

SPECIFICATIONS

Product Type	Auto-tracking Model			Auto-collimation Model		
	GT-1001	GT-1002	GT-1003	GT-501	GT-502	GT-503
Model						
Auto-tracking / Auto-Collimating						
Auto-tracking		●			-(Option) ¹	
Auto-collimating		●			●	
Motor type	Direct drive by ultrasonic motor					
Rotation speed / Auto-tracking speed	180°/s / 20°/s					
Auto-tracking / Auto-Collimating range ²	ATP1/ATP1S 360° prism ³ : 2 to 600m (6.6 to 1,960ft.), Prism-5 mini prism : 1.3 to 500m (4.3 to 1,640ft.) Prism-2 one prism : 1.3 to 1,000m (4.3 to 3,280 ft.) Reflective sheet (Auto-collimation) ⁴ : RS10/30/50N-K : 5 to 50m (16 to 160ft.) / RS90N-K : 10 to 50m (32 to 160ft.)					
RC handle		●			-(Option) ¹	
Remote control range (RC handle + RC-5)	2 to 300m (4.3 to 980ft.)			2 to 300m (4.3 to 980ft.) ¹		
Telescope	30x / 2.5"					
Magnification / Resolving power	30x / 2.5"					
Length : 142mm (5.6in.), Objective aperture : 38mm (1.5in.) (38mm (1.5in.) for EDM), Image: Erect, Field of view: 1°30' (26m/1,000m), Minimum focus: 1.3m (4.3ft.)						
Angle measurement						
Display resolutions	0.5"/1" (0.0001 / 0.0002gon, 0.002 / 0.005mil)		1"/5" (0.0002 / 0.001gon, 0.005 / 0.02mil)	0.5"/1" (0.0001 / 0.0002gon, 0.002 / 0.005mil)		1"/5" (0.0002 / 0.001gon, 0.005 / 0.02mil)
Accuracy (ISO 17123-3:2001)	1"	2"	3"	1"	2"	3"
Dual-axis compensator	Dual-axis liquid tilt sensor, working range: ±6'					
Distance measurement						
Laser output ⁵	Reflectorless mode : Class 3R / Prism/sheet mode : Class 1					
Measuring range	Under good conditions ⁸ : 0.3 to 1,000m					
(under average conditions ⁶)	RS90N-K: 1.3 to 500m (4.3 to 1,640ft.), RS50N-K: 1.3 to 300m (4.3 to 980ft.), RS10N-K: 1.3 to 100m (4.3 to 320ft.)					
Mini prism ¹⁰	1.3 to 500m (4.3 to 1,640ft.)					
One prism ¹⁰	1.3 to 5,000m (4.3 to 16,400ft.) / Under good conditions ⁸ : 6,000m (19,680ft.)					
ATP1/ATP1S 360° prism	1.3 to 1,000m (4.3 to 3,280ft.)					
Display resolution	Fine : 0.0001 / 0.001m (0.001 / 0.01ft., 1/16 / 1/8in.) / Rapid : 0.001m / 0.01ft. / 1/8in. Tracking / Road : 0.01m / 0.1ft. / 1/2in. (2 + 2ppm x D) mm ¹² (2 + 2ppm x D) mm (1 + 2ppm x D) mm					
Accuracy ^{6,11}	Reflectorless ⁷ : (2 + 2ppm x D) mm Reflective sheet ⁹ : (2 + 2ppm x D) mm Prism ¹⁰ : (1 + 2ppm x D) mm					
(D=measuring distance in mm)						
Measuring time ^{8,13}	Fine / Rapid / Tracking : 0.9s (initial 1.5s) / 0.6s (initial 1.3s) / 0.4s (initial 1.3s)					
OS, Interface and Data management						
Operating system	Windows Embedded Compact7					
Control panel	4.3 inch, Transmissive TFT WVGA color LCD with LED backlight, Touch screen, 24 keys with backlight					
Display						
Keyboard						
Location	On single face			On both faces (Face 2 is only touch screen display)		
Trigger key	On right instrument support					
Data storage	1GB internal memory (includes memory for program files)					
Internal memory						
Plug-in memory device	USB flash memory (max. 32GB)					
Calendar / clock function	Yes					
Interface	Serial RS-232C, USB2.0 (Type A / miniB)					
Wireless communication Bluetooth modem	Bluetooth Class 1, Ver.2.1+EDR, Operating range: up to 600m (1,960ft.) (while in communication with RC-5) ¹⁴					
General						
Guide light ¹⁵	Green LED (524nm) and Red LED (626nm), Operating range: 1.3 to 150m (4.3 to 490ft.)					
Laser-pointer ¹⁵	Coaxial red laser using EDM beam					
Levels	6' (Inner Circle) 10' / 2mm					
Plummet	Magnification: 3x, Minimum focus: 0.5m (11.8in.) from tribrach bottom					
Dust and water protection ¹⁶ / Operating temperature	Red laser diode (635nm±10nm), Beam accuracy: <=1.0mm@1.3m, Class 2 laser product IP65 (IEC 60529:2001) / -20 to +50°C (-4 to +122°F)					
Size with handle	212(W)x 172(D)x 355(H)mm (Display on single face)					
Instrument height	192.5mm from tribrach mounting surface					
Weight with battery & tribrach	Approx. 5.8kg (12.8lb)(with RC handle)			Approx. 5.7kg (12.6lb)(with standard handle)		
Power supply						
Battery	Li-ion rechargeable battery					
BDC70 detachable battery						
Operating time (20°C)	BDC70 detachable battery : Approx. 4hours ¹⁶					

