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## ESS INVERTER AND MICROGRID HYBRID INVERTER SOLUTIONS

Shenzhen Yunt Digital Power Co., Ltd.



# About us

## Shenzhen Yunt Digital Power Co., Ltd.

Shenzhen Yunt Digital Power Co., Ltd. focuses on microgrid hybrid inverters, C&I energy storage converter, and microgrid solution. Concentrated on inverter technology, YUNT is committed to delivering efficient, safe, and modular products and MW level solutions for the C&I energy storage market.



1.5 GW/year  
production capacity



27,600 m<sup>2</sup> industrial park



PCS Cumulative  
Shipments 25000+

50<sup>+</sup>

Worldwide shipments to  
over countries and territories



Proportion of  
R&D personnel

16<sup>+</sup>

16 years  
power electronics experience

# Milestone



**2022**  
Company Establishment  
Shenzhen, China

**2023**  
C&I Energy Storage Inverter  
The Mars-125KT was launched to the market

**2024**  
Product Certification  
The inverter obtained TUV + SGS system certifications

**2025**  
Market Recognition  
Top 5 module PCS Supplier in China

# Index

## Module Product



Air-cooling PCS Module  
100kW/110kW/125kW



Liquid-cooling PCS Module  
100kW/110kW/125kW

MPPT module  
40kW/50kW/60kW



DCDC module  
40kW/50kW/60kW

STS module  
750kW/1000kW



STS module  
250kW



PCS Inverter without transformer  
Neptune-P250/P375/P500



PCS Inverter with transformer  
Neptune-P125T/P250T/P375T/P500T



MPPT Cabinet  
Neptune-M120/M180/M240/M300/M360

## Monitoring

EMS Controller



EMMS CLOUD

STS/ATS Cabinet  
Neptune-D375/D500/D750/D1000



Microgrid Hybrid Inverter  
Neptune-H125T



# C&I Energy Storage Modular Product



## 25,000+

YUNT delivers comprehensive energy storage solutions featuring high-efficiency PCS converters, DC/DC MPPT modules, and seamless STS transfer switches - all internationally certified for commercial/industrial energy storage, PV-storage-charging systems, and mission-critical power applications.



## 50+

 Countries and Regions

Our solutions have been successfully implemented in over 50 countries and regions worldwide



## 30+

 Grid Connection Certification by Country






IEC 62109 Austria ; OVE-Richtlinie R25+TORIEC 62477;  
Spain UNE 217001 & NTS 631 V2.1;  
Spain UNE 217002 & RD 217002 IEC 61000;  
Germany VDE-AR-N 4105; UK G9911-10;  
Germany VDE-AR-N 4110CE-LVD&EMC;  
Germany VDE-AR-N 4120  
etc.

# Mars Series (Air-cooling) PCS Module

Mars-100KT/110KT/125KT



## Features

-  Three-level topology with up to 98.9% conversion efficiency
-  Supports stable operation under weak grid conditions
-  Advanced grid-forming interconnection technology
-  Supports AC coupling of up to 32 units
-  Supports VSG function



	Mars-100KT	Mars-110KT	Mars-125KT
<b>DC side</b>			
Maximum DC voltage	1000V	1000V	1000V
Minimum DC voltage	580V	580V	580V
DC voltage operating range	580~1000V(Min 680V for off-grid)	580~1000V(Min 680V for off-grid)	580~1000V(Min 680V for off-grid)
Maximum current on DC side	173A	190A	216A
<b>AC side(on-grid)</b>			
Rated charge/discharge power	100kW	110kW	125kW
Maximum charge/discharge power	120kW	132kW	150kW
Rated charge/discharge current	145A	160A	182A
Maximum charge/discharge current	174A	192A	217A
Rated grid voltage	400V	400V	400V
Grid voltage range	300~460V	300~460V	300~460V
Rated grid frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
THDi	<3%(at rated power)	<3%(at rated power)	<3%(at rated power)
Power factor	>0.99	>0.99	>0.99
Power factor range	-1~1	-1~1	-1~1
Over load capacity	1.2Pn for 1minute	1.2Pn for 1minute	1.2Pn for 1minute
<b>AC side(off-grid)</b>			
Rated output voltage	400V	400V	400V
Voltage deviation	±2%	±2%	±2%
THDu	<3%(linear load)	<3%(linear load)	<3%(linear load)
<b>Efficiency</b>			
Maximum efficiency	98.9%	98.9%	98.9%
<b>Protection</b>			
DC reverse connection protection	Yes	Yes	Yes
AC short circuit protection	Yes	Yes	Yes
AC output over current protection	Yes	Yes	Yes
Surge protection	Type II	Type II	Type II
Insulation impedance monitoring	Yes	Yes	Yes
Temperature protection	Yes	Yes	Yes
<b>Basic parameters</b>			
Dimensions (H*W*D)	220mmx444mmx720mm	220mmx444mmx720mm	220mmx444mmx720mm
Weight	58kg	58kg	58kg
Topology	Transformerless	Transformerless	Transformerless
Ambient	-40~+60°C	-40~+60°C	-40~+60°C
IP rating	IP20	IP20	IP20
Cooling mode	Intelligent air cooling	Intelligent air cooling	Intelligent air cooling
Maximum working altitude	4,000m(>3,000m,derated)	4,000m(>3,000m,derated)	4,000m(>3,000m,derated)
<b>Characteristic</b>			
DC port	OT terminal	OT terminal	OT terminal
AC port	OT terminal	OT terminal	OT terminal
Display	LED	LED	LED
Communication mode	Ethernet RS485 CAN	Ethernet RS485 CAN	Ethernet RS485 CAN
<b>Certificate</b>			
EN/IEC 62477-1, EN/IEC 61000-6-2, EN/IEC 61000-6-4, EN 50549-1, EN 50549-10, G99/1-10/03.24, VDE-AR-N 4105, VDE-AR-N 4110, VDE-AR-N 4120, NRS 097-21-1, NTS631, UNE 217001, UNE 217002			

# Mars Series (Liquid-cooling) PCS Module

Mars-100KT/110KT/125KT-LP



## Features

- Adapt to various harsh environments
- Supports VSG function
- Noise < 60 dB
- IP 66





	Mars-100KT-LP	Mars-110KT-LP	Mars-125KT-LP
<b>DC side</b>			
Maximum DC voltage	1000V	1000V	1000V
Minimum DC voltage	580V	580V	580V
DC voltage operating range	580~1000V(Min 680V for off-grid)	580~1000V(Min 680V for off-grid)	580~1000V(Min 680V for off-grid)
Maximum current on DC side	173A	190A	216A
<b>AC side(on-grid)</b>			
Rated charge/discharge power	100kW	110kW	125kW
Maximum charge/discharge power	120kW	132kW	150kW
Rated charge/discharge current	145A	160A	182A
Maximum charge/discharge current	174A	192A	217A
Rated grid voltage	400V	400V	400V
Grid voltage range	300~460V	300~460V	300~460V
Rated grid frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
THDi	<3%(at rated power)	<3%(at rated power)	<3%(at rated power)
Power factor	>0.99	>0.99	>0.99
Power factor range	-1~1	-1~1	-1~1
Over load capacity	1.2Pn for 1minute	1.2Pn for 1minute	1.2Pn for 1minute
<b>AC side(off-grid)</b>			
Rated output voltage	400V	400V	400V
Voltage deviation	±2%	±2%	±2%
THDu	<3%(linear load)	<3%(linear load)	<3%(linear load)
<b>Efficiency</b>			
Maximum efficiency	98.9%	98.9%	98.9%
<b>Protection</b>			
DC reverse connection protection	Yes	Yes	Yes
AC short circuit protection	Yes	Yes	Yes
AC output over current protection	Yes	Yes	Yes
Surge protection	Type II	Type II	Type II
Insulation impedance monitoring	Yes	Yes	Yes
Temperature protection	Yes	Yes	Yes
<b>Basic parameters</b>			
Dimensions (H*W*D)	245mmx505mmx850mm	245mmx505mmx850mm	245mmx505mmx850mm
Weight	78kg	78kg	78kg
Topology	Transformerless	Transformerless	Transformerless
Ambient	-40~+60°C	-40~+60°C	-40~+60°C
IP rating	IP66	IP66	IP66
Cooling mode	Liquid Cooling	Liquid Cooling	Liquid Cooling
Maximum working altitude	4,000m(>3,000m,derated)	4,000m(>3,000m,derated)	4,000m(>3,000m,derated)
<b>Characteristic</b>			
DC port	Plug-in Terminal	Plug-in Terminal	Plug-in Terminal
AC port	Plug-in Terminal	Plug-in Terminal	Plug-in Terminal
Display	LED	LED	LED
Communication mode	Ethernet RS485 CAN	Ethernet RS485 CAN	Ethernet RS485 CAN
<b>Certificate</b>			
EN/IEC 62477-1, EN/IEC 61000-6-2, EN/IEC 61000-6-4, EN 50549-1, EN 50549-10, G99/1-10/03.24, VDE-AR-N 4105, VDE-AR-N 4110, VDE-AR-N 4120, NRS 097-21-1, NTS631, UNE 217001, UNE 217002			

