Cherry on Top

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Cherry On Top@ Smart Zero-Carbon

Product Manual

ABOUT CHERRY

01. Company Profile

Cherry Solution founded in 2023 and headquartered in Hangzhou, China, We focuses on advanced power electronics, third-generation semiconductor packaging, and intelligent energy technologies. Our core products include microinverters, residential energy storage systems, intelligent storage robots, and C&I energy storage solutions – delivering end-to-end smart energy services.

With a team rooted in top-tier universities and leading energy companies, we bring deep expertise in intelligent control systems. Cherry is committed to driving energy transformation through innovation, empowering global users with smart, efficient energy solutions and promoting a zero-carbon lifestyle.

02. Cultural Concept

Vision

In the future energy field, everyone can enjoy a zero-carbon and low-carbon lifestyle and promote society towards the goal of sustainable development.

Mission

Cherry focuses on customer needs, adheres to the zero-carbon concept, injects power into the global energy transformation, and contributes to environmental protection and sustainable development.

Values

Creativity **Honesty** **Efficiency** **Reliability** **Responsibility** **Youth**



03. R&D Strength

R&D Team
60% Core R&D personnel account for all employees

Labs
3 in Hangzhou、Haining、Suzhou

R&D center
3 in Hangzhou、Haining、Suzhou

FAMILY OF PRODUCTS

Cherry products offer superior quality and performance, guaranteeing a durable and reliable experience for customers. We maintain industry-leading standards through rigorous quality testing.

Additionally, Cherry's easy installation process ensures fast and hassle-free access to advanced technology. Choose Cherry for a seamless blend of professionalismand quality.



CORE ADVANTAGES

The core idea of product safety runs through product monomer design, system integration, and application performance

Single Safety Design



System Design Ensures Safety



Multi-Level Security Design



Equipped with the world's leading battery cell

High safety positive electrode

High safety electrolyte

Prevent system spread



Module aerospace grade thermal insulation design

System precise spray design

Safe & Efficient

Efficient and safe power electronics

Advanced and reliable power devices and topologies

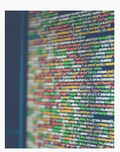
Flexible and intelligent control algorithms



Advanced design and algorithms

Higher safety and system power generation

Long-term economics



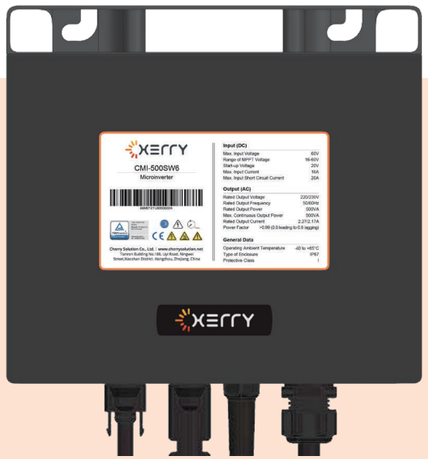
PV Inverter Series

Engineered for distributed and residential solar applications, this series delivers efficient, reliable, and intelligent energy conversion for modern power systems.

1-in-1 Microinverter

Cherry Polar-300-500SW6/SS6

PRODUCT APPEARANCE



FUNCTIONAL CHARACTERISTICS

Smart Communication

- Supports Sub-1G & Wi-Fi connectivity
- Equipped with iMesh networking technology
- Strong anti-interference, ensuring stable data transmission

Easy Installation

- Quick deployment by a single person, flexible expansion
- Enables efficient distributed system setup

Compact & Lightweight

- Ultra-compact body with curved hook structure
- Aesthetic and sturdy, adaptable to various rooftop scenarios

Comprehensive Safety Protection

- Certified by 200+ safety tests
- IP67 protection, operates at 60V low-voltage DC
- Prevents arc faults at the source

TECHNICAL SPECIFICATIONS

Product Model	Cherry Polar-300SW6/SS6	Cherry Polar-500SW6/SS6
Input (DC)		
MPPT Operating Voltage Range (V)	16~60	
Max. Input Voltage (V)	60	
Start-up Input Voltage (V)	20	
Number of MPPTs	1	
Max. Input Current (A)	16	
Max. Short-circuit DC Input Current (A)	20	
Strings per MPPT	1	
Output (AC)		
Nominal Output Power (VA)	300	500
Max. Rated Output Current (A)	1.36/1.3	2.27/2.17
Nominal Output Voltage (V)	220/230	
Adjustable Output Frequency Range (Hz)	45~55/55~65	
Power Factor (default / adjustable)	>0.99 / 0.8 leading...0.8 lagging	
THDi	<3%	
Efficiency		
Peak Efficiency	96.7	
Nominal MPPT Efficiency	99.8	
CEC Peak Efficiency	96.3	
Night-time Power Loss (mW)	<30	
Protection		
Input Reverse Connection Protection	Yes	
Output Overcurrent Protection	Yes	
Output Overvoltage Protection	Yes	
Anti-islanding Protection	Yes	
Output Short-circuit Protection	Yes	
General Data		
Dimensions (W*H*D mm)	194*164*29	
Weight (kg)	1.5	
Operating Ambient Temperature (℃)	-40~66	
Degree of Protection	IP67	
Cooling	Natural Cooling - No fans	
Communication [1]	Sub-1G/WIFI	
Type of Isolation	High frequency transformers, Galvanically isolated	
Operating Environment	Outdoor	

*1: Sub-1G: Cherry Polar-300-500SS6； Built-In Wi-Fi: Cherry Polar-300-500SW6

- Design and specifications are subject to change without notice.

2-in-1 Microinverter

Cherry Polar-600-1000SW6/SS6

PRODUCT APPEARANCE



FUNCTIONAL CHARACTERISTICS

Smart Communication

- Supports Sub-1G & Wi-Fi connectivity
- Equipped with iMesh networking technology
- Strong anti-interference, ensuring stable data transmission

Easy Installation

- Quick deployment by a single person, flexible expansion
- Enables efficient distributed system setup

Compact & Lightweight

- Ultra-compact body with curved hook structure
- Aesthetic and sturdy, adaptable to various rooftop scenarios

Comprehensive Safety Protection

- Certified by 200+ safety tests
- IP67 protection, operates at 60V low-voltage DC
- Prevents arc faults at the source

