

TO68B is a portable multi-functional GNSS. It has a built-in high-precision positioning module that supports tracking satellite signals from all systems and frequency bands. It is equipped with 4G full network access, Bluetooth, WIFI and built-in data transmission radio. The high-precision IMU integrates AR and Laser to achieve tilt measurement, Laser measurement and AR real-Time Stakeout, making the measurement work more convenient and efficient.



Characteristic

Linux Smart System

Linux+ARM Cortex-A7 intelligent system platform offers efficient computation and unlimited product functionality expansion.

Full System GNSS Reception

The receiver integrates a high-precision positioning module, utilizing 1408 channels to support a comprehensive range of signals including BDS (B1I/B2I/B3I/B1C/B2a/B2b), GPS (L1/L2/L5), GLONASS (L1/L2/L3), Galileo (E1/E5a/E5b/E6), QZSS (L1/L2/L5), SBAS and NavIC.

Tilt Measurement

Built-in intelligent high-precision inertial navigation module for real-time tilt compensation, eliminating "fly points" in RTK measurement.

AR Real-Time Stakeout

Utilizes a professional ultra-wide-angle camera to provide high-definition real-time plotting functionality, making stakeout tasks more accurate and convenient.

4C Full NetCom

The 4G NetCom solution based on the Linux platform fully supports 2/3/4G networks, offering better compatibility, stronger signals, and more stable connections.

Laser Measurement

Equipped with a high-precision millimeter-level laser ranging module, combined with high-precision inertial navigation for accurate laser targeting in complex environments.

IP68 Design

Industrial design, solid magnesium alloy shell, in line with IP68 design requirements, safe and reliable.



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| ITEM | | SPECIFICATION | REMARKS |
|-----------------|------------------------------|---|---------------------------------|
| HARDWARE SYSTEM | | ARM Cortex-A7 | |
| OS | | Linux | |
| GNSS | GPS | L1C/A, L1C, L2P(Y), L2C, L5 | PPP-B2b, PPP-E6, SBAS supported |
| | GLONASS | L1, L2, L3 | |
| | BDS | B1I, B2I, B3I, B1C, B2a, B2b | |
| | GALILEO | E1, E5a, E5b, E6 | |
| | QZSS | L1, L2, L5 | |
| | SBAS | L1 | |
| | NavIC (IRNSS)* | L5* | Requires firmware support |
| | Channel | 1408 | |
| | Standard Output | NMEA-0183 | |
| | Correction I/O Protocol | RTCM3.X | |
| | Frequency | ≤20Hz | |
| | Reacquisition Time | <1s | |
| | Cold Start Time | <40s | |
| | RTK Initialization Time | <10s | |
| | Internal noise level | ≤1mm | |
| | Phase Center Offset | ≤2.5mm | |
| ACCURACY | SINGLE(RMS) | Horizontal: 1.5m ; Vertical: 2.5m | |
| | DGPS(RMS) | Horizontal: 0.4m ; Vertical: 0.8m | |
| | RTK(RMS) | Horizontal: ± (8mm+1ppm) ; Vertical: ± (15mm+1ppm) | |
| | Timing Precision(RMS) | 20ns | |
| | Static Mode Precision (RMS) | Horizontal: ± (2.5mm+1ppm) ; Vertical: ± (5mm+1ppm) | |
| | Velocity Estimation(RMS) | 0.03m/s | |
| | Tilt Correction (Within 60°) | <2cm | |
| | AR Stakeout | Horizontal: ± (8mm+1ppm) ;Vertical: ± (15mm+1ppm) | |
| | Laser Measurement | The three-dimensional accuracy of laser tiltmeasurement within 5m: no more than 2.5cm | |
| SYSTEM | Bluetooth | BR+EDR+BLE | |
| | NFC | Support | |
| | WIFI | 802.11 b/g/n/ac | |
| | Network | LTE FDD: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28 LTE TDD: B38/39/40/41 WCDMA: B1/2/4/5/6/8/19 GSM: B2/3/5/8 | |
| | Radio | Integrated transceiver radio Frequency Range: 410~470MHz Power: 0.5W/1.5W Protocols: TRIMTALK, TRIMMK3, SOUTH, TRANSEOT, SATEL, LORA Air Baud Rate: 4800, 9600, 19200 | |
| | Storage | 8GB | |
| | Voice | Support | |
| | Laser Camera | Sensor size:1/3.06inch Aperture: f/2.9 | |



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| | | | |
|---------------|-----------------------|---|------|
| | | Resolution:4224*3200 Field of view: D44°H=35°V=26.5° Distortion: <1% | |
| | AR Camera | Supports AR real scene stakeout Sensor size: 1/2.8 inch Aperture: f/2.5 Resolution: 1920*1080 Field of view: 69.3°±3° Distortion: <0.38% | |
| BATTERY | Battery | 7.4V, 6500mAh | 2P2S |
| | Work time | More than 16 hours (Typical, Rover, GSM) | TBD |
| | Charge | USB PD 15V/2A 5V/3A | |
| ENVIRONMENTAL | Operating Temperature | -30°C~+65°C | |
| | Storage Temperature | -40°C~+85°C | |
| | Shock Resistance | Can withstand a 1.5m drop at normal temperatures | |
| | Protection Rating | IP68 | |
| PHYSICAL | Materials | Magnesium alloy casing with ABS/PC plastic top cover | |
| | Dimensions | Φ134mm*86mm | |
| | Weight | ≤0.78Kg | |
| ACCESSORIES | TO68B | 1 Unit | |
| | Type-C power adapter | 1 PCS | |
| | Type-C To Type-C | 1 PCS | |
| | Radio Antenna | 1 PCS | |
| | Controller (Optional) | 1 Set | |

▲ Manufacturers may update parameters at any time, please refer to the latest product information.

► Equipped with electronic fence system, Toknav’s product have area code restrictions. Any issue please contact Toknav or local dealers to verify the specific details.



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