

GNSS Receiver **T40Pro**

Hot Swappable Battery
Photogrammetric RTK

T40Pro GNSS Receiver

The T40Pro is a versatile GNSS receiver equipped with photogrammetry technology. It integrates a high-precision positioning module, IMU, AR, and a high-definition imaging camera, combining precise inertial navigation and positioning data. It enables tilt measurement, AR real-time staking, and image-based survey, allowing for efficient extraction of high-precision coordinates from real-world images. The receiver features a robust magnesium-aluminum alloy design, offering durability and reliability. It supports hot-swappable batteries, allowing quick recharging without power interruption, thereby extending operational time.

CHARACTERISTIC

Linux Intelligent System

The Linux + ARM Cortex-A7 intelligent system platform provides users with efficient computing power and unlimited expansion of product features.

Tilt Measurement

Equipped with an intelligent high-precision inertial navigation (IMU) module, the device offers real-time tilt compensation, eliminating the issue of “floating points” in RTK surveys.

AR Stake Out

A professional ultra-wide-angle camera provides HD real-world stake out capabilities. Its user-friendly AR stake out application ensures precise, one-shot staking performance.

Photogrammetry

The receiver is equipped with a high-definition wide-angle camera with a large 1/2.6-inch sensor, integrating high-precision inertial navigation algorithms. Coupled with a high-performance Android controller, it achieves high-precision image survey.

Extended Battery Life

The receiver supports two detachable batteries that allow hot-swapping without power interruption. This enables quick battery replacement, significantly extending operational endurance.

IP68 Design

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

T40Pro GNSS Receiver

Hot Swappable Battery Photogrammetric RTK



Main body Magnesium alloy
ABS/PC top cover

Photogrammetric
Results in 1 second

Offers HD real-world stake out with AR technology.

7.2V, 3400mAh*2
Over 20 Hours

Supports dual removable powerful batteries for extended operation

Photogrammetry

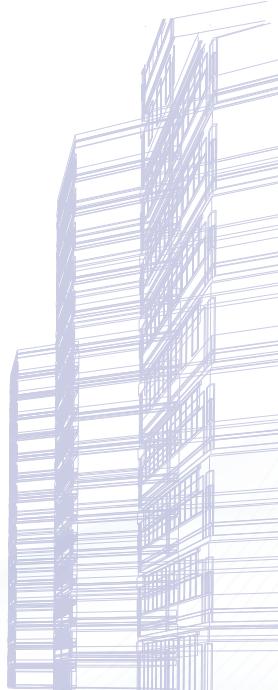


HEIGHT 103 mm | DIAMETER 160 mm | WEIGHT 850 g

Error of 2-4 cm within 2-15 meters.

Removable battery, dedicated charger

AR Stakeout Supported



SPECIFICATION

| SYSTEM | |
|------------------------------|--|
| HARDWARE SYSTEM | ARM Cortex-A7 |
| OS | Linux |
| GNSS | |
| GPS | L1C/A, L1C, L2P(Y), L2C, L5 |
| GLONASS | L1, L2, L3 |
| BDS | B1I, B2I, B3I, B1C, B2a, B2b(PPP) |
| GALILEO | E1, E5a, E5b, E6(PPP) |
| QZSS | L1, L2, L5 |
| SBAS | L1(PPP) |
| NavIC (IRNSS) | L5*(Requires firmware support) |
| Channel | 1408 |
| Standard Output | NMEA-0183 |
| Correction I/O Protocol | RTCM 3.X |
| Frequency | 20Hz max |
| Reacquisition Time | <1s |
| Cold Start Time | <40s |
| ACCURACY | |
| SINGLE (RMS) | Horizontal: 1.5m / Vertical: 2.5m |
| DGPS (RMS) | Horizontal: 0.4m / Vertical: 0.8m |
| RTK (RMS) | Horizontal: \pm (8mm+1ppm) Vertical: \pm (15mm+1ppm) |
| Time Accuracy(RMS) | 20ns |
| Static(RMS) | Horizontal: \pm (2.5mm+1ppm) Vertical: \pm (5mm+1ppm) |
| Speed Accuracy(RMS) | 0.03m/s |
| Tilt Correction (Within 60°) | <2cm |
| AR Stakeout Accuracy | Horizontal: \pm (8mm+1ppm) Vertical: \pm (15mm+1ppm) |
| Photogrammetry Accuracy | Error of 2-4 cm within 2-15 meters. |
| SYSTEM PLATFORM | |
| Bluetooth | BR+EDR+BLE |
| WIFI | 802.11 b/g/n |
| 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 |
| Storage | 32GB Storage |

| Data Radio | Integrated receiver/transmitter Frequency Range: 410~470MHz Power: 1W/2W/5W Protocols: TRIMTALK, TRIMMK3, SOUTH, TRANSEOT Air Baud Rate: 9600, 19200 |
|-------------------------|--|
| IS Camera | Supports Photogrammetry Sensor size: 1/2.6 inch Focal length: 6mm Aperture: f/2.8 Resolution: 1920*1080 Field of view: D51.8° H42.4° V32.4° Distortion: < 0.5% |
| AR Camera | AR Stakeout Supported Sensor: 1/2.8 inch Aperture: f/2.5 Resolution: 1920*1080 FOV: 70.3°H62.7°V38.6° Distortion: <0.38% |
| DISPLAY | |
| LCD Panel | Sensor: 1.3 inch Resolution: 240*RGB*240 |
| BATTERY | |
| Battery | 7.2V, 3400mAh *2 (Removable battery, dedicated charger) |
| Work time | Over 20 hours (when applying controller network mode) |
| External power | 9~24VDC |
| ENVIRONMENT | |
| Work Temperature | -20°C~+60°C |
| Storage Temperature | -20°C~+70°C |
| Shock Resistance | Can withstand a 1.5m drop at normal temperatures |
| Protection Rating | IP68 |
| PHYSICAL | |
| Materials | Magnesium alloy main body, ABS/PC top cover |
| Dimensions | Φ160mm*103mm |
| Weight | 850g(without battery) |
| ACCESSORIES | |
| T40Pro | 1 Unit |
| External Battery | 2 PCS |
| Battery Charging Cradle | 1 PCS |
| Radio Antenna | 1 PCS |

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



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