SPECIFICATIONS

	RNS
Measuring Range	
1P	5.0km
3P	8-10 km
Non prism	1000m
Digital Display	Maximum: 99999999.9999 Minimum: 0.1mm
Accuracy	With prism: 2mm+2ppm, without prism 3mm+2ppm
Measuring Time	Tracking 0.1s, Fine 0.3s (optimal)
Atmospheric Correction	Automatic Correction by Inputting Parameter
Prism Constant	Automatic Correction by Inputting Parameter
Angle Measurement	
Measurement Method	Absolute Encoding
Diameter of The Raster Disk	79mm
Minimum Reading	1 " / 5 " Optional
Accuracy	2 "
Detection Method	Horizontal: Four Sensors Vertical: Four Sensors
Telescope	
Image	Erect
Length	154mm
Effective Aperture	45mm (EDM 50mm)
Magnification	30 X
Field of View	1° 30′
Resolving Power	3 "
Minimum Focus	1.2m
Reticle	Illuminated, 4 Brightness Level
Guide Light	Yes, (Red/Green)
Compensation	
System	Dual axis liquid-electric
Working Range	±4′
Resolving Power	1 "
Sensitivity of Vials	
Plate Vial	30 " /2mm
Circular Vial	8′ /2mm
Laser Plummet (Default)	
Type	Laser Point, 4 Brightness Level
Accuracy	±1.5mm at 1.5M Instrument Height
Wavelength	630-670nm
Laser Class	Class 2 /IEC60825-1
Laser Power	‹0.4mW
Optical Plummet (Optional)	
Image	Erect
Magnification	3x
Focusing Range	0.5m
Field of View	5"
Accuracy	±1.5mm at 1.5M Instrument Height
System Config	
Operating System	Android 11
Processor	MT6753, 8 Cores, 1.5 GHz
Internal Memory	RAM: 4 GB; ROM: 64 GB (Store more than 30M points)
Communication	
Interfaces	- Micro Sim Card Slot
	- USB Type C (OTG)
	- TF Card
Network	2G 900/1800
	3G 2100/900 CDMA BC0 TDSCDMA A/F
	4G LTE band1/3/7/38/39/40/41
Bluetooth	Bluetooth 4.0
WLAN	Dual-Band Single Stream 802.11 a/b/g/n RF for Data Link
Microphone / Speaker	Available
Data format	CSV, DXF, ASCII, etc
Display	
Type	5.5", Graphic, Color Touch Screen 1280 * 720, Dual Faces
Battery	
Type	Lithium-ion, 7.4V, 5000 mAh, two pieces
Operating Time	18 Hours
Dimension	
Size	200mm*170mm*350mm
Weight	5.7kgs
Environmental	
Temperature Range (Operation)	-20℃~50℃
Protection	IP66

