
WANJI POWER EQUIPMENT • COMMERCIAL VEGETATION
MANAGEMENT

AUTONOMOUS LAWN MOWER

COMMERCIAL SERIES 2026

Full-Electric | Hybrid-Electric | RTK Autonomous

Orchard / Embankment / Photovoltaic / Municipal / Airport

TIANJIN WANJI IMP. & EXP. TRADING CO., LTD.

www.wanji-imp.com | info@wanji-imp.com

CONTENTS

01	Brand & Technology Overview	3
02	WANJI T1-900A (T1 Tracked Hybrid)	4-5
03	WANJI R1 (Wheeled Electric)	6-7
04	WANJI R3 (Compact Electric)	8-9
05	Autonomous Navigation System	10
06	Commercial Applications	11
07	Specifications Comparison	12
08	OEM / ODM & Contact	13

01

Brand & Technology

WANJI Commercial Autonomous Mower Series

WANJI commercial autonomous mowers are engineered for unattended, high-efficiency vegetation management across industrial, agricultural and municipal sites. Powered by self-developed RTK-GNSS navigation with optional LiDAR obstacle avoidance, our machines deliver centimeter-level path accuracy on both wheeled and tracked platforms, proven in photovoltaic farms, orchards, river levees and airports.

T1-900A

T1 SERIES

PLATFORM

Tracked | Hybrid-Electric

CAPACITY

900 mm cut | 325 kg

APPLICATIONS

Orchard / Dam / PV

R1

R1 SERIES

PLATFORM

Wheeled | Full Electric

CAPACITY

790 mm cut | 118 kg

APPLICATIONS

Airport / Park / Estate

R3

R3 SERIES

PLATFORM

Wheeled Compact | Full Electric

CAPACITY

450 mm cut | 62 kg

APPLICATIONS

Property / Green Belt

Core Technology

- RTK-GNSS centimeter-level positioning (BeiDou / GPS / Galileo / GLONASS)
- Self-developed navigation algorithm with fixed-obstacle avoidance
- LiDAR fusion option for dynamic obstacle detection and navigation
- Electronic fence & virtual wall (patented technology, CN115239905B)
- Remote control, real-time alarm and fleet management via mobile APP
- Removable LiFePO4 / Li-ion packs with fast charging and automatic dock recharge (not hot-swappable)

04

WANJI T1-900A

Tracked Hybrid Series | Hybrid-Electric | 900 mm Cut | 40 deg Slope

All-terrain tracked workhorse for orchard, embankment, photovoltaic and municipal vegetation management

KEY FEATURES

- ▶ Heavy-duty rubber-track chassis with maximum climbing angle of 40 degrees.
- ▶ Next-gen intelligent hybrid-electric powertrain; 3,000–4,000 m² per hour throughput.
- ▶ Lifting deck with flail and straight blades: 900 mm width, 20–150 mm height range.
- ▶ Optional combustion engine extends endurance for large-area commercial weed control.
- ▶ Remote control and real-time alarm via APP; RTK autonomous operation supported.
- ▶ Proven on South-to-North Water Diversion Project levees and photovoltaic farm vegetation control.
- ▶ All-terrain, low operating cost and high efficiency – built for orchard, woodland, dam and municipal use.

