Trimble 5600 Total Station Series
Servo-driven, highly productive measuring system upgradable to Autolock and Robotic surveying

The Trimble 5600 Total Station series gives you access to the best and most productive measuring methods available—for every measuring situation—for unassisted operation.

**Key Features and Benefits**
- Autolock and Robotic Surveying for increased productivity
- 4-speed servo
- Active search system
- Seamless data flow
- Choice of User Interfaces

**Servo gives you a 30% productivity increase**
The 5600 series is equipped with 4-speed servo operation that gives variable speed, faster, smoother and more accurate aiming. Servo is the platform for measurement automation and for further upgrades to increased productivity.

**Upgrade to Autolock and the productivity increase is 50%**
Autolock technology enables semi-robotic operation, with measuring and recording taking place at the total station. The 5600 series seeks out the RMT target (Active Remote Measuring Target), locks to it, and follows its movement during movement between points. No fine adjustments needed, no focusing, no problems working in the dark (the instrument will locate the target in any situation), and no work-related injuries from constant turning of the total station. In most cases the Autolock feature makes it possible to stake out and gather survey data as fast as the rodman can move.

**Upgrade to Robotic and the productivity increase is 80%**
Robotic operation offers the same advantages as Autolock—more than any other reflectorless total station! And the range using a single prism is 5.5 kilometers. Combining DR200+ capability with robotic operation results in the ultimate total station.

**True Integrated Surveying**
There are situations where measuring by GPS is more productive than by using a conventional total station, and vice versa.

Combine Robotic with DR200+ to double productivity
The long-range Direct Reflex EDM system (DR200+) option on the 5600 series allows you to measure up to 600 meters against a white object and 200 meters against Kodak Grey (the international standard to determine the range of reflectorless total stations). That’s 3.3 times further than any other reflectorless total station! And the range using a single prism is 5.5 kilometers. Combining DR200+ capability with robotic operation results in the ultimate total station.

Provided by Xpert Survey Equipment
Click Trimble 5601 for Product Info and Updated Pricing
### Trime Series 5600

