

Specifications

Distance Measurement		
Laser output	Prism	Class 2
	Reflective sheet	Class 2
	Non-prism	Class 3R
Distance measurement	Prism	5000 m
	Reflective sheet	400 m
	Non-prism	400 m
Accuracy	Prism	2 mm+2 ppm
	Reflective sheet	3 mm+2 ppm
	Non-prism	3 mm+2 ppm
Measuring time		Prism fine 0.3 s Prism tracking 0.1 s
Laser type		Red visible laser
Carrier		0.650~0.690 μm
EDM type		Coaxial
The smallest display		0.1 mm
Angle Measurement		
Diameter	79 mm	
Minimum readout	0.1"/1"/5"/10" optional	
Accuracy	2"	
Detection method	Horizontal: Dual	Vertical: Dual
Telescope		
Image	Erect	
Tube length	154 mm	
Objective lens effective aperture	For telescoping: 45 mm	
	For measuring: 50 mm	
Magnification	30×	
Field of view	1°30'	
Minimum focus distance	1.4 m	
Resolving power	3"	
Reticle illumination	4 brightness levels	
Auto Compensator		
System	Dual axis photoelectric detection	
Working range	±3'	
Accuracy	1"	
Laser Plummet		
Accuracy	1.5 mm at 1.5 m instrument height	
Laser spot size	2.5 mm	

Display	
Type	LCD, 6 lines digital screen
Keyboard	Alphanumeric,28 keys with backlight
Control panel	Double
Screen size	2.8 inch
Interface and Data Recording	
Interface	RS232-C, Mini-USB, SD
Internal storage	4 MB (ready for 30,000 points)
External storage	Up to 32 GB (ready for 245,760,000 points)
Battery	
Battery type	Rechargeable lithium battery
Battery voltage	DC 7.4 V 3100 mAh
Operating time	Continuous distance/angle measurement 8 hrs
	Continuous angle-only measurement 16 hrs
Charging time	About 3 hrs
Environment	
Operating temperature	−20°C to +50°C (-4°F to 122°F)
Dust and water proof	IP55
Size and Weight	
Size	160x150x330 mm
	(6.3x5.9x13.0 in)
Weight	5.2 kg

\*Specifications are subject to change without notice.

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Shanghai Huace Navigation Technology Ltd.  
599 Gaojing Road, Building D  
Shanghai, 201702, China  
+86 21 54260273 WWW.CHCNAV.COM



CTS-112R<sub>4</sub>  
Total Station



Make your work more efficient

# Hardware Description

## CTS-112R<sub>4</sub> Total Station

The CTS-112R<sub>4</sub> total station is based on proven technologies and is intended for users who need the most cost-effective survey solution. It has an angle accuracy of 2" and is equipped with high efficiency EDM that provides long range measurements: 400 m reflectorless and up to 5 000 m using a single prism, with millimeter accuracy.

Better industrial design makes work more efficient. Each replaceable battery provide 8 hours continuous working time, so you do not have to worry about losing power in the field any more. Easy data transfer, supporting an external SD card, with up to 32 GB memory. Furthermore, there are various built-in programs also available. Make your work more efficient.



# Core Technology



## Makes fieldwork easier

Dual face keyboards with buttons illumination to minimize mistakes provides optimum viewing and convenience under any environmental conditions. Starkey button [★] immediately brings up necessary functions. Built-in laser plummet is equipped for quick instrument setup in all lighting conditions. Enables cable-free connection like mini-USB, SD as well as serial ports.



## Large memory size

Internal memory can store 30 000 points, however external SD card supports maximum 32 GB memory that can record 245 760 000 points.



## Intuitive onboard software

Reliable onboard software with an intuitive interface is productive and sufficient for the typical survey and construction needs.

## Better EDM performance

The CTS-112R<sub>4</sub> is one of the fastest total station in his class, with a distance measurement speed of 0.3 seconds. Reflectorless range is up to 400 m and distance measurement to single prism is 5000 m.



## 2 years warranty

Improved industrial design, and CHC experience in manufacturing of quality solutions provide extended 2 years warranty. Should a device fail because of defects in material or workmanship, all repairs or replace will be covered under the warranty policy.



# Field software

The CTS-112R<sub>4</sub> is a versatile, easy to use, rugged total station with a variety of advanced field applications SW built-in to make your work more efficient.

