



Leading Tracker Technology

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KSI SOLAR COMPANY PROFILE

COMPANY HISTORY

KSI is a world-leader in the design, supply & installation of photovoltaic systems, with over 70,000 successful projects worldwide. From the hottest Middle Eastern deserts to sub-zero temperatures in Northern Canada & Alaska, these systems have been installed in the most challenging environments across 6 continents.

SINCE 1991, WE'VE INSTALLED:

55,000

2GWp

Trackers

Total Capacity

52

Countries

OUR PRODUCTS

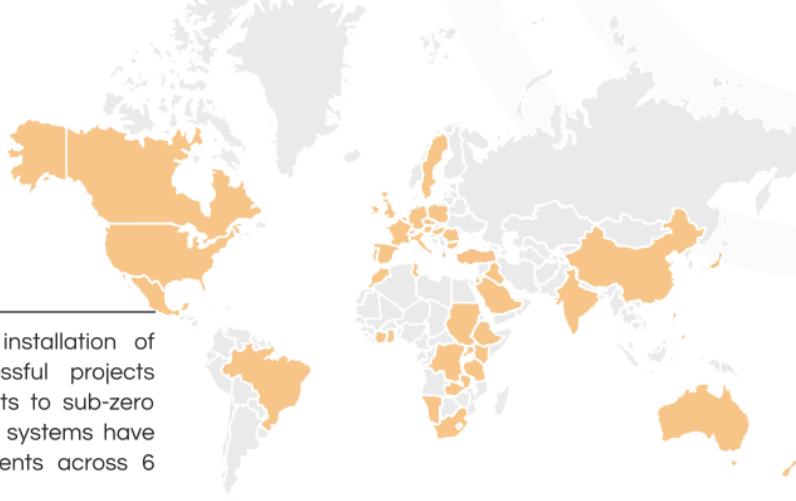
- Single-Axis Trackers
- Dual-Axis Trackers
- Agrivoltaic Systems
- Fixed Systems

OUR SERVICES

- Service & Maintenance
- Repowering & Retrofit
- EPC Services
- Consultancy

OUR OFFICES

- London, UK
- Milano, Italy
- Zug, Switzerland
- Toronto, Canada
- Delaware, USA
- Dubai, UAE



DUAL AXIS

D u a l - A x i s T r a c k e r

The DA generation of Dual-Axis trackers has earned a stellar reputation as the most reliable tracking system worldwide, with thousands of installations spanning over more than two decades of operation. Among these, KSI's DA-60 product stands as an iconic solution, deployed across every continent with an impressive track record of over 20,000 systems.

