

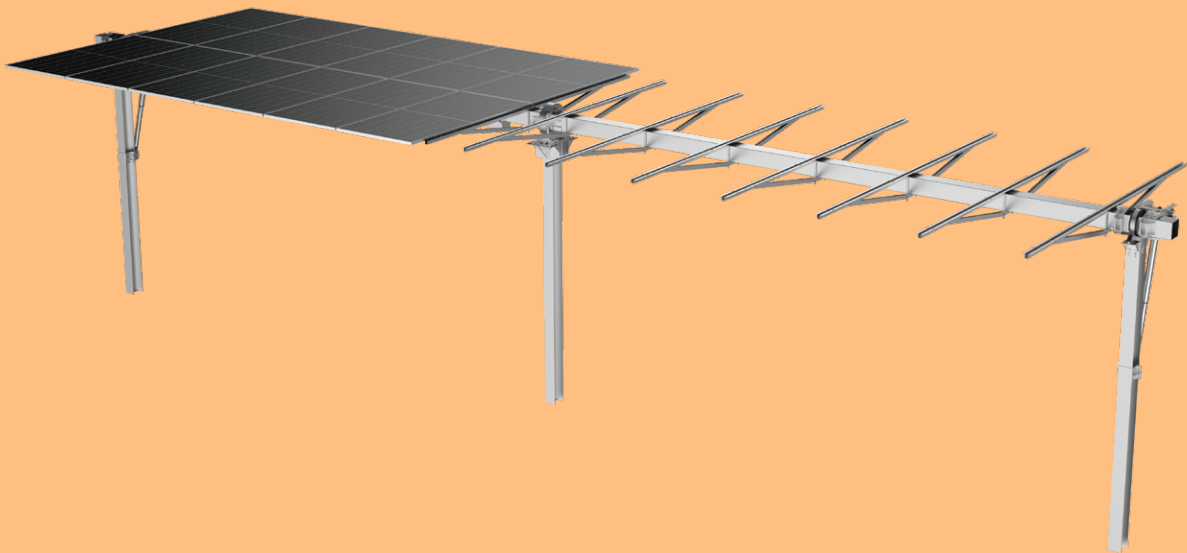
PalmBri Traker



SMART TRACKING SOLAR PV SYSTEM

Overview

Smart Tracking Solar PV System is mainly applied to large-scale solar plant with its most affordable, efficient and sustainable solutions. System combining with single row, 1 controller per tracker, multipoint parallel drive with backtracking mode, having strong wind-resistance capability. Comparing to fixed mounting system, Smart Single-axis Tracker is first option for LSS, could increase nearly 20% power generation under same conditions.



Advantages

- Debugging by automatic tracking
- Easy to install, lower O&M costs
- Strong adaptability of terrain up to 25% N-S slope
- Profitability and reliability for different conditions
- Multipoint parallel drive, strong wind-resistance capability

Technical Parameters

GPS Module	Automatically obtain latitude and longitude and precise time Compatible with GPS + Beidou satellite positioning system	Design Support	Support Wind Protection
Installation Capacity	Maximum 90 solar modules per row		Snow Removal Mode
Tracking Angle	$\pm 60^{\circ}$		Rain Cleaning Mode
Wind Resistance	47m/s design standard ASCE7-10, <18m/s (shelter from wind)		Position Return Mode
Tracking Algorithm	Astronomical Algorithms +Tilt Sensors	Drive Method	Slewing Speed Reducer
Drive Device	Slewing Drive, 24V DC motor	Structure Material	Hot-dip Galvanized + POSMAC Steel
Power Supply	Self-powered/External Connection	Control System	Micro Controller Unit
Communication Method	LoRa wireless communication or 485 bus (Modbus protocol)	Protection Level	IP65
		System Warranty	10 Years
		System Daily Power Consumption	$\leq 0.1\text{Kwh}$