RUIDE

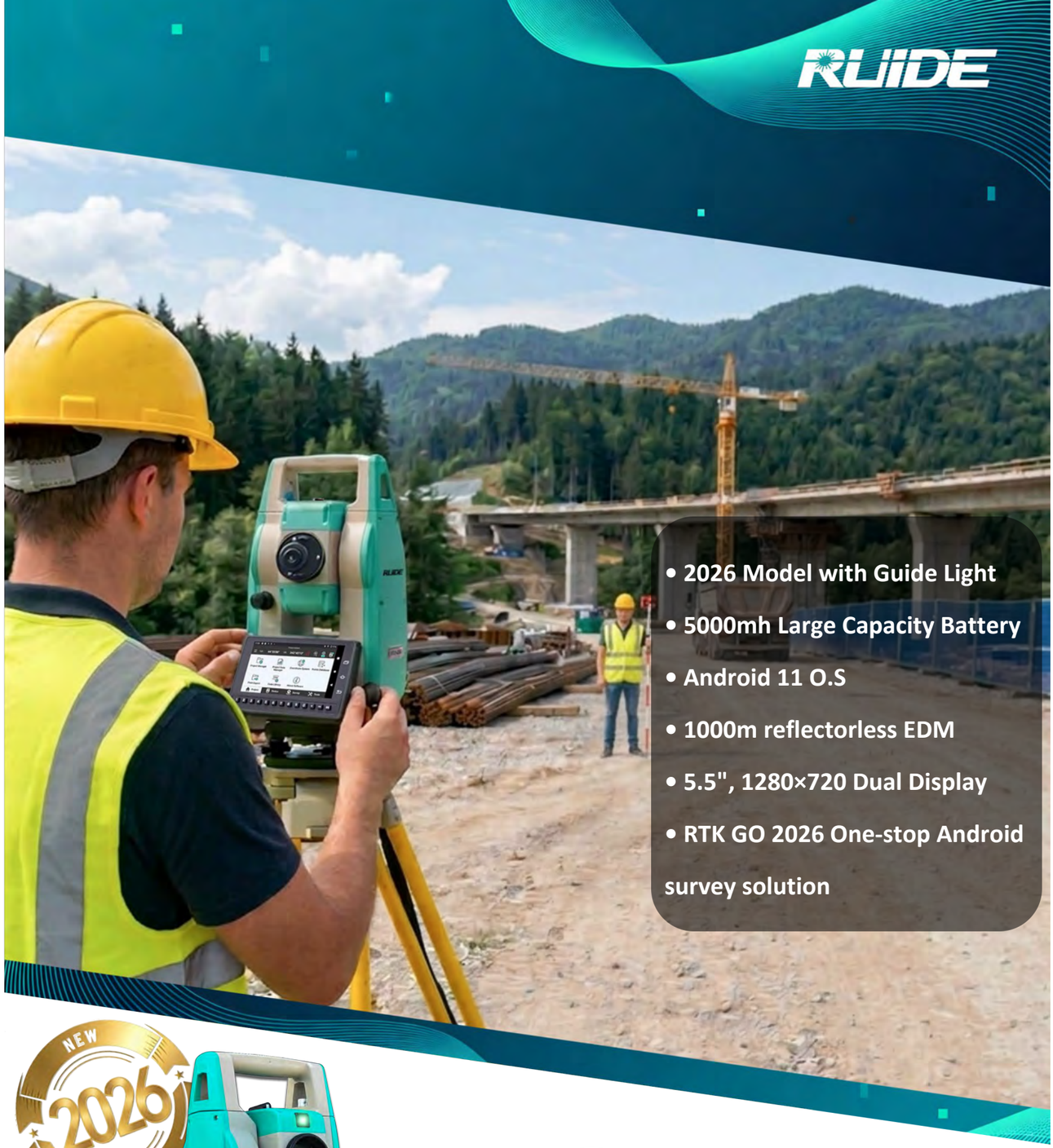
No.39, Sicheng Road, Guangzhou 510663, China

www.ruideinstrument.com

export@ruideinstrument.com

ruideinstrument

RUIDEPositioning



RNS

Android-Powered Precision Engineering for Unmatched Efficiency Connectivity and Productivity

RNS Android Total Station

The High-Performance Android Total Station. Delivering fast, precise measurements with powerful computing, intuitive operation, and seamless connectivity to streamline your field-to-office workflow.

Powerful & Enduring

The RUIDE RNS total station boosts measurement and stakeout efficiency with reliable performance.

Powered by an 8-core 1.5 GHz CPU and 4+64 GB memory, it runs smoothly and processes large files quickly.

Its new 5000mAh battery delivers up to 25 hours of standby, enabling uninterrupted, efficient work on long-duration measurement tasks.

Intuitive & Efficient Stakeout

The 5.5-inch 1280×720 high-clarity touch screen turns complex data into clear visual displays. Supporting CAD import and basemap stakeout, it minimizes errors and streamlines workflows by keeping all key info on one screen.

Guide Light Technology elevates stakeout efficiency: it guides prism-men accurately in dim or complex environments, enabling quick positioning without line-of-sight restrictions.

Intuitive and Dependable

RNS is powered by Android OS, easy to learn, combined with RUIDE RTK GO field software, it offers a simple and productive way of working.

Moreover, user can develop and install their own application into the system, to meet their special work demand.

Connect Office and Field

4G and wifi technology brings a greater connectivity to RNS, user can choose a convenient way to transmit data file to office or download data file (for example online map) from internet at any time any where.

With internet connection, user can get online update to RUIDE RTK GO APP and continuously increase functions and productivity.

7 Major Improvements
To lift your capability and productivity

TECHNOLOGIES

- 1000m Reflectorless
- Ultra Fast Measurement
- Co-axial Laser Beam
- Ultra Low-noise Amplifier
- Noise Phase Analysis
- Carrier Frequency
- 4G, wifi Bluetooth
- USB Type-C
- Dual Axis Compensation
- Laser Plummet
- Laser Pointing
- IP66

PROGRAMS

Station:
Known Pt, Resection, Point to Line, Free Station…

Collect:
Point Collect, Distance Offset, Plane Offset, Column Offset, REM, Line & Point, Line & Angle…

Stakeout:
CAD Stakeout, Point Setout, Reference Line, Line Setout...

