ALL TERRAIN TRACKER

BECAUSE THE WORLD IS NOT FLAT

Nevados is the premier solar tracker company for PV power plants built on sloped and rolling terrain. We offer innovative all-terrain trackers paired with a comprehensive software suite in an integrated technology platform that optimizes solar performance, improves plant reliability and respects the natural landscape.

SLOPE CHANGE AT EVERY PILE

BEARING TYPE	SLOPE CHANGE (%)
Straight-Through	± 4.4
Single Articulating	± 13
Double Articulating	± 26

1 FOLLOW THE LAND

- Industry's first and most capable terrain following tracker
- Eliminates civil grading & eases permitting
- Reduced pile length saves steel

2 INCREASE SITE OPTIONS

- Convert sites from fixed tilt to tracker
- Revisit sites previously disqualified due to grading
- Build on sites with differential settlement risk
- Fastest installation, zero custom tools or jigs

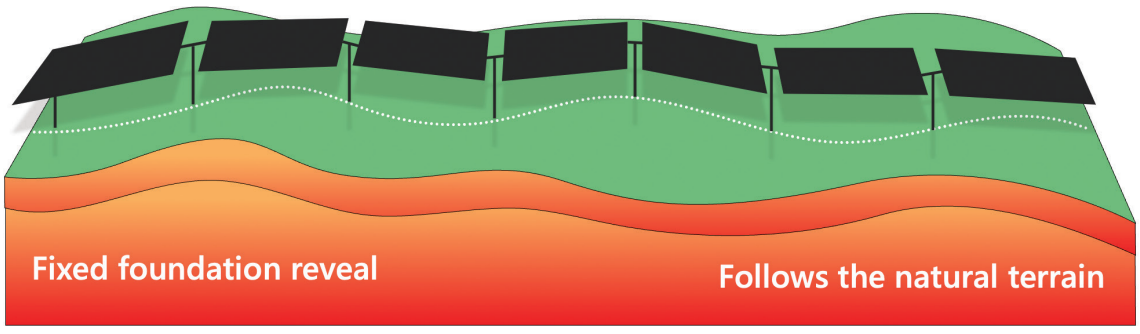
3 MANAGE EXTREME WEATHER RISK

- Extensive wind tunnel studies on variable terrain
- 75° hail stow
- Integrated friction dampers for unparalleled wind performance

4 OPTIMIZE SITE DESIGN AND PERFORMANCE

- Proprietary TRACE Terrain-Aware Backtracking schedules for zero shading & increased energy yield
- Unique software for site design optimization
- Off-azimuth, variable GCR, variable tilt schedules

Nevados All Terrain Tracker (ATT)



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ROW CONFIGURATION	• Up to 96 modules per row • 5 to 8 modules per bay
TRACKING ANGLE CAPABILITIES	• ± 60° tracking expandable to ± 75° tracking • Single row actuation with 24VDC slew drive
TERRAIN FOLLOWING	• Straight Through bearing: ±3.5% slope change at each foundation • Single Articulating bearing: ±13% slope change at each foundation • Double Articulating bearing: ±26% slope change at each foundation • 37% max N-S and E-W slope
FOUNDATION	• I-Beam or ground screw foundations installed at consistent reveal throughout site
GROUND COVERAGE RATIO	• Configurable, typically greater than or equal to 28%
DESIGN LOADS	• Designed to applicable ASCE • Configurable to 135+ MPH • Configurable to 50+ PSF snow load • Loads studied in wind tunnels for variable terrain; no external dampers required for wind dynamics
INCLUDED SERVICES	• Preliminary layouts and site design optimization • Structural calculations, IFC package and foundation design • TRACE Terrain-Aware Backtracking or True Tracking
OPERATING TEMPERATURE	• -20°C – 55°C
MODULE CONNECTION/GROUNDING:	• Self-grounding module brackets • UL2703 and UL3703
TOLERANCES	• Reveal height: +4” / -0”, N-S: ±1.5” (expandable), 2° vertical plumb, 9° twist • Flat-land: ±12” vertical & E-W at each pile, may change based on neighboring foundations
CONTROLS	• Web-based dashboard for monitoring & operation with row-level control • SCADA integration via Modbus TCP/IP for monitoring & operation with row-level control • Wireless, self-powered row controllers and weather stations • AC-powered Zone Controllers
WARRANTY	• 10-year structural, 5-year drive & controls warranty

