



KEY FEATURES

A total Spatial Imaging solution with an easy, seamless workflow

Trimble SureScan patented technology for fast, smart scanning

Real-time true-color acquisition provides realism and accuracy of scanned targets

Remote control with Trimble TSC2 for efficient integration of true surveying practices



The Trimble GX 3D Scanner is an advanced surveying and spatial imaging sensor that uses high speed laser and video to capture coordinates and image data. The powerful capabilities of the Trimble GX 3D Scanner and its supporting system increase your competitiveness today and open doors to new business opportunities.

CAPTURE ALL THE POINTS YOU NEED, NOT JUST ALL THE POINTS

With the latest generation of the Trimble® GX™ 3D Scanner, you can collect millions of points for photo-realistic resolution, or you can collect exactly the number of points you need. It's up to you: Trimble® SureScan™ patented technology lets you scan smarter—and faster.

Trimble SureScan automatically adapts your scanning parameters to the geometry of a scanned object, and controls scanning movement to keep a constant user-defined space between points in 3D. This unique, innovative function maintains the equal density of points even for target objects such as roads and tunnels, where distances to points vary. You won't capture too many points at short distances and too few points at longer distances—you also won't capture measurements you don't need.

Being more efficient in the field operation translates directly into faster and easier data processing.

THE TRIMBLE GX 3D SCANNER: PART OF A BIGGER PICTURE

The Trimble GX 3D Scanner is just one advanced component of a superior surveying and Spatial Imaging solution that lets you capture, extract, and analyze spatial data. Comprising the Trimble GX itself, the field-proven Trimble® TSC2® controller, and the powerful RealWorks Survey™ office software, the complete system enables surveyors and geospatial professionals to generate compelling deliverables for clients.

Trimble RealWorks Survey can take the millions of points captured in a single scan and convert them into a usable form for processing in RealWorks Survey or your

favorite CAD package. RealWorks Survey automates each step from data capture to client-ready deliverable—it's powerful but extremely easy to use.

The TSC2 Controller runs Trimble PocketScape Spatial Imaging field software, plus standard and specialized Windows Mobile programs¹. Its industry-leading communication technologies offer cable-free convenience and wireless connectivity anywhere, and the TSC2 can be used with all Trimble sensors on the job, including GPS/GNSS systems and total stations.

CATCH AND SHARE THE VISION

The Trimble GX 3D Scanner includes Trimble® VISION™ technology for digital image streaming and capture. Using a digital image on the TSC2 screen, users can quickly identify and capture relevant data with a simple point-and-click; the image can then be transferred with the data. This process makes project handover to colleagues simple—the image helps identify and orient the points. Data processed in RealWorks Survey software can then be delivered to your clients in compelling 2D and 3D.

¹ The Trimble GX can also be controlled using PointScape software, which runs on a laptop computer in the field.

TRIMBLE GX 3D SCANNER

PERFORMANCE

Range (typically, under standard clear conditions^{1,2})
 350 m to 90% reflective surface³ (w/ OverScan)
 200 m⁴ to 35% reflective surface³
 155 m to 18% reflective surface³

Scanning speed up to 5000 points per second

Standard deviation⁵ 1.4 mm @ ≤50 m; 2.5 mm @ 100 m
 3.6 mm @ 150 m; 6.5 mm @ 200 m

Single point accuracy position = 12 mm @100 m
 distance = 7 mm @ 100 m
 Hz angle = 12" (60 µrad); Vt angle = 14" (70 µrad)

Target acquisition std dev. <1 mm (Trimble targets)

Modeled surface precision ± 2 mm (depending on method)²

Leveling circular level in tribrach; 8" dual-axis compensator (user selectable); resolution 0.3" (1 cc); operating range ±14" Real-time automatic level compensation

Data integrity periodic zero index calibration
 real-time thermo-compensation

Scan enhancement atmospheric corrections (user definable)
 user-definable multishot averaging
 autofocus: user-controlled or auto-implementation

Scan resolution spot size: 3 mm @ 50 m

Spot size with autofocus: 0.3 mm @ 5 m; 0.9 mm @ 15 m;
 1.5 mm @ 25 m
 Point spacing: down to 3.2 mm @ 100 m
 (available 1.6 mm vertical = 18 pts/cm² / 105 points/sq.in)

