H2

Next-Gen Microgrid BESS

Built for Real-World Energy independence



Reliable Power

Plug & Play Deployment

Flexible Configuration

Lower LCOE Higher Value

H2 Highlights

One-stop solution for smart microgrids

Highly Integrated Less Equipment. Less Work. Faster Deployment.

- One cabinet integrates hybrid PCS, battery, BMS, EMS, liquid cooling and fire protection
- Direct connections for PV, grid, generator, backup loads and DC loads
- Simpler system design, less wiring and much less on-site work



Highly Flexible Easy Configuration. Perfect Fit for Every Project.

- Multiple power & energy combinations from 50–125 kW / 104–261 kWh
- Hybrid BESS or battery-only configurations
- Parallel operation for different system power and capacity requirements
- Flexible configuration to match different loads, applications and project requirements

Highly Intelligent Smarter Energy. Lower Cost. Higher Reliability.

- Intelligent coordination of PV, battery, grid, generator and loads
- Built-in EMS supports multiple energy strategies and microgrid applications
- Smart generator control and remote monitoring
- Automatically optimize energy use for lower electricity costs and reliable power supply

H2 Features

One-stop solution for smart microgrids

DC Coupled PV
Higher Efficiency(+3~4%)

High IP Grade
IP66 Hybrid PCS and Battry

10ms UPS
Seamless on/off-grid switch

Blackstart Capability
Restart without external power

Automotive-grade BMS
ISO 26262, IATF 16949 Certifications

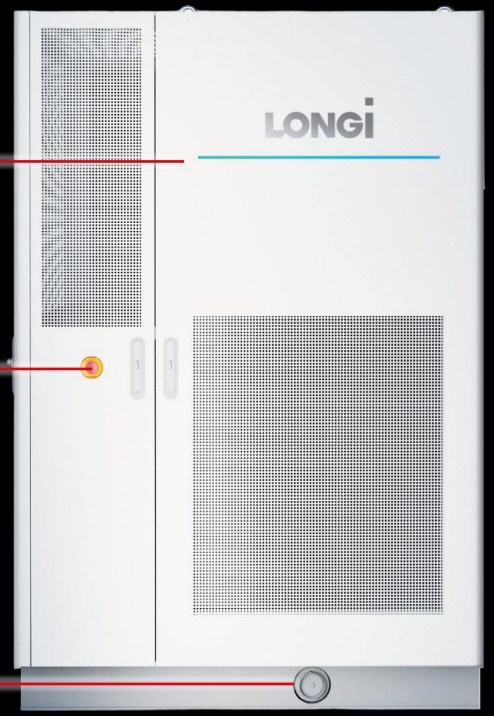
iCCS Technology
3-Level thermal runaway detection

