T30 GNSS Receiver

T30 is a fully-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 technology for AR stakeout and laser measurement, and augmented reality plotting, making surveying tasks more efficient and convenient.



HEIGHT DIAMETER WEIGHT 104.9_{mm} 174.9_{mm} 1500_g

CHARACTERISTIC



Linux Smart System

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

Full System GNSS Reception



4G

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), and QZSS L1/L2/L5.

Full Netcom 4G Communication

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



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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.



IP68 Design

Industrial-grade design, robust magnesium alloy casing, meeting IP68 standards for durability and reliability.

	ITEM	SPECIFICATION	REMARKS
HARDWARE SYSTEM		ARM Cortex-A7 1.8GHz	
	OS	Linux	
	GPS	L1 C/A, L1C, L2P(Y), L2C, L5	
	GLONASS	L1, L2, L3	_
	BDS	B1l, B2l, B3l, B1C, B2a, B2b	PPP-B2b, PPP-E6
	GALILEO	E1, E5a, E5b, E6	SBAS supported
	QZSS	L1, L2, L5	
	SBAS	L1	
GNSS	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	
	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	
ACCURACY	Static Mode Precision	Horizontal: ± (2.5mm+1ppm)	
ACCURACY	(RMS)	Vertical: ± (5mm+1ppm)	
	Velocity Estimation (RMS)	0.03m/s	
	Tilt Correction (Within		
	60°)	<2cm	
		The three-dimensional accuracy of laser tilt	
	Laser Measurement	measurement within 5m; no more than 2.5cm	
	Bluetooth	BR+EDR+BLE	
	WIFI		
	VVIFI	802.11 b/g/n	
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: 1W/2W/5W Protocols: TRIMTALK, TRIMMK3, SOUTH, TRANSEOT Air Baud Rate: 9600, 19200	
	Storage	32GB storage	
	AR Camera	Supports AR real scene stakeout 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%	
	Power Indicator	Indicates power and charging status	
INDICATOR	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)	TBD
	Charging	Supports USB PD 15V/2A and 5V/3A	With adaptive dynar 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	



	ITEM	SPECIFICATION	REMARKS	
HARDW	ARE SYSTEM	ARM Cortex-A7 1.8GHz		
	OS	Linux		
	GPS	L1 C/A, L1C, L2P(Y), L2C, L5	PPP-B2b, PPP-E6,	
	GLONASS	L1, L2, L3		
	BDS	B1I, B2I, B3I, B1C, B2a, B2b		
	GALILEO	E1, E5a, E5b, E6	SBAS supported	
	QZSS	L1, L2, L5		
	SBAS	L1		
GNSS	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		
	SINGLE (RMS)	Horizontal: 1.5m; Vertical: 2.5m		
	DGPS (RMS)			
	DGPS (RMS)	Horizontal: 0.4m; Vertical: 0.8m		
	RTK (RMS)	Horizontal: ± (8mm+1ppm) Vertical: ± (15mm+1ppm)		
	Timing Precision (RMS)	20ns		
CURACY	Static Mode Precision	Horizontal: ± (2.5mm+1ppm)		
	(RMS)	Vertical: ± (5mm+1ppm)		
-	Velocity Estimation (RMS)	0.03m/s		
	Tilt Correction (Within 60°)	<2cm		
		The three-dimensional accuracy of laser tilt		
	Laser Measurement	measurement within 5m: no more than 2.5cm		
	Bluetooth	BR+EDR+BLE		
	WIFI	802.11 b/g/n		
		LTE FDD:		
	Network	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		
YSTEM		Power: 1W/2W/5W		
ATFORM		Protocols: TRIMTALK, TRIMMK3, SOUTH,		
		TRANSEOT		
		Air Baud Rate: 9600, 19200		
	Storage	32GB storage		
		Supports AR real scene stakeout		
		Sensor size: 1/2.8 inch		
		Aperture: f/2.5		
	AR Camera	Resolution: 1920*1080		
		Field of view: D70.3°H62.7°V38.6°		
		Distortion: <0.38%		
	Power Indicator	Indicates power and charging status		
	Differential Signal			
CATOR	Indicator	Indicates differential signal transmission status		
	Satellite Indicator	Indicates satellite reception status		
	Bluetooth Indicator	Indicates Bluetooth connection status		
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	Endurance	Over 48 hours(when applying controller network mode)	TBD	
	Charging	mode) Supports USB PD 15V/2A and 5V/3A	With adaptive dynami	
IRONMENT			current adjustment	
	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		
	Materials	Magnesium alloy casing with ABS/PC plastic top cover		
YSICAL	Dimensions	Φ174.9 * 104.9mm		
	Weight	1500g		





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