Trimble Total Station Portfolio

COMPARISON GUIDE



Take control of the way you work

Surveyors worldwide trust Trimble® high-performance total station surveying solutions to maximize productivity today while offering scalability to adapt to future challenges and opportunities.

Streamline your workflows and deliver maximum quality with precision optics and robotics.

Find out more at geospatial.trimble.com/total-stations

Trimble scanning total stations



SCANNING & ROBOTIC

Trimble SX12

The versatile Trimble SX12 solution is capable of collecting any combination of high-density 3D scan data, Trimble VISION™ technology imagery, and high-accuracy total station data, allowing you to capture exactly what you need, saving time and money on every job.

Work away from the total station

Control remotely using a Trimble TSC710, TSC510 or T110 data collector, and a Trimble Empower™ EM120 or EM130 radio module.



Trimble **S series** total stations



ROBOTIC MODELS

Trimble S5, S7, S9, S9 HP

Trimble S series robotic total stations give you the freedom, speed, and flexibility of remote control and single-person operation. With the data collector on the pole, you're in command of the job, exactly where the action is. An integrated radio makes this remote control possible, while core technologies including Trimble Autolock®, Trimble MagDrive™, and Trimble SurePoint™ ensure reliable performance. Additional features like Trimble active tracking, Trimble Tracklight®, VISION, or Long Range Trimble FineLock™ technology allow you to take control of your work.

Work away from the total station

Control remotely using a Trimble TSC710, TSC510, T110 or T70 data collector and an EM120 or EM140 radio module.



Trimble **S series** total stations



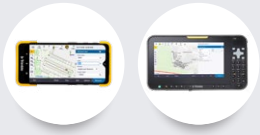
AUTOLOCK MODELS

Trimble S5, S7, S9, S9 HP

Trimble S series Autolock total stations enhance productivity for workflows performed at the instrument. These models feature Autolock, MagDrive, and SurePoint technologies and can be used as a regular total station, a permanent monitoring solution, or upgraded to a robotic model via a radio service upgrade. They also come with your choice of Trimble Tracklight, VISION, or Long Range FineLock technology.

Work at the total station

Control using a Trimble T70 or TDC6 data collector onboard, or a short-range remote connection to a data collector.



