

CHCNAV

CTS-A100

ANDROID TOTAL STATION



SURVEYING
& ENGINEERING

ANDROID-POWERED, USER-FRIENDLY

The CTS-A100 total station combines the Android OS with advanced LandStar software to provide an easy-to-use, highly efficient fieldwork experience. It features a powerful EDM system with a 5000m prism range and 1500m reflectorless range, supported by a Qualcomm octa-core processor, 3GB RAM and 32GB ROM. The intuitive LandStar software, powered by the CAD-based MetaCAD engine, enables fast, accurate measurements and streamlined stakeout, seamlessly linking CAD drawings to field work for efficient, cost-effective surveying. The 5.0" HD display, IP55 rating and built-in sensors ensure clarity and durability, while wireless connectivity enables seamless data transfer and integration with cloud services.

ANDROID OS, EASE TO USE

Enhance usability and operational flexibility.

The Android-based CTS-A100 total station offers a seamless, intuitive user experience with a customizable interface. It supports a wide range of third-party applications, expanding the scope of surveying operations. Its powerful data processing capabilities allow users to export multiple data formats, including custom formats, and save configurations as templates for future use.

ADVANCED LANDSTAR APP FOR EFFICIENT FIELD WORK

Streamlined CAD-Based survey and stakeout.

The CTS-A100 comes with the LandStar Android Field Surveying App, featuring a clear status bar and an easy-to-use Quick Menu for fast operation. The software supports various surveying modes, such as offset and station transfer to adapt to different scenarios. The MetaCAD engine simplifies CAD-based tasks, allowing users to open 200 MB base maps in just 8 seconds and select points, lines or stakes directly from the map for stakeout, improving accuracy and speed. Auto-OK and visual line style editing further increase user efficiency.

HIGH EDM PERFORMANCE FOR ACCURATE MEASUREMENTS

Reduce field time, improve setup efficiency.

The CTS-A100 features a powerful EDM system with 5000 m range with a prism and 1500 m in reflectorless mode. Its 2" angular accuracy minimizes the need for frequent instrument setups, saving valuable time in the field. The dual-axis electronic compensator increases measurement stability, while the digital electronic bubble simplifies leveling.

QUALCOMM OCTA-CORE PROCESSOR, 3GB RAM + 32GB ROM

Improve speed, process more data effectively.

Powered by a powerful Qualcomm octa-core processor with 3GB RAM and 32GB ROM, the CTS-A100 ensures smooth operation and processing of large data sets. The 5.0" full touch HD display remains clear even in bright sunlight. Built-in temperature and pressure sensors automatically correct for environmental factors, eliminating the need for manual entry. The IP55 rating makes it dust and water resistant, ideal for field work. Wireless connectivity, including Wi-Fi and 4G, supports cloud services for easy data transfer between field and office.



ANDROID-POWERED INTEGRATED LANDSTAR USER-FRIENDLY



Android O.S.



LandStar App



CAD Stakeout




Cloud Service*

* Support through
future online updates

SPECIFICATIONS

Angular measurement	
Angular accuracy	2"
Measurement method	Absolute encoding
Display resolution	1"
Distance measurement	
Range ⁽¹⁾	Prism group:5000 m Reflective sheet: 1000 m Reflectorless: 1500 m
Accuracy (Reflector)	Prism group:2 mm + 2 ppm Reflective sheet: 2 mm + 2 ppm
Accuracy (Reflectorless)	0~300m: 3 mm + 2 ppm 300~600m: 5 mm + 2 ppm >600m: 10 mm + 2 ppm
Typical measurement time	Continuous measurement: < 0.7s Tracking measurement: < 0.3s Initial fine measurement: < 2s
Telescope	
Imaging method	Ortho-imaging
Magnification	27 x
Resolving power	3"
Field of view	1°30'
Focusing range	1.5 m/ 4.92 ft to infinity
Tube length	152 mm
Effective aperture of objective lens	Effective: 40 mm DTM: 45 mm
Vial	
Plate Vial	30 7/2 mm
Circular Vial	8 7/2 mm
Plummet	Laser plummet
Correction	
Compensation sensor	Dual-axis liquid-electric sensor
Compensator setting accuracy	±6 "
Compensator range	±3'
Atmospheric correction	Temperature-pressure sensor auto correction
Temperature input range	-20°C to +40°C (-4°F to +104°F)
Air pressure input range	560 to 1066 hPa
Prsim constant	Auto correction
Trigger	Under battery house
Communication	
Operating system	Android 9.0
CPU	Qualcomm MSM8953
Ports	1 x Type-A USB2.0 (USB host) 1 x MicroUSB USB2.0 (USB device)
Bluetooth®	v 4.2LE (2402 MHz~2480 MHz)
Wi-Fi	802. 11b/g (2402 MHz~2482 MHz)
4G	TDD-LTE B34/38/40/41 FDD-LTE B1/3/5/8
3G/2G	GSM 900/1800MHZ, CDMA BC0 WCDMA B1/8

RAM	3 GB
ROM	32 GB
Display	
Type	HD LCD graphic screen
Size	5.0 inch
Resolution	1280*720
Brightness	480 cd/m ²
Graphic Display	Max.: 99999999.9999 m Min.: 0.1 mm
Battery	
Li-ion battery capacity	Rechargeable lithium battery 5000 mAh, DC 7.4 V
Operating time on internal battery ⁽²⁾	8 hours
Environment	
Operating temperature	-20°C to +50°C (-4°F to 122°F)
Storage temperature	-40°C to +50°C (-40°F to 122°F)
Ingress protection	IP55 ⁽³⁾ (according to IEC 60529)
Size and weight	
Size	195 x 185 x 365 mm (7.68 x 7.28 x 14.37 in)
Weight	5.5 kg
Compliance with Laws and Regulations	
International standards	UN Manual Section 38.3
	
<p>*All specifications are subject to change without notice.</p> <p>(1) All measurement ranges are based on the following environmental conditions: overcast skies, no fog, visibility of approximately 40 km, and no heat shimmer. Reflectorless range conditions are based on Kodak standard gray with 90% diffuse reflectance.</p> <p>(2) Battery life is optimized at 25°C and may vary depending on operating temperature and battery cycle life.</p> <p>(3) Splash, water, and dust resistance were tested under controlled laboratory conditions with an IP55 rating according to IEC standard 60529.</p>	
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