Comprehensive Solution
Provider of New Power System

Yotai Energy

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YOTAI Digital Energy Technology (Shenzhen) Co., Ltd.

Add:Tellhow Industrial Park, Guansheng 5th Road, Longhua District, Shenzhen
Tel:400-830-2980 0755-26998085
For further information please check our website: https://www.yotaienergy.com
Email:marketing@yotaienergy.com

VN:V1.2 EU-STD

YOTAI

OVERSEAS PRODUCT MANUAL

YOTAI Digital Energy Technology (Shenzhen) Co., Ltd.

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YOTAI is a leading comprehensive solution provider of a new power system. With the capability of constructing microgrid systems that integrate wind power, solar, energy storage, diesel generator and hydrogen for multi-energy complementation, we focus deeply on our core products: **BESS, EV Charger, Battery Swapping Cabinet, Power Equipment and Energy & Carbon Management.**

We provide whole life cycle management, EPC contracting and maintenance service to help our customers achieve green power generation and high-efficiency energy consumption.

We offer **OEM/ODM** programs to help our partners seize new business opportunities in an increasingly competitive marketplace, grow their business, and strengthen customer loyalty.

YOTAI Company Profile

Our product certifications satisfy global standards in various markets across Europe, America, Southeast Asia, and Africa, including CE, UL, UN, TR25, LTA...

All production is eco-friendly to minimize our environmental impact. We are committed to reducing carbon footprints and have obtained corresponding certifications including QC, ISO...

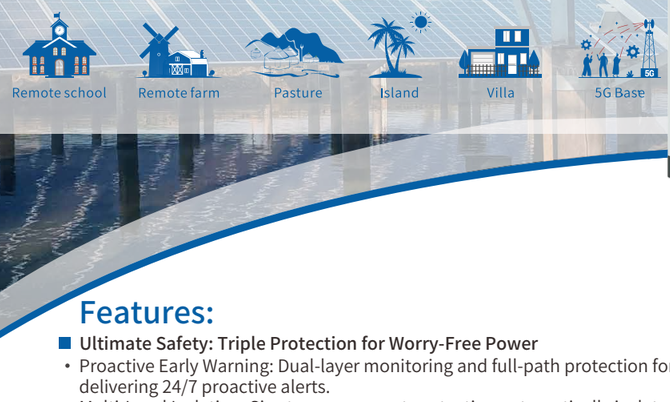
PRODUCTS & SOLUTIONS

C&I ESS Product Series

Liquid-Cooled C&I ESS

The Ener Hexon® Smart261L-CE liquid-cooled product adopts an All-in-One design, primarily consisting of 5 liquid-cooled battery PACKs, 1 control box, 1 PCS, 1 set of BMS, 1 set of EMS, 1 liquid cooling unit, along with its cabinet structure and electrical auxiliary equipment, etc. The cabinet integrates liquid cooling pipelines. The battery rated capacity is 261.248 kWh.

Ener Hexon® Smart261L-CE



Features:

■ **Ultimate Safety: Triple Protection for Worry-Free Power**
- Proactive Early Warning: Dual-layer monitoring and full-path protection form an integrated cloud-edge safety shield, delivering 24/7 proactive alerts.
- Multi-Level Isolation: Six-stage power-cut protection automatically isolates faults for safer maintenance.
- Fire Protection Linkage: Triple explosion-venting + triple fire-suppression system ensures effective control even under extreme conditions.

■ **High Efficiency: Better Performance, Higher Returns**
- High Conversion Efficiency: Next-generation SiC PCS enables charging/discharging efficiency up to 99%.
- 15% Longer Lifespan: Minimal temperature difference ensures high consistency and extended battery life.
- Multi-Mode Operation: Supports grid-tied, off-grid, and VPP modes for flexible applications.

■ **Smart & Hassle-Free: One-Click Operation, Remote Management**
- Local Visualization: Fully operable offline—power on and run immediately.
- Modular Design: Block-like installation with rapid deployment and easy front maintenance.
- 24/7 Smart Control : Cloud collaboration enables monitoring, diagnosis, and OTA upgrades.

■ **IEC-Certified Reliability: Built to Withstand Harsh Environments**
- Full IEC Compliance: Comprehensive certification ensures global-grade reliability.
- Condensation-Free & Anti-Corrosion: Suitable for high humidity, high salinity, and harsh conditions.

■ **Flexible Expansion: Configurable and Future-Proof**
- Scalable Architecture: Supports multi-unit parallel expansion up to 2.5 MW.
- Grid/Off-Grid Switchable: Easily adapts to diverse power usage scenarios.

Technical Parameters

Category	Name	Parameter	Remarks
DC Parameters	Cell Type	LFP-3.2V-314Ah	
	Battery Rated Capacity	261.248kWh	
	Nominal Voltage	832Vdc	Voltage range: 728~936Vdc
	Charging/Discharging C-rate	⩽0.5CP	
	Cooling Method	Intelligent Liquid Cooling	
AC Parameters (Grid-connected)	Rated Power	125kW	
	Grid Voltage	400V (-10%~10%)	
	Rated Current	180A	
	Rated Grid Frequency	50Hz/60Hz	
	Grid Frequency Range	45~55Hz/55~65Hz	
	Total Current Harmonic Distortion	<3% (at rated power)	
	Power Factor	>0.99 (at rated power)	
	Power Factor Adjustable Range	-1 (leading) ~1 (lagging)	
AC Parameters (Off-grid)	AC Off-grid Voltage	400V (-5%~5%)	
	AC Off-grid Frequency	50Hz/60Hz	
	Off-grid Output Voltage Distortion	<3% (linear load)	
System Parameters	Cooling Method	Liquid Cooling+Air Cooling	
	Fire Protection System	Aerosol + Water-based Fire Protection (optional)	
	Anti-corrosion Grade	C4-M	
	Protection Level	IP54 (IP65 for battery compartment)	
	Operating Temperature Range	-20°C~+45°C	Derating when >45°C
	Storage Temperature	-20°C~+35°C (⩽6 months) / -20°C~+45°C (⩽1 month)	SOC @20%~50%
	Operating Humidity Range	0～95%RH	No condensation
	Installation Method	Outdoor Installation	
	Working Condition	Maximum 2 charges and 2 discharges per day	
	System Communication Interface	Ethernet/RS485	
	External System Communication Protocol	Modbus TCP/IEC104/Modbus RTU	
	Altitude	Within 4000m	Derating when >2000m
	Dimensions [mm] (W*D*H)	1400 × 1400 × 2200	
	Weight	2500+5%kg	
Certification	IEC62619, IEC60730, IEC61000, IEC62477, EN50549, VDE4105, VDE4110, VDE4120, UN38.3, UN3480		

PV&ESS All-in-one Cabinet

The Ener Hexon® Smart110P air-cooled product adopts an all-in-one design. It mainly consists of 5 battery PACKs, a 50kW hybrid inverter, a BMS, an EMS, an intelligent temperature control system, an advanced fire suppression system integrating precise inhibition and explosion venting, as well as cabinet structure and electrical auxiliary equipment. The battery' s rated capacity is 110kWh.

Ener Hexon® Smart110P

Features:

Safety

Intelligent early warning ensures energy storage safety; precise temperature control extends battery life by **12%.**

Simplicity

Single cabinet footprint of only **1.3m²**, modular rapid deployment, factory pre-assembly saves **15%** in overall costs.

Intelligence

Cloud-based smart operation and maintenance with AI remote monitoring and warnings ensure full battery lifecycle management; multi-mode switching increases profitability.

Scalability

Hand-in-hand parallel expansion supports a wide power range from **50 kW** to **300 kW.**

Technical Parameters

Model		YT-DS5T110-PV050-B03
PV	Maximum Input Power	96kW
	Startup Voltage	210V
	Maximum PV Voltage	1000VDC
	Rated PV Voltage	620VDC
	MPPT Operating Voltage Range	330-850VDC
	Number of MPPTs	4
	Number of Inputs per MPPT	2
	Maximum Input Current(per MPPT)	40A*4
	Maximum Short-Circuit Current (per MPPT)	50A*4
Battery	Nominal capacity	110kWh
	Battery capacity	314Ah
	Rated Voltage	352VDC
	Battery Voltage Range	308~396VDC
	Rated Charge/Discharge Current	140A
	Maximum Charge/Discharge Current	165A
AC	Rated Output Power	50kW
	Maximum Output Power	50kW
	Rated Input Power	50kW
	Maximum Input Power	50kW
	Rated Output Current	76A
	Maximum Output Current	76A
	Rated Voltage(Input and Output)	3LN/PE;400V
	Grid Frequency	50Hz/60Hz
	Total Voltage Harmonic Distortion	<3%@Rated Power &Linear Load
Temperature Control and Fire Protection	Temperature Control Type	Smart Air Conditioner、Smart Fan
	Fire Suppression Agent	Aerosol(or Perfluorohexanone)
	Fire Protection Control Type	Composite Detection、Cabinet-Level Suppression
Mechanical	Weight	Net Weight:1370kg Gross Weight(with packaging):1420kg
	Dimensions(W*D*H)	Unit Dimensions:1000×1320×2145mm Dimensions with Packaging:1070×1390×2285mm
	Communication Method	Ethernet、4G
Certification	Battery certification	IEC62619、IEC61000、UN38.3
	Inverter certification	IEC61000、IEC62477、IEC62109、EN50549-1
	Whole machine certification	IEC62109、IEC61000、UN38.3

■ Note: The inverter includes safety regulations and grid-connection certifications for mainstream countries.