Trimble **C series** total stations



MECHANICAL

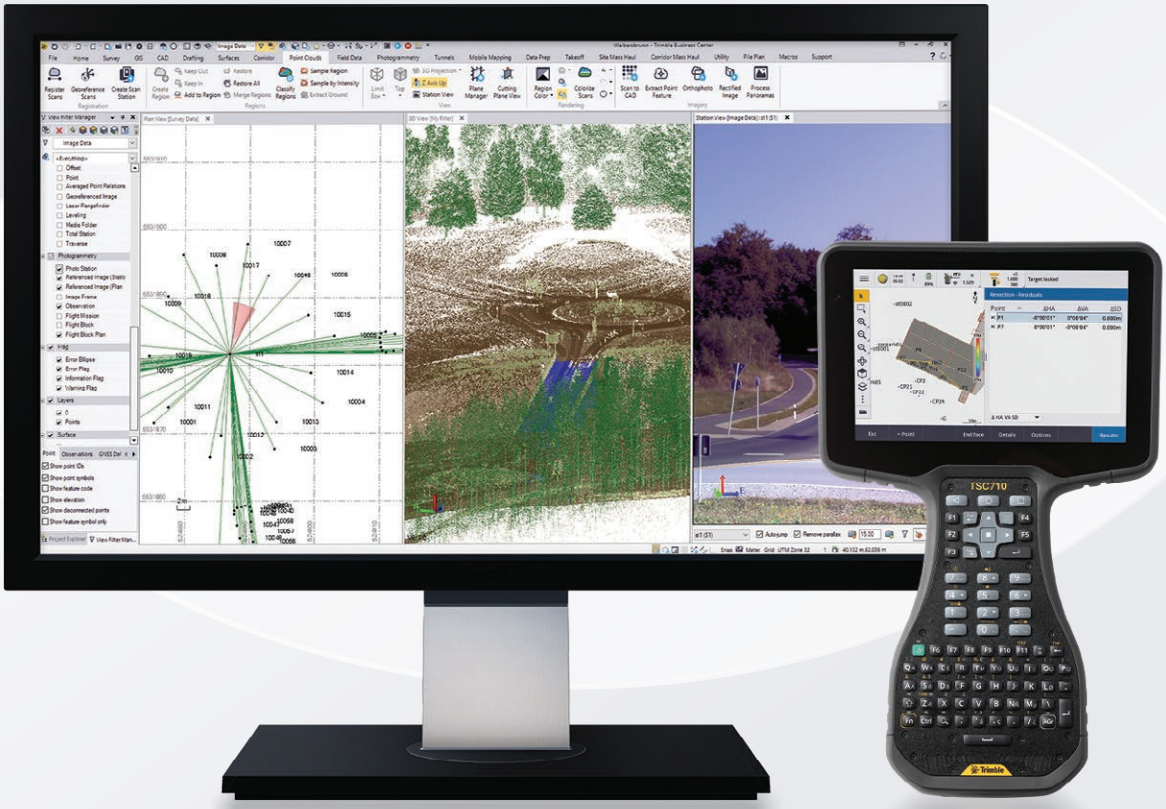
Trimble C3, C5, C5 HP

Trimble C series mechanical total stations are durable, efficient, highly precise instruments that work as hard as you do. By combining superior optics and autofocus with a rugged, lightweight, user-friendly design, the C series total stations deliver exceptional performance, making field work faster and more productive.

Work at the total station

Control using dual-face onboard displays or short-range remote connection to a data collector.





A complete solution

Trimble Access™ software is a leading field application used by professional surveyors around the world. It provides functionality that supports efficiency, accuracy, and ease of use, with simplified workflows to enhance your daily survey tasks.

Back in the office, Trimble Business Center office software transforms your field data into high-quality, actionable information and data-rich client deliverables.

SERVO TOTAL STATIONS

	TRIMBLE SX12	TRIMBLE S9 HP	TRIMBLE S9	TRIMBLE S7	TRIMBLE S5
					
Radio models	Robotic	Robotic or Autolock	Robotic or Autolock	Robotic or Autolock	Robotic or Autolock
Angular accuracy	1"	0.5" or 1"	0.5" or 1"	1", 2", 3" or 5"	1", 2", 3" or 5"
EDM technology	Lightning 3DM	DR HP	DR PLUS	DR PLUS	DR PLUS
EDM accuracy: Prism	1 mm + 1.5 ppm	0.8 mm + 1 ppm	1.0 mm + 2 ppm	1.0 mm + 2 ppm	1.0 mm + 2 ppm
EDM accuracy: DR	2 mm + 1.5 ppm	3.0 mm + 2 ppm	2.0 mm + 2 ppm	2.0 mm + 2 ppm	2.0 mm + 2 ppm
Maximum range	5,500 m	7,000 m	5,500 m	5,500 m	5,500 m
Core technology on all models	Scanning, VISION, Autolock, MagDrive, SurePoint, plummet camera, target illumination light	Autolock, MagDrive, SurePoint, FineLock, Active Tracking	Autolock, MagDrive, SurePoint, FineLock, Active Tracking	Autolock, MagDrive, SurePoint, Active Tracking	Autolock, MagDrive, SurePoint
Model-specific technology	Focusable Laser Pointer	Long Range FineLock, Tracklight, VISION	Long Range FineLock, Tracklight, VISION, Trimble SureScan™ technology	FineLock, SureScan, VISION	Tracklight, Active Tracking

