Pioneering Sustainable Energy Solutions

World's leading Supplier of PV Inverter

NINGBO DEYE INVERTER TECHNOLOGY CO.,LTD

Ver2501

Deye Inverter

NINGBO DEYE INVERTER TECHNOLOGY CO.,LTD

Ningbo Deye Inverter Technology Co.,Ltd, established in 2007, is a wholly-owned subsidiary of the publicly listed Deye Group (stock code: 605117.SH). Deye Inverter is dedicated to delivering reliable inverter solutions for residential and commercial photovoltaic power stations and energy storage systems, encompassing 1kW-136kW string grid-tied inverters, 3kW-80kW hybrid inverters, and 300W-2.2kW microinverters. Expanding beyond inverters, Deye has also launched a range of innovative products, including micro (balcony) energy storage solutions, wireless zero-export solutions, wireless energy management systems, and flexible C&I solutions ranging from 100kW to 2MW.

As a product-centric organization, Deye consistently strives to meet evolving market demands, continuously iterating and enhancing existing products, while accelerating the development of new innovations. Deye is committed to crafting advanced and efficient solutions for photovoltaic and energy storage systems, contributing to global energy transformation efforts, and providing reliable, affordable, and sustainable clean energy to users worldwide.

- High-tech enterprises
- The registered capital exceeds 400 million CNY (54.8 Million USD)[1]
- The production workshop area exceeds 600,000 m^2
- More than 300 technical talents

*1, 1 USD = 7.3 CNY

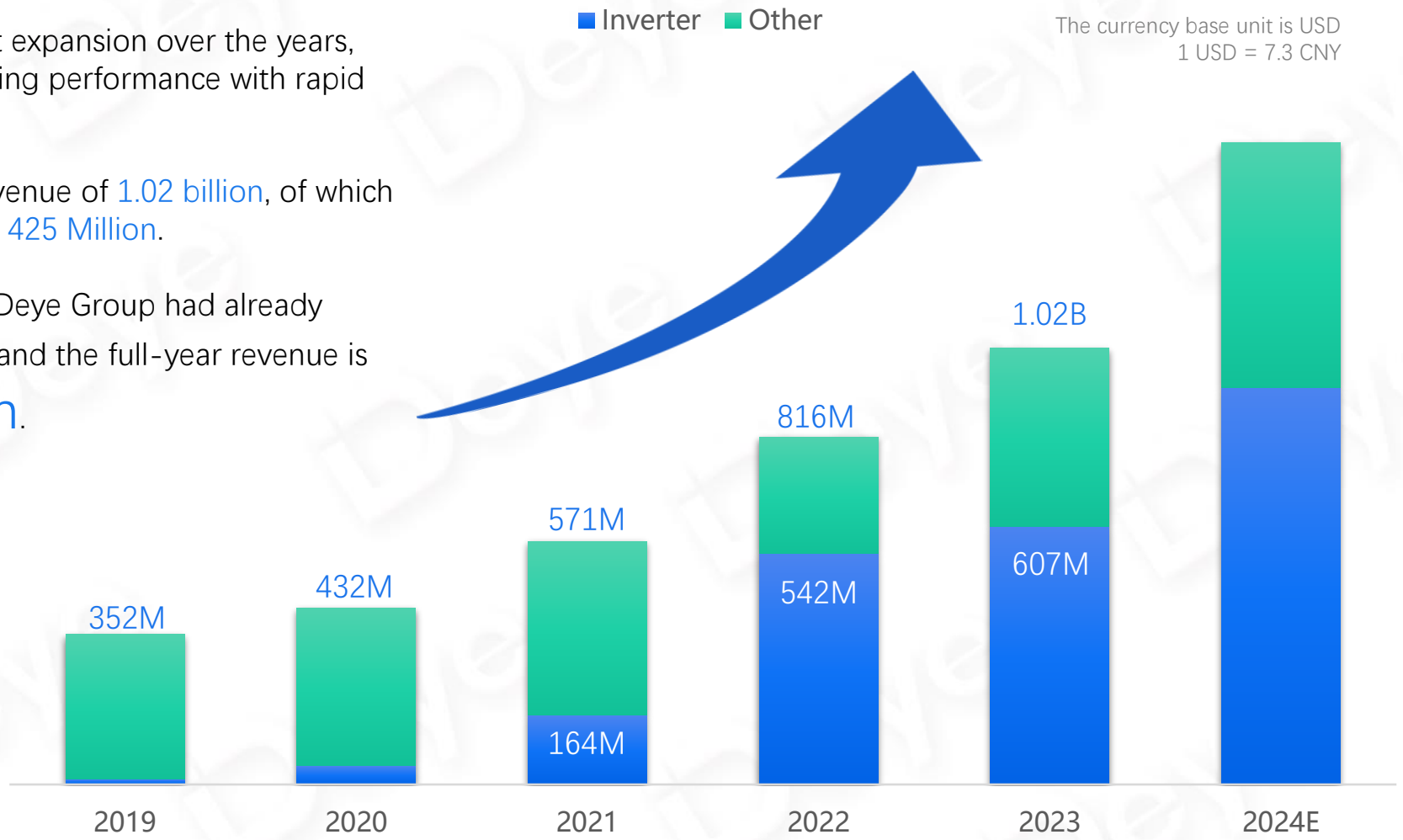
Outstanding Performance

With continuous efforts and market expansion over the years, Deye Group has achieved outstanding performance with rapid revenue growth.

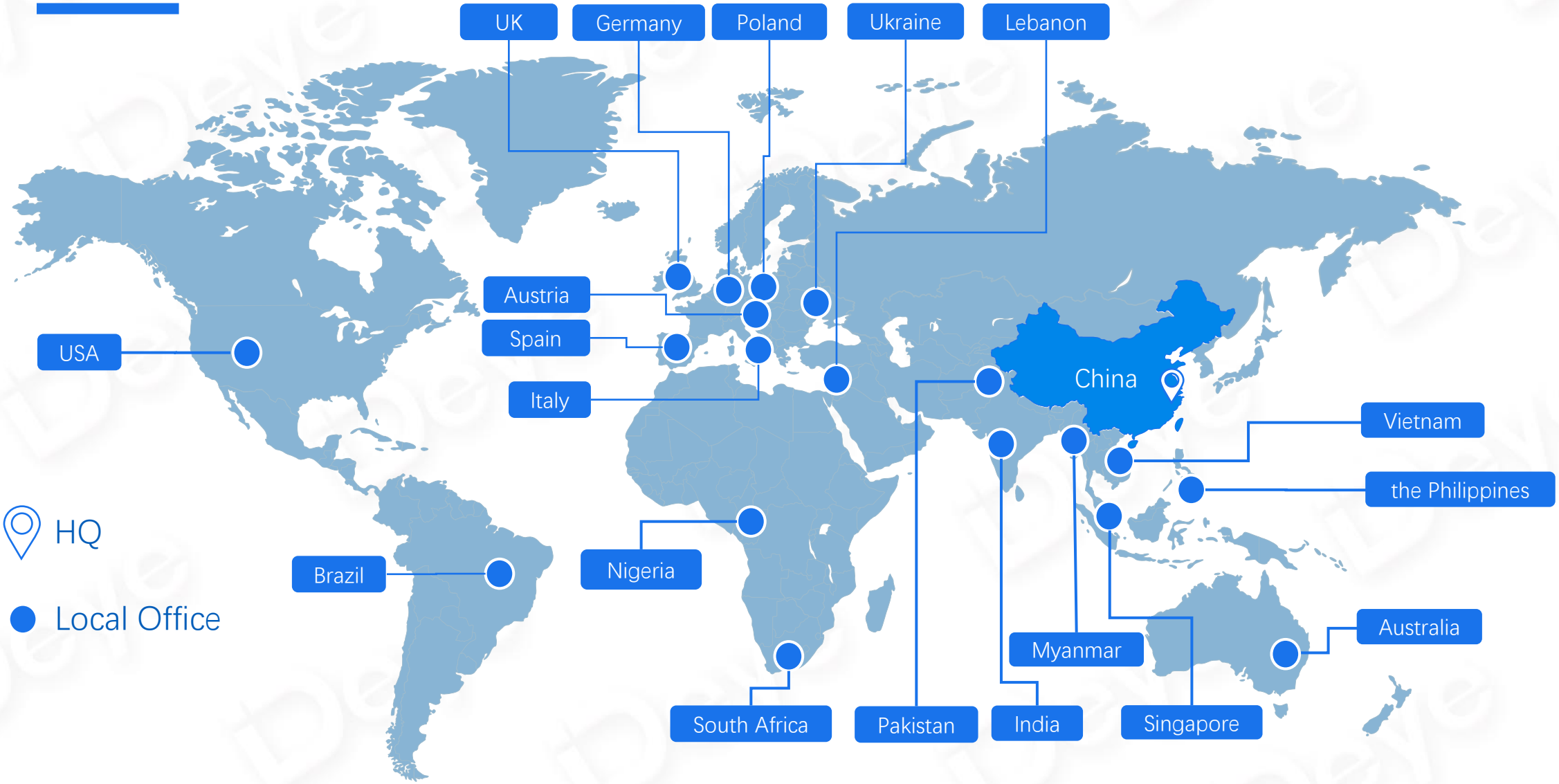
In 2023, Deye Group achieved a revenue of 1.02 billion, of which the inverter business accounted for 425 Million.

By the first three quarters of 2024, Deye Group had already achieved a revenue of 1 billion, and the full-year revenue is expected to exceed 1.5 billion.

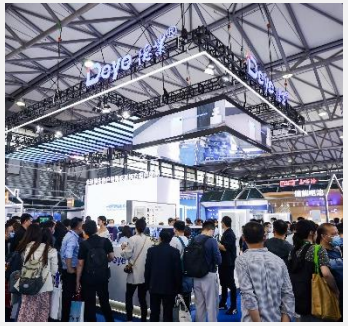
Revenue of Deye Group

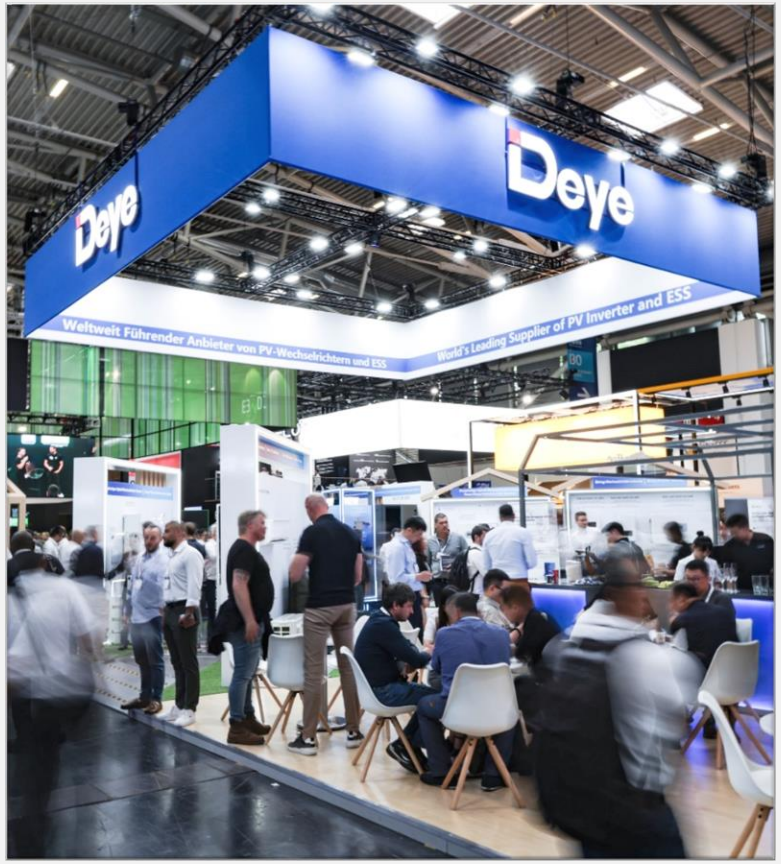


Global layout



Global Exhibitions





Participating in nearly 30 trade shows annually,

covering over 20 countries across 5 continents

Trainings and Roadshows

Partnering with local collaborators for roadshows and trainings to directly engage with end-user-facing distributors and installers.

2025

GLOBAL EXHIBITION TIMELINE

Jan.

1
2025-1.14-1.16
World Future Energy Summit
Abu Dhabi, UAE

2
2025-1.14-1.16
Solar Energy
Warsaw,Poland

Feb.

1
2025-2.19-2.21
World Smart Energy Week
Tokyo,Japan

2
2025-2.26-2.27
Solar & Storage Live Thailand 2025
Bangkok,Thailand

Mar.

1
2025-3.5-3.7
KEY ENERGY
Rimini,Italy

2
2025-3.5-3.7
SUCE
Jinan,China

3
2025-3.25-3.27
Solar & Storage Live Africa 2025
Johannesburg,South Africa

Apr.

1
2025-4.15-4.19
The 137th Canton Fair
Guangzhou,China

2
2025-4.23-4.25
Solartech Indonesia
JIExpo Kemayoran, Jakarta

May.

1
2025-5.7-5.9
Intersolar Europe
Munich,Germany

2
2025-5.19-5.20
Solar & Storage Live Philippines 2025
Manila,Philippines

Jun.

1
2025-6.11-6.13
SNEC
Shanghai,China

2
2025-6.26-6.28
Solar Africa
Nairobi, Kenya

Jul.

1
2025-7.2-7.4
ASEW
Bangkok, Thailand

2
2025-7.9-7.10
Solar & Storage Live Vietnam 2025
Ho Chi Minh City,Vietnam

Aug.

1
2025-8.26-8.28
The Smarter E South America 2025
Sao Paulo,Brazil

Sep.

1
2025-9.8-9.11
RE+ 2025
Las Vegas, USA

Oct.

1
2025-10.28-10.30
Nigeria Energy 2025
Lagos,Nigeria

2
2025-10.29-10.30
All-Energy
Melbourne,Australia

3
2025-10.30-11.1
REI
Greater Noida, India

Nov.

1
2025-11.18-11.20
GENERA
Madrid, Spain

Dec.

1
2025-12.3-12.4
Solar Solutions -Düsseldorf
Düsseldorf, Germany

*More exhibition plans will be revealed continuously.

Product Reigns, Technology Leads

Elite Talent Team

Advanced Inverter R&D Testing Platform

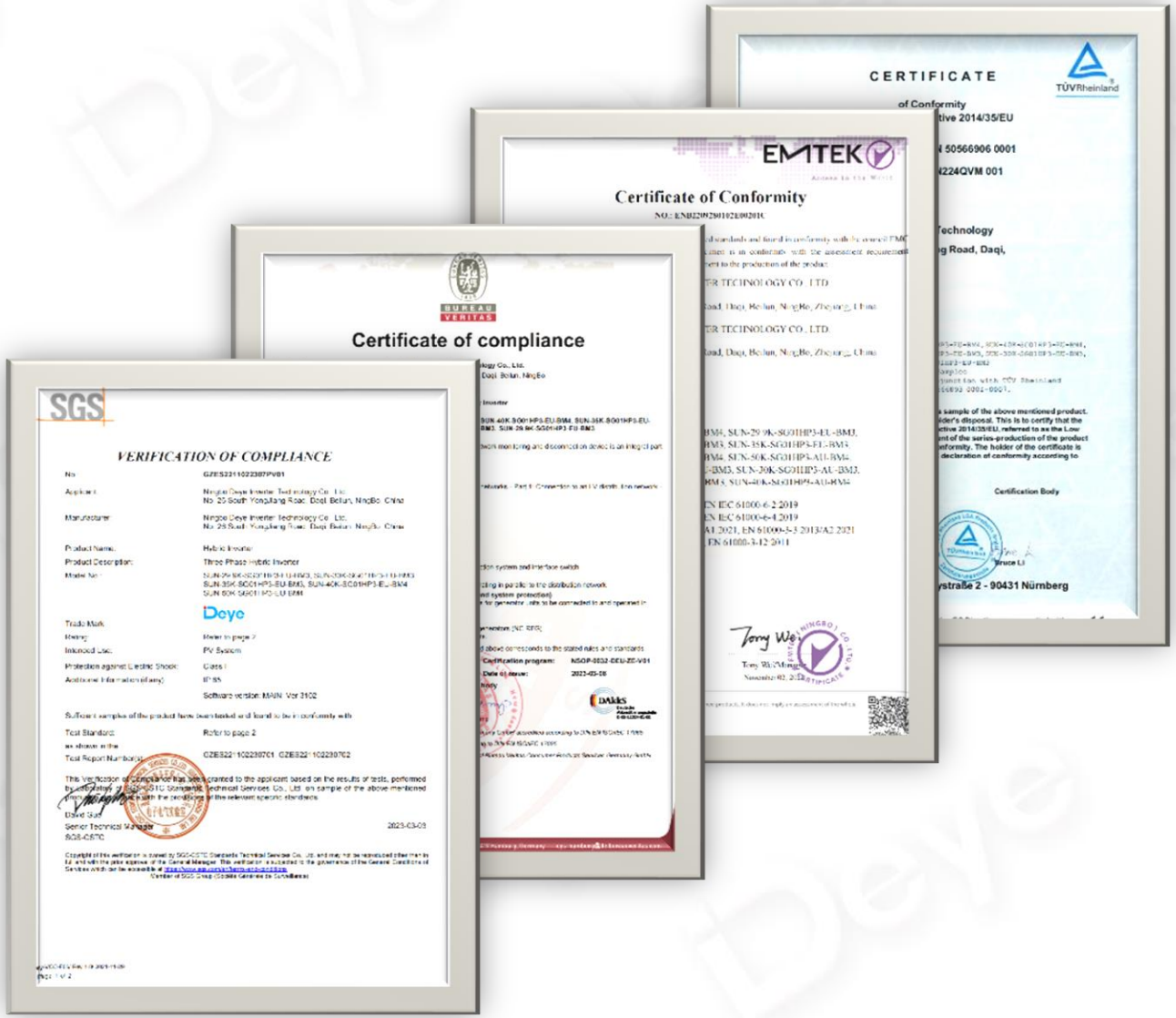
Performance Testing Platform

Functional R&D Laboratory

Reliability Laboratory

Microwave Anechoic Chamber

Authoritative Certification



Providing Multiple Certifications

G99
EN 50549
IEC 61727
IEC 62116
IEC/EN 62109-1
IEC/EN 62109-2
IEC/EN 61000-6-1/2/3/4
VDE-AR-N 4105
CEI 0-21
NRS 097
RD 140
UNE 217002
OVE-Richtlinie R25
...

