Leica ScanStation P30/P40
Because every detail matters

The right choice
Whether you need a detailed as-built representation of a façade, a 2D floor plan or 3D data for integration into Building Information Modelling (BIM), real-time planning of architecture and building projects with fast and accurate deliverables is important. 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 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-geosystems.com
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
- 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)

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: P30 18%, P40 8%
  - 180 m: P30 18%, P40 34%
  - 270 m: P30 18%

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
- Toned mapped / full range

External camera
- Canon EOS 60D/70D/80D supported

POWER

- Power supply: 24 V DC, 100 – 240 V AC
- Battery type: 2x 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): P30 80 mm × 90 mm × 50 mm / 3.1" × 3.5" × 2.0"; P40 120 mm × 90 mm × 50 mm / 4.7" × 3.5" × 2.0"
- Weight: P30 12.25 kg / 27.0 lbs, nominal (w/o batteries); P40 17.4 kg / 38.5 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, 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.
° 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 RTC360
3D Reality Capture Solution

Leica Cyclone REGISTER

Leica Cyclone MODEL

- when it has to be right