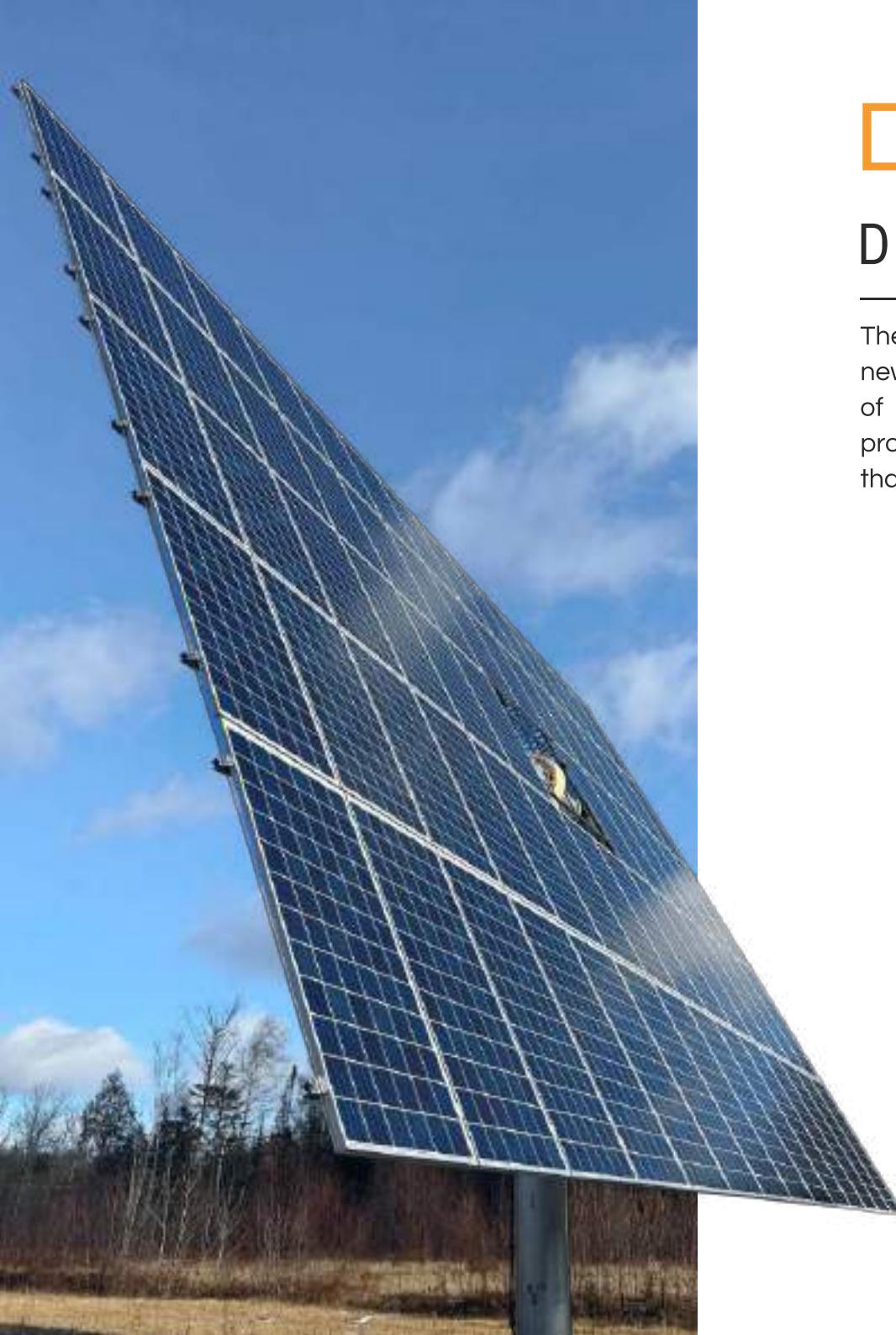




SINGLE AXIS

Single-Axis Tracker

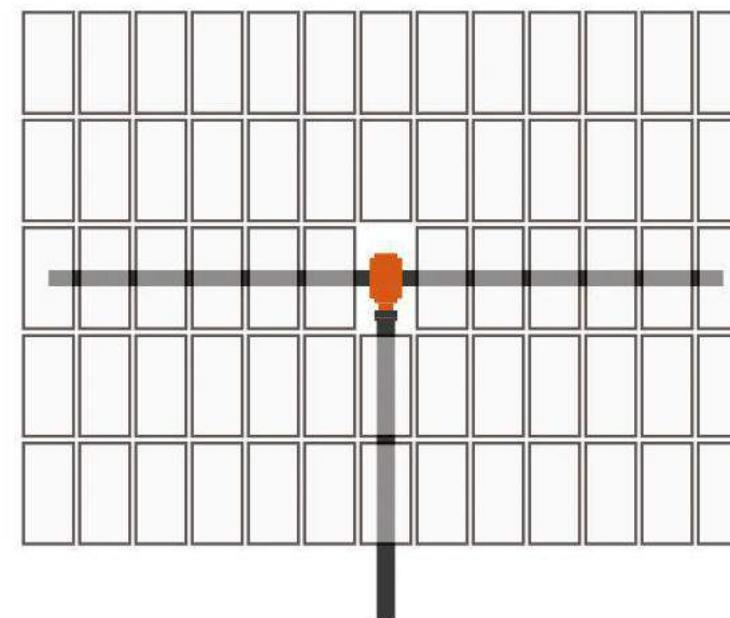
KSI has pioneered a groundbreaking new generation of single-axis solar trackers set to revolutionize the industry. Drawing upon more than two decades of experience as a market leader in dual-axis tracking systems, KSI has harnessed its expertise to develop the most advanced, cost-effective, and dependable solar tracking solution available—the UAT generation.



DUALIX-13

Dual - Axis

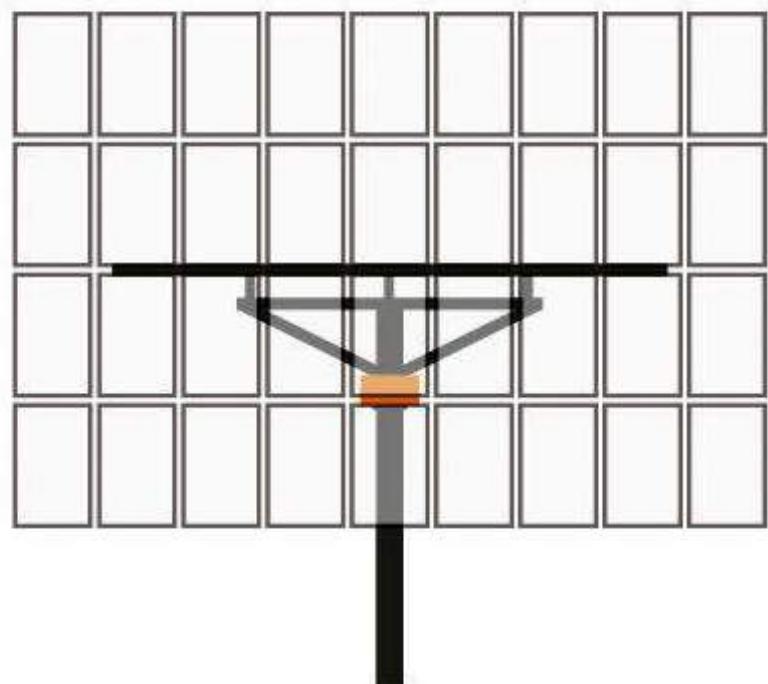
The **Dualix-13**, the latest evolution of Dual-Axis Tracker system, setting new standards in efficiency and reliability. Building upon the success of DA_60, it incorporates advanced performance in solar energy production. With an extended surface area, this tracker offers more than double the production capacity.