PV&ESS All-in-one Cabinet

Photovoltaic storage integrated machine series Ener Hexon® Smart 265P products are mainly composed of power battery clusters, hybrid photovoltaic storage inverters, frequency conversion temperature control systems, precise suppression and explosion venting integrated fire protection systems, electrical auxiliary equipment and weather-resistant sheet metal cabinets, etc., and are comprehensively managed by an intelligent, digitalized BMS and EMS system, forming a 125kW/265kWh integrated PV-storage system.

Ener Hexon® Smart 265P

Features:

Safe

PACK grade combustible gas detection, cabin level fire protection targeted fire extinguishing; Electrical multi-dimensional protection fusion perception, multi-level circuit breaker protection;

Minimalist

All in one design, modular installation, single cabinet covers an area of only **2.23 m²**;

Extend

Hand-in-hand parallel expansion is simple, covering a wide power range of **125kW-500kW**;

Intelligent

Intelligent balancing strategy, system AI early warning, to ensure the consistency of the whole life cycle of the battery;

Technical Parameters

Product Model		YT-DS5T265-PV125-B01
PV input parameters	Maximum input power	180 kW
	Starting voltage	180 Vdc
	Vdc Maximum voltage of photovoltaics	1000 Vdc
	Photovoltaic rated voltage	600 Vdc
	MPPT voltage range	180~950 Vdc
	MPPT quantity	10 (6)
	Number of single MPPT inputs	2 (3)
	Maximum Input Current (per MPPT)	42A*10(48A*6)
	Maximum Short Circuit Current (per MPPT)	60A*10(60A*6)
DC side energy storage parameters	Rated energy	265 kWh
	Rated capacity	314 Ah
	Rated voltage	844.8 Vdc
	Battery voltage range	739~950 Vdc
	Rated charge/discharge current	148 A
	Maximum charge/discharge current	170 A
	Cycle life	6000 times @25°C, 0.5P charge and discharge、95%DOD、EOL70%
AC parameters	Rated output power	125 kW
	Maximum output apparent power Grid-connected	Grid-connected 125 KW, off-grid 150 KW (100s), off-grid 175 KW (10s)
	Rated input power	125 kW
	Maximum input apparent power	173 kW
	Rated grid voltage	3/N/PE, 380 V / 400 V
	Rated output current	180.4 A / 189.9 A
	Maximum output current	253 A (10S)
	Rated output voltage	3/N/PE, 220 V / 380 V, 230 V / 400 V
	Grid frequency	50Hz/60Hz
	Voltage total harmonic distortion	<2%
Temperature control and fire protection	Temperature control type	Intelligent air conditioning air cooling
	Fire extinguishing agent	aerosol
	Fire control type	Smoke detector、temperature detector, H2 detection, cabin level suppression
General parameters	Working mode	Grid-connected/off-grid, self-consumption, peak shaving and valley filling, scheduling charging and discharging/virtual power plant, power backup, etc
	Operating temperature range	-20~50°C (derating above 45°C)
	Storage ambient temperature	0~35°C
	Operating humidity	5%~95%
	Protection level	IP54
	Anti-corrosion grade	C3 (C4/C5optional)
	Working altitude	3000m (>2000m derating)
	Weight	Net weight 2500kg, gross weight with packaging about 2600kg
	Dimensions(W*D*H)	This machine is 1200*1860*2200mm, with packaging 1270*1930*2400mm
	Communication method	RS485、Ethernet、4G
certification	Battery certification	IEC62619、IEC61000、UN38.3
	Inverter certification	IEC61000、IEC62477、IEC62109、EN50549-1
	machine certification	IEC62619、UN38.3

■ Note: The inverter includes safety regulations and grid-connection certifications for mainstream countries.

Features:

- **Smart On/Off Grid Switching**
  Automatically detects grid status and seamlessly switches between on-grid and off-grid modes to ensure uninterrupted power during grid instability or outages — ideal for areas with unreliable grid supply.
- **High energy density and modular design**
  98 kWh storage and 50 kW output support high-load applications in malls and hotels, while the modular design enables flexible expansion for farms, schools, and more.
- **Intelligent Energy Management System (EMS)**
  Dynamically balances solar, storage, and grid power to cut diesel use and electricity costs by over 30% — ideal for regions with high fuel costs, such as parts of Africa.
- **Supports multi-source integration**
  Grid, solar, diesel, and storage — for diverse commercial and industrial indoor applications.

Technical Parameters

Type Name		Ener Hexon®Solution 98P
DC (PV)	Maximum Input Power	50kW
	Start Voltage	200V
	PV Maximum Voltage	1000V
	PV Rated Voltage	630V
	MPPT Operating Voltage Range	200-850V
	Qty.MPPT	4
	Qty.Single-Channel MPPT Input	2
	Maximum Input Current (Per MPPT)	30A*4
	Maximum Short-Circuit Current(Per MPPT)	40A*4
DC (Battery)	Battery Stringing Form	1P7S*14
	Nominal Capacity	314Ah
	Rated Capacity	98 kWh
	Rated Voltage	313.6V
	Voltage Range	274.4～352.8V
	Charge/Discharge Rate	⩽0.5CP
AC (Mains Power)	Rated Output Power	50kW
	Rated Input Power	50kW
	Maximum Output Current	75A
	Rated Voltage (Input And Output)	3L/N/PE;400V
	Off-Grid Switching Time	<20ms
	Grid Frequency	50Hz/60Hz
	THDu	<3%@Rated power &Linear load
AC (Genset)	Maximum Input Apparent Power	60kVA
	Maximum Battery Charging Power	50kW
	Rated Output Voltage	3L/N/PE;220/380V;230/400V;240/415V
	Rated Frequency	50/60Hz
	Maximum Input Current	87A
Other	Operating Temperature Range	Charging:0 to 45°C,Discharging:-20 to 45°C
	Storage Temperature Range	0～35°C
	Relative Humidity	10～85%RH,No condensation.
	Altitude	3000m(>2000m Derating)
	Weight	800kg(Indoor Battery Rack)/73kg(Inverter) 20kg(Power Control Distribution Box)
	Dimensions(W*D*H)	570*800*2100mm(Indoor Battery Rack)/530*880*290 mm(Inverter)/ 800*200*700mm(Power Control Distribution Box)
	Cooling Methods	natural cooling
	Communication Mode	RS485,Ethernet,4G(Optional)
	PCS Certification	IEC/EN62109-1/-2,IEC/EN61000-6-2/-4,EN 55011,EN 50549-1/EN50549-10.etc
	Cell Certification	GB/T34131、UL1973、UL9540A、IEC 62619、UN 38.3

Features:

- **High-capacity storage with long-lasting off-grid power**
  239 kWh capacity and 100 kW output enable 8-12 hours of off-grid operation for high-load sites like malls and hotels, reducing diesel dependency.

- **Smart multi-source integration**
  Energy management prioritizes solar, uses storage and grid/diesel as backup as needed. Cuts energy costs by over 40%, ideal for high fuel cost regions.

- **Rapid deployment and modular expansion**
  Cabinet-style pre-assembled design enables quick one-day installation. It supports parallel operation and scales up to 6 units for growing mall and factory demands. (A dedicated paralleling device is required.)

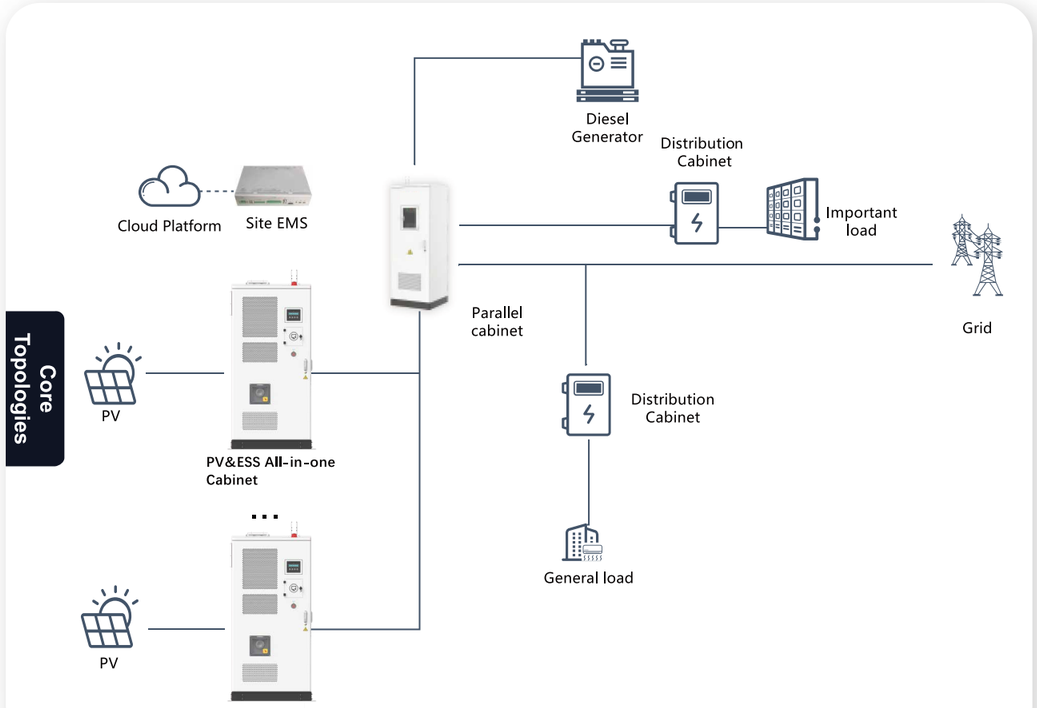
- **Triple safety protection**
  Three-level interlocking protection of BMS + EMS + PCS, preventing overcharging, overdischarging and short circuit.

