

# Smart Antenna TS100 Series Rover



## INNOVATIVE MULTI-CONSTELLATION SMART ANTENNAS FOR PRECISION AGRICULTURE



### MULTI-CONSTELLATION FOR ADVANCED POSITIONING

TS100 Rover Series is a multi-GNSS compatible system using GPS, GLONASS, BeiDou, Galileo, for simultaneous satellite tracking to offer RTK positioning. It is able to track any visible satellites under challenging conditions, so farm tractors or machines can have a well signal reception when there are obstructions around the farmland.

### SMOOTH PASS-TO-PASS ACCURACY

TS100 Rover Series features the patented T-DIFF™ technology, providing a smooth positioning and exceptional pass-to-pass accuracy. Its steady output is well suited for auto steer applications and helps the machines operate in the steady path. By reducing the impact of machine vibration on complex landform, T-DIFF™ technology ensures the machine controlling and positioning accuracy in a centimeter level.

### CONTINUOUS OPERATIONS IN CHALLENGING CONDITIONS

Powered by the latest stand-alone algorithmic technology, TS100 Rover Series can maintain the RTK positioning accuracy for a certain period when the RTK difference link is disconnected during machine operation. It guarantees the farm machines operate effectively and accurately under a poor positioning condition.

### TILT COMPENSATION ALGORITHM FOR INCREASED ACCURACY

TS100 Rover Series can output the real-time tilt information for machines on rugged farmland, it is convenient for users to improve positioning accuracy through tilt compensation algorithm.

### CORRECTION DATA LINKS SELECTABLE

The 3G/4G modules, built-in/external radio modems and Bluetooth are designed as multiple selections as required.

### MULTIPLE INSTALLATION OPTIONS

TS100 Rover Series supports mounting options of built-in magnet, fixed mounting as well as 5/8-inch screws and M4 screws, offering more convenient and quicker installation in challenging environments.

### BENEFITS

- Multi-Constellation RTK for enhanced accuracy and reliable positioning
- T-DIFF™ technology provides a smooth positioning and exceptional pass-to-pass accuracy
- Bluetooth wireless connectivity makes configuration and diagnosis easier
- 3 magnet mountings offer convenient installation in challenging environments

### KEY FEATURES

- 432 channels
- GPS, BeiDou, GLONASS Galileo signals tracking
- Bluetooth<sup>①</sup>
- Tilt (optional)
- 3G / 4G(optional)<sup>②</sup>
- Build-in Radio (optional)
- External Radio (optional)

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## PERFORMANCE <sup>③</sup>

### Signal Received

GPS	L1/L2/L5
GLONASS	L1/L2
BDS	B1/B2/B3
GALILEO	E1/E5a/E5b

### Horizontal Position Accuracy(RMS)

Single point	1.5m
DGPS	0.4m
RTK	1cm + 1ppm

**Maximum Position Data Rate** 10Hz

### Time to First Fix

Cold Start <50s

**Velocity Accuracy** 0.03m/sRMS

## PHYSICAL AND ELECTRICAL

**Dimensions** 160 diameter x 80 height(mm)

**Weight** <850g<sup>④</sup>

**Connector** 10pin female

### Mounting

3xmagnet mountings

4xM4 screw inserts

1x5/8-inch screw insert

### Power

Input Voltage Range +9VDC to +30VDC

Power Consumption <4.5W<sup>⑤</sup>

### Status LEDs

Power

RTK status

Correction data link

## ENVIRONMENTAL

### Temperature

Operating -40°C to +70°C<sup>⑥</sup>

Storage -55°C to +85°C

**Humidity** 95% non-condensing

**Vibration** GJB150.16-2009, MIL-STD-810

**Compliance** CE, FCC, REACH, RoHS

**Ingress Protection Rating** IP67

## COMMUNICATION PORTS

- 1xRS-232 serial port for user
- 1xRS-232 serial port for external correction data input
- 1xBluetooth
- 1x3G / 4G for correction data input(optional)
- 1x built-in radio for correction data input (optional)

## STANDARD FEATURES

- GPS L1/L2/L5, BDS B1/B2/B3, GLONASS L1/L2, Galileo E1/E5a/E5b position, velocity
- 10Hz data rates
- Field upgradable software
- Differential correction support for RTCM2.x 3.x
- Navigation output support NMEA0183

## HARDWARE OPTIONS

**Tilt** (optional)

**3G / 4G** (optional)

**Build-in Radio**(optional)

**External Radio**(optional)

## OPTIONAL ACCESSORIES

**Interface Cable**

**Radio Antenna**

For the most recent details of this product:

<http://en.harxon.com/products-detail.php?Prolid=162>

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**Version 1** Specifications subject to change without notice.  
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Printed in China  
June 2018

①. 2.0 & 4.0

②. Contact sales for territory of use and frequency

③. Typical value

④. No optional module

⑤. Typical value and no optional module

⑥. Bluetooth: -20 to +70°C

## HARXON SMART ANTENNAS ROVER SERIES

	3G / 4G	Tilt	Built-in Radio(410-470 MHz)	Accessory
<b>TS108</b>	—	✓	—	InterfaceCable
<b>TS108-PRO</b>	✓	✓	✓	Interface Cable Radio Antenna