DUALIX-6

Dual - Axis

The **Dualix-6**, a cornerstone of reliability and durability in solar tracking technology. Renowned for its robust build quality, it has been installed thousands of times across the globe and has proven to consistently deliver exceptional performance.



LUMA

1P Single-Axis

With Luma's "1P" formation, efficiency meets elegance with a single row of panels arranged in a portrait orientation. Its central axis gracefully aligns along the midpoint, ensuring optimal solar tracking performance.



NIGHT FLIP



ADJUSTABLE HEIGHT



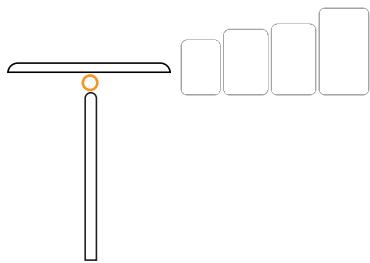
OFF-SET
INSTALLATION



ADJUSTABLE ARRAY
LENGTH

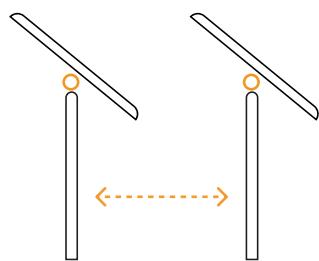


Features



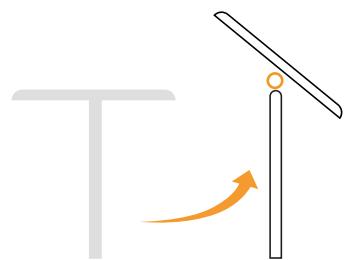
○ Modules Scalability

Luma is engineered for exceptional versatility, featuring a highly adaptable structure that supports any type of solar panel available on the market, regardless of size. This flexibility allows users to select the most suitable panel technology for their specific project needs.



○ Optimized Space Utilization

With its compact and efficient 1P formation, Luma enables denser installations, maximizing land use and solar resource efficiency. This design allows for a higher panel density per unit area, ensuring greater solar energy capture and increased project output.



○ Seamless Retrofit Capability

Luma is an ideal solution for retrofit projects, thanks to its flexible and compact design. This single-axis tracker easily integrates into existing solar installations, enabling performance upgrades and energy efficiency improvements without the need for major structural modifications.

TRACKING

○ Tracking Method

Single-Axis, horizontal (N-S installation)

○ Tracking Range

-60° +60° (-90° +180° With Night-Flip Mode Optional)

○ Backtracking

Configurable to terrain

○ Accuracy

0.1°

CONFIGURATION

○ No. of Panels

Up to 48 Modules per Array (Large form factor)

○ Tracker unit

2 Arrays with 1 Controller

○ Drive Type

Slewing Drive with DC Motor

○ Tracker MWp

Approx 30 Arrays



LUMA AGRI

1P Single-Axis

The **Luma Agri** is a specialized evolution of the robust Luma, designed specifically for the agrivoltaic market. Its highly flexible design enables module positioning perpendicular to the ground, ensuring a fully open inter-row space for unrestricted access to agricultural vehicles.