Technical Parameters

	Model	YT-PV100-B01	YT-PV100-B02	YT-PV100-B03
DC (PV)	Maximum PV Power	180kW(maximum optional 240KW)		/
	Starting Voltage	200V		/
	MPPT Voltage Range	200 to 770V		/
	PV Maximum Opening Voltage	900V(protection value)		/
	Qty.MPPT	3(up to 4 optional)		/
	Qty.Single-Channel MPPT Input	1		/
	Maximum Input Current	160A*3(up to 4 optional)		/
DC (Battery)	Cell Type	LFP		
	Nominal Energy Capacity	314Ah		
	Rated Energy Capacity	239kWh		
	Battery Voltage Range	650 to 950V		
	Rated Voltage	761.6VDC		
	Charge/Discharge Rate	⩽0.5 CP		
	String Form	1P17S*14(maximum support 19S*14)		
AC (Mains Power)	Input Apparent Power	200kVA		
	Input Rated Voltage	3L/N/PE,220V/380V,230V/400V		
	Rated Frequency	50Hz/60Hz		
	Voltage Range	-15%~+15%		
	Maximum Input Current	350A		
AC (Genset)	Inputs Apparent Power	100kVA		/
	Input Rated Voltage	3L/N/PE,220V/380V,230V/400V		/
	Maximum Input Current	152A		/
AC (On/Off Grid)	On/Off-Grid Output Rated Power	100kW		
	On/Off-Grid Output Apparent Power	115kW		
	On/Off-Grid Output Rated Voltage	3LN/PE,220V/380V,230V/400V		
	On/Off-Grid Output Rated Frequency	50Hz/60Hz		
	On-Grid Output Rated Current	151.9A/144.3A		
	Power Factor	0.99		
	On-Grid Thdi	<2%		
	Off-Grid Thdu	<3%		
	On/Off-Grid Switching	Support automatic switching		Support manual switching
	On/Off-Grid Switching time	<20ms	<3s	/
	Maximum Efficiency	98.50%		
Other	Maximum Three-Phase Unbalance	100%		
	Operating Temperature	Charging:0 to 45°°C,Discharging:-20 to 45°°C		
	Storage Temperature	0～35°C		
	Operating Altitude	⩽3000m(>2000m derating)		
	Weight	About 400kg (Power Distribution Cabinet)/ 770kg+770kg+600kg(Battery)		About 300kg (Power Distribution Cabinet)/ 770kg+770kg+600kg (Battery)
	Dimensions(W*D*H)	900*1000*2000mm(Power Distribution Cabinet)/ 1710*800*1900mm (Battery)		650*1000*2000mm(Power Distribution Cabinet)/ 1710*800*1900mm (Battery)
	Communication Mode	CAN,RS485,Ethernet,4G		
	PCS Certification	CE-EMC EN61000-6-2:2019;EN61000-6-4:2019;CE-LVD EN 62477-1;EN50549-1:2019+AC:2019-04		
	Cell Certification	GB/T 34131、UL 1973、UL 9540A、IEC 62619、UN 38.3		

50-300kW PV&ESS All-in-one Cabinet parallel scheme

Topology diagram of the scheme(up to 6 parallel machines)



Topology Introduction:

2-6 sets of 110P PV-storage all-in-one units can be connected to one parallel cabinet to form a 300kW 660kWh solar-storage-diesel system to cope with high-power usage scenarios.

Introduction to the integrated cabinet of photovoltaic storage: Ener Hexon Solution150K/300K products are mainly composed of AC molded case circuit breakers, energy meters, transformer switches, EMS, displays, switching power supplies, surge protectors, cooling fans, a variety of connection busbars, cabinets, etc. Minimalist design, modular installation, with the characteristics of safe and reliable, rapid deployment, low cost, high energy efficiency and intelligent management.

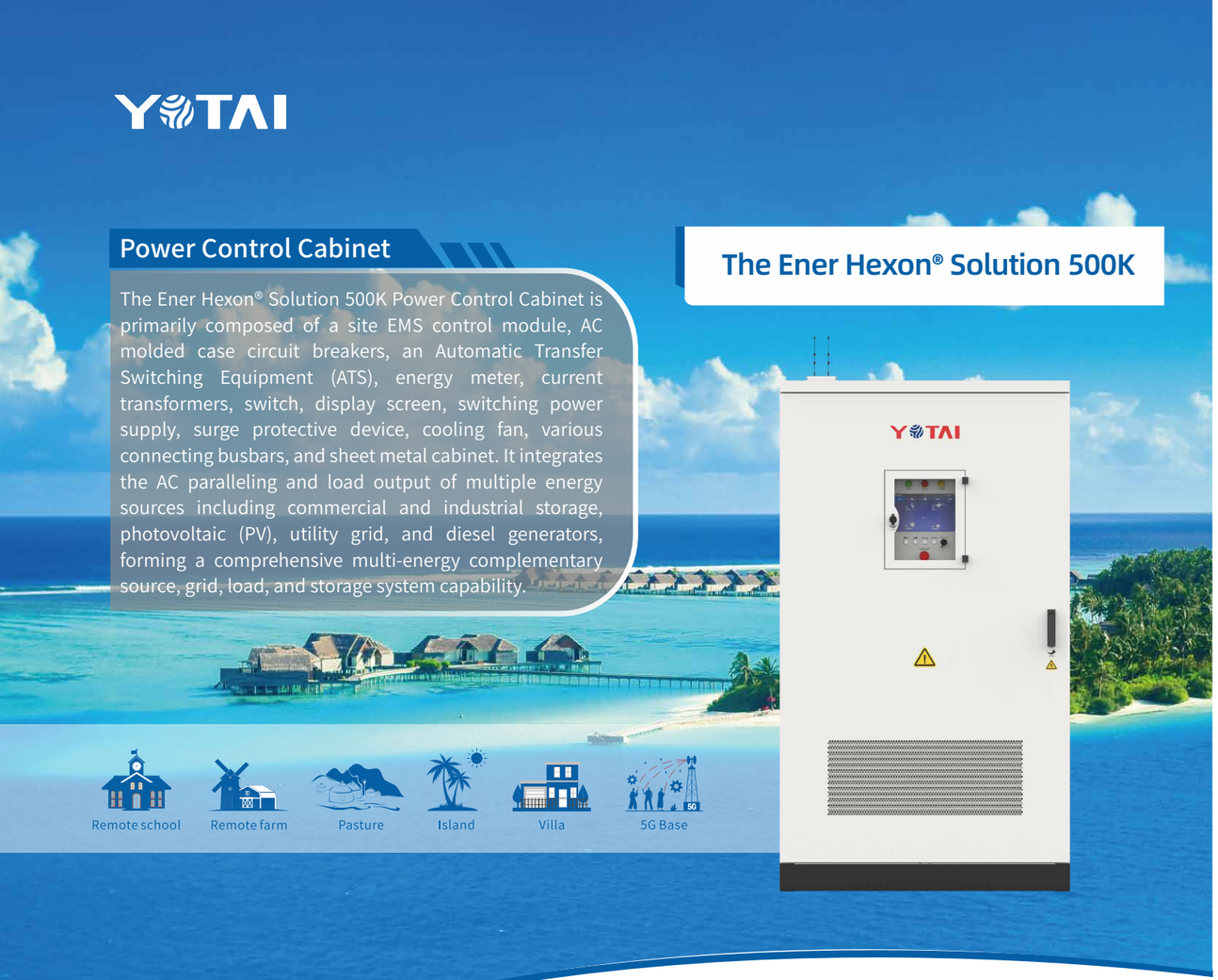
Configuration parameter

Model	YT-DS5T110-PV050-B03 (1 machine)	YT-DS5T110-PV050-B03 (3 parallel machines)	YT-DS5T110-PV050-B03 (6 parallel machines)
DC(PV)			
Maximum input power	96kW	96kW*3	96kW*6
Starting voltage	180V	180V	180V
Photovoltaic rated voltage	620Vdc	620Vdc	620Vdc
MPPT voltage range	200-850Vdc	200-850Vdc	200-850Vdc
Number of MPPTs	4	4*3	4*6
Number of inputs per MPPT	2		
Maximum Input Current (per MPPT)	40A	40A	40A
Maximum Short Circuit Current (per MPPT)	50A	50A	50A
DC(Battery)			
Rated energy	110kW	330kW	660kW
Rated capacity	314Ah	314Ah	314Ah
Rated voltage	352Vdc		
Battery voltage range	308~396 Vdc		
Rated charge/discharge current	140A	140A*3	140A*6
Maximum charge/discharge current	165A	165A*3	165A*6
Cycle life	25°C 0.5C/0.5C EOL70% ＞6000		
AC parameters			
Rated output power	50kW	150kW	300kW
Maximum output apparent power Grid-connected	50kW	150kW	300kW
Rated input power	50kW	150kW	300kW
Maximum input apparent power	50kW	150kW	300kW
Rated output current	76A	76A*3	76A*6
Rated grid voltage	3L/N/PE; 400V		
Grid frequency	50Hz/60Hz		
Voltage total harmonic distortion	< 3% @Rated power & linear load		
Generator (optional)			
Input power	50kW	150kW	300kW
Rated output voltage	3L/N/PE; 400V		
General parameters			
Weight	1370kg	1370kg*3+1*300kg	1370kg*6+1*300kg
Working mode	Grid-connected/off-grid, self-consumption, peak shaving and valley filling		
Operating temperature range	charge-20~50°C；discharge0~50°C		
Storage ambient temperature	-20~45°C		
Operating humidity	5%~95%		
Protection level	IP54		
Working altitude	3000m (>3000m degrade)		
Communication method	RS485、Ethernet、4G		

Power Control Cabinet

The Ener Hexon® Solution 500K Power Control Cabinet is primarily composed of a site EMS control module, AC molded case circuit breakers, an Automatic Transfer Switching Equipment (ATS), energy meter, current transformers, switch, display screen, switching power supply, surge protective device, cooling fan, various connecting busbars, and sheet metal cabinet. It integrates the AC paralleling and load output of multiple energy sources including commercial and industrial storage, photovoltaic (PV), utility grid, and diesel generators, forming a comprehensive multi-energy complementary source, grid, load, and storage system capability.