Own Factory, Lean Manufacturing

Electronic Workshop

Ultra-high Speed SMT Mounting

Lead-free Hot Air Reflow Soldering

Automatic Optical Inspection

Automatic Spot Welding Equipment

Three-proof Paint Spraying Workshop

Own Factory, Lean Manufacturing

Assembly Workshop

Assembly Line

Automated Guided Vehicle

ATE Workshop

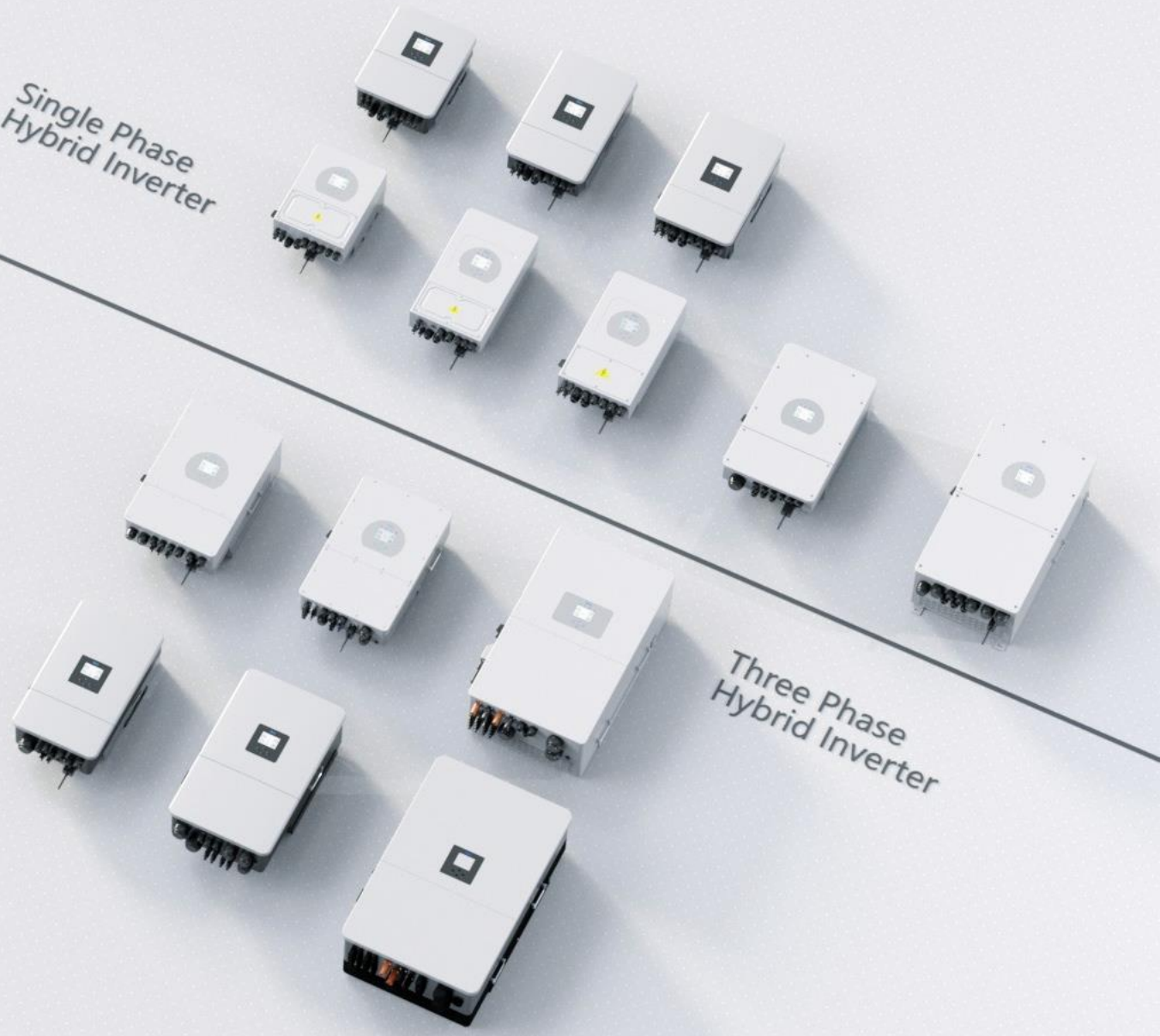
Automatic Test Equipment

Packaging and Warehousing

Hybrid Inverter

Deye's hybrid inverters are globally recognized, commanding a leading market share in countries such as South Africa. They provide accessible, highly reliable, and sustainable energy solutions for users in areas with weak grid infrastructure or high electricity costs. These solutions address various needs, including residential to commercial energy storage applications.

- **3-80kW** — Power Range
- ***4ms*** — Switching Time
- 16 Units in Parallel[1]
- Generators
- Peak Shaving
- AC Coupling[2]
- High Performance



1. The maximum of 16 units in parallel is a feature of the single-phase hybrid inverter , while the three-phase hybrid inverter has a maximum parallel number of 10 units.
2. "AC coupling" means that the inverter has the ability to couple on the AC side, can implement multiple inverters in parallel on the AC bus, and can also connect other AC power sources through the GEN port.

A Wide Range of Models, More Power, More Choices

	Single Phase	Three Phase
Support LV Battery	3/3.6/5/6/7.6/8/10/12/14/16/18kW	3/4/5/6/8/10/12/14/15/16/18/20kW
Support HV Battery		5/6/8/10/12/15/20/25kW 29.9/30/35/40/50kW 60/75/80kW

As an expert in hybrid inverters, Deye offers an array of models featuring comprehensive functionalities and a wide power range, providing an extensive options for customers. In addition to the commonly available low-power hybrid inverters, Deye also boasts unique high-power products.

The high-power hybrid inverter supports a greater number of electrical loads, allowing seamless connection of all loads to the hybrid inverter. It not only ensures the power supply for critical loads but also genuinely caters to the needs of whole-house backup power. The inverter can connect to the grid or other AC power sources such as diesel generators, through AC coupling, and enabling photovoltaic power to reduce or even replace diesel generators in areas with weak grids. This positions the hybrid inverter as the centerpiece of the building's microgrid, serving as the central hub for smart energy management.

Intuitive Touch Screen and Buttons

Deye not only facilitates cloud-based O&M through Web and mobile Apps, but also preserves the functionality of physical buttons and a touch screen.

Users can instantly get the operational status of the devices, and its menu navigation provides a seamless and user-friendly experience.

The retention of the screen and buttons reflects a commitment to preserving user autonomy.

Multi-Functional GEN Port of Deye Hybrid Inverter

Supports the connection of Generators as a supplementary power source

In areas with weak grids, it fully utilizes photovoltaic power generation while retaining diesel generators as backup power sources, effectively reducing electricity costs and supporting sustainable development.

Supports connection to Deye Smart EV Charger

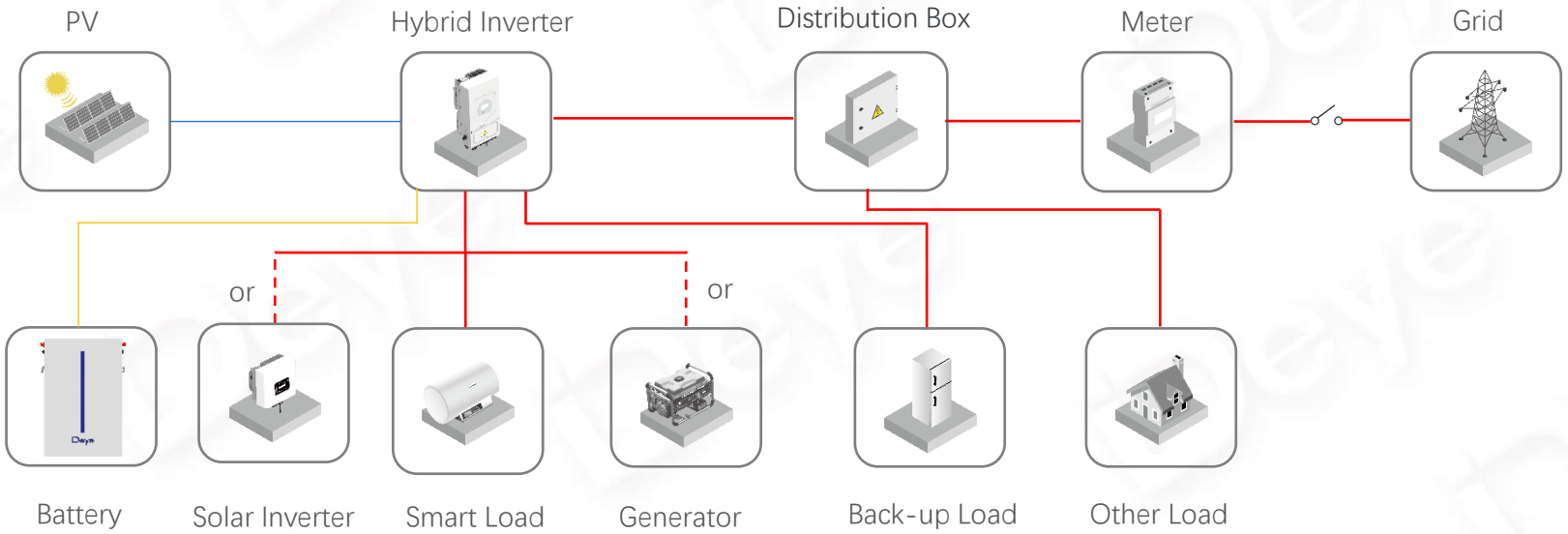
with the capability to schedule charging in 4 different time slots within a day, and the option for 100% solar charging.

Smart Load Application

The GEN port can be customized as a smart load port when not connected to a diesel generator. When the battery power is sufficient and photovoltaic generation is abundant, the inverter will autonomously supply power to the smart load.

Supports AC Coupling

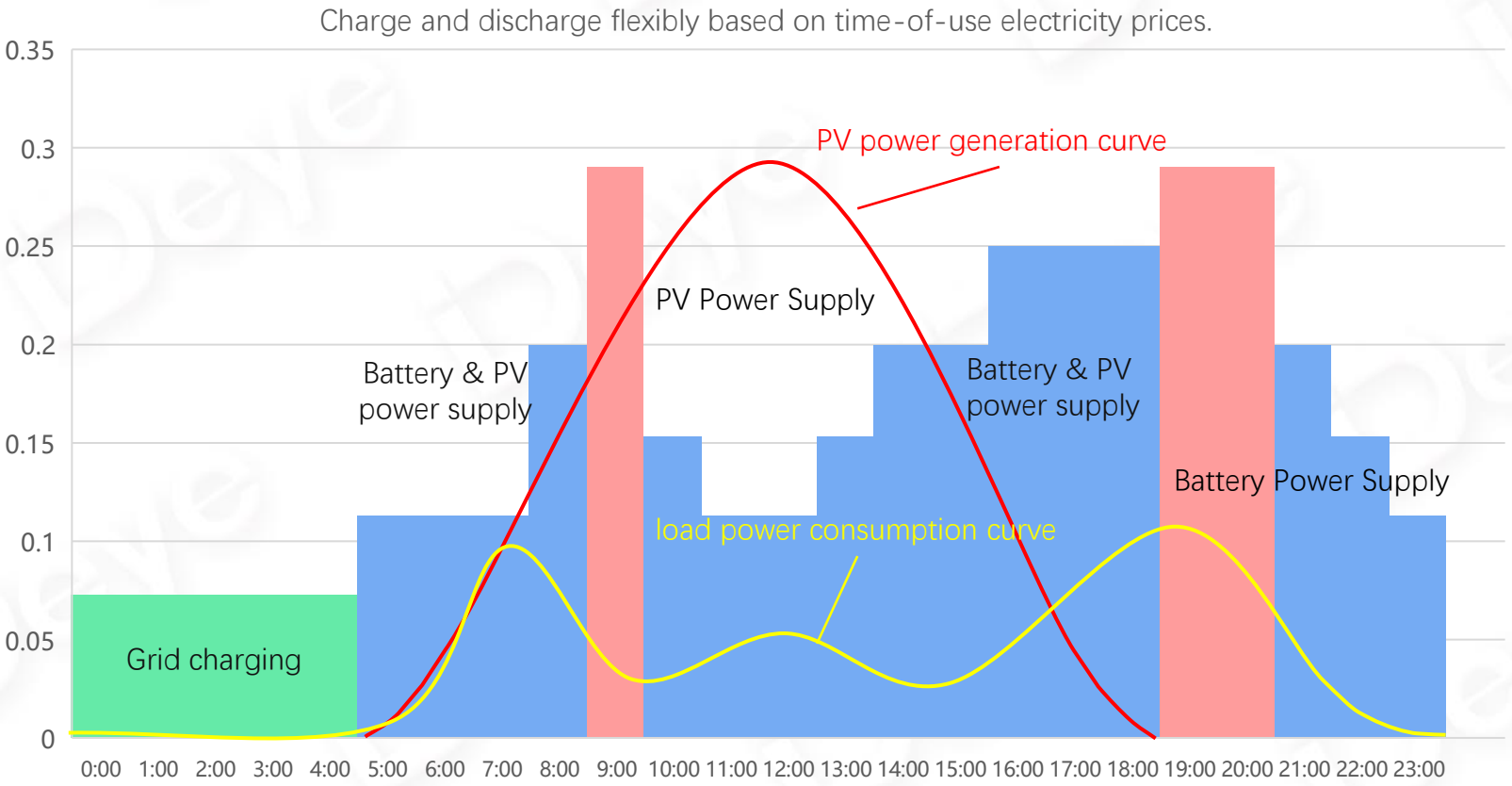
The GEN port can serve as an AC coupling port when not connected to a diesel generator, thereby upgrading the conventional grid-tied solar PV system to a solar energy storage system.

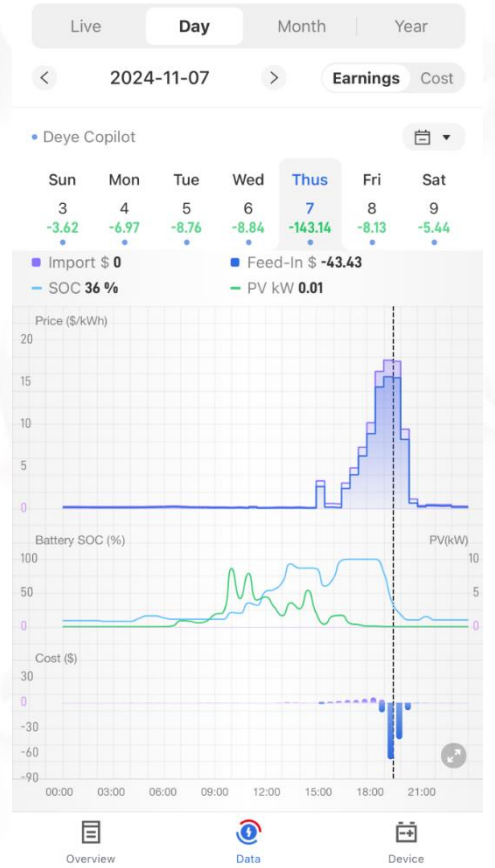


Customizable Charging and Discharging Function

The inverter can be programmed with 6 different charging and discharging time slots to make the most of time-of-use electricity pricing and reduce costs.

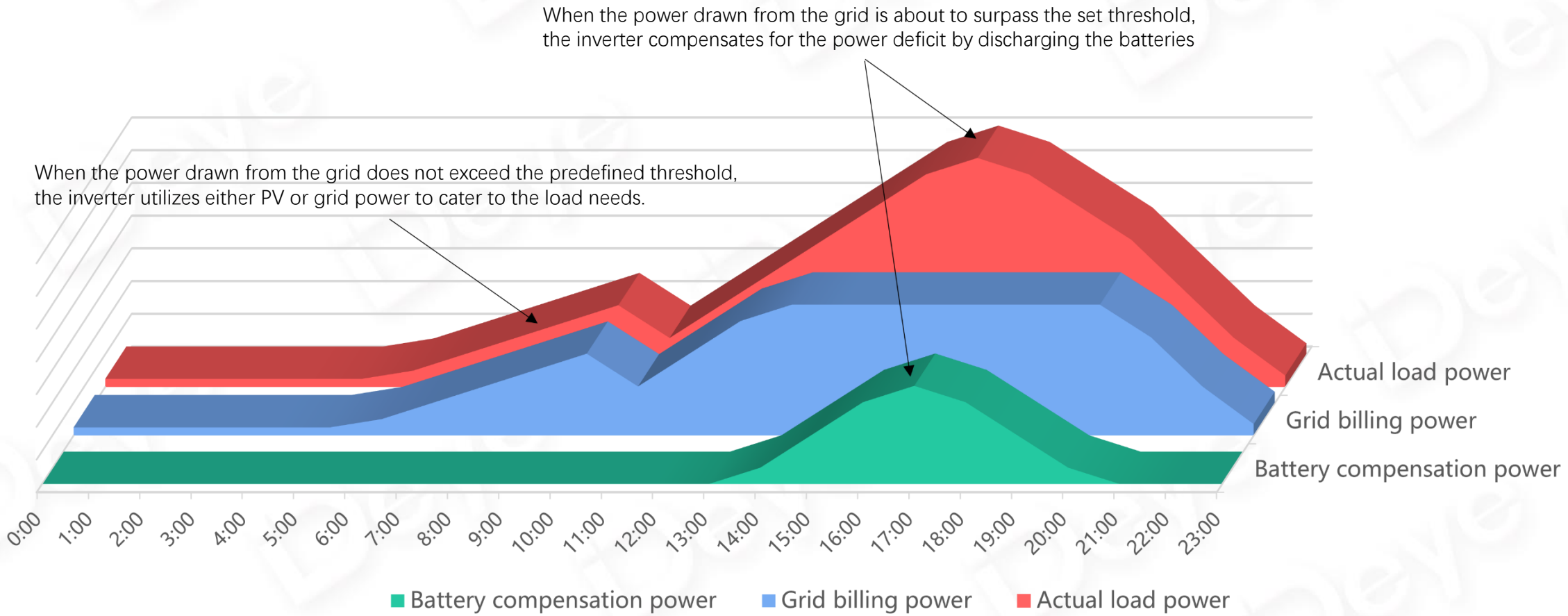
Through the **Deye Copilot** feature in the Deye Cloud, the system can also access local dynamic electricity prices, enabling AI to make decisions on selling or buying electricity (available in select regions).