# Mercury Series MPPT Module

Mercury-40K-PV / Mercury-50K-PV / Mercury-60K-PV



## Features

-  Four-channel independent input, boosting photovoltaic utilization
-  Reducing the number of combiner boxes and lowering costs
-  Designed with a standard 3U module for ease of maintenance and scalability
-  SiC-MOS for higher efficiency — up to 99% peak conversion rate





	Mercury-40K-PV	Mercury-50K-PV	Mercury-60K-PV
<b>PV Side</b>			
Rated power	4-way *10kW	4-way *12.5kW	4-way *15kW
Rated current	4-way *30A	4-way *37.5A	4-way *45A
Rated voltage	350V	350V	350V
Maximum voltage	1,000 V	1,000 V	1,000 V
Voltage range	150-1000 V	150-1000 V	150-1000 V
Minimum voltage at full power	340V	340V	340V
PV side start-up voltage	150V	150V	150V
<b>Bat Side</b>			
Rated power	40kW	50kW	60kW
Rated current	67A	83A	100A
Rated voltage	600V	600V	600V
Maximum voltage	1,000 V	1,000 V	1,000 V
Voltage range	350-1000 V	350-1000 V	350-1000 V
Full power voltage range	600-950 V	600-950 V	600-950 V
Bat side start-up voltage	350V	350V	350V
<b>Protection Features</b>			
Reverse connection detection		Yes	
Fuse protection		Yes	
Overcurrent protection		Yes	
Overvoltage/undervoltage protection		Yes	
Overheat protection		Yes	
Low-voltage side short circuit detection		Yes	
Insulation resistance testing		Yes	
Over-voltage level		Type II	
Surge protection level		Type II	
Basic operating modes		MPPT, power limit operation	
Circuit operation mode		4-way independent MPPT, any 2-way parallel MPPT	
<b>System Parameters</b>			
Topology structure		Non-isolated	
Protection level		IP20	
Operating temperature		-30°C to +60°C (> 45°C derated)	
Humidity		< 95% (non-condensing)	
Maximum operating altitude		4,000m (derating when > 3,000m)	
Maximum efficiency		99%	
Cooling method		Intelligent air cooling	
Communication mode		RS485/CAN/Ethernet	
Display		LED	
<b>Mechanical Parameters</b>			
Weight		25kg	
Dimensions (W*H*D)		444mm*130mm*550mm (excluding terminals)	
Installation method		Cabinet-style fixed installation (left and right mounting ears)	
<b>Standards</b>			
IEC62109-1, IEC 61000-6-2, IEC 61000-6-4			

# Mercury Series DCDC Module

Mercury-40K / Mercury-50K / Mercury-60K



## Features

-  Interleaved parallel design reduces ripple current, prolonging battery life
-  Supports multi-scenario battery charging and discharging applications
-  Designed with a standard 3U module for ease of maintenance and scalability
-  SiC-MOS for higher efficiency — up to 99% peak conversion rate





	Mercury-40K	Mercury-50K	Mercury-60K
<b>Low-Voltage DC Side</b>			
Rated power	40kW	50kW	60kW
Rated current	120A	150A	180A
Rated voltage	350V	350V	350V
Maximum voltage	1,000 V	1,000 V	1,000 V
Voltage range	200-880 V	200-880 V	200-880 V
Minimum voltage at full power	340V	340V	340V
Voltage requirements for low-voltage	200V ≤ LV ≤ (HV - 50V), maximum 880V		
Low-voltage side start-up voltage	150V	150V	150V
<b>High-Voltage DC Side</b>			
Rated power	40kW	50kW	60kW
Rated current	67A	83A	100A
Rated voltage	600V	600V	600V
Maximum voltage	1,000 V	1,000 V	1,000 V
Voltage range	350-920 V	350-920 V	350-920 V
Full power voltage range	600-920 V	600-920 V	600-920 V
Voltage requirements for high-voltage	(LV+30V) ≤ HV ≤ 1000V, minimum 350V		
High-voltage side start-up voltage	350V	350V	350V
<b>Protection Features</b>			
Reverse connection protection	Yes		
Fuse protection	Yes		
Overcurrent protection	Yes		
Overvoltage/undervoltage protection	Yes		
Overheat protection	Yes		
Low-voltage side short-circuit protection	Yes		
Over-voltage level	Type II		
Basic operating modes	Bi-directional constant power, bi-directional constant current, bi-directional constant voltage		
Forward and reverse switching time	Full-load switching time 50ms		
<b>System Parameters</b>			
Topology structure	Non-isolated		
Protection level	IP20		
Operating temperature	-40°C to +60°C (>45°C derated)		
Humidity	<95% (non-condensing)		
Maximum operating altitude	4,000m (derating when > 3,000m)		
Maximum efficiency	>99		
Cooling method	Intelligent air cooling		
Communication mode	RS485/CAN/Ethernet		
Display	LED		
Maximum parallel operation number	8		
<b>Mechanical Parameters</b>			
Weight	25kg		
Dimensions (W*H*D)	444mm*130mm*550mm (excluding terminals)		
Installation method	Cabinet-style fixed installation (left and right mounting ears)		
<b>Standards</b>			
IEC62477-1, IEC 61000-6-2, IEC 61000-6-4			

# Static Transfer Switch

STS-200KS/250KS/750KS/1000KS



## Features

-  Support TN/TT/IT grid system
-  Standard modular design
-  Switching time<10ms
-  Intelligent switch

STS-250

STS-750

STS-1000

Electrical specifications	STS-250	STS-750	STS-1000
Power on the rated grid side	250kW	750kW	1000kW
Current on the rated grid side	380A	1082A	1443A
Power on the PCS&Load	250kW	750kW	1000kW
Rated grid voltage	380V/400V	400V	400V
Grid voltage range	±15%		
Rated grid frequency	50Hz/60Hz		
Grid frequency range	±5Hz		
Over load capability	110%(ambient temperature less than 40°C)		
On-grid to off-grid time	≤10ms		
Wiring mode	3P3W	3P3W	3P3W
Maximum efficiency	99.5%		

System parameters			
Topology	Non-isolated		
IP rating	IP20		
Operating temperature range	-40°C to +60°C(>45°C derated)		
Storage temperature range	-40~70°C		
Relative humidity	0~95%,no condensation		
Maximum operating altitude	4,000m(>3,000m derated)		
Cooling mode	Intelligent air cooling		
Display	LED		
Communication mode	RS485/CAN/EtherNet/DIO	RS485/CAN/EtherNet	RS485/CAN/EtherNet
Installation method	Rack Mount Installation for Modular Systems		
Noise	<75dB @1m	<80dB @1m	<80dB @1m
Weight	27kg	110kg	110kg
Dimensions(H*W*D)	175mm*444mm*550mm	831mm*457mm*700mm	831mm*457mm*700mm

Certificate
IEC 61439-1 IEC 61439-2

# Microgrid Hybrid Solution

- PCS Inverter
- MPPT Cabinet
- STS & ATS Cabinet
- Hybrid Inverter

## Naming Rules

Neptune

Neptune Series

-H125T

H: Hybrid cabinet    P: PCS cabinet    M: MPPT cabinet    D: STS&ATS cabinet

125: System power

T: Isolation transformer

-SA2

S: Optional STS

A: Optional ATS

1: STS/ATS power equals 1× PCS power

2: STS/ATS power equals 2× PCS power

-2

-M Model: Default is empty, indicating module output ports are not paralleled. Numbers 1-4 indicate 1-4 independent DC outputs after paralleling.

