

# Leica ScanStation C10

## The All-in-One Laser Scanner for Any Application

See also  
ScanStation  
C10  
brochure!



### 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	
<b>Instrument type</b>	Compact, pulsed, dual-axis compensated, very high speed laser scanner, with survey-grade accuracy, range, and field-of-view; integrated camera and laser plummet
<b>User interface</b>	Onboard control, notebook or tablet PC
<b>Data storage</b>	Integrated hard drive or external PC
<b>Camera</b>	Auto-adjusting, integrated high-resolution digital camera with zoom video

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

Laser Scanning System	
<b>Type</b>	Pulsed; proprietary microchip
<b>Color</b>	Green, wavelength = 532 nm
<b>Laser Class</b>	3R (IEC 60825-1)
<b>Range</b>	300 m @ 90%; 134 m @ 18% albedo (minimum range 0.1 m)
<b>Scan rate</b>	Up to 50,000 points/sec, maximum instantaneous rate
<b>Scan resolution</b>	
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
<b>Field-of-View</b>	
Horizontal	360° (maximum)
Vertical	270° (maximum)
Aiming/Sighting	Parallax-free, integrated zoom video
<b>Scanning Optics</b>	Vertically rotating mirror on horizontally rotating base; Smart X-Mirror™ automatically spins or oscillates for minimum scan time
<b>Data storage capacity</b>	80 GB (onboard hard disk)
<b>Communications</b>	Dynamic Internet Protocol (IP) Address, Ethernet
<b>Integrated color digital camera with zoom video</b>	Single 17° x 17° image: 1920 x 1920 pixels (4 megapixels) Full 360° x 270° dome: 230 images; streaming video with zoom; auto-adjusts to ambient lighting
<b>Onboard display</b>	Touchscreen control with stylus, full color graphic display, QVGA (320 x 240 pixels)
<b>Level indicator</b>	External bubble, electronic bubble in onboard control and Cyclone software
<b>Data transfer</b>	Ethernet or USB 2.0 device
<b>Laser plummet</b>	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	
<b>Power supply</b>	15 V DC, 90 – 260 V AC
<b>Power Consumption</b>	< 50 W avg.
<b>Battery Type</b>	Internal: Li-Ion; External: Li-Ion
<b>Power Ports</b>	Internal: 2, External: 1 (simultaneous use, hot swappable)
<b>Duration</b>	Internal: >3.5 h (2 batteries), External: >6 h (room temp)

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

Physical	
<b>Scanner</b>	
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)
<b>Battery (internal)</b>	
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
<b>Battery (external)</b>	
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
<b>AC Power Supply</b>	
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	

Notebook PC for scanning with Cyclone software Δ	
<b>Component</b>	<b>required (minimum)</b>
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)

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)	

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

Δ Minimum requirements for modeling operations are different. Refer to Cyclone data sheet specifications

Laser class 3R in accordance with IEC 60825-1 resp. EN 60825-1

Laser class 2 in accordance with IEC 60825-1 resp. EN 60825-1

Windows is a registered trademark of Microsoft Corporation. Other trademarks and trade names are those of their respective owners.

Illustrations, descriptions and technical specifications are not binding and may change. Printed in Switzerland – Copyright Leica Geosystems AG, Heerbrugg, Switzerland 2009. 776791enUS – IX.09 – RDV