NIGHT FLIP



ADJUSTABLE HEIGHT



OFF-SET
INSTALLATION



ADJUSTABLE ARRAY
LENGTH



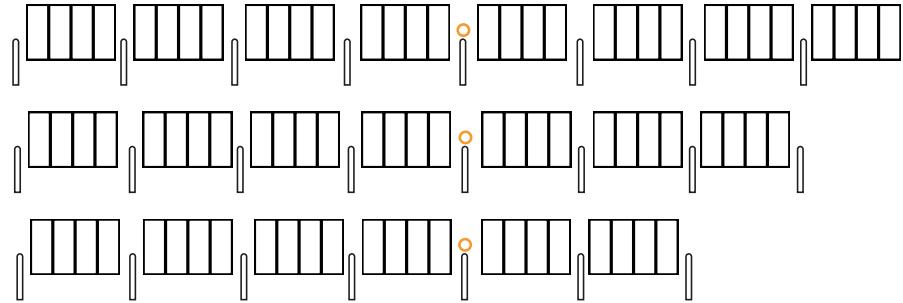
FIT FOR AGRIVOLTAIC



Features

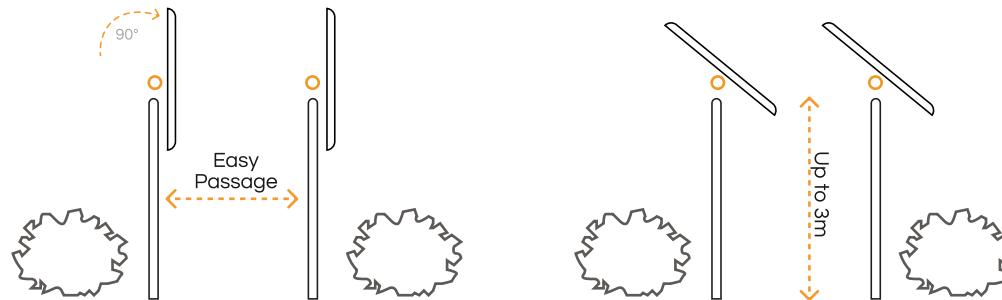
○ Adaptive Installation

Engineered for seamless integration into agricultural environments, the Luma Agri offers a modular design that allows for customized configurations based on site-specific needs. The tracker's flexibility ensures optimal space utilization for all projects, from small farms to large-scale agrivoltaic projects.



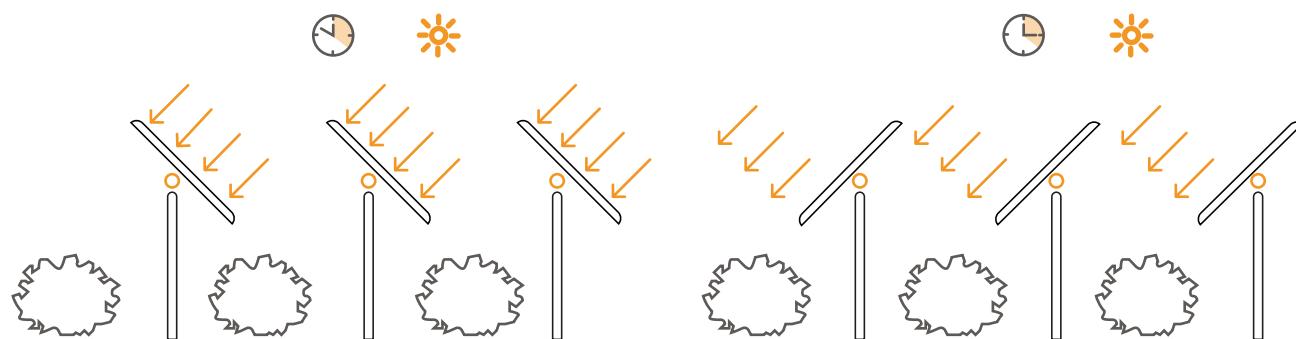
○ Fit for Agrivoltaics

With an elevated structure ensuring ample ground clearance, Luma Agri allows uninterrupted access for farming equipment and machinery. It includes a manual positioning function that enables operators to adjust module angles for easy equipment passage and improved field management.



○ Programmable (Optional)

Luma Agri can be programmed to adjust module positioning based on crop needs, allowing for controlled sunlight exposure during the most critical hours of the day. This feature helps prevent heat stress, enhance crop yields, and maintain agricultural productivity.



VEON

2P Single-Axis

Veon elevates solar tracking with its “2P” formation, featuring two rows of panels in portrait orientation. With its central axis located between these two rows, this system offers enhanced energy capture and maximum production.