-P Model: Default is empty, indicating battery input ports are not paralleled. 1-2 indicate 1-2 battery cluster inputs after paralleling.

-H Model: Default is empty, indicating fully equipped with 3 MPPT modules. Numbers 1-2 indicate optional 1-2 MPPT modules.

# PCS Inverter without transformer

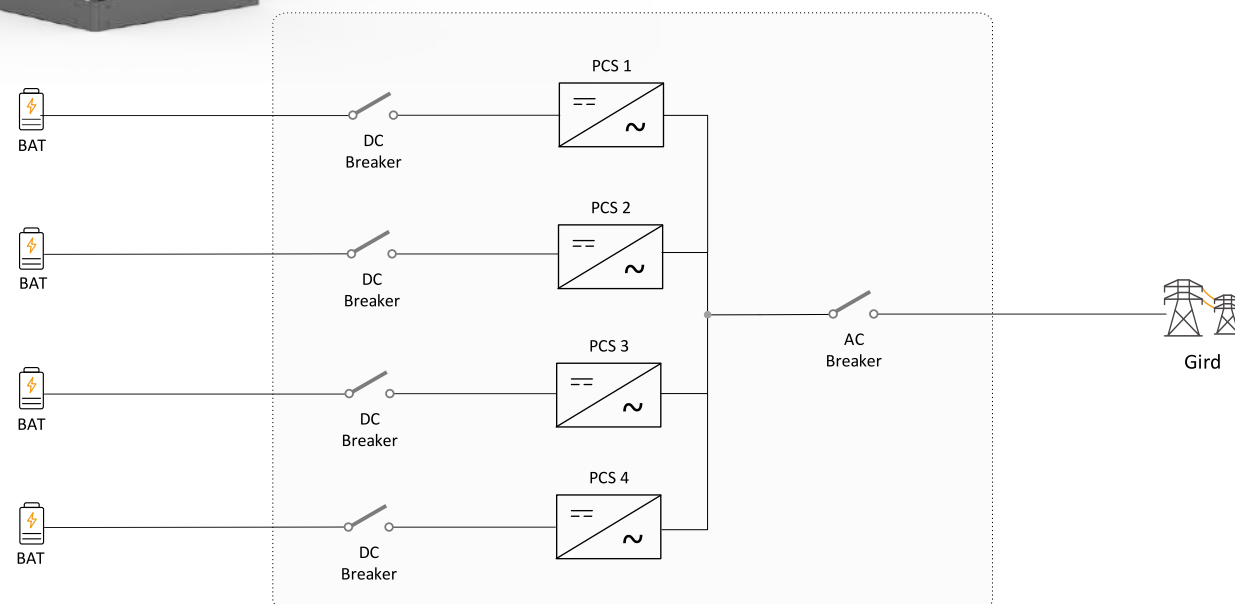
Neptune-P250/P375/P500

Bidirectional PCS cabinet without transformer from 250kW to 500kW, can be used alone as inverter /rectifier or with solar MPPT cabinet and STS/ATS cabinet for engineering customized photovoltaic and energy storage systems.



## Features

- Supports DC-coupled with PV and battery DC coupling
- Supports battery cluster access to extend battery cycle life
- Modular design for easy maintenance
- IP54 design



### Neptune-P250

### Neptune-P375

### Neptune-P500

DC(BAT input)	Neptune-P250	Neptune-P375	Neptune-P500
DC voltage range	600-1000V(Min.680V for off-grid)	600-1000V(Min.680V for off-grid)	600-1000V(Min.680V for off-grid)
Max. Num. of battery input	2	3	4
Max. charge/discharge current	216A*2	216A*3	216A*4
Max. charge/discharge power	125kW*2	125kW*3	125kW*4

AC side(on-grid)	Neptune-P250	Neptune-P375	Neptune-P500
Rated output apparent power	250kVA	375kVA	500kVA
Rated output current	364A	546A	728A
Max. input apparent power	250kVA	375kVA	500kVA
Max. AC input current	364A	546A	728A
Rated voltage	400V	400V	400V
AC voltage range	360-440V	360-440V	360-440V
Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Frequency range	45-55Hz/55-65Hz	45-55Hz/55-65Hz	45-55Hz/55-65Hz
PF	>0.99 -0.8~0.8	>0.99 -0.8~0.8	>0.99 -0.8~0.8
THDi	<3%(@rated power)	<3%(@rated power)	<3%(@rated power)
AC connection	3W+N+PE	3W+N+PE	3W+N+PE

AC side(off-grid)	Neptune-P250	Neptune-P375	Neptune-P500
Rated output power	250kW(@resistive load)	375kW(@resistive load)	500kW(@resistive load)
Rated output voltage	400V	400V	400V
Rated output current	364A	546A	728A
Rated frequency	50/60Hz	50/60Hz	50/60Hz
THDu	<3%(@linear load)	<3%(@linear load)	<3%(@linear load)
Overload capability	120%-1min	120%-1min	120%-1min

System data	Neptune-P250	Neptune-P375	Neptune-P500
Build-in transformer	No		
IP level	IP54		
Cooling method	Intelligent air cooling		
Operating temperature range	-40~60°C	45~60°C derating, derating factor 5%/°C	
Storage temperature range	-40~70°C no condensation		
Relative humidity	0~95% no condensation		
Noise	<75dB @1m		
Maximum operating altitude	4000m	derating above 3000m,derating factor 1%/100m	
AC lightning protection	Type II		
BMS communication	RS485/CAN		
Meter communication	RS485		
Remote communication	WLAN/4G/Ethernet		
Display	LED+LCD+APP		
Dimensions(W*D*H)	1000*1100*2100mm	1000*1100*2100mm	1000*1100*2100mm
Weight	890kg	945kg	1000kg

### Certificate

IEC 62477-1 IEC 61000-6-2 IEC 61000-6-4 NRS 097-2-1

# PCS Inverter with transformer

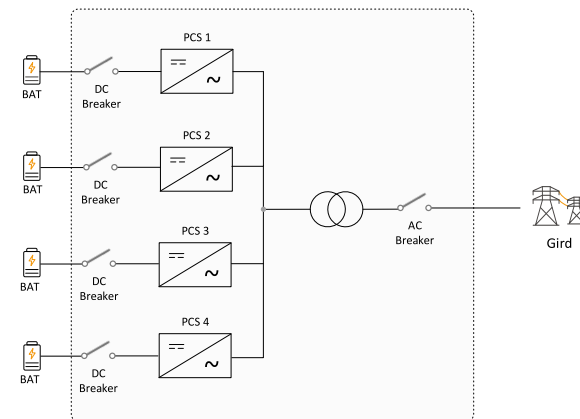
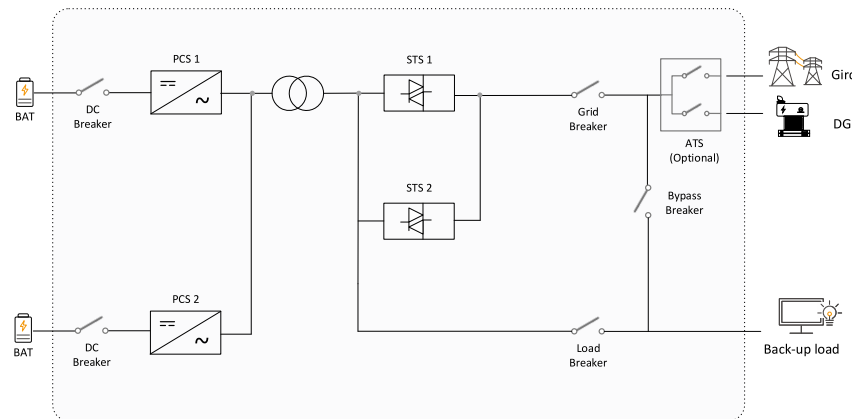
Neptune-P125T/P250T/P375T/P500T

PCS cabinet from 125kW to 500kW, can be used alone or with solar MPPT cabinet and STS/ATS cabinet for customized photovoltaic and energy storage systems.