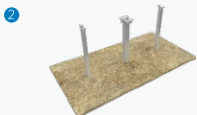
Structure



Component Details

						
Post Material : Q235B/Q355B (Hot-Dip Galvanized)	Controller Material : Q235B (Hot-Dip Galvanized)	Motor Spec : 7~9 inches	Putter Spindle Fastener Material : Q235B (Hot-Dip Galvanized)	Bearing base Material : Q235B (Hot-Dip Galvanized)	Putter Customized according to actual needs	Tilt Sensor Material : Q235B (Hot-Dip Galvanized)
						
Angle Steel Material : Q235B/Q355B (Hot-Dip Galvanized)	Motor Base Material : Q235B/Q355B (Hot-Dip Galvanized)	Putter Post Fastener Material : Q235B (Hot-Dip Galvanized)	Bearing Sleeve Material : Q235B (Hot-Dip Galvanized)	U-shaped support Material : Zn-Al-Mg Coating Steel Q355B (Hot-Dip Galvanized)	U-shaped Rail Material : Zn-Al-Mg Coating Steel Q355B (Hot-Dip Galvanized)	Spindle Spec : 120*120, 140*140 Material : Q355B(Hot-Dip Galvanized)

Installation Guide

				
1 Install the Posts according to design drawings	2 Install the Motor Base&Bearing bases on the Posts	3 Install the Motor in the Motor base	4 Install the Bearing Sleeve on the Bearing bases	5 Install the Spindle through the Bearing Sleeve&Motor
				
6 Install the Putter Spindle Fastener in the Spindle	7 Install the Putters	8 Install the U-shaped Rail	9 Install the Controller	10 Install the modules, then installation is done



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PalmBri-Simple

**Slew-Drive Single-Axis
Independent Tracking System - 1P**

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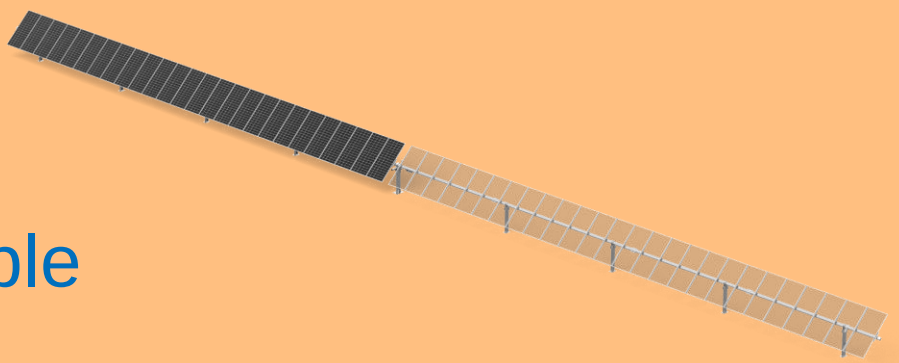


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PalmBri-Simple

Slew-drive Single-axis
Independent Tracking System - 1P

DESIGN SPECIFICATION

Tracking Type	Horizontal Single-Axis 1 Module-in-Portrait Tracker
Drive Type	Single Point Slew drive
Motor Type	24V DC Motor
String Voltage	1000 V or 1500 V (DC)
Tracker Length	Up to 97m
Tracker Configuration	Up to 3 strings (1500V DC)
Module Number	Up to 90 modules (depending on module size)
Ground Coverage Ratio (GCR)	>25%
Modules Support	All Commercial Modules (210/182/166)
Stow Position	30° (configurable, depending on the project requirement)
Tracker Rotation Range	Up to $\pm 60^\circ$
Operating Temperature Range	-30° C to 60° C
Foundation Type	Ramming/Pre-drilling/Concrete Pile/PHC
Anti-Corrosion Coating	Pre-Galvanized/Hot-dipped Galvanized/Magnesium Zinc Coated Steel
Allowable Wind Speed	Up to 55 m/s per ASCE 7-10
Slope Tolerances	N-S: Up to 20% (11°)