TECHNICAL SPECIFICATIONS

Product Model	Cherry Polar-600SW6/SS6	Cherry Polar-700SW6/SS6	Cherry Polar-800SW6/SS6	Cherry Polar-900SW6/SS6	Cherry Polar-1000SW6/SS6
Input (DC)					
Typical Module Compatibility (W)	240 - 450+	280 - 525+	320 - 600+	360 - 670+	400 - 670+
Max. Input Voltage (V)	60				
Operating Voltage Range（V）	16-60				
MPPT Voltage Range（V）	33-60				
MPPT Operating Voltage Range (V)	16-60				
Start-up Input Voltage (V)	20				
Max. Input Current (A)	16				
Max. Short-circuit DC Input Current (A)	20				
MPPT Channels / Strings per MPPT	2/1				
Output (AC)					
Nominal Output Power (VA)	600	700	800	900	1, 000
Output Voltage (V)	230/180-275				
Output Current (A)	2.61/3.33-2.18	3.04/3.89-2.55	3.48/4.44-2.91	3.91/5.0-3.27	4.35/5.56-3.64
Rated Output Frequency / Range (Hz)	50/45-55				
Power Factor	>0.99 default, 0.8 leading ... 0.8 lagging				
THDi	< 3%				
Efficiency					
Peak Efficiency	96.70%				
CEC Weighted Efficiency	96.30%				
MPPT Conversion Efficiency	99.80%				
Night-time Power Loss (mW)	<30				
General Data					
Operating Ambient Temperature (℃)	-40 to +65				
Storage Temperature Range (℃)	-40 to +85				
Dimensions (W*H*D mm)	325 x 170 x36				
Weight (kg)	2.8				
DC Connector Type	MC4				
Degree of Protection	IP67				
Cooling	Natural cooling(No fans)				
Features					
Communication [1]	Sub-1G/WIFI				
Isolation	High-frequency isolation transformer				
Energy Management App	Cherry App				
Warranty	12 years				
Certifications					
Safety, EMC, Grid Compliance	EN 62109-1, EN 62109-2, EN IEC 61000-6-1/3, EN 300328, VDE 4105				

*1: Sub-1G: Cherry Polar-600-1000SS6； Built-In Wi-Fi: Cherry Polar-600-1000SW6

- Design and specifications are subject to change without notice.

4-in-1 Microinverter

Cherry Polar-1600-2000SW6/SS6



产品外观
PRODUCT APPEARANCE

FUNCTIONAL CHARACTERISTICS

Smart Communication
- Supports Sub-1G & Wi-Fi connectivity
- Equipped with iMesh networking technology
- Strong anti-interference, ensuring stable data transmission

Easy Installation
- Quick deployment by a single person, flexible expansion
- Enables efficient distributed system setup

Compact & Lightweight
- Ultra-compact body with curved hook structure
- Aesthetic and sturdy, adaptable to various rooftop scenarios

Comprehensive Safety Protection
- Certified by 200+ safety tests
- IP67 protection, operates at 60V low-voltage DC
- Prevents arc faults at the source

TECHNICAL SPECIFICATIONS

Product Model	Cherry Polar-1600SW6/SS6	Cherry Polar-1800SW6/SS6	Cherry Polar-2000SW6/SS6
Input (DC)			
Typical Module Compatibility (W)	240 - 450+	280 - 525+	320 - 600+
Mppt Operating Voltage Range (V)	16-60		
Max. Input Voltage (V)	65		
Start-up Input Voltage (V)	20		
Number of MPPTs	4		
Max. Input Current (A)	4*16		
Max. Short-circuit DC Input Current (A)	4*20		
Strings per MPPT	1		
Output (AC)			
Nominal Output Power (VA)	1600	1800	2000
Nominal Output Current (A)	7.27/6.69/6.67	8.18/7.83/7.50	9.09/8.70/8.33
Nominal Output Voltage (V)	220/230/240/183~276		
Rated Output Frequency / Range (Hz)	45~55/55~65		
Power Factor (default / adjustable)	>0.99 default, 0.8 leading ... 0.8 lagging		
THDi	< 3%		
Efficiency			
Peak Efficiency	96.70%		
CEC Weighted Efficiency	96.30%		
MPPT Conversion Efficiency	99.80%		
Night-time Power Loss (mW)	<60		
Protection			
Input Reverse Connection Protection	Yes		
Output Overcurrent Protection	Yes		
Output Overvoltage Protection	Yes		
Anti-islanding Protection	Yes		
Output Short-circuit Protection	Yes		
General Data			
Operating Ambient Temperature (℃)	-40 to +65		
Weight (kg)	5		
DC Connector Type	MC4		
Degree of Protection	IP67		
Cooling	Natural Cooling - No fans		
Communication [1]	Sub-1G/WIFI		
Type of Isolation	High frequency transformers, Galvanically isolated		
Energy Management	Cherry App		
Operating Environment	Outdoor		
Certifications			
Safety, EMC, Grid Compliance	EN 62109-1, EN 62109-2, EN IEC 61000-6-1/3, EN 300328, VDE 4105		

*1: Sub-1G: Cherry Polar-1600-2000SS6； Built-In Wi-Fi: Cherry Polar-1600-2000SW6

- Design and specifications are subject to change without notice.

8-in-1 Microinverter

Cherry Polar-4000/4500/5000SW6/SS6



PRODUCT APPEARANCE

FUNCTIONAL CHARACTERISTICS

High-Power Design, Wide Module Compatibility

- 5000 W output, 20 A input, compatible with 182/210 high-power modules.
- Improves system efficiency for commercial and high-power scenarios.

4 MPPTs for Higher Energy Yield

- Four independent MPPTs for precise string management.
- Reduces mismatch losses and boosts overall energy harvest.

8-in-1 Design for Lower System Cost

- Connect up to eight PV modules per inverter for flexible deployment.
- Quick-connect design enables fast installation and efficient wiring.

Smart Communication & Safe Operation

- 2.4G wireless module with Cherry Cloud for remote monitoring.
- Built-in protections ensure stable and reliable system performance.

