



# EAS301 Pro

## Precision Steering System

EAS301 Pro is an autopilot control technology that adapts to different crops, regions and characteristics of agricultural equipment, relying on the advantages of the whole industry chain in the field of satellite positioning. While greatly improving the operation efficiency of agricultural machinery, it makes sure the centimeter-level accuracy of repeated farming operations, reduces the labor intensity of drivers, and increases the unit output.

### High Control Accuracy

The high torque and high-speed electric steering wheel make the control faster. The controller with multi constellations and multi frequency GNSS board is built in to make the control more accurate up to 2.5cm.

### Big Touch Screen

The 10-inch screen with 1024 x 600 resolution makes ST6 display a high-fidelity device. 750-nits brightness makes it Sunlight viewable.

### Atlas Correction Service

Atlas is a service to provide global precision correction service over L-band satellites. With ATLAS subscription, EAS301 Pro can achieve centimeter accuracy without any base station.

### aRTK Function

The innovative aRTK technology is used to maintain RTK-level accuracy, availability, and reliability when RTK corrections fail without additional cost.

### Terrain Compensation Technology

Combing GNSS positioning, heading and 9-axis MEMS sensor fusion technology, EAS301 Pro provides the capability to detect roll, pitch of vehicle to ensure straight lines.

### Angle Sensor Free

Exclusive encoder mode allows to automatic steering during 1km-12km without angle sensor.

### NMEA 0183 Output

Support GGA, GSV, VTG, GSA, ZDA, RMC, GST Messages output.

### Ultra-low Speed Driving

At the speed of 0.056km/h, the system can ensure the straight-line accuracy of 2.5cm .

# Product Specification

## EAS301 Pro System Performance

Accuracy	2.5cm ( $\leq 9\text{km/h}$ ) Dry land 5cm ( $\leq 9\text{km/h}$ ) Paddy field
Line acquisition distance	<10m
Vehicle velocity range	0.1km/h-18km/h
Correction Data Source	GSM, Radio, L-band, SBAS
Data formats	RTCM3.X, CMR, ROX
Optional Sensor	Angle Sensor, External IMU, Rear Camera



# Product Specification

## ST6-Display



### System

Processor	Qualcomm SDM450, Octa-core ARM Cortex-A53 64-bit CPU @ 1.8 GHz
OS	Android 9.0
RAM	2 GB
ROM	16 GB

### Screen

Screen Size	10.1" LCD
Resolution	1280 x 600
Brightness	750 nits
Touch Panel	Capacitive touch screen, multi-point anti-glare

### Communication

Bluetooth	BT2.1+EDR/3.0/4.1/4.2 BLE
Wi-Fi	2.4G+5G, IEEE802.11 g/b/n /ac
GSM	LTE FDD : B1/B3/B5/B8
	LTE TDD : B34/B38/B39/B40/B41
	TD-SCDMA : B34/B39
	WCDMA : B1/B8
	CDMA2000/EVDO : BC0
	GSM : 900/1800MHz

Port	<ul style="list-style-type: none"> <li>1 x Serial Port, 6-pin</li> <li>1 x Serial Port, 12-pin</li> <li>1 x Serial Port, 12-pin</li> <li>1 x USB Type-A, USB Host</li> <li>1 x USB, Micro-USB, USB Device</li> <li>1 x SIM Card, SDHC</li> <li>1 x TF card, 128G Max</li> <li>1 x GSM, Fakra D</li> </ul>
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### Power Supply

Input voltage	7 - 36 VDC
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### Physical

Dimension	270mm×190mm×40mm
Weight	1.3 kg
Button	1 x Power Button
Battery	None
Humidity	90%
Operating Temperature	-20°C ~ +70°C
Storage Temperature	-30°C~ +85°C
Water/Dust Proof	IP65
Vibration	ISO 16750/MIL-STD-810G



# Product Specification

## MC5 ECU



GNSS Performance	
Channels	1100
Satellites Tracking	GPS: L1CA/L1P/L1C/L2P/L2C/L5 BDS: B1I/B2I/B3I/B1C/B2a/B2b/ ACEBOC GLONASS: G1/G2/G3, P1/P2 GALILEO: E1/E5a/E5b/E6/ALTB QZSS: L1CA/L1C/L2C/L5/LEX IRNSS: L5 SBAS: L1/L5 L-Band: Atlas H10/H30/Basic
Update Rate	10Hz
Horizontal Positioning Accuracy	Single: <1.2m (RMS)
	DGNSS: <0.3m (RMS)
	SBAS: <0.3m (RMS)
	RTK: 8mm+1ppm (RMS) Atlas H10: 0.04m (RMS)
Heading Accuracy	<0.08°rms with 1.0 m baseline
Re-acquisition	<1s
Communication Interface	
Bluetooth	4.2
WiFi	IEEE 802.11 b/g/n
GSM	Global GSM/WCDMA/LTE
Port	1 x Serial Port, 18-pin

	1 x SIM Card 1 x GNSS Heading, TNC 1 x UHF, TNC
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Internal Radio	
Frequency Range	410-470 MHz & Hopping 902.4-928 MHz
Channel Spacing	12.5 KHz / 25 KHz
Protocol	HZSZ, TrimTalk 450S, PCC-GMSK, South

Environment	
Operating temperature	-40°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Humidity	95%
Shock	EP455Section 5.14.1
Vibration	EP 455 section5.15.1 (Random)
Water/Dust Proof	IP67

Power	
Input Voltage	9-28VDC (ISO 16750 4.2 B-H)

Physical	
Dimension	162.2mm×162.8mm×70.2mm
Material	Magnesium alloy
Weight	1.284kg±20g



# Product Specification

## EW1- Electric Steering Wheel



<b>Motor</b>	
Working voltage	9-16V DC
Nominal voltage	12V DC
Output torque	DC9V/6.5N.m ; DC12V/8.5N.m
Maximum output torque	13 N·m
Maximum rotation speed	100 RPM
Load steering error	< ±5°
Response delay	full range: 10Hz; straight walking: 20Hz
<b>Working Environment</b>	
Operating temperature	-20°C ~ +70°C (-68°F ~ 158°F)
Storage temperature	-40°C ~ +85°C (-104°F ~ 185°F)
Mechanical shock	EP455 5.14.1
Vibration characteristics	EP455 5.15.1& 5.15.2

<b>Communication</b>	
Interface	ALTW/1DC-06PMMS-LC7001
Communication Protocol	SAE J1939/ISO11783 CAN BUS
<b>EMC / Safety / Environmental Protection</b>	
Radiated interference	IAW ISO14982-2009 /6.4 (broadband) / 6.5 (narrowband)
Radiation immunity	IAW ISO14982-2009/6.6
Electrostatic discharge (ESD)	IAW ISO14982-2009/6.7
Environmental protection standard	2011/65/EU RoHS 2.0
<b>Physical</b>	
Dimensions	Φ180×80mm
Weight	4.6kg



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