Scan row (hz): 200,000 points ; Scan row (vt): 65,536 points

SYSTEM SPECIFICATIONS

Laser type: pulsed 532 nm, green
 Class: IEC 60825-1 – Class 3R; 21 CFR §1041.10: Class 2

Field of view 360° x 60° continuous single scan

Optics patented scanning optical system

Data transfer USB link for available extensions

Digital imaging real-time integrated color video with 5.5x optical zoom

Status indicators system ready, laser on, comm. status

PHYSICAL

Servo-Driven 3D Laser

Scanner dimensions: 323 D x 343 W x 404 H mm
 weight: 13.0 kg (28.7 lb); power consumption: <100 W

Power supply super compact unit. AC 90–240 V, 50–60 Hz;
 DC 24 V nominal
 dimensions: 169 D x 65 W x 37.5 H mm;
 weight: 0.7 kg (1.5 lb)

Instrument case rugged and portable, rolling;
 dimensions: 645 D x 490 W x 435 H mm;
 weight: 14.2 kg (32.4 lb)

Environmental operating temp: 0 °C to 40 °C;
 storage temp: –20 °C to 50 °C
 light: fully operational under all light conditions
 sealing: IP53 (I.E.C.); shock: IEC 60721-3-2: 2M2 (scanner)
 2M3 (scanner in case) transportation compliant
 humidity: non-condensing atmosphere

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 PN 022543-404 (09/07)

Standard accessories rolling instrument case;
 super-compact power supply unit with AC cables;
 Trimble tribrach; ethernet cable for connection of scanner to data collector; 50 adhesive flat targets;
 Trimble 3D Scanner Field Software installation kit

Optional accessories Trimble® Recon® and TSC2 special extended caps for wired connection; PocketScape field software; Trimble 3D scanner backpack; car battery cable kit; target kits (planar, spherical); batteries; WiFi unit

FIELD SOFTWARE

PointScape field software for the Trimble GX 3D scanner runs on a Notebook PC. PocketScape field software runs on the Trimble Recon and TSC2⁶ controllers. Both applications offer advanced scanning functionality:

Efficient Survey workflow:

- Electronic level
- Dual axis compensation
- Atmospheric corrections
- Station setup and resection routines

Framing tools:

- Rectangular framing
- Video zoom control
- Sphere, target and single point measurement

Scanning options:

- Trimble SureScan technology⁷
- Pre-set or custom scan settings
- Return intensity and colored point cloud
- Estimated scan time and resolution control

Additionally, PointScape offers the following advanced features:

- Live video streaming
- Automatic panorama
- Automatic scan imaging
- Fast interactive framing on video, 3D point cloud, panorama or image
- Polygonal framing
- Multiple scan framing
- Automatic target and sphere recognition
- Real-time 3D visualization, pan and zoom, even while scanning
- Visualization of scanner location
- True color or intensity mapped point cloud display
- Simulated surface rendering and environmental lighting
- Measure and inverse computations
- Target re-check

1 Standard clear: No haze. Overcast or moderate sunlight with very light heat shimmer.

2 Range and precision depend on atmospheric conditions, size of targets and background radiation.

3 Kodak Gray Card, Catalog number E1527795.

4 Specifications on precision are valid within this optimum range.

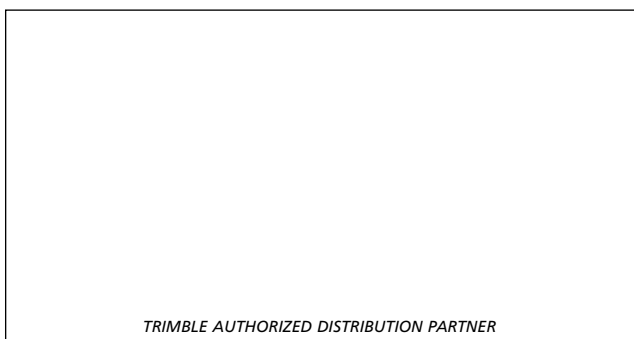
5 Figures (typical values) given for standard data capture of four shots, on distance measurement.

6 The Trimble GX Standard instrument only supports the

Trimble Recon Controller.

7 The Trimble GX Standard instrument does not offer SureScan technology.

Specifications subject to change without notice.



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