Precision Agriculture Catalogue

ARCHIMEDES INNOVATION TECHNOLOGY CO., LTD.

Accelerating Global *Autonomy* & *Intelligence*

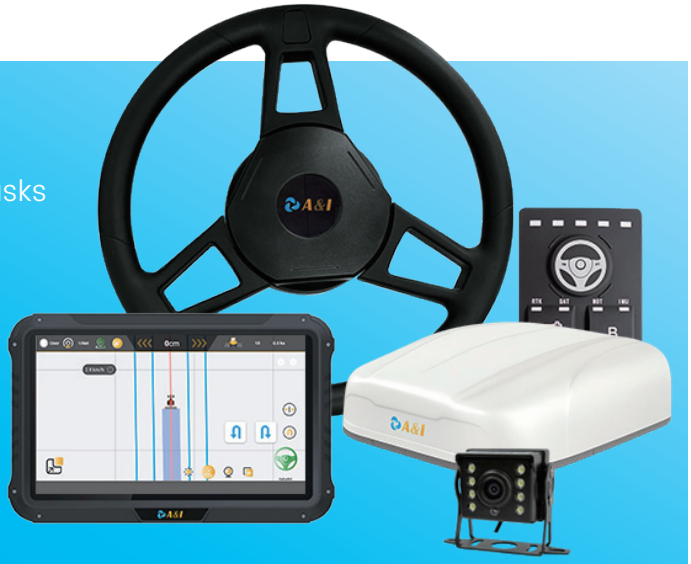
Contents

Product Introduction

AS10

Autosteering System

The AS10 Autosteering System is designed to help agricultural machine operators perform tasks more easily and efficiently. This system assists your agricultural equipment in better route planning and ensures it follows the set path strictly. Upon reaching the designated land boundary, it can prompt or automatically assist the vehicle in turning. The system can also interact with farming tools to enable smarter operations.



- **Full GNSS signal and PPP**

  Steer in centimeter-level accuracy with GNSS RTK corrections. Free PPP services are available for decimeter-level accuracy.

- **Wide Compatibility**

  Adapts to various agricultural machinery, including front/rear-wheel steering, tracked machines, articulated vehicles, transplanters, and self-propelled sprayers.

- **Accurate steering**

  Following to the designed routes, the steering and U-turn are in high accurate.

- **All-Terrain Adaptability**

  Supports multiple guidance modes, adapts to complex or irregular fields, and continuously provides reliable navigation services.

AS10

Parameters

GNSS	GPS, BDS, GLONASS, Galileo, IRNSS, QZSS
	L-band: commercial service(optional), B2b PPP, Galileo HAS
Operating Accuracy	Horizontal: ±8 mm + 1 ppm RMS
	Vertical: ±15 mm + 1 ppm RMS

System

Display Size	10.1 inch Touch Screen
Camera Resolution	1920*1080
Field of View	150°
Voice Prompt	Support
WIFI	Support
Auto Exposure Control	Support
Lighting	Support
Differential Communication Mode	4G Global Network
	UHF Radio 410-470 MHz

Electrical

Input Voltage	9-36V
Power Consumption (Entire System)	<70W

Physical Characteristics

Total Weight	<7kg
Operating Temperature	-20° ~ 70°
Storage Temperature	-40° ~ 85°
IP Rating	Receiver IP67
	Tablet IP67
	Camera IP67
	Motor IP65

ARS30

Farm Reference Station

Permanent RTK reference for repeatable field operations

Fxed GNSS base station designed as the permanent positioning reference for precision agriculture. Installed at the farm, it provides a stable and continuous RTK reference that ensures repeatable field operations across days, months, and seasons. The same guidance lines can be reused year after year, keeping planting, spraying, and harvesting perfectly aligned. With industrial-grade power backup, reliable communication, and a high-stability GNSS antenna, the base station operates 24/7 to serve multiple machines simultaneously. It forms the positioning backbone of the entire farm and can be expanded into a multi-station or VRS network, supporting large-scale, high-efficiency farming with consistent and reliable accuracy.

- **Season-to-season repeatable guidance**

  A permanently referenced base station ensures that all guidance lines remain consistent across days, months, and seasons — so the same AB lines can be reused year after year.

- **Farm-wide RTK reference infrastructure**

  The fixed base station forms the permanent RTK reference for the entire farm, supporting multiple machines and enabling unified guidance across all fields.

- **Stable signal and power for 24/7 operation**

  Industrial-grade power and communication design enables continuous 24/7 operation, even during power outages, ensuring uninterrupted RTK service throughout the farming season.

- **High-stability antenna for long-term accuracy**

  High-stability GNSS antenna design guarantees a fixed and repeatable reference point, which is essential for long-term accuracy and line repeatability in precision farming.

- **Network-ready: single base to VRS expansion**

  The system can be expanded from a single farm base station to a multi-station or VRS network, supporting large agricultural operations and regional service providers.