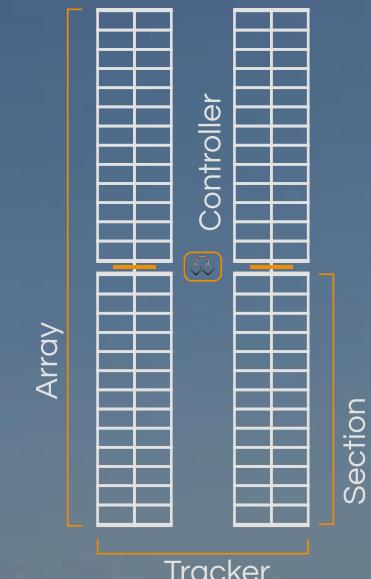
NIGHT FLIP



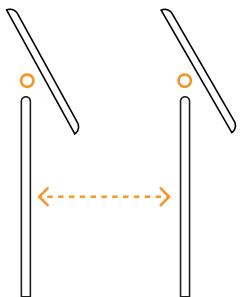
ADJUSTABLE ARRAY LENGTH



OFF-SET
INSTALLATION

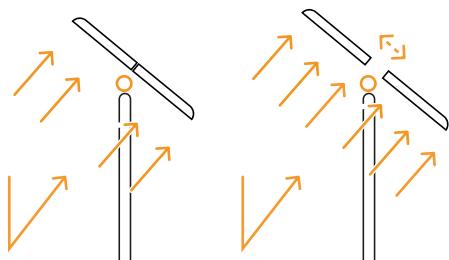


Features



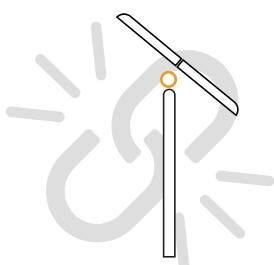
○ Low Impact of Land Use

Veon features a spaced-out tracker configuration, ensuring large gaps between rows for easy maintenance access and even weight distribution. This design minimizes land disturbance while maximizing efficiency, making it ideal for large-scale solar power plants.



○ Bi-Facial Adjustable Gap

With its 2P formation, Veon allows for adjustable spacing between panel sockets during installation. This flexibility ensures optimal light exposure for bifacial modules, preventing shading and maximizing rear-side energy gains for improved overall performance.



○ Durable Structure

Built for long-term reliability, Veon is one of the most robust and resilient single-axis trackers in our lineup. Its compact and stable design allows it to withstand harsh weather conditions, ensuring continuous operation and structural integrity even in the most challenging environments.

TRACKING

○ Tracking Method

Single-Axis, horizontal (N-S installation)

○ Tracking Range

-85° +85° (-90° +180° With Night-Flip Mode Optional)

○ Backtracking

Configurable to terrain

○ Accuracy

0.1°

CONFIGURATION

○ No. of Panels

Up to 52 Modules per array

○ Tracker Layout

2 portrait (2 section with up to 26 modules)

