SPECIFICATIONS

RUIDE

RTS1
Robotic Total Station

Performance			
Angle Measurement	Accuracy		1"
	Measure Method(HZ/V)		Absolute, continuous, 4 path detective
	Diameter of Encoder Disk		79mm
	Minimum Reading		1"/0.1"
	Compensator Type		Dual axis, liquid photoelectric
	Compensator Accuracy		1"
	Compensator Range		±6'
Distance Measurement	Laser Output*1		Class 3R
	Measuring Range	Prism*2	3500m
		Reflectorless*3	1000m
	Accuracy	Prism	±(1mm+1xppm•D)
		Reflectorless	D<500m: ±(2mm+2xppm•D)
			D>500m: ±(5mm+2xppm•D)
	Measuring Time	Prism	Fine: 0.3S, Tracking 0.1S
		Reflectorless	0.3-3S
	Minimum Reading		1mm/0.1mm

Robotic Specification			
Motorization	Motor Type		DC Servo Motor
	Rotate speed		60º/s
	Rotation Time F1/F2		2.9s
Prism Search	Range		3-300m
	Scope*4		Horizontal: 360º; Vertical: ±18º
	Search Time		Typically 3.5s per 90º
Auto Prism Recognition	Range*5		3-1200m
	Time		3-5s
	Search Window		Customized

General Specification			
Telescope	Image		Erect
	Tube Length		154mm
	Effective Aperture		45mm (EDM: 50mm)
	Magnification		30x
	Resolving Power		3"
	Field of View		1º30'
	Minimum Focus		1.2m
	Reticle Illumination		5 brightness levels
OS, Interface and Data	Operation System		Android 11
	Display		5inch, TFT color LCD with LED backlight, touch screen, dual face
	Keyboard		13 keys with backlight, 4 keys for function
	Processor		MT6833, 8 Core, 2.2GHz
	Data Storage	Internal Memory	4GB RAM, 64GM ROM
		Plug-in Memory Device	Type-C for USB OTG, TF card
Communication	Interface		RS-232, Bluetooth 5.1
	WLAN		2.4G/5G/WIFI
	SIM Slot		Micro Sim, 5G
	Long-range Remote Control		Powered by Zigbee, 450m
Levels	Plate Level		30"/2mm
	Circular Level		8'
Laser Plummet	Type		Red laser dot, 635nm
	Accuracy		±1.5mm at 1.5m
Power Supply	Operating Time (20°C)		4 hours
	Battery		Li-ion rechargeable battery, 5400mAh
Working Environment	Working Temperature		-20ºC to +50ºC
	Storage Temperature		-40ºC to +70ºC
	Protection /Humidity		IP54 / 95% non-condensing
Dimension	Size		217mm*198mm*378mm (without antenna)
	Weight		7kg (with battery)

*1: A built-in rangefinder product equipped with a Class 3R laser has a harmful distance of 1000m (3300ft). Beyond this distance, the laser intensity will be reduced to Class 1.
*2:Standard clear, no haze, overcast situations. Range and accuracy are dependant on atmospheric conditions.
*3: With Kodak Gray Card White Side (90% reflective)
*4/5: For 64mm round prism.

• High accuracy - 1" for angle, 1+1ppm for distance
• Long range prism (3500m) and reflectorless (1000m) measurements
• Reliable prism search to 300m
• Auto prism recognition to 1200m
• LocknTrack function
• Hyper Drive, direct motor powered by worm and gear
• Flexible data transfer by USB OTG, TF card and Bluetooth
• Fully robotic control with H6 Plus Controller, up to 450m
• Practical Survey Star onboard

RUIDE

Catches All in One Sight
RTS1

The Ultimate One-Man System

Benefit from Zigbee technology, RTS1 can be used to connect with your H6 Plus Controller in maximum 450m.
Long-range data link offers a flexible and agile remote control for one-man survey system.

Hyper**Drive**
Direct Motor by Worm & Gear. Stable and reliable for motorization. Positioning accuracy <1"

Prism**Search**
When Prism Search is activated, RTS1 enables you to search, recognize and aim a prism in 300m with both versatility and agility.

Auto Prism Recognition
RTS1 featuring a powerful algorithm that automatically aim and recognize the prism within the sight of view for 1200m. It can handle every task with ease.
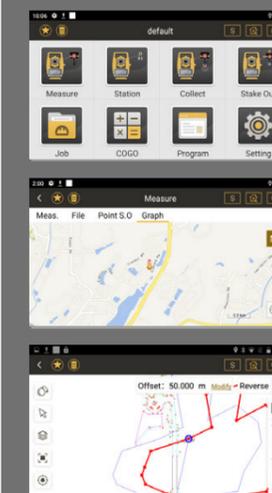
LlocknTRack
With **LocknTRack**, it easier to lock onto the prism and follow its movements constantly, which is able to eliminate the need for standing around and waiting when collecting data or staking out.
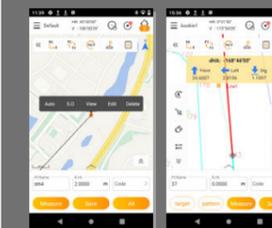
Practical Onboard Software - Survey Star

Survey Star helps you collect the data and stake out efficiently by graphical and iconic guidance.

Map-Driven Workflow
It is an interactive function embedded in Survey Star, with visible features.

Not necessary to extract the coordinate from **CAD** files any more. The only thing you need to do is import the CAD files directly to stake out the points.

Flexible Collector Software - Survey Star Pilot

Survey Star Pilot is a powerful and practical field software design for RTS1, it enables you to change the settings, collect data and stake out points easily on your controller.

1. Zigbee antenna for 450m fully robotic remote control
2. Seamless data transfer with Bluetooth 4.1
3. Easy access to network - dual nano-sim card and WLAN available
4. 5 inches capacitive touch screen
5. Android 11 operating system, 64GB ROM
6. Fully keypad for quicker entry
7. Waterproof and dustproof IP65 design
8. Market-leading 15 hours battery working life and 240 hours stand-by

Ultra Flexible!
Efficient for 3rd Party Developer
Combined with Survey Star Pilot, RTS1 offers a flexible workflow. Also it provides the software suite which can be developed by your own requests. Faster and easier to locate points from points to fields by using RTS1 robotic total station.

Ultra Fast!
Flexibility Makes It Easy to Start
You just need to carry a prism pole with H6 Plus Controller, then you can visit all the points by only one person. Not necessary to communicate with operator at the instrument, just following the guidance on your controller.