Liquid Cooling
ΔT ≤2℃, Longer battery life

Built-in EMS
Smart control of PV, battery, grid and generator



H2 Overview



Smart LED Status Bar

Emergency Stop

Water Injection



Top Explosion Vent

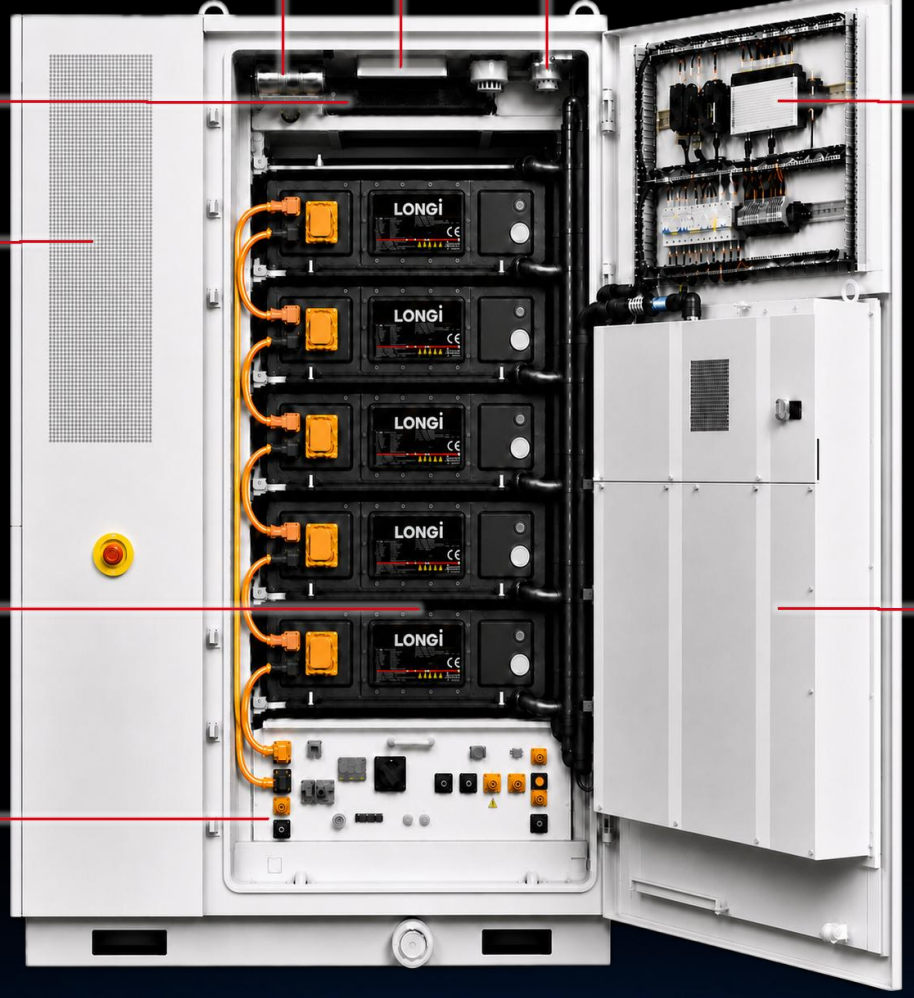
Hoist Ring

Hybrid Inverter Display

Hybrid Inverter N/OFF Switch

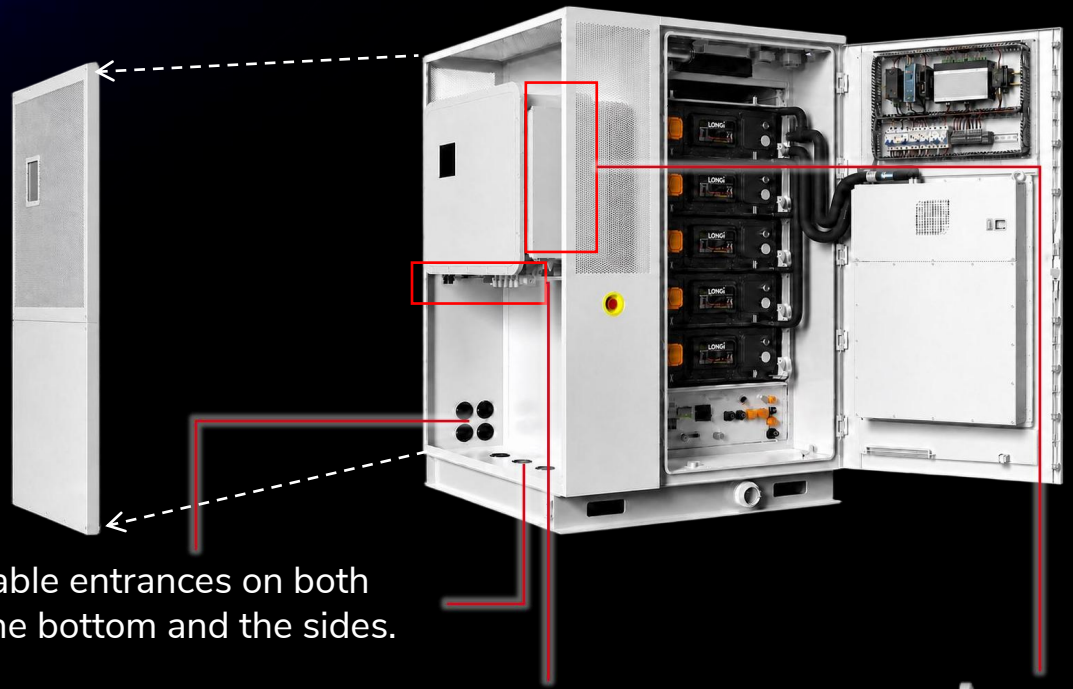
Side Cable Entry

H2 Overview

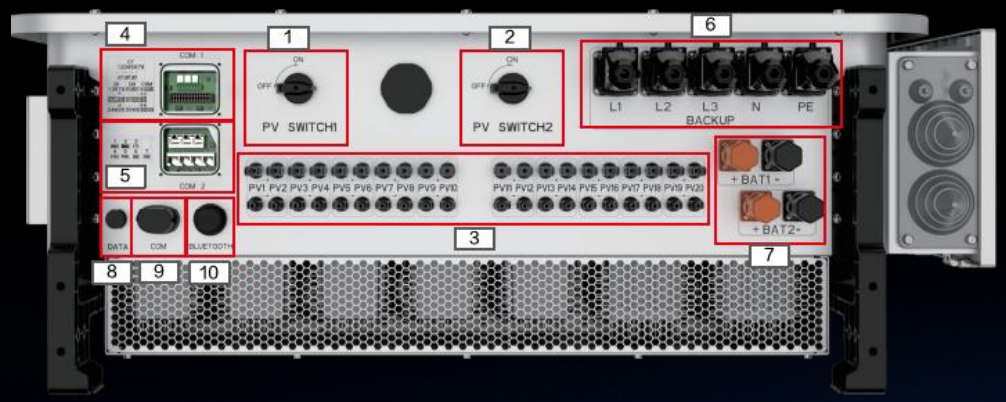

Internal Lighting
Aerosol Fire Extinguishing System
Smoke & Temperature Sensor
UPS
EMS
Hybrid Inverter
Liquid Cooling Battery Packs
Liquid Cooling Chiller
HV Box

