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

See also ScanStation C10 brochure!
# 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°)

**Modelled surface precision**
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

**Spot size**
From 0 – 50 m: 4.5 mm (FWHM-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**

<table>
<thead>
<tr>
<th>Horizontal</th>
<th>Vertical</th>
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<tr>
<td>360° (maximum)</td>
<td>270° (maximum)</td>
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</tbody>
</table>

**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)

**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

### 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: 2 (simultaneous use, hot swappable)

**Duration**
Internal: ≥ 13.5 h (2 batteries), External: ≥ 16 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: 0.6 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
- 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
- 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
- Trispod, tripod stand, rolling base, external wireless LAN adapter (third-party)

### Notebook PC for scanning with Cyclone software

<table>
<thead>
<tr>
<th>Component</th>
<th>required (minimum)</th>
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<tbody>
<tr>
<td>Processor</td>
<td>1.7 GHz Pentium M or higher</td>
</tr>
<tr>
<td>RAM</td>
<td>1 GB for Windows XP</td>
</tr>
<tr>
<td>Network card</td>
<td>Ethernet</td>
</tr>
<tr>
<td>Display</td>
<td>VGA or OpenGL accelerated graphics card (with latest drivers)</td>
</tr>
<tr>
<td>Operating system</td>
<td>Windows XP Professional (SP2 or higher) / Windows 7 (32 or 64)</td>
</tr>
<tr>
<td>Scanner</td>
<td>Windows Vista (32 or 64)</td>
</tr>
</tbody>
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### 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.

 Asterisk (*) indicates values are dependent on environmental and model-specific factors.

 Accuracy: 

<table>
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<th>Spec</th>
<th>Value</th>
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<td>±1 mm</td>
<td>60 µrad / 60 µrad (12° / 12°)</td>
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<th>Spec</th>
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<tr>
<td>±1 mm</td>
<td>2 mm std. deviation</td>
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<th>Spec</th>
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<tbody>
<tr>
<td>±1 mm</td>
<td>Surface accuracy 1.5&quot;</td>
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HDS扫描站C10的详细规格包括了其性能特点和配置信息。例如，该设备具有高精度的激光扫描系统，具有双轴补偿的激光器，可在-25°C至65°C的范围内正常工作。此外，还支持无线网络和USB 2.0连接，具有集成的高分辨率数字摄像头和激光瞄准器，能够在多种环境下进行精确的扫描操作。扫描速度可达到每秒50,000点，并能在90%的范围内实现300米的扫描距离。该设备适用于需要高精度建模的应用场景，如建筑测量、文物保护、环境监测等。