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# 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.

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# 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<br>Reflective sheet: 1000 m<br>Reflectorless: 1500 m |
| Accuracy (Reflector) | Prism group:2 mm + 2 ppm<br>Reflective sheet: 2 mm + 2 ppm |
| Accuracy (Reflectorless) | 0~300m: 3 mm + 2 ppm<br>300~600m: 5 mm + 2 ppm<br>>600m: 10 mm + 2 ppm |
| Typical measurement time | Continuous measurement: < 0.7s<br>Tracking measurement: < 0.3s<br>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<br>DTM: 45 mm |

| Vial | |
|---|---|
| Plate Vial | 30 ″/2 mm |
| Circular Vial | 8 ′/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<br>(-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)<br>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<br>FDD-LTE B1/3/5/8 |
| 3G/2G | GSM 900/1800MHz, CDMA BC0<br>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/m² |
| Graphic Display | Max.: 99999999.9999 m<br>Min.: 0.1 mm |

| Battery | |
|---|---|
| Li-ion battery capacity | Rechargeable lithium battery<br>5000 mAh, DC 7.4 V |
| Operating time on internal battery[2] | 8 hours |

| Environment | |
|---|---|
| Operating temperature | -20°C to +50°C<br>(-4°F to122°F) |
| Storage temperature | -40°C to +50°C<br>(-40°F to122°F) |
| Ingress protection | IP55[3] (according to IEC 60529) |

| Size and weight | |
|---|---|
| Size | 195 x 185 x 365 mm<br>(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 |

*All specifications are subject to change without notice.

(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.

(2) Battery life is optimized at 25°C and may vary depending on operating temperature and battery cycle life.

(3) Splash, water, and dust resistance were tested under controlled laboratory conditions with an IP55 rating according to IEC standard 60529.



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