H2 Easy Wiring

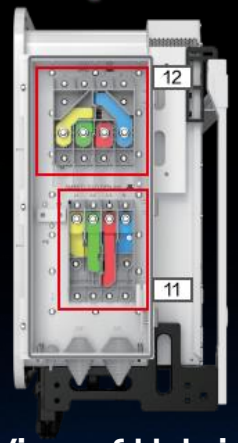
Side Connection, More Convenient.



Cable entrances on both the bottom and the sides.



Bottom View of Hybrid Inverter



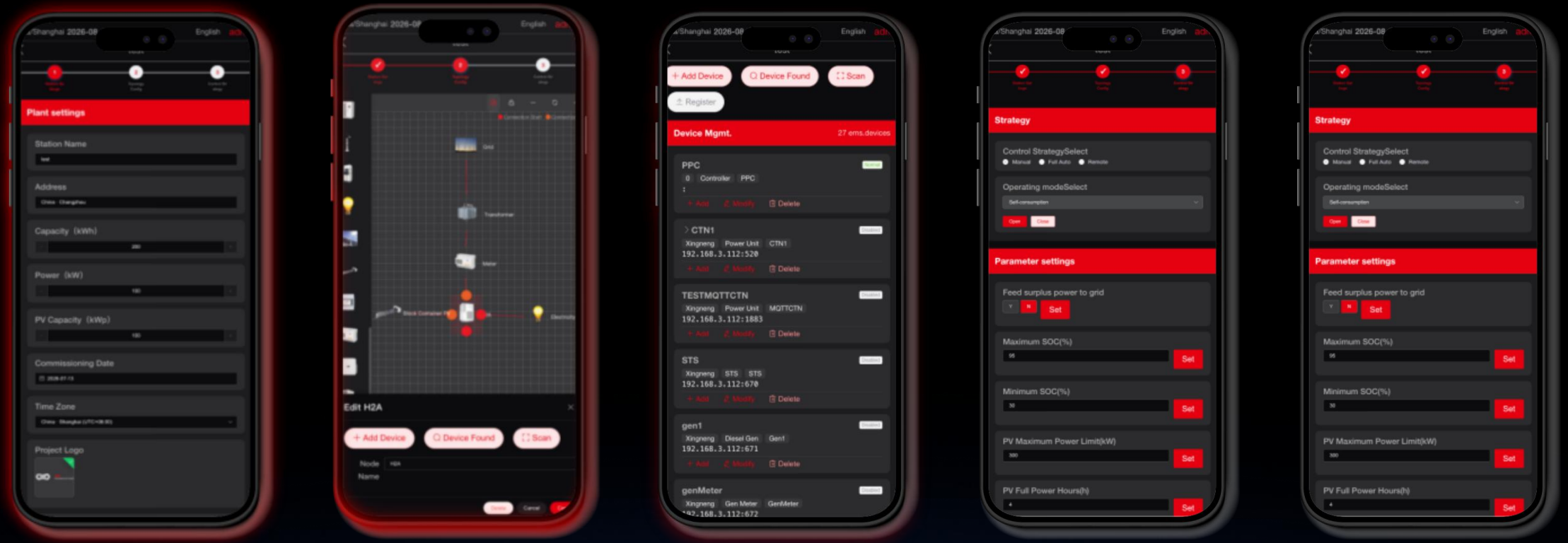
Side View of Hybrid Inverter

Ports List

Name	Description
1.PVSwitch1	PVswitchofthePV1-PV10
2.PVSwitch2	PVswitchofthePV11-PV20
3.PVModuleInput	ConduitofPVconductorsshouldbeconnectedhere
4.COM1	Communicationcablesofterminalblockshouldgothroughthisport
5.COM2	Communicationcablesofterminalblockshouldgothroughthisport
6.BACKUP	ConduitofACconductorstobackuploadspanelshouldbeconnectedhere
7.BatteryConnection	ConduitofBatteryconductorsshouldbeconnectedhere
8.DATA	Fordataloggerconnection
9.COM	Fordataloggerconnection
10.BlueTooth	AantennaforBluetoothsignal.noneedoperation
11.GEN/INV	ConduitofACconductorstogeneratorshouldbeconnectedhere
12.Grid	ConduitofACconductorstothemainservicepanelshouldbeconnectedhere

