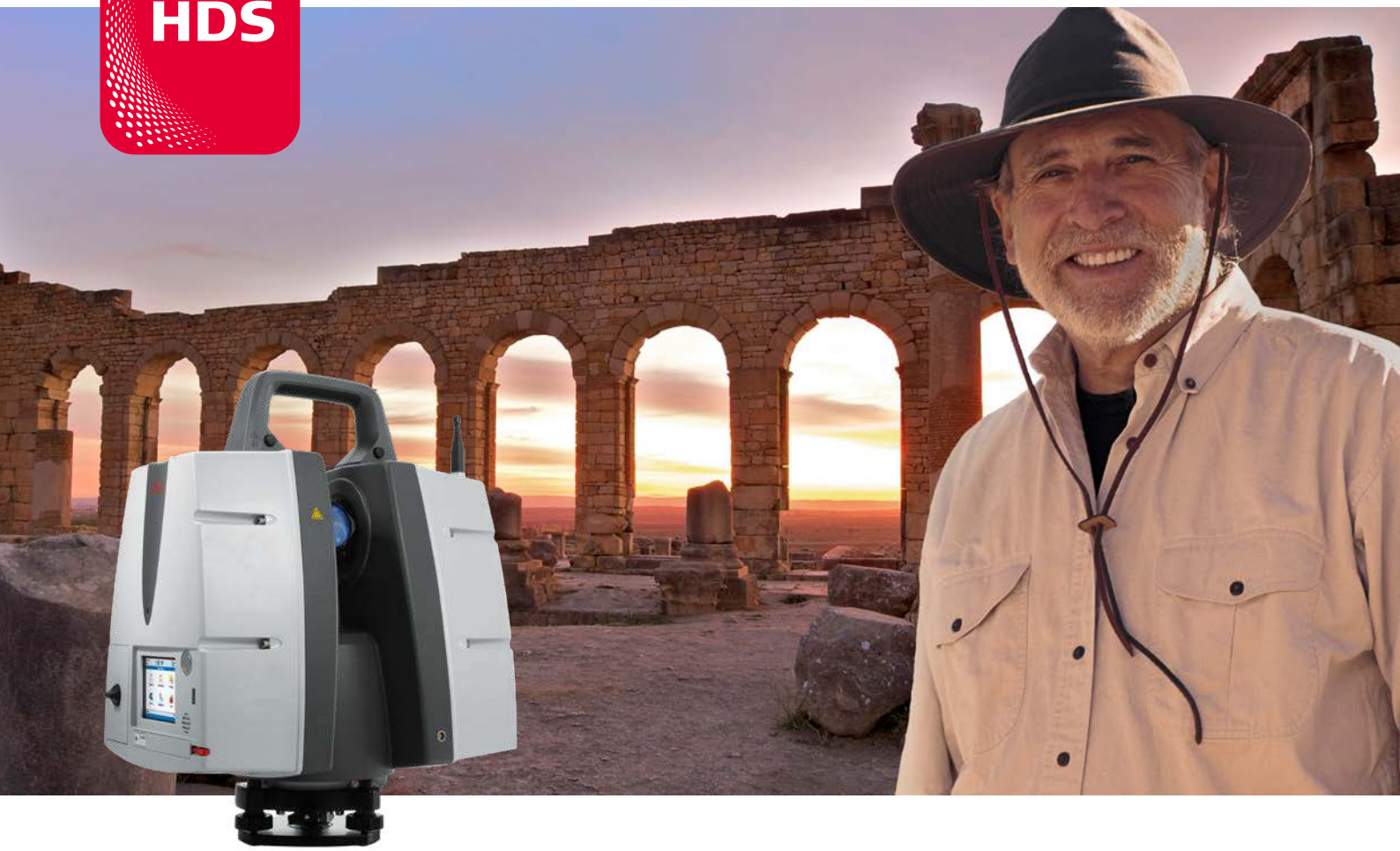
Leica ScanStation P30/P40

Because every detail matters

HDS



The right choice

Whether you want to digitally explore an archaeological excavation or research historic monuments in 3D, when recording and analysing heritage and archeology projects for future generations, it is imperative to collect data with the cleanest and most accurate results. The new ScanStation laser scanners from Leica Geosystems are the right choice, because every detail matters.

Reduced downtime

The Leica ScanStations deliver highest quality 3D data and HDR imaging at an extremely fast scan rate of 1 mio points per second at ranges of up to 270 m. Unsurpassed range and angular accuracy paired with low range noise and survey-grade dual-axis compensation form the foundation for highly detailed 3D colour point clouds mapped in realistic clarity.

Complete scanning solution

Leica Geosystems offers the ScanStation P30/P40 as a complete scanning solution including hardware, software, service, training and support. Captured data can be visualised and pre-registered in the field with Cyclone FIELD 360 app or fully registered with Cyclone FIELDWORX app, then processed in the industry's leading 3D point cloud office software suite, comprising Cyclone stand-alone software, JetStream, CloudWorx plug-in tools for CAD systems and the cost-free TruView.

