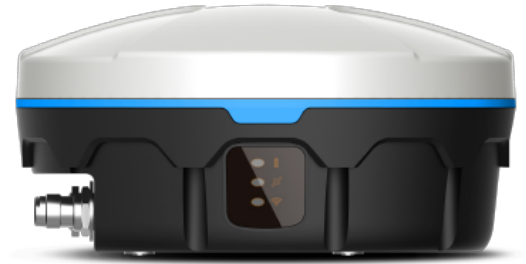


# Smart Antennas TS300 Series



## INNOVATIVE MULTI-CONSTELLATION SMART ANTENNAS FOR PRECISION AGRICULTURE



### MULTI-CONSTELLATION FOR ADVANCED POSITIONING

TS300 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

TS300 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 help 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.

### POSITIONING UNDER CHALLENGING CONDITIONS

Powered by the latest stand-alone algorithmic technology, TS300 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

TS300 Series can output the real-time tilt information for machines on rugged farmland. By optimizing the backend operation, it is convenient for users to improve positioning accuracy through tilt compensation algorithm.

### CORRECTION DATA LINKS

The data links such as 3G/4G modules, external/internal radio transmission modems and Bluetooth of TS300 Series are designed as multiple selections as required.

### MULTIPLE INSTALLATION OPTIONS

Purpose-built for challenging environments, TS300 Series supports built-in magnets simplify mounting, fixed mounting options are also available as 5/8-inch screws and M4 screws, offering a convenient and quick installation.

### 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 tracking
- Bluetooth<sup>①</sup>
- Tilt (optional)
- 3G / 4G(optional)<sup>②</sup>
- Build-in Radio (optional)
- External Radio (optional)

# Smart Antennas TS300 Series

## PERFORMANCE <sup>③</sup>

### Signal Received

GPS	L1
GLONASS	L1
BDS	B1
GALILEO	E1
SBAS	

### Horizontal Position Accuracy(RMS)

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

### Maximum Position Data Rate

10Hz (need to be authorized)

### Time to First Fix

Cold Start <50s

### Velocity Accuracy

0.03m/s RMS

## PHYSICAL AND ELECTRICAL

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

**Weight** <850g<sup>④</sup>

**Connector** 10pin female

### Mounting

3xmagnet mountings

4xM4 screw inserts

1x5/8-inch screw insert

### Power

Input Voltage Range +9 to +30VDC

Power Consumption <3.5W<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, BDS B1, GLONASS L1, Galileo E1, 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?Proid=167>

### en.harxon.com

sales@harxon.com

6/F, Block B, Building D3, TCL International E City, NO.1001 Zhongshanyuan Road, Nanshan District, Shenzhen, China

Tel: +86-755-26989948

Fax: +86-755-26989994

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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

	3G / 4G	Tilt	Built-in Radio (410-470 MHz)	Accessory
TS302	—	—	✓	Interface Cable Radio Antenna
TS304	✓	✓	—	Interface Cable
TS308	✓	✓	✓	Interface Cable Radio Antenna