

KEY FEATURES

Escalates productivity in Integrated Surveying and specialized Engineering applications, including monitoring and tunneling

Creates business opportunities in new and diverse applications

One investment; unlimited potential



The Trimble® S8 Total Station serves both general surveying and specialized engineering applications. Ideal for one and perfect for the other, the flexible Trimble S8 Total Station with 1" angular accuracy and EDM precision of 1 mm + 1 ppm seamlessly switches between different project types. Always working, it secures your investment and ensures a fast return.

A COMPLETE SOLUTION FOR ENGINEERING APPLICATIONS

The Trimble S8 Total Station is a key part of Trimble's complete solution for specialized Engineering applications, such as monitoring and tunneling¹. Unique, optional features for Engineering include:

- **Trimble FineLock™ technology** is a smart tracker sensor with a narrow field of view. A Trimble S8 Total Station equipped with FineLock technology will detect a target without interference from surrounding prisms, achieving more reliable accuracy and greater density of mounted targets.
- Trimble FineLock technology is also offered as a **Long-Range FineLock** option reaching up to 2500 m with 1 cm accuracy.
- A Trimble S8 Total Station with a **Class 3R Laser Pointer** visually marks points in tunneling and mining.
- When monitoring reflective foil targets, **Automatic Servo Focus** sets the optical focus automatically for quicker aiming.
- **10 Hz high-speed synchronized data output** makes data collection in dynamic applications faster and more accurate. E.g., in railway monitoring, a trolley or ATV can move more quickly without compromising accuracy.

INTEGRATED SURVEYING

The Trimble S8 Total Station supports Trimble's full Integrated Surveying™ solution. For typical surveying tasks, its optical measurements can combine with GNSS and Spatial Imaging data, plus the Trimble S8 can partner with the Trimble I.S. Rover. For engineering applications, data flow from the field to Trimble 4D Control software for real-time monitoring and postprocessing is seamless,

and fast. From the office, multiple total stations can be managed and scheduled through a centralized control center.

THE MOST ADVANCED TOTAL STATION PLATFORM

The Trimble S8 Total Station is built on Trimble's most advanced total station platform. It offers 1" angular accuracy and EDM precision of 1 mm + 1 ppm, plus the best features available from technology today to ensure unsurpassed efficiency, productivity, and profitability:

- **Trimble MagDrive™ servo technology:** Survey or monitor targets up to 40% faster. Frictionless motion reduces wear and tear for worry-free 24/7 operation and less maintenance. Silent movement ensures unobtrusive operation in urban or residential settings.
- **Trimble MultiTrack™ technology:** Choose between passive and active tracking. The Trimble MultiTrack Target ensures you always find and lock to the correct target fast. Nearby reflective surfaces, including other prisms, will not disrupt jobs.
- **Trimble SurePoint™ technology:** Measure accurately even after vibration and sinkage—the Trimble S8 actively corrects for unwanted movement. Avoid aiming errors and costly remeasurement.

A PROTECTED INVESTMENT

The Trimble S8 Total Station is protected from theft and tampering by the Trimble eProtect™ security feature, which blocks unauthorized access to the instrument.

¹ For Engineering solutions the Trimble S8 Total Station partners with Trimble Survey Controller™ field software and Trimble 4D Control software.

PERFORMANCE

Angle measurement
Accuracy (Standard deviation based on DIN 18723)
Angle reading (least count)
Standard
Tracking
Averaged observations
Automatic level compensator
Type
Accuracy
Range
Distance measurement
Accuracy (S. Dev.)
Prism mode
Standard
Tracking
DR mode
Standard measurement
Tracking
Measuring time
Prism mode
Standard
Tracking
Averaged observations
DR mode
Standard
Tracking
Averaged observations
Range (under standard clear conditions)
Prism mode
1 prism
1 prism Long Range mode
3 prism
3 prism Long Range mode
Shortest possible range
DR mode (typically)
Kodak Gray Card (18% reflective)
Kodak Gray Card (90% reflective)
Shortest possible range

EDM SPECIFICATIONS

Light source
Beam divergence Prism mode
Horizontal
Vertical
Beam divergence DR mode
Horizontal
Vertical
Atmospheric correction

GENERAL SPECIFICATIONS

Laser pointer coaxial (standard)
Laser pointer non-coaxial (not available in all models)
Leveling
Circular level in tribrach
Electronic 2-axis level in
the LC-display with a resolution of
Servo system
Rotation speed
Rotation time Face 1 to Face 2
Positioning speed 180 degrees
Clamps and slow motions
Centering
Centering system
Optical plummet

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Magnification/shortest focusing distance
Telescope
Magnification
Aperture
Field of view at 100 m (328 ft)
Shortest focusing distance
Illuminated crosshair
Autofocus
Tracklight built in
Operating temperature
Dust and water proofing
Power supply
Internal battery
Operating time
One internal battery
Three internal batteries in multi-battery adapter
Robotic holder with one internal battery
Weight
Instrument (servo/Autolock)
Instrument (Robotic)
Trimble CU controller
Tribrach
Internal battery
Trunnion axis height
Communication
Security

ROBOTIC SURVEYING

Autolock and Robotic range
Passive prisms
Trimble MultiTrack Target
Autolock pointing precision at 200 m (656 ft) (standard deviation)
Passive prisms
Trimble MultiTrack Target
Shortest search distance
Angle reading (least count)
Standard
Tracking
Averaged observations
Type of radio internal/external
Search time (typical)

FINELOCK

Standard (not available in all models)
Pointing precision at 300 m (980 ft) (standard deviation)
Range to passive prisms (min-max)
Minimum spacing between prisms at 200 m (656 ft)
Long Range (not available in all models)
Pointing precision at 2,500 m (8,200 ft) (standard deviation)
Range to passive prisms (min-max)
Minimum spacing between prisms at 2,500 m (8,200 ft)

GPS SEARCH/GEOLock WITH THE TRIMBLE MULTITRACK TARGET

GPS Search/GeoLock
Solution acquisition time
Target re-acquisition time
Range

1 Repeats for defined number of measurements up to 99.
2 Standard clear: No haze. Overcast or moderate sunlight with very light heat shimmer.
3 Range and accuracy depend on atmospheric conditions, size of prisms and background radiation.
4 Kodak Gray Card, Catalog number E1527795.
5 The capacity in -20 °C (-5 °F) is 75% of the capacity at +20 °C (68 °F).
6 Bluetooth type approvals are country specific. Contact your local Trimble Authorized Distribution Partner for more information.
7 Dependent on selected size of search window.
8 Solution acquisition time is dependent upon solution geometry and GPS position quality.
9 Uses a combination of Standard and Long Range FineLock.

Specifications subject to change without notice.

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