## Features

- Supports PV-storage DC coupling
- Supports battery cluster access to extend battery cycle life
- Built-in isolation Transformer
- Modular design for easy maintenance
- IP54 design



Neptune-P125T-S2 Neptune-P250T-S1/ Neptune-P250T-S2 Neptune-P375T Neptune-P500T

	Neptune-P125T-S2	Neptune-P250T-S1/ Neptune-P250T-S2	Neptune-P375T	Neptune-P500T
<b>DC(BAT input)</b>				
DC voltage range	600-1000V(Min.680V for off-grid)			
Max. Num. of battery input	1	2	3	4
Max. charge/discharge current	216A	216A*2	216A*3	216A*4
Max. charge/discharge power	125kW	125kW*2	125kW*3	125kW*4
<b>AC(on-grid)</b>				
Rated output apparent power	125kVA	250kVA	375kVA	500kVA
Rated output current	182A	364A	546A	728A
Max. input apparent power	250kVA	250kVA/500kVA	375kVA	500kVA
Max. AC input current	364A	364A/728A	546A	728A
Rated voltage	400V	400V	400V	400V
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz
PF	>0.99 -0.8~0.8	>0.99 -0.8~0.8	>0.99 -0.8~0.8	>0.99 -0.8~0.8
THDi	<3%(@rated power)	<3%(@rated power)	<3%(@rated power)	<3%(@rated power)
AC connection	3W+N+PE	3W+N+PE	3W+N+PE	3W+N+PE
<b>AC(off-grid)</b>				
Rated output power	125kW(@resistive load)	250kW(@resistive load)	375kW(@resistive load)	500kW(@resistive load)
Rated output voltage	400V	400V	400V	400V
Rated output current	182A	364A	546A	728A
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz
THDu	<3%(@linear load)	<3%(@linear load)	<3%(@linear load)	<3%(@linear load)
Overload capability	120%-1min	120%-1min	120%-1min	120%-1min
<b>System data</b>				
Build-in transformer	Yes	Yes	Yes	Yes
Build-in STS	Yes	Yes	No	No
Transfer between on/off grid with STS	<10ms	<10ms	/	/
IP level	IP54			
Cooling method	Intelligent air cooling			
Operating temperature range	-40~60°C 45~60°C derating, derating factor 5%/°C			
Relative humidity	0~95% no condensation			
Noise	<75dB @1m			
Maximum operating altitude	4000m derating above 3000m,derating factor 1%/100m			
AC lightning protection	Type II			
Communication	RS485/CAN for BMS, RS485 for meter			
Remote communication	WLAN/4G/Ethernet			
Display	LED+LCD+APP			
Dimensions(W*D*H)	1200*1100*2100mm	1300*1100*2100mm	1300*1100*2100mm	1300*1100*2100mm
Weight	1152kg	1800kg/1850kg	2450kg	2500kg
<b>Certificate</b>				
IEC 62477-1 IEC 61000-6-2 IEC 61000-6-4 NRS 097-2-1				
<b>Expand models</b>				
Expand models	Neptune-P125T-SA2	Neptune-P250T-SA1 Neptune-P250T-SA2	/	/
	Neptune-P125T-A2	Neptune-P250T-A1 Neptune-P250T-A2	/	/
	Neptune-P125T	Neptune-P250T	/	/

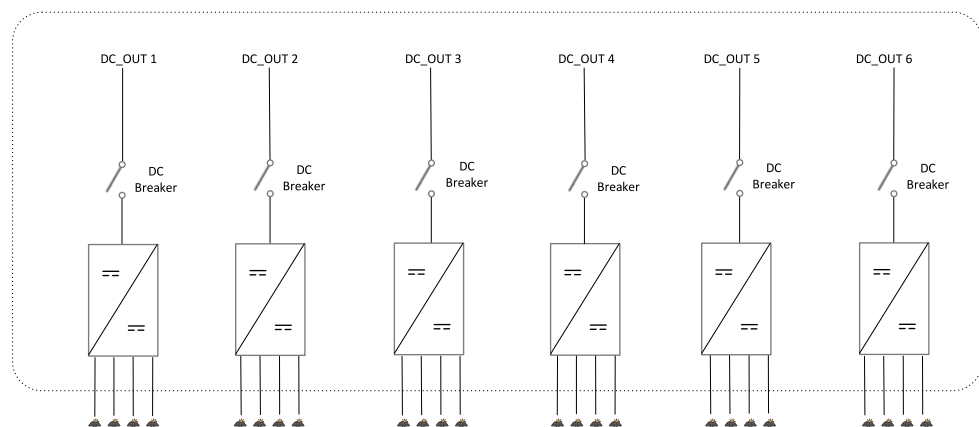
# MPPT Cabinet

Neptune-M120/M180/M240/M300/M360



## Features

- SiC-MOS in the MPPT module
- Four independent MPPTs in one module
- Compatible with 2-6 modules
- Each module has a output circuit breaker
- Modular design for easy maintenance
- IP54 design



Neptune-M120 Neptune-M180 Neptune-M240 Neptune-M300 Neptune-M360

	Neptune-M120	Neptune-M180	Neptune-M240	Neptune-M300	Neptune-M360
<b>PV Input</b>					
Input voltage range	150-1000	150-1000	150-1000	150-1000	150-1000
Full load MPPT voltage range	340-950	340-950	340-950	340-950	340-950
Max. Num.of modular	2	3	4	5	6
Max. PV Power	120kW(60kW*2)	180kW(60kW*3)	240kW(60kW*4)	300kW(60kW*5)	360kW(60kW*6)
Num. of MPPT's per modular	4	4	4	4	4
Max. Num. of strings per MPPT	1	1	1	1	1
Rated current per MPPT	45A	45A	45A	45A	45A
Rated power per MPPT	15kW	15kW	15kW	15kW	15kW
<b>DC Output</b>					
Output voltage range	350-1000V	350-1000V	350-1000V	350-1000V	350-1000V
Full load output voltage	600-950V	600-950V	600-950V	600-950V	600-950V
Max. output total current	200A(100A*2)	300A(100A*3)	400A(100A*4)	500A(100A*5)	600A(100A*6)
Num. of DC output	2	3	4	4	4
Rated output total power	120kW(60kW*2)	180kW(60kW*3)	240kW(60kW*4)	300kW(60kW*5)	360kW(60kW*6)
<b>System data</b>					
DC reverse polarity protection					Yes
DC output fuse protection					Yes
DC output breaker protection					Yes
PV input switch					Yes
Over current protection					Yes
Over/Under voltage protection					Yes
Insulation monitoring					Yes
Over-heat protection					Yes
IP level					IP54
Max. efficiency					>99.2%
Cooling method					Intelligent air cooling
Operating temperature range	-40~60°C	45~60°C derating, derating factor 5%/°C			
Storage temperature range	-40~70°C	no condensation			
Relative humidity					0~95% no condensation
Noise					<75dB @1m
Maximum operating altitude	4000m				derating above 3000m,derating factor 1%/100m
PV lightning protection					Type II
Communication					Ethernet RS485
Display					LED
Dimensions(W*D*H)					650*900*2100mm
Weight	325kg	350kg	375kg	400kg	425kg

## Certificate

IEC 62109-1 IEC 61000-6-2 IEC 61000-6-4

# STS/ATS Cabinet

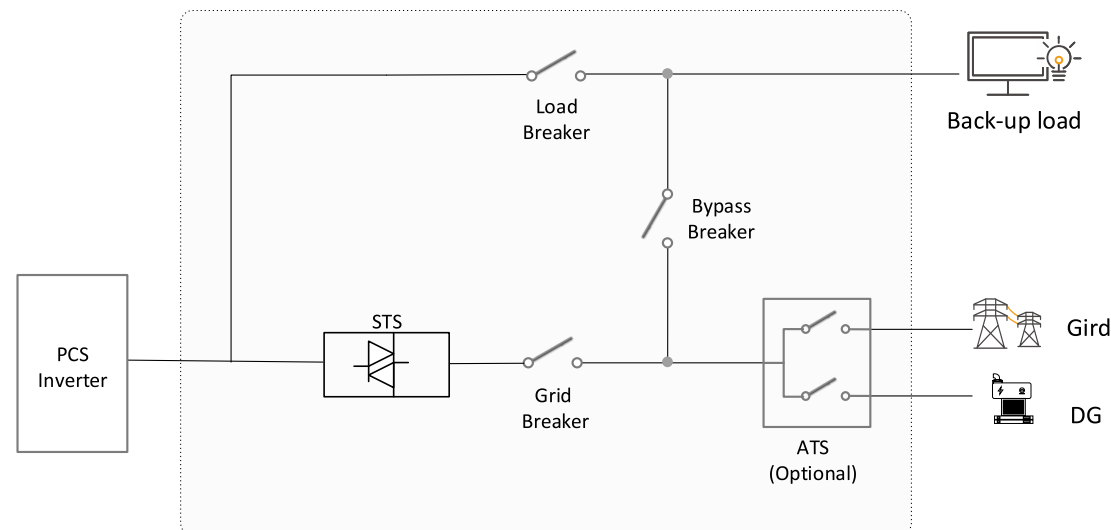
Neptune-D375/D500/D750/D1000

STS/ATS cabinet is designed to be used together with PCS cabinet to realize seamless transfer between on-grid and off-grid modes automatically, it can also achieve automatic switching between diesel