H2 Easy Commissioning

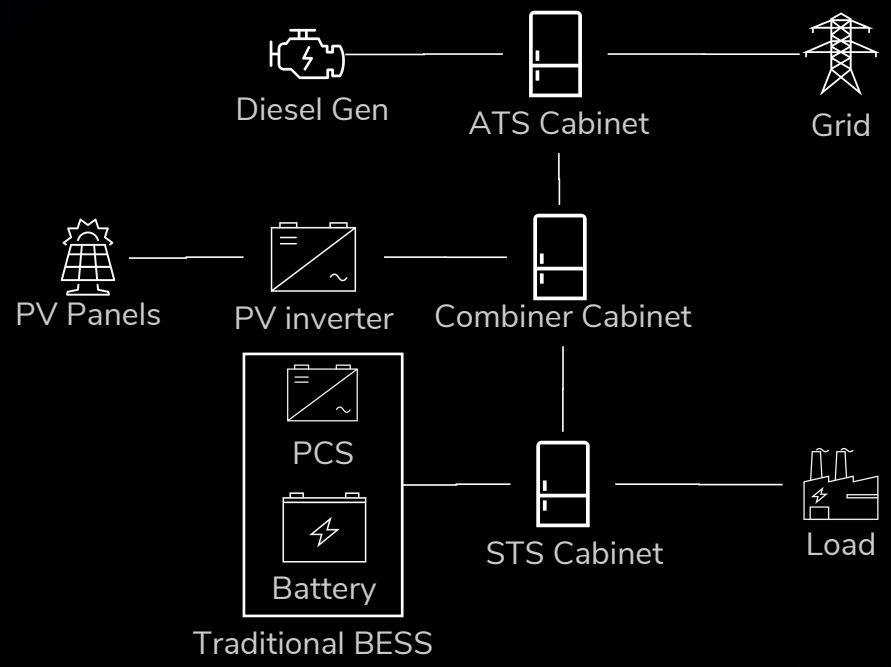
- Built-in Wi-Fi & web-based configuration.
- Fast commissioning from a smartphone or laptop — no dedicated software or special tools required.
- Drag-and-Drop Smart Configuration. Build the electrical topology by simply dragging and connecting devices, then deploy pre-configured control strategies for fast and easy commissioning.



H2 One-stop Microgrid Solution

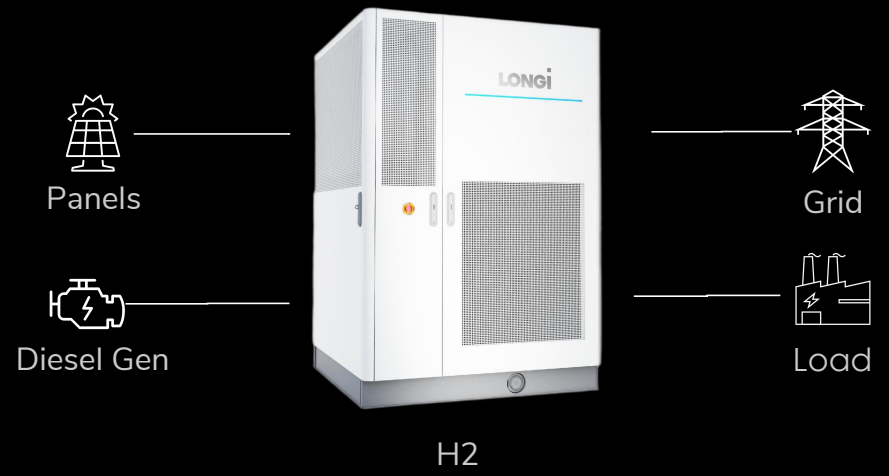
Simplify Deployment with Integrated Architecture

Traditional AC Coupled Architecture



- Extra PV inverters
- Extra STS/ATS equipment
- Complex system integration
- Multiple communication interfaces

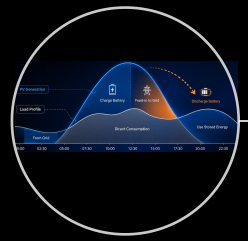
H2 DC Coupled Architecture



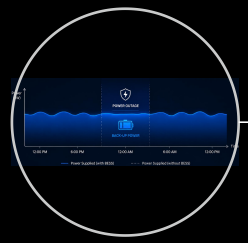
- Highly Integrated, Simplified wiring and installation
- DC Coupled Architecture, Higher efficiency
- Internal Communication, More reliable system

H2 Applications

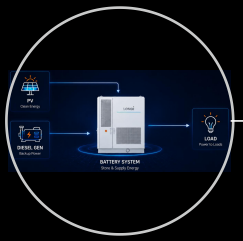
Self consumption
Maximise renewable energy utilisation by storing excess power and reducing grid dependency.



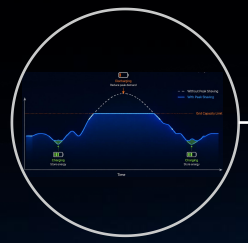
Back-up power
Ensure reliable power continuity by seamlessly switching to battery backup when the grid fails.



Off-grid
Operate independently from the grid by intelligently managing renewable energy, batteries, and generators to ensure reliable power supply.

