



Residential Energy Storage Solutions

Inverters & Batteries

Continuously Innovating to
**POWER A
SMARTER WORLD**



About us

CLN Energy Limited is a BSE-SME listed company specializing in the design and manufacturing of advanced lithium-ion battery solutions. We power the future of clean energy with high-performance batteries for Electric Vehicles (EVs), Battery Energy Storage Systems (BESS) — including residential, commercial & industrial (C&I), telecom, and data center applications. Headquartered in Singapore, CLN Energy has a global footprint with teams operating across Malaysia and Hong Kong. Our two state-of-the-art manufacturing facilities in India enable us to deliver safe, scalable, and sustainable energy solutions that meet the highest international standards. Driven by innovation, backed by a global team of experts, and committed to environmental stewardship — we're building the foundation for a cleaner and connected tomorrow.

100+
Business Partners

100+
Distributor Network

380+
Workforce



"Switch to Lithium" reflects CLN Energy's commitment to powering a cleaner, smarter future. As the world moves toward sustainable solutions, lithium stands out as the energy source of tomorrow—lightweight, efficient, and eco-friendly. This shift marks a move away from outdated technologies toward reliable, future-ready power systems that align with global energy goals.



Powering Industries Across Globe

**Commercial
& Industrial**

Residential

**Electric
Vehicles**

**Telecom &
Railways**

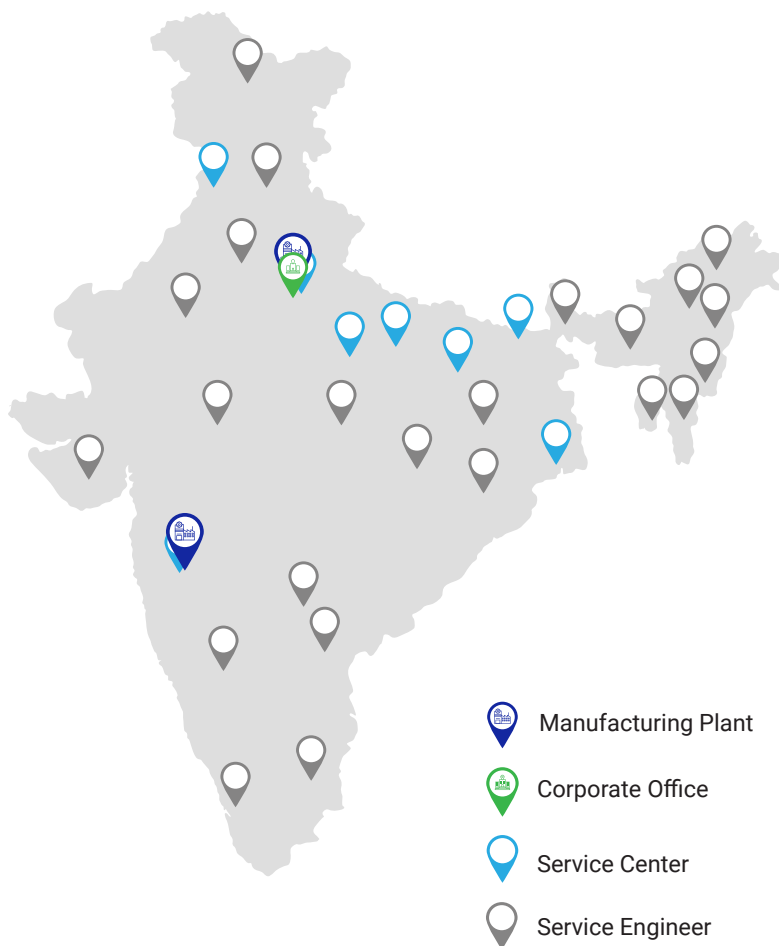
**Grid &
Utility**

Data Center



Pan India Sales and Service

Our extensive sales and service network spans to major cities across India, ensuring timely support wherever you are. With teams strategically positioned nationwide, we offer reliable after-sales service, maintenance, and technical assistance. Our customer-focused sales professionals understand local needs and recommend tailored solutions, while our experienced service team ensures quick response and minimal downtime. Count on us for dependable, personalized support—just a call away