TECHNICAL SPECIFICATIONS

Product Model	Cherry Polar-4000SW6/SS6	Cherry Polar-4500SW6/SS6	Cherry Polar-5000SW6/SS6
Input (DC)			
Typical Module Compatibility (W)	400~650+	560~700+	600~750+
Maximum input voltage (V)		140	
Min./Max. start-up voltage (V)		32/136	
MPPT Operating Voltage Range (V)		12~136	
Peak power MPPT voltage range (V)	58~136	59~136	66~136
Max. Input Current (A)		4*20	
Max. input short circuit current (A)		4*25	
Number of MPPTs		4	
Strings per MPPT		1	
Output (AC)			
Grid type		Grid type Three Phase	
Rated output power (VA)	4000	4500	5000
Rated output current (A)	3 × 5.79	3 × 6.52	3 × 7.25
Nominal output voltage (V)		230/400 3L+N+PE	
Nominal frequency (Hz)*		50/60	
Nominal range (Hz)*		45-55 / 55-65	
Adjustable power factor (@rated power)		>0.99 default 0.8 leading … 0.8 lagging	
Total harmonic distortion (@rated power)		< 3%	
Maximum units per 2.5 mm² branch**	3	3	3
Maximum units per 4 mm² branch**	5	4	4
Maximum units per 6 mm² branch**	6	5	5
Efficiency			
Peak efficiency		97.40%	
CEC weighted efficiency		96.20%	96.30%
Nominal MPPT efficiency		99.80%	
Night power consumption (mW)		<50	
General Data			
Ambient temperature range (℃)		-40~+65	
Storage temperature range (℃)		-40~+85	
Dimensions (W × H × D mm)		395 × 308 × 60	
Weight (kg)		9	
Enclosure rating		Outdoor-IP67	
Cooling		Natural convection-No fans	
Protection			
Active Power Regulation、Reactive Power Regulation、High Voltage Ride Through (HVRT)、Low Voltage Ride Through (LVRT)			
Features			
Anti-Islanding Protection、Input Reverse Polarity Protection、Output Short-Circuit Protection、Output Overcurrent Protection、Output Overvoltage Protection、Surge Protection			
Other			
Communication		2.4G	
Topology		Transformerless	
Monitoring		Cherry Cloud	
Compliance		NB/T 32004-2018	

*1： The parameter may vary depending on local requirements
*2： Refer to local requirements for exact number of microinverters per branch.

- Design and specifications are subject to change without notice.

Single-Phase Hybrid Inverter

Cherry-6K-S2201AL-E



PRODUCT APPEARANCE

FUNCTIONAL CHARACTERISTICS

High Efficiency & Stable Backup

- Max. efficiency up to 97.6%
- Backup with UPS-level switching <4ms

Smart Battery Management

- Compatible with lead-acid and LFP batteries
- Adaptive BMS charging for longer lifespan

Lightweight & Easy Installation

- Compact, low-noise design for home use
- Supports real-time monitoring via smart platform

Dual MPPT for Higher Yield

- Two independent MPPTs (150–425 V)
- Optimized tracking for better PV performance

TECHNICAL SPECIFICATIONS

Product Model	Cherry-6K-S2201AL-E
Battery Data	
Battery Type	Lead-acid or Lithium-ion
Battery Voltage Range (V)	48
Nominal Battery Voltage (V)	40-60
Max. Charging Current (A)	135
Max. Discharging Current (A)	135
Charging Strategy for Li-ion Battery	Self-adaption to BMS
Communication	RS485/CAN
PV String Input Data	
Max. DC Input Power (W)	9600
Max. DC Input Voltage (V)	550
MPPT Voltage Range(V)	150-425
Start-up Voltage (V)	100
Rated DC Input Voltage (V)	370
MPPT max. input current (A)	18*2
Max. Input Short-Circuit Current (A)	27*2
Number of MPPTs	2
Strings per MPPT	1
Output AC (Grid)	
Rated Output Power (W)	6600
Max. Apparent Output Power (W)	6000
Rated output voltage (V)	220/230
Rated frequency (Hz)	50/60
Rated output current (A)	26.1
Rated Output Frequency (A)	30/28.7
Power Factor	1 (-0.8~+0.8)
THDi	< 3%
DC Injection Current	<0.5% In
Off-Grid Output	
Rated Output Power (W)	6000
Rated input voltage (V)	220/230
Rated input frequency (Hz)	50/60
Rated Output Current (A)	26.1
Power Factor	1 (-0.8~+0.8)
Generator Input	
Rated Input Power (W)	6000
Rated Input Voltage (V)	220/230
Rated Frequency (Hz)	50/60
Rated Input Current (A)	26.1
Efficiency	
MPPT Efficiency	99.90%
Maximum Efficiency	97.60%
CEC Efficiency	96.50%
General Data	
Operating Temperature Range	-25℃ ~ +60℃ (>45℃derating)
Humidity	0-100%
Operating Altitude	≤2000 (>2000m derating)
Cooling	Intelligent Fan Cooling
Noise	<30dB
Communication	WIFI
Display	LCD Color Touch Screen
Weight	~20kg
Dimension (WxHxD)	390 × 590 × 230 mm
Topology	Non-isolated (PV Side) High-Frequency Isolation (Battery Side)
Ingress Protection	IP65
Installation Method	Wall-Mounted Installation
Protection Category	Class I
Overvoltage Category	OVC III (AC Main), OVC II (PV)
Warranty	5/10Years (Optional)
Number of Parallel Units	16
Protection, certification and standards	
Integrated	PV Insulation Resistance Detection , Residual Current Monitoring , PV Reverse Polarity Protection Battery Reverse Polarity Protection , Anti-islanding Protection , AC Overcurrent Protection , AC Short Circuit Protection AC Overvoltage Protection , DC Switch , Thermal Protection , Overvoltage Load Drop Protection , Earth Fault Detection Ground Fault Current Monitoring , Remote Shutdown , AFCI(Optional)
Compliance	IEC62109-1,IEC62109-2,EN61000-6-1,EN61000-6-3
Grid Connection Standard	VDE4105

- Design and specifications are subject to change without notice.

Three Phase String Inverter 100/110kW

Cherry-100/110K-T4002C-E

PRODUCT APPEARANCE



FUNCTIONAL CHARACTERISTICS

Product Features

- Max efficiency 98.7%, China efficiency 98.2%
- 8-MPPT design for complex scenarios, boosting energy yield
- Supports up to 20 A per string, perfectly matching 210-series modules
- Module-level monitoring
- PID night recovery to improve system generation
- Supports aluminum cable connection to reduce AC wiring cost

Safe & Reliable

- Intelligent forced-air cooling
- AC/DC Type II surge protection
- Residual current monitoring
- Fanless design
- Input reverse-polarity protection
- IP66 enclosure for strong environmental adaptability
- Built-in DC switch

