Leica ScanStation P30/P40

Because every detail matters

HDS

The right choice

Whether you need an as-built representation of a large industry complex, a detailed scan of a piping system or a 3D point cloud of a ship hull, you know you'll need accurate life cycle representations in plant engineering and ship building. The combination of speed, range, accuracy and ruggedness make the new ScanStation laser scanners from Leica Geosystems 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 new Leica ScanStation portfolio as an integrated part of a complete scanning solution including hardware, software, service, training and support. 3D laser scanner data can be processed in the industry's leading 3D point cloud software suite, which consists of Leica Cyclone stand-alone software, Leica CloudWorx plug-in tools for CAD systems and the free Leica TruView.

Leica ScanStation P30/P40 Product Specifications

SYSTEM ACCURACY

Accuracy of single measurement *	
Range accuracy	1.2 mm + 10 ppm over full range
Angular accuracy	8" horizontal; 8" vertical
3D position accuracy	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	360°		
Vertical	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	2.2 µm
Video	Streaming video with zoom; auto-adjusts to ambient lighting
White balancing	Sunny, cloudy, warm light, cold light, custom
HDR	Tonemapped / full range
External camera	Canon EOS 60D/70D/80D 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)	238 mm × 358 mm × 395 mm / 9.4" × 14.1" × 15.6"
Weight	12.25 kg / 27.0 lbs, nominal (w/o batteries)
Battery (internal)	
Dimensions (D×W×H)	40 mm × 72 mm × 77 mm / 1.6" × 2.8" × 3.0"
Weight	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.

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 or scan
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

ORDERING INFORMATION

Contact your local Leica Geosystems representative or an authorised Leica Geosystems dealer.

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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