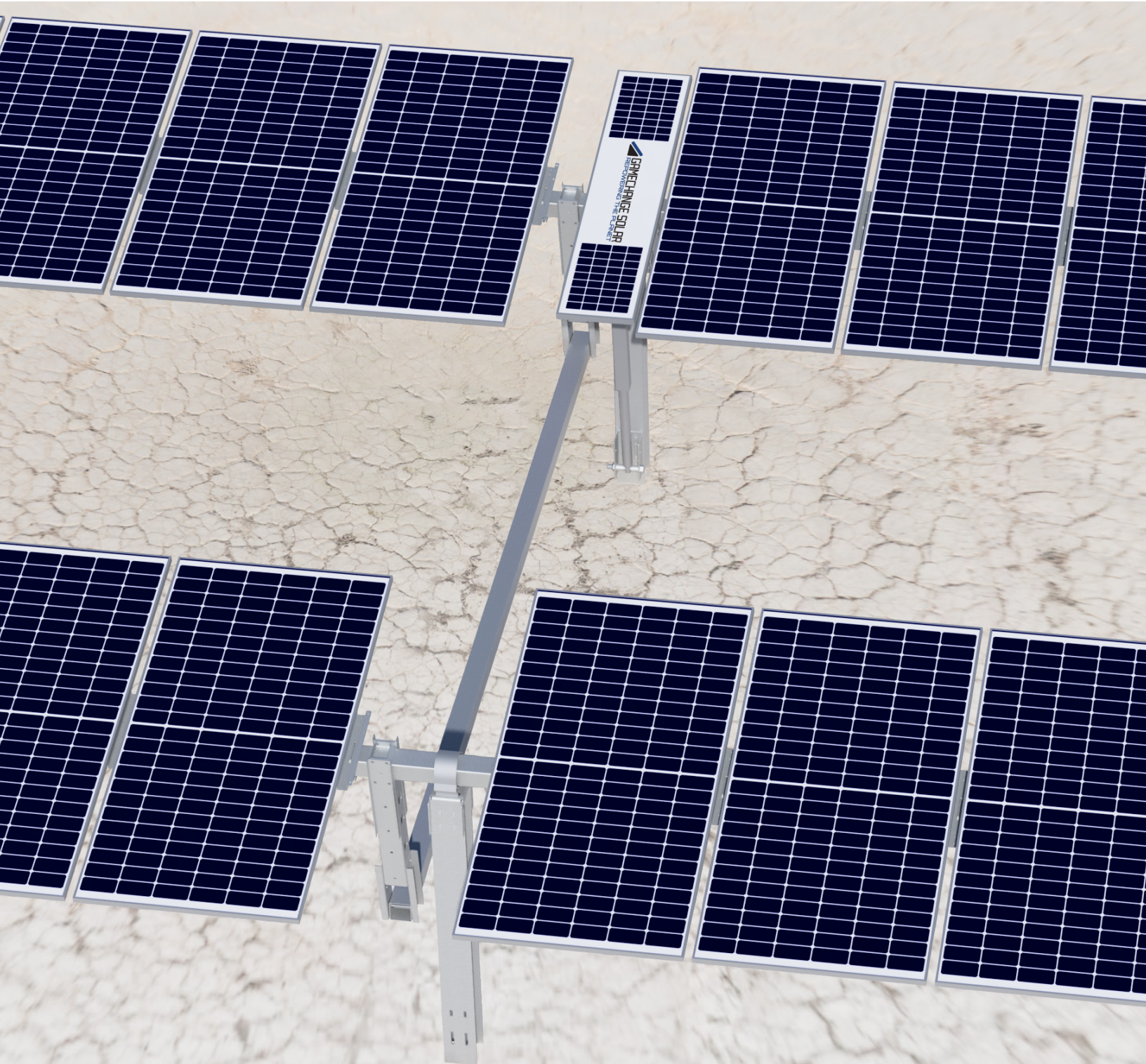


TECHNICAL DATASHEET

GENIUS TRACKER™ 1P-2R

HIGH POWER PRODUCING AND
FAST INSTALLING SOLAR TRACKER SYSTEM



OWNER BENEFITS

UP TO 2% MORE POWER PRODUCTION
 Results In higher kWh output.

WEATHERSMART™

Proprietary algorithm optimizes tilt angle based on weather data to maximize power production. Adds up to 1.25% additional power production.

ZERO MAINTENANCE DRIVE SYSTEM

INSTALLER BENEFITS

FASTEST INSTALLING SYSTEM

Advanced design innovations & pre-assembled components.

SPEEDCLAMP™

Mounts modules with no mounting hardware, speeds module installation up to 200%.

