



# R27 GNSS Receiver

Compact GNSS Inertial RTK for high-precision positioning in various industries.



## WHY CHOOSE ALLYNAV R27 GNSS RECEIVER

The R27 GNSS Receiver is a versatile and compact GNSS receiver equipped with a full-frequency GNSS antenna, high-precision positioning board, inertial navigation module, and integrated radio module. It can function as both a rover and a base station, offering high precision, low power consumption, and a portable, easy-to-use design. The R27 is ideal for applications in machine control, surveying, precision agriculture, GIS, marine surveying, construction, mining, aerial photography, and UAV operations.

## KEY FEATURES



### Full Constellation Support:

Receives signals from all major satellite systems (BDS, GPS, GLONASS, Galileo, QZSS).



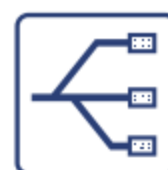
### Durable Design:

IP67-rated for water and dust resistance, and can withstand drops from up to 2 meters.



### Smart Web Platform (WEBUI):

Accessible via mobile devices through Wi-Fi, allowing for easy device information review and mode settings.



### Integrated Radio Module:

Supports multiple communication protocols with a transmission range of up to 5 km.



### Type-C Interface:

Standardized and versatile connection interface.



### Inertial Navigation Module:

Offers quick calibration and achieves 2.5 cm tilt measurement accuracy within 30 degrees.



### Large Storage Capacity:

Includes a 32 GB internal storage card for real-time job data storage.



## BENEFITS

- High Precision**  
 Provides centimeter-level accuracy for precise measurements in various environments.
- Multi-System Compatibility**  
 Enhanced reliability and signal stability by supporting multiple satellite systems.
- User-Friendly**  
 Easy to operate with a smart web interface and mobile connectivity.
- Extended Battery Life**  
 Long-lasting battery ensures continuous operation for extended periods.

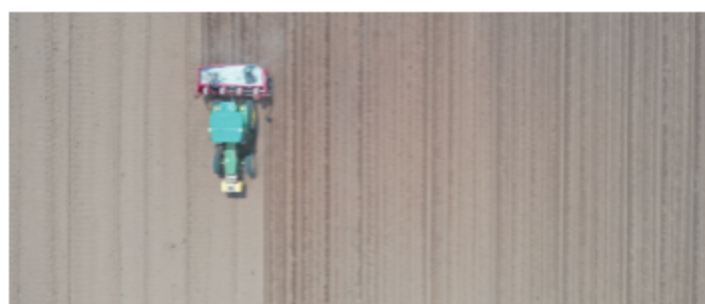
## SPECIFICATIONS

<b>Accuracy Indicators</b>	<b>PHYSICAL PERFORMANCE</b>	Tilt Accuracy: 2.5cm (within 30°)
Single Point Positioning:	Operating Temperature: -40°C~+60°C	<b>Electrical Parameters</b>
Horizontal: 1.5m Vertical: 2.5m	Storage Temperature: -55°C to +75°C	Power Consumption: ≤3.0W
RTK Accuracy:	Dimensions: Φ50mm×64mm	Battery Life: ≥15h (Mobile Station), ≥7h(Base Station)
8mm+1ppm(RMS) 15mm+1ppm(RMS)	Protection Level: IP67	Radio Frequency: 410~470MHz
Static Accuracy:	Impact and Vibration: Resistant to 2m drop	Input Voltage: 9~36V DC
2.5mm+1ppm(RMS) 5mm+1ppm(RMS)	Buttons: 1 button	Battery Capacity: 4000mAh
Speed Accuracy: 0.03m/s	Indicators: 3 LED indicators	Radio Power: 1W/1.5W
<b>Signal Tracking</b>	Humidity: 95% non-condensing	Storage Capacity: 32GB
BDS: B1I/B2I/B3I/B1C/B2a/B2b	Weight: 430g	<b>Initialization Time</b>
GPS: L1C/A/L2P(Y)/L2C/L5	<b>Data Output</b>	Cold Start Time: <15s
GLONASS: G1/G2/G3	Differential Data: RTCM3.X	Initialization Time: <5s (typical)
Galileo: E1/E5a/E5b/E6	Positioning Data: NMEA-0183	RTK Initialization Reliability: >99.9%
QZSS: L1/L2/L5	<b>INERTIAL MEASUREMENT</b>	Reacquisition Time: <1s
	Tilt Angle: 0-60°	Static Data: Binary

## APPLICATION



**SURVEYING**



**PRECISION AGRICULTURE**



**MINING AND CONSTRUCTION**



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