ARRAY TECHNOLOGIES

FOLLOW THE SUN.
FOLLOW THE LEADER.

# Engineered to optimize First Solar® technology.

## DuraTrack® HZ v3
### with First Solar

The latest evolution of the DuraTrack HZ v3 features an optimized interface for mounting First Solar thin-film modules. Together, these two powerhouses deliver superior energy performance and reliability to your solar plants.

**RAPIDCLAMP™**
RapidClamp utilizes First Solar's Series 6 innovative Speedslot. As simple as SET-CLICK-CLAMP Array's patented single bolt module clamp ensures error-proof alignment of Series 6 module N-S and E-W. Installers torque a single bolt to securely fasten and ground the module for installation in as little as 11 seconds per module.

**HIGH POWER DENSITY.**
Combine the high density made possible by the DuraTrack HZ v3 with First Solar's thin film module performance advantage for winning returns. You can boost production within a tight footprint by taking advantage of no module gaps.

**LEADING TERRAIN ADAPTABILITY.**
DuraTrack HZ v3 flexibly linked architecture, with articulating driveline joints and forgiving tolerances, creates the most adaptable system on the market for following natural land contours while creating the greatest power generation potential from every site.

**FEWER COMPONENTS. GREATER RELIABILITY.**
Reducing the number of sensitive components has resulted in the highest operational uptime in the industry. Many other trackers have 166 potential failure points for every 1 in the DuraTrack HZ v3. First Solar modules also have years of proven reliability in harsh environments.

**ZERO SCHEDULED MAINTENANCE.**
The tracker's gearboxes are sealed and lubricated for life, resulting in zero scheduled maintenance. All tracker rows self-calibrate twice daily, ensuring each row is always at the optimal tracking angle. Uninterrupted module rows with First Solar Series 6 create a robot-ready design permitting autonomous module cleaning.

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## OUR EXPERIENCE. YOUR ADVANTAGE

Array Technologies made history in 2013 with the successful integration of First Solar thin-film modules on single-axis solar trackers at the 265 MW Mt. Signal Solar. The largest thin-film solar tracking facility in North America at the time, it boasts more than three million First Solar thin-film modules mounted on a DuraTrack HZ single-axis tracking system.

## THE ARRAY ADVANTAGE

Array Technologies is the worldwide leader in tracking solutions for utility and commercial solar electric generation systems, with multiple gigawatts across the globe. After 30 years in the industry, Array's innovations in solar tracking continue to provide the best levelized cost of electricity through reliable, easy to install and maintain systems. Array Technologies' solutions are engineered in the USA.


## ARRAY TECHNOLOGIES, INC.

3901 Midway Place NE
Albuquerque, NM 87109 USA

+1 505.881.7567
+1 855.TRACKPV (872.2578)
+1 505.881.7572

sales@arraytechinc.com

**arraytechinc.com**


**30 GW** YEARS OF OPERATION

**167×** FEWER COMPONENTS THAN COMPETITIVE TRACKERS

## STRUCTURAL & MECHANICAL FEATURES/SPECIFICATIONS

| | |
|---|---|
| Tracking Type | Horizontal single axis |
| Less than 1 Drive Motor / MW | ~1 MW DC |
| String Voltage | Up to 1,500V DC |
| Maximum Linked Rows | 32 rows for both Series 4 & 6 |
| Maximum Row Size | Series 4 - 240 Modules<br>Series 6 - 78 Modules |
| Drive Type | Rotating gear drive |
| Motor Type | 2 HP, 3 PH, 480V AC |
| East-West/North-South Dimensions | Site / module specific |
| Array Height | Series 4 - 54" standard, adjustable<br>Series 6 - 48" standard, adjustable (48" min. height above grade) |
| Ground Coverage Ratio (GCR) | Flexible, 32.5–45% typical, others supported on request |
| Terrain Flexibility | N-S tolerance: 0-15% standard, 26% optional; Driveline: 40° in all directions |
| Modules Supported | First Solar Series 4 & Series 6 |
| Tracking Range of Motion | ± 52° standard, ± 62° optional |
| Operating Temperature Range | -30°F to 140°F (-34°C to 60°C) |
| Module Configuration | Series 4 - Four in landscape<br>Series 6 - One in portrait |
| Module Attachment | Series 4 – Array's single-fastener bracket with integrated grounding attaches to First Solar module interface bracket containing pre-installed clips<br>Series 6 – Compatible with Array patented single-fastener module clamps with integrated grounding ,<br>Series 6 with Speed Slot™ is seamlessly compatible with Array's RapidClamp© module clamps with integrated grounding |
| Materials | Pre-galv steel, HDG steel and aluminum structural members, as required |
| Allowable Wind Load (ASCE 7-10) | 120 mph, 3-second gust exposure C , custom designs avalable for higher wind speeds |
| Wind Protection | Failure free passive mechanical system protects against wind damage without the use of complex communications systems, batteries — no power required |

## ELECTRONIC CONTROLLER FEATURES/SPECIFICATIONS

| | |
|---|---|
| Solar Tracking Method | Algorithm with GPS input |
| Control Electronics | MCU plus Central Controller |
| Data Feed | MODBUS over Ethernet to SCADA system |
| Night-time Stow | Yes |
| Tracking Accuracy | ± 2° standard, field adjustable |
| Backtracking | Yes, optional. Adjust to optimize |

## INSTALLATION, OPERATION & MAINTENANCE

| | |
|---|---|
| PE Stamped Structural Calculations & Drawings | Yes |
| On-site Training and System Commissioning | Yes |
| Connection Type | Fully bolted connections, no welding |
| In-field Fabrication Required | No |
| Dry Slide Bearings and Articulating Driveline Connections | No lubrication required |
| Scheduled Maintenance | None required |
| Module Cleaning Compatibility | Robotic, Tractor, Manual |

## GENERAL

| | |
|---|---|
| Annual Power Consumption (kWh per 1 MW) | 400 kWh per MW per year, estimate |