Leica ScanStation C10
The All-in-One Laser Scanner for Any Application

New platform represents the most capabilities and best value packed into a single instrument

Leica ScanStation C10: new standard for pulsed scanners

The industry's most popular class of laser scanner – ScanStation – is now in a compact, all-in-one ScanStation C10 platform: scanner, battery, controller, data storage, and video camera. In addition, ScanStation C10 also features major advances in productivity, versatility, and ease-of-use for as-built and topographic High-Definition Surveying™ (HDS™).

All-in-one scanner capabilities for higher value

ScanStation C10 gives users the advantage of high-accuracy, long range scanning plus the advantage of fast, full-dome interior scanning – all in one instrument. The key is the new Smart X-Mirror™ design that automatically spins or oscillates the mirror for optimum productivity. Smart X-Mirror also automatically aligns the embedded, high-resolution video camera with the laser for fast targeting and fast, accurate texture mapping of scans.

Full field-of-view + traverse + high accuracy + excellent range = Versatility

ScanStation C10 includes the hallmark versatility features that have made the ScanStation class so popular. These capabilities let users take advantage of scanning for more applications and more sites, while minimizing field labor.

Easy to learn

ScanStation C10 includes surveyor-friendly, total station-like onboard graphic control, including the ability to view target scans in 3D. Users can also take advantage of laptop control for more comprehensive scan viewing.

- when it has to be **right**

Leica Geosystems

Leica ScanStation C10
Product Specifications

General

Instrument type	Compact, pulsed, dual-axis compensated, very high speed laser scanner, with survey-grade accuracy, range, and field-of-view; integrated camera and laser plummet
User interface	Onboard control, notebook, tablet PC or remote controller
Data storage	Integrated solid-state drive (SSD), external PC or external USB device
Camera	Auto-adjusting, integrated high-resolution digital camera with zoom video

System Performance

Accuracy of single measurement	
Position*	6 mm
Distance*	4 mm
Angle (horizontal/vertical)	60 µrad / 60 µrad (12" / 12")
Modeled surface precision/noise**	2 mm
Target acquisition*	2 mm std. deviation
Dual-axis compensator	Selectable on/off, resolution 1", dynamic range +/- 5', accuracy 1.5"

Laser Scanning System

Type	Pulsed; proprietary microchip
Color	Green, wavelength = 532 nm visible
Laser Class	3R (IEC 60825-1)
Range	300 m @ 90%; 134 m @ 18% albedo (minimum range 0.1 m)
Scan rate	Up to 50,000 points/sec, maximum instantaneous rate
Scan resolution	
Spot size	From 0 – 50 m: 4.5 mm (FWHH-based); 7 mm (Gaussian-based)
Point spacing	Fully selectable horizontal and vertical; < 1 mm minimum spacing, through full range; single point dwell capacity
Field-of-View	
Horizontal	360° (maximum)
Vertical	270° (maximum)
Aiming/Sighting	Parallax-free, integrated zoom video
Scanning Optics	Vertically rotating mirror on horizontally rotating base; Smart X-Mirror™ automatically spins or oscillates for minimum scan time
Data storage capacity	80 GB onboard solid-state drive (SSD) or external USB device
Communications	Dynamic Internet Protocol (IP) Address, Ethernet or wireless LAN (WLAN) with external adapter
Integrated color digital camera with zoom video	Single 17° x 17° image: 1920 x 1920 pixels (4 megapixels) Full 360° x 270° dome: 260 images; streaming video with zoom; auto-adjusts to ambient lighting
Onboard display	Touchscreen control with stylus, full color graphic display, QVGA (320 x 240 pixels)
Level indicator	External bubble, electronic bubble in onboard control and Cyclone software
Data transfer	Ethernet, WLAN or USB 2.0 device
Laser plummet	Laser class: 2 (IEC 60825-1) Centering accuracy: 1.5 mm @ 1.5 m Laser dot diameter: 2.5 mm @ 1.5 m Selectable ON/OFF

Electrical

Power supply	15 V DC, 90 – 260 V AC
Power Consumption	< 50 W avg.
Battery Type	Internal: Li-Ion; External: Li-Ion
Power Ports	Internal: 2, External: 1 (simultaneous use, hot swappable)
Duration	Internal: >3.5 h (2 batteries), External: >6 h (room temp)

Environmental

Operating temp.	0° C to 40° C / 32° F to 104° F
Storage temp.	-25° C to +65° C / -13° F to 149° F
Lighting	Fully operational between bright sunlight and complete darkness
Humidity	Non-condensing
Dust/humidity	IP54 (IEC 60529)

Physical

Scanner	
Dimensions (D x W x H)	238 mm x 358 mm x 395 mm / 9.4" x 14.1" x 15.6"
Weight	13 kg / 28.7 lbs, nominal (w/o batteries)
Battery (internal)	
Dimensions (D x W x H)	40 mm x 72 mm x 77 mm / 1.6" x 2.8" x 3.0"
Weight	0.4 kg / 0.9 lbs
Battery (external)	
Dimensions (D x W x H)	95 mm x 248 mm x 60 mm / 3.7" x 9.8" x 2.4"
Weight	1.9 kg / 4.2 lbs
AC Power Supply	
Dimensions (D x W x H)	85 mm x 170 mm x 41 mm / 3.4" x 6.7" x 1.6"
Weight	0.9 kg / 1.9 lbs

Standard Accessories Included

Scanner transport case
Tribrach (Leica Professional Series)
4x Internal batteries
Battery charger/AC power cable, Car adapter, Daisy chain cable
Data cable
Height meter and distance holder for height meter
Cleaning kit
Cyclone™ SCAN software
1year CCP Basic support agreement

Additional Accessories

HDS scan targets and target accessories
Service agreement for Leica ScanStation C10
Extended warranty for Leica ScanStation C10
External battery with charging station, AC power supply and power cable
Professional charger for internal batteries
AC power supply for scanner
Tripod, tripod star, rolling base, external wireless LAN adapter (third-party)

Notebook PC for scanning with Cyclone software ∆

Component	required (minimum)
Processor	1.7 GHz Pentium M or higher
RAM	1 GB (2 GB for Windows Vista)
Network card	Ethernet
Display	SVGA or OpenGL accelerated graphics card (with latest drivers)
Operating system	Windows XP Professional (SP2 or higher) (32 or 64) Windows Vista (32 or 64), Windows 7 (32 or 64)

Control Options

Full color touch screen for onboard scan control
Leica Cyclone SCAN software for laptop PC (see Leica Cyclone SCAN data sheet for full list of features)
Remote controller (Leica CS10/15 or any other remote desktop capable device)

Ordering Information

Contact Leica Geosystems or authorized representatives

All specifications are subject to change without notice.
All ± accuracy specifications are one sigma unless otherwise noted.
* At 1 m – 50 m range, one sigma
** Subject to modeling methodology for modeled surface
*** Algorithmic fit to planar HDS targets
∆ Minimum requirements for modeling operations are different. Refer to Cyclone data sheet specifications

Scanner: Laser class 3R in accordance with IEC 60825-1 resp. EN 60825-1
Laser plummet: Laser class 2 in accordance with IEC 60825-1 resp. EN 60825-1

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