

# Navi Station

## Total Station with Integrated GNSS



### SPECIFICATIONS

Distance Measurement with Reflector	Range *1	5000m
	Accuracy	±(2+2ppmxD)mm
	Measure Interval	Fine: 0.3s, Tracking: 0.1s
Distance Measurement without Reflector	Range *2	800/1500/2000m Optional
	Accuracy	±(3+2ppmxD)mm
	Measure Interval	0.3-3s
Angle Measurement	Accuracy	2"
	Measure Method (HZ/V)	Absolute Continuous, Diametrical
	Diameter of Encoder Disk	79mm
	Display Resolution	0.1"
	Compensation	Liquid, Dual Axis Compensation
	Compensator Setting Accuracy	1"
	Compensator Range	±4'
Telescope	Image	Erect
	Tube Length	154mm
	Effective Aperture	45mm (EDM:50mm)
	Magnification	30x
	Resolving Power	3"
	Field of View	1°30"
	Focusing Range	1.2m
	Reticle	Illuminated, 4 Brightness Level
Vial	Plate Vial	30"/2mm
	Circular Vial	8'/2mm
Laser Plummet	Type	Laser Class 2/IEC60825-1; 4 Brightness Level
	Accuracy	±1.5mm at 1.5M Instrument Height
System Config	Operating System	Android 6.0
	Processor	MT6753
	Internal Memory	RAM: 3GB; ROM: 32GB
Satellite Signals	Satellite Tracking	574 Channels
	Signal Tracking	BDS-2: B1, B2, B3 GPS: L1, L2C, L2P, L5 GLONASS: L1, L2 GALILEO: E1, E5a, E5b SBAS
	Time to First Fix	Cold Start <50s, Warm Start <45s
	Signal Re-acquisition	<3s
	RTK Initiation Time	<15s
Performance Specification	RTK Initiation Reliability	>99.9%
	Single Point Positioning	Single: H≤3m, V≤5m (1σ, PDOP≤4)
	RTD Surveying	H: ±0.5m, V: ±1.0m
	Static Surveying	H: ±(2.5mm+1ppm x D), V: ±(5mm+1ppm x D)
Positioning Precision	Real-time Kinematic Surveying	H: ±(10mm+1ppm x D), V: ±(20mm+1ppm x D)
	Interfaces	- Serial Port (6-Pin) - Micro SIM - USB Type C (OTG) - TF Card
Communication	Network	2G 900/1800 3G 2100/900 CDMA BCO 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
	Others	Display
Battery	Lithium-Ion, 7.4V, Operating 8-10 Hours	
Dimension	200mm*170mm*350mm, 5.7kgs	
Protection	IP55	
Temperature Range (Operation)	-20°C--+50°C	

\* 1: Good conditions (good visibility approx.40km, overcast, twilight)

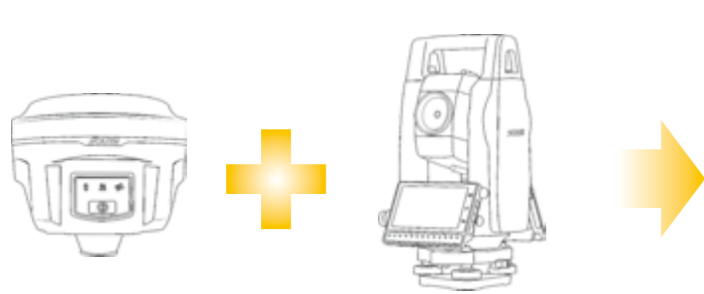
\* 2: White objects with high reflectivity (KGC 90%)

Note: all information above is subject to change without any prior notice.

- Fully Integrated GNSS
- Simply Setup the Station Wherever You Want
- Without the Limitation of Known Points
- Up to 2000m Reflectorless EDM
- Cable-free Connection by Bluetooth
- Intelligent Workflow under Android 6.0

# FREELY POSITION

Simply Setup the Station Wherever You Want



## Total Station with Integrated GNSS

Features Android O.S, Navi Station provides an intelligent solution that integrates GNSS receiver on Total Station. Simply setup and determine the position of occupied point by GNSS receiver to centimetre accuracy, among the range of 40 km from a reference station. Navi Station allows you to work quickly and effectively right from the beginning.



### Dual Laser EDM

- 2000m Non-prism
- Stronger return signal due to its dual laser technology



### Stable Measurement

- Accuracy: 2+2ppm
- Extremely fast (0.3s) speed under fine mode



### USB OTG, TF Card & Bluetooth

- Flexible transfer of data via PC or PDA

### WLAN & 4G Module

- Quick access to Internet



### 5.0 Inch Color & Touch Screen

- Built-in high resolution display

### Numerical Keypad

- Faster and easier input of data



### Intelligent O.S

- Android 6.0 O.S
- User friendliness
- Free SDK package for developer



### All Constellations

- Enable the satellite tracking from BDS, GPS, GLONASS and Galileo with 574 channels
- Horizontal: 10+1ppm Vertical: 20+1ppm



# SUPERIOR CONVENIENCE

Without the Limitation of Known Points

With Navi Station, it's *not necessary to worry about the unknown control points*, traverse or the influence of obstacle on the ground. No matter how many difficulties you have met, Navi Station helps you define the position and *orientation freely* with superior convenience and maximum flexibility.

## Case Study ▶▶▶

### Topographic Measurement



Mission: Plan to measure an area with large amount of elements like houses, trees, vegetations on the ground. There are no control points nearby but a GNSS reference station 20km away from this area.

#### • By Traditional Method:

Measure and record several points by GNSS receiver. Total station will setup and orient by two of those known points. It's necessary to use two sets of equipment on the field and the surveyor will feel inconvenient when they need to measure the occupied points twice by GNSS receiver and total station separately.

#### • By Navi Station:

Set up the Navi Station wherever it's convenient. Define the coordinate of occupied point P1 by its integrated GNSS receiver. Then aim at an unknown point P2 as backsight. Measure the data of this area after orientation. Move the station to the unknown point P2 and use the first station P1 as backsight. Based on the defined coordinate, our Navi Station will re-calculate the position of points which measured at the first station.

### Stake Out in Construction Site



Mission: Plan to stake-out the position of buildings, facilities or roads on the site. Due to the limitation of working environment and the obstacle, most of them are unable to set a RTK rover stably,

#### • By Traditional Method:

Before stake-out, it is necessary to have the data of control points. However, in the construction site, those points are often covered by equipment or materials. Under such kind of situation, it takes time and effort for total station to move the station and do the traverse measurement when the sight of view is not good enough.

#### • By Navi Station:

With Navi Station you don't need to worry about control points, traverses or sight of view. Navi Station will help you define the position of occupied point and backsight quickly by the integrated GNSS receiver. Benefit from its easy-to-understand graphical guidance and fast navigation inside the software, stake-out the points by Navi Station will be easier and simpler with minimum requirements and maximum flexibility.