

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)	±(2 + 2 x 10 ⁻⁶ D) mm
Accuracy (Reflectorless)	0~300m: ±(3 + 2 x 10 ⁻⁶ D) mm 300~600m: ±(5 + 2 x 10 ⁻⁶ D) mm >600m: ±(10 + 2 x 10 ⁻⁶ D) mm
Typical measurement time	Continuous measurement: < 0.7 s Tracking measurement: < 0.3 s Initial fine measurement: < 2 s

► Telescope

Imaging method	Erect
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: 40mm DTM: 45mm

► Vial

Plate Vial	30 "/2mm
Circular Vial	8 '/2mm
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

► Display

Type	LCD digital screen
Size	3.1 inch
Resolution	240*160
Keyboard	Alphanumeric, 28 keys with backlight
Graphic Display	Max.: 99999999.9999 m Min.: 0.1 mm

► Communication

Ports	1 x Type-A USB2.0 (USB host)
Bluetooth ®	v3.0
Internal storage	16 MB(ready for 140,000 points)
External storage	Up to 128 GB(ready for 1,142,850,000 points)

► Battery

Li-ion battery capacity	Rechargeable lithium battery 3000 mAh, DC 7.4 V
Operating time on internal battery ⁽²⁾	8 hours

► Environment

Operating temperature	-20° C to +50° C (-4° F to122° F)
Storage temperature	-40° C to +50° C (-40° F to122° F)
Ingress protection	IP54 ⁽³⁾ (according to IEC 60529)

► Size and weight

Size	200 x 200 x 355 mm (7.68 x 7.28 x 14.37 in)
Weight	5.6 kg

► Compliance with Laws and Regulations

International standards	UN Manual Section 38.3
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***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 IP54 rating according to IEC standard 60529.



CTS-M100

Total Station



CHC Navigation Headquarter

577 Songying Road, Qingpu, 201703, Shanghai,
China
MARKETING@CHCNAV.COM
+86 21 54260273

CHC Navigation Europe

Office Campus, Building A, Gubacsi út 6, 1097
Budapest, HUNGARY
+36 20 421 6430
Europe_office@chcnav.com



► Cost-effective And Easy-to-use Survey Solution

The CHCNAV CTS-M100 total station is built on proven CHCNAV technology, offering a reliable and affordable solution for everyday surveying tasks. With 2" angle accuracy and a high-efficiency EDM, it delivers reflectorless measurements up to 1,500 m and up to 5,000 m using a single prism, with millimeter-level precision. A replaceable battery provides up to 8 hours of continuous operation, ensuring uninterrupted productivity in the field.



► Key feature



Efficient EDM
Reflectorless measurement up to 1,500 m.



Long Battery Life
Up to 8 hours of continuous field operation.



Dual-Face Keyboards
Convenient and efficient operation



Data Storage
External USB storage up to 128 GB

► Total Station Use Made Easy



Best-in-class industrial design with dual-face keyboards and a built-in laser plummet.

The CTS-M100 dual-face keyboards with illuminated keys minimize errors and ensure optimal visibility under all environmental conditions. Its integrated laser plummet enables fast and accurate instrument setup in any lighting.

► High EDM Performance



Up to 1,500 m reflectorless measurement range.

With a measurement speed of just 0.3 seconds, the CTS-M100 is one of the fastest total stations in its class. It delivers accurate reflectorless measurements up to 1,500 m and prism measurements up to 5,000 m, providing reliable accuracy.

► Intuitive Onboard Software



Higher productivity for all surveying and construction projects.

Designed for versatility and ease of use, the CTS-M100 features advanced onboard field software that streamlines daily surveying workflows and increases productivity.

► Extended Memory Capacity



Store up to 140,000 points in internal memory.

The CTS-M100 stores up to 140,000 points in internal memory and supports external USB storage up to 128 GB, expanding total capacity to over one billion points.

► Application Scenario



Topographic Surveying



Land Subdivision



Solar Farm Layout