



KEY FEATURES

A total Spatial Imaging solution with an easy, seamless workflow

Control with Trimble Access on Trimble Tablet and produce deliverables in the field

Trimble SureScan patented technology for fast, smart scanning

Real-time true-color acquisition for better visualization

Immediate target acquisition methods for faster observations



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, Trimble Access software on Trimble Tablet, and the powerful Trimble RealWorks™ office software, the complete system enables surveyors and geospatial professionals to generate compelling deliverables for clients.

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

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

Trimble Access is a dramatic field software designed to make the Trimble GX system easy to use. It also makes it easy to share deliverable results with others while still in the field.

Surveyors who are familiar with scanning will find the approach to the observation workflows very refreshing due to the Total Station-like interface. Those who are unfamiliar with scanning will find their learning curve is remarkably short.

Trimble Access software is run on the Trimble Tablet PC, a very rugged unit designed for outdoor use. It has a large, clear touch screen which is easy to read in all lighting conditions.

Trimble Access has specialized applications options that allow users to produce final deliverables, right on the Trimble Tablet and right in the field, for immediate transfer over a standard Internet connection.

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 controller 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 immediately in Trimble Access, or with Trimble RealWorks can then be delivered to your clients in compelling 2D and 3D.

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 surface
 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
 Systematic error (after compensations) ~ 6 mm
 Combined standard uncertainty Uc 6.7 mm @ 50 m; 7.2 mm @ 100 m
 8.5 mm @ 150 m; 11.7 mm @ 200 m

Luminance resolution8 bits

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)

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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

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

FIELD SOFTWARE

Trimble Access for Spatial Imaging is control software that runs on Trimble Tablet to control the Trimble GX. In addition to instrument control, Trimble Access includes specialized applications that allow users to create deliverables directly in the field on the Trimble Tablet controller.

Users may also continue to use PointScape controller software on a laptop PC as well as PocketScape on TSC2 controllers⁶.

Efficient Survey workflow:

- Scan setup and resection routines
- Electronic leveling
- Dual axis compensation
- Atmospheric corrections
- Single survey point measurement
- Automatic target recognition
- Target re-check

Refined framing capabilities:

- Fast framing on video, point cloud, panorama or image
- Rectangular and polygonal framing
- Video-based remote instrument control

Scanning advantages:

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

Sophisticated display:

- Real-time 3D visualization, pan and zoom, even while scanning
- Live video streaming
- True color or intensity mapped point cloud display
- Simulated surface rendering and environmental lighting
- Visualization of instrument location

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.

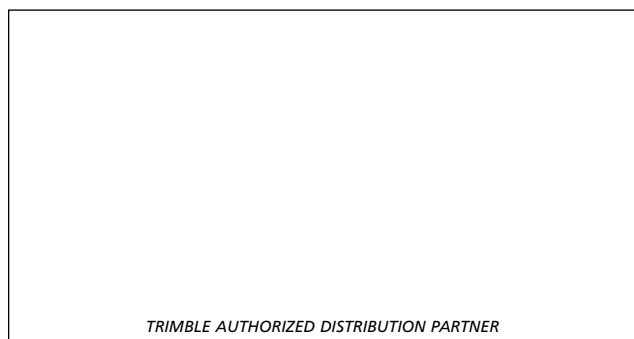
⁴ Specifications on precision are valid within this optimum range.

⁵ Figures (typical values at 99% albedo) given for standard data capture of four shots, on distance measurement.

⁶ TSC2 is compatible with Trimble GX Advanced only

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

Specifications subject to change without notice.



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