○ Tracker unit

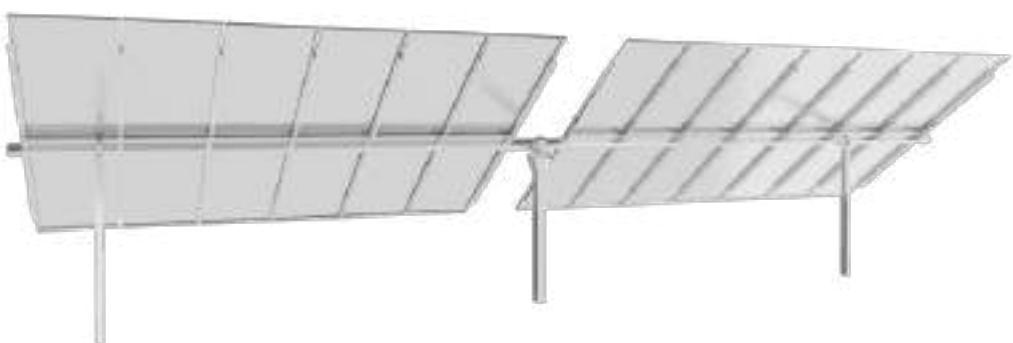
2 arrays with 1 controller

○ Drive Type

Slewing drive with DC motor

○ Tracker MWp

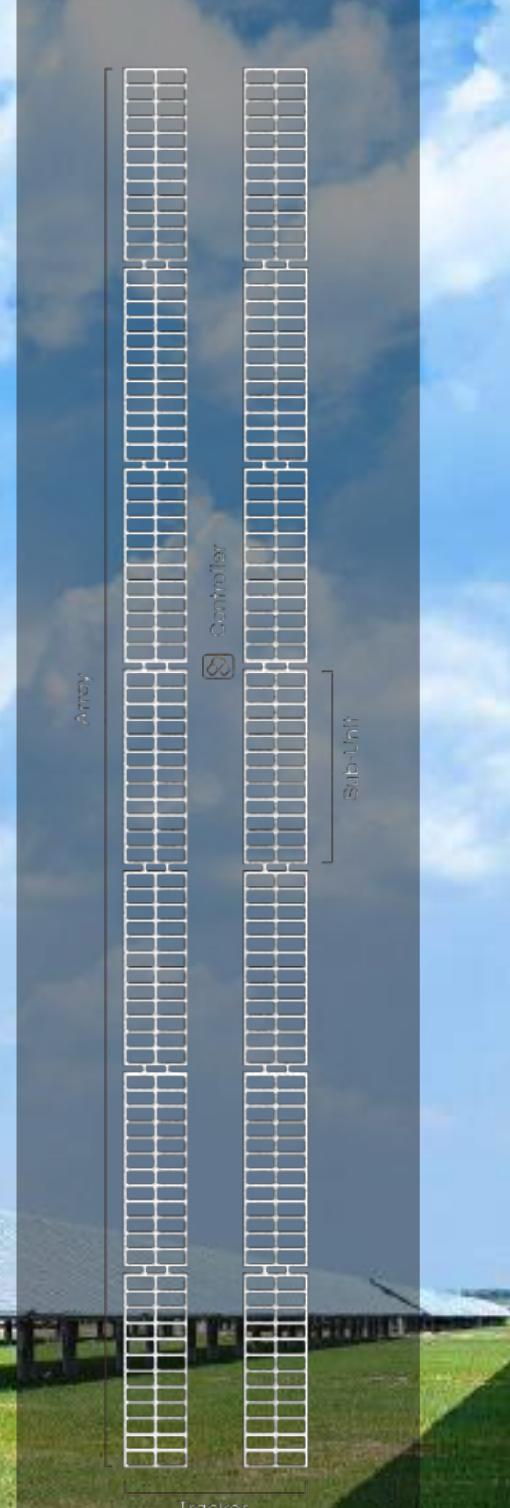
Approx. 20 arrays



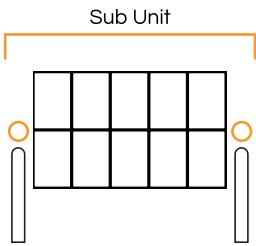
VEON-TX

2P Single-Axis

KSI's new Veon-TX tracker introduces innovative TFT (Terrain-Following-Tracker) technology, making it possible to be installed on all kinds of terrain, while the module arrangement in "2P" ensures maximum energy production, even in uneven landscapes.



Features



- **Independent Sub-Units**

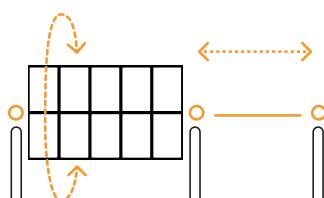
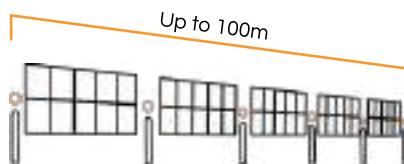
Veon-TX is composed of independent sub-units, providing exceptional flexibility and adaptability. A dynamic connection between adjacent units eliminates wind resonance and enhances system rigidity, ensuring reliable performance in diverse environmental conditions.

- **Array up to 100 meters**

Thanks to its flexible transmission system, a single motor can operate up to 7 sub-units, each with 24 modules, enabling the creation of arrays up to 100 meters in length. This design is optimized for large-scale solar installations, reducing operating costs while maximizing energy output and efficiency.

- **Flexible Transmission**

Sub-units are controlled by the motor via flexible steel cables, which allows unparalleled terrain adaptability, thanks to Tracker-Following-Terrain (TFT) technology.



TRACKING

- **Tracking Method**

Single-Axis, horizontal (N-S installation)

- **Tracking Range**

$\pm 60^\circ$

- **Backtracking**

Configurable to terrain

- **Accuracy**

$0.1^\circ - 0.25^\circ$ on azimuth

CONFIGURATION

- **No. of Panels**

Up to 24 PV modules per sub-unit with form factor 1.3m x 2.4m

- **Tracker Layout**

Maximum of 7 subunits with Maximum length of 100m per array

- **Tracker unit**

2 Arrays with 1 Controller

- **Drive Type**

Slewing drive with 1 DC motor per array

- **Tracker MWp**

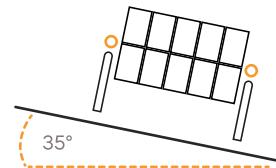
Approx. 8.5 trackers for form factor 1.3m x 2.4m (700Wp module)