#### ACCURACY

<table>
<thead>
<tr>
<th>5601</th>
<th>5602</th>
<th>5603</th>
<th>5605</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distance Measurement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accuracy M.S.E.</strong></td>
<td>±(2 mm + 2 ppm)</td>
<td>±(2 mm + 2 ppm)</td>
<td>±(2 mm + 2 ppm)</td>
</tr>
<tr>
<td><strong>Optional</strong></td>
<td>±(0.007 ft + 2 ppm)</td>
<td>±(0.007 ft + 2 ppm)</td>
<td>±(0.007 ft + 2 ppm)</td>
</tr>
<tr>
<td><strong>Standard measurement (STD):</strong></td>
<td>±(3 mm + 2 ppm)</td>
<td>±(3 mm + 2 ppm)</td>
<td>±(3 mm + 2 ppm)</td>
</tr>
<tr>
<td><strong>Optional</strong></td>
<td>±(0.01 ft + 2 ppm)</td>
<td>±(0.01 ft + 2 ppm)</td>
<td>±(0.01 ft + 2 ppm)</td>
</tr>
<tr>
<td><strong>Fast standard (FSTD):</strong></td>
<td>±(2 mm + 2 ppm) ±(0.007 ft + 2 ppm)</td>
<td>±(2 mm + 2 ppm) ±(0.007 ft + 2 ppm)</td>
<td>±(2 mm + 2 ppm) ±(0.007 ft + 2 ppm)</td>
</tr>
<tr>
<td><strong>Optional</strong></td>
<td>±(8 mm + 2 ppm) ±(0.025 ft + 2 ppm)</td>
<td>±(8 mm + 2 ppm) ±(0.025 ft + 2 ppm)</td>
<td>±(8 mm + 2 ppm) ±(0.025 ft + 2 ppm)</td>
</tr>
<tr>
<td><strong>Fast tracking (TRK):</strong></td>
<td>±(10 mm + 2 ppm) ±(0.032 ft + 2 ppm)</td>
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<td>±(10 mm + 2 ppm) ±(0.032 ft + 2 ppm)</td>
</tr>
<tr>
<td><strong>Optional</strong></td>
<td>±(6 mm + 2 ppm) ±(0.019 ft + 2 ppm)</td>
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<tr>
<td><strong>Shortest possible range:</strong></td>
<td>0.2 m (0.7 ft)</td>
<td>0.2 m (0.7 ft)</td>
<td>0.2 m (0.7 ft)</td>
</tr>
<tr>
<td><strong>Least count</strong></td>
<td>0.1 mm (0.0005 ft)</td>
<td>1 mm (0.005 ft)</td>
<td>1 mm (0.005 ft)</td>
</tr>
<tr>
<td><strong>Standard measurement (STD):</strong></td>
<td>1 mm (0.005 ft)</td>
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<tr>
<td><strong>Fast standard (FSTD):</strong></td>
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<td>1 mm (0.005 ft)</td>
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<tr>
<td><strong>Fast tracking (TRK):</strong></td>
<td>10 mm (0.01 ft)</td>
<td>10 mm (0.01 ft)</td>
<td>10 mm (0.01 ft)</td>
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<tr>
<td><strong>Measuring time:</strong></td>
<td>Users decision</td>
<td>Users decision</td>
<td>Users decision</td>
</tr>
<tr>
<td><strong>Arithmetic mean value (D-bar):</strong></td>
<td>1.6 sec</td>
<td>1.6 sec</td>
<td>1.6 sec</td>
</tr>
<tr>
<td><strong>Standard deviation (STD):</strong></td>
<td>1.3 sec</td>
<td>1.3 sec</td>
<td>1.3 sec</td>
</tr>
<tr>
<td><strong>Fast standard (FSTD):</strong></td>
<td>0.4 sec</td>
<td>0.4 sec</td>
<td>0.4 sec</td>
</tr>
<tr>
<td><strong>Light source:</strong></td>
<td>Infrared GaAs diode</td>
<td>Infrared GaAs diode</td>
<td>Infrared GaAs diode</td>
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<tr>
<td><strong>Beam divergence:</strong></td>
<td>1.6 mrad (16 cm/100 m)</td>
<td>1.6 mrad (16 cm/100 m)</td>
<td>1.6 mrad (16 cm/100 m)</td>
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<tr>
<td><strong>Atmospheric correction:</strong></td>
<td>±0.032 ft + 2 ppm</td>
<td>±0.025 ft + 2 ppm</td>
<td>±0.016 ft + 3 ppm</td>
</tr>
<tr>
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<td>0.1 mm (0.0005 ft)</td>
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<tr>
<td><strong>Arithmetic mean value (D-bar):</strong></td>
<td>2 sec</td>
<td>2 sec</td>
<td>2 sec</td>
</tr>
<tr>
<td><strong>Standard deviation (STD):</strong></td>
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</tr>
<tr>
<td><strong>Fast tracking (TRK):</strong></td>
<td>0.4 sec</td>
<td>0.4 sec</td>
<td>0.4 sec</td>
</tr>
<tr>
<td><strong>Light source:</strong></td>
<td>IR Laser Diode</td>
<td>IR Laser Diode</td>
<td>IR Laser Diode</td>
</tr>
<tr>
<td><strong>Beam divergence</strong></td>
<td>0.4 mrad (4 cm/100 m)</td>
<td>0.4 mrad (4 cm/100 m)</td>
<td>0.4 mrad (4 cm/100 m)</td>
</tr>
<tr>
<td><strong>Vertical:</strong></td>
<td>0.8 mrad (8 cm/100 m)</td>
<td>0.8 mrad (8 cm/100 m)</td>
<td>0.8 mrad (8 cm/100 m)</td>
</tr>
<tr>
<td><strong>Atmospheric correction:</strong></td>
<td>-60 to 195 ppm</td>
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</tr>
</tbody>
</table>
**Range Robotic**: Up to 1500 m (0.9 miles) depending on type of RMT

**Range Autolock**: Up to 2200 m (1.3 miles) depending on type of RMT

Measuring time:
- Standard measurement: 5 – 10 sec.
- Fast tracking: 0.4 sec.

Search time (typical):
- < 10 sec. **

Search area:
- 400 gon (360 degrees), or defined search window

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**SPECIFICATIONS FOR ROBOTIC SURVEYING**

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<tbody>
<tr>
<td>With one prism:</td>
<td>2500 m (1.6 miles)</td>
<td>2000 m (1.2 miles)</td>
<td>1500 m (0.9 miles)</td>
<td>1800 m (1.1 miles)</td>
<td>1200 m (0.7 miles)</td>
</tr>
<tr>
<td>With one prism, long range mode:</td>
<td>3500 m (2.2 miles)</td>
<td>2800 m (1.7 miles)</td>
<td>2100 m (1.3 miles)</td>
<td>2500 m (1.6 miles)</td>
<td></td>
</tr>
<tr>
<td>With 3 prisms:</td>
<td>3500 m (2.2 miles)</td>
<td>2800 m (1.7 miles)</td>
<td>2100 m (1.3 miles)</td>
<td>2500 m (1.6 miles)</td>
<td></td>
</tr>
<tr>
<td>With 3 prisms, long range mode:</td>
<td>4600 m (2.9 miles)</td>
<td>3900 m (2.5 miles)</td>
<td>2900 m (1.8 miles)</td>
<td></td>
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</tr>
<tr>
<td>With 8 prisms:</td>
<td>4500 m (2.8 miles)</td>
<td>3800 m (2.4 miles)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With 8 prisms, long range mode:</td>
<td>5800 m (3.6 miles)</td>
<td>5000 m (3.1 miles)</td>
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</tr>
</tbody>
</table>

