

## Compact High-Speed 3D Laser Scanner



- Fast, Precise Scanning
- Reduced Noise, High-Quality Point Clouds
- Full-dome Scanning Range
- World's First – Direct Height Measurement
- Easy and Accurate Registration Methods
- Intuitive On-board Software

# GLS-2000 Compact High-Speed 3D Laser Scanner

## Capture Reality

An industry leading laser scanner that no serious practitioner should be without, the GLS-2000 can be effectively deployed at any job site to capture existing, as-built conditions.

With a scan range of over 350 m, the GLS-2000 is a versatile tool that incorporates valuable point cloud data in more project applications.

The innovative capabilities of the GLS-2000 combined with its field rugged design, provides users with a single solution that will stand up to the most extreme work environments.

## Intuitive and Adaptable

The GLS-2000 offers a quick, simple and effective way of capturing 3D point cloud data at a high speed without sacrificing the accuracy desired by today's demanding professionals.

Including a one-touch operation for the non-specialist, the GLS-2000 also satisfies the survey professional with occupation and backsight operation.

Together with ScanMaster software, the GLS-2000 is the right solution for industry professionals wanting the most value from their investment.

## Precise Scan Technology II

The GLS-2000 emits pulse signals three times faster than previous GLS models. The faster (time-of-flight) pulse signals produces a clear signal waveform enabling timing to be detected more precisely in signal processing.

Employing an ultra high-speed analog-digital converter (ADC) along with a newly developed direct sampling technique, Precise Scan Technology II enables signal extraction resulting in reduced noise and high-accuracy data.



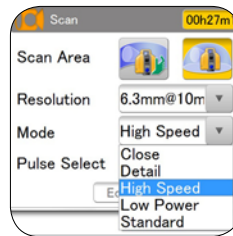
## Full Dome Field-of-View (FOV)

The instrument provides a 360°(H) and 270°(V) FOV, enabling the capture of point cloud data in closed-in areas such as building interiors, mechanical rooms, under bridge spans, pipe racks, and other challenging spaces



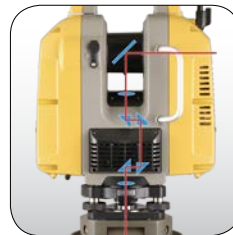
## Long-range Scanning up to 350 m

Distance measuring range is user-selectable – from applications requiring short distance measuring, to those that require long distance measuring such as large structures and material stockpiles.



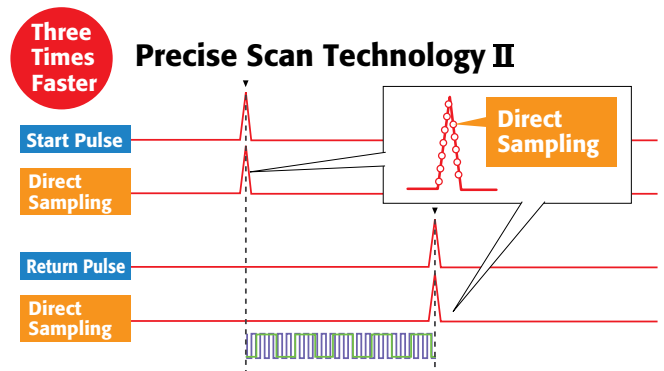
## Selectable Laser (3R/1M) Class

Depending on job site requirements, the measurement mode (with different laser output), can be switched between Class 3R and Class 1M, to accommodate eye-safety concerns in populated areas.



## Direct HI Measurement

The GLS-2000 has an exclusive laser plummet function that accurately measures instrument height with a one-touch operation, facilitating faster set-up times in traversing operations.





## PRIMARY FEATURES



### Dual Cameras

The GLS-2000 is equipped with dual (5 MP) cameras. A 170° wide-angle camera obtains images at high speed and an 8.9° tele-photo camera is coaxial with the measuring axis.