Leica ScanStation P30/P40 Product Specifications

SYSTEM ACCURACY

Accuracy of single measurement *	
Range accuracy Angular accuracy 3D position accuracy	1.2 mm + 10 ppm over full range 8" horizontal; 8" vertical 3 mm at 50 m; 6 mm at 100 m
Target acquisition **	2 mm standard deviation at 50 m
Dual-axis compensator	Liquid sensor with real-time onboard compensation, selectable on/off, resolution 1", dynamic range ±5', accuracy 1.5"

DISTANCE MEASUREMENT SYSTEM

Type	Ultra-high speed time-of-flight enhanced by Waveform Digitising (WFD) technology			
Wavelength	1550 nm (invisible) / 658 nm (visible)			
Laser class	1 (in accordance with IEC 60825:2014)			
Beam divergence	< 0.23 mrad (FWHM, full angle)			
Beam diameter at front window	≤ 3.5 mm (FWHM)			
Range and reflectivity	Minimum range 0.4 m			
		Maximum range at reflectivity		
		120 m	180 m	270 m
	P30	18%	–	–
	P40	8%	18%	34%
Scan rate	Up to 1,000,000 points per second			
Range noise *	0.4 mm rms at 10 m 0.5 mm rms at 50 m			
Field-of-View				
Horizontal Vertical	360° 290°			
Data storage capacity	256 GB internal solid-state drive (SSD) or external USB device			
Communications/ Data transfer	Gigabit Ethernet, integrated Wireless LAN or USB 2.0 device			
Onboard display	Touchscreen control with stylus, full colour VGA graphic display (640×480 pixels)			
Laser plummet	Laser class 1 (IEC 60825:2014) Centring accuracy: 1.5 mm at 1.5 m Laser dot diameter: 2.5 mm at 1.5 m Selectable ON/OFF			

IMAGING SYSTEM

Internal camera	
Resolution	4 MP per each 17°×17° colour image; 700 MP for panoramic image
Pixel size Video	2.2 µm Streaming video with zoom; auto-adjusts to ambient lighting
White balancing HDR	Sunny, cloudy, warm light, cold light, custom Tonemapped / full range
External camera	Canon EOS 60D/70D/80D/90D supported

POWER

Power supply	24 V DC, 100 – 240 V AC
Battery type	2× Internal: Li-Ion; External: Li-Ion (connect via external port, simultaneous use, hot swappable)
Duration	Internal > 5.5 h (2 batteries) External > 7.5 h (room temp.)

ENVIRONMENTAL

Operating temperature	–20°C to +50°C / –4°F to +122°F
Storage temperature	–40°C to +70°C / –40°F to +158°F
Humidity	95%, non-condensing
Dust/Water	Solid particle/liquid ingress protection IP54 (IEC 60529)

PHYSICAL

Scanner	
Dimensions (D×W×H) Weight	238 mm × 358 mm × 395 mm / 9.4" × 14.1" × 15.6" 12.25 kg / 27.0 lbs, nominal (w/o batteries)
Battery (internal)	
Dimensions (D×W×H) Weight	40 mm × 72 mm × 77 mm / 1.6" × 2.8" × 3.0" 0.4 kg / 0.9 lbs
Mounting	Upright or inverted

CONTROL OPTIONS

Full colour touchscreen for onboard scan control.
Remote control: Leica CS10/CS15/CS20/CS35 controller or any other remote desktop capable device, including iPad, iPhone and other SmartPhones; external simulator.
Leica Cyclone FIELD 360 with tablet and SmartPhone (iOS and Android).
Leica Cyclone FIELDWORX with Windows® Surface tablet.

FUNCTIONALITY

Survey workflows and onboard registration	Quick orientation, Set azimuth, Known backsight, Resection (4 and 6 parameters), Traverse
Check & Adjust	Field procedure for checking of angular parameters, tilt compensator and range offset
Onboard target acquisition	Target selection from video, scan or red laser beam
Onboard user interface	Switchable from standard to advanced
One button scan control	Scanner operation with one button concept
Scan area definition	Scan area selection from video or scan; batch job scanning
Double scan	Automatic removal of point cloud noise introduced by moving objects

All specifications are subject to change without notice.
All accuracy specifications are one sigma unless otherwise noted.
* At 78% albedo
** Algorithmic fit to planar HDS 4.5" B&W targets

Scanner: Laser class 1 in accordance with IEC 60825:2014
Laser plummet: Laser class 1 in accordance with IEC 60825:2014

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active Customer Care

Your Trusted Active Customer Care
Active Customer care is a true partnership between Leica Geosystems and its customers. Customer Care Packages (CCPs) ensure optimally maintained equipment and the most up-to-date software to deliver the best results for your business. The myWorld@Leica Geosystems customer portal provides a wealth of information 24/7.

Leica RTC360 3D Reality Capture Solution

Leica Cyclone REGISTER

Leica Cyclone MODEL

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- when it has to be **right**

Leica Geosystems