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TOKNAV


*Precision Agriculture*

# TAG66

## Electric Steering Wheel Autonomous Driving System

# Electric Steering Wheel Autonomous Driving System

TAG66 is an electric steering wheel autonomous driving system. It obtains centimeter-level vehicle positioning through BeiDou high-precision positioning and adjusts the vehicle's direction through an advanced DC servo motor solution. This autonomous steering system uses an integrated controller that combines a 4G module, IMU sensor, UHF radio, and BeiDou positioning module to achieve high-precision autonomous driving. It is suitable for agricultural activities such as sowing, harvesting, spraying, mulching, plowing, and ridge making. It can effectively improve work efficiency and yield while saving fuel, seed, and labor costs.

# CHARACTERISTIC

## Integrated Controller Design

This autonomous steering system uses an integrated controller that combines a 4G, IMU sensor, UHF radio, and BeiDou positioning modules, making it easy to install and transfer between vehicles. There is no need to install additional wheel angle sensors, making installation even easier.

## High Precision

The system provides industry-standard RTK precision, combining BeiDou positioning with INS terrain compensation to ensure a pass precision of 2.5cm even in difficult agricultural terrains. This level of precision and accuracy is valuable for various agricultural activities such as plowing, sowing, and harvesting. By eliminating overlaps and skips, it can increase yield while saving fuel, seeds, and time.

## Excellent Performance

The system easily maintains a precision of ±2.5cm within a speed range of 0.15 to 25 kilometers per hour. With high-precision algorithms, it is very suitable for sowing, planting, spraying, plowing, and other ground operations.

## All-in-One Features

Compatible with various operating modes, including AB line, A+ line, custom curves, and angle harrowing. It supports work area statistics, work trajectory recording, data upload and download, and shared operation modes among multiple vehicles.

## Easy to Use

Users can activate common functions in just a few steps, allowing them to get started quickly and learn on the go.

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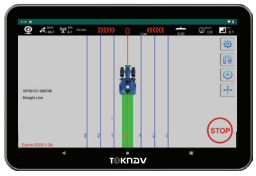
## Electric Steering Wheel Autonomous Driving System

Auto-Steering System

GNSS Receiver

Camera



High-Precision Display and Control Terminal

## System composition

Intelligent Display Screen

Electric steering wheel

Supports receiving external RTK corrections via UHF radio.
Supports wheel angle sensor mode required for specific farm operations.
Supports secondary development for tighter integration of components.

# SPECIFICATION

## RECEIVER

| | |
|---|---|
| GPS | L1, L2, L5 |
| GLONASS | L1, L2 |
| GALILEO | E1, E5a, E5b |
| BDS | B1, B2, B3 |
| Accuracy (RTK) | Horizontal: ±8mm + 1ppm RMS<br>Vertical: ±15mm + 1ppm RMS |
| Working Temperature | -20°C ~+70°C |
| Storage Temperature | -40°C ~+80°C |
| Size | 159*56 mm |
| Network | 2G/3G/4G |
| Dust and Waterproof | IP69K |

## VEHICLE MOUNTED COMPUTER

| | |
|---|---|
| Display Screen | 12-inch, Support 5-point capacitive touth |
| Dual system | Android 11.0<br>Linux 5.10， Qt 5.15.7 |
| Brightness | 750cd/m2 |
| Resolution | 1280*800px |
| I/O | DC_OUPUT 12V output *2<br>IO_INPUT input *2<br>100Mbps Ethernet *1<br>RS232*2 RS485*1 CAN*2 |
| Communication | 4G<br>WiFi 2.4G/5G<br>BT 4.2, BLE<br>USB 3.0*1 |
| Operating Temperature | -30°C ~ +70°C |
| Storage Temperature | -40°C ~ +85°C |
| Protection Level | IP65 |
| Work Humidity | 0%-90%RH |
| Vibration standard (Operational) | MIL-STD-810 |
| Impact standard (Operational) | ISO16750 |
| Power | 9-36V DC Input<br>ACC, State detection for ignition |

## AUTO-STEERING SYSTEM

| | |
|---|---|
| Rated Torque | 7.5 N·m |
| Max RPM | 180 RPM |
| Rated Current | 15A |
| I/O | 1 × CAN |
| Power | (9-32) VDC |
| Motor Dimensions | 165mm × 80.5mm |
| Steering Wheel Diameter | D: 410mm |
| Operating Temperature | -20°C ~ +70°C |
| Storage Temperature | -40°C ~ +85°C |
| Dust & Waterproof Rating | IP65 |

## CAMERA

| | |
|---|---|
| Power Supply | DC12V ±5% |
| Viewing Angle | 120° |
| Resolution | 1280(H) × 720(V) |
| Dust & Waterproof Rating | IP65 |
| Operating Temperature | -20°C ~ +70°C |
| Storage Temperature | -40°C ~ +85°C |

## ACCESSORIES

| | |
|---|---|
| Receiver | 1 Unit |
| Tablet | 1 Unit |
| Steering Wheel | 1 PCS |
| Motor and Driver | 1 PCS |
| Main Cable | 1 PCS |
| Tablet Power Cable | 1 PCS |
| Screw Accessories Pack | 1 PCS |
| Mount | 1 PCS |
| Camera (Optional) | 1 PCS |

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

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