

# SOLINTEG SMART EMS

## Energy Storage System

INTEGRATE SOLAR INTELLIGENTLY



## Brief Introduction

*Solinteg Smart EMS is an advanced energy management system aimed at helping users utilize solar energy systems more efficiently and achieve energy independence. It possesses the following characteristics:*



### Intelligent Management

Manage the devices and plants intelligently and remotely.



### Maximizing Efficiency

Maximizing energy utilization by increasing power generation, optimizing usage strategies and so on.



### Stable and Reliable

Multiple intelligent strategies ensure a stable electricity supply.





# Smart Devices and Monitoring 01

Solinteg provides an intelligent and convenient remote control platform—Solinteg Cloud. With the multiple choices of devices, users can easily check the status of their system anytime and anywhere.

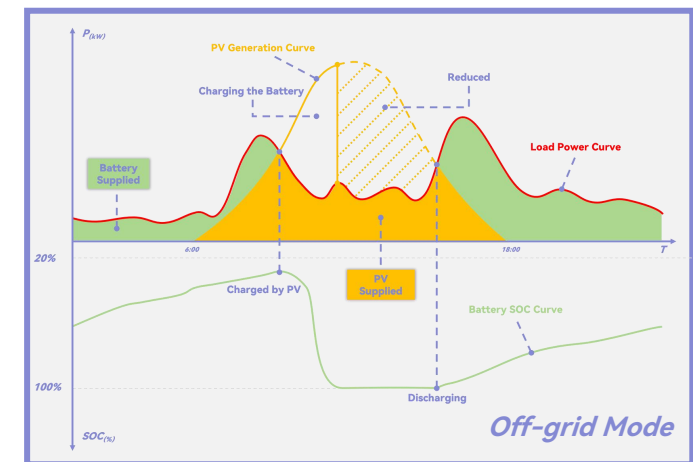
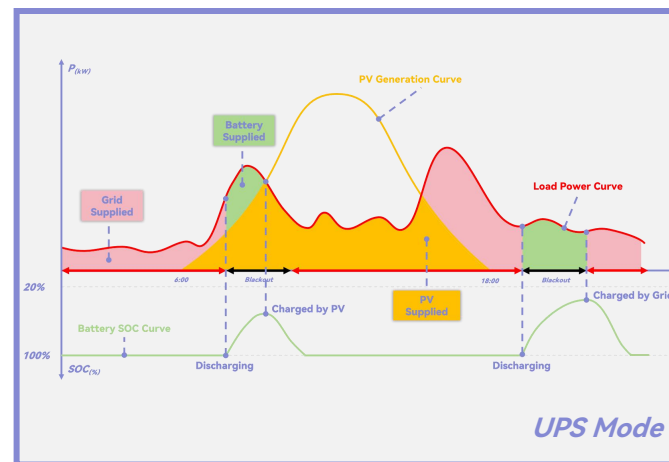
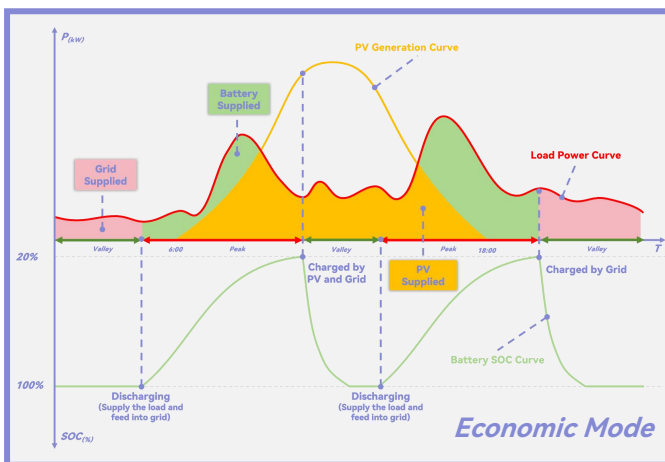
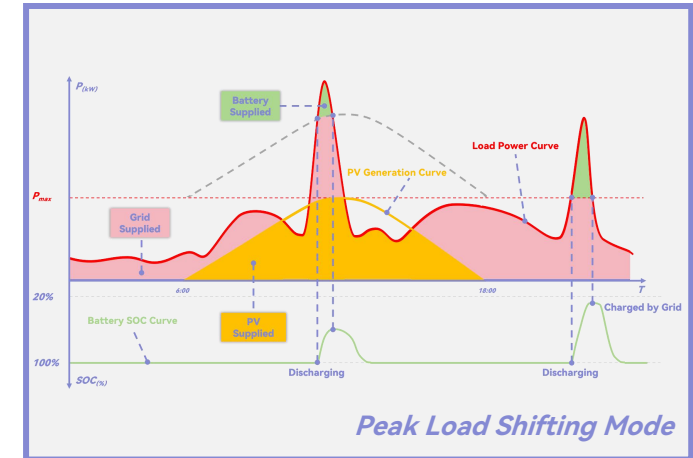
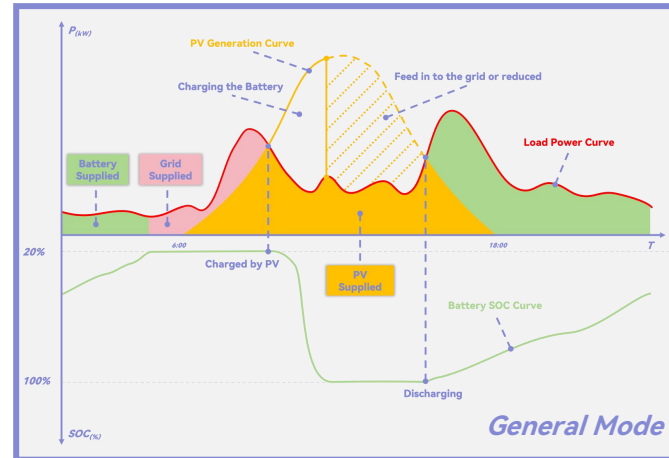
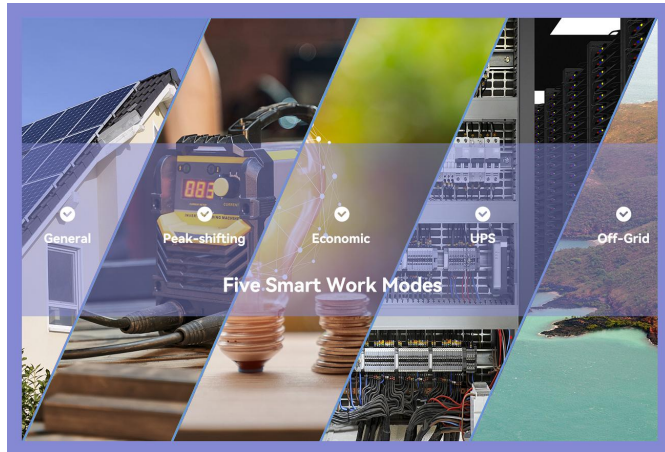
Including:

- Plants and devices management;
- Data checking;
- Parameters setting;
- Alarm pushing;
- Firmware upgrading;
- .....

And multiple communication options are available: WiFi/LAN/4G.

# 02 Smart Work Modes

Solinteg's hybrid inverter features five intelligent operational modes tailored to meet diverse requirements. By strategically employing these modes in various scenarios, users can optimize power allocation and prioritize energy usage effectively.



Expand the Capacity **Easily**



Master-Slave



Datalogger



On-Grid



Off-Grid

## Multiple Paralleling **03**

Solinteg provides multiple methods for paralleling inverters, supporting parallel operation in both on-grid and off-grid modes.

This functionality enables users to seamlessly scale up their systems from several kilowatts to hundreds of kilowatts, saving both time and costs for users.



Up to 10 units



Cost saving



Easier to install



More stable

# 04 Smart Load Control

Have you ever been troubled by the following **PROBLEMS?**

- Excess solar energy being wasted
- EV was not charged in time
- Expensive electricity used by heat pump or water heater in non-emergency time
- Excess power exporting to the power grid without any payback or even being punished.
- .....

Solinteg's smart load control feature offers solutions for various situations. You can activate it through the Solinteg Cloud or App to manage high-consumption loads based on the status of the battery, PV, and time.

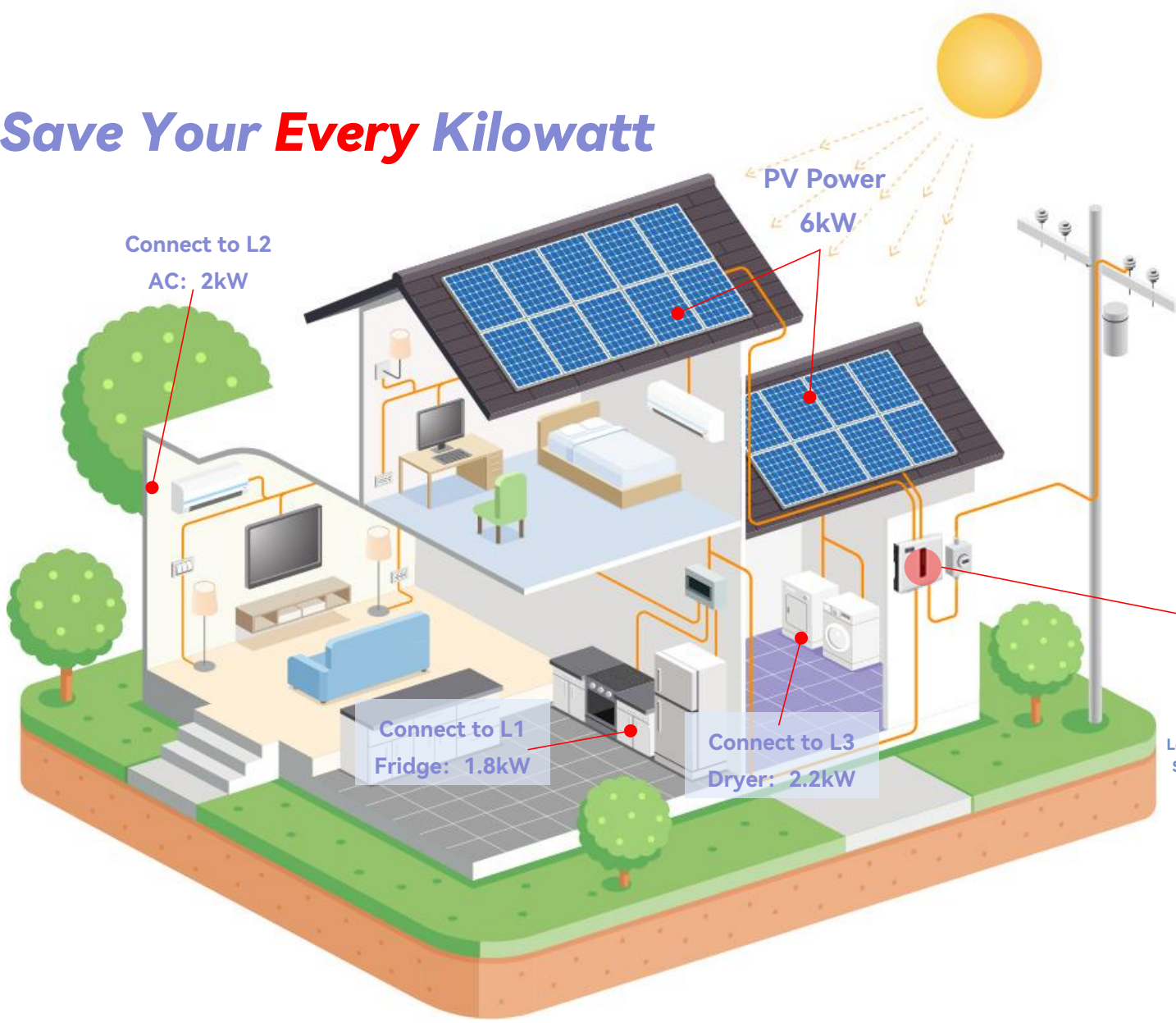
**Use Your Power Efficiently**

**SG Ready Heat Pump  
Water Heater  
EV Charging  
.....**

**Work Modes**

- Manual
- PV
- Battery
- Time

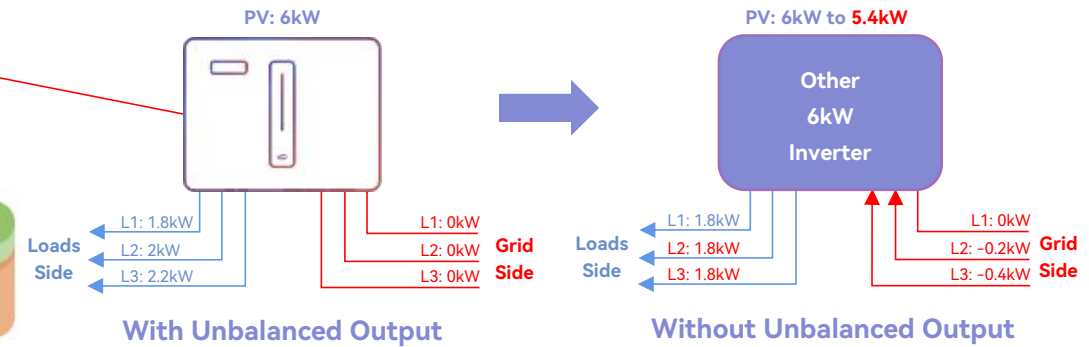
# Save Your *Every* Kilowatt



# Unbalanced Output 05

In a three-phase system, it is common that different power loads will be used at the same time on different phase, which will cause the power consumption of the whole three-phase grid to be unbalanced.

*What's the difference when you are using Solinteg inverter compared to other brand inverters?*



Solinteg inverters support **110% unbalanced output**. So, the output upper limit of each phase is 2.2kW. In this case, each phase can be fully supplied by the inverter, which can save energy bills and increase load flexibility on each phase.

# 06 Diesel Generator Control

It is possible that we may encounter extreme situations where the grid blackouts, the battery reaches SOC protection value, and the solar panels don't work due to bad weather. Don't worry! Solinteg hybrid inverters support the use of a diesel generator as an AC source to supply loads and charge batteries in this situation.

Currently, Solinteg 25-50kW inverters support connecting the diesel generator to provide full backup for your energy security. And it can automatically start the generator when other power sources are insufficient.

