



# 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

**ADVANCED SURVEYING INSTRUMENTS (INDIA) PVT. LTD., New Delhi, INDIA**

# RSat 10 GNSS RECEIVERS

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 1408 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

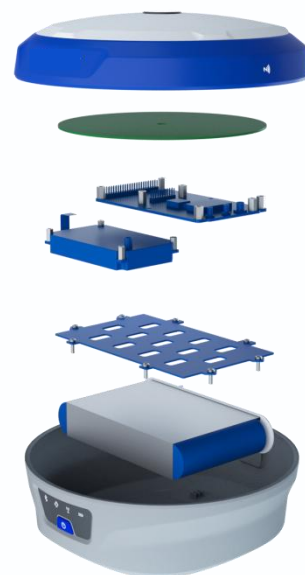
Equipped with a high-precision millimeter-level laser ranging module, combined with high-precision inertial navigation for accurate laser targeting in complex environments.

### 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 IP68 Standards for Durability and Reliability.



#### Office Address

H-10/103, 1st Floor, Express Arcade,  
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Place, Pitampura, New Delhi - 110034, INDIA



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# RSat 10 GNSS RECEIVERS

ITEM		SPECIFICATION	REMARKS
<b>HARDWARE SYSTEM</b>		<b>Qualcomm Cortex-A7</b>	
<b>OS</b>		<b>Linux</b>	
<b>GNSS</b>	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	1408	
	Standard Output	NMEA-0183	
	Correction I/O Protocol	RTCM 3.X	
	Frequency	20Hz	20Hz Max
	Reacquisition Time	<1s	
	Cold Start Time	<40s	
<b>ACCURACY</b>	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	
<b>SYSTEM PLATFORM</b>	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	
<b>INDICATOR</b>	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	
<b>BATTERY/CHARGE</b>	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

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# RSat 10 GNSS RECEIVERS

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	Φ 174.9 * 104.9mm	
	Weight	≤2kg	TBD
ACCESSORIES	T30Pro	1 Unit	
	Power adapter	1 PCS	
	USB A To Type-C Data Cable	1 PCS	
	Radio Antenna	1 PCS	

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



## ISO 14001:2015

## ISO 9001:2015



### Standard Compliance



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