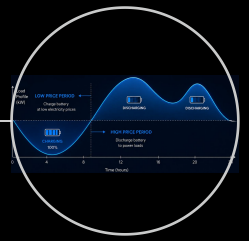


Peak shaving
Shave consumption peaks and cut demand rate costs

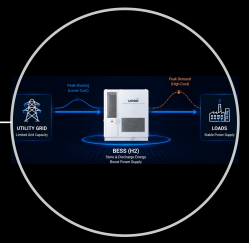




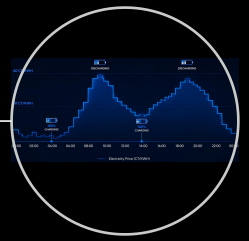
Time of use
Optimise energy costs by charging during low-price periods and discharging during high-price periods based on time-of-use electricity tariffs.



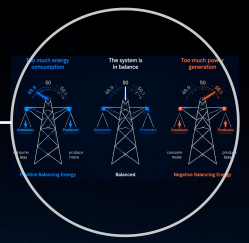
Utility Grid Boost
Increase available grid capacity by using BESS to shave peak power demand, avoiding costly grid upgrades.



Dynamic electricity tariffs
Optimise energy costs by intelligently scheduling battery charging and discharging based on real-time electricity price fluctuations.

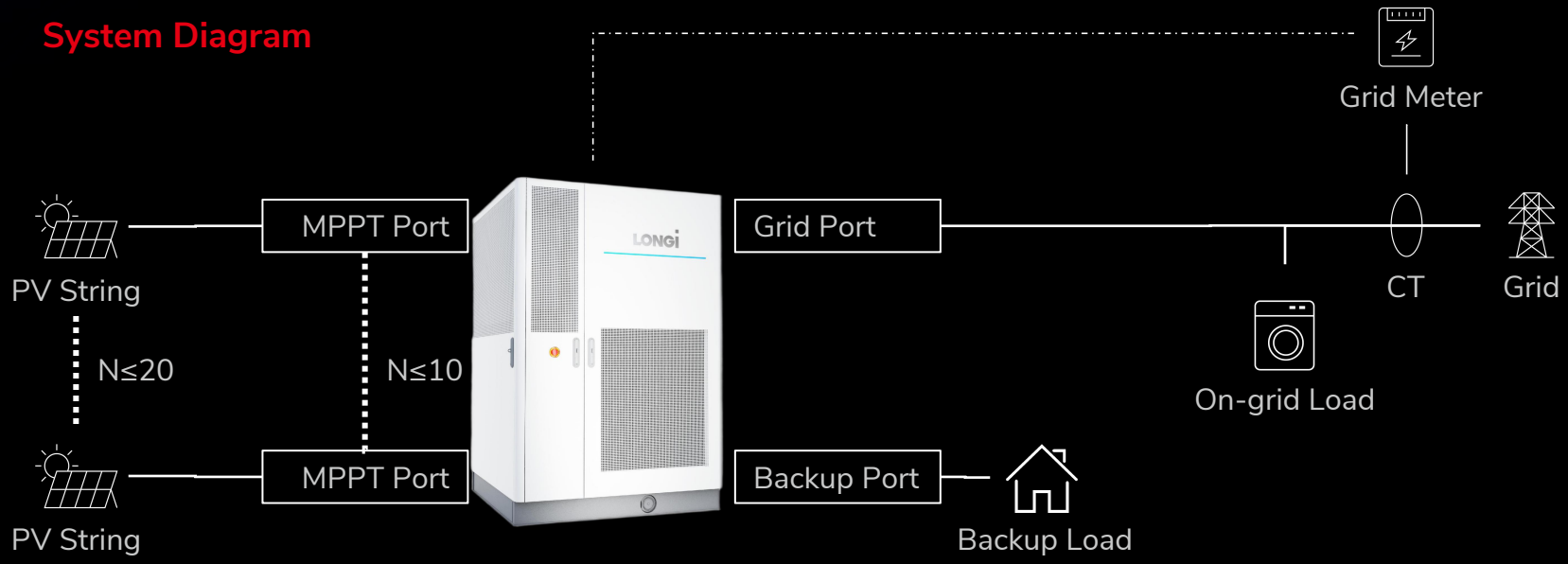


Ancillary service
Support grid stability by rapidly adjusting power output to balance supply and demand.



H2 Reference Design 1 | Grid-Connected Smart Energy

System Diagram



Smart Energy Management

Maximize PV self-consumption and optimize battery charging & discharging to reduce electricity costs.