## Features

- Seamless on/off grid transfer within 10ms
- ATS adopts TÜV certified switch
- Modular design for easy maintenance
- IP54 design



Neptune-D375-S1 Neptune-D500-S1 Neptune-D750-S1 Neptune-D1000-S1

Electrical parameters	Neptune-D375-S1	Neptune-D500-S1	Neptune-D750-S1	Neptune-D1000-S1
Rated AC voltage	400V	400V	400V	400V
Rated AC current	546A	728A	1092A	1456A
Rated AC frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Rated apparent power	375kVA	500kVA	750kVA	1000kVA
Max. load output apparent power	375kVA	500kVA	750kVA	1000kVA
Max. load output current	546A	728A	1092A	1456A
Max. PCS apparent power	375kVA	500kVA	750kVA	1000kVA
Max. PCS current	546A	728A	1092A	1456A

System data				
Build-in STS	Yes			
Build-in ATS	No			
IP level	IP54			
Transfer between on/off grid with STS	<10ms			
Cooling method	Intelligent air cooling			
Operating temperature range	-40~60°C 45~60°C derating, derating factor 5%/°C			
Storage temperature range	-40~70°C no condensation			
Relative humidity	0~95% no condensation			
Noise	<75dB @1m			
Maximum operating altitude	4000m derating above 3000m,derating factor 1%/100m			
AC lightning protection	Type II			
Communication	RS485			
Dimensions(W*D*H)	950*900*2100mm	950*900*2100mm	1500*1000*2100mm	1500*1000*2100mm
Weight	600kg	600kg	850kg	850kg

Certificate
IEC 61439-1 IEC 61439-2

Expand models	Neptune-D375-SA1	Neptune-D500-SA1	Neptune-D750-SA1	Neptune-D1000-SA1
Expand models	Neptune-D375-A1	Neptune-D500-A1 Neptune-D500	Neptune-D750-A1	Neptune-D1000-A1 Neptune-D1000

# Microgrid Hybrid Inverter

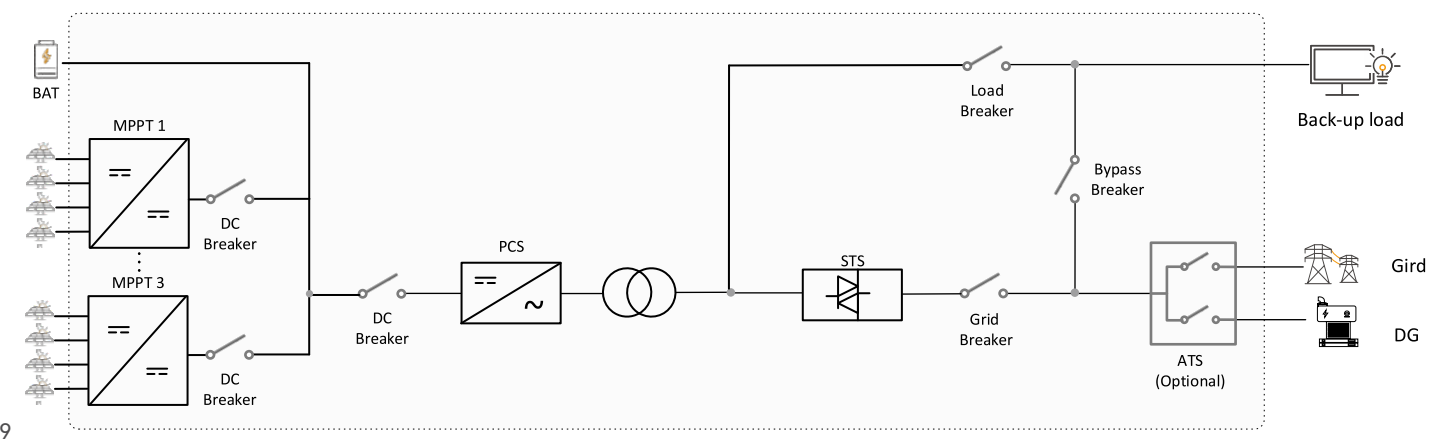
Neptune-H125T

The all-in-one Hybrid inverter is customized for small C&I microgrid hybrid scenarios, which features a built-in isolation transformer, PCS, MPPT module and STS, to realize the on/off grid application.



## Features

- Multiple power integration All-in-one
- Seamless on/off grid transfer within 10ms
- DC-coupled with PV and battery
- Built-in isolation transformer
- Modular design for easy maintenance
- IP54 design



## Neptune-H125T-S2

DC(PV Input)	
PV voltage range	150V-Vbat(min), maximum 1000V
Max. PV Power	180kW(60kW*3)
Num. of MPPT's per module	4
Rated current per MPPT	45A
Rated power per MPPT	15kW

DC(BAT Input)	
Battery voltage Range	600-1000V(Min.680V for off-grid)
Max charge/discharge current	216A
Max charge/discharge power	125kW

AC(on-grid)	
Rated output apparent power	125kVA
Rated output current	182A
Max. input apparent power	250kVA
Max. input current	364A
Rated voltage	400V
Rated frequency	50/60Hz
PF	>0.99 -0.8~0.8
THDi	<3%(@rated power)
AC connection	3W+N+PE

AC(off-grid)	
Rated output power	125kW(@resistive load)
Rated output voltage	400V
Rated output current	182A
Rated frequency	50/60Hz
THDu	<3%(@linear load)
Overload capability	120%-1min

System data	
Build-in transformer	Transformer & STS
IP level	IP54
Transfer between on/off grid with STS	<10ms
Cooling method	Intelligent air cooling
Operating temperature range	-40~60°C 45~60°C derating, derating factor 5%/°C
Relative humidity	0~95% no condensation
Maximum operating altitude	4000m derating above 3000m,derating factor 1%/100m
Lightning protection	Type II for AC&PV
Communication	RS485/CAN for BMS, RS485 for meter
Remote communication	WLAN/4G/Ethernet
Display	LED+LCD+APP
Dimensions(W*D*H)	1200*1100*2100mm
Weight	1252kg