Grid Peak Shaving Function

Grid peak shaving, when the power drawn from the grid approaches the set limit, the battery discharges to supplement part of the power, preventing high-rate electricity usage and reducing costs.

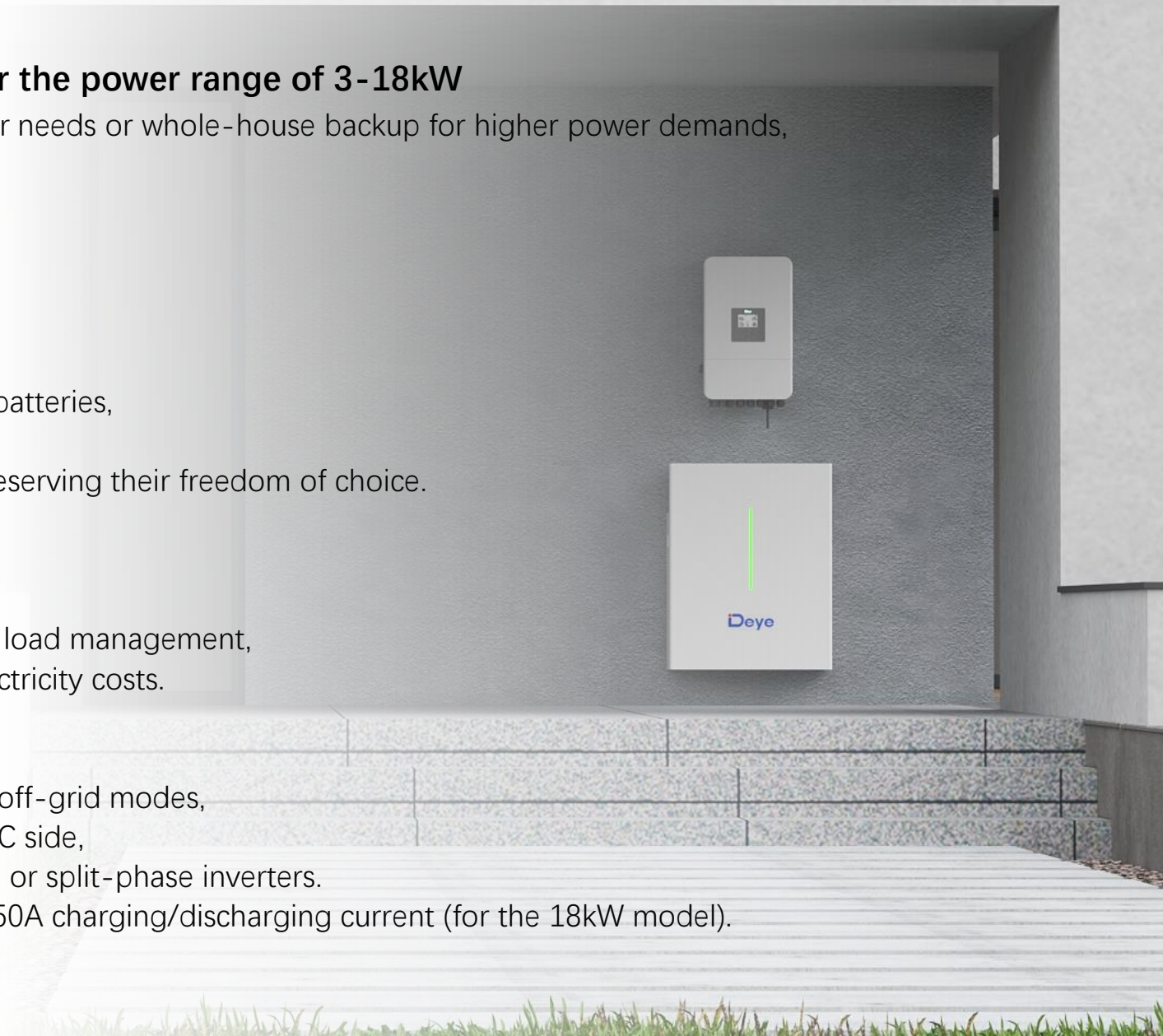


Residential Energy Storage Solution

Based on Deye hybrid inverters

As an expert in residential energy storage,
Deye has been deeply involved in the home storage industry for many years, ensuring that our home storage solutions consistently lead in functionality, stability, and reliability.

Highly Popular Low-Voltage Energy Storage Solution



Deye single-phase low-voltage hybrid inverters cover the power range of 3-18kW

Whether it's standard backup power for medium and low-power needs or whole-house backup for higher power demands,
Deye provides the right models for selection.

Compared to other single-phase low-voltage(LV) solutions,
Deye's hybrid inverter solutions offer the following advantages:

Super compatibility

You can choose from Deye's highly compatible self-developed batteries,
or select from over 100 other brands of LV batteries globally,
allowing users to match batteries based on actual needs and preserving their freedom of choice.

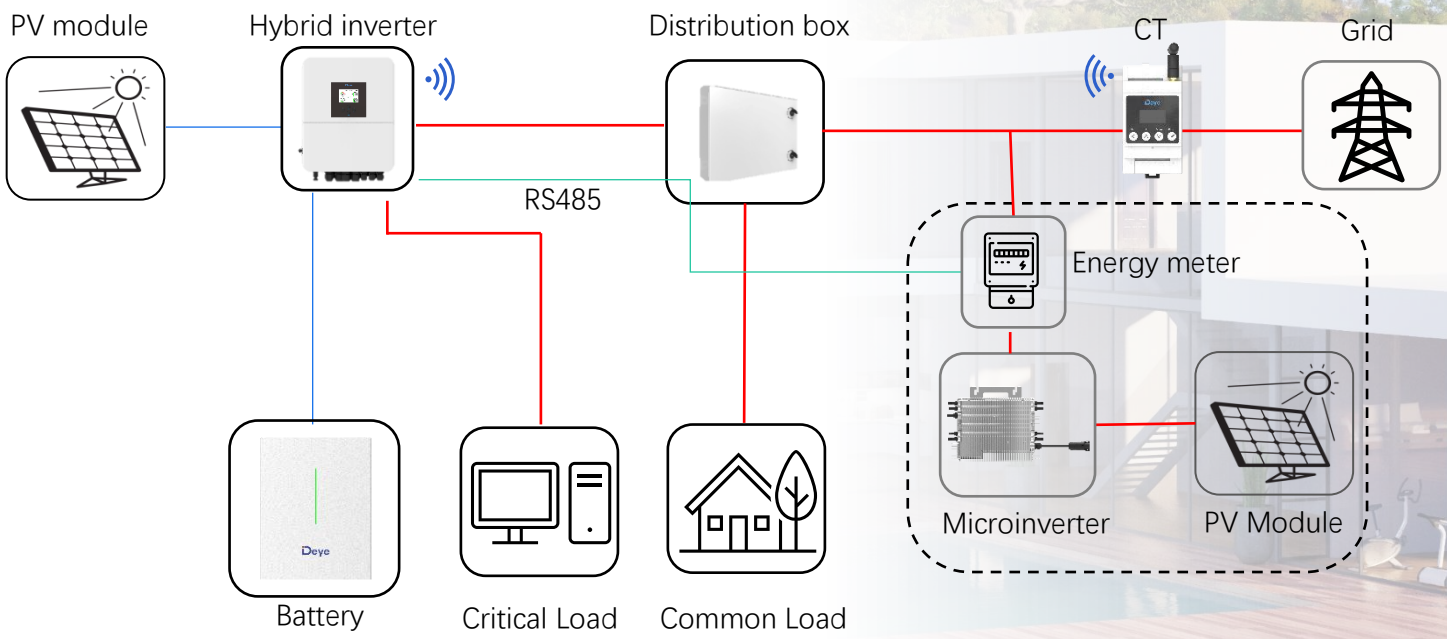
Strong functionality

With a rich and comprehensive set of software features,
including practical time-of-use charging/discharging and smart load management,
it can fully utilize photovoltaic power generation and reduce electricity costs.

Excellent performance

It features a 4ms ultra-fast switching time between on grid and off-grid modes,
supports stable parallel operation of up to 16 inverters on the AC side,
and can form a three-phase system using multiple single-phase or split-phase inverters.
It supports 18A high-current photovoltaic modules and up to 350A charging/discharging current (for the 18kW model).

Typical Low-Voltage Energy Storage System



Unique Three-Phase Low-Voltage Hybrid Solution

Deye introduced its three-phase low-voltage (LV) hybrid inverters as early as 2021, facilitating the integration of LV batteries into three-phase systems. Covering a power range from 3-20kW, these products support 100% unbalanced three-phase output, making them an excellent choice for home users looking for a secure, reliable, and high-ROI three-phase energy storage solution.

Compared to common three-phase high-voltage solutions,
Deye's three-phase LV solution offers the following advantages:

Enhanced Safety

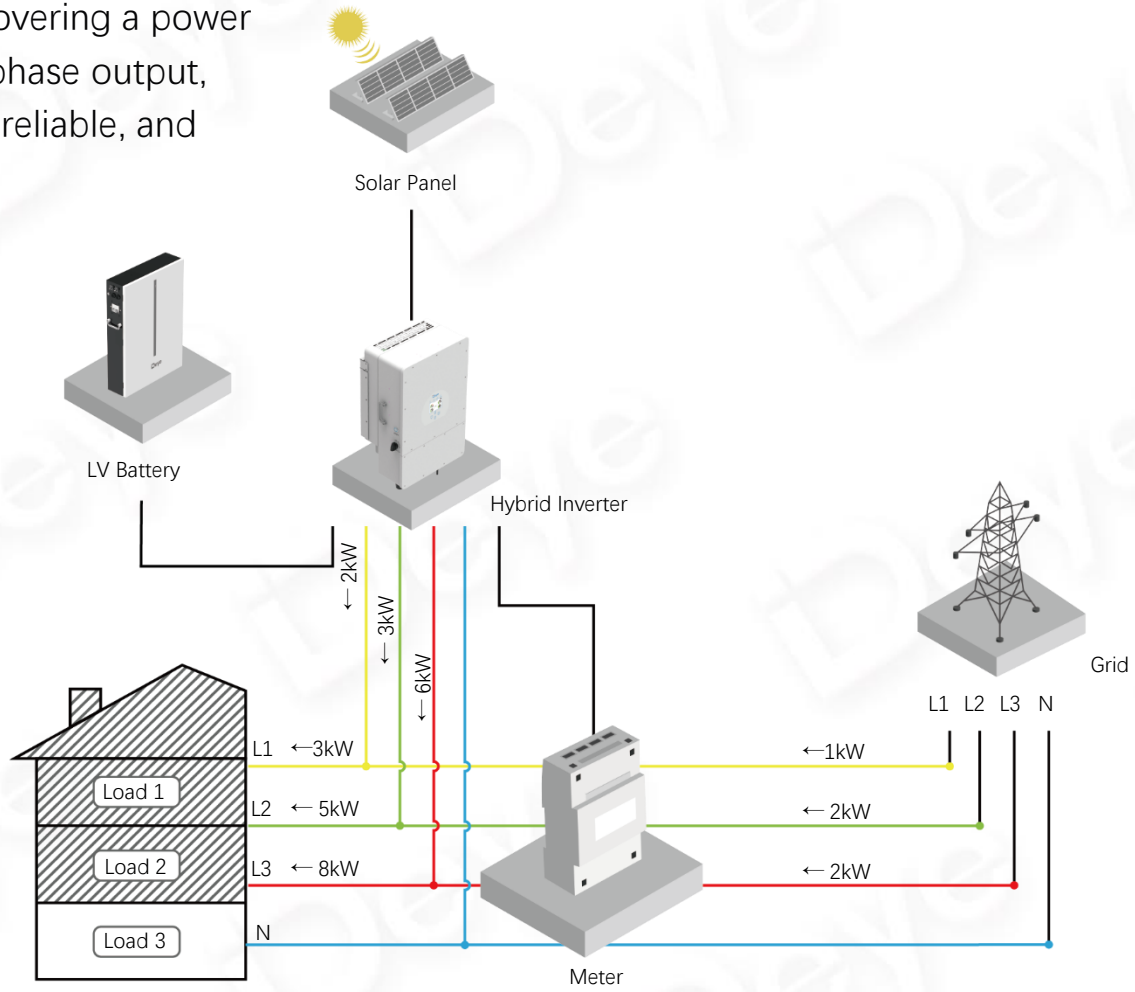
The battery system voltage is within 60V, ensuring exceptional safety while mitigating the risk of arc faults on the battery side.

Greater Economy

Constructed with LV energy storage batteries, it reduces costs, making the entire energy storage system more affordable and shortening the ROI period.

Increased Convenience

With lower technical prerequisites for constructing a low-voltage energy storage system, the installation process is more convenient.
There is no need for a separate BMS control box, making battery expansion more straightforward.



Deye Residential Energy Storage System Cases

6kW/12kWh Energy Storage System

Location	Italy
Inverter	Deye SUN-6K-SG04LP3
Battery	Deye RW-M6.1*2pcs

24kW/48kWh ESS

Location	Germany
Inverter	Deye SUN-8K-SG04LP3*3

20kW/30kWh Energy Storage System

Location	Czech Republic
Inverter	Deye SUN-10K-SG04LP3*2

Deye Residential Energy Storage System Cases

16kW/60kWh Energy Storage System

Location	the Philippines
PV Capacity	14.85kWp
Inverter	Deye SUN-16K-SG01LP1

8kW/6kWh Energy Storage System

Location	India
PV Capacity	8kWp
Inverter	Deye SUN-8K-SG05LP1
Battery	Deye RW-M6.1

8kW/20kWh Energy Storage System

Location	Australia
PV Capacity	20kWp
Inverter	Deye SUN-8K-SG05LP1
Battery	Deye AI-W5.1-B

Deye Residential Energy Storage System Cases

24kW/50kWh Hybrid ESS of PV&DG
(Diesel Generators)

Location	Germany	PV Capacity	20kWp
Inverter	SUN-12K-SG04LP3-EU*2	Battery	12.5k Wh*4

32kW Energy Storage System

Location	South Africa
Inverter	SUN-8K-SG01LP1*4

27kW AC Coupling System

Location	Germany
Inverter	SUN 12K-SG04LP3-EU*1 SUN-15K-G06P3-EU*1
PV Capacity	28.8kWp
Battery	14.4kWh

10kW Energy Storage System

Location	Switzerland
Inverter	Deye SUN-10K-SG04LP3

C&I Energy Storage Solution

Based on Deye hybrid inverters

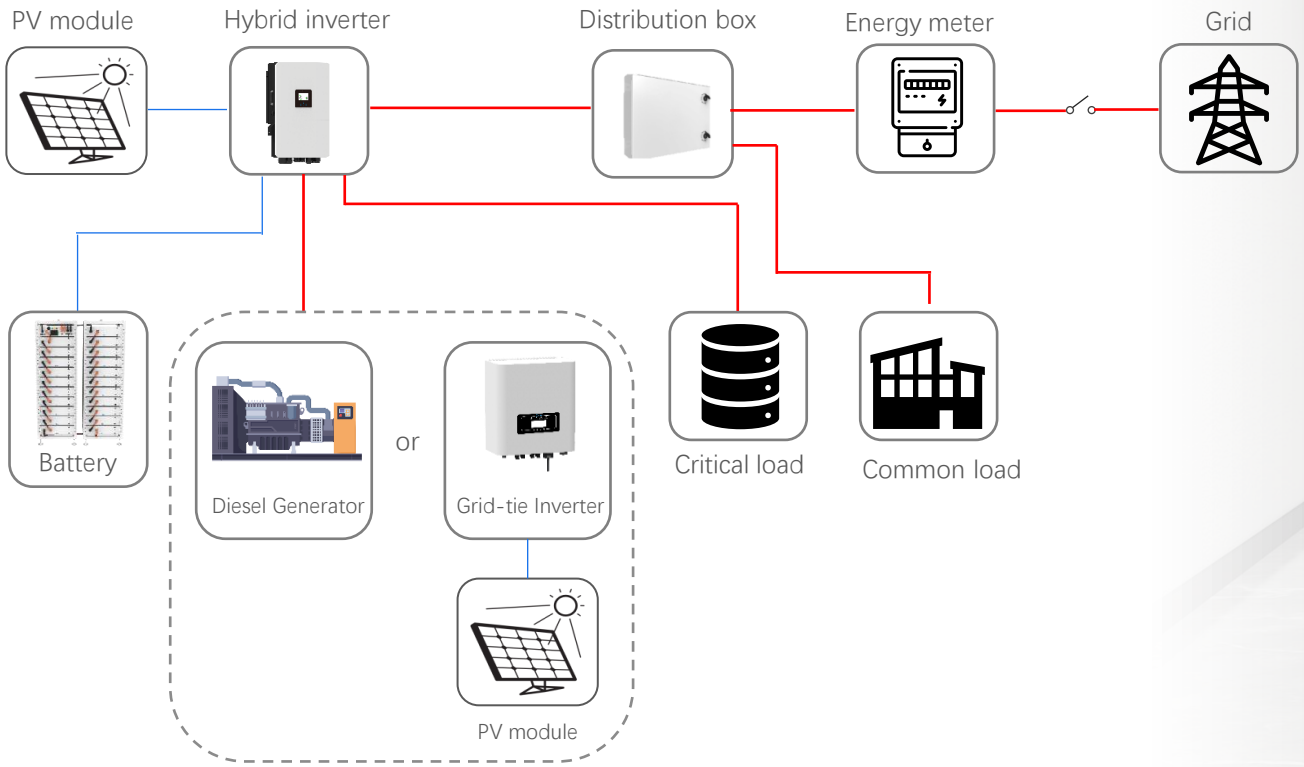
Three-phase High-voltage Energy Storage Solution

