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 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 or tablet PC

Data storage
Integrated hard drive or external PC

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

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)

Scanning Optics
Vertically rotating mirror on horizontally rotating base; Smart X-Mirror™ automatically spins or oscillates for parallax-free, integrated zoom video

Data storage capacity
80 GB (onboard hard disk)

Communications
Dynamic Internet Protocol (IP) Address, Ethernet

Intergrated color digital camera with zoom video

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

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 or USB 2.0 device

Laser plummet
Laser class: 2 (IEC 60825-1)

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 0.6 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
Trinibach (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
1 year 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

Component
Processor Required (minimum)
RAM 1.7 GHz Pentium M or higher
Network card 1 GB (2 GB for Windows Vista)
Display Ethernet
Operating system SVGa or OpenGL accelerated graphics card (with latest drivers)

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
Data sheet specifications

Leica Geosystems AG
Heerbrugg, Switzerland
www.leica-geosystems.com/hds

Copyright Leica Geosystems AG, Heerbrugg, Switzerland 2009. 776791enUS – IX.09 – RDV
Illustrations, descriptions and technical specifications are not binding and may change. Printed in Switzerland.
Windows is a registered trademark of Microsoft Corporation. Other trademarks and trade names are those of their respective owners.

- when it has to be right