Operational Facilities

Noida: 42,000 Sqft
Pune: 20,000 Sqft

Annual Production Capacity

2 GWh+ Batteries

Service Center

**Pan India
Service Network**



CLN Energy: Noida Plant



CLN Energy: Pune Plant

Residential Energy Storage Product Range



All-in-one Table Top



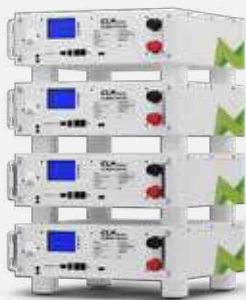
All-in-one Wall Mount



Inverter Battery- Table Top



Inverter Battery- Wall Mount



Stackable Solution

COMING SOON



Stackable Solution



Grid Tie Inverter



Continuously
Innovating to
**POWER A
SMARTER
WORLD**

Residential Solution

CLN Energy's residential lithium-ion energy storage system is perfectly suited for a wide range of applications, including on-grid home power, backup power, smart energy systems, and solar energy integration. It seamlessly connects with the grid, generators, and solar panels, enabling efficient and flexible energy management. Engineered with durability and cutting-edge technology, it offers an ideal solution for homeowners seeking to enhance energy efficiency and ensure reliable power.



All in one solution

The all-in-one residential energy storage solution (ESS) delivers seamless and intelligent power management for modern homes. Engineered for exceptional reliability and performance, it combines a hybrid inverter, scalable lithium iron phosphate (LiFePO4) battery technology, and advanced energy optimization features into a single, integrated system.

All-in-one Table Top

Key Features



Integrated solution

All-in-one design with hybrid inverter and modular battery storage.



Life cycle

3000+ charge cycles with a 5-year warranty.



Superior durability & safety

Supports peak shaving, scheduled charging, and other grid services using safe, long-lasting lithium iron phosphate (LFP) battery chemistry.



Installation

Wall-mounted or tabletop configuration for flexible setup and reliable backup power during outages.

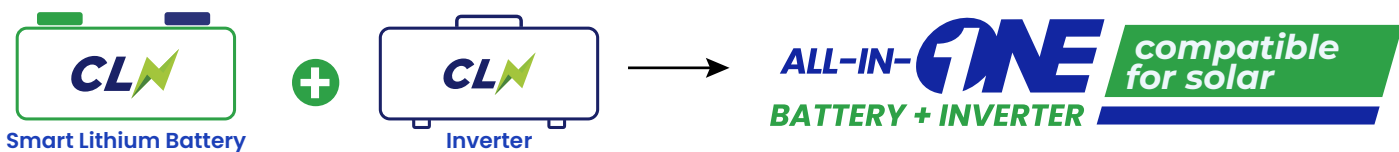


2000VA/25.6V

Technical Specification





Parameter	Rating
Model Number	2000VA/25.6
Nominal DC Voltage (V)	25.6
MPPT Charger	
Type of Charger	MPPT
No of MPPT Channels	1
Max. Connected PV Modules kW	2.2
Max MPPT Output Current/ Max Battery Charging Current (A)	70
Max. Open Circuit PV Voltage (V)	110
MPPT Voltage Range (V)	35-88
MPPT Peak Efficiency	>94%
Solar Inverter	
Input Power at Peak Load (W)	2200
Nominal Output Voltage (V)	220
Nominal Output Frequency (Hz)	50
Output Supply Phase	Single Phase
Overloads	100-125% - 120Sec
	126-150% - 60Sec
	151-200% - 5 Sec
	>200% - Immediate
Output Type	Pure Sine Wave
Input Source	PV/Battery/Grid
Peak Inverter Efficiency	>85%
THD	>5%
Load Power Factor	0.8
Battery	
Battery (Ah)/Voltage (V)	100/25.6
Battery (Wh)	2560
Charging Current (A)	30
Discharging Current (A)	50
Max Continuous Discharging Current (A)	100
Battery Under Cut Alarm (V)	24.2 (Settable)
Battery Under Cut (V)	24 (Settable)
Float Charging Voltage (V)	28.8
Boost Charging Voltage (V)	28.8
Grid Charger	
Grid Operating Voltage Range (V)	120-280
Grid Frequency Range	47-53
Ambient Conditions	
Operating Temp (°C)	0-50
Humidity	95%
Degree of Protection	IP 20
Cooling Method	Temp. controlled natural air cooling

