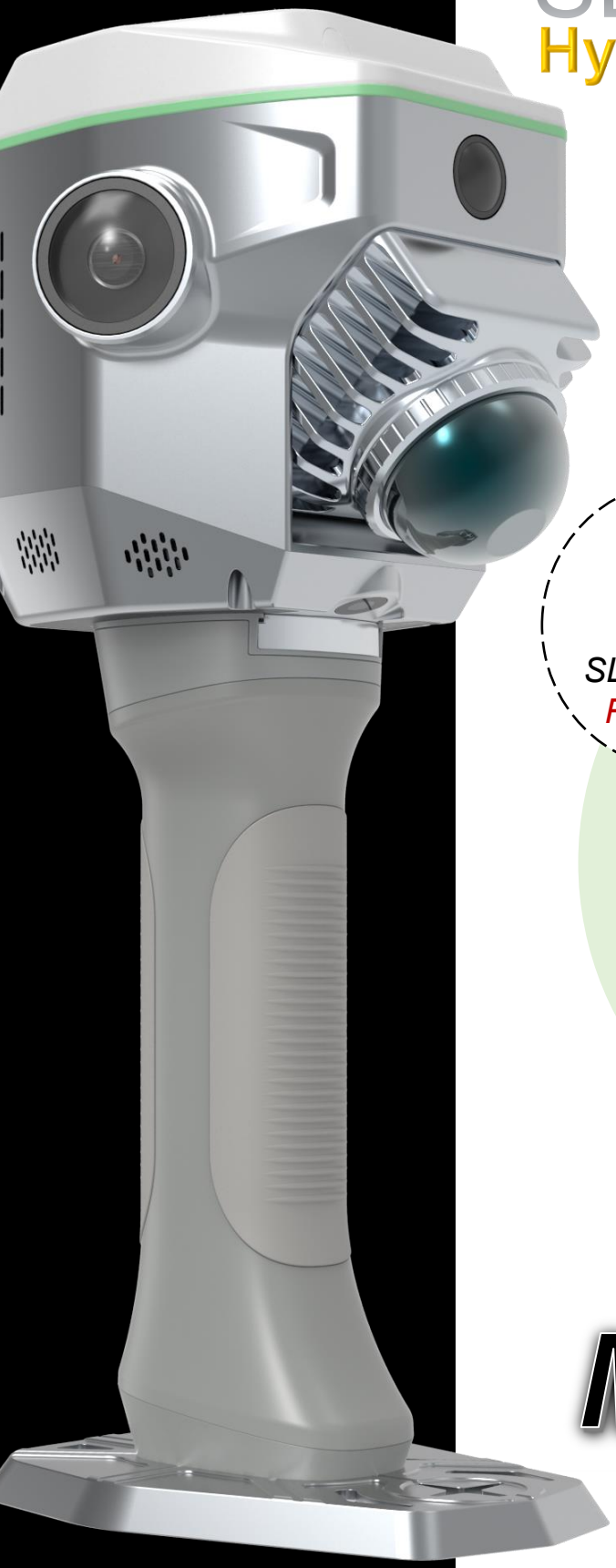
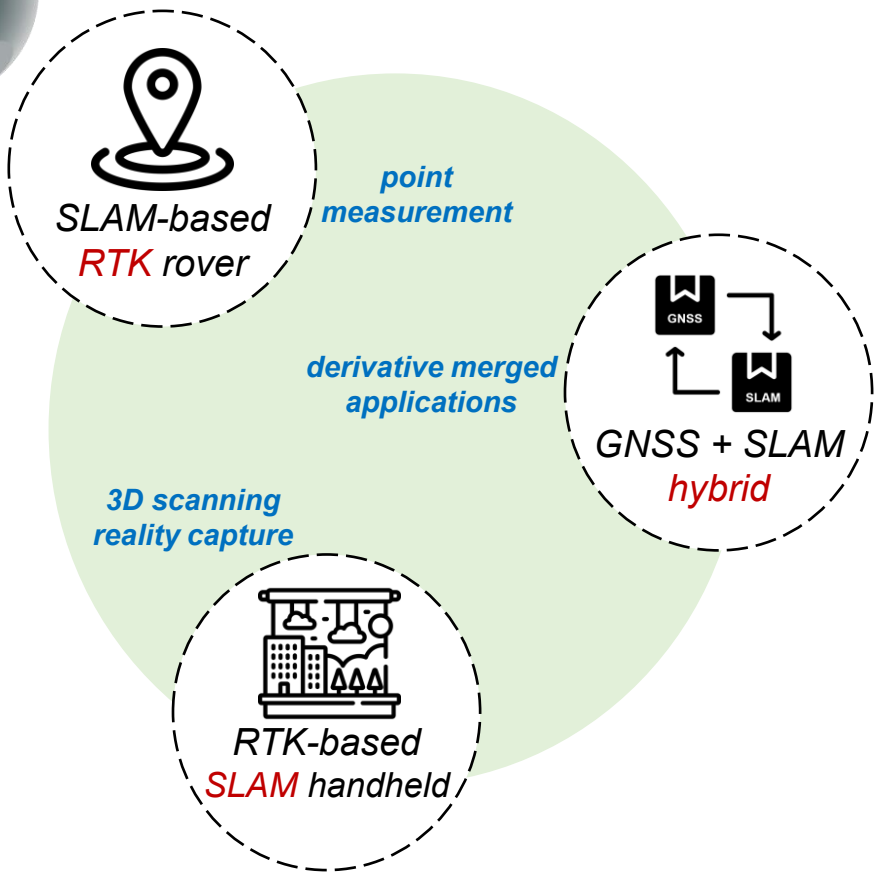
RUIDE