Backup Power

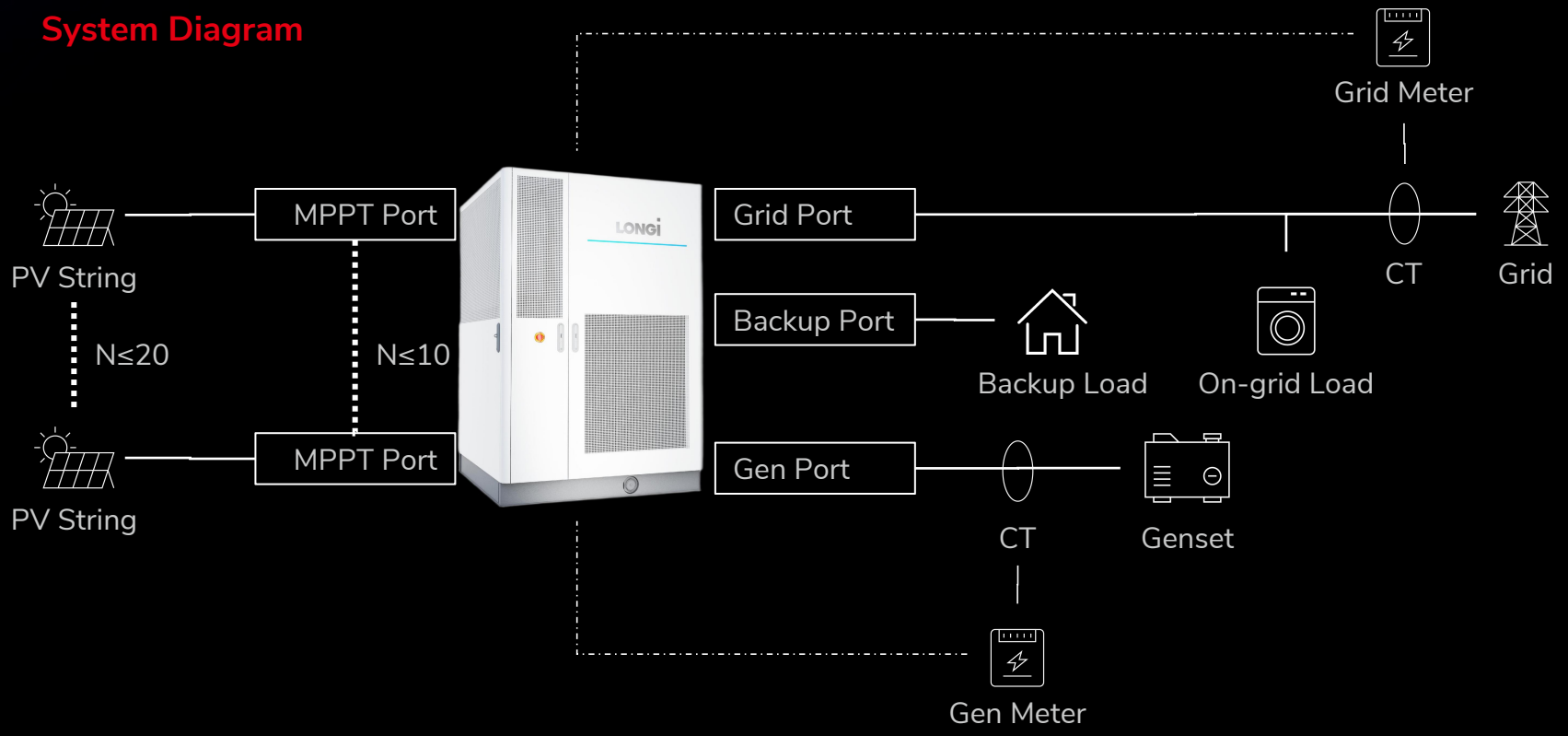
Keep critical loads continuously powered during grid outages with seamless on/off-grid switching.

Flexible Grid Interaction

Support peak shaving, time of use, utility grid boost, dynamic electricity tariffs, ancillary service for smarter grid-connected operation.

H2 Reference Design 2 | Grid Resilience with Generator Backup

System Diagram



Backup Power

Keep critical loads continuously powered during grid outages with seamless on/off-grid switching.

Extended Backup

Automatically start the standby generator when PV and battery energy are insufficient, enabling extended backup during prolonged outages.