Display/Indication	
Protections	Pv: Reverse polarity, high current Battery: Reverse polarity, under voltage cut, over voltage cut Grid: Over/under voltage, over/under freq., Surge protection, reverse feed protection Load: Overload, short circuit
Display Parameters	Pv: Voltage, amps, power, today kwh, total kwh generation. Battery: Voltage, amps, charge/ discharge status Grid: Voltage, frequency., Load: voltage, load%, frequency. Load: Operating modes (ups/ wide range), priority selection, grid charging enable/ disable, battery status (charging/ discharging)
Display Faults	PV: PV over voltage Battery: Battery under voltage, battery over voltage Grid: Back feed, under/ over voltage, fuse fail Load: Overload, o/p short circuit



All-in-one Wall mount

Key Features

- 
Integrated solution
 All-in-one design with hybrid inverter and modular battery storage.
- 
Life cycle
 3000+ charge cycles with a 5-year warranty.
- 
Superior durability & safety
 Supports peak shaving, scheduled charging, and other grid services using safe, long-lasting lithium iron phosphate (LFP) battery chemistry.
- 
Installation
 Wall-mounted or tabletop configuration for flexible setup and reliable backup power during outages.



900VA-2000VA/12.8V-25.6V

Technical Specification

Parameter	Rating			
Module Number	900VA/12.8V (WM)	1100VA/12.8V (WM)	1600VA/25.6V (WM)	2000VA/25.6V (WM)
Nominal DC Voltage	12.8	12.8	25.6	25.6
MPPT Charger				
Type of Charger	MPPT			
No of MPPT Channels	1			
Max. Connected PV Modules kW	1	1	2	2
Max MPPT Output Current/Max Battery Charging Current (A)	55			
Max. Open Circuit PV Voltage (V)	50	50	100	100
MPPT Voltage Range (V)	30-50	30-50	40-100	40-100
MPPT Peak Efficiency	>92%			
Solar Inverter				
Input Power at Peak Load (W)	900	1100	1600	2000
Nominal Output Voltage (V)	220			
Nominal Output Frequency (Hz)	50			
Output Supply Phase	Single Phase			
Overloads	100-105% - 60Sec / 105-110% - 30Sec / 110-120% - 2 Sec			
Output Type	Pure Sine Wave			
Input Source	PV/Battery/Grid			
Peak Inverter Efficiency	>82%			
THD	>4%			
Load Power Factor	0.8			
Battery				
Battery (Ah)/Voltage (V)	100/12.8	100/12.8	100/25.6	100/25.6
Battery (Wh)	1280	1280	2560	2560
Charging Current (A)	30			
Discharging Current (A)	50			
Max Continuous Discharging Current (A)	100			
Battery Under Cut Alarm (V)	24.2 (settable)			
Battery Under Cut (V)	24 (settable)			
Float Charging Voltage (V)	28.8			
Boost Charging Voltage (V)	28.8			
Grid Charger				
Grid Operating Voltage Range (V)	90-280			
Grid Frequency Range	47-53			
Display/Indication				
Protections	PV: Reverse Polarity, High Current			
Display Parameters	PV: Voltage, Amps, Power, Today kWh, Total kWh Generation.			
Display Faults	PV: PV over voltage			
Others				
Operating Temp (°C)	0-50			
Humidity	0.9			
Degree of Protection	IP31			
Cooling Method	Temp. controlled natural air cooling			
Dimensions (LWH) and Weight	440x380x160mm 25kg approx.	440x380x16mm 25kg approx.	570x440x220mm 41kg approx.	570x440x220mm 41kg approx.