ARS30

GNSS PERFORMANCE

GNSS	Channels	1408
	GPS	L1 C/A, L1C, L2P(Y), L2C, L5
	BDS	B1I, B2I, B3I, B1C, B2a, B2b
	GLONASS	L1, L2, L3
	GALILEO	E1, E5a, E5b, E6
	QZSS	L1, L2, L5
	SBAS	L1
	NavIC	L5

COMMUNICATION

Front Panel					
SIM	SIM card slot X 1	**TF**	TF card slot X 1	**USB**	TYPE-C X 1
Rear Panel					

26pin Connector	Power X 1, CAN X 1, RS232 X 2, Ethernet X 1, 1PPS X 1	
4G	SMA X 1	
	LTE (FDD): B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66	
	LTE (TDD): B34/38/39/40/41	
Internal Radio	SMA×1	
	Standard Internal Rx/Tx: 410 to 470 MHz	
	Transmit power: 0.5W, 1W, 2W	
	Protocol: TRANSEOT, TRIMTALK, TRIMMARK3, SOUTH	
External Radio	Frequency Range: 410-470MHZ	
	Channel Spacing: 25KHZ, 12.5KHZ	
	Air Data Rate: 4800bps/9600bps/19200bps	
	RF Output Power	High Power (35W): 45.5+0.5dBm@DC 12V
		Medium Power (22W): 43.4+0.5dBm@DC 12V
		Low Power (5W): 37+1dBm@DC 12V
	Protocol: TRIMTALK, TRIMMK3, SATEL, TRANSEOT	
GNSS Connector	TNC X 1 or TNC X 2	

ELECTRICAL

Power Consumption(1)	2.6W～6.5W	**Power Input**	9 ～ 48V	**Endurance**	>8h
Battery Compartment	Removable rechargeable Li-ion battery × 1 , 3400mAh, 7.2V, 24.48Wh				

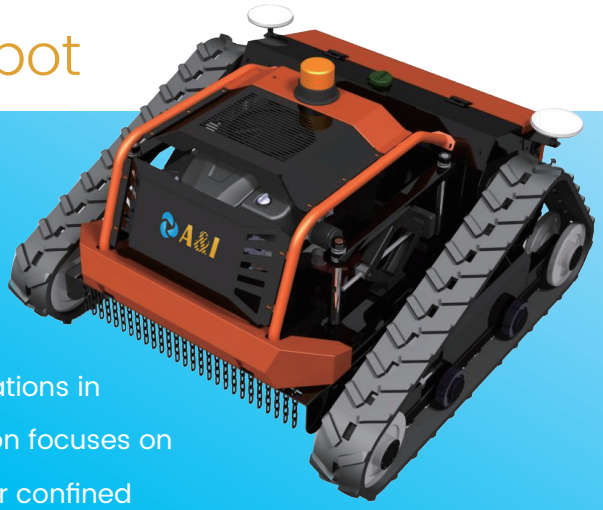
CERTIFICATION

RoHS*, WEEE*, CE, FCC Class B Part 15*, UKCA*, ISO 9001-2015*

(1) Power consumption depends on the user's configuration

AWR27

Hybrid Tracked Weeding Robot



The AWR27 is a high-precision positioning unmanned hybrid tracked mower. It integrates satellite navigation and intelligent control technologies. It is available in two versions: The Intelligent Navigation Version supports autonomous driving and is suitable for unmanned operations in large and regular areas, while the Remote Control Version focuses on flexible manual control, making it ideal for small-scale or confined environments. It is designed for scenarios such as orchards, greenhouses, airports, photovoltaic power plants, river embankments, and highway slopes.

- **48V Hybrid Power**
  - Engine-generated electricity, electric drive
- **Flexible Cutter–Engine Coupling**
  - Absorbs impact torque, prevents engine stalling
- **Autonomous Operation (Optional)**
  - GNSS-based navigation, straight lines, adaptive curves, custom paths, geofencing
- **Rubber Tracked Undercarriage**
  - No track derailment, superior terrain capability, zero-radius turning
- **Floating Underslung Cutting System**
  - Excellent ground following, reduced ground contact, effective forward & reverse mowing

REMOTE ENGINE ON/OFF	**838**mm CUTTING WIDTH	**4.2**km/h MOWING SPEED	SLOPE CLIMB: **50** DEGREES
HUMAN OR ANIMAL DETECTION	REMOTE CONNECTIVITY UP TO **200**m	**27** HORSEPOWER ENGINE	

AWR27

Powertrain

Power Type	· Hybrid	· 2 Cylinder 4 Stroke Engine	· 764cc Engine Displacement
Engine Power	27 hp		
Generator	56 V / 70 A		
Battery	48 V / 20 Ah		
Drive Motors	1.2 kW × 2		
Starting Method	Electric start		
Fuel Tank Capacity	10 L		

Performance

Maximum Speed	· 5.5 km/h Transport Speed	· 4.2 km/h Mowing Speed-1	· 3 km/h Mowing Speed-2
Working Efficiency	0.47 ha/h		
Minimum Turning Radius	0 m		
Maximum Climbing Ability	50°		
Operating Time	4.5 h		

Mowing Deck

Cutting Type	Flail blades	**Deck Structure**	9.5 mm thick deck across spindles
Cutting Width	838 mm	**Spindle**	Steel spindle
Cutting Height	30 – 180 mm		

Controller / Options

Remote Control Distance	200m			
Control System	· Dual Joystick	· Malfunction Alert	· Cruise Control	· One Button Reverse
	· LCD Screen	· Electronic Brake		
Optional	· Automatic Navigation		· Beyond Visual Line-Of-Sight (Bvlos)	

Tracks

Structure	Rubber molded over steel links	**Reinforcement**	Steel cords
Track Width	150 mm	**Tread Pattern**	Tread Style 'J '

Dimensions

Overall Dimensions	1350 × 1300 × 700 mm
Machine Weight	430 kg

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