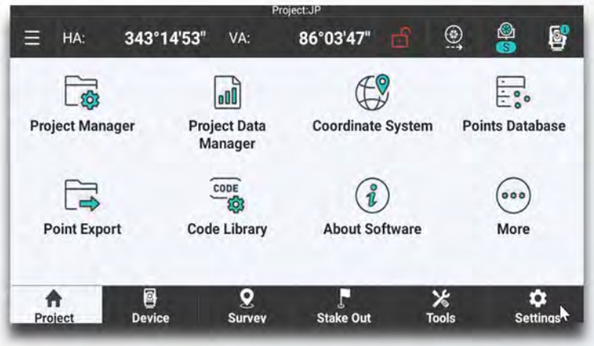
COGO:
Reduction, XYZ Calc., Inverse, Area & Girth, Dist. Conversation, Angle Conversation, Average, Triangle Calc., Calculator…

Product Details:https://www.ruideinstrument.com/en/product_details.html?short_url=RNSAndroidTotalStation

RTK GO Onboard 2026

RTK GO is a professional data collection app featuring intuitive high-precision surveying and mapping. With standard data formats and cloud-based sharing, it greatly enhances field efficiency.

One-stop Android Survey Workflow Solution



Intuitive Field Interface

6 core menus covering 40+ professional surveying and mapping applications, with more refined functional partitioning.

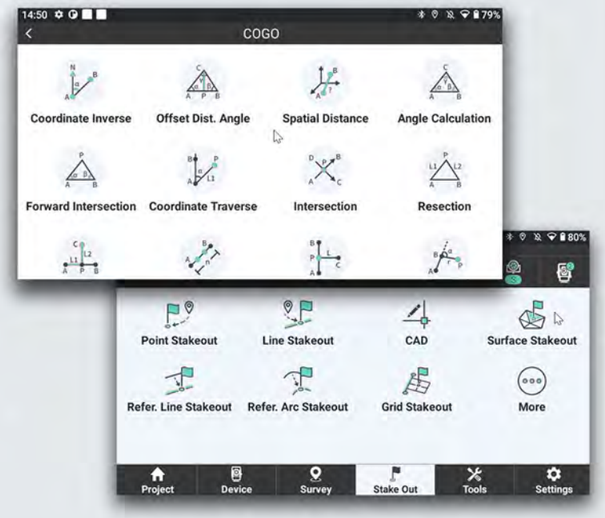
Deeply adapted for Android touch operation; one-click access to high-frequency functions such as reflectorless measurement and electronic level, significantly improving efficiency.

Seamless Surveying

Native CAD integration supports direct DWG/DXF reading and complex XML digital surface staking.

Multiple station setup and rear-sight verification ensure zero initial error, enabling seamless total station/RTK switching.

Built-in COGO closed-loop computation resolves coordinates, area and volume directly on-site.



Quick Setup & Standardized Project Management

Minimalist layout, fast access to frequent functions, clear workflow

Electronic bubble & dual-axis compensation; customizable units; visualized parameters

Smart project wizard for fast setup; isolated multi-database data management

Predefined feature code library, site calibration, precise coordinate alignment

Videos: https://www.youtube.com/watch?v=5xyYFBHP1lc&t=8s

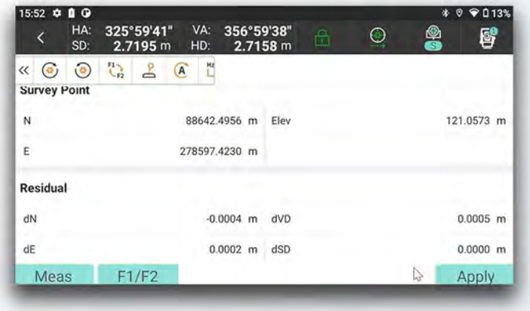
RTK GO Onboard 2026

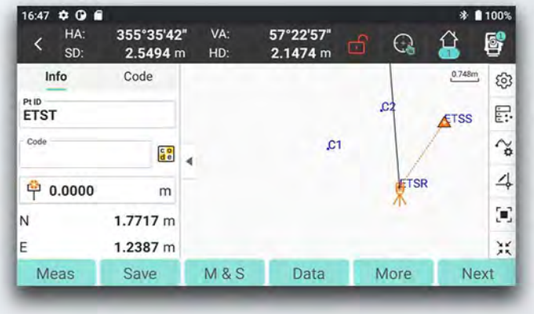
RTK GO is a professional data collection app featuring intuitive high-precision surveying and mapping. With standard data formats and cloud-based sharing, it greatly enhances field efficiency.

Flexible Setup for Complex Environments

Supports multiple station setup methods (rapid, resection, free stationing) for conventional and confined sites, delivering mm-level accuracy even in challenging environments.

