Specifications

GNSS Features	
Channels	1898
GPS	L1C, L1C/A, L2C, L2P(Y), L5
GLONASS	G1, G2, G3
BDS	B1I, B2I, B3I, B1C, B2a, B2b
GALILEO	E1, E5a, E5b, E6, AltBOC*
SBAS	L1*
IRNSS	L5*
QZSS	L1, L2C, L5*
MSS L-Band*	BDS PPP/ Galileo HAS
Positioning Output Rate	1Hz~20Hz
Initialization Time	< 10s
Initialization Reliability	>99.99%
Positioning Precision	
Code Differential Positioning	Horizontal: 0.25 m + 1 ppm RMS Vertical: 0.50 m + 1 ppm RMS
GNSS Static	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 3.5 mm + 0.5 ppm RMS
Static (Long Observation)	Horizontal: 2.5 mm + 0.1 ppm RMS Vertical: 3 mm + 0.4 ppm RMS
Rapid Static	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 5 mm + 0.5 ppm RMS
PPK	Horizontal: 3 mm + 1 ppm RMS Vertical: 5 mm + 1 ppm RMS
RTK(UHF)	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS
RTK(NTRIP)	Horizontal: 8 mm + 0.5 ppm RMS Vertical: 15 mm + 0.5 ppm RMS
SBAS Positioning	Typically<5m 3DRMS
RTK Initialization Time	2~8s
IMU Tilt Angle	0°~ 120°
Hardware performance	
Dimension	155mm(φ)×93.6mm(H)
Weight	1280g (battery included) ,800g(without battery)
Material	Magnesium aluminum alloy shell
Operating Temperature	-45℃~+75℃
Storage Temperature	-55℃~+85℃
Humidity	100% Non-condensing
Waterproof/ Dustproof	IP68 standard, fully protected against blowing dust
Shock/Vibration	Withstand 2 meters pole drop onto the cement ground naturally
Power Supply	6-28V DC, overvoltage protection
Battery	Inbuilt 7.4v 10000mAh rechargeable Lithium-ion battery
Battery Life	30h
Communications	
I/O Port	5-PIN LEMO interface (external power port + RS232)
	Type-C interface (Charge+OTG+Ethernet)
	UHF antenna interface
	SIM card slot (Micro SIM)
Internal UHF	3W Radio receiver and transmitter
Frequency Range	410-470MHz
Communication Protocol	Farlink, Trimtalk, SOUTH, HUACE, Hi-target
Communication Range	Typically 8-10km with Farlink protocol (12-15km in optimal condition)
Cellular Mobile Network	4G
Bluetooth	Bluetooth 5.0, 3.0/4.2 standard, Bluetooth 2.1 + EDR
NFC Communication	Support
Modem	802.11 b/g/n standard
Data Storage/Transmission	
Storage	64GB SSD internal storage
	Automatic cycling storage
	Support external USB storage (OTG)
	The customizable sample interval is up to 20Hz
Data Transmission	Plug and play mode of USB data transmission
	Supports FTP/HTTP data download
Data Format	Static data format: STH, Rinex2.01, Rinex3.02 and etc.
	Differential data format: RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2
	GPS output data format: NMEA 0183, PJK plane coordinate, Binary code
	Network model support: VRS, FKP, MAC, fully support NTRIP protocol
Sensors	
IMU	calibration-free, up to 120°, refresh rate 400 Hz, pitch & roll accuracy 0.05 °,heading accuracy 0.15°
Camera	Video shooting camera: 8MP Laser aiding telephoto camera: 8MP AR stakeout camera: 2MP
Laser	3R green laser, 150m range (200m in optimal condition)
Electronic Bubble	Controller software can display electronic bubble, checking leveling status of the carbon pole in real-time
Thermometer	Built-in thermometer sensor, adopting intelligent temperature control technology, monitoring and adjusting the receiver temperature
User Interaction	
Operating System	Linux
Buttons	Single button
Indicators	Satellites, data and power indicators
Display	1.39' circular LED touchscreen, 454*454 pixel
Web Interaction	With access to Web UI via WiFi or USB connection, users can monitor the receiver status and change the configurations
Voice Guidance	Chinese/English/Korean/Spanish/ Portuguese/Russian/Turkish/French/ Italian
Secondary Development	Provides secondary development package, and opens the OpenSIC observation data format and interaction interface definition
Cloud Service	The powerful cloud platform provides online services like remote management, firmware updates, online registers, etc.

*Reserve for future upgrade.

Remarks: Measurement accuracy and operation range might vary due to atmospheric conditions, signal multipath, obstructions, observation time, temperature, signal geometry and number of tracked satellites. Specifications subject to change without prior notice

SOUTH
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INNO8 PRO

Ultra-Long-Range Laser RTK

Measure Beyond Limits



Engineered for Performance

INNO8 Pro combines advanced sensing, intelligent perception, and precision engineering into a single platform. It delivers the performance needed for demanding surveying tasks while providing a more efficient and confident field experience.



Extended Measurement Reach

Expands distance measurement range up to 200 m across all environments.



Multi-view Imaging System

Telephoto, Wide-Angle, Starlight Camera for Improved Laser and AR Measurement



3 Cameras

Instant-Ready Tilt Survey

6th-Generation IMU Engine with Fast Initialization & Stable Accuracy



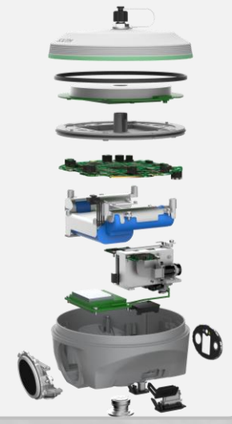
Enhanced UHF Connectivity

Top-Mounted Antenna with Farlink Pro Protocol for Stable Communication



Shock-Resistant Reliability

Reinforced Internal Structure for Field Durability



30h Battery Life



Touch Screen



SDAS Service

Network-Free Positioning



Intelligent SurvStar Experience

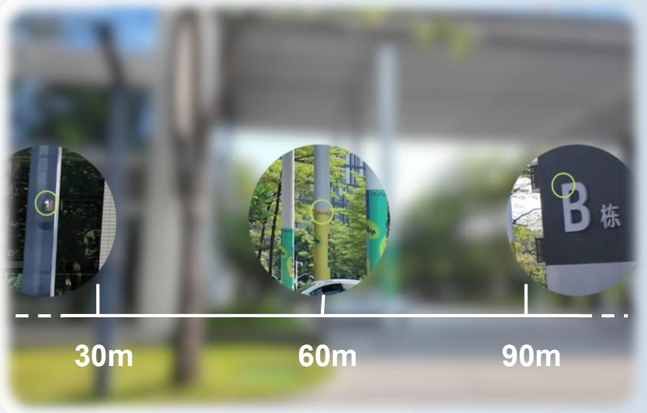
Capture Points Automatically

Automatically captures and saves point coordinates once the pole is stable, enabling fully hands-free operation and improved focus on aiming and stability.



Always the Optimal View

Automatically adjusts camera zoom based on target distance during Laser AR measurement, ensuring clear target visibility and faster, more intuitive long-range aiming.



Smart Field Interaction

Enables hands-free operation through voice commands and provides real-time AI assistance for workflow guidance, troubleshooting, and field support, with full multilingual support to ensure seamless operation across global users.



100m
CAD AR Stakeout

Photogrammetry

3D Modeling