T40 GNSS Receiver

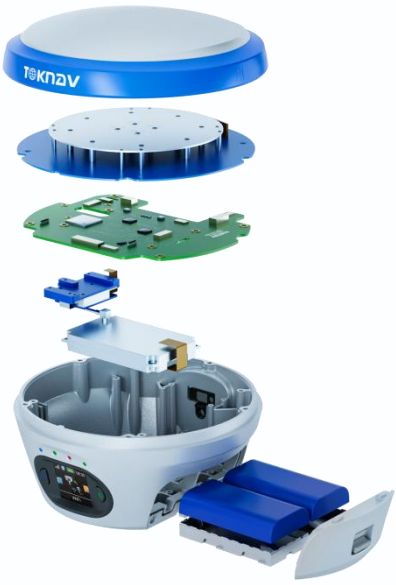
T40 is a versatile GNSS receiver equipped with dual-laser cameras. It integrates a high-precision positioning module, IMU, AR, laser technology, and laser visualization to enable high-precision positioning, tilt measurement, AR real-world staking, and visualized laser point measurement. It boasts a maximum testing radius of up to 30 meters. 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

Full-System, Multi-Frequency GNSS Receiver

The receiver integrates a high-precision positioning module with 1,408 high-speed channels. It supports full-system and multi-frequency signal reception and processing, including: BDS: B1I, B2I, B3I, B1C, B2a, B2b, GPS: L1 C/A, L1C, L2C, L5, GLONASS: L1, L2, L3, Galileo: E1, E5a, E5b, E6, QZSS: L1, L2, L5, SBAS and NavIC systems.



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.

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.

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.

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ITEM		SPECIFICATION	REMARKS
HARDWARE SYSTEM		**ARM Cortex-A7 1.8GHz**	
OS		**Linux**	
GNSS	GPS	L1 C/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	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: ±(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 Stake Out Accuracy	Horizontal: ± (8mm+1ppm) Vertical: ± (15mm+1ppm)	
	Laser Measurement	⩽2.5cm 3D error within 5m range	
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	
	Radio	Integrated high-power transceiver Frequency Range: 410~470MHz Power: 1W/2W/5W Protocols: TRIMTALK, TRIMMK3, SOUTH, TRANSEOT Air Baud Rate: 9600, 19200bps	
	Storage	32GB storage	
	Laser Module	Type: Class 3R Range: 30m Precision: ±5mm±100*10-6*D， (D: Measurement Distance) Wavelength: 520±20nm Power: 3.8mW	

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	Laser Assist Camera	Sensor：1/3.06 inch Resolution: 4224x3200 FOV: D44°H35°V26.5° Distortion: ＜1%	
	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/CHARGE	Capacity	7.2V, 3400mAh*2 (Removable, dedicated charger)	
	Endurance	Over 20 hours(when applying controller network mode)	
	Charging	9~24VDC	
ENVIRONMENT	Operating Temperature	-20℃~+60℃	
	Storage Temperature	-20°C~+70°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	Φ160 * 103mm	
	Weight	850g(without battery)	
ACCESSORIES	T40	1 Unit	
	External Battery	2PCS	
	Battery Charging Cradle	1 PCS	
	Radio Antenna	1 PCS	

▲ 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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