RFID
Solar Panel Tracking

by Daphne Systems Private Limited

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INTRODUCTION

Daphne Systems Pvt Ltd, as a leading provider, integrates these features into its solutions, making them a reliable choice for organizations looking to optimize their solar energy systems.

When you want to save time and know where to get hold of solar panel, an RFID solar panel tracking solution from Daphne Systems can prove to be highly advantageous. Our RFID solar panel tracking tool called SPTrack easily connects to your network and carries out the task of tracking and finding solar panel plats in real-time and in the most effortless manner. Our fully automated and local positioning system will find, identify and manage solar plats along with other complete descriptions within an organisation.

> The RFID tags can be read using portable or fixed RFID readers, and the data is stored in a centralized database for easy access and management. This ensures transparency, traceability, and compliance with government norms.

BENEFITS OF SP-TRACK

Enhanced Visibility: Provides real-time data on the location and performance of solar panels.

Improved Efficiency: SP-Track tracking and monitoring, reducing manual intervention and errors.

Cost Savings: Reduces operational costs by streamlining inventory management and maintenance.

Compliance: Ensures adherence to government norms, such as mandatory tagging for subsidized projects.

Sustainability: Promotes efficient use of renewable energy resources, contributing to environmental sustainability.

Security: RFID tags have unique IDs that cannot be cloned, preventing duplication and fraud.

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CASE STUDIES

SCENARIO: FOR LARGE SOLAR FARMS

In large solar farms, managing thousands of solar panels can be challenging. RFID technology simplifies this by:

- **SP Tracking:** Each panel is tagged with an RFID chip, allowing operators to track its location and condition.
- **Performance Monitoring:** Real-time data on panel performance can be accessed to identify underperforming panels.
- **Maintenance:** RFID tags help schedule maintenance by providing detailed information about the panel's history and condition.
- **Compliance:** Ensures adherence to government regulations, such as those mandated by the Ministry of New and Renewable Energy (MNRE) in India.

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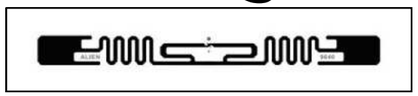
Components:

RFID Tags:



RFID Tags are used for tagging Non-Metallic surfaces, i.e., (Wooden /Plastic /Fiber) assets for identification through RFID Readers.

RFID Handheld Reader with Android Application:

This Android-based wireless device is used for Searching, Tracking, & Inventory (Audit) of assets.

Tagging Station:

The Tagging Station is used to map the RFID Tags with Asset IDs.

* RFID Desktop Reader
* Tagging Application Software

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Components Used:

SP-Track Software:

This is a set of software and middleware that integrates RFID devices with computers. This package also includes Web-based Software used for MIS Reporting and controlling the complete RFID System.

- Control Unit of the whole RFID System
- Monitoring of Unauthorised asset movements.
- Java-based Web Application
- Asset Registration
- Inventory Control
- Database Backup
- MIS Reports (Category wise/Location wise/Daily/Monthly/Yearly Reports)
- Export Reports to PDF/Excel

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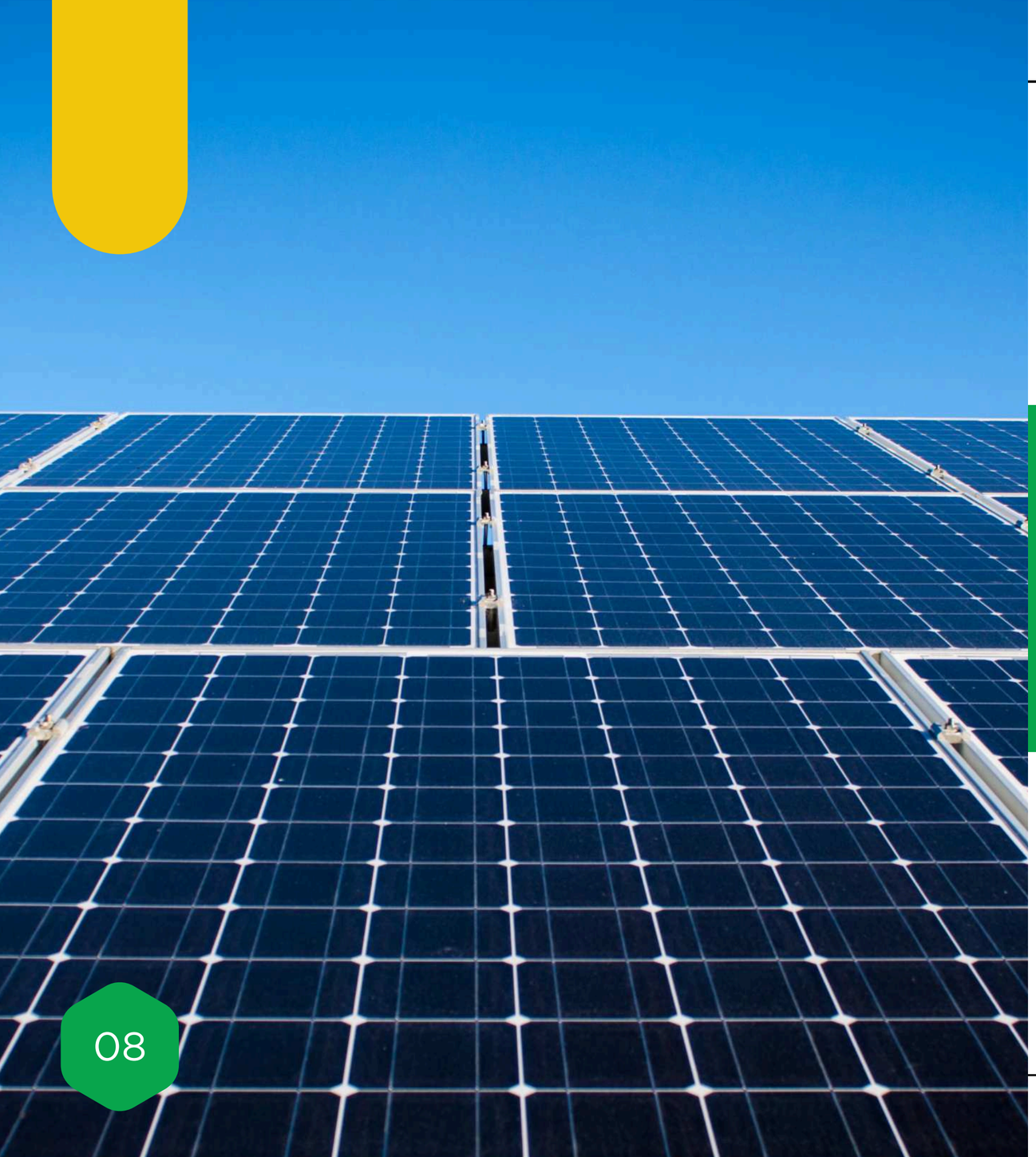
We suggest making effective use of an RFID-based Solar Panel Tracking that offers a complete solution. Our solution, called SPTrack, has been specifically designed to serve in the form of a modular solution that comes with varied modules that can effectively be used for building a system to meet your requirements. It also offers identification, security automation, and tracking of solar panels.



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THANK YOU

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