TECHNICAL SPECIFICATIONS

Product Model	Cherry-100K-T4002C-E	Cherry-110K-T4002C-E
Power rating	100kW	110kW
Input (DC)		
Max. Input Voltage	1100V	
Start-up DC Input Voltage	195V	
Rated Input Voltage	600V	
MPPT Voltage Range	200-1000V	
Full-Load MPPT Voltage Range	420-800V	
Max. String Input No.	16	16
MPPT No.	8	8
Max. Input Current	40A	40A
Max. DC short-circuit current	50A	50A
Output (AC)		
Rated AC Output Power	100kW	110kW
Max. AC Output Power (Apparent)	110kVA	121kVA
Rated Output Voltage	380V	
Grid Connection Type	3 L / N / PE	
Max Output Current	167.1 A	183.8 A
Rated Output Frequency	50 Hz	
THDi	< 3%	
Power Factor	0.8 leading ... 0.8 lagging	
Efficiency		
Maximum Efficiency	98.70%	
China Efficiency	98.20%	
Environment		
Protection Degree	IP66	
Cooling	Intelligent Fan Cooling	
Operating Temperature Range	-30℃~+60℃	
Operating Humidity	0 - 100 % Non-condensing	
Operating Altitude	4000 m (> 3000 m derating)	
Protection		
Anti-Islanding Protection	Yes	
DC Reverse-Polarity Protection	Yes	
DC Insulation Resistance Dection	Yes	
Residual Current Monitoring	Yes	
AC Output Over Current Protection	Yes	
Smart Disconnect Switch	Yes	
Overvoltage Class	II (DC), III(AC)	
DC / AC SPD	DC SPD Type II / AC SPD Type II (Type I Optional)	
Display and Communication		
Display	LED , APP	
Communication	RS485 / 4G	
General Data		
尺寸 (W / H / D)	972 x 706 x 350 mm	
Weight	75kg	
DC Inputs Type	D4	
AC Outputs Type	OT Terminals	
Certification		
Safety、EMC、Grid connection regulations	NB/T 32004-2018	

- Design and specifications are subject to change without notice.

Three Phase String Inverter 320kW

Cherry- 320K-T8001-E

PRODUCT APPEARANCE



FUNCTIONAL CHARACTERISTICS

Product Features

- Max efficiency 99.03%, China efficiency 98.53%
- Up to 6 MPPTs, suitable for complex terrains to increase energy yield
- Supports up to 30 strings for flexible system configuration
- Module I–V scanning for precise string anomaly detection
- PID night recovery to boost system generation
- Supports PLC communication to lower cabling and installation cost
- Dual AC/DC power redundancy for 24/7 monitoring

Safe & Reliable

- Self-cleaning fan extends inverter service life
- AC/DC Type II surge protection
- Residual current monitoring
- DC switch with arc-fault suppression for enhanced safety
- Input reverse-polarity protection
- IP66 enclosure for strong environmental adaptability
- Corrosion-resistant C5 design

TECHNICAL SPECIFICATIONS

Product Model	Cherry- 320K-T8001-E
Power rating	320kW
Input (DC)	
Max. DC Input Voltage	1500Vdc
Start-up DC Input Voltage	550V
Rated input voltage	1090Vdc
MPPT Operating Voltage Range	500-1500V
Full-Load MPPT Voltage Range	860-1300V
Number of Inputs	5×6
MPPT No.	6
Max. Input Current per MPPT	75A
Max. Short-Circuit Current per MPPT	125A
Output (AC)	
Rated AC Output Power	320kW
Max. AC Output Power (Apparent)	352 kVA
Rated Output Voltage	800V
Grid Connection Type	3Φ / PE
Max Output Current	254.0A
Rated Output Frequency	50Hz
THDi	< 3% (rated power)
Power Factor	> 0.99 / 0.8 leading – 0.8 lagging
Efficiency	
Maximum Efficiency	99.03%
China Efficiency	98.54%
Environment	
Protection Degree	IP66
Cooling	Adjustable speed air cooling
Operating Temperature Range	-30℃ -60℃, 45° no derating (320kW)
Operating Humidity	0 - 100 % Non-condensing
Operating Altitude	5000m (> 4000m derating)
Protection	
DC Reverse-Polarity Protection	Yes
Anti-Islanding Protection	Yes
DC Insulation Resistance Detection	Yes
Residual Current Monitoring	Yes
String Monitoring	Yes
AC Output Over Current Protection	Yes
AC Short Circuit Protection	Yes
PID Recovery	Yes
Overvoltage Class	II (DC), III(AC)
DC / AC SPD	DC SPD Type II / AC SPD Type II
Smart IV Curve Scanning	Yes
Night SVG (Static Var Generation)	Yes
Aluminum Cable Support	Yes
Smart DC Switch	Yes
Smart Terminal Detection	Yes
Display and Communication	
Display	LED + APP
Communication	RS485 / PLC
General Data	
Dimensions (W / H / D)	1140x853x385mm
Weight	108kg *
AC Outputs Type	D4
DC Inputs Type	OT/DT Terminals support 400 mm
Certification	
Safety EMC Grid Connection Standards	NB/T 32004-2018（New Energy Standard、EMC）; GB/T29319-2024（Certification） GB/T 19964-2024（LVRT, HVRT、SCR、SCCR）; CNCA/CTS0002-2014(Efficiency)
IP66、C5	GB/T4208-2017; GB/T19292.1-2018
PV Module I–V Scanning & Intelligent Diagnostics	CGC/GF 180:2020A; CGC-R46305:2020A
Power Quality	GB/T 29319-2024 Technical requirements for PV system grid connection (≤10 kV grid) GB/T 19964-2024 Technical requirements for PV power station grid connection (>10 kV grid)

*1: The net weight of the product may deviate by +/-8%.

- Design and specifications are subject to change without notice.

Energy Storage System

Built with uncompromising reliability to resist time, weather, and load fluctuations – delivering stable power, every moment, every cycle.

Centralized PCS 1565kW

Cherry Van-1565

PRODUCT APPEARANCE



FUNCTIONAL CHARACTERISTICS

Grid-Friendly Operation with Zero-Voltage Ride-Through

- THDi (Total Harmonic Distortion) < 2%.
- Supports reactive power regulation to enhance grid stability.
- Withstands 12%/10min and 15%/10s overvoltage conditions for robust grid compatibility.
- Supports fault ride-through (FRT) to maintain grid connection and improve system reliability.

High Efficiency for Maximum System Yield

- High-efficiency topology enables 98.31% discharging efficiency and 98.45% charging efficiency.

High Reliability for All Sites, Climates and Seasons

- Wide temperature design ensures stable operation under ambient temperatures up to 50° C.
- Outdoor-ready design with full IP65 protection rating.
- PCS noise level < 75 dB, suitable for industrial and commercial sites.
- Annual system availability > 99%.

