TOPCON

GLS-1000

Compact, Operator-friendly Laser Scanner

Mass point collection laser scanner with internal batteries, built-in digital camera and wireless connectivity

- Compact all-in-one design
- Precise Scan Technology
- Hot-swappable, on-board lithium-ion batteries
- Class 1 invisible, eye-safe, pulse laser
- Built in 2.0 megapixel digital camera
- Wireless LAN & USB connectivity
- Dual Axis compensators
- 3000 points/second scan rate
- 1100 ft (330m) maximum range at 90% reflectivity, 500 ft (150m) maximum range at 18% reflectivity

All-in-one Design

Topcon's GLS-1000 laser scanner leaves nothing behind—except the competition. The operator-friendly design allows for quick and hassle-free setups which saves time and improves productivity. With batteries and data collector on-board, Topcon's GLS-1000 is lightweight and cable-free. Transportation is a cinch. While other laser scanners take two people to unload, setup, operate, and load, the GLS-1000 is a one man instrument.

On-board Data Collection

The GLS-1000 has an on-board data collector with an LCD display and a 21-key keyboard. This gives the scanner the freedom to function as a stand-alone laser scanner with no connection to a computer.

Eye-safe and Efficient

Use the GLS-1000 anywhere without worrying about damaging the eyes of a passersby. The GLS-1000 uses an invisible, Class 1, eye-safe laser. Scan near airports, busy traffic, and populated areas with no effect to the people or the environment. In addition, the use of a Class 1 invisible laser offers the benefit of low power consumption. With lower power consumption, the GLS-1000 can operate at longer times with fewer battery changes.

Built-in 2.0 Megapixel Digital Camera

Reduce the amount of equipment needed in the field with the GLS-1000's built-in 2.0 megapixel digital camera. Collect sharp and detailed images from the scanning location, or connect to a PC with ScanMaster software, and stream a live video feed of the jobsite to aid in scan setup and data acquisition.

Small but Mighty

This robust scanner sends out a laser beam that captures data at 3,000 points per second at a range of 500 ft. (150m) to a typical surface, and with an extended range to 1100 ft. (330m) for more reflective surfaces. Unique to Topcon's GLS-1000 is the mechanical ability to select from multiple lens arrays to control the laser beam. This provides consistent 0.16 in. (4mm) accuracy throughout the range from 3 ft. to 500 ft. (1m to 150m).
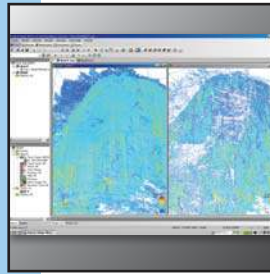
GLS-1000

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Topcon's GLS-1000 Laser Scanner combines advanced technology with an operator-friendly design.

Precise Scan Technology

The GLS-1000 integrates pulse-based time of flight and phase-based technologies to achieve industry leading accuracy and "clean" scan data. The GLS-1000 inherently has:

- Less point cloud noise
- The most consistent scanning accuracy
- The ability to detail slight texture variations
- Great results at ranges over 330 ft. (100m)

Wireless LAN & USB Connectivity

The GLS-1000 offers wireless LAN (802.11b) and USB 2.0 PC connection. With the GLS-1000's built-in wireless LAN communication, you can control and collect image and scanning data on a PC from your car.

Dual Axis Compensators

The use of dual axis compensators allows for more accurate instrument setups and scans. Occupy a known coordinate and backsight so traversing within one coordinate system is possible. Compensators can be turned off for tiltable mounts.

On-board Lithium-ion Batteries

The GLS-1000 uses four hot-swappable batteries, two per side. With the lower power consumption of the Class 1 laser, the GLS-1000 can operate for 4 hours doing a continuous scan on one set of batteries at a temperature of 68˚F (20˚C).

ScanMaster Office Software

With ScanMaster's operator-friendly interface you become more proficient and productive. Manipulate data with ease and quickly deliver a product to your customer.

- Operator-friendly User Interface
- Mass 3D Point Cloud Acquisition and Manipulation
- Traverse and Back Sight Capabilities
- Image Capture and Live Video Feed
- Target Scans and Tie-Point Registration
- Create Mesh Objects and Annotations
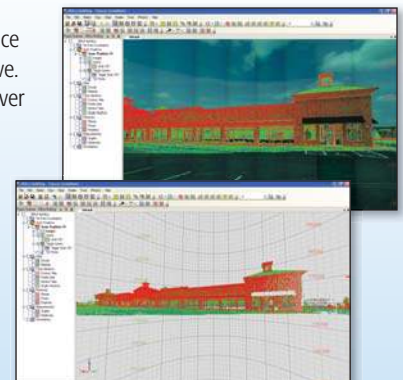
Image and Point Cloud Views

On-Board Batteries, Built-in Digital Camera, Wireless Connectivity and More. The Topcon GLS-1000 Laser Scanner gives you the tools you need for mass point collection in a compact, all-in-one design.

