

# HDS8810

Long range scanning solution  
for mine and topographic surveying



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**Leica**  
Geosystems

# HDS8810 mine scanning system

Laser scanner, software and support for mine surveying  
... from the global leader in laser scanning solutions

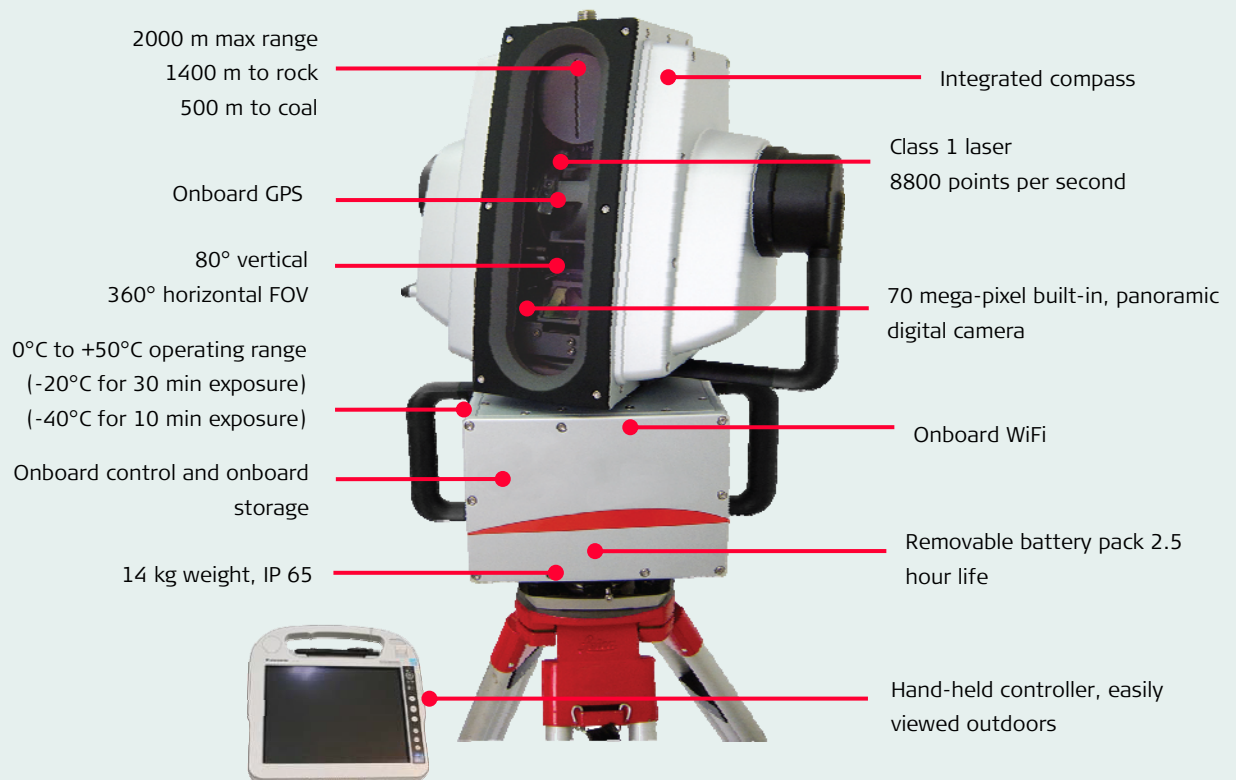
The HDS8810 mine scanning system offers all the benefits of laser scanning in a convenient, easy-to-learn and highly productive package. It's High-Definition Surveying™ (HDS™) for the mining industry:

- Faster
- Safer
- More accurate volumes and contours
- From scan to deliverables in < 60 min

A complete, integrated system:

- ✓ Easy-to-use, highly productive laser scanner
- ✓ Easy-to-use, rugged field data collector
- ✓ Easy-to-learn office software specifically designed for mine surveyors
- ✓ Leica Geosystems quality training, support and warranty

Full photographic detail makes it easier and more efficient to analyse the mine scene. A high-resolution, panoramic camera image is taken while scanning and automatically rendered over the laser scan data. There is no separate camera, calibration or alignment.



Portable, surveyor-friendly instrument:

- Fast, long range scanner
- Motorised back sight telescope
- Automatic, digital tilt compensation
- Embedded, high-resolution, panoramic, colour camera
- Removable, long-life battery
- Remote wireless control or onboard control

Use traditional survey workflows:

- Standard instrument set up
- Stationing
- GPS data integration

## Intuitive, mining-specific software

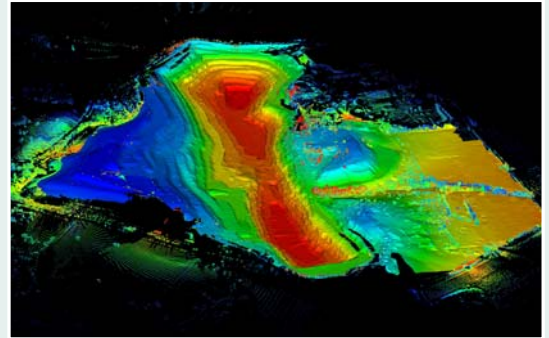
### Key software features:

Included with the system, the scanning and processing software features a complete set of tools for mining:

- Powerful 3D graphics interface
- Colour and intensity data display
- Windows™ style data browser
- Registration
- Modelling (2D, 3D)
- Exporting
- Volumes, surface calculations
- Contours
- Sections
- Face maps
- 3D scene models
- Building footprints and elevations

### Use the stand-alone office software for:

- Stockpile and excavation reconciliations
- Bucket, truck and shovel volumes
- Open pit and quarry surveys
- Tailings dam measurements
- Bulk material profiles within silos
- Geologic mapping



## Unique low temperature scanning capability



The scanner is capable of operating in temperatures as low as -40 °C for short periods of time.

- No special equipment or additional accessories required
- Maximum exposure times are as follows:
  - -20 °C allows 30 mins scanning time
  - -40 °C allows 10 mins scanning time
- Typical scan time is 10 mins
- This low temperature capability allows the scanner to function in even the most extreme locations

## HDS8810 vehicle system

Robust vehicle mounting system allows rapid deployment of the scanner to greatly increase productivity.

- Data and power cables directly feed from vehicle to scanner
- Quick to 'mount and dismount' system without the need to reconnect cables
- Shock absorbing mount for permanent vehicle installation
- Increased height improves line-of-sight over undulating ground
- Safer site survey practices
- Increased productivity for reduced field crews
- Built-in compass and GPS for fast and easy scan registration



# World class Leica Geosystems training & support

Leica Geosystems is one of the world's largest manufacturers and developers of surveying and measurement instruments and software.

For 3D laser scanning, Leica Geosystems is by far the industry leader, with more scanners and software users than all other manufacturers combined.

One key reason for the popularity of Leica Geosystems products is our renowned global service, support, and training. Training, for example, includes both on-site and classroom training by industry experts. In addition, Leica Geosystems strong user community (thousands of laser scanning customers) provides an additional resource network for customers.

General	
<b>Instrument type</b>	Compact, pulsed, high-speed laser scanner with mining grade accuracy, range and field-of-view
<b>User interface</b>	External rugged tablet PC customised for use with system
<b>Scanner drive</b>	Servo motor
<b>Data storage</b>	External rugged PC or onboard USB
<b>Camera</b>	Integrated 70 mega pixel digital camera

Laser Scanning System	
<b>Type</b>	1545 nm Near-IR Pulse
<b>Laser class</b>	1 (IEC 60825-1:2007)
<b>Range*</b>	2.5 m -2000 m 1400 m to 80 % albedo (rock) 500 m to 10 % albedo (coal)
<b>Scan rate</b>	8,800 points per second
<b>Divergence</b>	+ 0.25 mrad
<b>Exit aperture</b>	< 8 mm
<b>Accuracy</b>	
Range**	8 mm to 200 m 20 mm to 1000 m
Angle	+/- 0.01 °
Repeatability**	+/- 8 mm
<b>Field-of-view</b>	
Horizontal	360 °
Vertical	80 °
Aiming/Sighting	Built-in, motorised telescope (14 x) Additional co-aligned 635 nm (red) laser pointer (class 1)
<b>Data transfer</b>	Wireless or Ethernet cable to rugged PC
<b>Data storage</b>	Rugged PC or onboard USB
<b>Compensator</b>	Built-in tilt compensator 20" resolution, 5° tolerance
<b>Level indicator</b>	External bubble 30" divisions, 20' bubble
<b>Mounting</b>	Tribrach or optional vehicle mount

Electrical	
<b>Battery Type</b>	Integrated LiO rechargeable and removable
<b>Duration</b>	2.5 hours

Environmental	
<b>Operating temperature</b>	0 °C to +50 °C -20 °C to +50 °C for 30 min exposure -40 °C to +50 °C for 10 min exposure
<b>Storage temperature</b>	-40 °C to +70 °C
<b>Protection class</b>	IP 65 (IEC 60529)

Physical	
<b>Dimensions</b>	455 x 246 x 378 mm
<b>Weight</b>	14 kg (without battery)

Field Computer (included) Software for Scanning and Post-Processing (included)	
Scan Control, Registration, Modelling (2D, 3D), Exporting, Volumes, Surfaces, Contours, Sections, Face Maps, 3D Scene Models, Building Footprints and Elevations	

Ordering Information	
Contact your local Leica Geosystems sales representative or your authorised distribution centre.	
* Values are average performance on sample surfaces, performance will vary depending on individual target surface characteristics.	
** Under laboratory conditions.	

All specifications are subject to change without notice. Laser class 1 in accordance with IEC 60825-1 resp. EN 60825-1. Windows is a registered trademark of Microsoft Corporation. Other trademarks and trade names are those of their respective owners.

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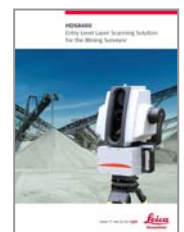
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Leica ScanStation P20 Brochure



Leica ScanStation C10 Brochure



HDS8400 Brochure

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Heerbrugg, Switzerland

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