TERRAIN FOLLOWING TRACKER

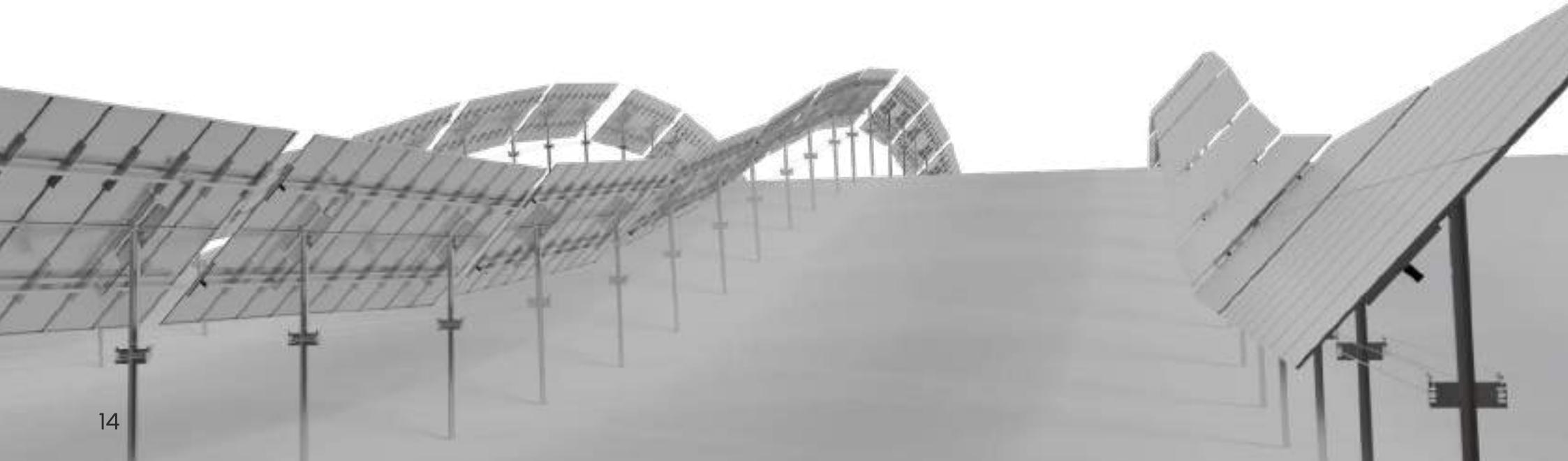
T F T

Terrain-Following-Trackers represent a breakthrough in solar technology, enabling energy generation on previously impractical sites. These systems adapt to natural land contours, significantly reducing the need for costly earthwork and grading. By minimizing land disturbance, they lower project costs while also reducing the environmental impact of solar installations on sloped, uneven, and challenging terrain.



Flexible Implementation

Veon-TX has a terrain slope adaptability up to 35° (70%) to reduce civil engineering work & requirement for flat land.



FEATURES COMPARISON

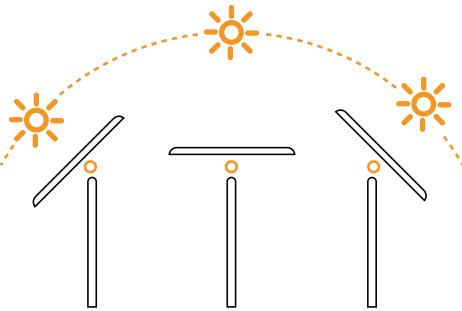
Feature	Luma	Luma Agri	Veon	Veon-TX
1P Formation	✓	✓	✗	✗
2P Formation	✗	✗	✓	✓
3L Formation	✗	✗	✗	✓
4L Formation	✗	✗	✗	✓
All Modules Form Factor	✓	✓	✗	✓
Agri Installation	✗	✓	✗	✓
Small Installation	✓	✓	✗	✗
Medium Installation	✓	✓	✓	✓
Large Installation	✓	✓	✓	✓
90° Position	✓	✓	✓	✗
Night-Flip	✓	✓	✓	✗
Off-Set	✓	✓	✓	✓
Adjustable Array Length	✓	✓	✓	✓
Adjustable Height	✗	✓	✗	✓
Wind-Safe Position	✓	✓	✓	✓
TFT	✗	✗	✗	✓

KSI SOLAR CONTROL UNIT

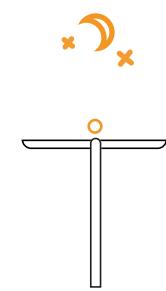
SolTrk

SolTrk is the advanced control unit behind KSI Solar's photovoltaic trackers, setting the industry standard for decades. Its cutting-edge electronics utilize an astronomical tracking system, ensuring precise alignment with the Sun's movement throughout the day and across all seasons, maximizing energy production.

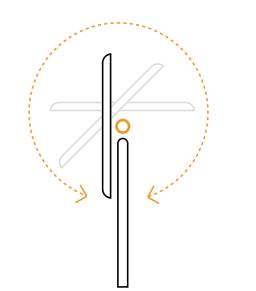
Developed by KSI Solar, SolTrk delivers angular accuracy of up to 0.1°, a level of precision essential for concentrator module technology and other high-efficiency solar applications. Fully integrated with a built-in datalogger, it enables bi-directional data exchange, allowing for real-time monitoring and control from anywhere in the world.



○ Daily Tracking



○ Night-Flip



○ Full Control



Features

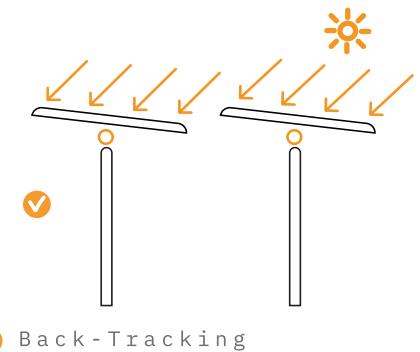
Each tracker is equipped with its own control unit, enabling individual access and analysis of each system. Only one cable is required for power supply, along with one for the motors and one for communication, simplifying the setup. All cable access points are conveniently grouped within each **SolTrk** unit, ensuring a quick, simple, and accurate connection.