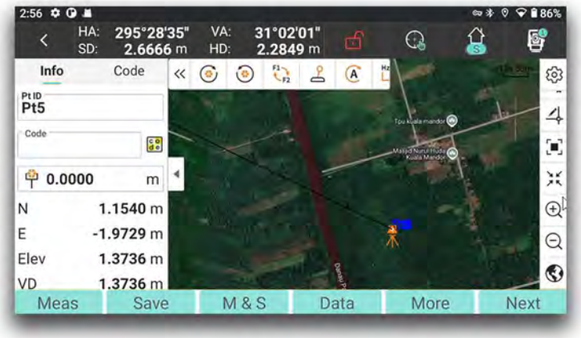
Backsight verification and automated elevation control enhance measurement stability, avoid unnecessary rework to keep your projects on schedule.

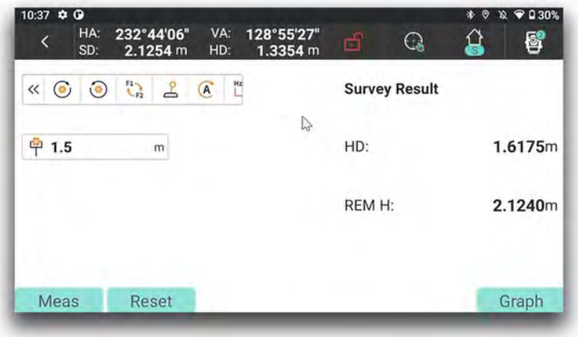




Efficient Point Collection Across All Scenarios

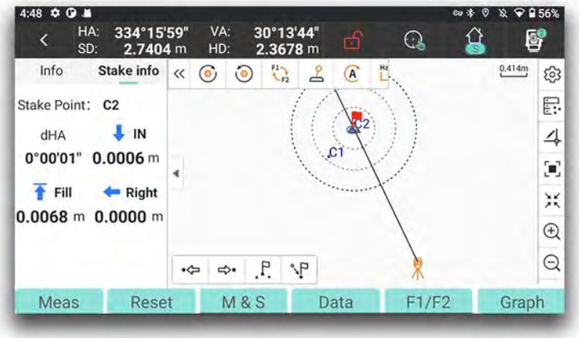
Enables batch collection of topographic detail points and control points with map guidance and real-time display of coordinates and elevation, simplifying on-site operation and improving work efficiency.





Delivers millimeter-accurate measurements for inaccessible targets such as overhead power lines and building tops, with instant on-screen survey results.

Recovers lost or missing points via graphical guidance and real-time survey data to re-establish positions quickly, eliminating rework and preserving data integrity.



Videos: https://www.youtube.com/watch?v=5xyYFBHP1lc&t=8s

RTK GO Onboard 2026

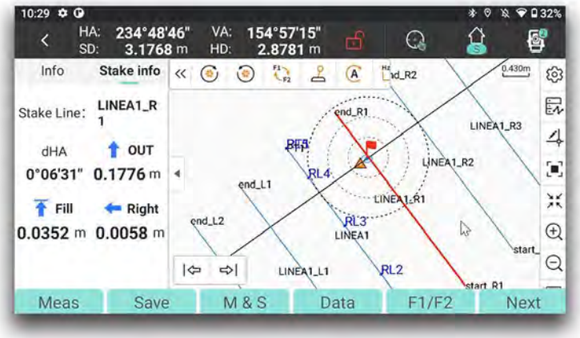
RTK GO is a professional data collection app featuring intuitive high-precision surveying and mapping. With standard data formats and cloud-based sharing, it greatly enhances field efficiency.

Survey & Draw, On-site CAD

Built-in graphics engine supports one-click switching between drawing modes for lines, circles, rectangles and more. It offers rectangular and circular modeling for fast mapping of columns, buildings and other objects. Survey points connect automatically, displaying terrain and feature outlines in real time.

On-site DWG export integrates seamlessly with AutoCAD, greatly reducing office workload. Intelligent point and line attribute binding ensures standardized and verifiable data topology.

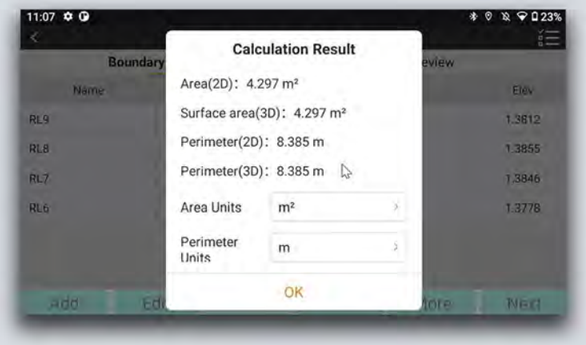
Intelligent Survey Staking



Intelligent point/line staking with graphical guidance boosts efficiency, while parallel-line and CAD-direct staking eliminates manual calculations and input errors.

On-board Calculation & Export

Automatically calculates perimeter and area for closed areas for instant on-site results, while one-click multi-format export ensures full process traceability for acceptance.



Videos: https://www.youtube.com/watch?v=5xyYFBHP1lc&t=8s