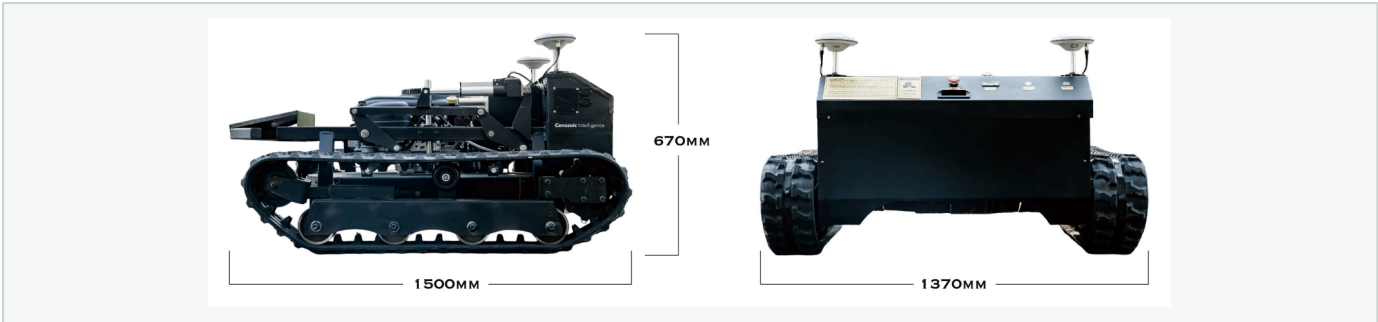


T1-900A — tracked hybrid-electric autonomous mower

04

WANJI T1-900A — Specifications

Tracked Hybrid Series



PARAMETER	VALUE
Energy Type	Hybrid-Electric (optional engine)
Dimensions L × W × H	1500 × 1350 × 680 mm
Net Weight	325 kg
Protection Rating	IP54
Travel Speed	0 – 6 km/h
Max Climbing Angle	≤ 40 deg
Peak Efficiency	3,000 – 4,000 m²/h
Cutting Width	900 mm
Cutting Height	20 – 150 mm
Blade Speed	3,000 rpm
Blades	2 flail + 1 straight
Battery Type	LiFePO4 48V
Endurance	~2.5 h (battery)
Battery Swap	Pack not field-swappable; hybrid engine provides all-day endurance
Fast Charger	20A, ~2.5 h (optional)
Control	2.4G remote + mobile APP
Navigation	RTK-GNSS + LiDAR fusion
Chassis	Rubber track
Application	Orchard / Dam / PV / Municipal / Reclamation

* Specifications subject to change without notice. Custom configurations available on request (OEM/ODM).

06

WANJI R1

Wheeled Electric Series | Full Electric | 790 mm Cut | 118 kg

Four-wheel differential drive – autonomous, zero-emission commercial lawn care

KEY FEATURES

- ▶ Four-wheel differential steering with in-situ turning; obstacle-climbing and slope capability.
- ▶ Maximum travel speed 6 km/h; peak efficiency up to 2,000 m² per hour.
- ▶ Distributed cutting blades with lifting deck: 790 mm cutting width, 20–100 mm height adjustment.
- ▶ Removable LiFePO₄ battery pack delivers ~2 hours runtime per pack (~4,000 m² coverage); not hot-swappable — the unit powers off and the pack is exchanged via the rear locking pin. The charging dock automatically returns, recharges (~2h) and resumes the route.
- ▶ Remote control and real-time alarm via mobile APP; supports RTK autonomous route planning.
- ▶ IP54 protection; low pollution, low noise, low operating cost, high efficiency.
- ▶ Ideal for airports, large estates, landscaping, agricultural weeding and municipal green space.



R1 — wheeled full-electric autonomous mower

06

WANJI R1 — Specifications

Wheeled Electric Series



PARAMETER	VALUE
Energy Type	Full Electric
Dimensions L × W × H (incl. antenna)	1030 × 1040 × 550 mm
Net Weight	118 kg
Protection Rating	IP54
Travel Speed	0 – 6 km/h
Peak Efficiency	2,000 m²/h
Cutting Width	790 mm
Cutting Height	20 – 100 mm
Blade Speed	3,000 rpm
Blade Power	850 W × 2
Travel Motor	400 W servo × 4
Steering	Four-wheel differential, in-situ turn
Battery Type	LiFePO4 48V / 48Ah
Endurance	~2 h per pack
Battery Swap	Removable pack; cold swap only (power off, rear locking pin) — not hot-swappable
Fast Charger	20A, ~2 h full charge (included)
Control	2.4G remote + mobile APP
Navigation	RTK-GNSS, LiDAR optional
Application	Airport / Park / Estate / Landscaping

* Specifications subject to change without notice. Custom configurations available on request (OEM/ODM).

08

WANJI R3

Compact Electric Series | Full Electric | 450 mm Cut | 62 kg

Lightweight compact unit for commercial property, green belts and facility grounds

KEY FEATURES

- ▶ Four-wheel differential steering with in-situ turning; compact footprint for tight spaces.
- ▶ Maximum travel speed 6 km/h; peak efficiency up to 1,500 m² per hour.
- ▶ Manganese-steel straight blade with lifting deck: 450 mm cut, 20–70 mm height.
- ▶ Removable ternary lithium battery, ~2.5 h runtime covering ~3,750 m² per charge.
- ▶ Remote control and real-time alarm via mobile APP; autonomous charging dock optional.
- ▶ IP54 protection; low noise and zero emissions – suitable for noise-sensitive areas.
- ▶ Ideal for commercial properties, factory grounds, HOA common areas and roadside green belts.



R3 — compact full-electric autonomous mower

08

WANJI R3 — Specifications

Compact Electric Series



PARAMETER	VALUE
Energy Type	Full Electric
Dimensions L × W × H	795 × 615 × 500 mm
Net Weight	62 kg
Protection Rating	IP54
Travel Speed	0 – 6 km/h
Max Climbing Angle	≤ 20 deg
Peak Efficiency	1,500 m²/h
Cutting Width	450 mm
Cutting Height	20 – 70 mm
Blade Speed	3,000 rpm
Blade Power	800 W × 1
Travel Motor	250 W servo × 4
Blade	Manganese-steel straight blade
Battery Type	Ternary lithium 48V
Endurance	~2.5 h (~3,750 m²)
Battery Swap	Removable pack supported
Fast Charger	20A, ~2.5 h
Control	2.4G remote + mobile APP
Navigation	RTK-GNSS, LiDAR optional
Application	Property / Green Belt / Facility / HOA

* Specifications subject to change without notice. Custom configurations available on request (OEM/ODM).

