

Trinabot

Aurora
PV Cleaning Robot - 1P

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Suitable for tracker



Intelligent Algorithm for Auto-Correction

- Height Tolerance: 50 mm
- Longitudinal Deviation: 50 mm



Self-powered with Self-cleaning Capability

- Powered by an independent mini PV module and equipped with an automatic cleaning function, enabling flexible installation and reducing long-term O&M efforts.



Autonomous Cleaning with Intelligent Risk Avoidance

- Real-time integration with the plant, tracker, and weather monitoring systems enables autonomous cleaning planning and proactive risk avoidance through intelligent decision-making.



Multi-layer Protection

- The robot features IP65 dustproof and waterproof protection and an active wind protection mechanism, ensuring stable long-term operation in harsh outdoor environments.



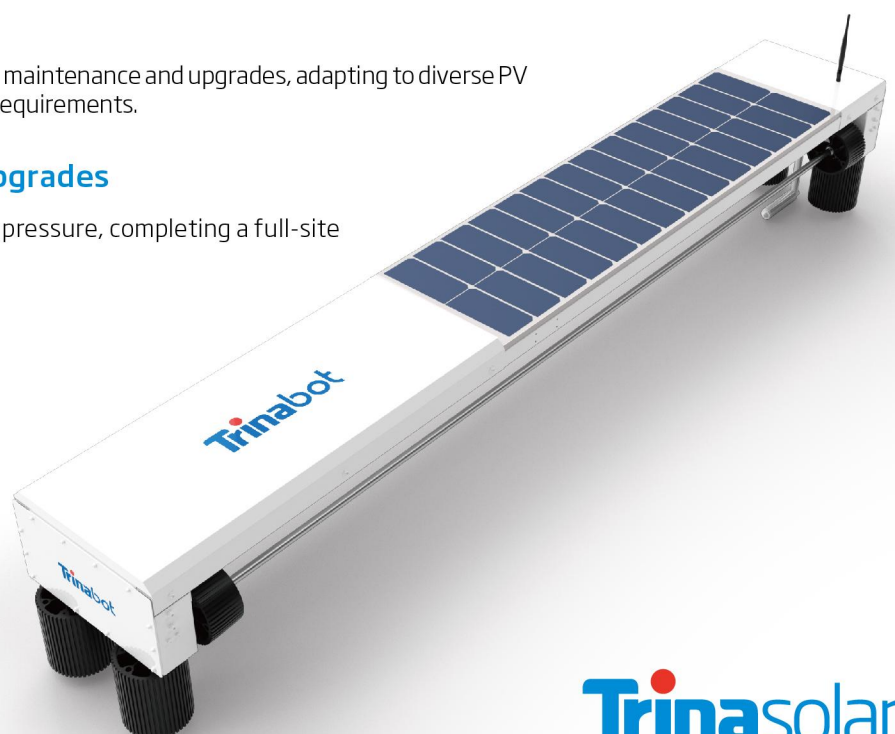
Modular O&M

- A modular architecture allows flexible maintenance and upgrades, adapting to diverse PV plant environments and operational requirements.



OTA Remote Differential Upgrades

- Reduces upgrade time and storage pressure, completing a full-site upgrade in just 15 minutes.



GENERAL FEATURES

Dimensions (L×W×H mm)	L*450*350 (L≤3000)
Weight (kg)	45-50
Rated Power (W)	≤240
Maximum Operating Distance (m)	>4000
Operating Speed (m/min)	20±2
Power Supply	Self-charging
Battery Type/Capacity	LFP 20Ah
Standby Ambient Temp.	-30°C~65°C
Operating Ambient Temp.	-20°C~60°C
Relative Humidity	0~95% Non-condensing
Applicable Module Tilt Angle	0~60°
Working Angle	0~45°
Maximum Climbing Angle	Max 25°
Tracker Misalignment Angle	10°(1m gap)
Tolerance of module vertical offset	50mm
Tolerance of module horizontal offset	50mm
Cleaning Efficiency	≥99.5%
Availability	≥99%
Cleaning Frequency	Once/day
Communication	LoRa+ Bluetooth
Communication Protocol	Custom protocol
Monitoring Terminal	Web + APP
Operating Wind Speed (m/s)	15m/s
Maximum Wind Resistance (m/s)	55m/s
High Wind Protection	YES
Protection Rating	IP65
Corrosion Resistance	C4M
Life Cycle	25 Years

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