Entry-level laser scanner with Leica Geo systems quality and flexible upgradeability

**Leica ScanStation C5: Entry-level price, Leica Geosystems quality, optional add-on features for even greater versatility**

For companies entering into laser scanning for as-built and engineering surveys, the affordable Leica ScanStation C5 represents a great starting platform: high performance laser scanner, power supply, data storage, touch screen interface, video camera, and laser plummet all in one instrument.

**Incremental upgradeability for tailor-made solutions**

Users can add additional performance and versatility over time to meet expanding client opportunities. Leica Scan Station C5 owners can easily upgrade to long range, even faster scan speed, high-accuracy dual-axis compensation for standard survey workflows, and a high-resolution internal camera for color mapping.

**Low cost of ownership**

An attractive initial price and the ability to add specific features over time enables users to get into laser scanning with an excellent starting point and add just the specific features needed over time. This provides users with a flexible, future safe investment that minimizes ownership costs.

**Intuitive user interface**

The Leica ScanStation C5 offers an easy-to-learn, color touch screen interface to get started right away. Users can also opt for convenient, handheld control.
# Leica ScanStation C5

## Product Specifications

### General

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrument Type</td>
<td>Compact, pulsed, high speed laser scanner, with survey-grade accuracy, range, and field-of-view; integrated video camera and laser plummet</td>
</tr>
<tr>
<td>User Interface</td>
<td>Onboard control, notebook, tablet PC or remote controller</td>
</tr>
<tr>
<td>Data storage</td>
<td>Integrated solid-state drive (SSD), external PC or external USB device</td>
</tr>
<tr>
<td>Camera</td>
<td>Auto-adjusting, integrated high-resolution video camera</td>
</tr>
</tbody>
</table>

### System Performance

#### Accuracy of single measurement

- **Position**
  - Distance*: 6 mm
  - Angle (horizontal/vertical): 60 μrad / 60 μrad (12° / 12°)

- **Modeled surface precision**
  - 2 mm

- **Target acquisition***
  - 2 mm std. deviation

### Laser Scanning System

- **Type**
  - Pulsed: proprietary microchip

- **Laser Class**
  - Green: wavelength = 532 nm visible

- **Scan resolution**
  - From D – 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 optics

- **Scanning Optics**
  - Vertically rotating mirror on horizontally rotating base;
  - Smart-X-Mirro™ automatically spins or oscillates for minimum scan time

- **Data storage capacity**
  - 80 GB onboard solid-state drive (SSD) or external USB device

### Communications

- **Network card**
  - Dynamic Internet Protocol (IP) Address, Ethernet or wireless LAN (WLAN) with external adapter

- **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

- **Onboard control, notebook, tablet PC or remote controller**

### Laser plummet

- **Laser class**: 2 (IEC 60825-1 resp. EN 60825-1)

### Upgrade Options

<table>
<thead>
<tr>
<th>Component</th>
<th>Basic</th>
<th>Upgrade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scan rate</td>
<td>25,000 pts/sec</td>
<td>up to 60,000 pts/sec</td>
</tr>
<tr>
<td>Range</td>
<td>35 m @ ≥ 5% albedo</td>
<td>300 m @ 90% albedo, 134 m @ 18% albedo</td>
</tr>
<tr>
<td>Dual-axis compensator</td>
<td>not available</td>
<td>Selectable on/off, resolution 1&quot;, dynamic range +/- 0.5&quot;, accuracy 1.5&quot;</td>
</tr>
</tbody>
</table>

### Electrical

- **Power supply**
  - 15 V DC, 90 – 260 V AC

- **Power Consumption**
  - ≤ 60 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

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

### Physical

- **Scanner**
  - Dimensions (D x W x H): 236 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**
- **1 year CCP Basic support agreement**

### Additional Accessories

- **HDS scan targets and target accessories**
- **Service agreement for Leica ScanStation C5**
- **Extended warranty for Leica ScanStation C5**
- **External battery with charging station, AC power supply and power cable**
- **Professional charger for internal batteries**
- **AC power supply for scanner**
- **Tripod, tripod stand, rolling base, external wireless LAN adapter (third-party)**

### Notebook PC for scanning with Cyclone software

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>1.7 GHz Pentium M or higher</td>
</tr>
<tr>
<td>RAM</td>
<td>1 GB (2 GB for Windows Vista)</td>
</tr>
<tr>
<td>Network card</td>
<td>Ethernet</td>
</tr>
<tr>
<td>Display</td>
<td>SVG or OpenGL accelerated graphics card (with latest drivers)</td>
</tr>
<tr>
<td>Operating system</td>
<td>Windows XP Professional (SP2 or higher) (32 or 64)</td>
</tr>
<tr>
<td></td>
<td>Windows Vista (32 or 64, Windows 7 (32 or 64)</td>
</tr>
</tbody>
</table>

### Control Options

- **Full color touch screen for onboard scan control**
- **Leica Cyclone SCAN software for laptop PC**

### 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

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