TECHNICAL SPECIFICATIONS

Product Model	Cherry Van-1565
Input (DC)	
Rated Power	1565kW
Max. Input Current	1673A
DC Operating Voltage Range	1000V ~ 1500V
Output (AC)	
Continuous Output Power	1722kW
Reactive Power Range	0 ~ 1643kVar
Rated Voltage	690Vac
Grid Voltage Range	621 ~ 759Vac
Voltage Operating Range	50Hz
Frequency Operating Range	45Hz ~ 55Hz
THDi	< 2%
Power Factor	-1 ~ 1
General Data	
Operating Temperature Range	- 35℃ ~ 60℃（derating above 50℃）
Altitude	≤3000m
Protection Rating	IP65
Battery Communication Ports	RS485 / CAN
EMS Communication Interface	Ethernet / Optical Fiber
Communication	Modbus RTU / Modbus TCP / IEC104 / IEC61850
Compliance Standards	GB/T 34120, GB/T 34133
Grid Support	High/Low Voltage Ride-Through / Primary Frequency Regulation / Inertia Response, etc.
Dimensions (W × D × H)	700*2450*1460mm
Weight	< 1200kg

- Design and specifications are subject to change without notice.

Integrated PCS + Step-Up Transformer Substation

6.25MW

PRODUCT APPEARANCE



FUNCTIONAL CHARACTERISTICS

High-Efficiency Conversion

- Integrated PCS + transformer design reduces footprint and installation time.
- Intelligent air-cooling ensures no derating at 50° C ambient temperature.

Grid-Friendly Performance

- Supports grid-forming operation and black start.
- Complies with LVRT/HVRT and weak-grid support for enhanced grid adaptability.

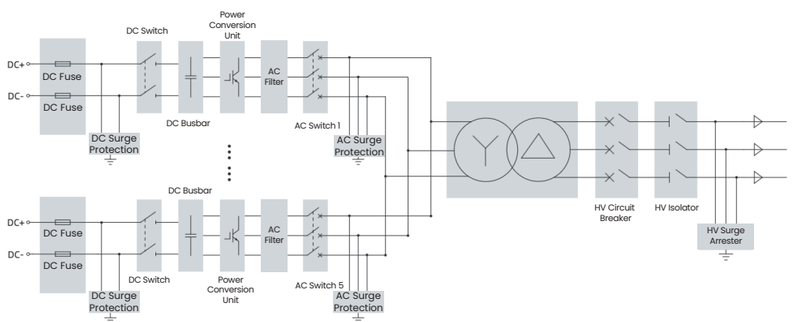
Safety & Reliability

- Transformer IP65, other components IP54 protection.
- Multi-layer hardware and software protection for higher system safety.

Versatile for Multiple Scenarios

- Supports VSG, VF, and PQ operation modes.
- Suitable for harsh environments: high altitude, high salinity, high/low temperature, etc.

CIRCUIT DIAGRAM



TECHNICAL SPECIFICATIONS

Product Model	PCC6250KT-C4
Input (DC)	
Rated Power	1565kW
Max. DC Bus Voltage	1673A
Max. DC Current	1000V ~ 1500V
DC Voltage Operating Range	1565kW
Number of DC Inputs	1673A
Output (AC)	
Rated Output Power	1722kW
Max. Output Power	0 ~ 1643kVar
Rated AC Voltage	690Vac
Reactive Power Range	621 ~ 759Vac
Grid Parameters	
Rated Grid Voltage	10kV/35kV
Rated Grid Frequency	50Hz
Grid Frequency Range	45Hz~55Hz
THDi	<3 (Rated power)
Power Factor Adjustment Range	-1~1
System Parameters	
Transformer Type	Dry-type
Operating Temperature Range	-30℃~+60℃（Derating above 50℃）
Maximum Operating Altitude	5000m
Cooling	Forced Air Cooling
Protection Rating	Converter IP65, Others IP54
Battery Communication Interface	RS485/CAN
EMS Communication Interface	Ethernet / Optical Fiber
Communication	Modbus RTU/Modbus TCP/IEC 104/IEC61850
Compliance Standards	GB/T 34120-2023/GB/T34133-2023
Grid Support	LVRT/HVRT / Primary Frequency Regulation / Inertia Response, etc.
General Data	
Dimensions (W × D × H)	8000*3050*3200mm (Subject to actual delivery)
Weight	25t (Subject to actual delivery)

- Design and specifications are subject to change without notice.

Centralized Energy Storage System Solution

Cherry Solution's centralized ESS integrates PCS, BMS, and EMS for efficient, reliable, and intelligent operation. Supporting both liquid and air cooling, it fits large power stations, industrial parks, and microgrid scenarios.

Key Advantages

Superior Performance

- Reliable operation from –50C to +50 °C, adapting to harsh environments
- THDi < 2%; voltage harmonics < 2%; voltage recovery time < 20 ms

High Efficiency

- PCS average efficiency up to 98.33%
- Heat loss < 200W, ideal for distributed and large-scale station applications
- Supports off-grid operation, black start, seamless switching

Smart O&M, Lower Lifecycle Cost

- "One-click" upgrade, automatic fault isolation
- Predictive maintenance with AI-driven diagnostics

High Reliability, Long-Term Stability

- Operational reliability > 99.62%
- IP65 outdoor protection; superior dust, salt-spray, and corrosion resistance
- Strong grid support with low-frequency

Recommended Product





Integrated PCS + Step-Up Transformer Substation

Input (DC)	Rated Power	6250kW
	Max. DC Current	1673A*4
	DC Voltage Range	1000V ~ 1500V
	DC Inputs	2/4
Output (AC)	Rated Power	6250kW
	Max. Output Power	6875kW
	Isolation Method	Transformer Isolation
	Reactive Power Range	-6563~6563kVar
Grid Parameters	Rated Grid Voltage	10kV / 35kV
	Rated Grid Frequency	50Hz
	Allowable Frequency Range	45Hz ~ 55Hz
	THDi	<3%
	Power Factor	-1 ~1
Transformer Parameters	Rated Capacity	6250/6600/6900kVA
	Transformer Type	Dry-type / Oil-immersed Transformer
	LV/MV Ratio	0.69 / （10/35）kV
	Losses	Compliant with national standards, SCB12/14/18 optional
System Parameters	Temperature	-30℃~60℃
	Altitude	≤3000m（>3000m derating）
	Protection Rating	IP54
	Battery Communication Port	RS485 / CAN
	EMS Communication Ports	Ethernet / Optical Fiber
	Communication Protocols	Modbus RTU / Modbus TCP / IEC104 / IEC61850
	Compliance	GB/T 34120,GB/T 34133,GB/T 36547, etc.
	Grid Support	High/Low Voltage Ride-Through / Primary Frequency Regulation / Inertia Response, etc.