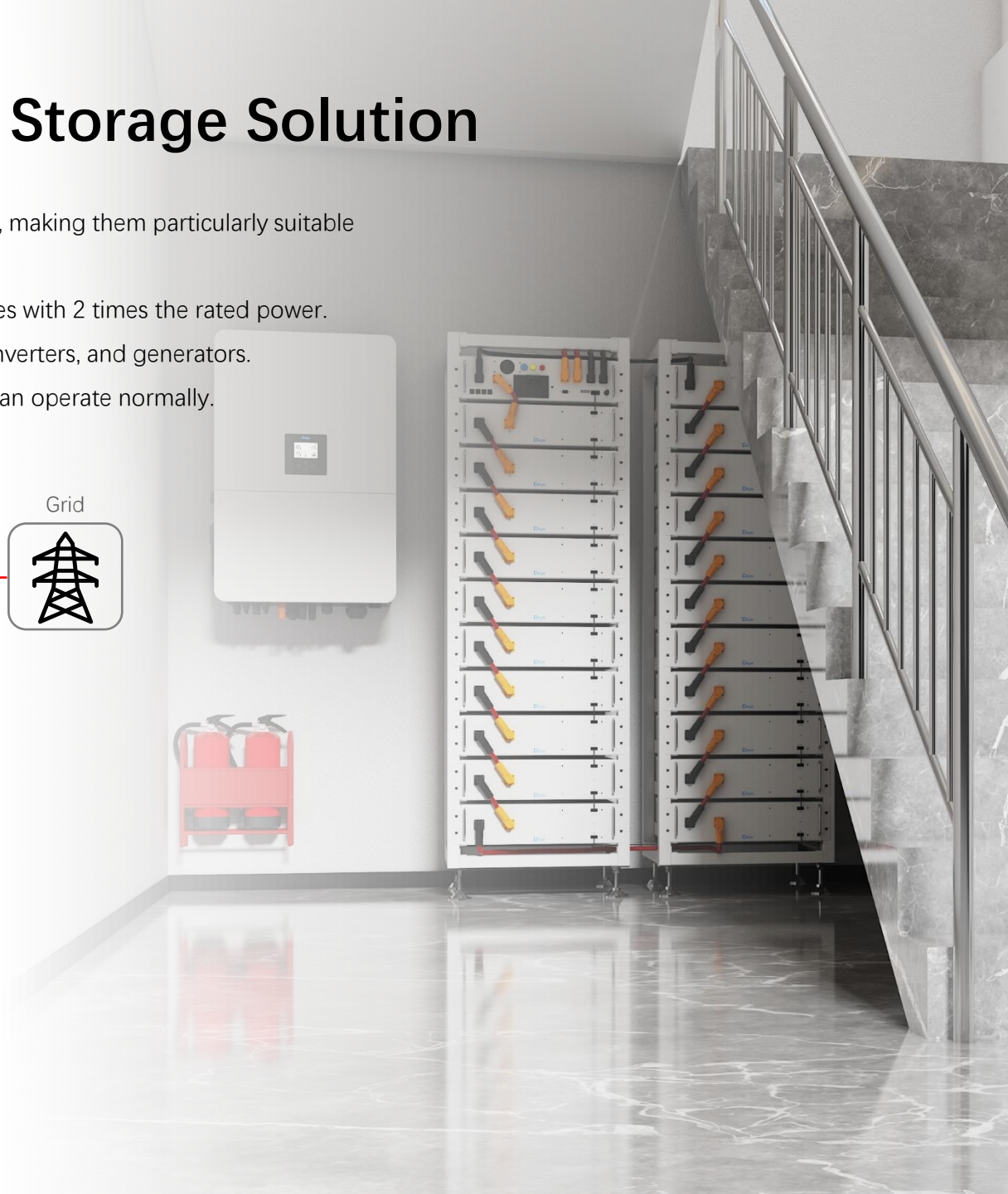
Deye's three-phase high-voltage energy storage inverters cover the power range of 5-80kW, making them particularly suitable for medium to large-scale commercial and industrial energy storage projects.

They support PV input at 1.6 times the rated power, allowing for the installation of PV modules with 2 times the rated power.

On the AC side (GEN Port), they support the connection of grid-tied string inverters, micro-inverters, and generators.

Even during power outages, grid-tied inverters connected to the hybrid inverter's GEN Port can operate normally.

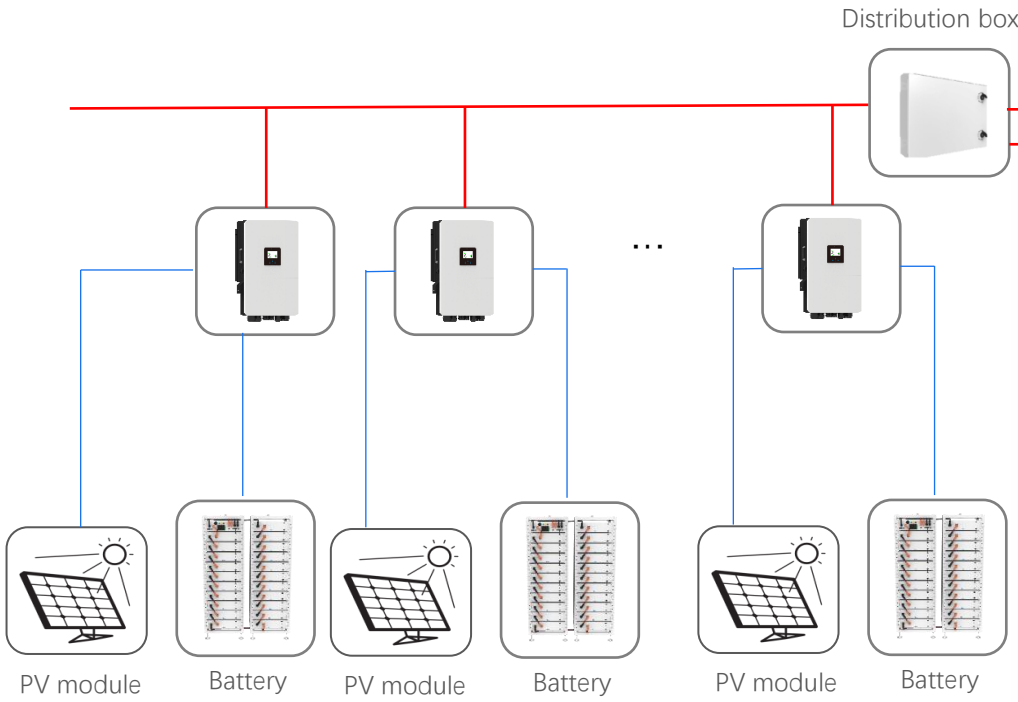




Three-phase High-voltage Energy Storage Solution (Parallel)

The Deye three-phase high-voltage hybrid inverter supports up to 10 parallel connections on the AC side, with a maximum rated power of up to 800kWac for a single system.

Additionally, all Deye hybrid inverters are rated at IP65 for protection,
and when paired with battery cabinets, they can achieve outdoor deployment of energy storage systems.



Deye C&I Energy Storage System Cases

100kW/124kWh Energy Storage System

Location: Netherlands

PV Capacity: 92kWp

Inverter:
SUN-50K-SG01HP3*2

Battery: BOS-G

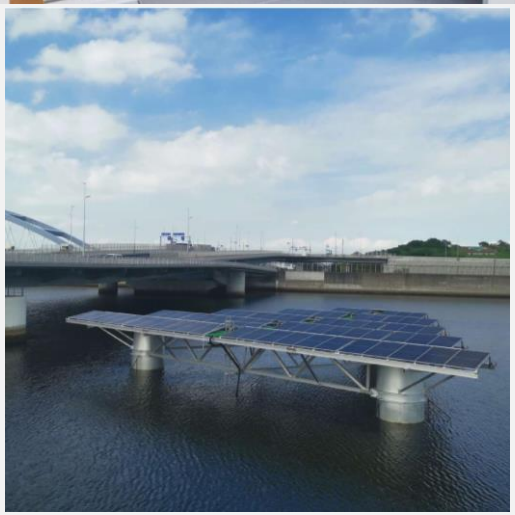
120kW/490kWh Energy Storage System

Location: Indonesia

PV Capacity: 125kWp

Inverter:
SUN-30K-SG01HP3*4

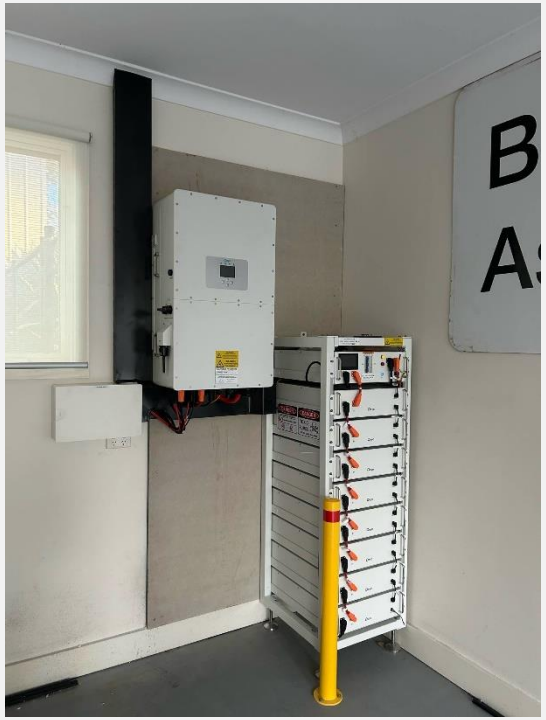
Battery: BOS-G



30kW/60kWh Energy Storage System

Location	Japan
Inverter	Deye SUN-30K-SG01HP3
Battery	BOS-G

Deye C&I Energy Storage System Cases



50kW/40kWh Energy Storage System

Location	Australia
Inverter	Deye SUN-50K-SG01HP3
Battery	Deye BOS-G

100kW/300kWh Energy Storage System

Location	South Africa
Inverter	Deye SUN-50K-SG01HP3*2
Battery	Deye BOS-G

50kW/200kWh Energy Storage System

Location	China
Inverter	Deye SUN-50K-SG01HP3
Battery	Deye BOS-G

Deye C&I Energy Storage System Cases

850kW/1.8MWh
Energy Storage System

Location:
Germany

Inverter:
SUN-50K-SG01HP3*10
SUN-50K-SG01HP3*7

Battery:
BOS-G

200kW/240kWh Energy Storage System

Location	South Africa
Inverter	Deye SUN-50K-SG01HP3*4
Battery	Deye BOS-G

High Compatibility, Strong Performance
One-stop Complete Solution.

Deye Hybrid Inverters not only support many third-party batteries but also have a comprehensive self-developed battery product line, providing a one-stop complete solution.

String Inverter

Deye string inverter offers a spectrum of power options ranging from 1-136kW, supporting practical functions such as string monitoring, Arc Fault Circuit Interrupter (AFCI), zero export, and Potential Induced Degradation (PID) repair.

It is actively being developed to support larger current module and string models with greater power, aiding distributed photovoltaic power stations in further reducing the Levelized Cost of Electricity (LCOE), minimizing investment costs, accelerating the payback period, and providing partners with foreseeable high-value returns.

1-136kW
Power Range

Multi-functional

Safe and Reliable

Diesel Generators

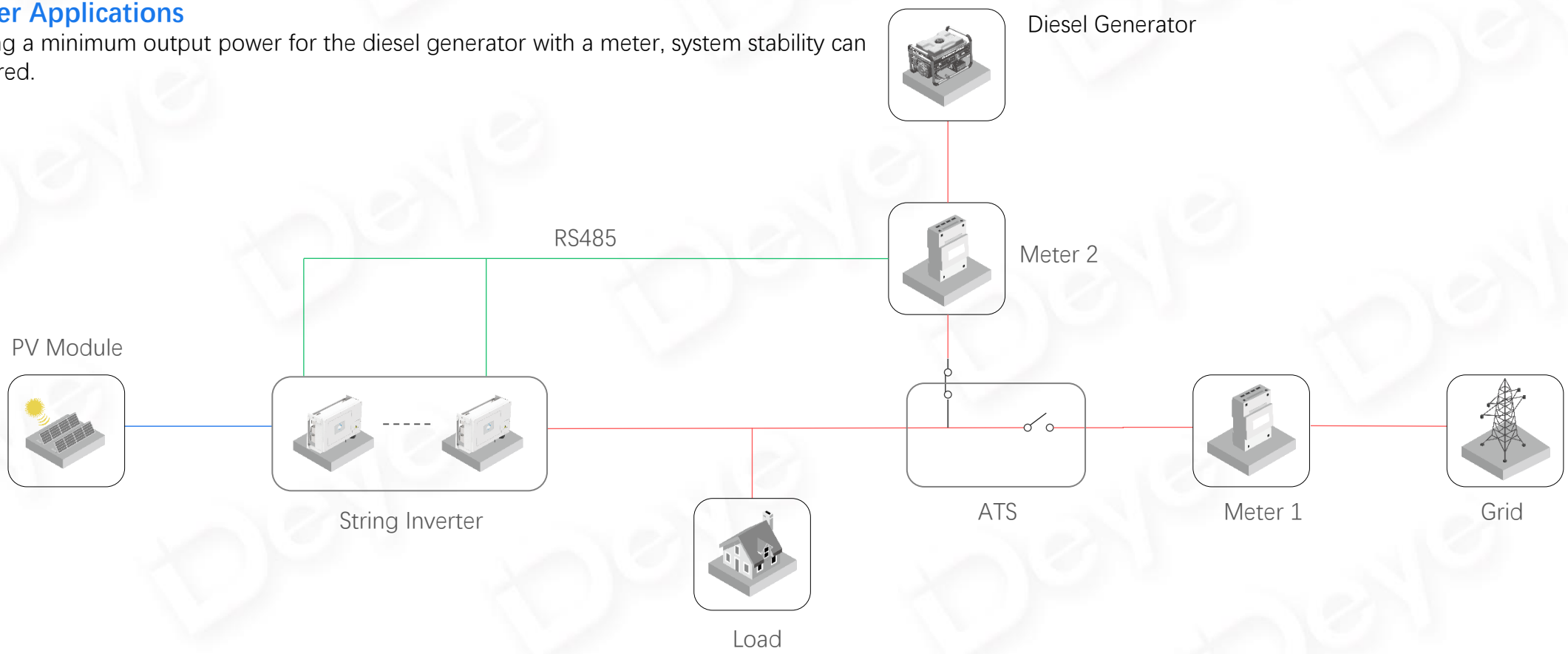
Photovoltaic Grid-tie System Based on Deye String Inverter

1. Frequency droop control algorithm, VSG application

When the grid is out of power, Deye string inverters can work together with a diesel generator to continue to supply power to the loads, and in this scenario it also supports the use of more than one parallel connection, eliminating the need for an external controller.

2. Meter Applications

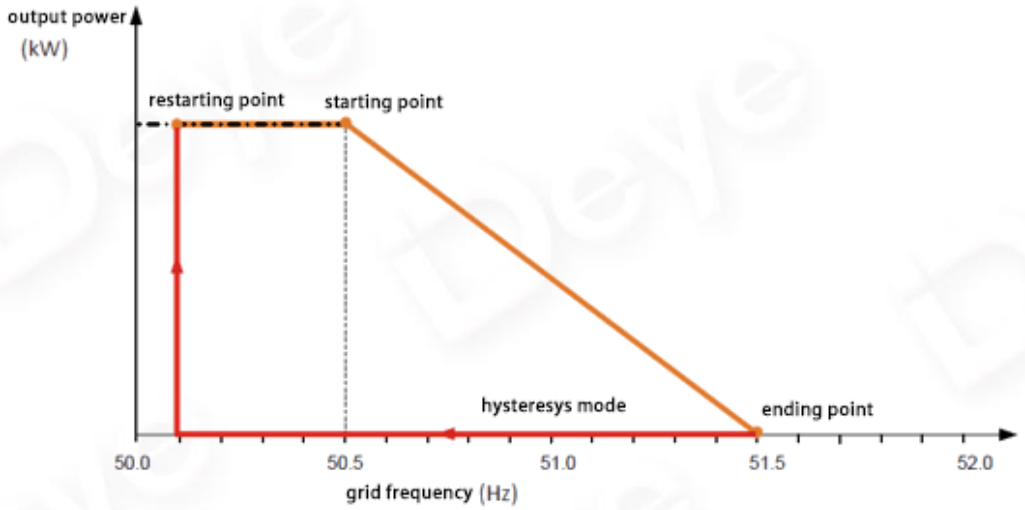
By setting a minimum output power for the diesel generator with a meter, system stability can be ensured.

