



# Trimble TX6

## LASER SCANNER

An optimal scanner for building construction applications, the Trimble TX6 combines the high quality output needed for precise data capture and the scanning-range appropriate for most building projects.

Building Information Modeling (BIM) requires highly precise inputs from the field. For mechanical, electrical and plumbing (MEP) projects and structural as-built assessments, the Trimble TX6 provides the speed, quality and range to make in-field data collection fast and efficient.

### Practical Innovation

Using Trimble's patented Lightning technology, the Trimble TX6 captures precise data at high speed over its full measurement range. And since Trimble Lightning technology is less susceptible to variations in surface types and atmospheric conditions, you can capture complete datasets from each station. To colorize scans, an integrated camera can quickly take full field-of-view HDR images.

The Trimble TX6 streamlines work in the office as well. The scanner's clean, low-noise data reduces processing time. That data loads directly into Trimble RealWorks® or Trimble Scan Explorer, enabling project collaboration via Internet Explorer. The Trimble TX6 paired with RealWorks also provides efficient data flow into popular CAD programs, Trimble EdgeWise and SketchUp for point cloud modeling.

### High Performance for Demanding Applications

The Trimble TX6 is ideal for capturing detailed data on existing conditions. By performing high-speed measurements without compromising range or precision, the Trimble TX6 delivers the high-density 3D point clouds needed by design and analysis professionals.

The Trimble TX6 provides a 360° x 317° field of view. Typical scan times are just three minutes to capture 34 million points or six minutes to capture 138 million points. The Trimble TX6

maintains its high precision over the entire range of 80 m with no need to reduce speed. Plus, it's available with an optional upgrade extending the range to 120 m.

### Rugged, Flexible and Easy to Use

The TX6's color touchscreen display and one-button scanning make data capture easy and efficient. The intuitive interface lets you quickly manage scan resolution and define scan areas. Since you capture only the data you need, you'll save time in the field and office. You can also operate the scanner remotely with a Trimble tablet or other mobile device via integrated WLAN.

The Trimble TX6 has a rugged design with an IP54 rating and protected mirror to capture data in demanding environments and bright sunlight. And its Class 1 eye-safe laser make it safe to use in busy public places.

Designed for mobility, the Trimble TX6 is powered by lightweight, long-life lithium ion batteries. The wheeled transportation case conforms to most airlines' checked luggage requirements enabling easy transport between job sites.

### The Total Solution

The Trimble TX6 is designed for a broad array of uses and environments. Typical construction applications include:

- ▶ Building Information Modeling (BIM)
- ▶ Virtual Design Construction (VDC)
- ▶ Pre-construction as-builts
- ▶ Quality control
- ▶ Preservation and restoration
- ▶ Plant and industrial measurement

The Trimble TX6's ability to capture precise high-density 3D data, combined with Trimble RealWorks software's advanced modeling, analysis and data management tools, make this laser scanner the complete scanning solution for construction professionals.

## Key Features

- ▶ Increase field productivity with fast, high resolution scans
- ▶ Confidence in data accuracy, clarity and richness
- ▶ Reliable performance in real world environments
- ▶ Fast image capture to colorize scans with VISION™ technology
- ▶ Intuitive and easy to operate



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## PERFORMANCE

**Overview**  
 Scanning principle ..... Vertically rotating mirror on horizontally rotating base  
 Range principle ..... High speed time-of-flight powered by Trimble Lightning technology

Scanning speed<sup>2</sup> ..... 500,000 pts/sec  
 Maximum range ..... 80 m on most surfaces  
 120 m with optional upgrade

Range noise<sup>5</sup> ..... <2 mm on most surfaces

**Range measurement**  
 Laser class ..... 1. eye safe in accordance with IEC EN60825-1  
 Laser wavelength ..... 1.5 µm, invisible  
 Laser beam diameter ..... 6–10–34 mm @ 10–30–100m  
 Minimum range ..... 0.6 m  
 Max. standard range ..... 80 m on 18–90% reflectivity  
 Extended range<sup>1</sup> ..... 120 m on 18–90% reflectivity  
 100 m on very low reflectivity (5%)

Range noise<sup>5</sup> ..... <2 mm from 2 m to 80 m on 18–90% reflectivity with standard  
 <2 mm from 2 m to 120 m on 18–90% reflectivity with extended range

Range systematic error<sup>5,6</sup> ..... <2 mm

**Scanning**  
 Field of view ..... 360° x 317°  
 Angular accuracy<sup>5</sup> ..... 80 µrad

Scan Parameters	Preview	Level 1	Level 2	Level 3
Max range <sup>1</sup>	80/120 m	80/120 m	80/120 m	80/120 m
Scan duration (minutes) <sup>3</sup>	02:00	03:00	05:00	19:00
Point spacing at 10 m	15.1 mm	---	---	---
Point spacing at 30 m	---	22.6 mm	11.3 mm	5.7 mm
Number of points	8.7 Mpts	34 Mpts	138 Mpts	555 Mpts

## IMAGING

Integrated HDR camera ..... 10 megapixel resolution, full field of view  
 Image capture duration ..... 1 min for Standard, 2 min for HDR  
 External camera kits are available for higher resolution HDR images

## OTHERS

Touchscreen display ..... TFT-LCD with 24-bit color  
 Size (mm) ..... 93 (H) x 55.8 (V), equivalent 4.3" diagonal  
 Resolution ..... 800 x 480 (WVGA)

Luminance resolution ..... 8 bits  
 Leveling ..... External bubble, onboard electronic bubble  
 Dual axis compensation ..... Selectable on/off  
 Resolution ..... 0.3"  
 Range ..... ±5"  
 Accuracy<sup>5</sup> ..... 1"

Data storage ..... USB 3.0 Flash Drive  
 Remote control ..... Operate with Trimble tablet or other mobile device via WLAN or with Windows 7 or higher PC or tablet via USB cable<sup>4</sup>

1 Optional upgrade increases range from 80m to 120 m.  
 2 Effective scan speed for optimum scan quality.  
 3 Scan duration times for Standard scan modes.  
 4 Wired remote control requires optional USB cable PN 23704034.  
 5 Specification given as 1 sigma.  
 6 At distance of 1.5 m to 100 m for albedo >20%.

Specifications subject to change without notice.

## PHYSICAL

Dimensions ..... 335 mm W x 386 mm H x 242 mm D  
 (13.2 in W x 15.2 in H x 9.5 in D)  
 Weight ..... 10.7 kg (23.6 lb) with tribrach and no battery;  
 11.2 kg (24.7 lb) with tribrach and battery  
 Power supply ..... 76 mm W x 43 mm H x 130 mm D  
 (3.0 in W x 1.7 in H x 5.1 in D);  
 Weight: 0.66 kg (1.46 lb)  
 Battery dimensions ..... 89.2 mm W x 20.1 mm H x 149.1 mm D  
 (3.5 in W x 0.8 in H x 5.9 in D)  
 Battery weight ..... 0.46 kg (1 lb)  
 Power consumption ..... 72 W  
 Scan time per battery ..... >2 hours  
 Instrument case ..... 500 mm W x 366 mm H x 625 mm D  
 (19.7 in W x 14.4 in H x 24.6 in D)

## ENVIRONMENTAL

Operating temperature range  
 (non-condensing atmosphere) ..... -0 °C to +40 °C (32 °F to 104 °F)  
 Storage temperature ..... -20 °C to +50 °C (-4 °F to 122 °F)  
 Operating humidity range ..... Non condensing  
 Lighting conditions ..... All indoor & outdoor conditions over entire range  
 (no lighting limitations)  
 Protection class ..... IP54



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