String Energy Storage System Solution

A modular ESS architecture with independent string operation, integrating PCS, BMS, and EMS for efficient energy conversion, precise control, and rapid fault isolation. Ideal for utility, C&I, and microgrid applications.

Key Advantages

High Efficiency & Reliability

- Battery availability +3%–7.5%; system RTE +~2%.
- String PCS delivers 4%–5% higher discharge energy.
- Independent operation per module improves overall stability.

Precise Control, Better Yield

- Unified SOC calibration reduces energy deviation.
- Intelligent management cuts O&M costs and energy loss.
- SOC 0–100% accurate control ensures stable performance.

Easy Deployment & O&M

- Fault isolation ensures uninterrupted operation (loss ↓92%).
- Factory-preinstalled modules improve installtion quality.
- Integrated delivery simplifies on-site wiring.

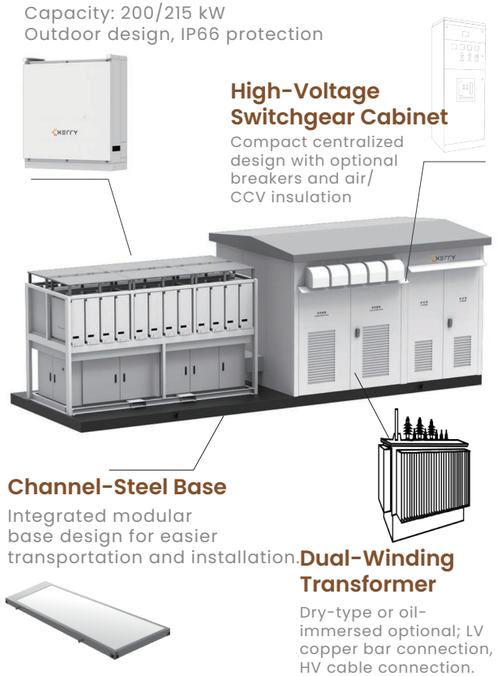
Optimized Investment

- Initial capacity requirement ↓ 15%, lowering CAPEX
- Battery cycle life +5%, improving long-term returns.
- Supports flexible expansion for future needs.

Recommended Product

String PCS

Capacity: 200/215 kW
Outdoor design, IP66 protection



High-Voltage Switchgear Cabinet

Compact centralized design with optional breakers and air/ CCV insulation

Channel-Steel Base

Integrated modular base design for easier transportation and installation.

Dual-Winding Transformer

Dry-type or oil-immersed optional; LV copper bar connection, HV cable connection.

Integrated PCS + Step-Up Transformer Substation

Input (DC)	Max. DC Bus Voltage	1500V
	Max. DC Current	240 A*24
	DC Voltage Range	1000~1500V
	No. of Battery Strings	24
Output (AC)	Rated Power	5160 kVA
	Max. Output Power	5676 KVA
	Rated Grid Voltage	6/ 10/35 kV
	Rated Grid Frequency	50 Hz
Efficiency	Power Conversion Efficiency	99%
	Transformer Efficiency	>99%(@75°C, COSΦ=1, 100%Load)
Transformer Parameters	Transformer Type	Dry-type
	Transformer Rated Power	5160 KVA
	MV/LV	(6~35) /0.69 kV
	Winding Connection	Dy11
System Parameters	Dimensions (L×W×H)	8800*3000*3020(tentative)
	Cable Entry	AC/DC bottom entry
	Operating Temperature	-40°C~+60°C（≥45°C derating）
	Operating Altitude	5000m（>4000m derating）
	Weight	<25t
	Protection Rating	IP54 (PCS IP66)

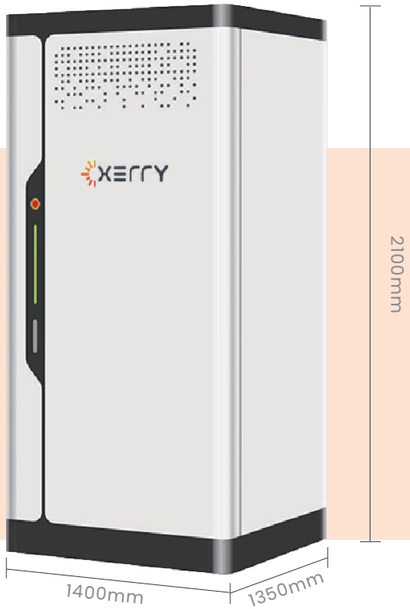
C&I Cherry Van

C&I All-in-one Battery Energy Storage System

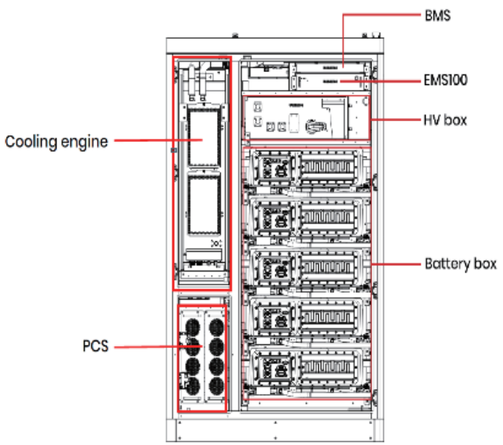
PRODUCT APPEARANCE



CATL battery with aerospace-grade safety design for dual protection and smart control.



FUNCTIONAL CHARACTERISTICS



Strong Grid Adaptability

- Supports weak grids and handles voltage fluctuations
- Balances three-phase loads for stable performance

High Energy Density

- High energy density for better efficiency
- Compact footprint, suitable for space-limited sites

High Efficiency & Reliable

- Multi-layer safety protection for reliable operation
- Plug-and-play design for fast deployment and easy O&M
- Significantly reduces installation and maintenance costs

Versatile for Multiple Applications

- Ideal for C&I peak shaving and load shifting
- Supports virtual power plants and energy dispatch scenarios