The Ener Hexon® Solution 500K



Features:

•Capable of on-grid and off-grid operation, suitable for areas without electricity or with weak grids.

•Enables sub-second on/off-grid switching, autonomously managing PV/storage/diesel energy to maximize overall system efficiency.

•Compatible with most generator models available on the market.

•Multi-source energy integration, supports connection of up to 4 all-in-one PV/storage units or commercial/industrial storage units, multiple PV inputs, and automatic switching between utility grid and diesel generator.

•Supports power exchange for systems up to 500kW.

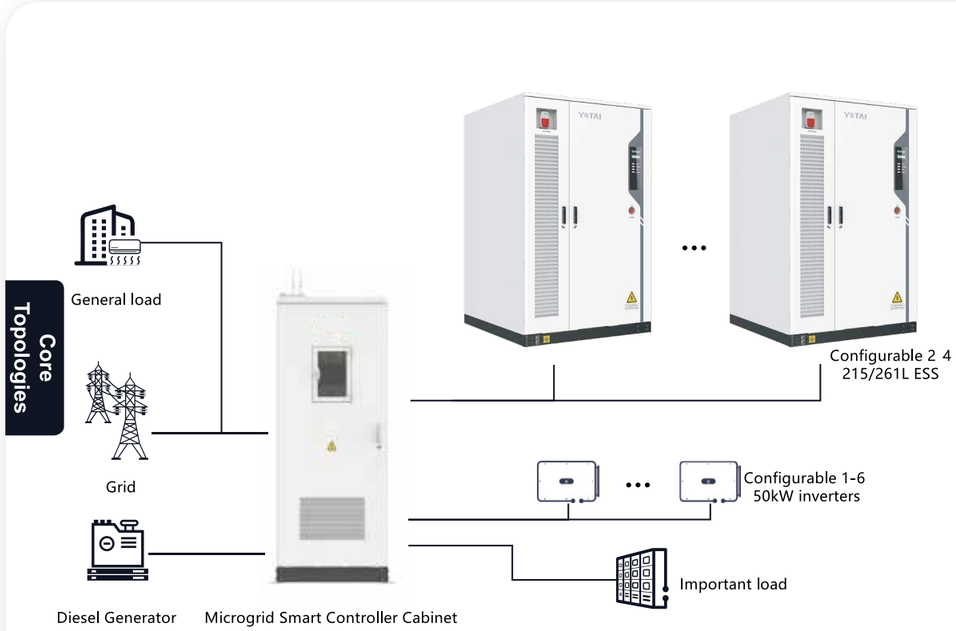
Technical Parameters

Category	Model	YT-MCC500-B01
Electrical Parameters	Grid Voltage	400Vac
	Max. Grid Input Current	1250A
	Rated Grid Frequency	50Hz/60Hz
	System Rated Power	500kVA
	Power Source I Input Capacity	1*400Vac/1250A
	Power Source II Input Capacity*1	1*400Vac/1250A
	Energy Storage Input Capacity*2	4*400Vac/200A
	PV Input Capacity*3	8*400Vac/125A
	Load Output Capacity*4	2*400Vac/800A or 1*400Vac/800A
System Control	Grid-connected/off-grid Switching Mode	Based on STS, 20ms level
	Data Acquisition	Current, voltage, power, frequency, SOC, temperature, smoke
	Data Preprocessing	Digital filtering, harmonic detection, voltage sag
	Fault Diagnosis	PV inverter fault, PCS fault, battery fault, communication fault
	System Mode	Grid-connected mode, off-grid mode, scheduled charge/discharge, self-consumption, backup power, etc.
General Parameters	Temperature Control Method	Intelligent air cooling
	Corrosion Protection Level	C3
	Enclosure Protection Level	IP54
	Operating Temperature Range [°C]	–25°C to +55°C
	Installation Method	Indoor/outdoor installation
	Altitude [m]	3000m (derating above 2000m)
	External Communication Interface	RS485, Ethernet, 4G wireless
	Dimensions [mm] (W×D×H)	1250*1200*2200
	Weight	350kg

■ Note: Can be customized according to different application scenarios.

200-400kW PV&ESS&D/G All-in-one Cabinet scheme

Topology diagram of the scheme



Features:

Intelligent Switching

Sub-second on/off-grid switching, light storage and diesel linkage

Wide Generator Compatibility

Compatible with 90% of generator models

Multi Expandable

4 storage,6 lightflexible access

Great Capacity Guarantee

400kW uninterruptible power supply

Configuration parameter

System power	200kW	300kW	400kW
AC input parameters			
Rated voltage	400VAC	400VAC	400VAC
Rated current	300A	450A	630A
Rated frequency	50Hz	50Hz	50Hz
Rated power	200kW	300kW	400kW
IPower access capability(grid)	1*400VAC/300A	1*400VAC/450A	1*400VAC/630A
IIPower access capability (D/G)	250kW,Suggest configuring power greater than energy storage power	350kW,Suggest configuring power greater than energy storage power	500kW,Suggest configuring power greater than energy storage power
ESS configuration	2*(125kW/261kWh)	2/3*(125kW/261kWh)	3/4*(125kW/261kWh)
PV configuration	⩽200kW,Suggest configuring power lower than energy storage power	⩽250kW,Suggest configuring power lower than energy storage power	⩽300kW,Suggest configuring power lower than energy storage power
AC output parameters			
Rated voltage	400VAC	400VAC	400VAC
Rated frequency	50Hz	50Hz	50Hz
Rated power	400kVA	400kVA	400kVA
General load output capability	1*400VAC/200A	1*400VAC/200A	1*400VAC/200A
Important load output capability	1*400VAC/300A	1*400VAC/450A	1*400VAC/630A
System parameters			
Anti-corrosive level	C3		
Ingress protection	IP54		
Operating temperature	-20°C~+55°C		
Installation method	Indoor/Outdoor Instalation		
Altitude	3000m(>2000m derating)		
External communication methods	RS485,Ethernet,4G wireless (optional)		

Utility ESS Product Series

Containerized Liquid-Cooled Utility ESS

The Ener Hexon® Aurora 5015 Containerized Liquid-Cooled Utility ESS primarily consists of 314Ah liquid-cooled battery PACKs, a control box, a main control panel, a liquid cooling unit, a liquid cooling pipeline system, a BMS (Battery Management System), a fire protection system, auxiliary power distribution, and more. The system has a nominal energy capacity of 5015.96 kWh, utilizing 314Ah Lithium Iron Phosphate (LFP) battery cells. A single PACK is configured as 1P52S. Each battery cluster is formed by connecting 8 battery PACKs in series. A single system comprises 12 clusters in total. Each is equipped with one control box. The DC side supports multiple parallel branch circuits converging into a centralized PCS (Power Conversion System). The temperature control system features an independent liquid cooling circulation system. The fire protection system employs an aerosol fire suppression + combustible gas detection + explosion-proof ventilation and exhaust + water fire suppression solution. The overall container utilizes a non-walk-in external maintenance design.
The Ener Hexon® Aurora 5015 Containerized Liquid-Cooled Utility ESS can be applied in generation-side, grid-side, and user-side fields, meeting various application scenario needs such as renewable energy consumption, peak shaving and frequency regulation, shared energy storage, independent energy storage, and peak load shifting.

Ener Hexon® Aurora 5015

Features:

Safe

- Utilizes high-safety, long-life, high-efficiency, large-capacity Lithium Iron Phosphate (LFP) batteries;
- Integrates advanced BMS products for real-time monitoring and intelligent management; comprehensive battery protection strategies and fault detection/isolation measures ensure energy storage system safety;
- Combustible gas + temperature + smoke cabin-level detection; total flooding gas fire suppression; integrates six safety protections pre-warning, detection, prevention, isolation, venting, and suppression - into one system; implements BMS whole-unit linkage protection strategy with ultra-early warning protection control for enhanced safety;
- Unaffected by extreme operating conditions; high protection rating: IP54 (IP55 for battery compartment); corrosion resistance rating C4 or higher.

Simple

- Supports centralized topology solution, centralized DC-side convergence; simple topology communication and control logic ensure system stability and reliability;
- Employs 314Ah large-capacity battery cells; PACK uses an extremely narrow 770mm cooling plate; the enclosure uses a standard 20-foot container meeting sea and land transport requirements; single container footprint < 15m²; supports expansion and parallel cabinet connection, saving 35% on footprint, resulting in better overall station EPC cost;
- Factory pre-fabricated production supports cost-effective and efficient deployment on-site, effectively reducing construction workload; on-site installation and commissioning efficiency improved by 50%, lowering project costs.

Smart

- Efficient liquid cooling temperature control strategy; fully variable frequency liquid cooling units; cluster-level throttling design; temperature difference within Pack < 2.5°C; smooth battery cell temperature fluctuations extend battery service life by 15%;
- Independent dehumidification and cooling air conditioner ensures temperature and humidity control within the cabin to prevent condensation;
- Supports one-click upgrades for fast maintenance and updates.