Home Inverter Lithium Ion Battery

CLN Energy home inverter lithium-ion battery is an advanced energy storage solution that replaces traditional lead-acid batteries. Unlike lead-acid batteries, which are bulky, have shorter lifespans, and need regular maintenance, lithium-ion batteries offer notable advantages. They are more compact, lightweight, and efficient, with higher energy density and longer cycle life. Furthermore, lithium-ion batteries charge and discharge more quickly, providing a reliable and consistent power supply. Homeowners can benefit from improved energy efficiency, lower maintenance costs, and enhanced overall performance in their home energy storage systems.



LONGER BACKUP, LONGER LIFE

Switch to Lithium

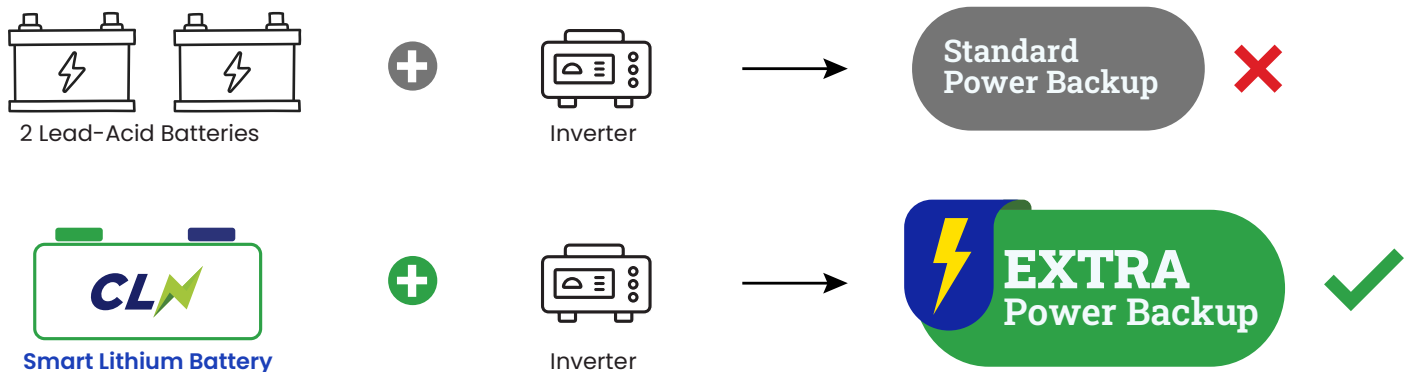


Table Top Battery

Key Features



Inbuilt battery indicator



Deep discharge protection



No fire risk



Bluetooth connectivity



Low battery alarm



Easy installation









12.8V/25.6V-100Ah

Technical Specification

Model	12.8V100Ah	25.6V100Ah	48V200Ah	51.2V200Ah	12.8V200Ah
Nominal Voltage (V)	12.8	25.6	48	51.2	12.8V
Capacity (Ah)	100		200		
Cell Type and Chemistry	Prismatic (100Ah) and LFP				
BMS Type	Smart				
Maximum Cut-off Voltage (V)	14.4 (±0.4)	28.8 (±0.8)	54.0 (±1.5)	57.6 (±1.5)	14.4 (±0.4)
Minimum Cut-off Voltage (V)	10.0 (±0.4)	20.0 (±0.8)	42 (±1.5)	44.8 (±1.5)	10.0 (±0.4)
Charging Voltage (V)	14	28	52.5	56	14
Recommended Charging Current (A)	25				
Rated Discharge Current (A)	30				
Max Discharging Current (A)	100				
Cycle Life @25°C at 90% DOD, 0.5C/1C (Cycles)	1500				
Cycle Life @25°C at 90% DOD, 0.5C/0.5C (Cycles)	2000				
Cell Under Voltage Protection	Yes				
Cell Over Voltage Protection	Yes				
Over Current Protection	Yes				
Short Circuit Protection	Yes				
Temperature Protection	Yes				
Ambient Temperature (°C)	0-60				
Storage Temperature (°C)	0-55				
Size (LxWxH)mm	325×250×250	400X265X255	710X482X279		400X265X255
Weight (kg)	17 (approx.)	25 (approx.)	95 (approx.)	100 (approx.)	25 (approx.)
Power Connector	Through wall				
Communication Connector	As per requirement				
IP Protection	IP20				

Wall Mounted Battery

Key Features

-  Inbuilt LED indicator
-  Deep discharge protection
-  No fire risk
-  Bluetooth connectivity