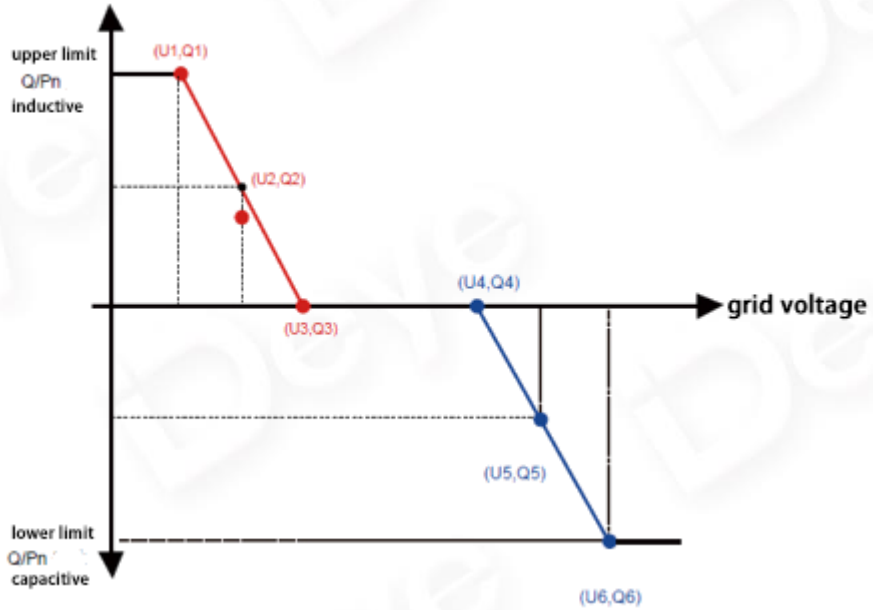


Photovoltaic Grid-tie System Based on Deye String Inverter

3. Adjust active power by frequency; adjust reactive power by voltage.

- Adjust active power by setting start point of over-frequency derating mode
- Avoid inverter shut down because of voltage increase caused by big output power in good irradiance conditions





4. Multiple zero export function for different scenarios

- Average and minimal mode can be selected in zero export function with up to 0.5s response time.
- One Meter can support up to 16 Pcs. inverters

Deye String Inverter Application Cases

320kW PV Power Station

Location	Brazil
Inverter	Deye SUN-80K-G03*4

20kW PV Power Station

Location	Germany
Inverter	Deye SUN-10K-G06*2

20kW PV Power Station

Location	Spain
Inverter	Deye SUN-20K-G05

Deye String Inverter Application Cases

60kW PV Power Station

Location	the Philippines
Inverter	Deye SUN-60K-G01P3-LV
PV Capacity	35kWp

660kW PV Power Station

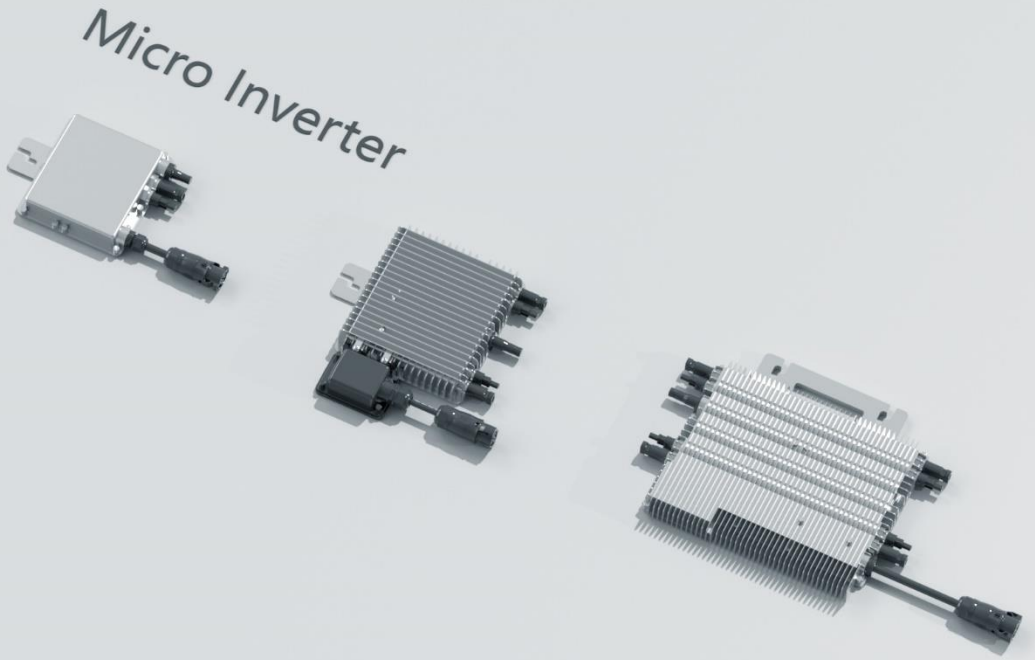
Location	Indonesia
Inverter	Deye SUN-110K-G03*6
PV Capacity	718kWp

Microinverter

Deye microinverter offers a spectrum of power options ranging from 300W to 2250W, accompanied by one, two, or four-way Maximum Power Point Tracking (MPPT).
It features module-level monitoring and optimization, Wi-Fi direct connection, and capabilities for remote rapid shutdown.

The complete Network & System protection ensures the safe operation of the product within home electrical grids. Installation is easy and straightforward; by connecting to a Wi-Fi hotspot, the product can join the home WLAN network for cloud-based monitoring and management.

Deye Microinverters provide a more cost-effective and convenient solution for small photovoltaic power stations and balcony photovoltaic systems.

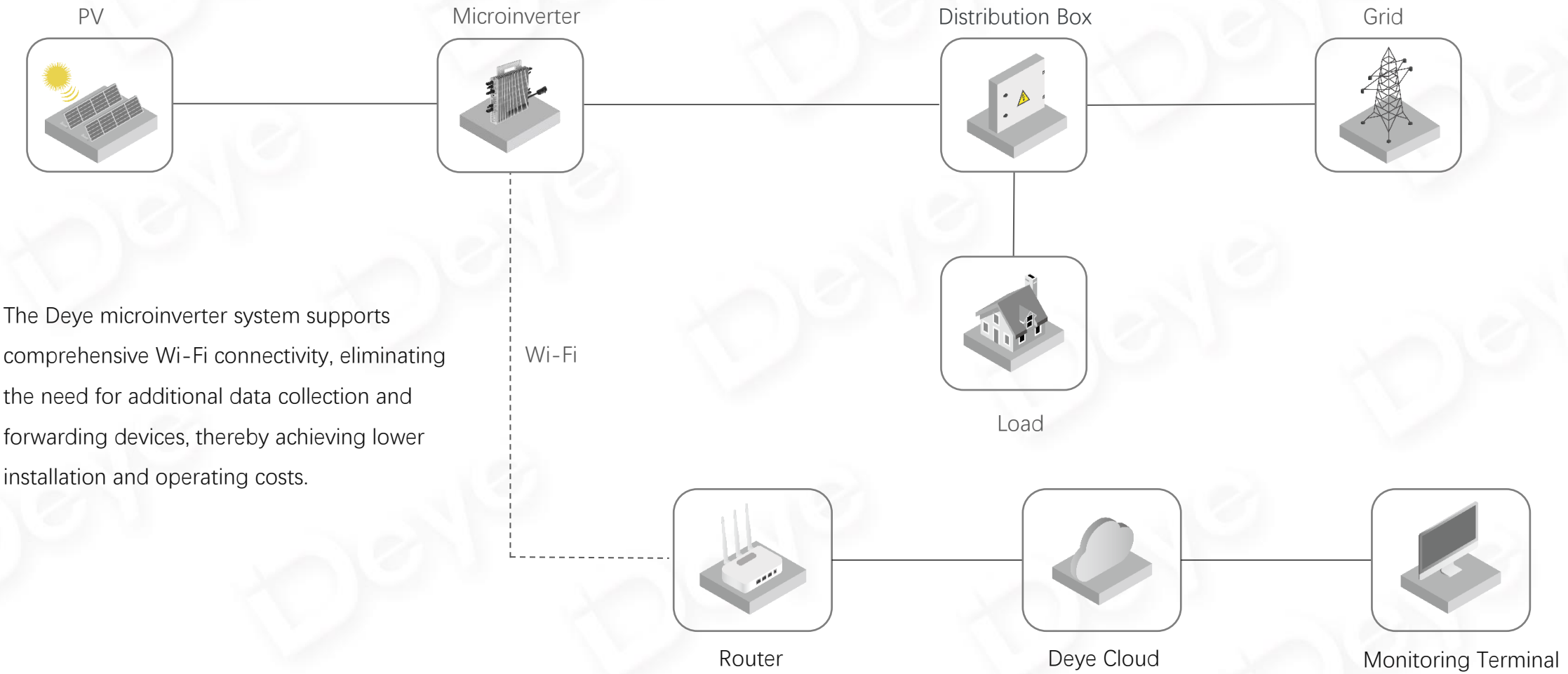


0.3kW-2.25kW			
Power Range	WLAN Connection	Easy Installation	Optimal Power

Photovoltaic System Based on Deye Microinverter

The Microinverter is compact in design and facilitates easy installation.

Each Maximum Power Point Tracking (MPPT) is connected to a single module, enabling optimization and tracking at the module level.



The Deye microinverter system supports comprehensive Wi-Fi connectivity, eliminating the need for additional data collection and forwarding devices, thereby achieving lower installation and operating costs.

Photovoltaic System Based on Deye Microinverter

Each photovoltaic (PV) module operates independently, effectively mitigating the impact of shadowing or faults on individual PV modules on the entire photovoltaic array.

This allows for the generation of more power with the same installed capacity. At the same time, as the microinverter system does not need to account for PV module mismatch issues, a greater number of PV modules can be installed within the same area, thereby enhancing the overall system capacity.

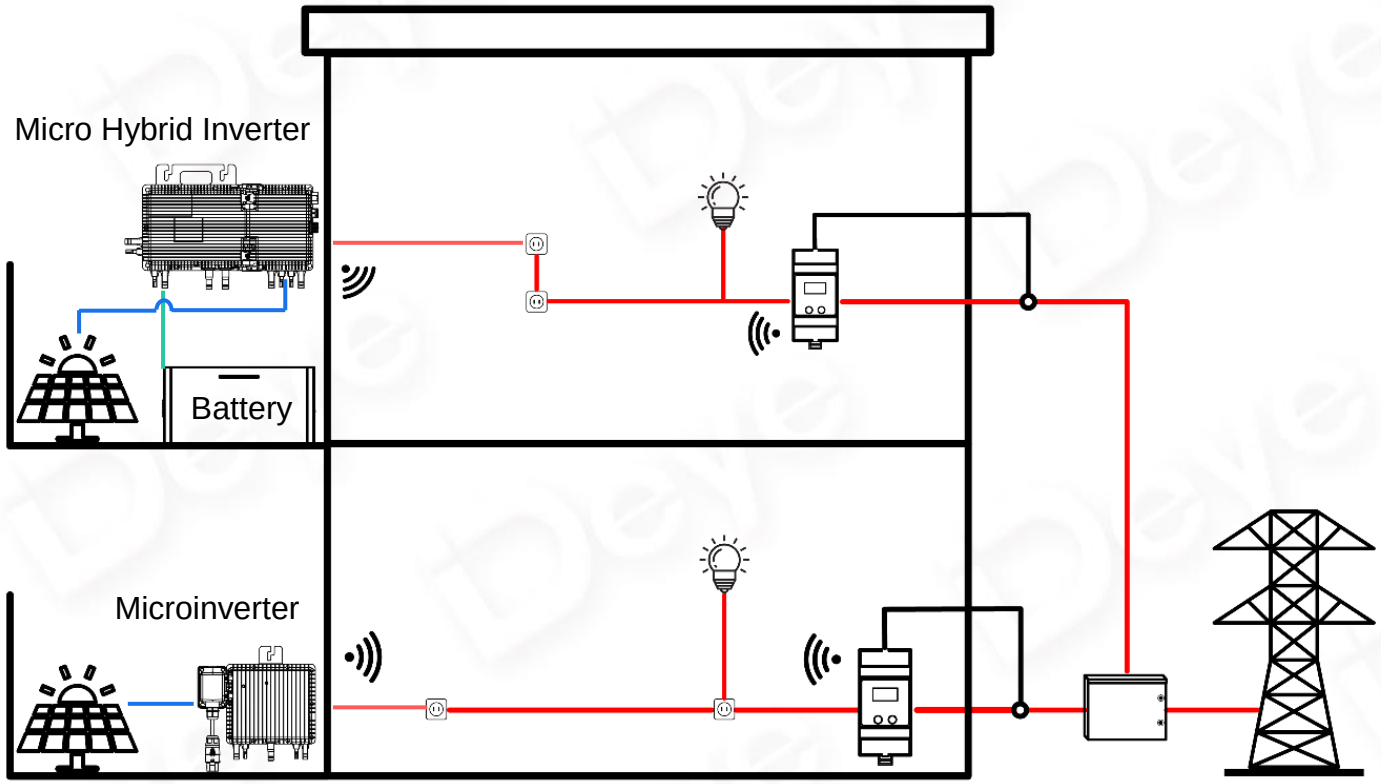
Shadow occlusion of microinverter system

Shadow occlusion of traditional string system

Balcony PV and Energy Storage System Based on Deye Microinverter

In regions that adhere to legal stipulations, specific microinverter products can be employed to establish a compact photovoltaic power generation system on the balcony. This system can be directly connected to the home grid, compensating for household electricity consumption and consequently reducing electricity expenses.

Additionally, your portable energy storage battery can be charged directly through solar photovoltaic power generation on the balcony.



New Product

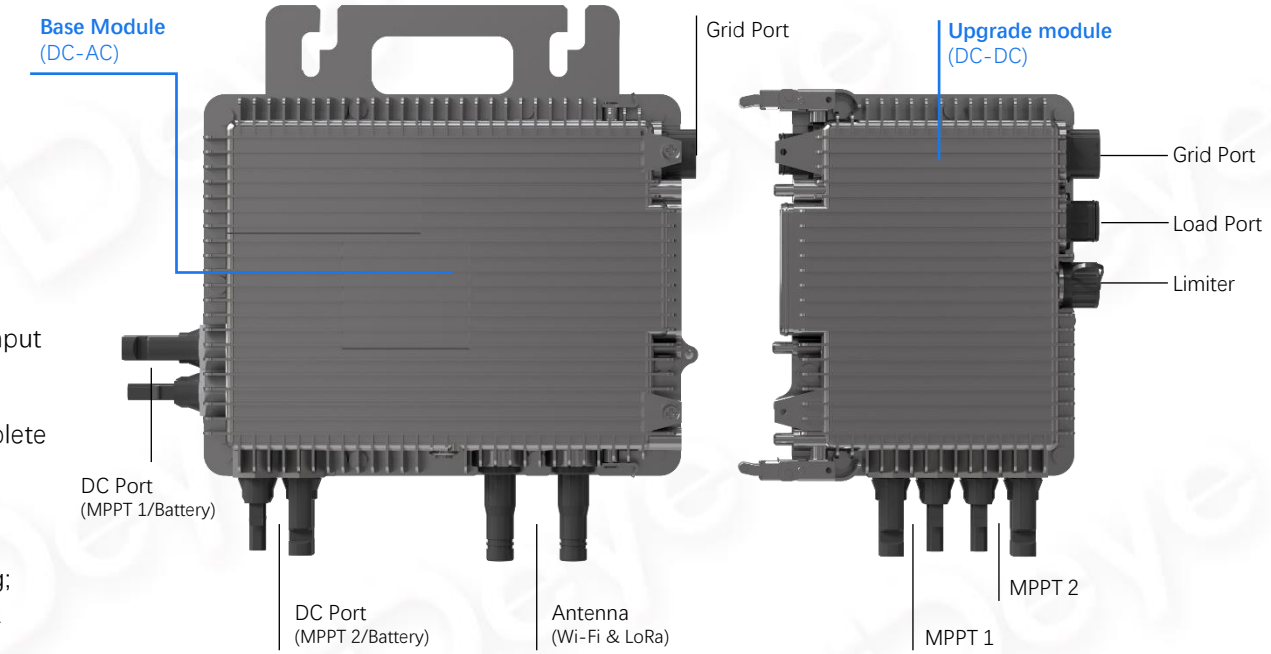
Micro Hybrid Energy Storage System

New Product: Micro Hybrid Inverter

BK Series Micro Hybrid Inverter

SUN-BK60/80/100/SG01-EU-AM2

- Integrates on-grid, off-grid, and AC coupling operation modes in one unit;
- Offers three power segments of 600W/800W/1000W to choose from;
- Maximum grid bypass current of 10A;
- Innovative split design, with the base module available for purchase separately as a standard micro-inverter;
- Two independent MPPTs, compatible with 18A PV modules, with a maximum photovoltaic input power of 1600W;
- By adding a DC-DC upgrade module, it can be connected to a battery, upgrading to a complete energy storage system;
- Possesses the same capabilities as Deye Hybrid Inverters, such as time-of-use charging/discharging, 4ms on-grid/off-grid switching, and AC coupling;
- Supports Wi-Fi communication, allowing direct connection to the home wireless network for cloud-based monitoring and management;
- Supports Deye wireless CT and smart plug based on LoRa communication, achieving efficient and reliable wireless energy management.



10A
Maximum grid bypass current

IP67
Protection Level

Plug and Play

Wireless Zero Export function

AC-Coupled
Upgrade the existing PV system

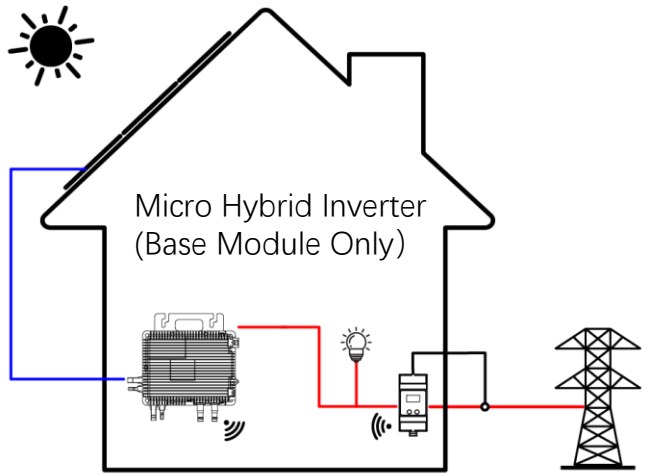
DC-DC
Low Conversion Loss

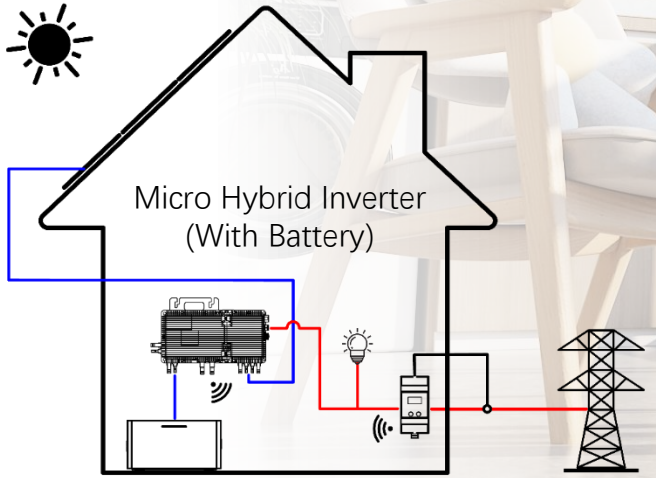
18A+18A
High Current PV modules

4ms
Ultra-fast switching

Balcony PV ESS based on Deye BK Series Micro Hybrid Inverters

The BK Series Micro Hybrid Inverters features a unique split design, where the base module can be used as a standard micro-inverter and can be paired with photovoltaic modules to establish a solar photovoltaic system. By adding an Upgrade Module and connecting to a battery later, it can seamlessly upgrade from a photovoltaic system to a hybrid energy storage system.





