Trimble S5 Total Station

TRUSTED PERFORMANCE
All you need to perform efficient survey campaigns is available in the Trimble® S5 Robotic Total Station solution: An accurate and reliable instrument, DR Plus EDM, MagDrive™ technology, the popular Trimble TSC3 controller with Trimble Access™ field software and quick data processing with Trimble Business Center office software.

Trimble has been manufacturing the industry's leading robotic total stations for over a decade. You can depend on the Trimble S5 Total Station to keep you productive in the field no matter what you encounter.

Trimble Technology
The Trimble S5 Total Station is built upon proven Trimble technologies like SurePoint™, MagDrive and our DR Plus EDM, helping you work more efficiently while maintaining the highest accuracy possible. Smooth and silent, Trimble MagDrive electromagnetic technology means fewer moving parts, which reduces servicing requirements. Trimble SurePoint ensures accurate pointing and measurements by actively correcting for unwanted movements like wind, handling, and sinkage. The Trimble DR Plus EDM allows you to measure with fewer instrument set-ups and enhance your direct reflex performance.

Manage Your Assets 24/7
Know where your total stations are 24 hours a day with Trimble Locate2Protect technology. See where your equipment is at any given time and get alerts if your instrument leaves a jobsite or experiences unexpected equipment shock or abuse.

Trimble InSphere™ Equipment Manager system lets you view usage and keep up-to-date on firmware, software and maintenance requirements. With Trimble Locate2Protect and InSphere Equipment Manager, you can rest assured knowing your equipment is up-to-date and where it should be.

Robotic and Autolock
The Trimble S5 Total Stations are available in robotic or Autolock®-only versions. The Trimble S5 robotic and Autolock versions have an optional TCU data collector with Trimble Access field software for convenient, simple operation in any environment.

Integrated Surveying
The Trimble S5 Total Station provides the foundation for Trimble's Integrated Surveying™ solutions. With Integrated Surveying, you can seamlessly integrate complementary technologies on the job site, such as Trimble GNSS receivers and optical measurements.

Powerful Field and Office Software
Choose from a variety of Trimble controllers operating the feature rich, intuitive Trimble Access field software. Streamlined workflows guide crews through common project types, helping to get the job done faster with less distractions. Trimble Access workflows can also be customized to fit your needs.

Back in the office, trust Trimble Business Center software to help you check, process and adjust your optical, leveling, and GNSS data in one software solution. No matter what Trimble instruments you use in the field, you can trust that Trimble Business Center office software will help you generate industry-leading deliverables.

Trimble S5 Configurations
<table>
<thead>
<tr>
<th>EDM</th>
<th>Angle</th>
<th>Accuracy</th>
<th>Servo Control</th>
<th>Active Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR Plus</td>
<td>1&quot;, 2&quot;, 3&quot;, 5&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robotic, Autolock</td>
<td>Optional</td>
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</tbody>
</table>

Key Features
- Everything you need to perform survey campaigns
- Measure further and faster with the Trimble DR Plus EDM
- Locate2Protect real-time equipment management
- Seamless integration with the Trimble V10 Imagine Rover and GNSS receivers
- Intuitive Trimble Access Field Software
- Trimble Business Center Office Software for quick data processing

DATASHEET
Provided by Xpert Survey Equipment
Click Trimble S5 for Product Info and Updated Pricing
## PERFORMANCE

### Angle measurement
- **Sensor type**: Absolute encoder with diametrical reading
- **Accuracy** (Standard deviation based on DIN 18723): 1° (0.3 mgon), 2° (0.6 mgon), 3° (1.0 mgon), or 5° (1.5 mgon)
- **Angle Display (least count)**: 0.1" (0.01 mgon)
- **Automatic level compensation**: Type: Centered dual-axis

### Distance measurement
- **Accuracy (ISO)**: Prism mode: 1 mm + 2 ppm
- **Prism mode**
  - Standard: 2 mm + 2 ppm
  - Tracking: 4 mm + 2 ppm
- **DR mode**
  - Standard: 2 mm + 2 ppm
  - Tracking: 4 mm + 2 ppm
- **Extended Range**: 10 mm + 2 ppm