-  Low battery alarm
-  Easy installation

51.2V/48V100Ah

Technical Specification

Model	48V 100Ah (WM)	51.2V 100Ah (WM)
Nominal Voltage (V)	48	51.2
Capacity (Ah)	100	
Cell Type and Chemistry	Prismatic (100Ah) and LFP	
BMS Type	Smart	
Maximum Cut-off Voltage (V)	54.0 (±1.5)	57.6 (±1.5)
Minimum Cut-off Voltage (V)	42 (±1.5)	44.8 (±1.5)
Charging Voltage (V)	52.5	56
Recommended Charging Current (A)	25	
Rated Discharge Current (A)	30	
Peak Discharging Current (A)	100	
Cycle Life @25°C at 90% DOD, 0.5C/1C (Cycles)	1500	
Cycle Life @25°C at 90% DOD, 0.5C/0.5C (Cycles)	2000	
Cell Under Voltage Protection	Yes	
Cell Over voltage Protection	Yes	
Over Current Protection	Yes	
Short Circuit Protection	Yes	
Temperature Protection	Yes	
Ambient Temperature (°C)	0-60	
Storage Temperature (°C)	10-35	
Size (LxWxH) mm	785×155×505	785×155×505
Weight (kg)	55 (approx.)	57 (approx.)
Power Connector	Through wall	
Communication Connector	As per requirement	
IP Protection	IP20	

Stackable BESS

CLN Energy stackable lithium-ion energy storage system designed for residential backup and solar applications. Supports up to 4 modules (20.48 kWh), with integrated EMS and optional off-grid inverter. Offers multiple operating modes, remote monitoring via app, and advanced protection features. Easy to install, safe, and maintenance-free



Key Features



Modular and Scalable : Stack up to 4 modules – from 5.12 kWh to 20.48 kWh total capacity



Safe and Long-lasting : Uses advanced cobalt-free LiFePO4 cells with 3000+ cycles @ 80% DoD



Smart Energy Management : Integrated EMS supports multiple operation modes: PV priority, grid priority, or inverter priority



Remote Monitoring : Monitor system performance via Android App or integrated display



Advanced Communication : Equipped with RS485/CAN for inverter and BMS communication



Built-in Battery Protections : Automatic safety features: over/under voltage, temperature, current, and short-circuit protection



Plug-and-Play Design : Pre-configured for quick installation and reduced maintenance time



Wide Temperature Range : Reliable operation from 0°C to 60°C with natural/forced/HVAC cooling options



Certified Quality : Compliant with global standards: UN38.3, IEC 62619, IEC 61000, UL 1973