Certificate	
IEC 62109-1	IEC 62477-1 IEC 61000-6-2 IEC 61000-6-4 NRS 097-2-1

Expand models	
Expand models	Neptune-H125T-SA2 Neptune-H125T-A2 Neptune-H125T

# Microgrid Hybrid Solution - 250kW/375kW/500kW

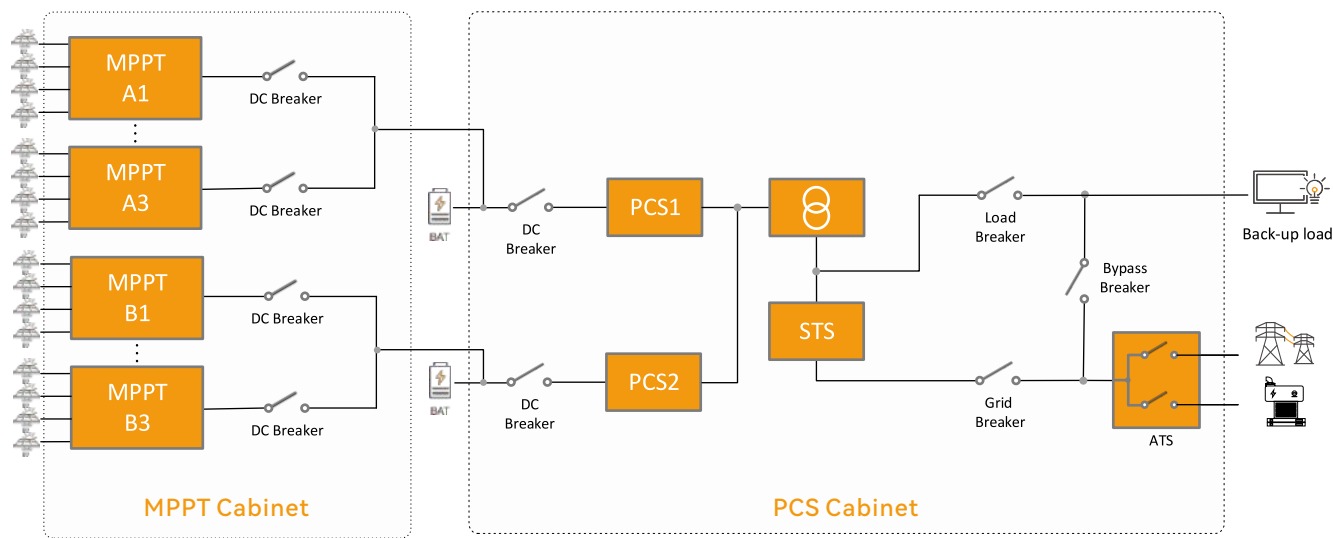
To meet various C&I application scenarios, we have designed standardized cabinets with different power levels and types, including PCS inverter, MPPT cabinet and STS/ATS cabinet. These cabinets can support to assemble the microgrid hybrid system up to 1MW.

## Hybrid Power 250kW



MPPT Cabinet

PCS Cabinet



MPPT Cabinet

PCS Cabinet

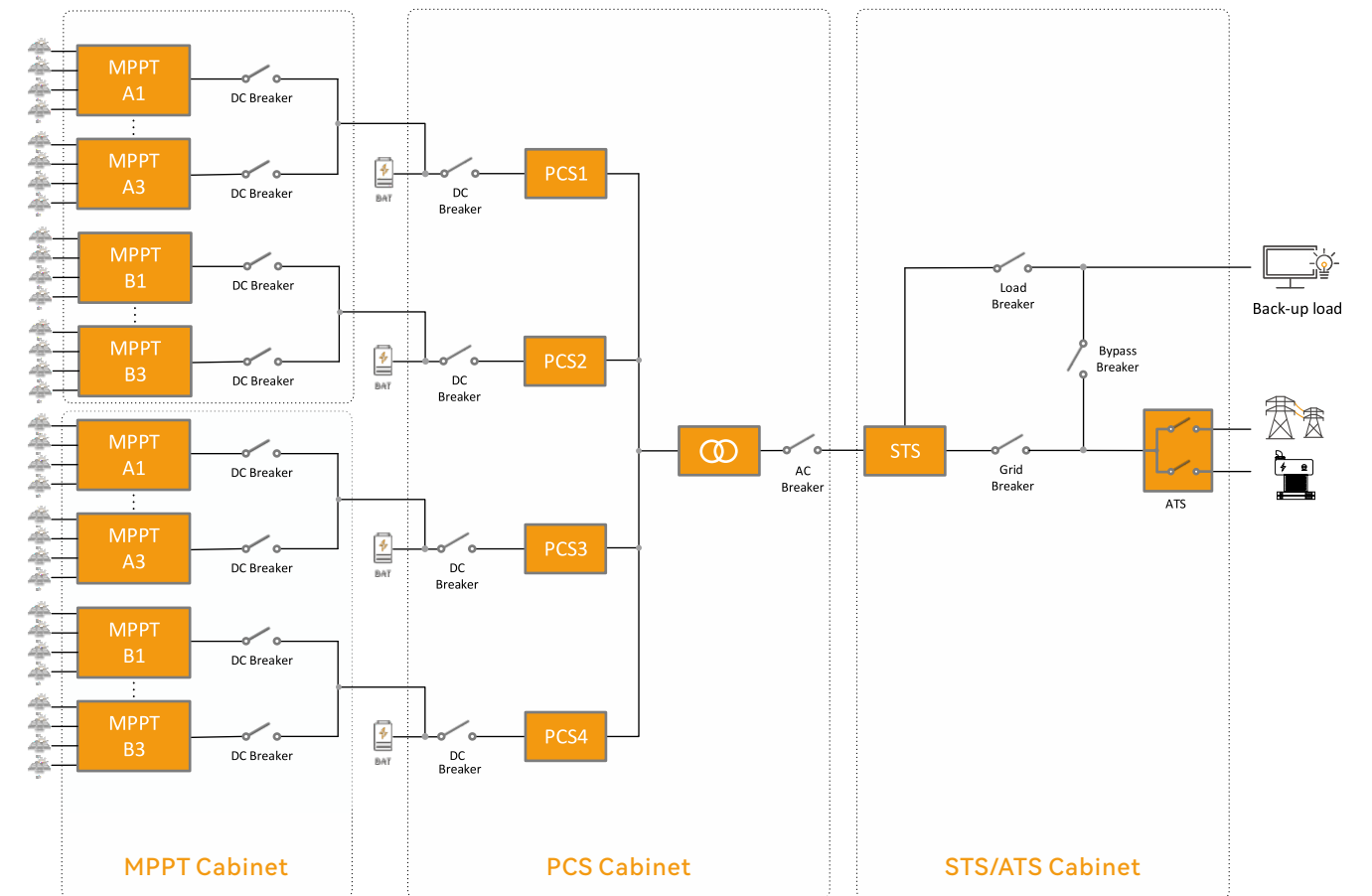
## Hybrid Power 375/500kW



MPPT Cabinet

PCS Cabinet

STS/ATS Cabinet



MPPT Cabinet

PCS Cabinet

STS/ATS Cabinet

# EMS Controller

EMS innovatively integrates distributed cluster data from regional energy storage sites and establishes corresponding databases. Through reliable real-time monitoring, it gains insights into system operation status, efficiently addresses system conditions through intelligent operation and maintenance methods.