Micro Hybrid ESS

AE-FS Series Micro Hybrid Energy Storage System

- 96.5% DC-AC conversion efficiency, with less charging and discharging loss.
- Equipped with the same time-of-use charging/discharging, 4ms on-grid/off-grid switching, and AC coupling capabilities as Deye hybrid inverters.
- Comes with standard sockets as well as USB-A and USB-C ports.
- Supports Bluetooth and Wi-Fi connections, allowing for local and cloud-based online management.
- Supports Deye wireless CT and smart plug based on LoRa communication for smart devices.
- Fan-less design for ultra-silent experience (except for the Performance version).
- IP65 protection rating, suitable for outdoor use.
- 6000 cycle lifespan, with a 10-year standard warranty (3-5 years in some regions).

AE-FS Series Micro Hybrid ESS	**Standard** AE-FS2.0-2H	**Performance** AE-FS2.0-1H
		
Battery Nominal Energy	2kWh	2kWh
Max. Charging/Discharging Current	25A	40A
Nominal Input/Output Power	1000W	1600W
Max. bypass grid to load	10A	16A
Max. output power(on grid)	2200W	3520W
No. of MPPT	2	2
Max. MPPT Input Power	18A+18A	30A+30A
No. of string per MPPT	1+1	2+2
Max. PV Input Power	1600W	2560W
Weight	26kg	29kg
Type of Cooling	Natural Cooling	Fan Cooling

Plug and Play

Easy expansion

DC-AC 96.5%
High Efficiency

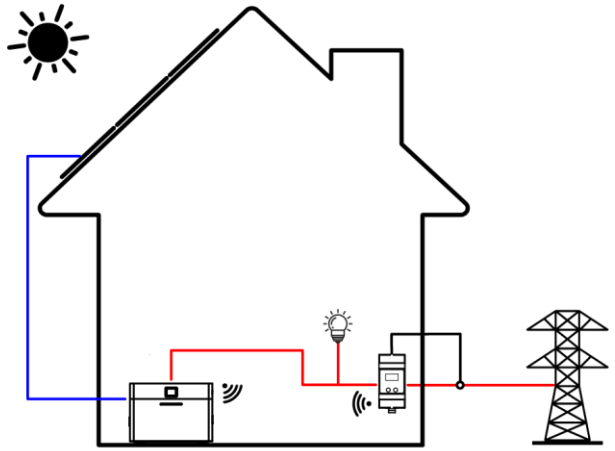
IP65
Protection Level

4ms
Ultra-fast Switching

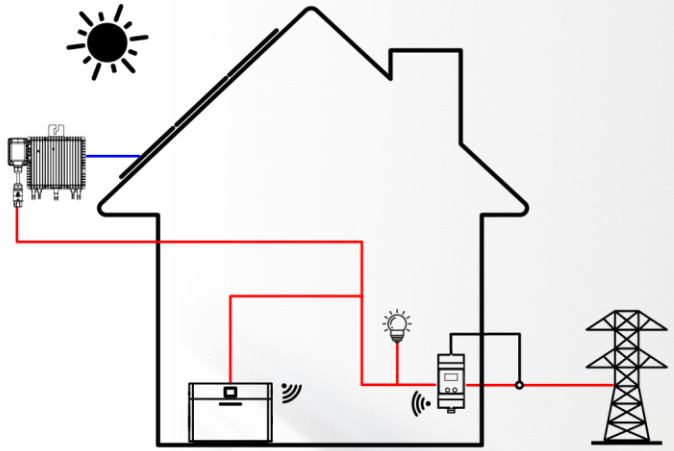
Micro Hybrid ESS

The AE-FS Series Micro Hybrid ESS can be directly connected to PV modules, or it can be used through AC coupling to retrofit Solar PV systems that already have other microinverters installed.

When paired with Deye's wireless CT, it enables easy and simple wiring and installation for zero-export energy storage systems.



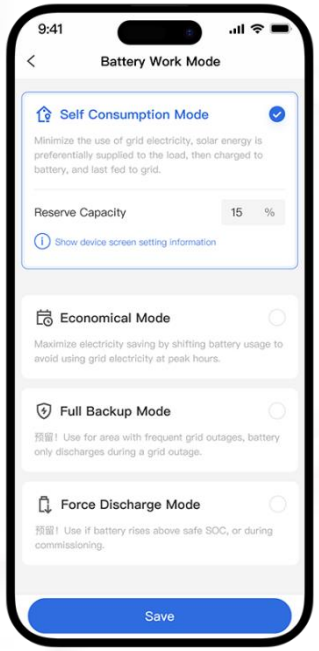
Micro Hybird ESS Used Standalone



Retrofitting Existing Solar PV Systems Through AC Coupling

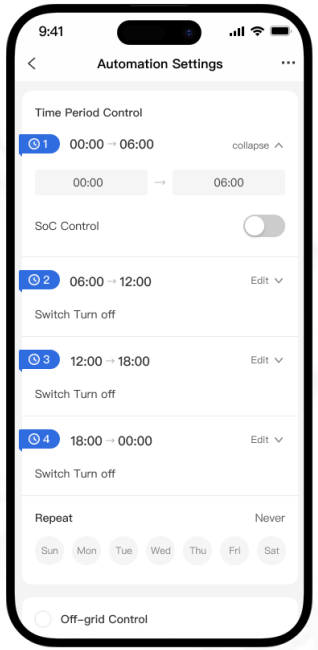
Embrace a New Sustainable Lifestyle with Ease

Deye Micro Hybrid Inverter and Micro Hybrid ESS both feature the same flexible and practical control logic as the widely popular Deye Hybrid Inverters, meeting the power needs for various scenarios such as self-generation and self-use, time-of-use charging and discharging, peak shaving and valley filling, and emergency backup power.



Self Consumption Mode

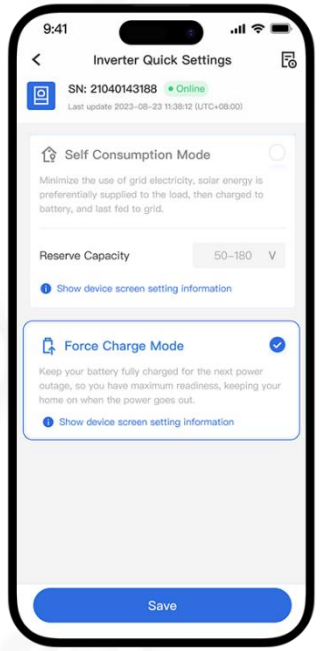
During the day, PV power generation prioritizes supplying electricity to the loads (including Load side and Grid side), and any excess electricity charges the battery. At night, the stored electricity from the day is used to power the loads, and if there is a shortage, electricity is purchased from the grid. This approach aims to minimize the consumption of grid electricity and make full use of photovoltaic green power.



Economical Mode

Supports 6 charging/discharging periods; flexibly schedules buying/selling power based on time-of-use rates and SOC. Charges batteries in low-rate periods and supplies loads during peak times to minimize peak purchases and reduce costs.

*Ideal for areas with significant time-of-use rate differences.



Full Backup & Force Charge Mode

Photovoltaic and grid power fully charge the battery, preparing for emergency power outages and off-grid use.

The APP interface is subject to change with updates; please refer to the actual version.

New Product

Deye Wireless Energy Management System

based on LoRa Communication

New Product: Wireless Energy Management System

The Smart Switch is designed for outdoor high-power loads, offering the same logic control as Smart Plugs, supporting both single-phase and three-phase loads.

The Smart Plug can be easily installed in any standard socket, instantly upgrading the appliance plugged in to a smart device.

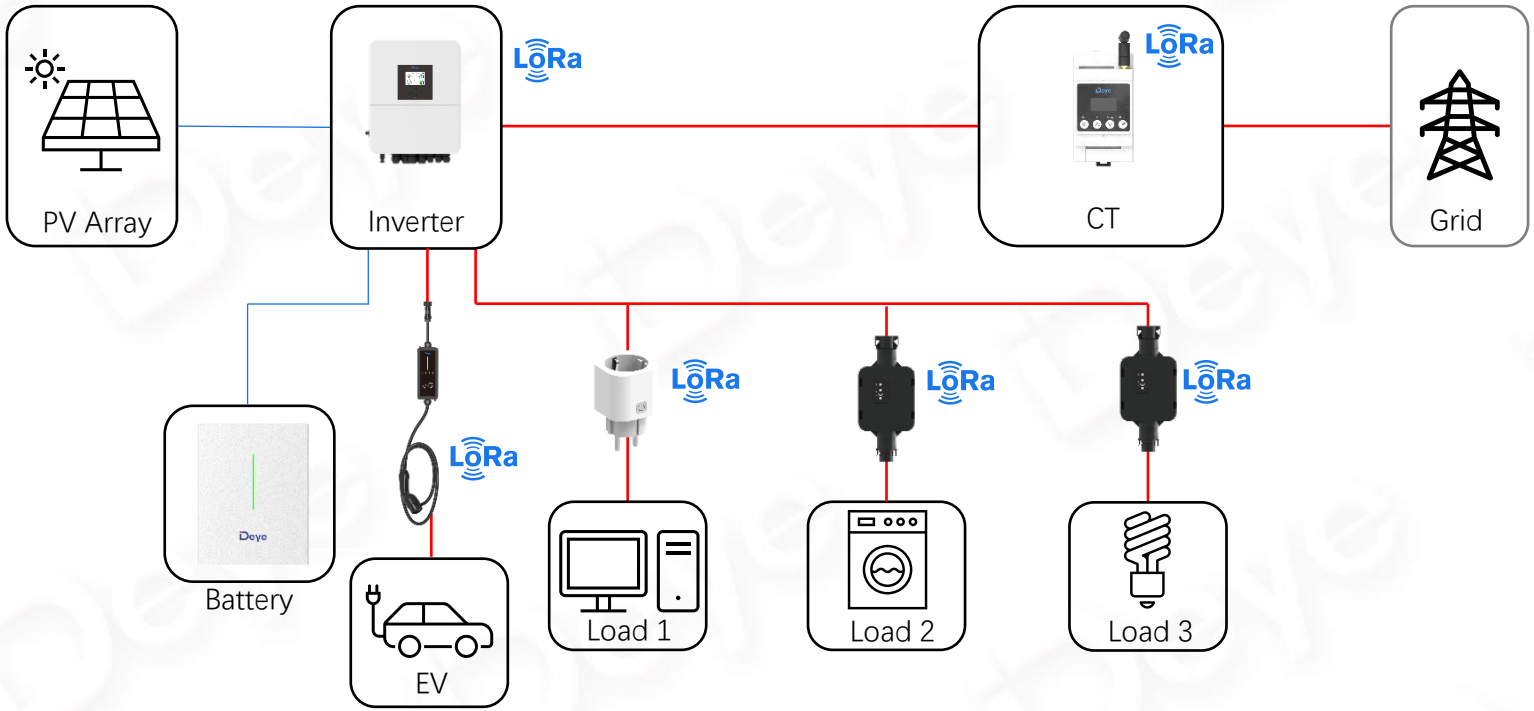
The wireless CT is installed in the distribution box to monitor power consumption, Supports both LoRa and RS485 communication methods simultaneously.

The Smart EV Charger can be directly connected to any AC port of the inverter and is controlled by the inverter via LoRa communication. It offers flexible options to take advantage of low-cost electricity, with modes such as Plug and Play, Time of Charge, or Solar Energy Only.

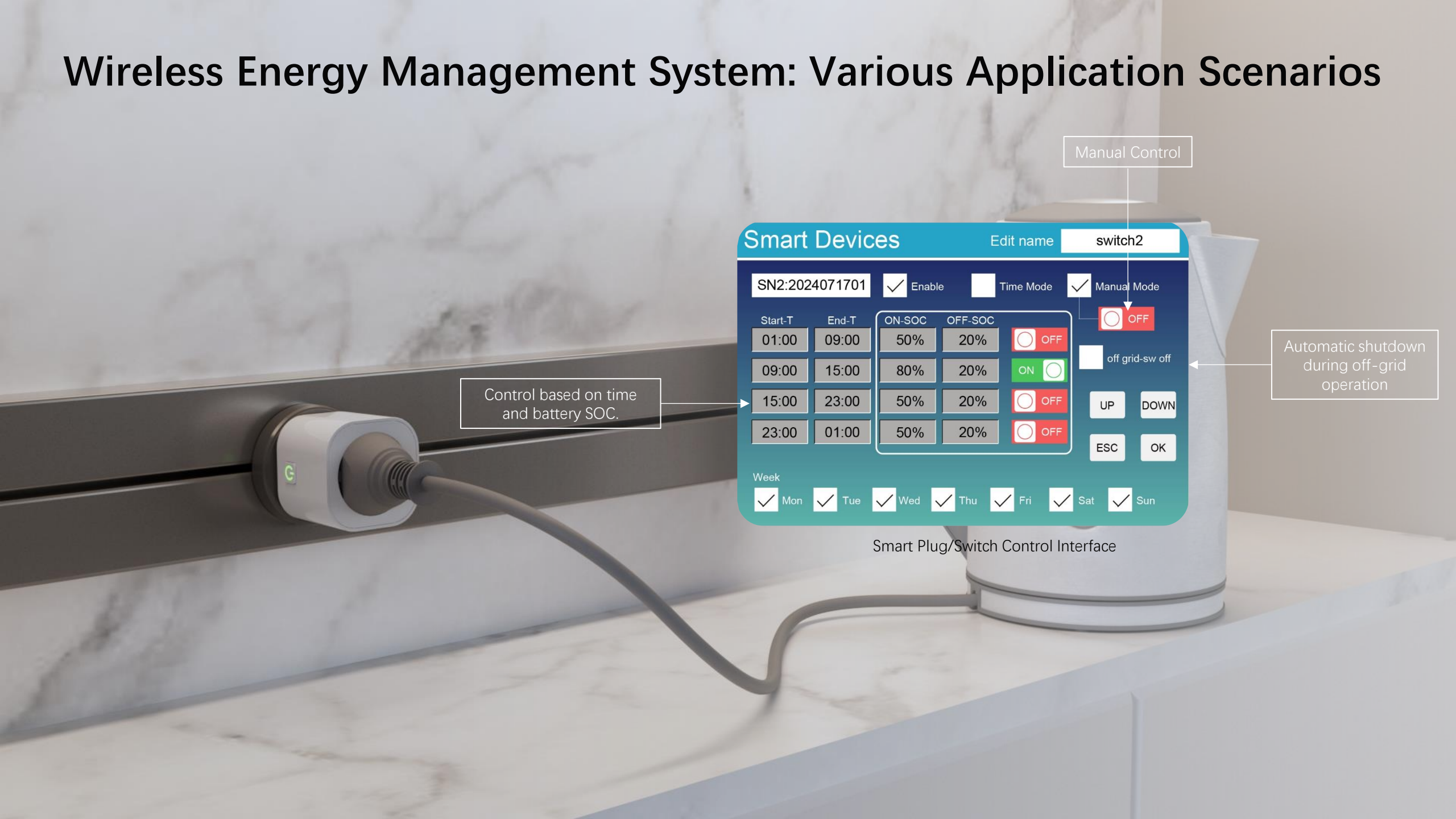
All Deye hybrid inverters can serve as the local control center for the Deye Smart Home IoT System.
Simply install the Deye Smart Transmitter(TX) to the inverter's Meter port to easily pair with Deye LoRa devices.

Wireless Energy Management System

- Enables wireless zero-export functions, reducing wiring complexity.
- Independent smart load control based on time and battery SOC.
- Precise control of non-essential loads to be disconnected during off-grid operation.
- Charging stations support full solar charging with dynamic power adjustment. Each inverter supports binding to 2 Wireless CTs.
- All Deye Hybrid Inverters can be upgraded to support this system.