ELECTRONICS & CONTROLS

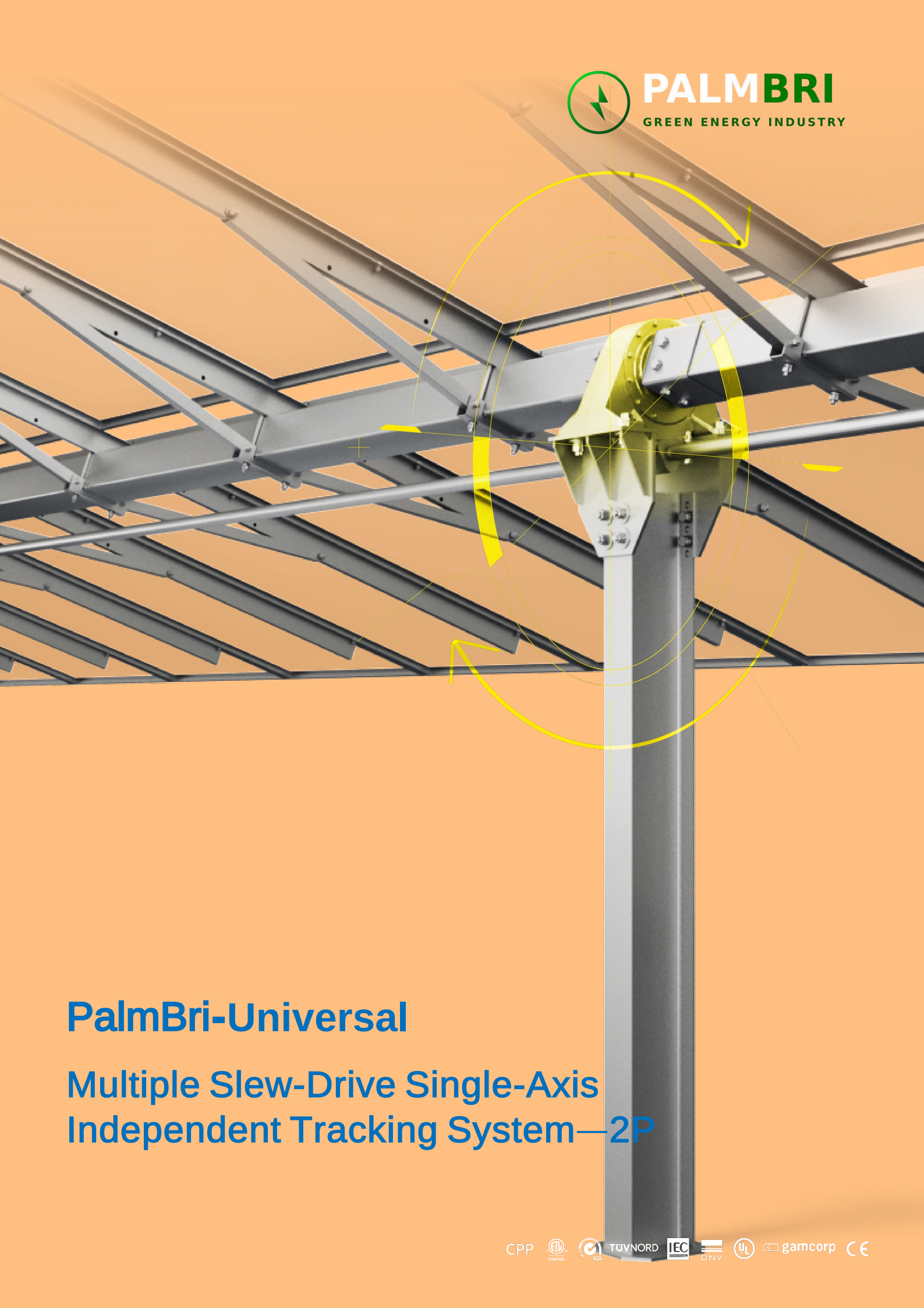
Control System	1 controller per tracker
Power Supply Solar Tracking Algorithm Controller Energy Consumption	300-1500VDC String Powered, 90-264VAC Powered, Backup lithium battery
Tracking Accuracy Communications Nighttime Stow Backtracking	Astronomical Algorithms+Intelligent Algorithms About 0.05 kWh/Day $\pm 2^\circ$ Zigbee Wireless Mesh Network/ Ethernet or RS485 Cable Yes Yes (3D optional)