Eco-Friendly Chemistry : Non-toxic, non-hazardous, and fully recyclable LiFePO4 cells

www.clnenergy.in



CLN-SB



COMING SOON

Technical Specification

Battery Specification	Parameter			
Battery Capacity (kWh)	4.8	9.6	14.4	19.2
Cell Type and Chemistry	Prismatic (100Ah) and LFP			
Capacity (Ah)	100	200	300	400
DoD	>80%			
Nominal Voltage (V)	48			
Voltage Range (V)	42 – 54			
Rated Charging Current (Standard) (A)	30	60	90	120
Peak Charging Current (A)	50	100	150	200
Rated Discharge Current (A)	100	200	300	400
Communication Interface/Protocol	RS485/CAN			
Operating Ambient Temperature – Charging (°C)	0 TO 55			
Operating Ambient Temperature – Discharging (°C)	0 to 60			
Storage Temperature For 6 Months (°C)	0 to 35 (50% SOC)			
Cooling	Natural / Forced / HVAC			
Lifecycle @ Ambient 25°C	3000			
IP Protection	IP20			
Electrical Protection	Contractor / Breaker / BMS			
Standards (Compliance)	UN38.3, IEC 62619, IEC 61000, UL 1973			
Protection	Over voltage, under-voltage			
	Over-temperature (charge and discharge)			
	Under-temperature (charge and discharge)			
	Over current (charge and discharge)			
	External short circuit detection			

Grid Tie Inverter

CLN Energy grid-tie inverter connects solar systems directly to the utility grid (230/400V) without a transformer. Featuring an LCD display and easy controls, it simplifies operation and maintenance, especially in remote areas. With MPPT technology for optimal energy conversion and safety features like anti-islanding protection, it ensures reliable and efficient power management for both residential and commercial systems.



Key Features



1 MPPT tracker, max. efficiency up to 97.5%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)



Low start-up voltage of 80V



CLN-GTI

Technical Specification

Model Name	CLN-GTI-1000	CLN-GTI-1500	CLN-GTI-2000	CLN-GTI-3000	CLN-GTI-4000	CLN-GTI-5000
PV String Input Data						
Max. PV Input Power (kW)	1.3	2	2.6	3.9	5.2	7.5
Max. PV Input Voltage (Vdc)	550					600
Start-up Voltage (V)	80					
MPPT Voltage Range (Vdc)	70-500					
Rated PV Input Voltage (V)	360				420	
Max. Operating PV Input Current (A)	20					
Max. Input Short Circuit Current (A)	30					
No. of MPPT Trackers/No. of Strings MPPT Tracker	111					
AC Output Side						
Rated AC Output Active Power (kW)	1	1.5	2	3	4	5
Max. AC Output Apparent Power (kVA)	1.1	1.65	2.2	3.3	4.4	5.5
Max. AC Output Current (A)	5/4.8	7.5/7.2	10/9.6	15/14.4	20/19.2	25/24
Rated Output voltage/range (V)	220/230V 0.85Un-1.1Un					
Grid Connection Form	L/N/PE					
Rated Output Grid Frequency/Range(Hz)	50/45-55, 60/55-65					
Power Factor Adjustment Range	0.8 Leading to 0.8 Lagging					
Total Current Harmonic Distortion THDi	<3%					
DC Injection Current	<0.5% In					
Efficiency						
Max. Efficiency	97.50%					
Euro Efficiency	97.00%					
MPPT Efficiency	>99%					
Equipment Protection						
DC Polarity Reverse Connection Protection	YES					
Thermal Protection	YES					
Earth Fault Detection	YES					
Over voltage Load Drop Protection	YES					
Residual Current (RCD) Detection	YES					
Interface						
Communication Interface	RS485/RS232					
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN (optional)					
General Data						
Operating Temperature Range (°C)	(-10 to +60, >45 De-rating)					
Permissible Ambient Humidity	0-100%					
Permissible Altitude (m)	4000					
Ingress Protection(IP) Rating	IP65					
Inverter Topology	Non-isolated					
Type of Cooling	Natural cooling					
Grid Regulation	IEC 61727, IEC 62116,CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99,VDE-AR-N 4105					
Safety EMC/Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2					



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