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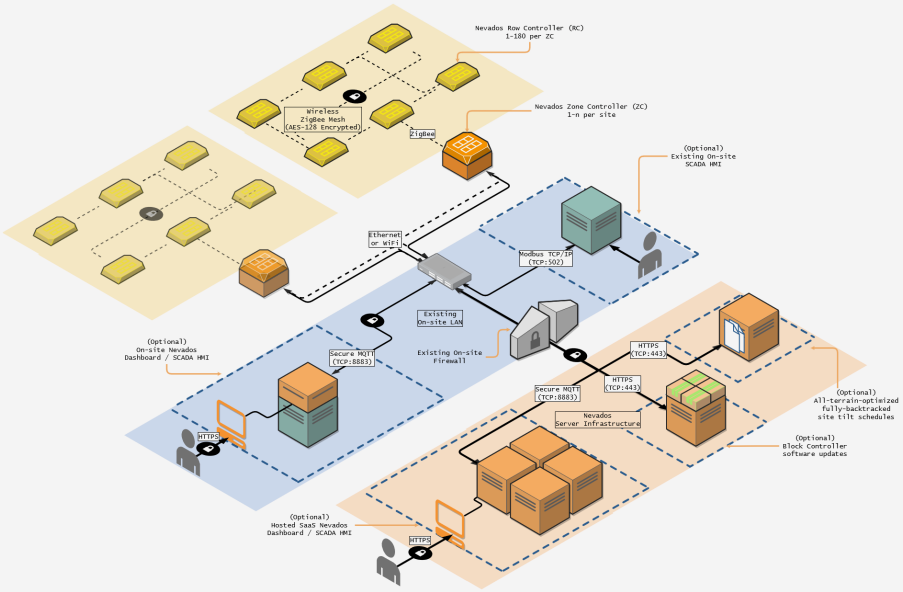
SOLAR TRACKER CONTROLS

FOR ALL TERRAIN ENVIRONMENTS



The Nevados control system is designed to optimize power generation from your project site and account for variable shadow fall on flat, sloped, and rolling terrain. Each row of up to 96 modules is monitored by a single row controller. Row controllers are connected and optimized through zone controllers, each of which can manage up to 180 row controllers. The system provides detailed operational information from each row, which can be utilized to increase row-to-row efficiency and maximize output. String-level current sensing can be added to identify any inter-row shadowing, blown fuses, poor performing strings, and bad electrical connectors.

1 CURRENT SENSOR

- Enables continuous commissioning
- Identifies poor performing strings
- Assembled with the wiring harness at the factory, or installs in minutes in the field
- IP65

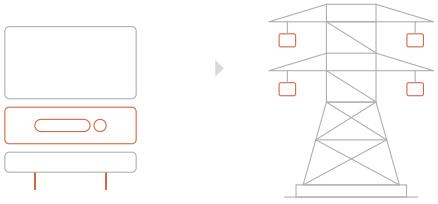
2 ROW CONTROLLER

- Configurable for most environments
- Retrofits to existing install
- Wireless and self-powered
- IP65

3 ZONE CONTROLLER

- Active optimization
- Choose either cloud-hosted or fully on-premises monitoring and control
- Failure prediction
- O&M reporting
- IP65

MODULES | CURRENT SENSOR | ROW CONTROLLER | ZONE CONTROLLER | CLOUD SERVER | DASHBOARD



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COMMUNICATIONS	ROW CONTROLLER	ZONE CONTROLLER
WIRELESS	• ZigBee (with external antenna) between RC and ZC	• ZigBee communication to manage RC
WIRED	• Cat5/6 between ZC and SCADA • RS485 between RC and string current sensor	• Manage with SCADA over Modbus • Reporting to on-premises or cloud-hosted monitoring and control dashboard • Integrated web portal for simple management
ENCLOSURE		
SIZE (LxWxD)	• 10” x 12” x 3.5” – max external dimension of enclosure (not including mounting tabs)	• 13” x 15” x 5”
DESIGN	• IP67, Plastic (injection molded), Membrane vent (Amphenol BJ001, Gore Vent, or similar)	• Compression molded fiberglass reinforced polyesterCompression molded fiberglass reinforced polyester
SERVICE/ACCESS	• Access panel for battery only	
MOUNTING	• Direct mount RC to auxiliary solar module • Mount aux module to torque tube using standard module clips	• IP65 rated • Mounted near or on inverter skid, or other ethernet and power access point. • Integrated web portal for simple management
POWER	• Auxiliary solar module, 40W and 36V, approx 645mm x 345mm x 25mm	• 120V AC wired to enclosure
BATTERY	• 3-6Ah LiFEPO4 battery with optional cold weather package	
INPUTS	• RS485 port w. Weather cap • E-Stop • Status LED (optional) • Auxiliary module power cables	• 120V AC • Ethernet
OUTPUTS	• Motor Cable with screw-on connector to motor • External ZigBee Co-ax connector for antenna wire	• External ZigBee co-ax connector for antenna wire
BOARD COMPONENTS	• XBee X2C or XBee3 • PTC (resettable fuse) • Motor over-current monitoring and protection • 16bit Microcontroller @ >8MHz • Accelerometer	• Xbee S2C, S2C Pro or 3 • Optional wind sensor