

GLS-1000 - LASER SCANNER



An advanced Laser Scanner that functions like a Total Station

- Consistent 4 mm precision up to 150 m
- Stand-alone operation
- Integrated camera
- 330 m maximum range
- Fast, easy setup
- Class 1 eye safe laser
- Dual axis compensation

It's time.

Capture Reality - Coordinate your world. Topcon's new imaging sensor allows you to define your world point-by-point, pixel-by-pixel. Work from the part to the whole to accurately and quickly detail your site in 3 Dimensions.

Get Laser Scanning with the GLS-1000. Our field ready laser scanner lets you sample your site precisely at 3000 points a second. Robust, portable, compact and independent surveying. A unique tool with clean design that no-serious practitioner should be without.

The GLS-1000 - A Laser Scanner

The GLS-1000 is a pulse based laser scanner designed to manage with the practical aspects of the job site. With a scan range up to 330 m the GLS is a versatile tool that lets you get laser scanning in many different work environments.

The stand-alone capability of this instrument ensures Topcon has a unique solution that can manage with the extremes of the measurement world. Building, antenna, span, earth, historically difficult to measure subjects are recorded at the press of a button.

The instrument is designed for stand-alone operation. It's quick, simple and effective, emphasizing the benefits of laser scanning on site, you are not tied to a PC, you do not have to worry about power, site work is easy because you are only dealing with one box and one tripod, just as you would a Total Station. However – if you want to operate your scanner in the traditional way you can always connect to the PC and see the data as it is being collected.

Get Laser Scanning with our robust, portable solution that builds on our proven Total Station heritage to provide you with the ultimate scanning tool.

The Topcon GLS-1000 gives high quality observations with effective field operation



Eye-safe and efficient

Use the GLS-1000 anywhere without worrying about your liability or damaging the eyes of a passerby. The GLS-1000 uses an invisible class one laser, so it's completely eye-safe. Scan near airports, rail, busy traffic and populated areas without a flashing laser.



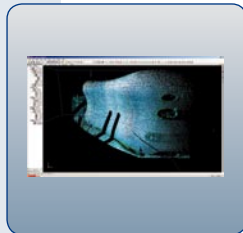
High Accuracy Measurements

This robust scanner sends out a laser beam that measures 3000 points per second. It measures distances up to 330m away. A sophisticated lens mechanism ensures consistent 4 mm accuracy through the scanner's range up to 150m.



Survey Work-Flow

The GLS-1000 is unique in its class. It has the ability to input, occupy and backsight known real world coordinates on board. This means that for operation, the user does not need to bring a total station to locate positions for point cloud registration later in the office. With the ability to input known points, elevations and a backsight, the point cloud collected is registered in the field.



ScanMaster software

- The GLS-1000's ScanMaster software is well suited for the way you work, with all the features you'll need, and none that you don't.
- Features include: Scanning control, 3D visualization and cloud registration.
- Export scan data in a wide variety of file formats for superior compatibility.
- ScanMaster software controls and registers using surveying and modeling tools. It's a modern software that simplifies a traditionally difficult process.

Power-, computer- and cable-free

With internal batteries and computer, Topcon's GLS-1000 is lightweight at 16 kg, has a quick setup time and is cable-free. Transportation is user-friendly. While other laser scanners take two people to unload, setup, operate and load, the GLS-1000 is truly a one man instrument.



Compact - Portable - Robust - Independent

The GLS-1000 pulse laser scanner brings you the latest in terrestrial laser scanning instrumentation.



1 Integrated coaxially aligned 2.0 Mega pixel digital camera

2 Quicksight/Mirror mechanism

3 On-board control interface

4 SD Card slot

5 USB connectivity

6 Jog shuttles for smooth manual pointing

7 360 x 70 Field of View

8 Compact, streamlined instrument housing

9 WiFi Connectivity

10 Hot-swappable Internal power

Digital camera

An integrated digital camera collects and records images from the scanning location. The lens uses the laser mirror for coexistent image and beam accuracy. Use the photogrammetry algorithms to calculate additional points between the scanned points.

WiFi

The GLS-1000's built in WiFi (802.11b) communication lets you control and collect image and scanning data on a PC from the office or car. The more traditional approach to field scanning.



It's time.

The Leader in Positioning Technology ...

Topcon offers positioning products that deliver unparalleled site-wide performance and integration. Topcon's history of technological advances and our reputation for superior reliability means there's no other company positioned to provide you with a better "Total Positioning Solution."

From survey to inspection Topcon, through our dealer network, provides the 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 job site 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.



The Leader in Customer Satisfaction ...

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

SPECIFICATIONS

GLS-1000

SYSTEM PERFORMANCE

Maximum range at specified reflectivity	330 m at 90%, 150 m at 18%
Calculated range at 18%	150 m
Single Point Accuracy	
Distance	4 mm at 150 m
Angle	6" (Vertical) / 6" (Horizontal)
Target Detection Accuracy	3" at 50 m

LASER SCANNING SYSTEM

Type	Pulsed
Colour	Invisible (Eye Safe Laser)
Laser Class	Class 1
Scan Rate	3000 points/second
Scan Density (Resolution)	
Spot Size	6 mm at 40 m
Maximum Sample Density	1 mm at 100 m
Field-of-view (Per scan)	
Horizontal/Vertical	360° (maximum) / 70° (maximum)
Colour Digital Imaging	2.0 Mega pixel digital camera

ELECTRICAL

Power Supply	On-Board Li-Ion battery BT-65Q x 4
Power Consumption	< 25 W
Maximum operation time	Approx. 4.0 hours per 4 pcs
Hot-swappable battery	Hot-swap (2 by 2)

ENVIRONMENTAL

Operating Temperature	0°C to 40°C
Storage Temperature	-10°C to 60°C
Dust/Humidity	IP52

PHYSICAL

Dimensions	240 mm x 240 mm x 566 mm
Weight	16 kg 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, USB
Display unit	LCD 20 characters x 4 lines
Keyboard / Data storage	21 keys / SD Card

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