SPECIFICATIONS

GNSS Performance	
Signal tracking	1598 channels
	GPS: L1C/A, L2P, L1C, L2C, L5
	GLO: G1,G2,G3
	BDS:B1I, B2I, B3I, B1C, B2a, B2b
	GAL: E1, E5b, E5a, E6, E5AltBoc*
	QZSS:L1C/A, L5, L1C, L2
	SBAS:L1, L5
	IRNSS：L5*
	L-Band*： B2b
GNSS features	RTK Initialization Time： Time 2-8s, reliability >99.99%
	Positioning Rate： 1Hz-20Hz
Positioning precision	
Code differential GNSS positioning	Horizontal: ±0.25m+1ppm Vertical: ±0.50m+1ppm
SBAS Positioning	Typically<5m 3DRMS
High Precision Static	Horizontal: ±3mm+0.1ppm Vertical: ±3.5mm+0.4ppm
Fast Static and Static	Horizontal: ±2.5mm+0.5ppm Vertical: ±5mm+0.5ppm
Post Processing Kinematic (PPK)	Horizontal: ±8mm+1ppm Vertical: ±15mm+1ppm
Real Time Kinematic (RTK)	Horizontal: ±8mm+1ppm Vertical: ±15mm+1ppm
Network RTK (VRS, FKP, MAC)	Horizontal: ±8mm+0.5ppm Vertical: ±15mm+0.5ppm
Inertial Measurement	Accuracy: down to 2cm (Typically less than 10mm+0.7mm/°tilt)
	Supporting walk to activate IMU.Tilt Angle: up to 60 degrees.
Communications	
Operation System	SOC
Buttons and Indicators	1 button,2 Indicator lights
Bottom Ports	1 Type-C USB port,1 UHF antenna port
WiFi	802.11 b/g/n standard
Bluetooth	Bluetooth 4.2 standard and Bluetooth 2.1+EDR
HD Voice Guide	Intelligent voice technology provides status indication and operation
	guide.Chinese, English, Korean, Russian, Portuguese,
	Spanish, Turkish and user define.
Hardware	
Size and Weight	131mmX80mm,800g
Data Storage	4GB SSD internal storage
	Support external USB storage (up to 32GB),
	Automatic cycle storage,changeable record interval
	Up to 20Hz raw data collection
Built-in Camera	2MP
Camera View Angle	75°
Environment	Operating: -30℃ to +70℃ Storage: -40℃ to +80℃
Humidity	100% condensation
Ingress Protection	IP68 waterproof, sealed against sand and dust
Shock	Survive 2m pole drop on concrete
Data Format	
GPS Output Data Format	NMEA 0183, PSIC, PJK, Binary Code
Differential Correction	RTCM 3.1, RTCM 3.2,CMR,CMR+
Static	STH, Rinex 2, Rinex 3
Network	Supported VRS, FKP, MAC, Ntrip
UHF Radio Characteristics	
Frequency Range	410-470MHz Transmitting and Receiving
Protocols	Farlink\Trimtalk\SOUTH
Channels	60 channels for Farlink protocol
	120 channels for other protocols
Power	
Battery	7.4V, 6800mAh unremoviable battery
Battery Life	10-15 hours
Fast Charge	4 hours charge to full power
USB recharge	Power Bank for recharging
	Power Bank for external power supply

SANDING
EVERY POINT MATTERS

T12 AR Stakeout Receiver
— The unseen will become visible —

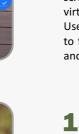| SOC OS | Multi-color Light Bar | 2MP Camera | 4GB SSD Storage |
| 6800mAh Battery | Thermometer Sensor | Fast Charge | Battery Life Checking |
| Web UI | NFC | IP68 | OTG |

AR STAKEOUT, OPEN UP A WHOLE NEW CHAPTER

Integrated HD camera, T12 captures real-time video with RTK position.Users can directly see the points to be setout on the collector screen, which is accurate and intuitive.AR technology superimposes a virtual guide-line and distance numbers on the real-time video display. Users do not need to recognize the directions themselves, they only need to follow the guide-line to find the point to be setout, which saves time and effort.

1598 CHANNELS, EXCELLENT PERFORMANCE

Equipped with new generation GNSS RTK engine with 1598 channels,T12 captures 5 satellite constellations with 21 frequencies strongly.With the introduction of SOC design and anti-ionospheric interference technology,accuracy is higher,enhanced working performance in challenging environments, especially in forest and city center.

FARLINK, MORE RELIABLE AND STABLE COMMUNICATIONS

When GNSS receiver is using signal of bigger number of satellites, the data amount to send and receive by UHF radio increased greatly. Farlink technology is developed to send large number of data and avoid data loss.Farlink technology improves the signal-catching sensitivity from -110db to -117db, so it can catch the very weak signal from a base station far way.

SOC TECHNOLOGY, COMFORTABLE EXPERIENCE

T12 is a new product from SANDING SOC platform, most components of T12 (GNSS module, Wi-Fi, Bluetooth, etc.) are integrated on one circuit board which lower power consumption, and efficiently improves the ability of receiving higher quality satellites signals.The light-weight design reduces surveyor's fatigue, increase their mobility, is especially helpful to work in challenging environment.

FIXED-KEEP, LESS DOWNTIME AND MAXIMUM PRODUCTIVITY

Fixed-keep technology can continue to provide "Fixed" positioning for up to 5 minutes for RTK surveys following RTK correction outage.After RTK and CORS signal recovers, receiver will switch to real-time corrections seamlessly.It can reduce downtime effectively and maximize productivity when radio or Internet connection outages in many field survey environment.

IMU, SIMPLER AND EASIER-TO-USE

New IMU Program, users only need to walk a few steps to activate the inertial sensor.This improvement makes measurements simpler and faster.While retaining the previous initialization method and significantly improving accuracy and stability.