

ROBUST



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Laser Measurement

RSat 10

RTK Receiver



Characteristics

- ▶ Laser Measurement
- ▶ AR Real-Time Stakeout
- ▶ Remote VPN
- ▶ 2.5mm static accuracy
- ▶ 60°IMU
- ▶ 13800mAh,48h battery backup

The RSat 10 GNSS RECEIVERS (LASER RTK)

The RSat 10 is 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. Also integrated a high-precision inertial navigation system combined with AR and laser technology for tilt and laser measurement, and augmented reality plotting, making surveying tasks more efficient and convenient.



Characteristic

Linux Smart System

Runs on a Linux+ARM Cortex-A7 platform, offering high-efficiency computing and infinite scalability of product functions.

Full System GNSS Reception

The receiver integrates a high-precision positioning module, utilizing 800+ channels to support a comprehensive range of signals including BDS (B1I/B2I/B3I/B1C/B2a/B2b), GPS (L1/L2/L5), GLONASS (L1/L2/L3), Galileo (E1/E5a/E5b/E6), 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.

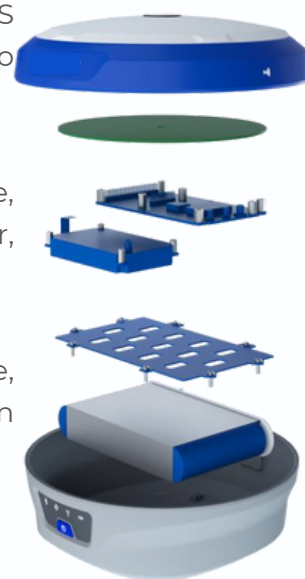
AR Real-Time Stakeout

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 Standards for Durability and Reliability.

IP68



RSat 10 GNSS RECEIVERS (LASER RTK)

ITEM		SPECIFICATION	REMARKS
HARDWARE SYSTEM		Qualcomm Cortex-A7	
OS		Linux	
GNSS	GPS	L1 C/A, L1C, L2P(Y), L2C, L5	
	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	
	Channel	800+	
	Standard Output	NMEA-0183	
	Correction I/O Protocol	RTCM 3.X	
	Frequency	20Hz	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)	0.0 3m /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	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: 5W(37 \pm 1dBm) 1W(30 \pm 1dBm) Protocols: TRIMTALK, TRIMMK3, SOUTH, TRANSEOT Air Baud Rate: 9600, 19200	
	Storage	32GB storage	
	Camera	AR Real-Time Stakeout Supported	
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)	TBD
	Charging	Supports USB PD 15V/2A and 5V/3A	With adaptive dynamic current adjustment

Manufacture by, Advanced Surveying Instruments (India) Pvt. Ltd.
Marketed By, BB Marketing Technologies Pvt. Ltd.,

RSat 10 GNSS RECEIVERS (LASER RTK)

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	≤2kg	TBD
ACCESSORIES	RSat 10	1 Unit	
	Power adapter	1PCS	
	USB A To Type-C Data Cable	1PCS	
	Radio Antenna	1PCS	

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



ISO 14001:2015

ISO 9001:2015



Standard Compliance