## Features

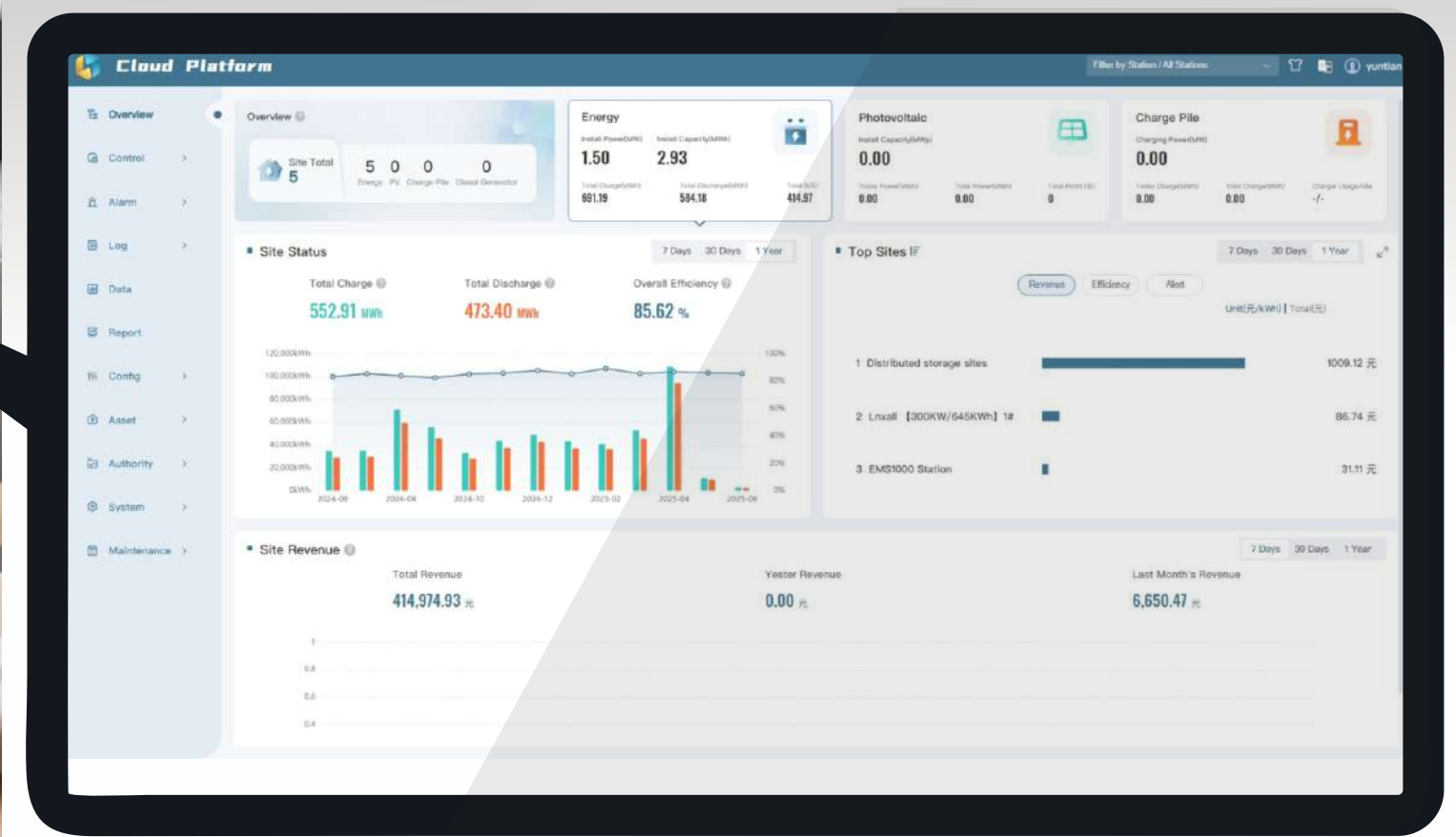
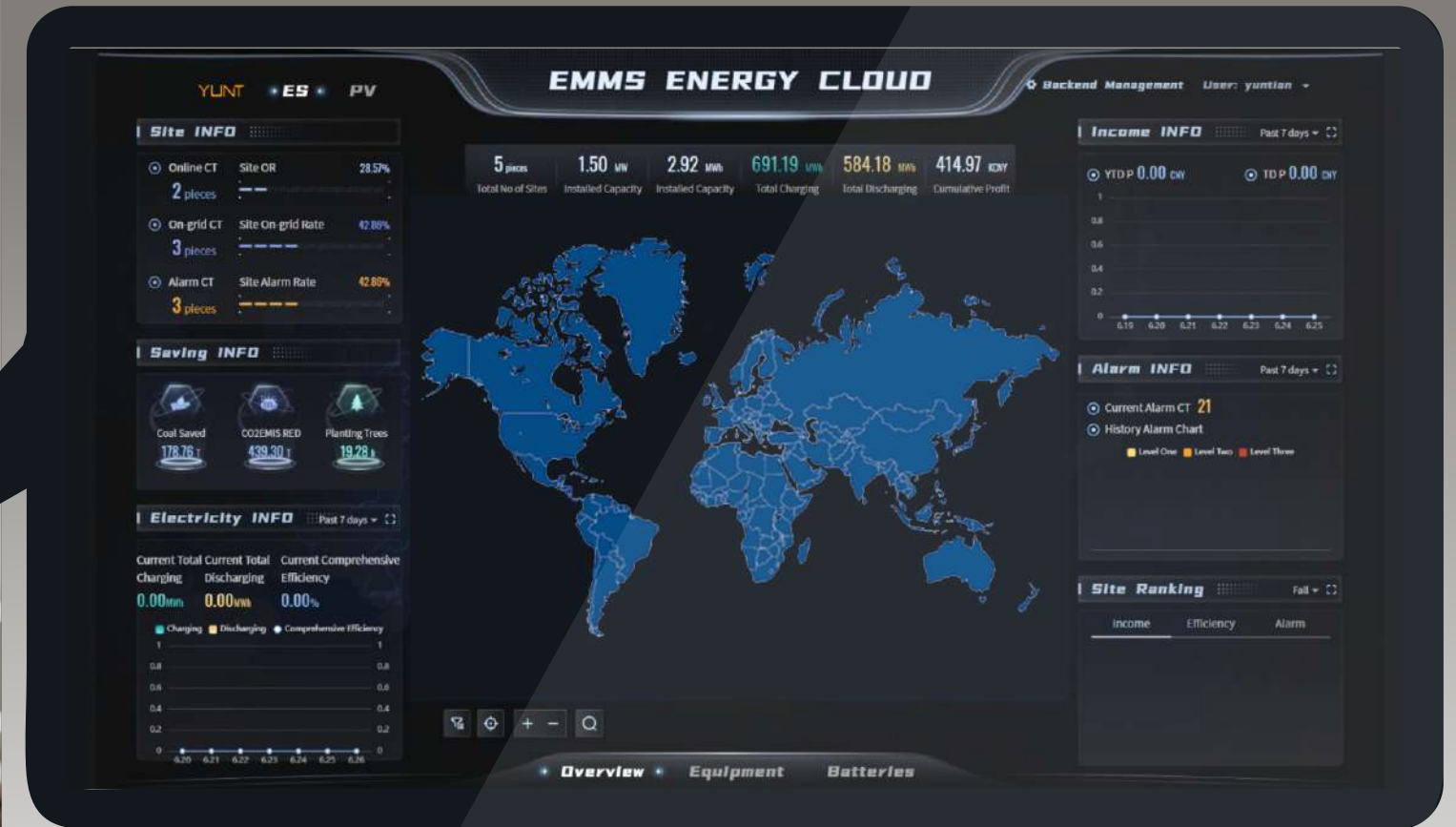
- Remote management and maintenance of equipment, reduces maintenance costs
- Big data collection and analysis to achieve automatic control and timely optimization of connected power stations
- Flexible operation of the site, improve economic benefits
- Data visualization, useful for understand the operation of equipment



### EMS Controller

Hardware Parameter	
Power adapter	Input: DC12V~48V
Power Consumption	Average 10W ,Full loaded <15W
Application Parameter	
Max communication distance with PCS	100m
Communication with inverter	MODBUS or CAN
Communication with server	TCP
Support network	4G & Ethernet & Wifi
Data transfer interval	1min
General Information	
Dimension (W*H*D)	210mm * 165mm*53mm
Weight	2kg
Language	Chinese, English
Mounting	Wall-mounted
Operation temperature	-20°C~60°C
Degree of protection	IP20
Warranty	1
Certificate	CE ROHS 2.0

# EMMS CLOUD



Compatible with the following devices



Window Mac PC IOS Mobile Android Mobile

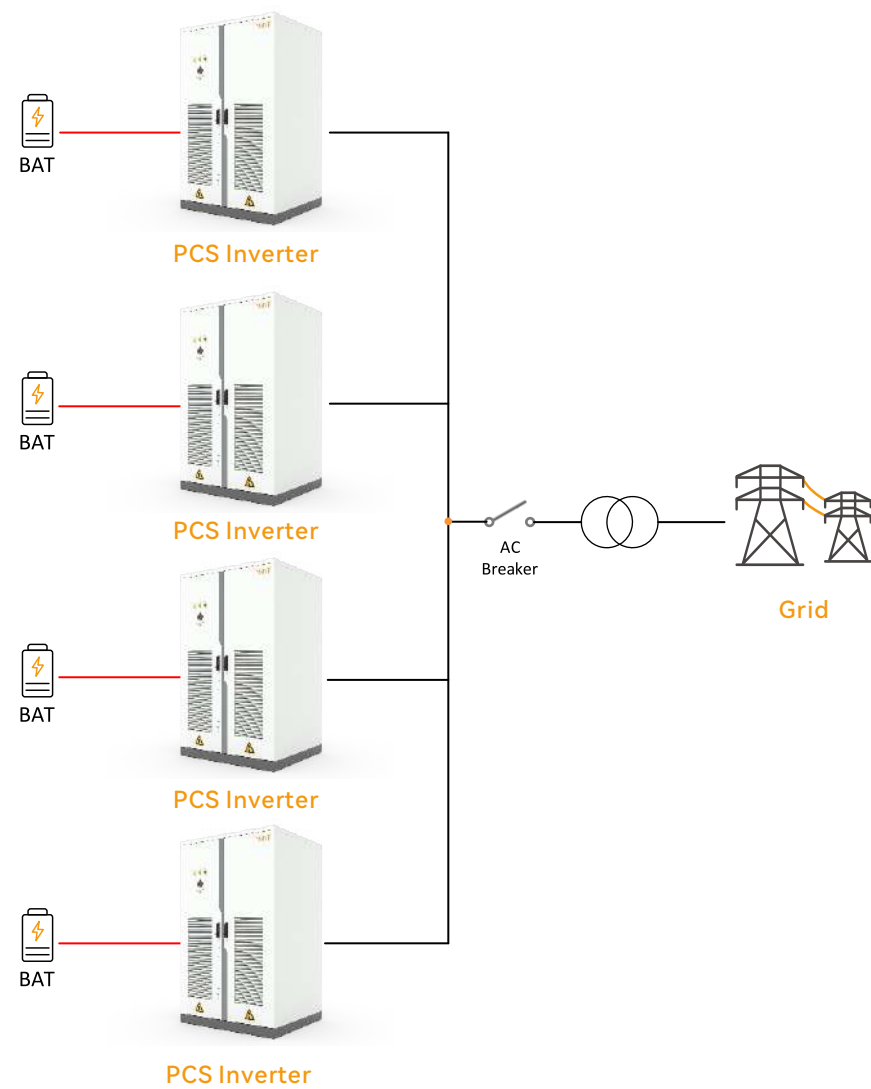
# C&I Energy Microgrid Hybrid Application