Smart Generator Control

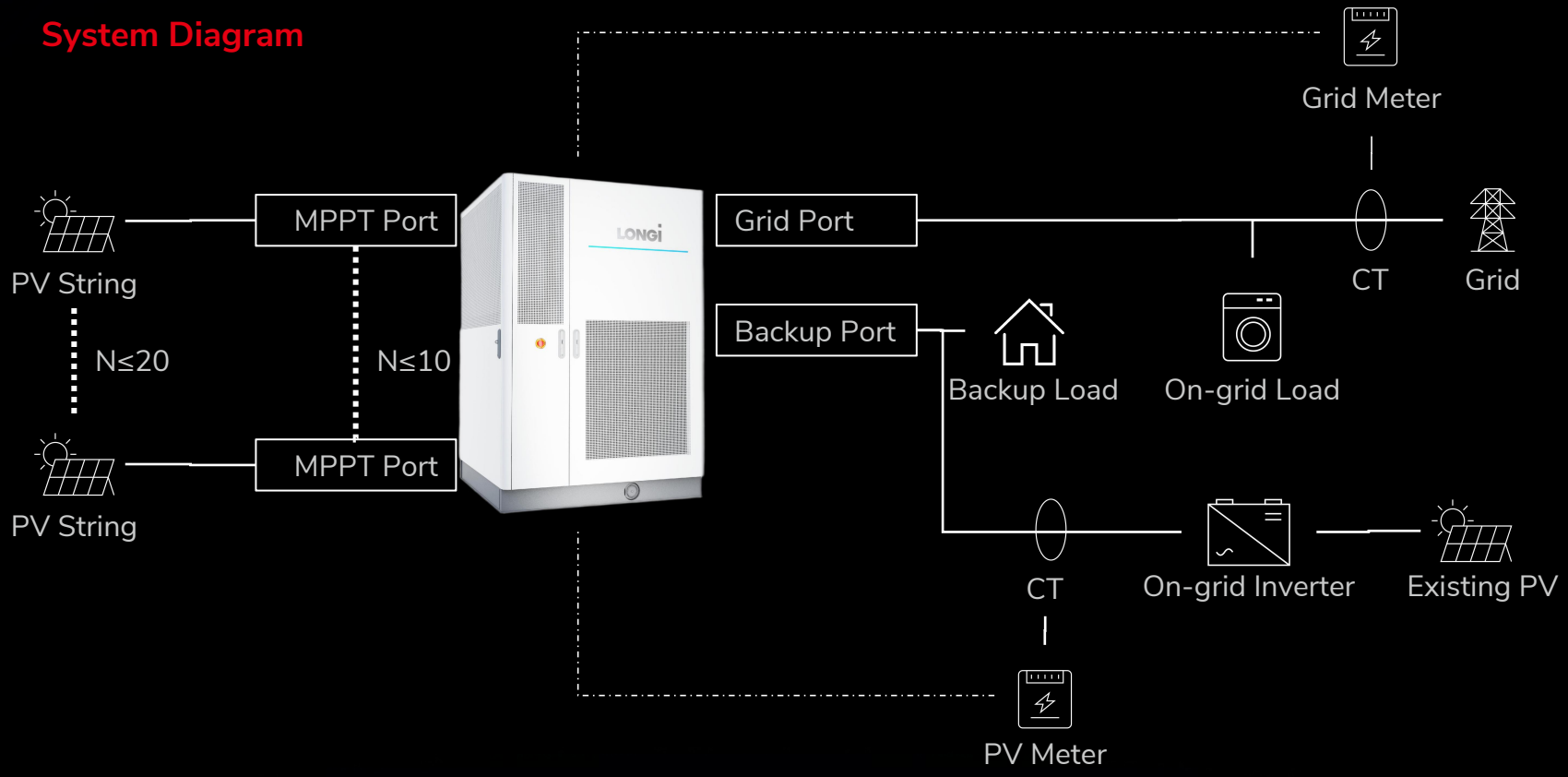
Automatically start and stop the generator based on grid status, battery SOC and load demand.

Smart Energy Management & Flexible Grid Interaction

H2 Reference Design 3 | AC-Coupled PV Backup

Keep your existing PV working — even when the grid is down.

System Diagram



Existing PV Retrofit

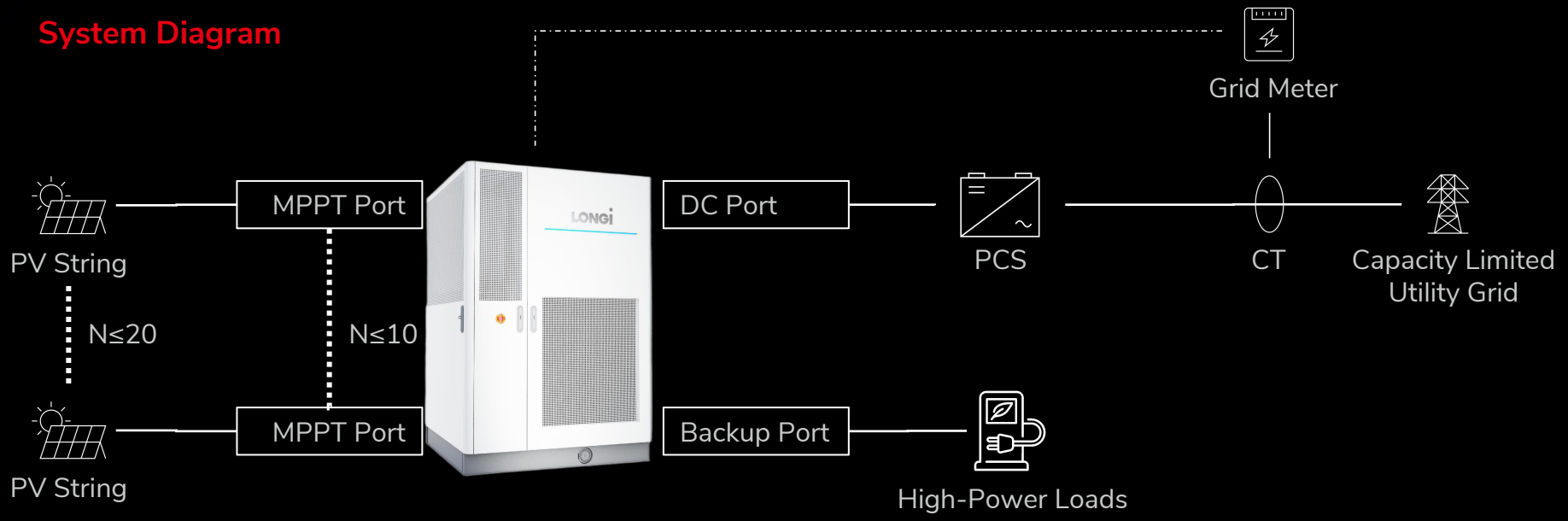
Integrate H2 with existing grid-tied PV systems through AC coupling, minimizing changes to the existing installation.