### Measuring time
- **Prism mode**
  - Standard: 1.2 sec
  - Tracking: 0.4 sec
- **DR mode**
  - Standard: 1.5 sec
  - Tracking: 0.4 sec

### Measurement Range
- **Prism mode (under standard clear conditions)**
  - 1 prism: 2500 m
  - 1 prism Long Range mode: 5500 m (max. range)
  - 2 mm + 2 ppm
- **DR mode**: 1 mm + 2 ppm

### EDM SPECIFICATIONS
- **Light source**: Pulsed laser diode 905 nm, Laser class 1
- **Beam divergence**
  - Horizontal: 0.4 cm/100 m
  - Vertical: 0.8 cm/100 m

### SYSTEM SPECIFICATIONS

#### Leveling
- **Circular level in tribrach**: 8'/2 mm
- **Electronic 2-axis level in the LC-display**: 0.3" (0.1 mgon)

#### Service system
- **MagDrive servo technology, integrated servo/sensor electromagnetic direct drive**
  - **Rotation speed**: 115 degrees/sec (128 gon/sec)
  - **Rotation time Face 1 to Face 2**: 2 sec
  - **Positioning time 180 degrees (200 gon)**: 2.6 sec

#### Centering
- **Centering**: Trimble 3-pin
  - Optical plummet: Built-in optical plummet
  - Magnification/shortest focusing distance: 2.3×0.5 m–infinity

#### Telescope
- **Magnification**: 30×
- **Aperture**: 40 mm
- **Field of view at 100 m**: 2.8 m at 100 C
- **Shortest focusing distance**: 1.5 m–infinity
- **Illuminated crosshair**: Variable (10 steps)

#### Power supply
- **Internal battery**: Rechargeable Li-ion battery 11.1 V, 5.0 Ah

#### Weight
- **Instrument (Autolock)**: 5.4 kg
- **Instrument (Robotics)**: 6.5 kg
- **Trimble CU controller**: 0.4 kg
- **Trivariate**: 0.7 kg
- **Internal battery**: 0.35 kg
- **Trunnion axis height**: 195 mm

#### Communication
- **USB, Serial, Bluetooth**: Not available in all models
- **IP65**: Dust and water proofing
- **Humidity**: 100% condensing
- **Laser pointer coaxial (standard)**: Laser class 2

#### Security
- **Dual-layer password protection, Locate2Protect**

## SYSTEM SPECIFICATIONS

### ROBOTIC SURVEYING
- **Autolock and Robotic Range**
  - **Autolock**: 0.2 m
  - **Robotic Range**: 500 m–700 m
  - **Trimble MultiTrack Target**: 800 m
  - **Trimble Active Track 360 Target**: 500 m

### GPS SEARCH/GEOLOCK
- **GPS Search/GeoLock**: 380 degrees (400 gon) or defined horizontal and vertical search window

### Solution acquisition time
- **15–30 sec**

### Target re-acquisition time
- **10–30 sec**

### Range
- **AutoLock & Robotic range limits**

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**Note:** Specifications subject to change without notice.

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**Table:**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td><strong>White card</strong></td>
<td>1,300 m, 1,300 m, 1,200 m</td>
</tr>
<tr>
<td><strong>Gray card</strong></td>
<td>600 m, 600 m, 550 m</td>
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<tr>
<td><strong>Reflective foil 20 mm</strong></td>
<td>1000 m</td>
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<tr>
<td><strong>Shutter range</strong></td>
<td>1 m</td>
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<tr>
<td><strong>DR Extended Range Mode</strong></td>
<td>2200 m</td>
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<tr>
<td><strong>Trimble CU controller</strong></td>
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</tr>
<tr>
<td><strong>TRIMBLE AUTHORIZED DISTRIBUTION PARTNER</strong></td>
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