Technical Parameters

Model			YTLS1T5015A	
Category	Name		Parameter	Remarks
Battery parameters	Cell Type		LFP-3.2V-314Ah	
	Battery Rated Capacity [kWh]		5015.96	@25°C±3°C
	Nominal Voltage [Vdc]		1331.2	
	Voltage Range [Vdc]		1164.8～1497.6	
	Charging C-rate		⩽0.5CP	
	Discharging C-rate		⩽0.5CP	
	Maximum Charging/Discharging Power [kW]		2500	2 units of 1250kW
	Operating Temperature	Charging [°C]	5～45	
		Discharging [°C]	0～45	
	Recommended Ambient Temperature [°C]		25±10	
	Cooling Method		Liquid Cooling	50% Ethylene Glyco Aqueous Solution
System parameters	Fire Protection System		Aerosol + Water-based Fire Protection	
	Anti-corrosion Grade		C4	C5 optional
	Lightning Protection Grade		Class II	
	Protection Level		IP54 (IP55 for battery compartment)	
	Operating Temperature Range [°C]		-20～+55	Derating when >45°C
	Storage Temperature [°C]		-20～+35 (⩽6 months)/ -20～+45 (⩽1 month)	SOC @20%～50%
	Operating Humidity Range		0～95%RH	No condensation
	Installation Method		Outdoor Installation	
	Working Condition		2 charges and 2 discharges per day	
	System Communication Interface		Ethernet/RS485	
	External System Communication Protocol		Modbus TCP/IEC104/IEC61850/Modbus RTU	
	Altitude [m]		⩽4000	Derating when >3000m
	Dimensions [mm] (L*W*H)		6058*2438*2896	
	Weight [T]		Approx.42.5	
Certification	IEC62619,IEC60730,IEC63056,IEC61000,IEC62477,UN38.3,UN3536			

Energy Storage System

Ener Hexon® Matrix 3450 Centralized Medium Voltage Converter System is highly integrated with PCS, dry transformer, high voltage ring cabinet, fire protection system, lighting system and grounding system, which requires smaller room and makes transportation,hoisting, installation, operation and maintenance more convenient and efficient.

Ener Hexon® Matrix3450

Features:

Smart

- PQ, VF, SVG, VSG and other functions support high/low voltage crossing;
- Fast power dispatching, off-grid operation and "black start" power grid adaptability;
- Support two groups of batteries, independent charge and discharge management, more battery friendly.

Highly integrated

- Reasonable and efficient layout to improve space utilization;
- Secondary loop integration, unified measurement, protection and communication;
- All-in-one design for easier transportation, hoisting, installation, operation and maintenance.

Efficient and stable

- Adapt to the harsh environment such as extreme temperature, humidity, altitude and salt spray;
- Smart multistage fan speed regulation, wide temperature control, 50°C without derating, high system stability;
- Three-level topology with maximum 99% conversion efficiency.

Target users

- Multiple ESS application scenarios on generation side, grid side and user side.

Technical Parameters

Type	Name	Parameters	Remarks
AC Parameters	Rated power[kW]	3450	
	Maxi. Rated power[kW]	3795	
	Rated voltage[V]	690	
	Rated grid voltage[kV]	10~35	
	Rated grid frequency[Hz]	50/60	
	THD (Rated power)	<1.5%	
	Power factor	-1 (leading) ~1 (lagging)	
DC Parameters	Maxi. output voltage[V]	1500	
	Maxi. DC current[A]	3872	
	Battery pack voltage range[V]	1000~1500	
	Maxi. battery pack connections	2	
System Parameters	Maxi. efficiency	98.31%	
	Operating temperature range[℃]	-30~+60℃	
	Operating humidity range	0～100%RH	no condensing
	System communication interface	RS485/Ethernet/CAN	
Mechanical Parameters	Dimensions[W*D*Hmm]	7620*2896*2438	
	Weight[T]	~14.5	dry converter
	Ingress protection	IP54	
	Anticorrosive grade	C3	C4/C5 (optional)
Certificates	GB/T 34120, GB/T 34133, EN62477, IEC61000, IEC62040		

■ Product continues to iterate, specifications may be updated without prior notice.

EV Charger Product Series

Product Introduction

The YTY is a new generation of All-in-one DC EV charger incorporating 30kW potting charging modules, with an output voltage range of DC200-1000V, making it compatible with all vehicle models on the market. It supports various payment methods, including credit card payments, and can be equipped with a cable management device. The system features smart power distribution and charging control, making it suitable for a wide range of charging scenarios.

All-in-one DC Charger -YTY
(60/90/120kW)

Features:

- **Equitable Power Distribution:**
  Equitable power distribution for flexible output during simultaneous dual-port charging.
- **Dynamic Load Management:**
  Fast response to peak-hour transformer constraints for smart, orderly charging.
- **Easy Maintenance:**
  On-site detection of charging modules, identification of easily damaged parts, and modular design reduce on-site maintenance time by over 30%.
- **Smart Fault Prediction:**
  With an uptime greater than 95%, multi-sensor technology, and big data analysis through the operation and maintenance platform, more than 50% of equipment anomalies can be predicted.
- **Multiple Payment Methods:**
  Supports card swipe, QR code, and credit card activation for charging, providing convenient operation.
- **Multiple Charging Modes:**
  Supports Plug and Charge, dual-gun simultaneous charging mode, VIP mode, and day-night mode, reducing equipment costs by approximately 10%.
- **Remote Operation and Maintenance Platform:**
  Features remote OTA and USB-OTA, resolving over 90% of faults remotely.
- **Battery Health Smart Algorithm:**
  Identifies safety risks in new energy vehicle batteries, ensuring driver safety (available in future upgrades).

Technical Parameters

Model		YTY060CEAG1	YTY090CEAG1	YTY120CEAG1
AC input	Input connection	3P+N+PE		
	Input voltage	400V Ac±10%		
	Input frequency	50Hz		
	Power factor	⩾0.99		
	THDi	⩽5%		
DC output	DC output power	60kW	90kW	120kW
	DC output voltage	200~1000V		
	DC output current	CCS2 : 200A		
	Efficiency	⩾95% (at nominal output power)		
Environmental conditions	Temperature range	-25°C~+50°C		
	Altitude	⩽2000m		
	Humidity	5%-95 % RH non-condensing		
Mechanical specifications	Dimensions (W*D*H)	800*600*1800mm		
	Cable length	4m; (5m or 7m optional)		
	Protection	IP54 (indoor and outdoor rated)		
Basic information	Screen type	7″ LCD touch screen		
	Languages	English for default (others available via software upgrade)		
	Cellular communication	GSM / 4G / LTE		
	Communication protocols	OCPP 1.6J(can be upgraded to OCPP 2.0.1 later)		
	User authentication	APP, RFID card, Credit card (optional)		
Standards and certification	Declaration of conformity	CE, CB, TR25		
	EMC class	Class A		
	Certification standard	IEC61851-1, IEC61851-23, IEC61851-24, IEC62196, TR25-1, TR25-3		
	Communication to the EV	DIN 70121, ISO 15118-2		
Safety function	Over voltage protection, under voltage protection, overload protection, short circuit protection, open circuit protection, leakage protection, grounding protection, over temperature protection, surge protection.			

- Product continues to iterate, specifications may be updated without prior notice.

Product Introduction

The YTY is a new generation of All-in-one DC EV charger incorporating 40kW potting charging modules, with an output voltage range of DC200-1000V, making it compatible with all vehicle models on the market. It supports various payment methods, including credit card payments, and can be equipped with a cable management device. The system features smart power distribution and charging control, making it suitable for a wide range of charging scenarios.

All-in-one DC Charger -YTY
(160/200/240kW)

Features:

- **Equitable Power Distribution:**
  Equitable power distribution for flexible output during simultaneous dual-port charging.
- **Dynamic Load Management:**
  Fast response to peak-hour transformer constraints for smart, orderly charging.
- **Easy Maintenance:**
  On-site detection of charging modules, identification of easily damaged parts, and modular design reduce on-site maintenance time by over 30%.
- **Smart Fault Prediction:**
  With an uptime greater than 95%, multi-sensor technology, and big data analysis through the operation and maintenance platform, more than 50% of equipment anomalies can be predicted.
- **Multiple Payment Methods:**
  Supports card swipe, QR code, and credit card activation for charging, providing convenient operation.
- **Multiple Charging Modes:**
  Supports Plug and Charge, dual-gun simultaneous charging mode, VIP mode, and day-night mode, reducing equipment costs by approximately 10%.
- **Remote Operation and Maintenance Platform:**
  Features remote OTA and USB-OTA, resolving over 90% of faults remotely.
- **Battery Health Smart Algorithm:**
  Identifies safety risks in new energy vehicle batteries, ensuring driver safety (available in future upgrades).

Technical Parameters

Model		YTY160CEAG1	YTY200CEAG1	YTY240CEAG1
AC input	Input connection	3P+N+PE		
	Input voltage	400V Ac±10%		
	Input frequency	50Hz		
	Power factor	⩾0.99		
	THDi	⩽5%		
DC output	DC output power	160kW	200kW	240kW
	DC output voltage	200~1000V		
	DC output current	CCS2:200A, 300A(MAX 400A optional)		
	Efficiency	⩾95% (at nominal output power)		
Environmental conditions	Temperature range	-25°C~+50°C		
	Altitude	⩽2000m		
	Humidity	5%-95 % RH non-condensing		
Mechanical specifications	Dimensions (W*D*H)	850*750*2000mm		
	Cable length	4m; (5m or 7m optional)		
	Protection	IP54 (indoor and outdoor rated)		
Basic information	Screen type	15.6″ LCD touch screen		
	Languages	English for default (others available via software upgrade)		
	Cellular communication	GSM / 4G / LTE		
	Communication protocols	OCPP 1.6J(can be upgraded to OCPP 2.0.1 later)		
	User authentication	APP, RFID card, Credit card (optional)		
Standards and certification	Declaration of conformity	CE, CB, TR25		
	EMC class	Class A		
	Certification standard	IEC61851-1, IEC61851-23, IEC61851-24, IEC62196, TR25-1, TR25-3		
	Communication to the EV	DIN 70121, ISO 15118-2		
Safety function	Over voltage protection, under voltage protection, overload protection, short circuit protection, open circuit protection, leakage protection, grounding protection, over temperature protection, surge protection.			