INSTALLATION & SERVICE

Onsite Training	Yes
Installation requirement	No special tools required
Warranty	Up to 10 Year Drive and Control, 15 Year Structure, 5 years Batteries
Certifications	UL3703/CE/UL2703/IEC62817



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PalmBri-Universal

Multiple Slew-Drive Single-Axis
Independent Tracking System—2P

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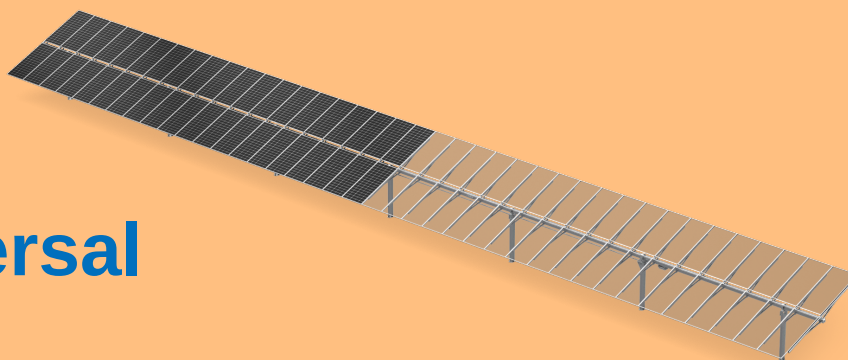


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PalmBri-Universal

Multiple Slew-Drive Single-Axis
Independent Tracking System—2P



DESIGN SPECIFICATION

Tracking Type	Horizontal Single-Axis 2 Modules-in-Portrait Tracker
Drive Type	Synchronous Multi-Point Slew drive
Motor Type	24V DC Motor
String Voltage	1000 V or 1500 V (DC)
Tracker Length	Up to 70m
Tracker Configuration	Up to 4 strings (1500V DC)
Module Number	90 -120 modules, depending on module size
Ground Coverage Ratio (GCR)	25%-45% (Typical)
Modules Support	All Commercial Modules (210/182/166)
Stow Position	5° (configurable, depending on the project requirement)
Tracker Rotation Range	Up to $\pm 60^\circ$
Operating Temperature Range	-30°C to 60°C
Foundation Type	Ramming/Pre-drilling/Concrete Pile/PHC
Anti-Corrosion Coating	Pre-Galvanized/Hot-dipped Galvanized/Magnesium Zinc Coated
Allowable Wind Speed	Up to 55 m/s per ASCE 7-10
Slope Tolerances	N-S: Up to 20% (11°)

ELECTRONICS & CONTROLS

Control System	1 controller per tracker
Power Supply	300-1500VDC String Powered, 90-264VAC Powered, Backup lithium battery
Solar Tracking Algorithm	Astronomical Algorithms+Intelligent Algorithms
Controller Energy Consumption	About 0.08kWh/Day
Tracking Accuracy	$\pm 2^\circ$
Communications	Zigbee Wireless Mesh Network/ Ethernet or RS485 Cable
Nighttime Stow	Yes
Backtracking	Yes (3D optional)

INSTALLATION & SERVICE

Onsite Training	Yes
Installation requirement	No special tools required
Warranty	Up to 10 Year Drive and Control, 15 Year Structure, 5 years Batteries