TECHNICAL SPECIFICATIONS

Product Model	Cherry Van
Battery Data	
Battery Technology	LFP
Rated Capacity (kWh)	232.96
Rated Voltage (V)	832
Charge/Discharge Rate	0.5P
System Battery Configuration	1P*52S*5P
PCS Data	
Operating Voltage Range (V)	340~440
Maximum Output Current (A)	198
Rated AC Power (kW)	125
Maximum AC Power (kW):	137
Power Factor	> 0.99(rated power)
Rated AC Line Voltage (V)	400
Rated AC Line Frequency (Hz)	50/60
AC Efficiency (Grid-Connected)	
AC Output Power (kVA)	125
Maximum AC Output Power (kVA)	137
Nominal AC Voltage (V)	400(-15%~+10%)
Nominal Grid Frequency / Grid Frequency Range (Hz)	50/60 (-2.5~2.5)
Maximum AC Output Current (A)	198
Total Current Harmonic Distortion (THD)	<3% (rated power)
Rated Power Factor	> 0.99
Adjustable Power Factor Range	1 leading - 1 lagging
AC Output Topology	3W+PE/3W+N+PE
AC Efficiency (Off-Grid)	
Overload Capacity	110%
AC Output Power (kVA)	125
Maximum AC Output Power (kVA)	137
Rated AC Output Voltage (V)	400
AC Voltage Total Harmonic Distortion (THD)	< 3% (rated power)
Nominal Grid Frequency / Grid Frequency Range (Hz)	50/60
Maximum AC Output Current (A)	198
AC Output Topology	3W+N+PE
General Data	
Maximum System Efficiency	99%
Dimensions (W*D*H) (mm)	1400x1350x2100
Weight (kg) （kg）	≤2700
Lightning Protection	Type II
Switching Between On/Off Grid	Manual (default) / Automatic (optional)
Protection	IP55
Operating Temperature Range (° C)	-20 to 55°C (>45°C derating)
Relative Operating Humidity	0~95%(non-condensing)
Operating Altitude (m)	2000
Cooling Method	Air-cooled (PCS), Liquid-cooled (battery)
Fire Protection	Active warning, aerosol
Communication Interfaces	RS485, Ethernet, CAN
Communication Protocols	Modbus RTU, Modbus TCP
Certifications	CE, IEC 61000, IEC62619, NRS 097-2-1: 2017

- Design and specifications are subject to change without notice.

Van-379

Outdoor Liquid-Cooling Battery System



PRODUCT APPEARANCE

BASIC SPECIFICATION

Item	Specification
Rated Energy	379.392KWh
Working Ratio	≤1.0P
Operating Temperature	-35℃...+55℃
Operating Altitude	≤4000m(No derating)
Cooling Method	Liquid cooling
Noise Class	≤84dB(A)
IP Level	IP56
Product Weight	~3.6t
Dimension(L*W*H)	1344.1*1390*2353.4mm

TESTING AND CERTIFICATION

IEC 61000-6-2/4 · IEC 62477-1 · IEC 62619 · IEC 62933-5-2 · IEC 63056 · IEC 60730

UL 1973 · UL 9540 · UL 9540A · CE · UN38.3 · NFPA 855

Design and specifications are subject to change without notice.

Van-407

Outdoor Liquid-Cooling Battery System



PRODUCT APPEARANCE

BASIC SPECIFICATION

Item	Specification
Rated Energy	407.347Wh
Working Ratio	≤0.5P
Operating Temperature	-35℃...+55℃
Operating Altitude	≤4000m(No derating)
Cooling Method	Liquid cooling
Noise Class	≤78dB(A)
IP Level	IP56
Product Weight	~3.6t
Dimension(L*W*H)	1344.1*1390*2353.4mm

TESTING AND CERTIFICATION

IEC 61000-6-2/4 · IEC 62477-1 · IEC 62619 · IEC 62933-5-2 · IEC 63056 · IEC 60730

UL 1973 · UL 9540 · UL 9540A · CE · UN38.3 · NFPA 855

Design and specifications are subject to change without notice.

Van-705/752-Liquid

Outdoor Liquid-Cooling Battery System



PRODUCT APPEARANCE

BASIC SPECIFICATION

Item	Specification
Rated Energy	705.536KWh / 752.128KWh
Working Ratio	≤0.5P
Operating Temperature	-35℃...+55℃
Operating Altitude	≤4000m(No derating)
Cooling Method	Liquid cooling
Noise Class	≤65dB(A)
IP Level	IP66
Product Weight	~6t
Dimension(L*W*H)	1500*1700*2450mm

TESTING AND CERTIFICATION

IEC 61000-6-2/4 · IEC 62477-1 · IEC 62619 · IEC 62933-5-2 · IEC 63056 · IEC 60730

UL 1973 · UL 9540 · UL 9540A · CE · UN38.3 · NFPA 855

Design and specifications are subject to change without notice.

Van-705/752-Direct

Outdoor Liquid-Cooling Battery System



PRODUCT APPEARANCE

BASIC SPECIFICATION

Item	Specification
Rated Energy	705.536KWh / 752.128KWh
Working Ratio	≤0.5P
Operating Temperature	-35℃...+55℃
Operating Altitude	≤4000m(No derating)
Cooling Method	Direct cooling
Noise Class	≤65dB(A)
IP Level	IP66
Product Weight	~6t
Dimension(L*W*H)	1500*1700*2450mm

TESTING AND CERTIFICATION

IEC 61000-6-2/4 · IEC 62477-1 · IEC 62619 · IEC 62933-5-2 · IEC 63056 · IEC 60730

UL 1973 · UL 9540 · UL 9540A · CE · UN38.3 · NFPA 855

Design and specifications are subject to change without notice.

Van-3790



BASIC SPECIFICATION

Item	Specification
Rated Energy	3.793MWh
Working Ratio	≤1P
Operating Temperature	-25°C...+55°C
Operating Altitude	≤4000m(No derating)
Cooling Method	Liquid cooling
Noise Class	≤96dB(A)
IP Level	IP55
Product Weight	36t
Dimension(L*W*H)	6058*2438*2896mm(20ft)

Van-5640



BASIC SPECIFICATION

Item	Specification
Rated Energy	5.644MWh
Working Ratio	≤1P
Operating Temperature	-35°C...+55°C
Operating Altitude	≤4000m(No derating)
Cooling Method	Liquid cooling
Noise Class	≤75dB(A)
IP Level	IP55
Product Weight	43T
Dimension(L*W*H)	6058*2438*2896mm(20ft)

EC 61000-6-2/4 · UL 9540A · CE · UL 9540A · NFPA 855

Van-4070



BASIC SPECIFICATION

Item	Specification
Rated Energy	4.073MWh
Working Ratio	≤0.5P
Operating Temperature	-25°C...+55°C
Operating Altitude	≤4000m(No derating)
Cooling Method	Liquid cooling
Noise Class	≤75dB(A)
IP Level	IP55
Product Weight	36t
Dimension(L*W*H)	6058*2438*2896mm(20ft)