- Product continues to iterate, specifications may be updated without prior notice.

Product Introduction

The YTY is a new generation of All-in-one DC EV charger incorporating 40kW potting charging modules, with an output voltage range of DC200-1000V, making it compatible with all vehicle models on the market. It supports various payment methods, including credit card payments, and can be equipped with a cable management device. The system features smart power distribution and charging control, making it suitable for a wide range of charging scenarios.

All-in-one DC Charger -YTY
(320/360/400kW)

Features:

- **Equitable Power Distribution:**
  Equitable power distribution for flexible output during simultaneous dual-port charging.
- **Dynamic Load Management:**
  Fast response to peak-hour transformer constraints for smart, orderly charging.
- **Easy Maintenance:**
  On-site detection of charging modules, identification of easily damaged parts, and modular design reduce on-site maintenance time by over 30%.
- **Smart Fault Prediction:**
  With an uptime greater than 95%, multi-sensor technology, and big data analysis through the operation and maintenance platform, more than 50% of equipment anomalies can be predicted.
- **Multiple Payment Methods:**
  Supports card swipe, QR code, and credit card activation for charging, providing convenient operation.
- **Multiple Charging Modes:**
  Supports Plug and Charge, dual-gun simultaneous charging mode, VIP mode, and day-night mode, reducing equipment costs by approximately 10%.
- **Remote Operation and Maintenance Platform:**
  Features remote OTA and USB-OTA, resolving over 90% of faults remotely.
- **Battery Health Smart Algorithm:**
  Identifies safety risks in new energy vehicle batteries, ensuring driver safety (available in future upgrades).

Technical Parameters

Model		YTY320CEAG1	YTY360CEAG1	YTY400CEAG1
AC input	Input connection	3P+N+PE		
	Input voltage	400V Ac±10%		
	Input frequency	50Hz		
	Power factor	⩾0.99		
	THDi	⩽5%		
DC output	DC output power	320kW	360kW	400kW
	DC output voltage	200~1000V		
	DC output current	CCS2:300A(MAX 400A), 500A(MAX 600A optional)		
	Efficiency	⩾95% (at nominal output power)		
Environmental conditions	Temperature range	-30°C~+55°C		
	Altitude	⩽2000m		
	Humidity	5%-95 % RH non-condensing		
Mechanical specifications	Dimensions (W*D*H)	850*1000*2100mm		
	Cable length	5m or 7m optional		
	Protection	IP55 (indoor and outdoor rated)		
Basic information	Screen type	15.6″ LCD touch screen		
	Languages	English for default (others available via software upgrade)		
	Cellular communication	GSM / 4G / LTE		
	Communication protocols	OCPP 1.6J(can be upgraded to OCPP 2.0.1 later)		
	User authentication	APP, RFID card, Credit card (optional)		
Standards and certification	Declaration of conformity	CE, CB, TR25		
	EMC class	Class A		
	Certification standard	IEC61851-1, IEC61851-23, IEC61851-24, IEC62196, TR25-1, TR25-3		
	Communication to the EV	DIN 70121, ISO 15118-2		
Safety function	Over voltage protection, under voltage protection, overload protection, short circuit protection, open circuit protection, leakage protection, grounding protection, over temperature protection, surge protection.			

- Product continues to iterate, specifications may be updated without prior notice.

Product Introduction

The YTS series is a split-type high-power charging system utilizing 40kW potting charging modules for smart power distribution, with an output voltage range of DC200-1000V, making it compatible with all vehicle models on the market. It supports various payment methods, including credit card payments, and can be equipped with a cable management device, allowing it to charge up to 12 vehicles simultaneously.

Split DC Charger - YTS-Series
(240/360/480kW)

Features:

- **Air-cooling Peak Charging Current of 400A:**
  Sustains a 400A current for over 20 minutes, offering an alternative to liquid-cooling superfast charging.
- **Dynamic Load Management:**
  Fast response to peak-hour transformer constraints for smart, orderly charging.
- **Flexible Charging Technology:**
  Utilizes fully flexible and star-coupled flexible charging technology, improving utilization rates by over 30%.
- **Smart Fault Prediction:**
  With an uptime greater than 95%, multi-sensor technology, and big data analysis through the operation and maintenance platform, more than 50% of equipment anomalies can be predicted.
- **Liquid-cooling Peak Charging Current of 600A:**
  Achieves true 3-minute charging with a range of over 150 kilometers.
- **Multiple Charging Modes:**
  Supports Plug and Charge, dual-gun simultaneous charging mode, VIP mode, and day-night mode, reducing equipment costs by approximately 10%.
- **Remote Operation and Maintenance Platform:**
  Features remote OTA and USB-OTA, resolving over 90% of faults remotely.
- **Battery Health Smart Algorithm:**
  Identifies safety risks in new energy vehicle batteries, ensuring driver safety (available in future upgrades).

Technical Parameters

Model		YTS240CEAG1	YTS360CEAG1	YTS480CEAG1
AC input	Input connection	3P+N+PE		
	Input voltage	400V Ac±10%		
	Input frequency	50Hz		
	Power factor	⩾0.99		
	THDi	⩽5%		
DC output	DC output power	240kW	360kW	480kW
	DC output voltage	200~1000V		
	DC output current	CCS2 Liquid cooling plug: 500A(MAX 600A)		
		CCS2 Air cooling plug:200A,300A(MAX400A optional)		
	Efficiency	⩾95% (at nominal output power)		
Environmental conditions	Temperature range	-25°C~+50°C		
	Altitude	⩽2000m		
	Humidity	5%-95 % RH non-condensing		
Mechanical specifications	Dimensions (W*D*H)	Charging host：1400*1000*2100mm		
		Liquid cooling：600*370*1900 mm		
		Air cooling：500*320*1800 mm		
	Cable length	Liquid cooling：3.5m		
		Air cooling：4m; (5m or 7m optional)		
	Protection	IP54 (indoor and outdoor rated)		
Basic information	Screen type	15.6" LCD touch screen(7" LCD touch screen optional)		
	Languages	English for default (others available via software upgrade)		
	Cellular communication	GSM / 4G / LTE		
	Communication protocols	OCPP 1.6J(can be upgraded to OCPP 2.0.1 later)		
	User authentication	APP, RFID card, Credit card (optional)		
Standards and certification	Declaration of conformity	CE, CB, TR25		
	EMC class	Class A		
	Certification standard	IEC61851-1, IEC61851-23, IEC61851-24, IEC62196, TR25-1, TR25-3		
	Communication to the EV	DIN 70121, ISO 15118-2		
Safety function	Over voltage protection, under voltage protection, overload protection, short circuit protection, open circuit protection, leakage protection, grounding protection, over temperature protection, surge protection.			

- Product continues to iterate, specifications may be updated without prior notice.

Features:

- Type A leakage protection design is reliable enough to ensure charging safety. It fully meets local safety requirements and third-party testing standards. It can be operated with great confidence.
- The automotive-grade virgin shell has excellent weather resistance and even with prolonged exposure to wind and sun.
- Breathing light design and anti-theft design both show differences & strength in details.
- Wide input voltage 230VAC±15%, compatible with complex power grid.
- With voice prompts, pulsating indicator light, a simple mobile app interface, easy learning and perfect HMI.
- Supports plug and play, swipe card, mobile APP startup methods etc, charging operation is smart and fast.
- Supports mobile APP to set functions.
- Overall operating status monitoring and control & protection functions ensure charging safety; and it has protection functions such as leakage, lightning protection, overload, overcurrent, overvoltage and undervoltage, short circuit, and overtemperature etc.

Application:

- In response to the needs of existing property renovation, parking lot upgrading, vehicle factory accessory, and vehicle owner self-purchase, the EV charger can be widely used in parking lot within residential communities, supermarket buildings, institutional offices, transportation hubs etc.

Technical Parameters

Items		Technical Parameters		
Product Type		7kW	11kW	22kW
Input characteristics	Power supply mode	Single-phase three wire system	Three-phase five-wire system	Three-phase five-wire system
	Voltage	230V±15%	400V±15%	400V±15%
	Frequency	50Hz		
Output characteristics	Voltage	230V±15%	400V±15%	400V±15%
	Current	⩽32A	⩽16A	⩽32A
	Interface Type	Type2		
Application Environment	Operating temperature	-30~+50°C		
	Operating humidity	5%~95%, RH		
	Altitude	⩽2000m		
	Protection level	IP65		
Basic Information	Dimensions	230*90*340 mm (W *D*H)		
	Communication Interface	Ethernet,4G,Wi-Fi,Bluetooth		
	Frequency Bandwidth	2412-2472MHz (Wi-Fi)		
	Cable Length	5m standard;7m Optional		
	Qty. of charging guns	1		
	Start charging mode	Plug and play, swipe card, APP		
	Letter of Conformity	OCPPI.6 Json (OCPP2.0 upgraded)		
	HMI	Status indicator		
	Installation mode	Wall-mounted/floor-standing		
	Certification	CE,CB		
Safety function	Equipped with input over or under voltage protection,input over-current protection,over-temperature protection,leakage protection,emergency stop protection,and grounding fault alarm			

■ Product continues to iterate, specifications may be updated without prior notice.