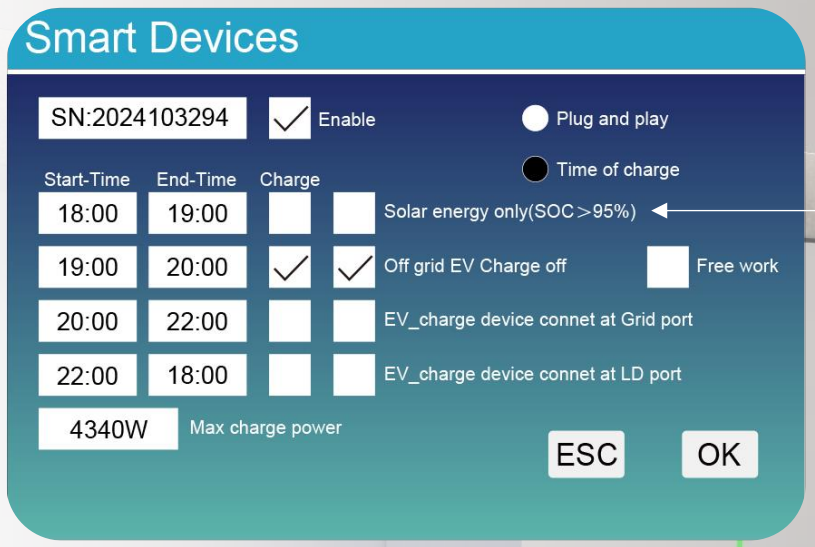


Wireless Energy Management System: Various Application Scenarios



Smart Plug/Switch Control Interface

Wireless Energy Management System: Various Application Scenarios



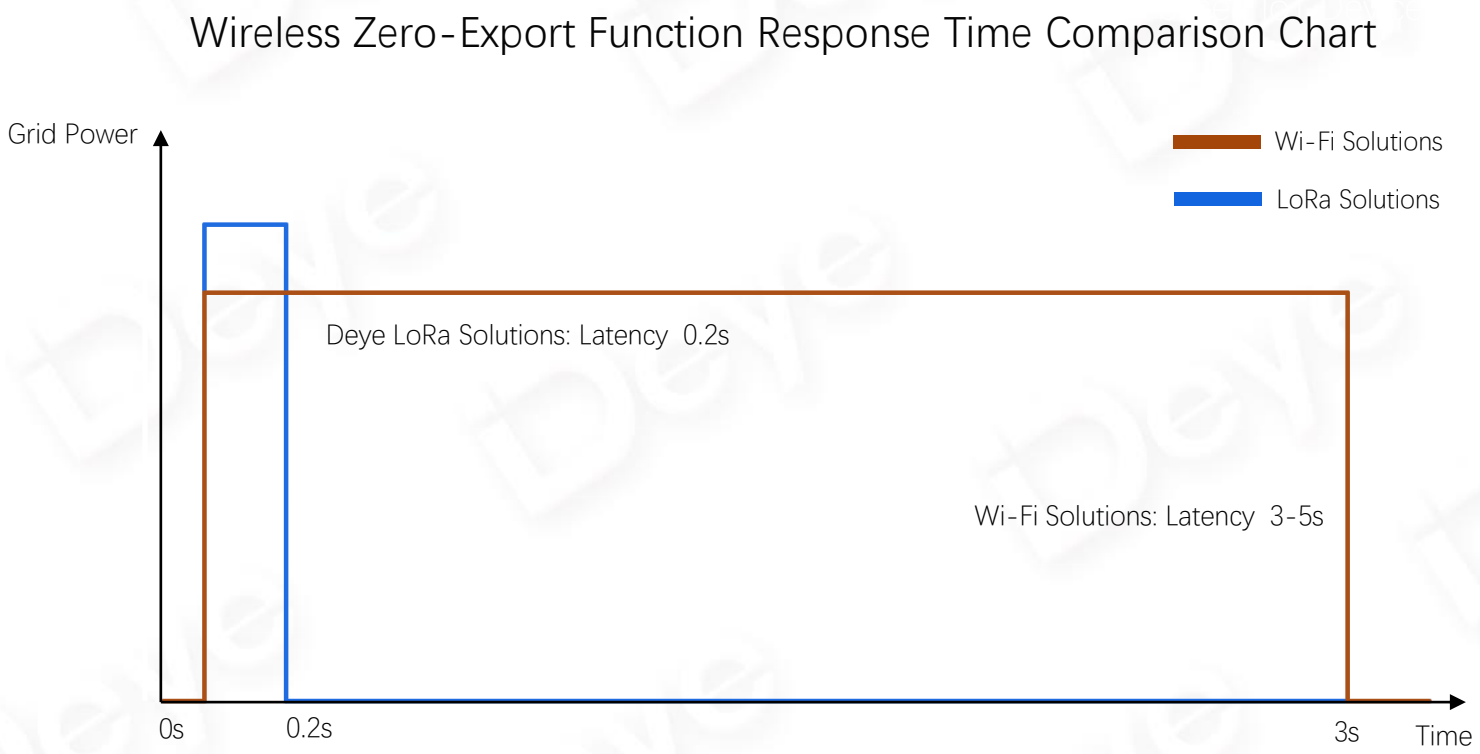
Smart EV Charger

100% Solar Charged

The advantages of LoRa communication

Deye LoRa Communication Solution			Common Wi-Fi Communication Solution	
Power Consumption	Low	The power consumption of LoRa communication is significantly lower than that of Wi-Fi communication, which, in an effort to save energy, may put devices into a sleep state during idle times. If a device needs to be awakened from sleep, it can cause a significant delay.	Power Consumption	High
Sleep/Wake	No need to sleep		Sleep/Wake	Periodic sleep and wake-up
Signal Range	≈200m	Considering factors such as power and frequency bands in practical applications, the coverage range of Deye's solution can reach up to 200 meters, while typical Wi-Fi solutions can only achieve 50 meters, and the distance can be even shorter with wall obstructions.	Signal Range	< 50m
Duplex Mode	Full duplex, capable of simultaneous data transmission and reception.	LoRa communication can perform data transmission and reception simultaneously, while Wi-Fi IoT solutions are typically half-duplex and cannot communicate bidirectionally at the same time.	Duplex Mode	Half duplex, cannot transmit and receive data simultaneously.
Network Dependency	Supports cloud operations, but can also issue commands locally through the inverter, remaining usable when the network is down.	When the network is interrupted, the inverter can still make judgments and issue commands based on the set conditions. At the same time, operations performed on smart devices on the inverter screen can still be responded to. In contrast, all data and commands in Wi-Fi solutions typically require cloud transit, and they cannot function properly once the internet connection is lost.	Network Dependency	The device remains online at all times, and does not support offline operations
Typical Latency	0.2s	Affected by the aforementioned factors, the latency of Wi-Fi solutions is significantly higher than that of Deye's LoRa solutions, and such unexpected latency may lead to unpredictable consequences in certain situations.	Typical Latency	3-5s

The advantages of LoRa communication



Taking the response time of zero-export applications as an example, using a Wi-Fi solution may result in a typical latency response of up to 5 seconds, leading to unnecessary grid power exports.
Frequent occurrences of this issue, once detected, could potentially lead to penalties.

New Products for C&I Energy Storage

100kW - 2MW Energy Storage Solutions

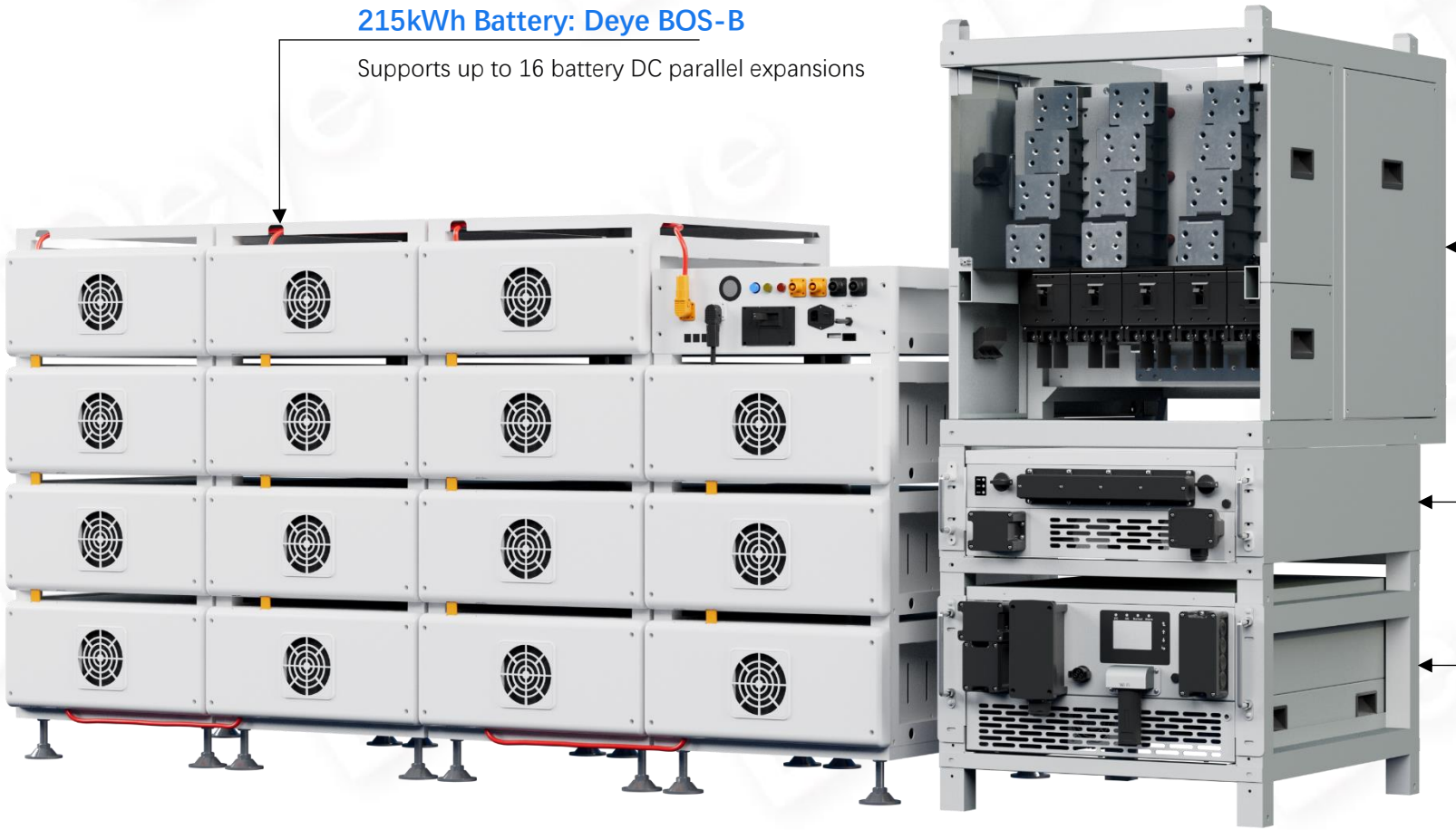
New Solution：100kW-2MW ESS

The entire system features a truly modular design, eliminating all unnecessary equipment. This not only makes transportation and assembly more convenient but also achieves a cost reduction of over 30%.

Additionally, it offers AC or DC EV charging solutions to meet the design requirements of various application scenarios.

215kWh Battery: Deye BOS-B

Supports up to 16 battery DC parallel expansions



500kW STS Module

- Switching capacity of 500kW.
- One STS can be paired with five PCS units.
- Enables smooth switching between grid-connected, off-grid, and diesel generator modes.
- Switching time of less than 10ms.

8 MPPT PV Module

- Maximum PV input of 200kW.
- Supports 20A high-current modules

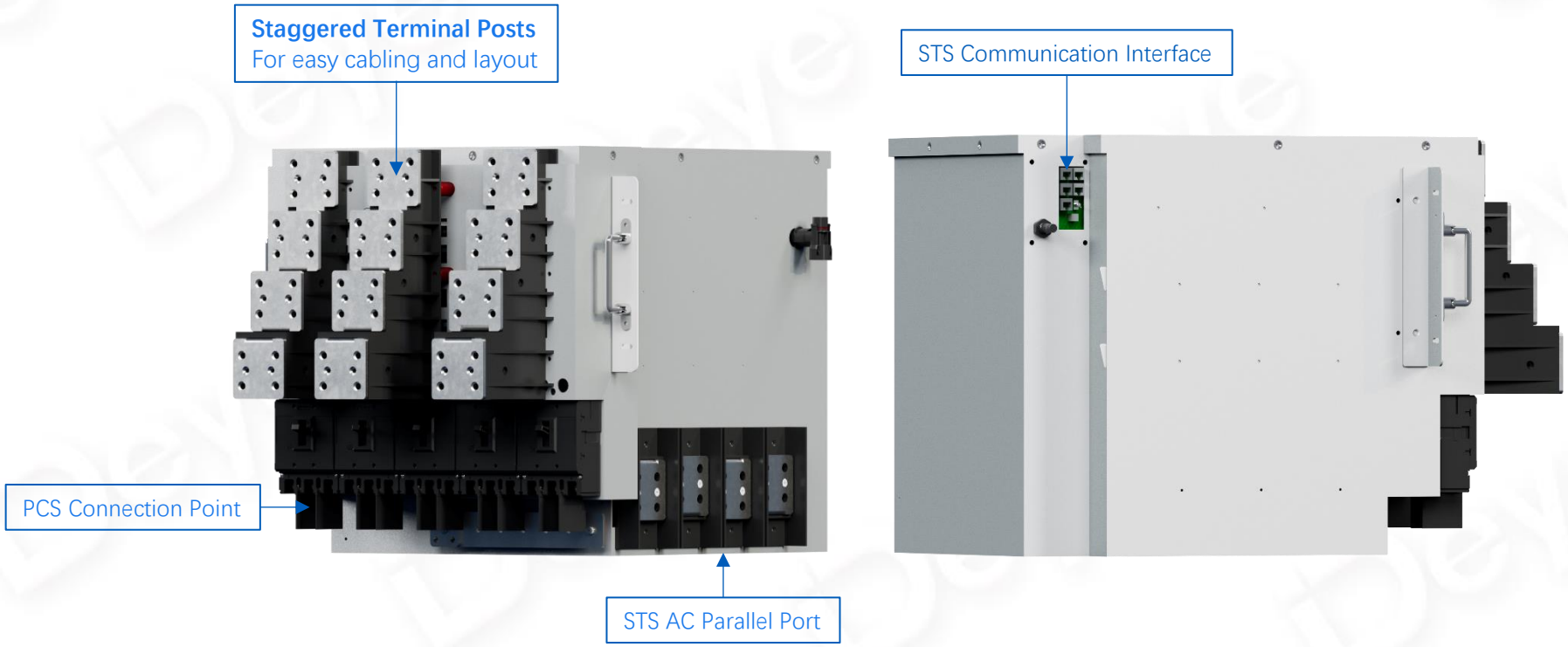
100kW PCS Module

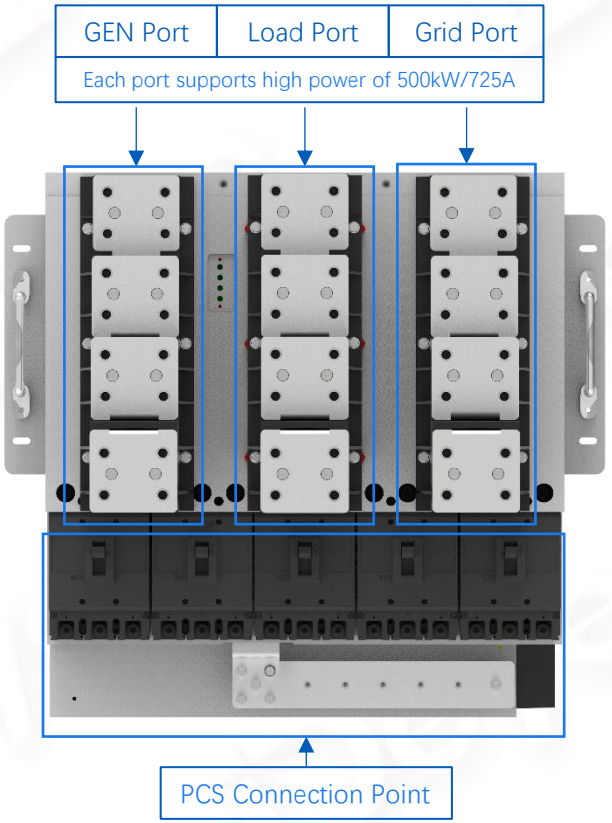
- 175A charge and discharge current.
- Maximum efficiency of 98.5%.
- Supports up to 20 units in parallel.
- System rated power up to 2MW.
- Supports instantaneous peak power up to 170% of rated power.
- Integrates zero-export and time-of-use control functions.
- eliminating the need for additional EMS.

New Product: 500kW STS Module

SUN-STS500L

Smoothly switch between on-grid, off-grid, and diesel generator modes with a switching time of less than 10ms. Each diesel, load, and grid connection is independent, with each path supporting 500kW. Only one STS is needed for five 100kW PCS units.





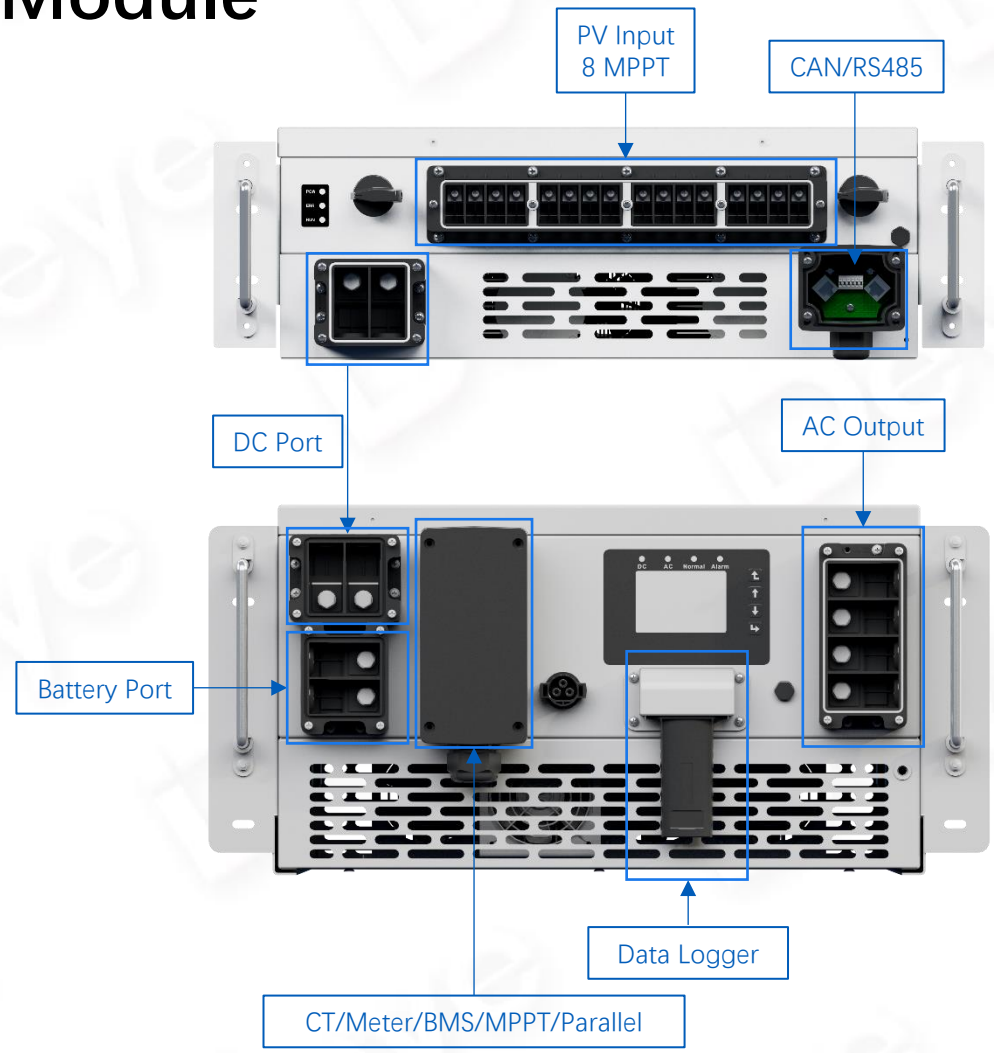
New Product: MPPT Module & PCS Module

SUN-MPPT-L01-EU-AM8

- Standard 1000V PV system with MPPT voltage range of 180-850V
- Maximum 200kW PV input, 8 MPPT channels, each MPPT channel supports 40A
- Maximum efficiency exceeds 99%
- IP65 protection level

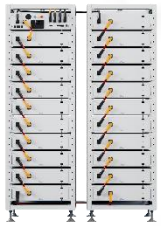
SUN-100K-PCSL01HP3

- 175A charge and discharge current, 630-1000V battery voltage, PV-battery, bidirectional DC-DC;
- Rated power of 100kW (380/400V), supports up to 20 units in parallel for a 2MW system expansion;
- Supports 110% power overload operation, supports instantaneous peak power up to 170% of rated power;
- Integrates essential functions of traditional EMS, supports zero-export and time-of-use charging/discharging applications, eliminating the need for additional EMS;
- Equipped with a color touchscreen, supports local screen or remote cloud parameter adjustment, making installation and maintenance more convenient;
- Maximum efficiency of 98.5%;
- IP65 protection level.