Internal Camera

Vertical and Horizontal Control Knobs

Laser Directing Mirror

Laser Scope

360° Rotating Dome

Cylindrical Low-wind Resistance

On-board Scan Control

Alpha and Numeric Keys

SD Card Slot

On-board Batteries Front and Back

Mini USB Port

Leveling Bubble

Standard Topcon Tribrach

Mass 3D Point Cloud Acquisition and Manipulation
ScanMaster has been optimized to quickly acquire and manipulate 3D point cloud data. Stream live video to setup the desired scan area and obtain the 3D point cloud data you need.

Traverse and Back Sight Capabilities
With the ability to quickly traverse and back sight, ScanMaster streamlines the process of aligning data captured from multiple occupations into a single coordinate system.

Image Capture and Live Video Feed
ScanMaster uses images to streamline data acquisition. Images can also be used to apply RGB data and texture map scanned data. In addition, ScanMaster can stream a live video feed from the GLS-1000 Scanner via WLAN to a remote PC.

Target Scans and Tie-point Registration
With the ability to precisely locate centers of retro reflective targets, ScanMaster offers a flexible and highly accurate alternative to traditional orientation techniques.

Create Mesh Objects and Annotations
ScanMaster can quickly create mesh objects. These mesh objects are triangulated surfaces that pass through a section of data points, that can be used to create cross-sections and profiles. ScanMaster can also quickly annotate desired information such as angles, and distances.
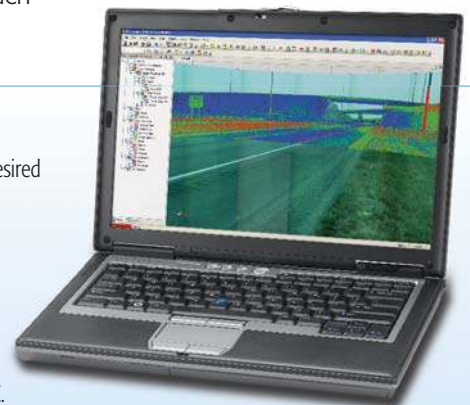
ScanMaster Specifications

REQUIRED SYSTEM REQUIREMENTS

Processor Speed	Intel® Core™ 2 Duo @ 2.00GHz
RAM	1 GB
Video Card	Discreet video card with 128 MB of memory and with full support for DirectX 9.0c, vertex and pixel shaders v2.0
Wi-Fi	802.11g Wi-Fi adapter
USB	USB 2.0 port

RECOMMENDED SYSTEM REQUIREMENTS

Processor Speed	Intel® Core™ 2 Duo @ 2.66GHz
RAM	2+ GB
Video Card	Nvidia or ATI discreet video card with 256+ MB of memory

The Leader in Positioning Technology...

From survey to inspection, Topcon dealers throughout the world provide innovative technology that gives surveyors, civil engineers, contractors, equipment owners, and operators the competitive edge by addressing such critical issues as increasing profits, quality craftsmanship, improving productivity, lowering operating costs, and enhancing jobsite safety.

Full positioning integration field-to-finish: That's the goal of Topcon. When it's time for you to step up to the next level, it's time to turn to Topcon.

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To ensure that your Topcon product maintains peak performance, your local Topcon dealer offers factory trained and certified service technicians. If service isn't available in your area, our factory offers a repair and return policy second to none.

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It's time.

Topcon Positioning Systems, Inc.
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GLS-1000 Specifications

SYSTEM PERFORMANCE

Maximum Range at specified reflectivity	1100 ft. (330m) at 90%
	500 ft. (150m) at 18%
Calculated Range at 18%	500 ft. (150m)
Minimum Range	3.28 ft. (1m)
Single Point Accuracy	Distance: 0.16 in. at 500 ft. (4mm at 150m)
Dual Axis Compensators	Angle (vertical): 6" Accuracy
	Angle (horizontal): 6" Accuracy

LASER SCANNING SYSTEM

Type	Pulsed
Color	Invisible (eye-safe laser)
Laser Class	Class 1
Scan Rate	3,000 points/second
Scan Density (Resolution)	
Spot Size	0.24 in. at 130 ft. (6mm at 40m)
Maximum Sample Density	0.04 in. at 328 ft. (1mm at 100m)
Field-of-view (Per scan)	
Horizontal	360° (maximum)
Vertical	70° (maximum)
Color Digital Imaging	2.0 megapixels digital camera

ELECTRICAL

Power Supply	On-board Lithium-ion battery BT-65Q x4
Power Consumption	<25W
Maximum Operation Time	Approx. 4.0 hours per 4 pcs
Hot-swappable Battery	Hot-swap (2 by 2)

ENVIRONMENTAL

Operating Temperature	+32°F to +104°F (0°C to +40°C)
Storage Temperature	+14°F to +140°F (-10°C to +60°C)
Dust/Humidity	IEC Specification IP52

PHYSICAL

Scanner	
Dimensions	9.5 in. x 9.5 in. x 22.3 in. (240mm x 240mm x 566mm)
Weight	35 lbs. (16kg) w/o on-board battery and tribrach

SCANNING CONTROL

Equipment for Controlling	On-Board computer (stand-alone) or PC
Communication Method for PC	Wireless LAN
Display Unit	LCD 20 characters x 4 lines
Keyboard	21 keys
Data Storage	SD Card

Your local Authorized Topcon dealer is: