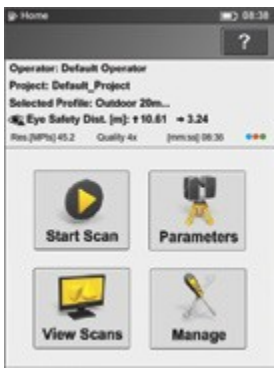
DATASHEET

Trimble Tx5 scanner

Key Features

- Versatile and cost-effective solution
- Compact and portable
- Integrated color camera for photo-realistic 3D laser scans
- Intuitive touch screen interface ideal for new users



The Trimble® TX5 3D laser scanner is a revolutionary and highly versatile 3D scanning solution for a broad variety of scanning applications. The compact and lightweight design provides unmatched mobility at the job site, increasing field productivity. The intuitive and easy to use onboard interface allows new users to quickly get up to speed.

HigH-speed scanning witH integrated color camera

The Trimble TX5 high-speed 3D laser scanner is able to measure at speeds of up to 976,000 pts / sec and up to a range of 120 m. The system also includes an integrated color camera featuring an automatic 70 megapixels parallax-free color overlay. The end result is detailed photorealistic 3D color images made from millions of measurements. This provides users an excellent solution for documenting existing conditions for BIM, architectural, structural deformations, industrial facilities, heritage, forensics, and accident investigation, where detail and color are required.

mobility

The Trimble TX5 is the smallest and lightest scanner available. With a size of only 240 mm x 200 mm x 100mm (9.5 in x 8 in x 4 in) and weight of just 5.0 kg (11 lb), it is easy to move and set up in complex environments. The small and light transportation case provides users with a convenient, safe and cost effective solution for transportation. The scanner also comes with a lithium-ion battery that provides up to five hours of battery life and can be charged during operation. The option to operate via WLAN to remotely start, stop, view or download scans from a distance is also available to users.

ease oF use

Operation of the Trimble TX5 is made easy with a touch screen interface that is clear and concise. The steps required to set scan parameters, manage projects and scan are intuitive and easy to learn. This greatly reduces the time needed to become productive and allows new users to be confident with the scanner operation. When combined with the benefits of working with a smaller more portable solution, the Trimble TX5 is truly one of the easiest scanners to a incorporate into your business.

automated sensors

The Trimble TX5 provides automated sensors to assist with scan registration and to allow a minimal number of targets needed in the field. The system has an electronic compass to associate directional data to your scans and a dual axis compensator to enable every scan to have integrated level information. A height sensor (Altimeter) provides height information to assist with differentiating scans, e.g.; different floor levels in a building.

data management

Data from the Trimble TX5 is stored on a SD card enabling easy and secure transfer to a PC. Data is processed and registered in the SCENE software and can be seamlessly imported into Trimble ® RealWorks® software for the generation of end deliverables, such as inspections, measurements or 3D models. Data can also be transferred to 3D CAD packages for application with 3rd party design software.

Trimble

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perFormance

ranging unit

Unambiguity interval 153.49m (503.58ft)
Range[1] . . . . . .0.6 m–120 m
indoor or outdoor with low ambient light and
normal incidence to a 90% reflective surface
Measurement speed . . . 122,000 / 244,000 / 488,000 / 976,000 points/sec
Ranging error [2] . . . . . .±2 mm at 10 m and 25 m, each at 90%
and 10% reflectivity

Ranging noise[3]	@10 m	@10 m noise compressed[4]	@25 m	@25 m noise compressed[4]
@ 90% reflectivity	0.6 mm	0.3 mm	0.95 mm	0.5 mm
@ 10% reflectivity	1.2 mm	0.6 mm	2.20 mm	1.1 mm

color unit

Resolution . . . . . Up to 70 megapixel color
Dynamic color feature . . . . . Automatic adaption of brightness

deflection unit

Field of view (vertical/horizontal) . . . . . 300° / 360°
Step size (vertical/horizontal . . . . . 0.009° (40,960 3D pixels on 360°) /
0.009° (40,960 3D pixels on 360°)
Max. vertical scan speed . . . . . 5,820rpm or 97Hz

laser (optical transmitter)

Laser class 3R
Laser power (cw Ø) 20mW
Wavelength 905nm
Beam divergence . . . . . Typical 0.19mrad (0.011°)
Beam diameter at exit . . . . . .3.0mm, circular

data handling and control

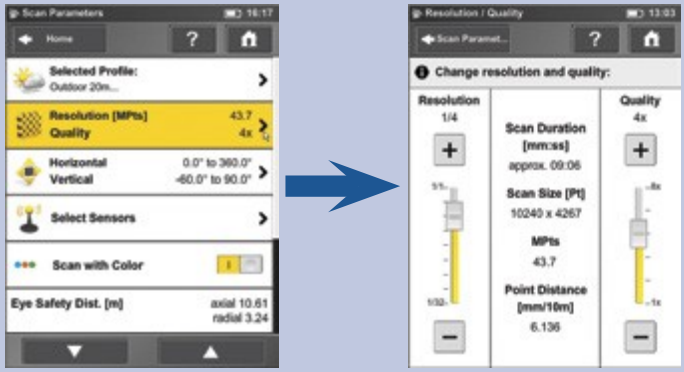
Data storage . . . . . SD, SDHC™, SDXC™; 32 GB card included
Scanner control . . . . . Via touch-screen display
WiFi (WLAN) access . . . . . Remote control, Scan visualization and
download are possible on mobile devices with Flash®

multi-sensor

Dual axis compensator . . . . . Levels each scan with an accuracy
of 0.015° and a range of ±5°
Height sensor . . . . . Detects the height relative to a fixed point via
an electronic barometer and adds it to the scan
Compass . . . . . Electronic compass gives the scan an
orientation. A calibration feature is included.

Hardware speciFications

Power supply voltage . . . . . .19 V (external supply),
14.4 V (internal battery)
Power consumption . . . . . 40 W and 80 W respectively
(while battery charges)
Battery life . . . . . Up to 5 hours
Ambient temperature . . . . . 5 °C to 40 °C (41 °F to 104 °F)
Humidity . . . . . .Non-condensing
Cable connector . . . . . .Located in scanner mount
Weight 5.0kg
Size . . . . . 240 mm x 200 mm x 100 mm
(9.5 in x 8 in x 4 in)



1 Depends on ambient light, which can act as a source of noise. Bright ambient light (e.g.; sunshine) may shorten the actual range of the scanner to lesser distances. In low ambient light, the range can be more than 120 m for normal incidence on high-reflective surfaces.
2 Ranging error is defined as the maximum error in the distance measured by the scanner from its origin point to a point on a planar target.
3 Ranging noise is defined as a standard deviation of values about the best-fit plane.
4 A noise-compression algorithm may be activated to average points in sets of 4 or 16, thereby compressing raw data noise by a factor of 2 or 4.

Specifications subject to change without notice.

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