

Dual-axis photovoltaic tracking module



Overview

Dual-axis trackers chase the sun in two directions for the highest possible yield. A dual-axis tracking system simultaneously adjusts the PV array in two independent axes: azimuth (horizontal rotation, 0° – 360°) and elevation (vertical tilt, 0° – 90°). The Dualix generation of Dual-Axis trackers has earned a stellar reputation as the most reliable tracking system worldwide. Engineered for maximum irradiance capture and 30–40% higher annual energy yield in high-value solar applications — the definitive solution for CPV systems, high-DNI utility projects, and precision solar research installations. By moving in both a horizontal (East-West) and vertical (North-South) direction, dual-axis trackers improve efficiency by 30–40%. TU Graz researchers have developed FLAPTrack, a dual-axis solar tracker that combines higher PV yields with automated weather protection by folding modules flat during storms. The system aims to make dual-axis tracking economically viable again, with reported yield gains of up to 40% compared with. The work deals with the simulation and optimization of a tracking mechanism used to increase the efficiency of photovoltaic (PV) systems. 3 years warranty and support customized design. Higher efficiency, +25% – 40% more energy! Less power consumption – only about 3 – 5kWh/set/year. High frame strength – better wind-resistance.



Article Content

(PDF) Design of a complex dual-axis solar tracker with an integrated ...

A dual-axis solar tracking system with a novel and simple structure was designed and constructed, as documented in

Single-Motor and Dual-Axis Solar Tracking System for Micro Photovoltaic ...

Although solar tracking systems work with higher power efficiency than fixed solar systems, they do not attract

Performance assessment of a dual-axis solar tracker for concentrator ...

Summary Enhancing the performance of a concentrator photovoltaic (CPV) system by integrating a solar tracker to

Dual Axis Solar Tracking System Auto Adjust improves

The fully automatic solar tracking bracket has a sensor controller and driver set to track the position of the

Dual-axis photovoltaic tracking system – Design and experimental ...

The proposed design of a dual-axis tracking system together with an open-loop control system of electric drives gives

Austrian scientists testing foldable PV system with dual-axis tracking

TU Graz researchers have developed FLAPTrack, a dual-axis solar tracker that combines higher PV yields with

Simulation and Optimization of a Dual-Axis Solar Tracking Mechanism

Abstract The work deals with the simulation and optimization of a tracking mechanism used to increase the efficiency

(PDF) Design and Practical Implementation of Dual-Axis

A dual-axis solar programmable logical controller (PLC) based automatic tracking system

Design and Implementation of a Dual-Axis Photovoltaic

This paper proposes a novel design for a dual-axis photovoltaic (PV) tracking system

Design, Modeling, and Experimental Validation of a Dual-Axis ...

The growing demand for renewable energy requires efficient technologies to maximize solar resource utilization. This

Design and Implementation of a Dual-Axis Photovoltaic Tracking

This paper presents a low-cost dual-axis photovoltaic (PV) tracking system based on sun-sensor feedback to improve

Design and Implementation of Hardware-Implemented Dual-Axis Solar ...

In summary, this study concentrated on the design and implementation of a hardware-implemented dual-axis solar

What Is A Solar Tracker And Is It Worth The Investment?

Single-axis trackers follow the position of the sun as it moves from east to west. These are usually used in

Dual-Axis Tracking Solar PV Mounting System

Dual-axis trackers chase the sun in two directions for the highest possible yield. A dual-axis tracking system

Dual Axis Solar Tracking System Basics: Dual Axis

A dual-axis solar tracking system has motors to rotate the solar panels around vertical and

Performance of Bifacial Photovoltaic Modules on a Dual-Axis Tracker

Bifacial photovoltaic dual-axis tracker systems have the potential to out-perform other module/mounting configurations at high

Developing a dual axis photoelectric tracking module using a multi ...

This study formulated and implemented a sample of an autonomous dual-axis solar tracking system using a newly

Dual Axis Tracker: Definition, Types and How it Works

There are two main types of dual-axis trackers: Polar-Axis Trackers and Altitude-Azimuth Trackers. Polar-axis

Dual-Axis Solar Tracking Systems for Maximum Energy Yield

Discover innovations in dual-axis solar tracking systems to maximize energy yield and efficiency for sustainable power

Design and Implementation of Dual-Axis Solar Tracking

To increase the photovoltaic panel efficiency a dual axis solar tracking system is designed

Dual-Axis Tracking

Solar PV modules arranged in a dual-axis tracker. The power curve for any PV array mounted on a tracker is broader than that for a

Evaluation and Design of Power Controller of Two-Axis Solar Tracking

Unlike previous technologies where the aim is to keep the solar rays perpendicular to the surface of the module and

Dual-Axis Tracking

This results in a higher capacity factor and specific yield compared to fixed-tilt or single-axis tracker mounting, which may be

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