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CLOCKWORK

+SolarControl

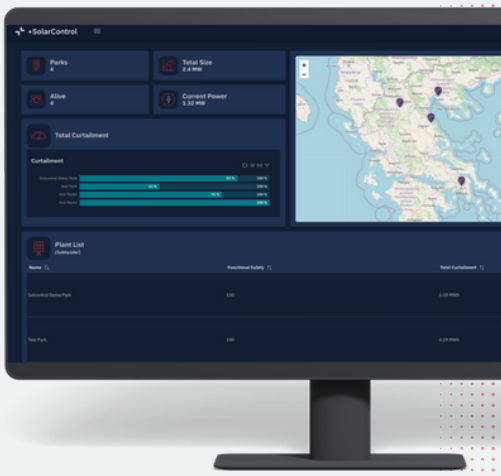
Optimal remote management for your RES park

full compliance with HEDNO requirements ΔΕΔΔΗΕ

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Plug-n-play Hardware

A compact box, sealed to ensure maximum security. The box contains power outlets for easy access and can be easily installed in any RES park.



Powerful Software

- supports 50+ inverter manufacturers and 6 feeder protection and control relay manufacturers
- empowered by open protocols, no dependency on commercial protocol barriers
- zero-trust cybersecurity architecture
- easily customizable to future requirements with remote updates
- IoT based architecture to manage everything from the cloud in real-time

User-friendly Online Platform

- Advanced visual analytics to understand how curtail affects you
- Future-proof: aggregator-ready to enable 3rd party curtails

Maximum Security

Impregnable defense to cyber attacks

Future-proof

Interconnected with RES aggregators - Battery Control

MiniPC Architecture

Flexible and customizable

Easy Monitoring

extremely user-friendly online platform

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Specifications

- Plug-and-Play architecture, compatible with 50+ inverter manufacturers, covering the entire Greek market
- Robust cybersecurity built on a zero-trust framework
- Resilient monitoring techniques for continuous real-time data logging
- Future-proof for Aggregators: supports curtailment signals from Aggregators
- Future-proof for batteries: supports ancillary services to the Grid when storage systems are installed within the parks
- Monitoring, control, and curtailment capabilities for each individual park within the connected portfolio
- Monitoring and control of the Main Switch at the Point of Common Coupling (PCC)
- Real-time equipment status alerts and fault recognition
- Support for IEC-60870-5-104, Modbus TCP/IP, Modbus RTU communication protocols, incl. wired interfaces. Expandable for OPC-UA/DA/XML-DA.
- Seamless two-way communication with HEDNO's SCADA/DMS for the transmission of measurements and reception of production curtailment or disconnection signals for parks
- RfG compliance-ready



Image 1. +SolarControl installed in RES park.

Custom Firmware

- for future customization & scalability
- flexible for the needs of each owner
- secure hardware through mechanical strip

Edge Controller

- MiniPC Capabilities
- Unique Device Identifier for direct communication in the field
- VPN Client for secure remote access

Warranty & Technical Support

Each module comes with a **2 year equipment replacement warranty**. Any defective module if within the equipment replacement warranty will be replaced within 5 business days. The 2-year warranty includes software updates to ensure compliance with HEDNO requirements and technical support.

With the annual **+SolarShield Subscription Plan**, RES owners ensure equipment longevity and unlock a range of value-added services. The annual plan includes software upgrades for new aggregator and battery functions, ancillary services, technical support, remote maintenance, access to the +SolarControl management platform, multi-level technical support, and cloud connectivity for parks.