*1 Auto-Tracking function can be added by upgrading. *2 Average conditions: Slight haze, visibility about 20km (12 miles), sunny periods, weak scintillation. *3 Figures when both the elevation and depression angles of the laser beam are within 15° and the instrument is facing the ATP1/ATP1S 360° prism *4 When using a reflective sheet for Auto Pointing, the size of sheet (10 to 90 mm) must be selected to correspond to the distance being measured. Use smaller reflective sheets for shorter distances. Figures when the Auto Pointing beam strikes within 15° of the reflective sheet target. *5 IEC60825-1:Ed.3.0:2014 / FDA CDRH 21 CFR Part 1040.10 and 11 *6 Average conditions: Slight haze, visibility about 20km (12 miles), sunny periods, weak scintillation. *7 With Kodak Gray Card White Side (90% reflective). When brightness on measured surface is 30,000 lx. or less. Reflectorless range/accuracy may vary according to measuring objects, observation situations and environmental conditions. *8 Good conditions: No haze, visibility about 40km (25miles), overcast, no scintillation. *9 When the measuring beam's incidence angle is within 30° in relation to the reflective sheet target. *10 Face the prism toward the instrument during the measurement with the distance at 10m or less. *12 Measuring range:0.66 to 200m *13 Fastest time under good conditions, no compensation, EDM ALC at appropriate setting, slope distance. *14 Usage approval of Bluetooth wireless technology varies according to country. Please consult your local office or representative in advance. No obstacles, few vehicles or sources of radio emissions/interference in the near vicinity of the instrument, no rain. *15 The laser-pointer and the guide light do not work simultaneously. *16 Figures will change depending on the operating environment including temperatures and observation conditions.

- Specifications may be region specific and are subject to change.
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GT Series

Robotic Total Station



World's fastest!*

UltraSonic motor and direct drive system

World's smallest!*

Redesigned to ultra-slim body

World's lightest!*

Accomplished lightweight, 5.7kg robotic total station

World's first Internet-connected (IoT) total station!*

Integrated cellular modem
Total station now offers Internet connectivity

Highest quality in class!

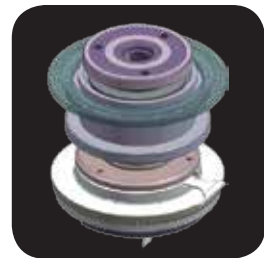
Passes various environmental tests with Topcon quality

*As robotic total station, by our research on January 2016.

Fastest · Smallest · Lightest



Newborn...The next generation total station



The world's fastest!*

UltraSonic motor and direct drive system!

Accomplished world's fastest turning speed of 180° per second with UltraSonic motor and direct drive system. This also contributes to ultra-slim body.



The world's lightest*

Accomplished weight-saving, 5.7 kg motor drive total station!

GT is a third smaller than any previous Topcon robotic instrument and the same weight as a manual total station — providing easy carrying and set up at a project site.



The world's smallest!*

Redesigned ultra-slim body!

GT is designed by reviewing of the basis and redesigned to the world's smallest total station.



World's first Internet-connected (IoT) total station!*

Integrated cellular modem. Total station now with Internet-connectivity!

GT is fully networked with cellular modem and wireless LAN. This allows direct connectivity to MAGNET® Enterprise and provides you close connection between project site and office staff and managers.



*As robotic total station, by our research on January 2016.



Highest quality in class

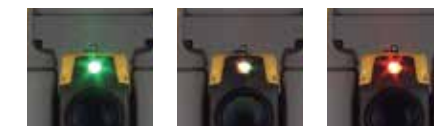
Passes various environmental test with Topcon quality!

Tough designed GT, passes impact, vibration, high-temperature, and humidity testing — provides consistent performance at any harsh environments.

Versatile functions

Bright, Sharp Guide Light

The Guide Light allows operators to instantly recognize the line between the instrument and the stakeout line, with clearly visible Green and Red lights.



Green: move to right stakeout line Red: move to left

Jog dial

You can rotate GT with smooth jog dial.



Large display

Large and high-resolution WVGA display provides clear visibility under the sun light. Moreover, large size icon improves operability.



RC handle (GT-1000 series)

RC-5 sensor on the handle can be used for auto-prism searching. This allows easy, rapid prism searching regardless of your position.



Trigger key

Just "Rough Aim" and "Press Trigger button" to get precise aiming and measurement automatically and easily.



USB available

Serial cable and USB connections can be used (Max:32GB) for data transmission/reception.



Waterproof and dustproof: IP65 design

Provides protection from dust and driving rain as well as other inclement weather conditions. Operates in temperatures from -20 to +50°C.



Auto-tracking

Increases power for prism tracking under extreme conditions of frequent interruption or strong reflections. Even if a prism rock is lost, you can easily rotate GT and reacquire prism with RC-5 and go back to work smoothly.

Auto-collimating

Precise measurement can be done by just "Rough Aim" and "Press Trigger button" without lens focus and other operation. Auto-collimating provides consistent accuracy and speed regardless of operator's skill levels and condition.