Van-3790

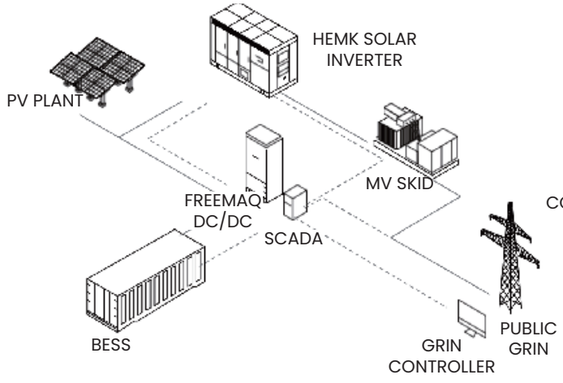


BASIC SPECIFICATION

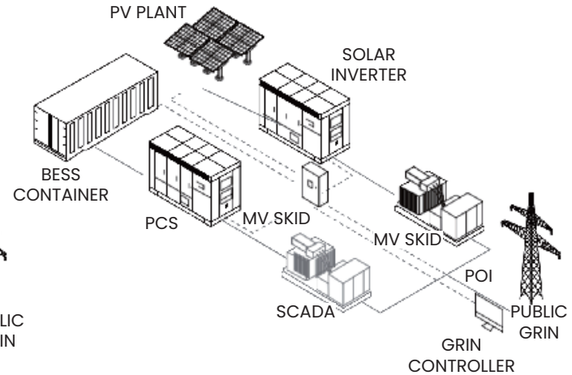
Item	Specification
Rated Energy	3.793MWh
Working Ratio	≤1P
Operating Temperature	-25°C...+55°C
Operating Altitude	≤4000m(No derating)
Cooling Method	Liquid cooling
Noise Class	≤96dB(A)
IP Level	IP55
Product Weight	36t
Dimension(L*W*H)	6058*2438*2896mm(20ft)

ESS AC SOLUTIONS

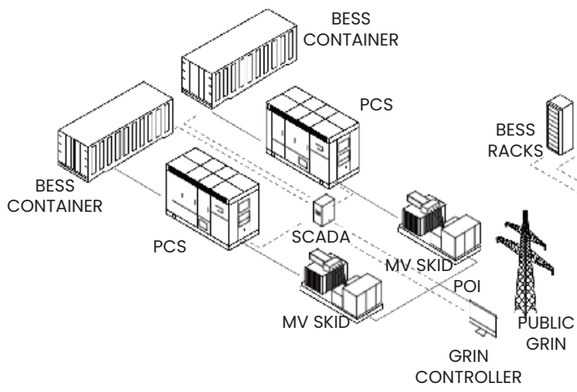
DC Coupling with MV transformer



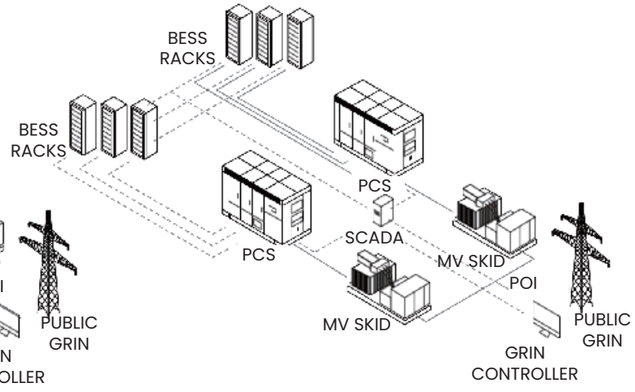
DC Coupling with MV transformer



DC Coupling with MV transformer



DC Coupling with MV transformer



Supply scope



3S Integrafion

EMS Decision

Energy transformation decision-making and operation and maintenance management analysis, etc.

Energy data transmission and collection. Real-time monitoring and control.

PCS Execute

Carry out charging and discharging decisions

BMS Percepfion

Perception: Voltage, current, temperature, SOX Management: Balance, thermal management Protection: Overcurrent, overvoltage, over-temperature...

DMU Data Management Unit

DMU

PRODUCT APPEARANCE



FUNCTIONAL CHARACTERISTICS

Easy Installation

- Compact design for quick desktop or wall-mounted installation.
- Seamlessly connects to IoT systems for fast cloud data upload.

Multi-Protocol Access

- Supports LoRa, Wi-Fi, and Ethernet communication.
- Flexible for standalone use or multi-node networking.

High-Performance Processing

- Equipped with a low-power SoC processor and SX126 chipset for efficient data handling.
- Built-in network server supporting MQTT and API access for seamless cloud connectivity.

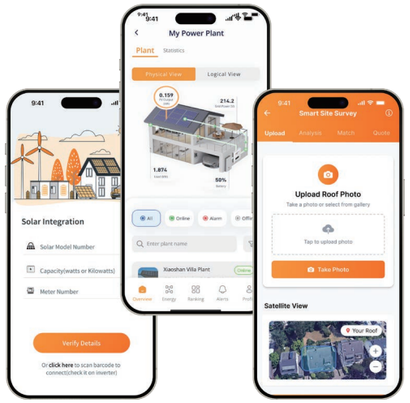
TECHNICAL PARAMETERS

Model	DMU Data Management Unit
Dimensions	151*101.21*27.13mm
Operating Temperature	-20°C ~50°C
Installation Method	Desktop placement / Wall mounting
Operating Voltage	DC 12V power supply
Antenna Type	External detachable antenna
Frequency Range	860 ~ 930MHz
Modulation	LoRa
Transmit Power	22dBm Max
Receiving Sensitivity	124dBm@ SF=7, BW=125KHz
Communication Protocol	Private Lora protocol
Device Type	Gateway
Regional Band	Supports multiple frequency bands
Communication Interfaces	Ethernet, Wi-Fi, BLE, RS485 × 3

■ Design and specifications are subject to change without notice.

POWER TO X





Platform Overview

CherryCloud integrates cloud computing, IoT, and big data technologies, enhanced with AI algorithms to enable full-process energy management–from device sensing to energy scheduling and revenue optimization.

The platform supports third-party system integration and is compatible with edge gateways, data sticks, and terminal devices, enabling flexible deployment across multiple scenarios and accelerating the intelligent and visualized transformation of energy systems.

Core Functions

Multi-Source Optimization

AI optimizes PV, storage, and load coordination to enhance system efficiency and stability.

Smart Strategy Control

Supports peak-shaving, backup scheduling, and AI-driven optimal operating modes.

Real-Time Data & AI Insights

Second-level data collection with AI trend prediction and anomaly detection.

Remote Control & Dispatching

Cloud-based PCS and load control for unattended, efficient system operation.

Fast Deployment & Compatibility

Multi-protocol, cross-brand device access for flexible and quick deployment.

Active Safety Protection

AI detects abnormalities in real time and triggers coordinated safety responses.

