

SAGRO 100

AUTOMATED STEERING SYSTEM
FOR PRECISION AGRICULTURE

Higher Efficiency, Higher Productivity



Singular XYZ

SAGRO 100

AUTOMATED STEERING SYSTEM FOR PRECISION AGRICULTURE

FEATURES

- ▲ Steering accuracy: $\pm 2.5\text{cm}$
- ▲ Ease of installation (in 30 minutes)
- ▲ Simple to calibrate and use (in 15 minutes)
- ▲ High torque
- ▲ Versatile for different tasks
- ▲ Suitable to install in various tractors
- ▲ Operation Mode



Line



Parallel Curve



U-turn



Rectangular
Ambulatory Plane



Harrowing



Land
Enclosure



Route

T10 GNSS TABLET

T10 tablet combines GNSS with the tablet together, which makes the system simpler. With 4G modem, Bluetooth and WIFI, it is ideal to connect with CORS or upload the working information to digital farm. The 10-inch big screen with clear graphic interface is suitable for guidance system with proper guidance software. One device with many options, small investment creates large value.





SA100 GNSS ANTENNA

SA100 GNSS antenna tracks all constellations, as well as the L-band. With its shock resistance, IP67 protection level, it is ideal for tractor automatic pilot.



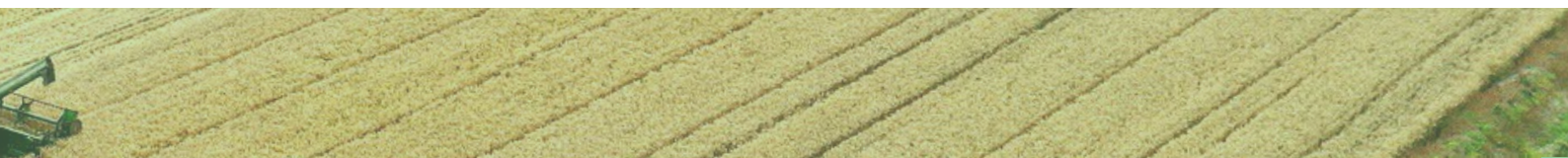
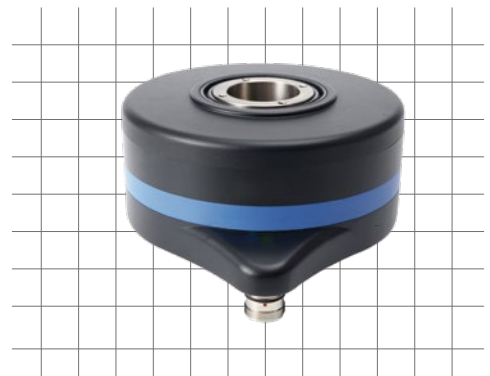
GYROSCOPE SENSOR

Comparing with the traditional wheel angle sensor, the gyroscope sensor is easier to install, which improves the installation efficiency. With the gyroscope sensor, the automatic steering accuracy is greatly improved.



SEM1 ELECTRIC MOTOR

The SEM1 electric motor integrates the electric motor and ECU into one rugged device which could output stable and high torque. Easier to install and maintain makes the auto pilot a reachable solution for all farmers. It works with low noise, low heat and high accuracy. Meanwhile, the easy-to-debug feature provides user-friendly experience for auto pilot developers.



STEERING PERFORMANCE

Steering Accuracy	± 2.5cm
Operation Mode	Line, Parallel Curve, Pivot

T10 GNSS Tablet

GNSS

GPS	L1, L2
GLONASS	L1, L2
BDS	B1, B2
Galileo	E1, E5b
QZSS	L1, L5
SBAS	WAAS, EGNOS, MSAS, GAGAN
RTK Accuracy	H: 10mm+1ppm V: 15mm+1ppm
Data Format	RTCM V2.3/3.0/3.2, NMEA0183
Data Output Rate	Maximum 20Hz

SYSTEM

Operation System	Android 6.0
CPU	Quad Core 1.5GHZ
Memory	2GB RAM+16GB ROM
Flash	T flash, up to 64GB

LCD DISPLAY

Screen	10.1" screens with sun readable capacitive touch screen
Resolution	1024×600 pixels

COMMUNICATIONS

WIFI	2.4GHz IEEE 802.11 a/b/g/n
4G	FDD-LTE (Band 800 / 1800 / 2100 / 2600 MHz) TD-LTE (Band 1900 / 2300 / 2500 / 2600 MHz) WCDMA (Band 850 / 900 / 1900 / 2100 MHz) GSM/GPRS/EDGE (Band 850 / 900 / 1800 / 1900 MHz)
Bluetooth	V4.1
USB Port	1×USB2.0 (Host & Debug)
Serial Port	2×RS232, 1×RS485
CAN Port	2×CAN (J1939, CANOpen, ISO15765)
Ethernet	1×RJ45(100M Ethernet)

ELECTRICAL

Input voltage	9-36 VDC
Power consumption	≤4.5W

PHYSICAL

Size	281×181×42mm
Weight	1.5 Kg

ENVIRONMENTAL

Environmentally Sealed Type	IP67, Waterproof and dustproof
Shock	Designed to survive a 2m drop onto concrete
Operating temperature	-20 °C to + 70 °C (-4 °F to 158 °F)
Storage temperature	-40 °C to + 85 °C (-40 °F to 185 °F)
Humidity	100% non-condensing

SA100 GNSS Antenna

Frequency Range	GPS: L1, L2, L5 GLONASS: L1, L2 BeiDou: B1, B2, B3 Galileo: E1, E5a/E5b, AltBoc L-Band SBAS
LNA Gain	40dB
Dimension	Φ152x62.2mm
Connector	TNC Female
Weight	374g
Mounting Configuration	5/8"x 11 Threaded
Operating Temperature	-40 °C to +85 °C (-40 °F to 185 °F)
Environmentally Sealed Type	IP67

D1-D External Radio (Optional)

Working mode	Tx&Rx
Frequency	410-470 MHz
Power	1W
Protocol	Transparent, TT450s
Channel spacing	12.5KHz
Input voltage	6-28 VDC
Power consumption	≤4.5W
Operating temperature	-40 °C to + 70 °C (-40 °F to 158 °F)
Humidity	100% non-condensing
Environmentally Sealed Type	IP67, Waterproof and Dustproof
Shock	Designed to survive a 2m drop onto concrete

External Camera (Optional)

Resolution	720×576 pixels
CMOS	1/3" CMOS
Input voltage	12-24 VDC
Mode of lighting	Infrared
Environmentally Sealed Type	IP67
Night vision	Infrared night vision

Standard Package

T10 GNSS Tablet	×1
SEM1 Electric Motor	×1
Gyroscope Sensor	×1
SA100 GNSS antenna	×2

All specifications are subject to change without notice.