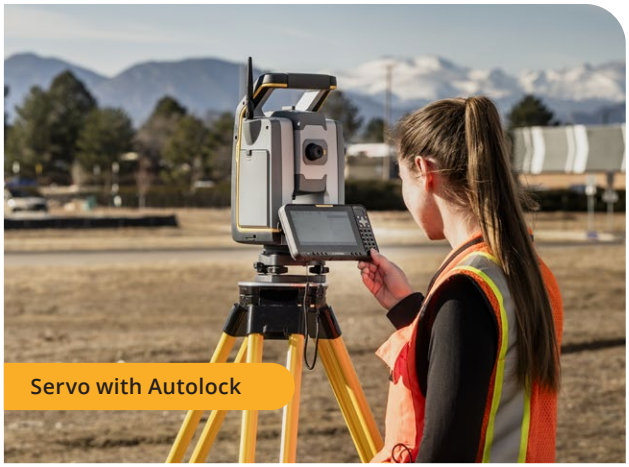
MECHANICAL TOTAL STATIONS

	TRIMBLE C5 HP	TRIMBLE C5	TRIMBLE C3
			
Angular accuracy	1", 2", 3" or 5"	1", 2", 3" or 5"	1", 2", 3" or 5"
EDM accuracy	1 mm + 1.5 ppm (Prism) 2.0 mm + 2 ppm (DR)	2.0 mm + 2 ppm (Prism) 3.0 mm + 2 ppm DR	2.0 mm + 2 ppm (Prism) 3.0 mm + 2 ppm DR
Maximum range	3,000 m	5,000 m	5,000 m
Autofocus	No	Yes	Yes
Displays	Two, color touchscreen	Two, color touchscreen	Two, black and white LCD
Onboard software	Trimble Access 2017	Trimble Access 2017	Basic onboard software
Plummet	Optical	Optical or laser	Optical or laser

Proven Trimble technologies designed to enhance precision and efficiency in your workflows

Trimble Active Tracking and Target ID	Active tracking ensures the total station maintains a constant and reliable lock on its target. Active tracking targets, such as the Trimble ST30, MT1000 and AT360, contain LEDs that emit a unique light signal. S series total stations equipped with the Active Tracking feature are specifically designed to look for these unique signals, preventing false locks from other reflective surfaces like car headlights or street signs. This robust technology also enables Target ID (Identification). Each active target offers 8 distinct channels that you can choose from. By selecting a specific channel on the target, its LEDs transmit a particular light pattern. The robotic total station is then configured to only track targets transmitting on that assigned channel. This means even if other active targets are on site, the total station will reliably follow only the one you've selected.
Trimble Autolock	Autolock technology allows the instrument to automatically find, lock onto, and track a survey prism. This feature enhances surveying efficiency by eliminating the need for manual aiming.
Trimble FineLock and Long Range FineLock	FineLock technology ensures the total station locks onto the correct prism in environments where multiple prisms are within the field of view. This is a similar principle to Autolock, but FineLock utilizes a narrower tracker window to detect prisms, which significantly reduces the minimum prism spacing required for the total station to differentiate between two separate reflections. FineLock works at a range of up to 700 meters (2,300 ft). Long Range FineLock is a specialized variation that incorporates a hardware transmitter to significantly extend FineLock's operational range, up to 2,500 meters (8,200 ft).
Trimble MagDrive	An electromagnetic direct drive servo system in Trimble S and SX series total stations enables exceptionally fast and precise yet silent instrument rotation. This frictionless technology is crucial for rapid prism tracking and sustained accuracy over the instrument's lifespan, making workflows more efficient and reducing wear.
Trimble SurePoint	SurePoint technology mitigates measurement errors caused by minor total station mislevelments. The total station constantly monitors its level and automatically corrects the angular output in real-time. This is incredibly beneficial when working on unstable ground like soft earth or melting snow, ensuring you always get accurate data. You can see SurePoint in action by intentionally setting up your total station slightly unleveled (within its compensator range), then moving the telescope vertically. You'll notice the horizontal angle adjust automatically, demonstrating how SurePoint provides the true horizontal and vertical angles to your target, no matter the subtle shifts.
Trimble SX12 scanning and Trimble S series SureScan	Trimble SX12 scanning total stations offer true terrestrial scanning with a rotating deflection prism for highly detailed, dense point clouds. This is ideal for comprehensive site documentation and modeling. For Trimble S7 and some S9 total stations, you can also create point clouds using Direct Reflex (DR) measurements with SureScan. This SureScan technology lets you define a desired point cloud density and then delivers a point cloud with even spacing between 3D points, preventing areas from being over-densified at close range or too sparse at longer distances.
Trimble Tracklight	A tracklight is a visible guide light that helps the rod person position themselves precisely in the instrument's line of sight, especially useful during stakeout. The light's color tells the rod person if they are left or right of the tracklight beam. For S series instruments, in Trimble Access setting the speed to "Auto" makes the Tracklight flash fast when locked and slow when no target is detected.
Trimble VISION	Trimble VISION integrates calibrated digital cameras into Trimble S series and SX total stations, allowing you to see what the instrument sees directly on your data collector via live video. This enables remote aiming and measuring points by tapping on the video screen, the augmented reality (AR) ability to see measured points overlaid on the video stream, and documentation of your work with images.









Contact your local Trimble authorized dealer to learn more

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