

*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.

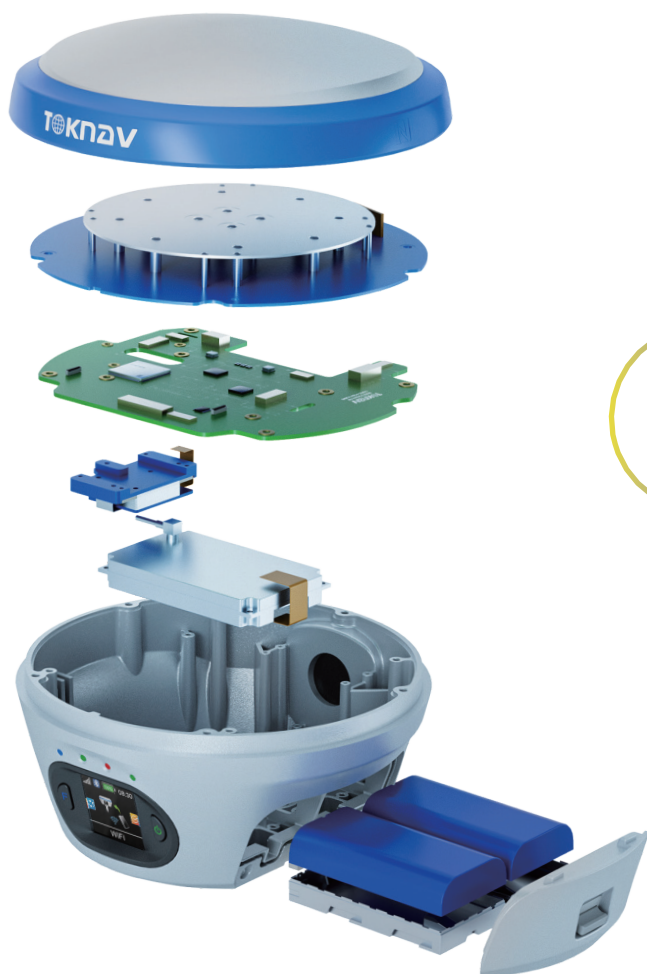
### IP68 Design

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	DIAMETER	WEIGHT
103 mm	160 mm	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
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Correction I/O Protocol	RTCM 3.X
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Frequency	20Hz max
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Reacquisition Time	<1s
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Cold Start Time	<40s
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## ACCURACY

SINGLE (RMS)	Horizontal: 1.5m / Vertical: 2.5m
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DGPS (RMS)	Horizontal: 0.4m / Vertical: 0.8m
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RTK (RMS)	Horizontal: $\pm$ (8mm+1ppm) Vertical: $\pm$ (15mm+1ppm)
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Time Accuracy(RMS)	20ns
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Static(RMS)	Horizontal: $\pm$ (2.5mm+1ppm) Vertical: $\pm$ (5mm+1ppm)
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Speed Accuracy(RMS)	0.03m/s
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Tilt Correction (Within 60°)	<2cm
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AR Stakeout Accuracy	Horizontal: $\pm$ (8mm+1ppm) Vertical: $\pm$ (15mm+1ppm)
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Photogrammetry Accuracy	Error of 2-4 cm within 2-15 meters.
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## SYSTEM PLATFORM

Bluetooth	BR+EDR+BLE
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WIFI	802.11 b/g/n
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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
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Storage	32GB Storage
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### 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)
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Work time	Over 20 hours (when applying controller network mode)
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External power	9~24VDC
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## ENVIRONMENT

Work Temperature	-20°C~+60°C
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Storage Temperature	-20°C~+70°C
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Shock Resistance	Can withstand a 1.5m drop at normal temperatures
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Protection Rating	IP68
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## PHYSICAL

Materials	Magnesium alloy main body, ABS/PC top cover
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Dimensions	Ø160mm*103mm
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Weight	850g(without battery)
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## ACCESSORIES

T40Pro	1 Unit
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External Battery	2 PCS
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Battery Charging Cradle	1 PCS
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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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