**Range 5600 DR200+**

**Range using a reflector**

- Standard clear:
  - 5500 m (3.4 miles) (max. range)

- Range using Plastic Reflector: 1500 m (0.9 miles)

- Range using Reflex Tape: 800 m (0.5 miles)

**Range Direct Reflex measurement (typically):**

- Range Kodak Gray (18% reflective): >200 m (656 ft)
- Range Kodak White (90% reflective): >600 m (1968 ft)
- Concrete: 200 - 300 m (656 - 984 ft)
- Wood Constructions: 150 - 300 m (492 - 984 ft)
- Metal Constructions: 150 - 200 m (492 - 656 ft)
- Light Rock: 150 - 250 m (492 - 820 ft)
- Dark Rock: 100 - 150 m (328 - 492 ft)

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*Standard clear: No haze, overcast or moderate sunlight with very light heat shimmer. Range and Accuracy vary depending on weather conditions and variation of reflective quality on different type of surfaces.
The principle of the new Direct Reflex Distance Meter.

"Time of flight"

The measurement technique used in DR200+ is based on the pulse measurement principle, e.g. the time for a transmitted very short light pulse to travel to the Target and back again is measured. What differs from earlier distance meters using this principle is a unique method of taking the average of many pulses and determining the shape of the pulse before the transit time is calculated. In this way the influence of noise can be reduced to a large extent, and both the Range and the Accuracy can be increased considerably.

1. S_Dev
In this menu the requested accuracy can be entered. The system will accept values from 0.001 to 0.9 (1 mm to 0.9 m).

During the measurement you will be able to see the "count down" towards the keyed in value. If the requested value is not achieved, the distance measurement can be stopped and the achieved Standard deviation will be displayed.

S_Dev — the data, e.g. S_Dev=256.456
S_Dev=0.003

OK?

If OK the displayed distance will be used.

2. Meas. Method
(Measurement Method)
1= Reflector
2= No Reflector

Simply select the required method.

3. Dist. Interval (Direct Reflex mode only)
(Distance Interval)
From =
To =

In this menu you can select the measurement interval. The system is set up by default as:

From = 2 m (6.56 ft)
To = 200 m (656 ft)

The user can change these default values. If the object to be measured is more than 200 m (656 ft) away you can change the "To=" value to e.g. 300 or 400 m (984 or 1312 ft). Another way to use this function is if you want to measure a small object on a unique method of taking the average of many pulses and determining the shape of

the pulse before the transit time is calculated. In this way the influence of noise can be reduced to a large extent, and both the Range and the Accuracy can be increased considerably.

PRODUCT SUPPORT PROGRAMS

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GENERAL SPECIFICATIONS

Aiming
Servo-drive. Endless fine adjustment

Levelling
Dual axis compensator

Compensator

Working range:
6’ (±100 mgon)

Circular level in tribrach:
8'/2 mm (8'/0.007 ft)

Electronic 2-axis level in the LC-display with a resolution of:
6’ (2 mgon)

Centering:
Optical plummet in tribrach

Telescope
Coaxial

Magnification:
26X (30X optional)

Focusing range:
1.7 m (5.68 ft) to infinity

Field of view:
2.6 m at 100 m (8.5 ft at 328 ft)

Illuminated crosshair:
Yes, variable (15 steps)

Operating temperature:
-20°C to +50°C (-5°F to +122°F)

Data input/output:
RS-232C Two-way communication

Batteries:
rechargeable NiMH battery 12V, 1.6 Ah

Central unit:
rechargeable NiMH battery 12V, 3.5 Ah

Power consumption:
0.5A – 1.0A depending on use of servo, tracker, radio and type of measurement mode.

Weight
Instrument (incl. Geodimeter Control Unit):
6.4 kg (14.1 lbs)

Control Unit:
0.7 kg (1.5 lbs)

Internal battery:
0.4 kg (0.9 lbs)

Instrument for robotic surveying:
7.5 kg (16.5 lbs)

(incl. Tracker and built in radio)

Control Unit options:
Geodimeter Control Unit
Geodimeter Control Unit
Zeiss Etla Control Unit with Etla Software
or Open System Software

Trimble Control Unit

ORDERING INFORMATION

For further information please contact your nearest Trimble Authorized Distributor or Trimble Office.

You may also visit our website at http://www.trimble.com