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TOKNAV



GNSS Receiver **T30** Laser Measurement RTK

T30 GNSS Receiver

T30 is a full-featured GNSS receiver designed for long battery life and high precision. It includes an advanced positioning module supporting full-system and multi-frequency satellite signal tracking. Equipped with 4G universal connectivity, Bluetooth, WiFi, a 5W data radio, and a large-capacity battery, it can operate continuously for up to two days on a single charge. The device integrates a high-precision inertial navigation system combined with AR and laser camera technology for AR stakeout and laser measurement, and augmented reality plotting, making surveying tasks more efficient and convenient.

CHARACTERISTIC

Linux Intelligent System

Linux+ARM Cortex-A7, the intelligent system platform, brings efficient computing and unlimited expansion of product functions to users.

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(PPP), GPS L1/L2/L5, GLONASS L1/L2/L3, Galileo E1/E5a/E5b/E6(PPP), QZSS L1/L2/L5.

Full Netcom 4G Communication

Based on the Linux platform, this full netcom 4G solution supports mobile, Unicom, Telecom 2/3/4G networks for better compatibility and stronger, more stable connections.

Visualized Laser Measurement

Featuring a high-precision, millimeter-grade laser ranging module and a high-definition camera, the receiver enables precise point-and-measure functionality. The combination of high-accuracy inertial navigation and the camera's HD visuals ensures seamless operation even in complex environments.

AR Real-Time Stakeout

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

Long Endurance

Built in 13800mAh battery ensures continuous working time of more than 2 days under normal operation.

T30 GNSS Receiver

Laser Measurement RTK

Main body magnesium alloy
ABS/PC top cover

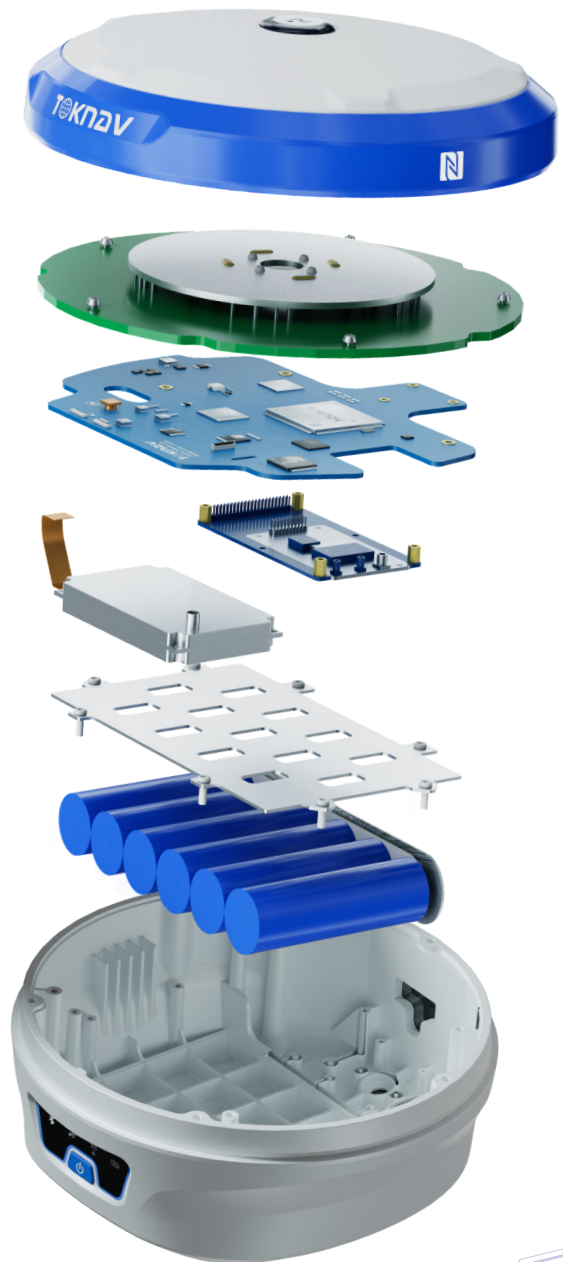
1408 Channel
GPS GLONASS BDS GALILEO
QZSS SBAS

Integrated 4G and 5W radio enable
simultaneous network and radio
differential transmission

7.2V, 13800mAh
Over 48 Hours

Visualized Laser
AR Stakeout

AR Real-Time Stakeout
Intelligent route planning
50% efficiency improvement



LASER MEASUREMENT



HEIGHT	DIAMETER	WEIGHT
104.9mm	174.9mm	1500g

Precise navigation with **2.5cm** accuracy up to **5 meters**.
Enhanced with Green Laser.
Expands the range of measurable objects.

SPECIFICATION

SYSTEM

HARDWARE SYSTEM	ARM Cortex-A7 1.8GHz
OS	Linux

GNSS

GPS	L1 C/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)
Timing Precision (RMS)	20ns
Static Mode Precision (RMS)	Horizontal: $\pm$ (2.5mm+1ppm) Vertical: $\pm$ (5mm+1ppm)
Velocity Estimation (RMS)	0.03m/s
Tilt Correction (Within 60°)	<2cm
Laser Measurement	The three-dimensional accuracy of laser tilt measurement within 5m: no more than 2.5cm

SYSTEM PLATFORM

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 high-power transceiver Frequency Range: 410~470MHz Power: 5W Protocols: TRIMTALK, TRIMMK3, SOUTH, TRANSEOT Air Baud Rate: 9600, 19200bps

Bluetooth	BR+EDR+BLE
WIFI	802.11 b/g/n
Storage	32GB storage

Laser Camera	Sensor size: 1/3.06 inch Aperture:f/2.9 Resolution: 4224*3200 Field of view:D44°H=35°V=26.5° Distortion: < 1%
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AR Camera	AR real-time stakeout supported Sensor size: 1/2.8 inch Aperture: f/2.5 Resolution: 1920*1080 Field of view: D70.3°H62.7°V38.6° Distortion: < 0.38%
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INDICATOR

Power Indicator	Indicates power and charging status
Differential Signal Indicator	Indicates differential signal transmission status
Satellite Indicator	Indicates satellite reception status
Bluetooth Indicator	Indicates Bluetooth connection status

BATTERY / CHARGE

Capacity	7.2V, 13800mAh
Endurance	Over 48 hours(when applying controller network mode)
Charging	Supports USB PD 15V/2A and 5V/3A (With adaptive dynamic current adjustment)

ENVIRONMENT

Operating Temperature	-20°C~+60°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	Φ174.9 * 104.9mm
Weight	1500g

ACCESSORIES

T30	1 Unit
Power adapter	1 PCS
Type-C To Type-C	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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