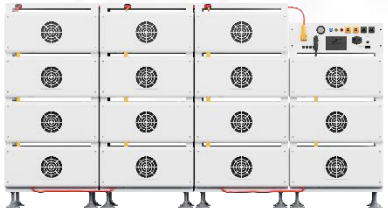
Typical Configuration

100kW PCS
1.6-hour backup power solution
BOS-A 161.28kWh
21 battery packs of 7.68kWh each

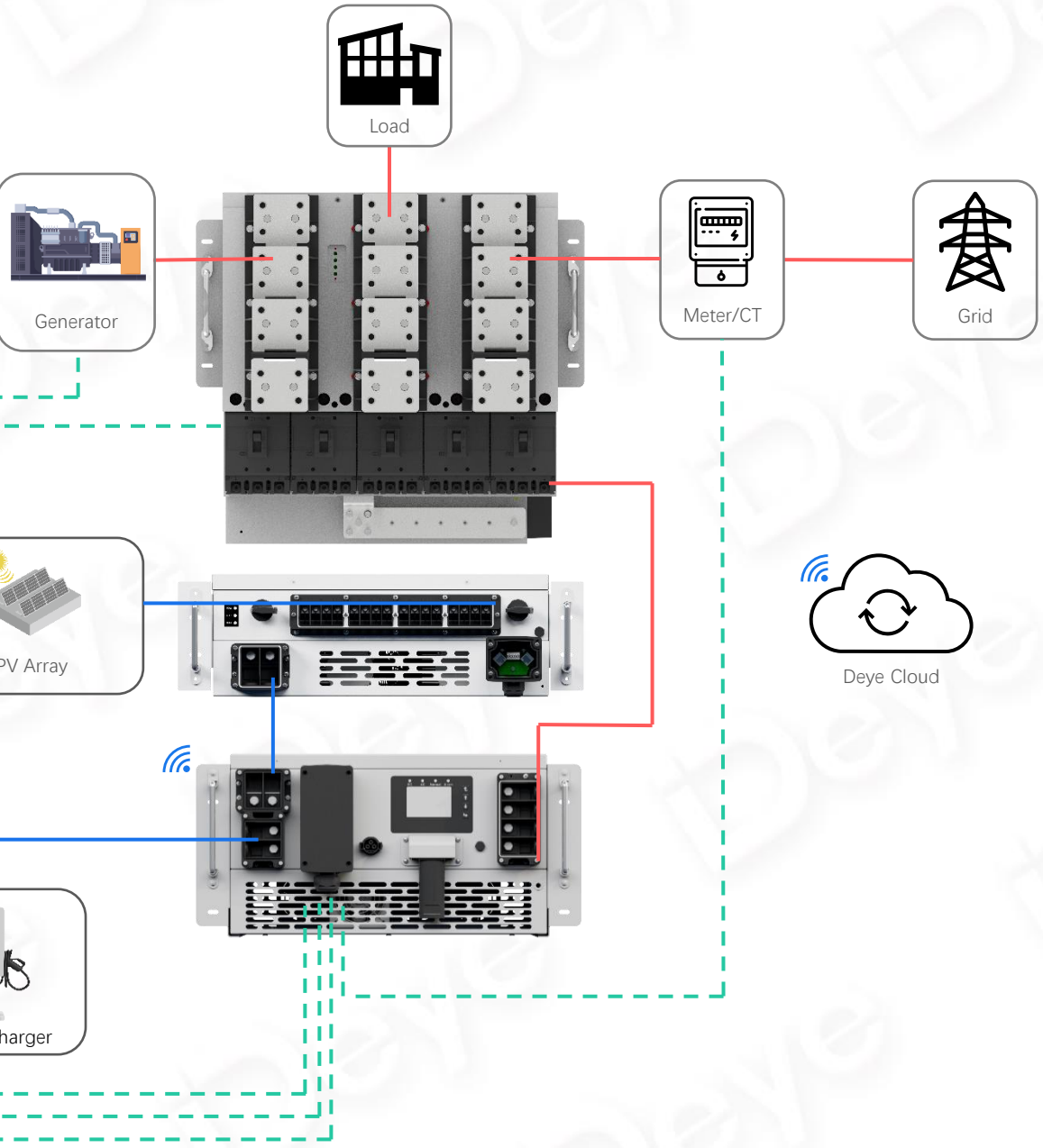


100kW PCS
2-hour backup power solution
BOS-B 215kWh
15 battery packs of 14.3kWh each

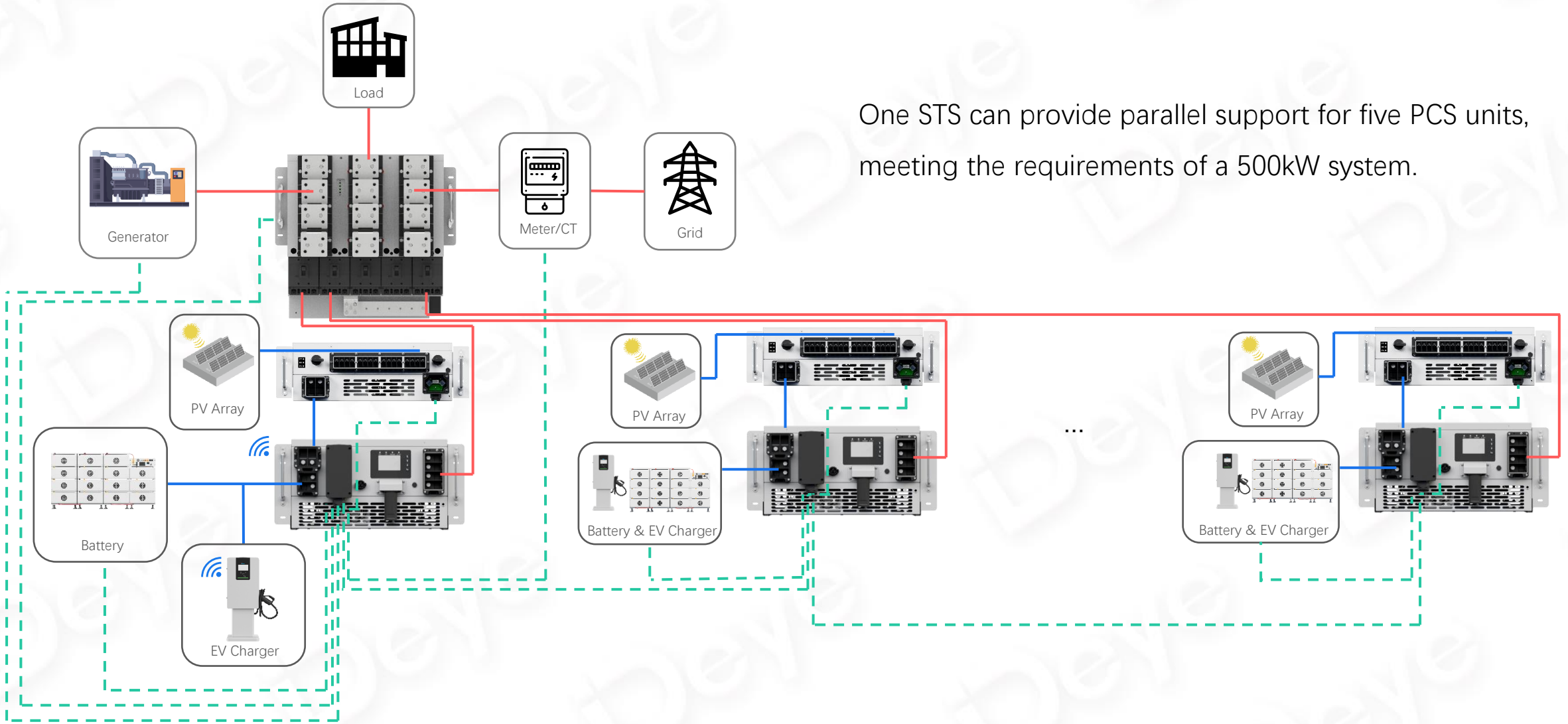
Up to 16 battery groups in parallel
expandable up to 3440kWh capacity



Additional battery solution options...

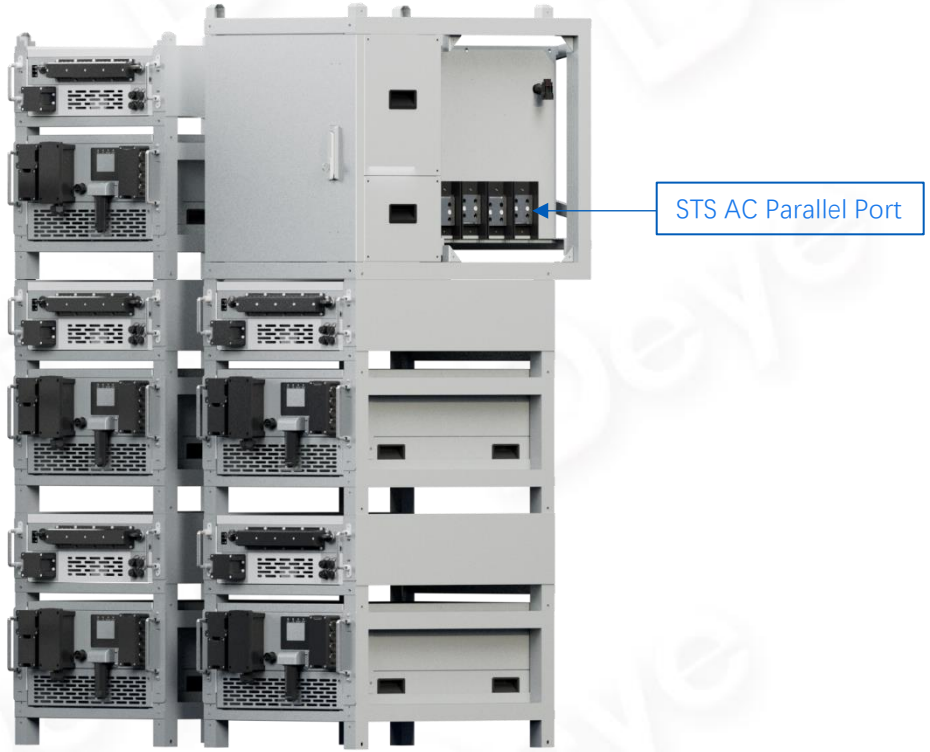


100kW-2MW Flexible Expansion

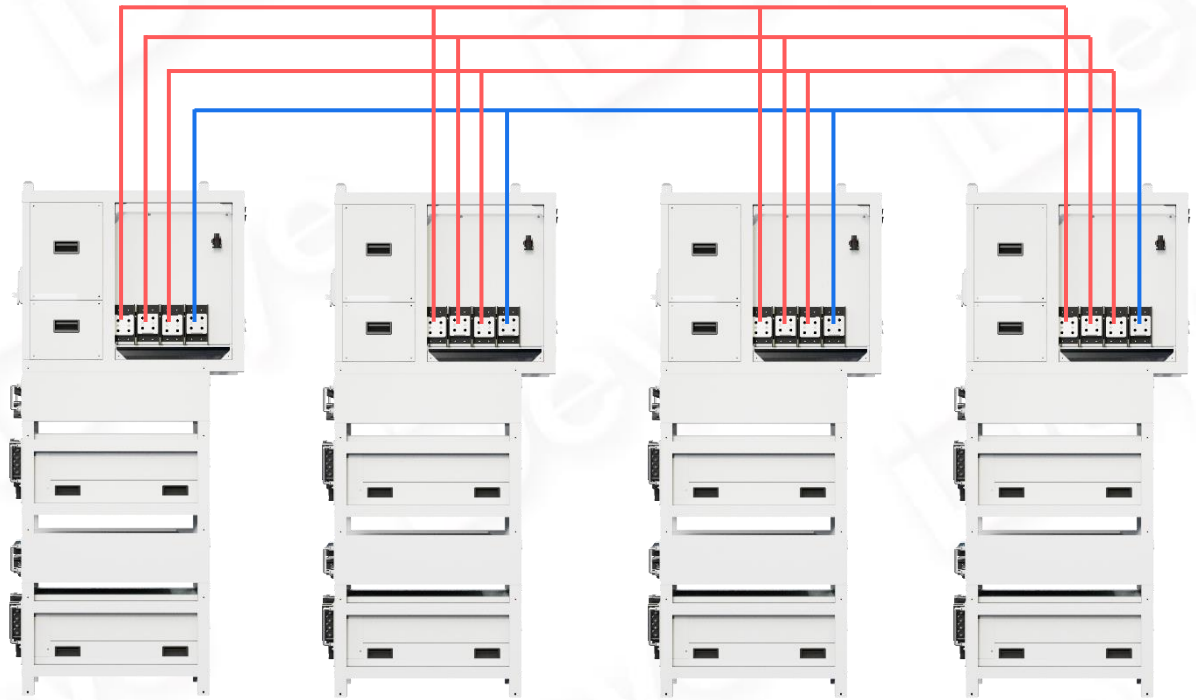


One STS can provide parallel support for five PCS units, meeting the requirements of a 500kW system.

100kW-2MW Flexible Expansion



Four STS units can be paralleled to form a 2MW system



Cloud Management: Online Operation and Maintenance

Deye Cloud is an advanced platform specifically designed for Deye Inverter and ESS, providing users with an outstanding online experience.

Through Deye Cloud, users can easily connect their photovoltaic or energy storage systems to the internet, supporting real-time monitoring of electricity usage and load conditions, cloud-based parameter adjustment, and online firmware updates.

With smart load settings based on time and battery SOC, it is possible to achieve home automation based on energy management.

It supports time-of-use or integration with dynamic pricing to achieve the lowest possible electricity costs.

Deye Cloud utilizes two localized data centers in Europe and America to ensure data independence and security.

FW Update

APP & Web

Alert Notifications

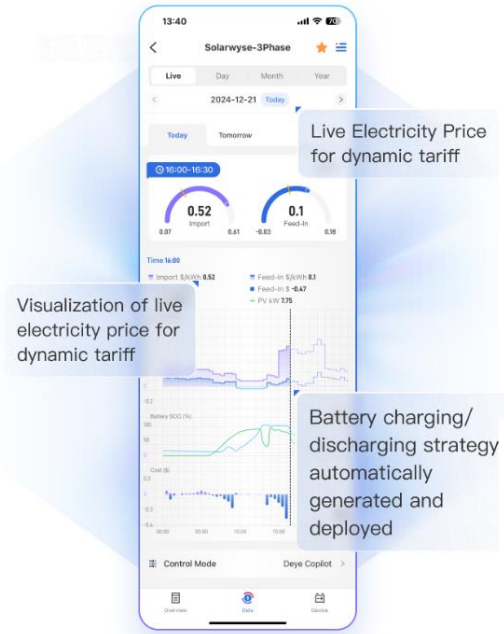
Localized Data Centers

AI Assistant

Cloud Management: AI Innovations for Smarter Operations

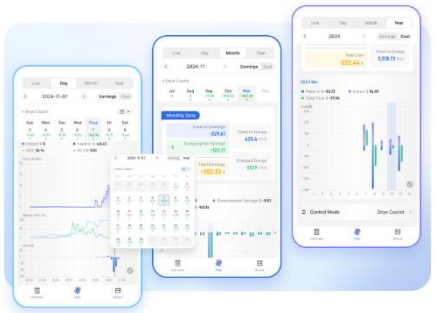
Deye Copilot leverages advanced algorithms to analyze dynamic electricity prices, load forecasts, and solar predictions, providing your energy system with optimized scheduling solutions to maximize electricity cost savings

1. Price – Strategy – Earning in one click



2. Earnings and Costs under control

View details about how Deye Copilot cuts your electricity bills – everyday, every month, every year.

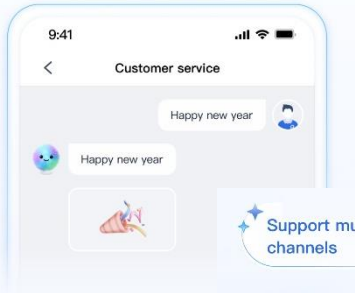


3. Switch between Deye Copilot and ToU

Enable Deye Copilot or go back to ToU in one click

AI Assistant resolves issues faster by offering response suggestions and personalized support experience in over 30 languages.

AI Chatbot pre-trained on device user manual and Deye Cloud user guide



Support multiple languages on multiple communication channels

Green Industry Better Future

World's Leading Supplier of PV Inverter

NINGBO DEYE INVERTER TECHNOLOGY CO.,LTD

Ver2501