SLAM RTK
Hybrid Supreme ME



When RTK Meets SLAM
1+1＞2 Is True



Map It Real

Datasheet V.202508

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SPECIFICATION

MODEL		ME	ME Plus
PHYSICAL ------			
Dimension		13 x 147 x 138 mm	
Net Weight		1.38 kg	
Camera (for SLAM)		12MP x2 left and right, 8MP x1 forward	
Camera (for GNSS)		2MP x1 downward	
Laser Scanner		Livox Mid-360	
Temperature Sensor		built in, intelligent variable frequency control	
IMU Module		built in for GNSS, and supports tilt survey option	
Wi-Fi Module		built in and serves as a hotspot source	
Network Telecom		SIM card slot built in, Nano SIM	
Radio Wireless		N/A	available
ELECTRICAL ------			
Power Supply		inbuilt battery + handgrip battery	
Endurance		inbuilt battery ≥0.5h; handgrip battery ≥2h	
Power Consumption		26 W	
Charging		1-2 h	
Input Voltage		14.4 V	
Power Output		30 W	
TECHNICAL ------			
GNSS Features	full constellation tracking and smart dynamic sensitivity positioning technology		
GNSS Performance	Signal Tracking	1,698 channels	
	Multi-constellation	GPS/Glonass/BDS/Galileo/QZSS/NavIC/IRNSS/SBAS	
	Positioning Output Frequency	1-10 Hz	
	Initialization Time	< 10 sec	
	Cold Restart	< 12 sec	
	Initialization Reliability	> 99.9%	
	IMU Refresh Rate	200 Hz	
GNSS Accuracy	Single Point Positioning	H. 1.5m RMS; V. 2.5m RMS	
	DGPS	H. 0.4m RMS; V. 0.8m RMS	
	Real Time Kinematic (RTK)	H. 8mm+1ppm RMS; V. 15mm+1ppm RMS	
	Post Processed Kinematic (PPK)	H. 3mm+1ppm RMS; V. 5mm+1ppm RMS	
	Precise Point Positioning (PPP)	supports PPP-B2b, H. 10 cm; V. 20 cm	
	High-precision Static	H. 2.5mm+0.1ppm RMS; V. 3.5mm+0.4ppm RMS	
	Static and Rapid Static	H. 2.5mm+0.5ppm RMS; V. 5mm+0.5ppm RMS	
	Code Differential	H. 0.4m RMS; V. 0.8m RMS	
	Positioning Refresh Rate	1Hz/5Hz/10Hz	
	Time for First Fixed Solution	cold start 45sec; hot start 10sec; single repeat 1sec	
SLAM Performance	Scanning Range	0.1-70m (70m/40m @ 80%/10% reflectivity)	
	Measurement Rate	200,000 pts/sec	
	Field Of View (FOV)	360° x 59°	
	Laser Wavelength	905 nm	
	Laser Safety Class	Class 1 (IEC 60825-1:2014), eye-safe	
	Loop Closure Free	available when RTK is enabled outdoors	
	PPK Mode	available	
SLAM Accuracy	Realtime Assessment	available	
	Relative Accuracy	≤10 mm	
	Range Noise	approx. 5-20 mm (optimized)	
	Absolute Accuracy (RTK)	best up to 3-5 cm (powered by onboard RTK)	
	Absolute Accuracy (PPK)	best up to 2-4 cm (post processed)	
Merged Applications	Positioning Accuracy while Satellites Unlocked (known as Magicalc)	best up to 2-3 cm, typical 5-10 cm	
	Contactless Measurement Accuracy	≤5 cm (@15 m)	
	Super Stake-out Accuracy	optimal H. 8mm+1ppm RMS; V. 15mm+1ppm RMS typical H. 10mm+1ppm RMS; V. 20mm+1ppm RMS	
AR Stake-out Performance	Visual Stake-out Accuracy	optimal H. 8mm+1ppm RMS; V. 15mm+1ppm RMS typical H. 10mm+1ppm RMS; V. 20mm+1ppm RMS	
COMMUNICATION ------			
Radio Datalink		N/A	Rx module built in
Voice Language		CHN/ENG/KOR/RUS/PRT/ESP/TUR as default	
Audio Messaging iVoice		smart audio for status broadcasting and instructions	
Bluetooth		BT4.2 (BR/EDR+BLE) standard	
NFC Wireless		auto pairing between device and controller by touch	
WLAN		802.11b/g/n standard	
ENVIRONMENTAL ------			
Waterproof/Dustproof		IP64	
Working Temperature		-20℃ ~ +55℃	
Storage Temperature		-40℃ ~ +80℃	
Operating Humidity		80% non-condensing	
DATA MANAGEMENT ------			
Data Format	Static: South STH, Rinex2/3.02, etc.; Differential: RTCM3.0/3.2; GPS output: NMEA0183, PJK plane coordinate, binary code; Network Mode: VRS/FKP/MAC/N-trip		
OTHER ------			
Mobile App Software	Mobile App Software for Android with a lifetime license and driver device included		
Desktop Software	Post-processing software for Windows with a lifetime license: - Georeferencing module, colorization module, slice module, profiles and debugging, import and export. - Point Cloud Format: Raw format exportable to .LAS or .LAZ directly or through included software. - Color Point Cloud Supported