PRE-ASSEMBLED DRIVE ARM

Can be lifted by one worker. No machine required. 50% faster than most competing systems.

PE STAMPED DRAWINGS

Design loads according to local building codes: ASCE 7, NBC, Eurocode, AS1170, IS 875.

PROPRIETARY INTEGRATED-HARDWARE™

Proprietary hardware allows for faster structure assembly, module mounting, and reduced O&M cost. Oversized Serrated Flange Nyloc Nut and Oversized Flange Star Bolt with integrated star washer eliminates the need for washers and star washers.

GameChange Solar

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RESEARCH & DEVELOPMENT CENTER

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Modules	Modules Supported	Most commercially available modules, including frameless crystalline and thin film
Civil	Slope Tolerance (N-S)	7% standard, can go to 15% special order
	Slope Tolerance (E-W)	5%
	Tracker follows slope (Y/N)	Yes
Structural	Drive Type	Robust linear actuator stainless steel & aluminum
	Posts per MW	300-400/MW for 1 up portrait or 225-300/MW for 2 up portrait
	Design Wind Load	110 mph [49.1 m/s][Std]
	Snow Load	5 psf [2.4 kPa][Std] / 20 psf [9.6 kPa][Premium 1] / 40 psf [1.92 kPa][Premium 2] / 60 psf [2.87 kPa][Premium 3]
	Tracking Range (Std)	45°, 52°
	Tracking Range (Premium)	60°
	Post Sections	G235 [55 µm] galvanized steel (or HDG option) roll formed standard posts, HDG wide flange option also available
	Post Size (Interior) & (Exterior)	6 x 6 in. [15.24 x 15.24 cm] roll form shape or W6x7, W6x9, W6x12 or W6x15 wide flange, plus W8 size options
	Motor Foundation	6.5 x 8 in. [16.51 x 20.32 cm] roll form hat or W6x15 or larger wide flange, plus W8 size options
	Standard Embedment	5 - 7 ft. [1.52 - 2.13 m]
Flood Plain Allowance	Up to 6 ft. [1.83 m]	
Design	Module Configuration	1 or 2 up in portrait for Crystalline, First Solar Series 6 and 7, and Bifacial
	Length per Table	Up to 260 ft. [79 m]
	Module Attachment	SpeedClamp™ or bolts available for bottom mount frame modules or clamps for glass on glass modules
	Ground Coverage Ratio	0.25 to 0.65
	Rows per Drive	1 drive per every two trackers (tables), distributed drive system
	Powering System	Onboard solar module with battery
	Ground Clearance To Module	18 - 48 in. [45.7 - 121.9 cm] typical
	Min / Max Ground to Top of Post	3'-8" [1.12 m] typical + 9 in. [22.86 cm] min. adjustment range
	Backtracking / Anti-shading	Yes, although can be turned off as requested (i.e. for FSLR modules)
	Temperature Range	-20° C (-40° C also available) + 48° C
Electromagnetic Interference	Compliant with FCC guidelines/ Applicable sections EN 61000	
Install	Specialty Tools Required	No
	Max Offload for Deliveries	As per customer requirement
Electrical	Tracking Method	Time and location based algorithm
	String Design	Compatible with any string size
	Cable Supports	Hole punching per customer requirement for nominal cost
	Linear Actuator Motor	24V DC UL Listed
	Parasitic Loss	0 amps
	Controller Box	Zigbee wireless communications, 24V solar module and battery
	Control System	Master to Node: Zigbee wireless communications Master to SCADA/DAS: Modbus TCP communications
	# of Motors	15 to 40 / MW depending on module wattage and loading conditions (26 for typical conditions)
	1000V System or 1500V System	Both
	Grounding Method	Tracker structure is part of grounding path per UL 2703
UL Compliance	UL 2703 / UL 3703	
Ingress Protection	IP66 Actuator (NEMA 4 equivalent)	
# Anemometers	1 per 8 MW - 13.5 MW typical	
Monitoring System	Web portal interface available Compatible with all standard third party monitoring vendors	
Snow & Flood Sensors	Move modules to optimum location for weather events	
Backup Power	Solar module and battery providing integrated backup - 3 days	
O&M	Warranty	5 year drive & control, 10 year structural standard, 10 / 20 also available
Shipping	Max load	International - 18.5 to 22.5 metric tons per container USA - 45,000 lbs. [20,411 kg] per truckload, 5,000 lbs. [2,267 kg] maximum bundle size, 2,900 lbs. [1315.4 kg] or other maximum as requested by customers
	Shipping Containers or Flatbeds	Flat beds for structure, dry vans for hardware
	# Trucks or Containers per MWdc	4 typical for trucks, 5 typical for containers
Commissioning	Backfeed required?	No, generator for power as alternative