## Power Your Home **ALL The Time**

### Start the Diesel Generator Remotely and Automatically



**DG Working Principle**



**Load Consumption Source**

- PV
- PV+Battery
- DG

**Battery SOC**

**Grid Outage**

**PV Power**

**P\_Load**

**DG Start**

**DG Working**

**Checking**

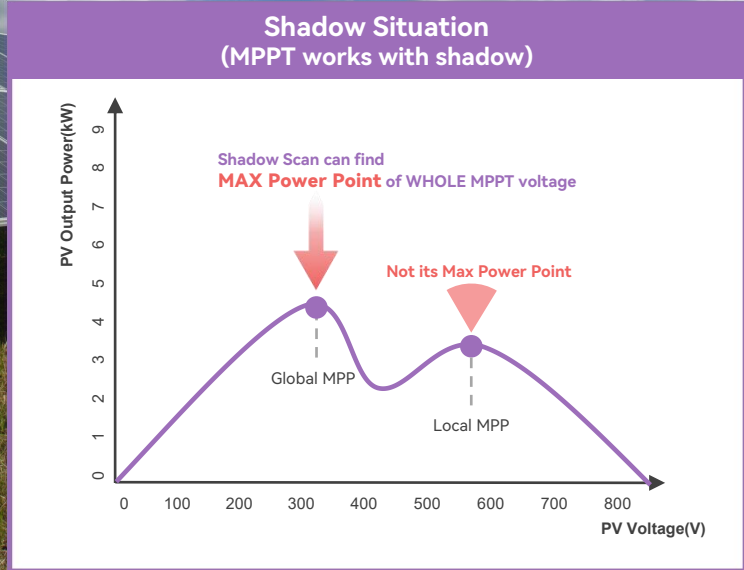
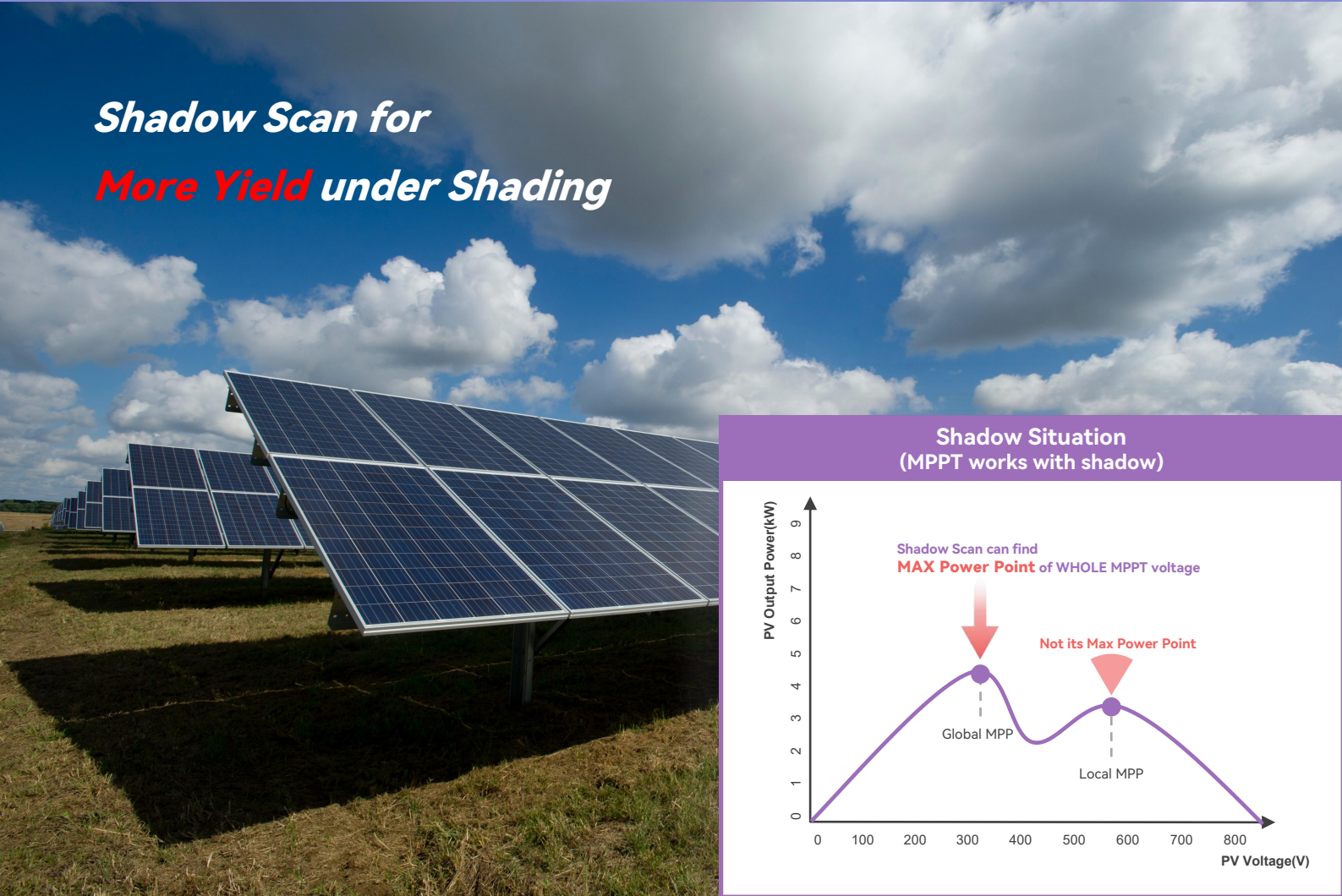
**DG Off**

**DO**



# Smart Shadow Scan 07

## Shadow Scan for *More Yield under Shading*



The Shadow Scan function is a shade repair technique that is frequently utilized when solar systems are shaded due to unavoidable shading. The inverter detects shadow and optimizes yield at the MPPT level using a highly efficient and powerful MPP tracking algorithm.

With Shadow Scan function, you can always generating with the best efficiency, even when there is partial shade.

# 08 UPS Level Switching

Solinteg hybrid inverters can switch your system to off-grid mode when power blackouts.

The whole switching process is managed automatically and can be activated within **10ms**.  
Secure your energy safety at anytime.



# Black Start 09

## Black Start



*During the use of a residential solar system, you may encounter a situation:*

*Your system shuts down due to the loss of all energy sources (battery over discharged, grid blackouts, PV panels unable to generate electricity at night or in extreme weather).*

Solinteg black start enables the system go back to work when PV or grid is recovered.

# 10 Smart Grid

There are different requirements for inverters in different regions. Some are related to safety, while others are related to the grid.

For example, RRCR in Germany. If the grid is overloaded, the utility company will send a command to the inverter through RRCR to ask the inverter to reduce its feed-in power to 0%, 30%, 60% of its rated power according to the command. If the grid is not overloaded, the inverter will be allowed to export 100% of the power.

Solinteg has the complete solution to adapt to the different regions requirements. Such as DRED, RRCR, N-PE check, and so on.





**END**  
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if you want to know more

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