05

Autonomous Navigation System

RTK-GNSS + LiDAR Fusion

NAV-L1 RTK Receiver

Centimeter-level positioning via BeiDou/GPS/Galileo/GLONASS. One base station supports N receivers within 60 km (network) or 1 km (radio). Configured via WeChat mini-program over Bluetooth.

NAV-L3 Entry Navigation

RTK + self-developed algorithm for outdoor autonomous route planning. Fixed-obstacle avoidance. Compatible with third-party chassis via custom VCU protocol. User APP included.

NAV-L3S LiDAR-Enhanced

Adds single-/multi-line LiDAR and domain controller. Detects and navigates around dynamic obstacles. Ideal for complex outdoor environments such as orchards and photovoltaic sites.

NAV-L3LS Indoor SLAM

High-beam LiDAR + multi-sensor fusion for indoor SLAM navigation. Full-scene unmanned operation with attitude and environment perception.

Patents & Certifications

National High-Tech Enterprise | 15 invention patents (6 granted) | Electronic Fence Patent CN115239905B
Tracked obstacle-avoidance mower CN211881071U | Multi-angle tracked mower CN211881070U

06

Commercial Applications

Proven Across Industrial & Municipal Sites

Photovoltaic Farms

Low-profile tracked deck passes under PV panels for unmanned, all-terrain vegetation control on solar farm sites.

Orchards & Woodland

Tracked T1 handles 40-degree slopes between fruit rows, 3,000–4,000 m²/h throughput.

River Embankments / Dams

Field-proven on the South-to-North Water Diversion Project levees and flood-control slopes.

Municipal Greening

Autonomous route planning for parks, roadsides, roundabouts and public green-space maintenance.

Airports & Large Lawns

R1 covers 2,000 m²/h with low noise and zero emissions on airfield grass and estate grounds.

Agricultural Weeding

Hybrid powertrain delivers all-day endurance for open-field and inter-row weed control.

Land Reclamation

Heavy-duty tracked chassis (325 kg) conquers rough terrain, brush and undeveloped sites.

Property & Facilities

R3 compact unit for commercial properties, green belts, factory grounds and HOA common areas.

07

Specifications Comparison

T1 / R1 / R3

Parameter	T1-900A (T1)	R1	R3
Energy	Hybrid-Electric	Full Electric	Full Electric
Platform	Tracked	Wheeled (4WD)	Wheeled (4WD)
Dimensions (mm)	1500×1350×680	1030×1040×550	795×615×500
Net Weight	325 kg	118 kg	62 kg
Cutting Width	900 mm	790 mm	450 mm
Cutting Height	20–150 mm	20–100 mm	20–70 mm
Blade Speed	3000 rpm	3000 rpm	3000 rpm
Blade Power	2 flail + 1 straight	850 W × 2	800 W × 1
Travel Speed	0–6 km/h	0–6 km/h	0–6 km/h
Max Slope	≤ 40 deg	Slope capable	≤ 20 deg
Peak Efficiency	3,000–4,000 m²/h	2,000 m²/h	1,500 m²/h
Battery	LiFePO4 48V	LiFePO4 48V/48Ah	Li-ion 48V
Endurance	~2.5 h	~2 h per pack	~2.5 h
Removable Pack	No (hybrid)	Yes, cold swap	Yes
Fast Charge	20A / 2.5 h	20A / 2 h	20A / 2.5 h
Protection	IP54	IP54	IP54
Navigation	RTK + LiDAR	RTK + LiDAR option	RTK + LiDAR option
Best For	Orchard/Dam/PV	Airport/Park/Estate	Property/Green Belt

* Specifications subject to change without notice. Custom configurations available on request (OEM/ODM). R1 pack exchange is a cold swap only (power off) — not hot-swappable; the T1 pack is not field-swappable and the hybrid engine provides all-day endurance.

GLOBAL PARTNERSHIP PROGRAM

OEM / ODM PARTNERSHIP

WANJI offers flexible OEM / ODM cooperation for global distributors:

- ✓ Custom branding, colors and logo printing
- ✓ CKD / SKD knock-down delivery to reduce import duty
- ✓ Regional exclusive dealership available
- ✓ CE / FCC / ISO certification support
- ✓ Multilingual APP and user manual
- ✓ Overseas spare-parts stocking and technical training

TIANJIN WANJI IMP. & EXP. TRADING CO., LTD.

Email: info@wanji-imp.com Web: www.wanji-imp.com