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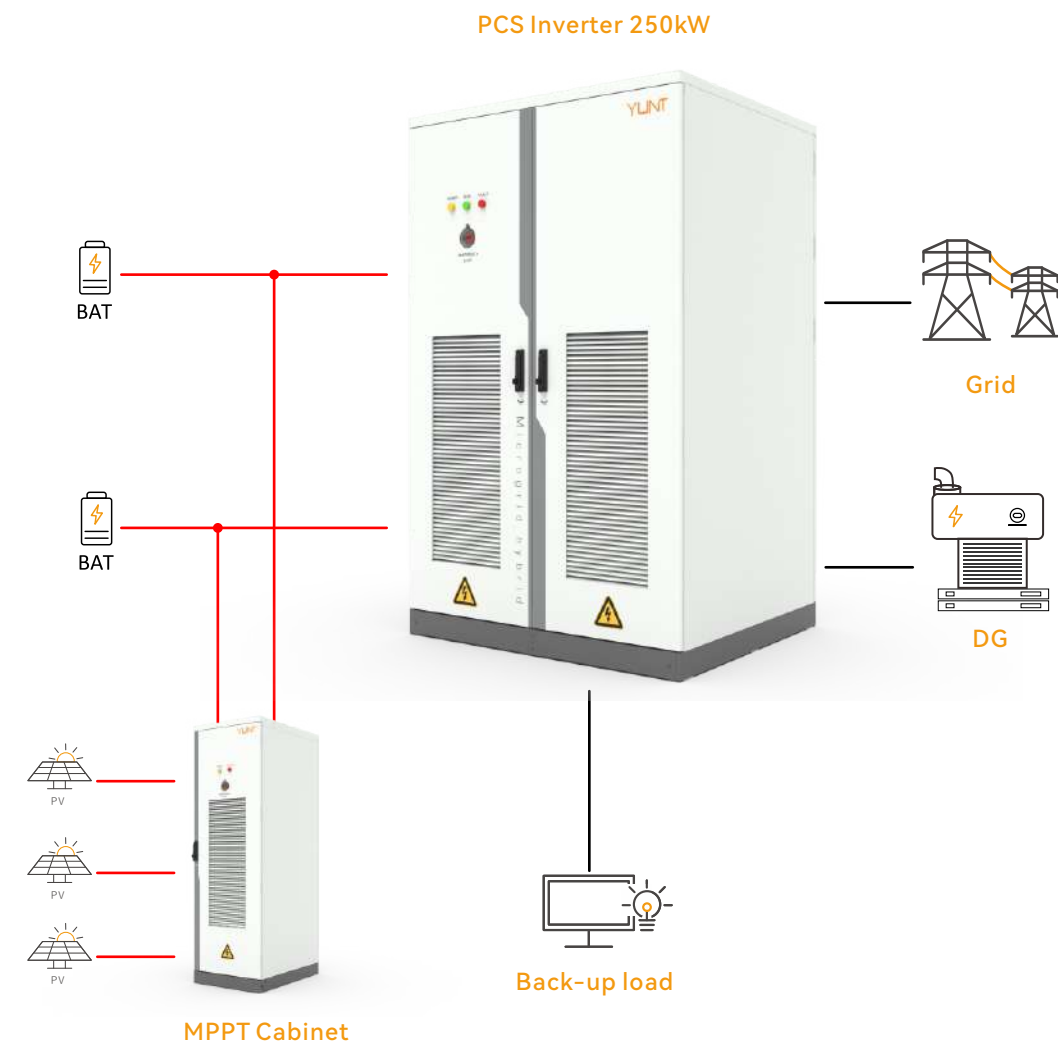




## On-grid/Grid-forming Application

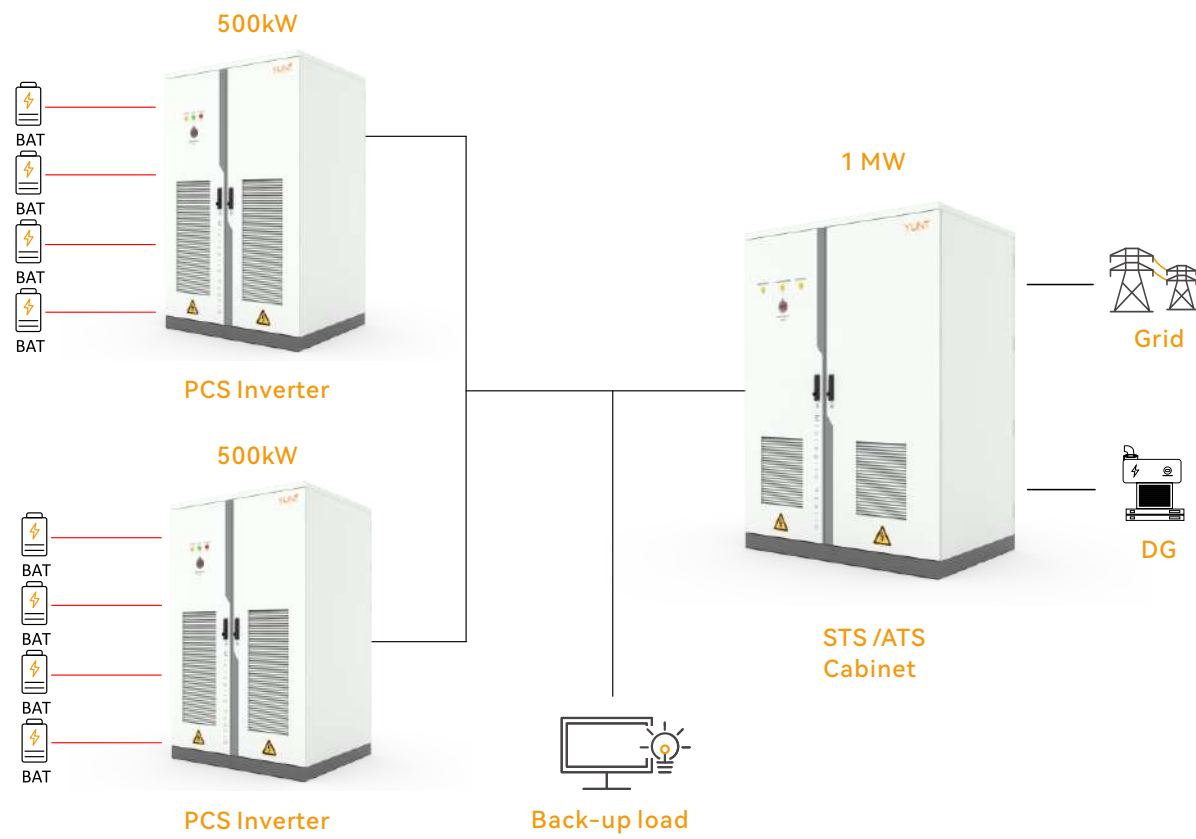


## Hybrid inverter application





## Parallel Solution



## Online UPS Solution