Local SCADA/EMS

The Local SCADA/EMS is primarily responsible for real-time monitoring, operation and maintenance, and local energy management of sites and energy storage systems. It supports up to 512 GB local data storage, fault recording, and big data analytics. It also enables collaborative intelligent data analysis with cloud platforms to support battery fault diagnosis, safety early warning, and intelligent EMS strategy optimization.

This system integrates Local EMS, Local SCADA for sites and energy storage equipment, and local big data analytics into a single unified solution.

Core Functional Features

◎ **Integrated "Source-Grid-Load-Storage" Management:**
Achieves unified energy management for customer-side microgrids, optimizing reliability and maximizing storage revenue (peak-valley arbitrage, ancillary services, backup power).

◎ **Comprehensive Site EMS Functions:**
Supports full export, self-consumption maximization, peak shaving, TOU management, VPP dispatch, EV charging control, and backup power, plus protection features like overload prevention and power quality regulation.

◎ **Full-Site SCADA Monitoring:**
Real-time monitoring and control of all site equipment and individual storage units, including parallel system management and local data handling.

◎ **Local & Cloud-Edge Analytics:**
Leverages up to 512GB local storage for fault recording and big data analysis. Collaborates with the cloud for battery fault diagnosis, safety warnings, and intelligent EMS strategy optimization (generation/load forecasting).

Key Technical Advantages

Flexible & Reliable Architecture:
Plug-in-based, model-driven software with MIL/SIL/HIL validation ensures high stability and scalability.

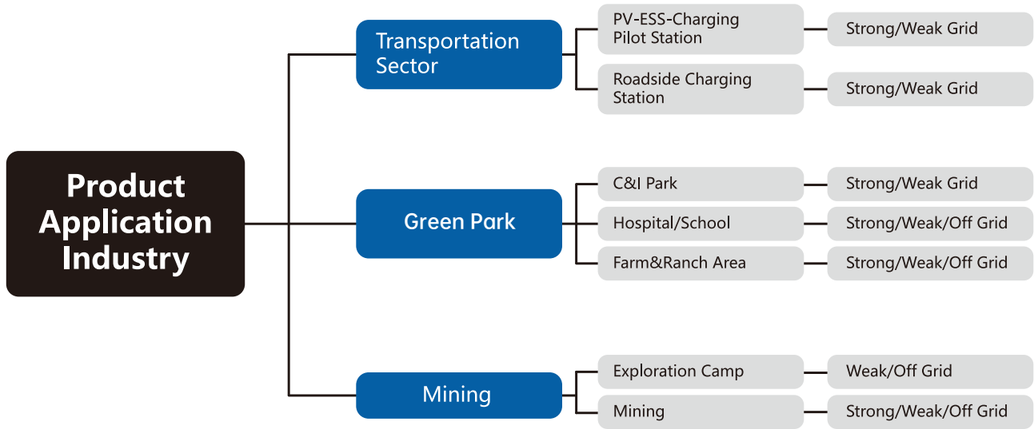
Multi-Device Compatibility:
Built-in driver library for seamless, configurable integration with third-party PCS, BMS, and other devices.

Local Intelligence & Autonomy:
Features a local data server for edge computing, high-frequency battery sampling, and independent offline operation for enhanced reliability.

Predictive Battery Safety:
Cloud-edge collaboration enables digital twin modeling, SOC/SOH optimization, and algorithm-driven early warnings for potential hazards (e.g., internal short circuit).

Comprehensive O&M Tools:
Includes data visualization, operational statistics (energy, revenue, emissions), and fault recording for in-depth system analysis and optimization.

APPLICATIONS & SCENARIOS

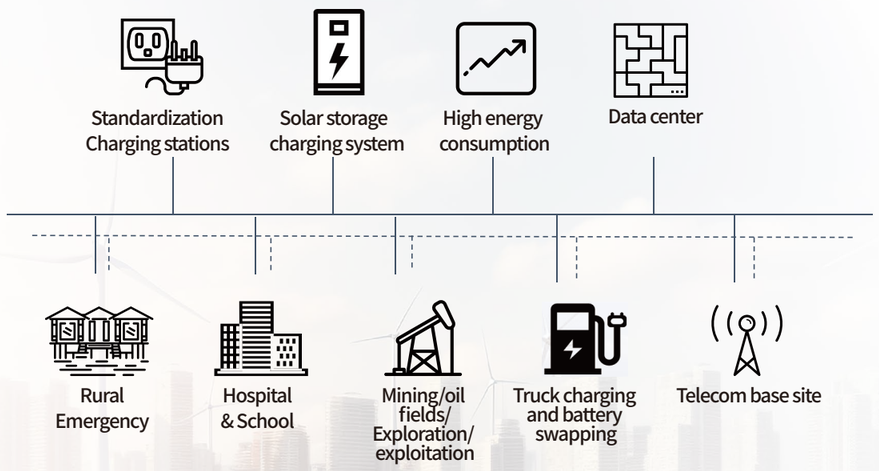


Novel Power Systems and Integrated energy solutions Provider

All-In-One PV-ESS-Charging: A New Model for Enhanced Energy Resilience

Provide End-To-End Services — design, implementation, and maintenance — to help customers build efficient, reliable smart microgrid systems

Solutions



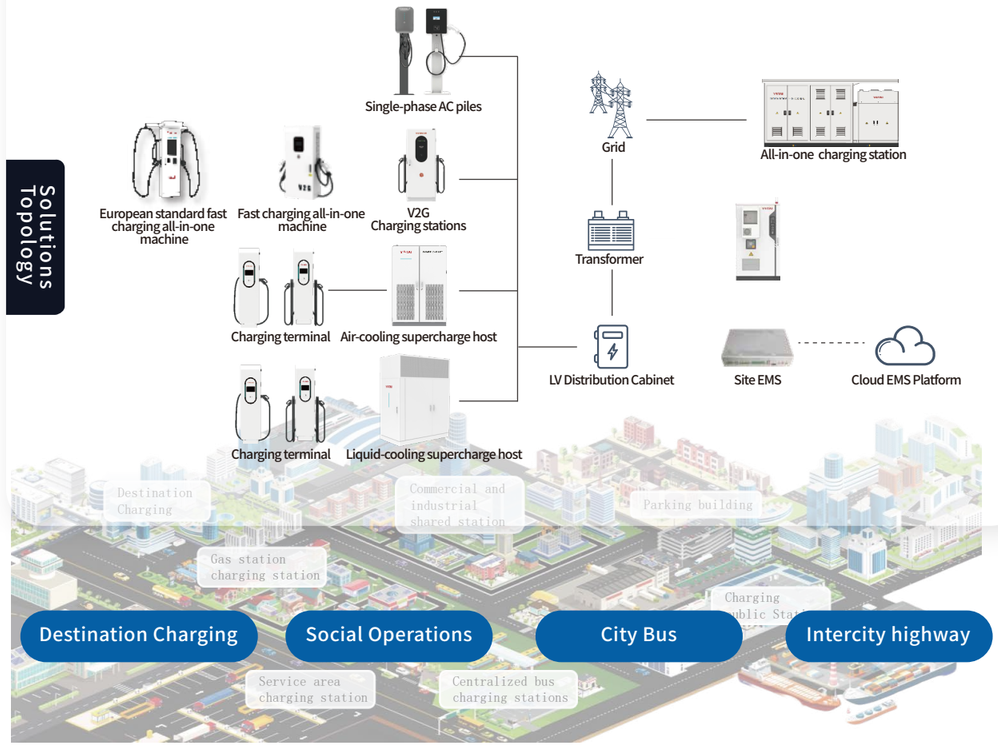
Consulting service | Product service | Engineering service

Green Transportation: Charging Station Solution

Multi-power, multi-form, multi-functional charging pile products flexibly adapt to various scenarios of low-carbon transportation infrastructure construction, build a green transportation charging network, and provide EPC customization for charging stations.

- Engineering productization
- Product modularization
- Module standardization
- Provide customization services
- Intelligent backends empower operations
- Modules respond quickly and efficiently

Solutions Topology



Zero-carbon Industrial Park: On-grid And Off-grid Switching Scenarios

The microgrid intelligent control cabinet integrates multiple energy sources to solve power usage challenges, instability, and weak grid supply for C&I users, ensuring diverse, reliable, and continuous power.

Multi-Energy complementarity ← Multi-Energyl aggregation — Microgrid smart control cabinet — Multi-Energy regulation → Energy management

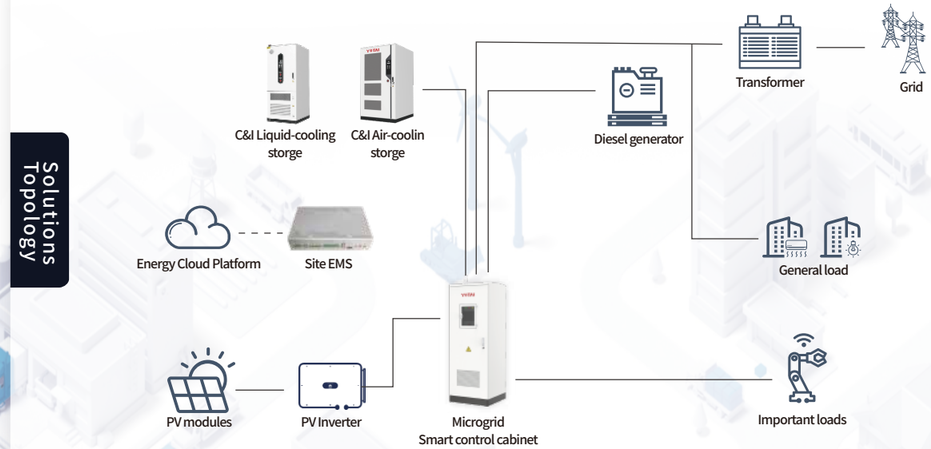
Multi-Energy supply Power | Multi-Energy Coordinated regulation | Smart adjustment self-Integration


Microgrid smart control cabinet

C&I Liquid-cooling ESS

C&I Air-cooling ESS

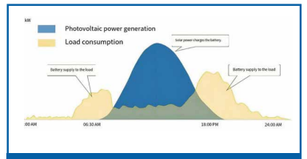
Solutions Topology



Overseas C&I | Remote Park

Mining & Oilfield: Exploration, Extraction, Multi-energy Complementarity And Medium-voltage Power Protection Solutions

Develop a mining oilfield framework for source-grid-load-storage + multi-energy complementarity, enabling multi-source integration, solar-storage synergy, and load-storage linkage. Use finance, assets, services, and technology to support green mine and oil field development.



