

# Leica ScanStation P16

## Because every detail matters



### Easy-to-use

The Leica ScanStation P16 features an intuitive and user-friendly touch screen interface. The one-touch scan button and wizard style software guarantees an easy workflow and enable a fast data check in the field. Combined with WLAN remote control, the Leica ScanStation P16 can be operated by any handheld device.

### Value for money

Its attractive price-performance ratio, worldwide support and quality service from Leica Geosystems result in a low cost of ownership and make the Leica ScanStation P16 the perfect solution for companies entering the laser scanning business.

### Reduced downtime

The extremely durable new laser scanner performs even under the toughest environmental conditions, such as extreme temperatures ranging from  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  and complies with the IP54 rating for dust and water resistance.

### 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 P16

## Product specifications

System Accuracy	
<b>Accuracy of single measurement *</b>	
Range accuracy	1.2 mm + 10ppm over full range
Angular accuracy	8" horizontal; 8" vertical
3D position accuracy	3 mm at 40 m
<b>Target acquisition **</b>	Up to 40 m in post-processing software
<b>Dual-axis compensator</b>	Liquid sensor with real-time onboard compensation, selectable on/off, resolution 1", dynamic range $\pm 5'$ , accuracy 1.5"

Distance Measurement System	
<b>Type</b>	Ultra-high speed time-of-flight enhanced by Waveform Digitising (WFD) technology
<b>Wavelength</b>	1550 nm (invisible) / 658 nm (visible)
<b>Laser class</b>	1 (in accordance with IEC 60825:2014)
<b>Beam divergence</b>	< 0.23 mrad (FWHM, full angle)
<b>Beam diameter at front window</b>	$\leq 3.5$ mm (FWHM)
<b>Range and reflectivity</b>	Up to 40 m; 18% reflectivity (minimum range 0.4 m)
<b>Scan rate</b>	Up to 1'000'000 points per second
<b>Range noise *</b>	0.4 mm rms at 10 m 0.5 mm rms at 40 m
<b>Field-of-View</b>	
Horizontal	360°
Vertical	290°
<b>Data storage capacity</b>	256 GB internal solid-state drive (SSD) or external USB device
<b>Communications/Data transfer</b>	Gigabit Ethernet, integrated Wireless LAN or USB 2.0 device
<b>Onboard display</b>	Touchscreen control with stylus, full colour VGA graphic display (640x480 pixels)
<b>Laser plummet</b>	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	
<b>Internal camera</b>	
Resolution	4 megapixels per each 17° x 17° colour image; 700 megapixels for panoramic image
Pixel size	2.2 $\mu$ m
Video	Streaming video with zoom; auto-adjusts to ambient lighting
White balancing	Sunny, cloudy, warm light, cold light, custom
HDR	Tonemapped / full range
<b>External camera</b>	Canon EOS 60D and 70D supported

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

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

Physical	
<b>Scanner</b>	
Dimensions (DxWxH)	238 mm x 358 mm x 395 mm / 9.4" x 14.1" x 15.6"
Weight	12.25 kg / 27.0 lbs, nominal (w/o batteries)
<b>Battery (internal)</b>	
Dimensions (DxWxH)	40 mm x 72 mm x 77 mm / 1.6" x 2.8" x 3.0"
Weight	0.4 kg / 0.9 lbs
<b>Mounting</b>	Upright or inverted

Control Options	
Full colour touchscreen for onboard scan control.	
Remote control: Leica CS10/CS15 controller or any other remote desktop capable device, including iPad, iPhone and other Smartphones; external simulator.	

Functionality	
<b>One button scan control</b>	Scanner operation with one button concept
<b>Scan area definition</b>	Scan area selection from video or scan; batch job scanning

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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Leica ScanStation P30/40



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- when it has to be **right**

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