humidity</b>	IP53 (IEC60529)			

All specifications are subject to change without notice.

<sup>1</sup> Detailed explanation on request

<sup>2</sup> Data rate 127000 pts/sec (equivalent to "high resolution, high quality scan), 1 sigma range noise, unfiltered raw data

<sup>3</sup> All values extrapolated

## Complete Solutions from Leica Geosystems



### Software

Leica Geosystems scanning software suite takes you from scanning all the way to deliverables. Standalone Cyclone software, CloudWorx CAD plug-ins, TruView free web viewer, Cyclone II TOPO, PointCloud CAD, Forensic-Map Pro, 3DReshaper, and Reality LINx Model are all industry standards.

### Training

Comprehensive onsite and classroom training by the industry's best training professionals instruct users from field scanning to creating final deliverables for your applications. Ask for local training options in your region.

### Support

The high quality and responsiveness of Leica Geosystems local support is commonly cited as a key reason why users choose "Leica" more than all other brands combined. Contact your local support by phone or email.

### Active Customer Care

Working with the best maintained equipment and most up-to-date firmware and software ensures the best results for your business. That's what Leica Geosystems Customer Care Packages (CCP) offer. With myWorld you have 24/7 access to a world of information at your fingertips, increase your efficiency and keep yourself and your products up-to-date.