○ Advanced Back-Tracking

To maximize energy production and eliminate shading losses, **SolTrk** features an intelligent back-tracking system that continuously adjusts array positions throughout the day. This ensures that trackers do not cast shadows on one another, optimizing installation space and preventing energy loss.



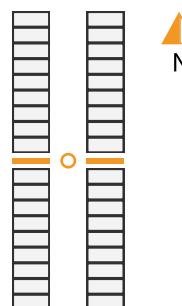
○ No Back-Tracking



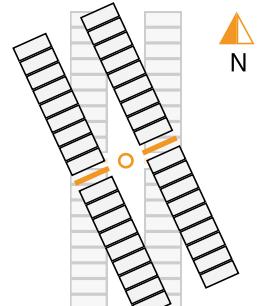
○ Back-Tracking

○ Off-Set Installation

SolTrk technology supports array installations with tilts of up to $\pm 35^\circ$ relative to the North-South axis, making it ideal for land with oblique borders or uneven terrain. This flexibility ensures efficient land use while minimizing energy production losses. The back-tracking algorithm is fully integrated with the offset function to maintain optimal performance.



○ Standard North-South



○ Off-Set Installation

Features

KSI's SolTrk is designed for optimal operation, even under harsh weather conditions. With advanced adaptive tracking algorithms, it ensures continuous performance and protection, minimizing disruptions caused by extreme environmental factors.

○ Rain-Swing (Optional)

Traditional trackers in a static position during rainfall can cause excess water accumulation, leading to mud formation, soil erosion, and seepage in concentrated areas.

With the Rain-Swing feature, SolTrk automatically detects rain and initiates a slow, controlled oscillation, distributing water evenly across both sides. This prevents ground erosion, maintains soil integrity, and ensures sustainable land use in Agrivoltaic applications.



○ Static Position



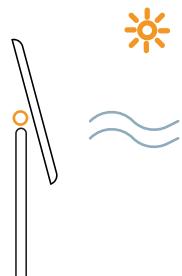
○ Rain-Swing

○ Wind-Safe

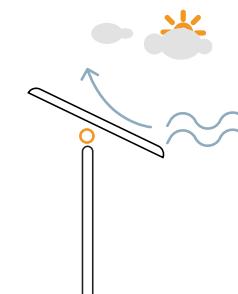
Trackers must adapt to changing wind conditions to maintain structural integrity and minimize energy losses. SolTrk incorporates multiple wind protection strategies, automatically adjusting to varying wind speeds:

- During high wind, the system positions modules flat to reduce wind resistance.
- During moderate winds, the tracker adjusts to safe angles, optimizing energy generation while maintaining stability.

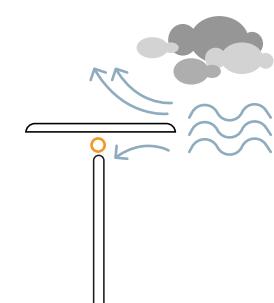
These dynamic adjustments help prevent structural damage, ensure continuous operation, and reduce production losses during extreme weather conditions.



○ Low-Wind - Standard Tracking



○ Medium Wind - ± 30° Position



○ Strong Wind - Flat Position

Monitoring

With the KSI by Higeco data-logger, our system enables seamless communication with all types of SCADA Modbus platforms, ensuring bi-directional data exchange from anywhere in the world. This advanced connectivity allows for real-time monitoring, control, and performance optimization, providing operators with full visibility and remote access to their solar installations.

○ Datalogger

SolTrk integrates seamlessly with the KSI by Higeco monitoring portal, enabling efficient tracker and production data management. The system also offers the flexibility to extend monitoring capabilities to all key plant devices, including switches & meters, lighting & security, media cabins & control systems, and video surveillance.



Immediate Tracking
Control of all Systems



Display and Status of
Control Boards



Control Boards
Data Analysis



Control Board History



Remote Parameter
Manager



Data-Logger



KSI Portal



Remote Control

GUARANTEED PROTECTION

Safety Concept

KSI's trackers are equipped with extensive array of safety features. This allows for reliable operation even in extreme weather conditions and, at the same time, protects your investment in the event of storms or power failures.

Safeguard offers full protection against:



Electrical Tension Spikes



Blackouts



Strong Winds



Storms



Autonomy up to 2 Days



S A F E G U A R D

All security features are summarized in our unique safety concept, the safeguard. A voltage monitoring system continuously checks the charge level of the control's batteries. This way, the secure table position can always be accessed, even in the event of a power failure.

WARRANTY, SERVICES, ACADEMY

We proudly offer our customers a product they can rely on, both in terms of safety and predictability of operating costs. In addition to a modular service concept that includes regular maintenance intervals, we also offer extended warranty options of up to 20 years.

The KSI Academy provides you with the latest technological and market developments for the PV tracking systems industry to ensure that you are able to optimize and secure your investment.





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KSI Solar