### KIT COMPONENTS

#### GLS-2000 Package Contents

- GLS-2000 Instrument
- 4x Batteries and 2x Chargers
- 2x Power Cables
- Carry Case
- 2x Magnetic Targets
- SD Memory Card



## SPECIFICATIONS

### System Performance

Maximum range at specified reflectivity	
Standard Mode	350m at 90%
High Speed Mode	210m at 90%
Low Power Mode	210m at 90%
Single Point Accuracy	
Distance	3.5mm (1-150m), 1 $\sigma$
Angle	6"
Tilt Sensor	
Type	Liquid 2-axis tilt sensor
Compensation Range	$\pm$ 6'
Target Detection Accuracy	3" at 50m

### Laser Scanning System

Type	Pulse (time of flight); Precises Scan Tech II		
Laser Class	3R (High Speed / Standard) 1M (Low Power)		
Scan Rate (High Speed)	Up to 120,000 pts/sec		
Spot Size	4mm at 20m (FWHM)		
Scan Time and Resolution (pre-set intervals at 10m)			
Interval	High Speed	Standard	Low Power
50mm	00:20	00:40	00:34
25mm	00:53	01:47	01:07
12.5mm	01:49	03:37	11:56
6.3mm	07:44	26:44	33:59
3.1mm	58:29	1:17:44	1:28:34
Field of View (per scan)	360° (H) / 270° (V)		
Color Digital Imaging			
Wide-angle	170° Diagonal		
Telephoto	11.9° (H) / 8.9° (V)		
Laser Class	3R (High Speed / Standard) 1M (Low Power)		

### Scanning Control

Control System	On-board
Display	3.5" Color Touch Screen
Data Storage	SD Card (Class 6 or higher)

### Environmental

Operation Temperature	23°F to 133°F (-5°C to 45°C)
Storage Temperature	-4°F to 140°F (-20°C to 60°C)
Dust/Humidity	IP54

For more specification information:  
[topconpositioning.com/gls-2000](http://topconpositioning.com/gls-2000)

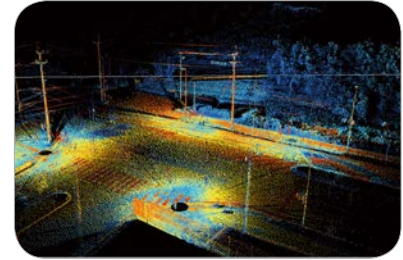
## SOFTWARE

### ScanMaster Software

Complete, full featured 3D point cloud software package that includes tools for processing, editing, and delivering point cloud data from your Topcon GLS-2000 laser scanner.

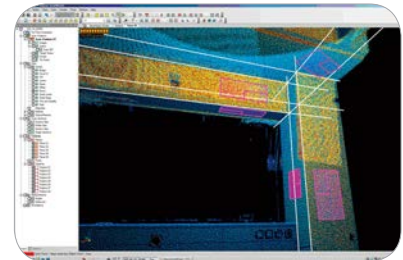
#### Processing Point Cloud Data

After field work is complete, ScanMaster supports importing, viewing and cleaning of collected point cloud data, providing multiple tools for registering, then geo-referencing to survey control.



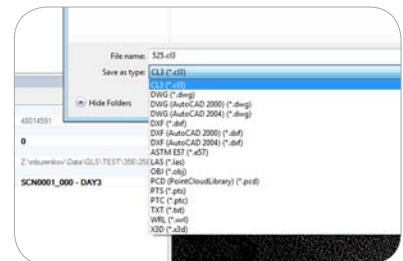
#### Extracting Objects

Tools for creating and editing objects such as polylines, meshes, edges, and planes are easily accessed. The region selection tool is especially useful for isolating surfaces such as roadways and building walls, floors, and ceilings.



#### Export to Industry Applications

Exporting clouds or objects to third party industry applications is simple. Many of today's most popular applications can directly accept Topcon (.clr) and (.cl3) point cloud formats making workflows even more streamlined.



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