Green and low-carbon, balancing supply and demand


Seamless backup power, security


Hybrid power generation saves 30% of fuel


Wind-solar-diesel -storage All-in-one


Diesel Generator Companion


liquid cooling ESS


DC Charger

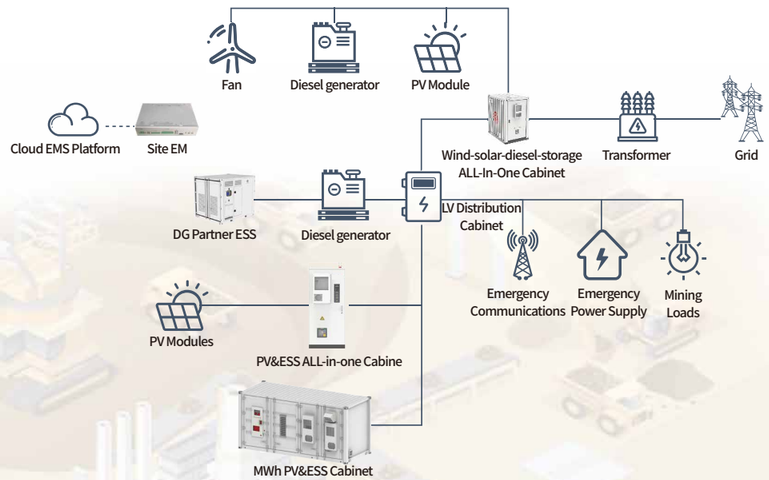

Liquid-cooling supercharge host


Air-cooled charging host


Air-cooling charging terminal


Liquid-cooling supercharge terminal

Solutions Topology



Mining exploration | Oil extraction | Construction machinery | Infrastructure Temporary power

Rural Electrification: Multi-powered Microgrid Solutions

Emergency Microgrid: Combines wind, solar, diesel, and ESS to provide flexible power in weak or off-grid scenarios for normal and emergency needs.

- Improving power supply reliability
- Promote the green and low-carbon transition
- Reduce electricity costs
- Adaptable, deploy on demand
- Supports off-grid operation
- Smart operation and maintenance saves manpower


Wind-solar-diesel -storage All-in-one


Small C&I ESS


C&I air-cooling ESS


C&I liquid-cooling ESS


Microgrid smart control cabinet


DG Partner ESS


AC Charger


DC Charger

Solutions Topology

Area Management | Grid Repair | Disasters in Rural Areas | Road Repair

Telecom Sites: Developing Always-on Base Stations With Resilient Power Supply

Equipping Telecom sites with Solar-ESS systems resolves unstable power supply and high operational costs in remote areas, enabling green, stable, off-grid operations.

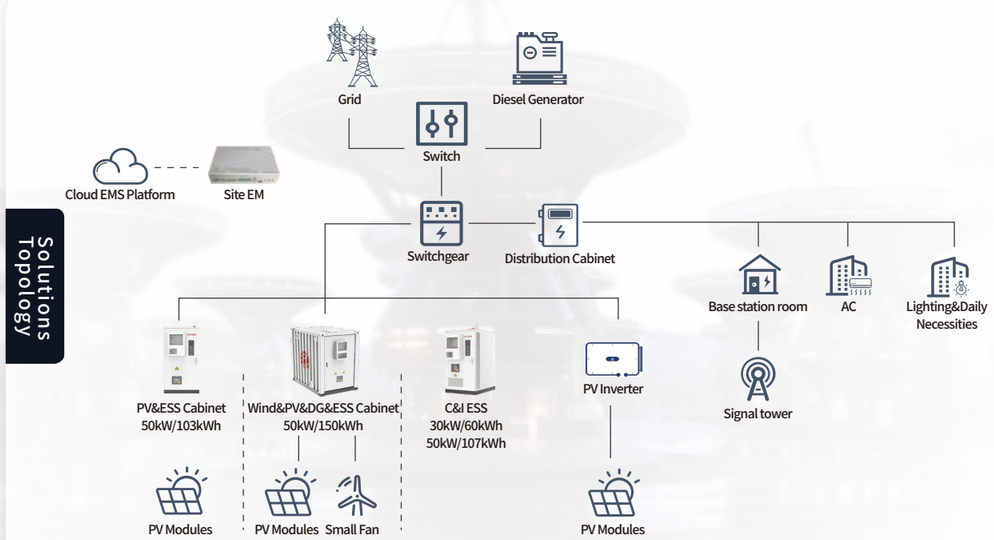
- Maintain continuous communication
- Cut oil engine reliance and lower maintenance costs
- Ideal for off-grid or weak-grid setups
- Lower energy use and costs
- Smart management


Wind&PV&DG&ESS ALL-IN-One Cabinet


C&I ESS


Small C&I ESS

Solutions Topology



Micro base site | Remote base site

CASES

01 Swiss Alps

Scenario: Multiple Farms
Deployment: Each Farm equipped with 1 Ener Hexon®Smart 103P PV&ESS All-in-One Cabinet
Significance:
Achieved year-round off-grid power stability for remote farms: PV-first power supply, intelligent diesel backup, reduced electricity costs by 60%, verified carbon mitigation, and was recognized by the government as a renewable energy benchmark, securing policy incentives.

02 The suburbs of Conakry,Guinea

Scenario: Multiple Livestock Farms
Deployment: Each Farm equipped with 1 Ener Hexon®Smart 103P PV&ESS All-in-One Cabinet
Significance:
Achieved diesel-free operation for Guinea livestock farms: saved 100 L of diesel per week and maintained 99.9% power availability for critical equipment.

03 Netherlands

Scenario: Multiple Restaurant
Deployment: Equipped with1 Ener Hexon® Smart 103P PV&ESS All-in-One Cabinet
Significance:
Achieved 90% PV self-consumption, provided seamless backup power, reduced annual electricity costs by 80%, and obtained Green Restaurant Certification.

04 Africa · Nigeria · Lithium Mine in Kogi State

Scenario: Microgrid
Deployment: Equipped with 50kWp PV, 2 Ener Hexon® Smart 103P and 4 Ener Hexon® Smart 60P PV&ESS All-in-One Cabinets
Significance:
Slashed electricity costs, elevated user experience, enabled dynamic scalability, and enhanced overall site energy resilience.

05 North Part of Xinjiang

Scenario: Power supply for oilfield pumping units
Deployment: Equipped with 1 Ener Hexon®Smart 150P Wind&PV&DG&ESS All-in-One Cabinet
Significance:
Delivered intelligent power supply, reduced diesel consumption by 85%, maintained power availability at 99.5%, and cut annual O&M costs by 30%.

06 Zambia

Scenario: Factory Power Supply
Deployment: Equipped with 1 Ener Hexon®Solution 400K Microgrid Smart Controller Cabinet and 3 Ener Hexon®Smart 215
Significance:
Deployed AI-optimized dispatch, kept diesel consumption below 10%, and achieved a 2.5-year payback period.

07 Kenya

Scenario: Factory Power Supply
Deployment: Equipped with 2 Ener Hexon® Smart 103P PV&ESS All-in-One Cabinet
Significance:
Reduced annual diesel runtime to under 5% (from a 100% baseline), achieved over 95% solar-powered operation, and delivered 24/7 stable power supply.

08 Brunei

Scenario: Allocating Energy Storage Project
Deployment: Aurora 2981*8 units
Significance:
Balanced PV output fluctuations with high-speed power response, reducing electricity costs. The energy storage system adopted a low-voltage centralized frame, resolving heat dissipation issues caused by high-rate, large-current operation, and enabled the system to reach a 1P charge and discharge rate.

09 Africa Eswatini Factory

Scenario: Microgrid
Deployment: 500kW/645kWh containerized ESS +750kW/860kWh containerized ESS
Significance:
Deployed a combined 500kW/645kWh and 750kW/860kWh containerized ESS, effectively balancing PV, storage, and diesel generator output, improving power quality and strengthening energy resilience across the factory.

10 Poland

Scenario: Factory
Deployment: 6 sets of 375kW/860kWh containerized ESS*6
Significance:
Created a model for green industrial upgrading in Central Europe and drove zero-carbon transformation across the factory.

11 Hong Kong

Scenario: Bus Charging Station
Deployment: 1set of 360kW split DC charging pile(1*liquid-cooled dual-gun supercharging terminal+2*air-cooled dual-gun fast charging terminal)
Significance:
Introduced 600A liquid-cooled ultra-fast charging to Hong Kong, ushering in a new era of "one kilometer per second" ultra-fast charging.

12 Hong Kong

Scenario: Charging Station
Deployment: 4*120kW all-in-one DC dual-gun charging
Significance:
Created a benchmark demonstration area for the public fast-charging network and accelerated Hong Kong's smart green transformation.

13 Zurich.Switzerland

Scenario: Charging Station
Deployment: 1x60kW integrated DC dual-gun charging pile
Significance:
Empowered the green revolution in Swiss industrial parks with China's smart charging solution.