Smart Energy Management & Backup Power & Flexible Grid Interaction

H2 Reference Design 4 | Utility Grid Boost

Break through grid capacity limits with H2.

System Diagram



Utility Grid Boost

Combine limited grid capacity with H2 battery power to support loads beyond the available grid connection capacity.

High-Power Load Support

Supply high-power loads by dynamically combining power from the grid, PV and battery.

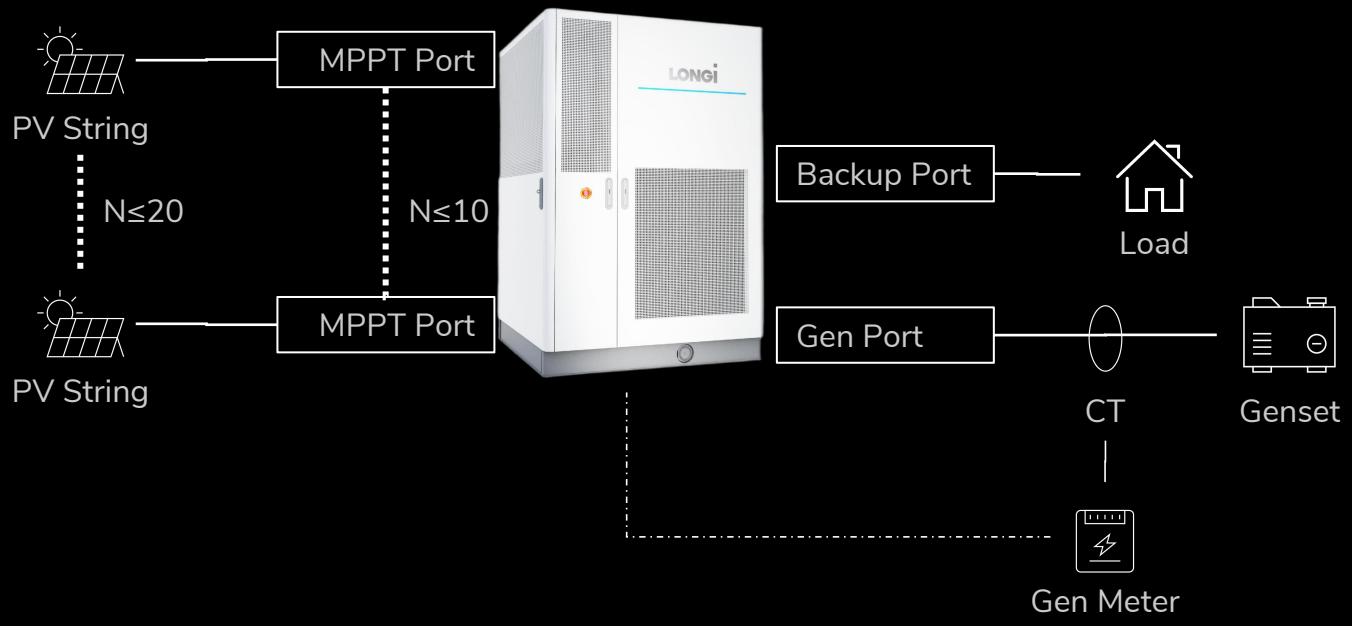
Avoid Grid Upgrades

Enable higher-power applications without costly and time-consuming utility grid capacity upgrades.

H2 Reference Design 5 | Off-Grid Hybrid Power

PV first, battery balancing, generator backup — reliable power anywhere.

System Diagram



Off-Grid Power Supply

Operate independently from the utility grid with H2 forming a stable microgrid for continuous power supply.

Renewable Energy Maximization

Prioritize PV generation and store excess solar energy to maximize renewable energy utilization and reduce generator dependency.

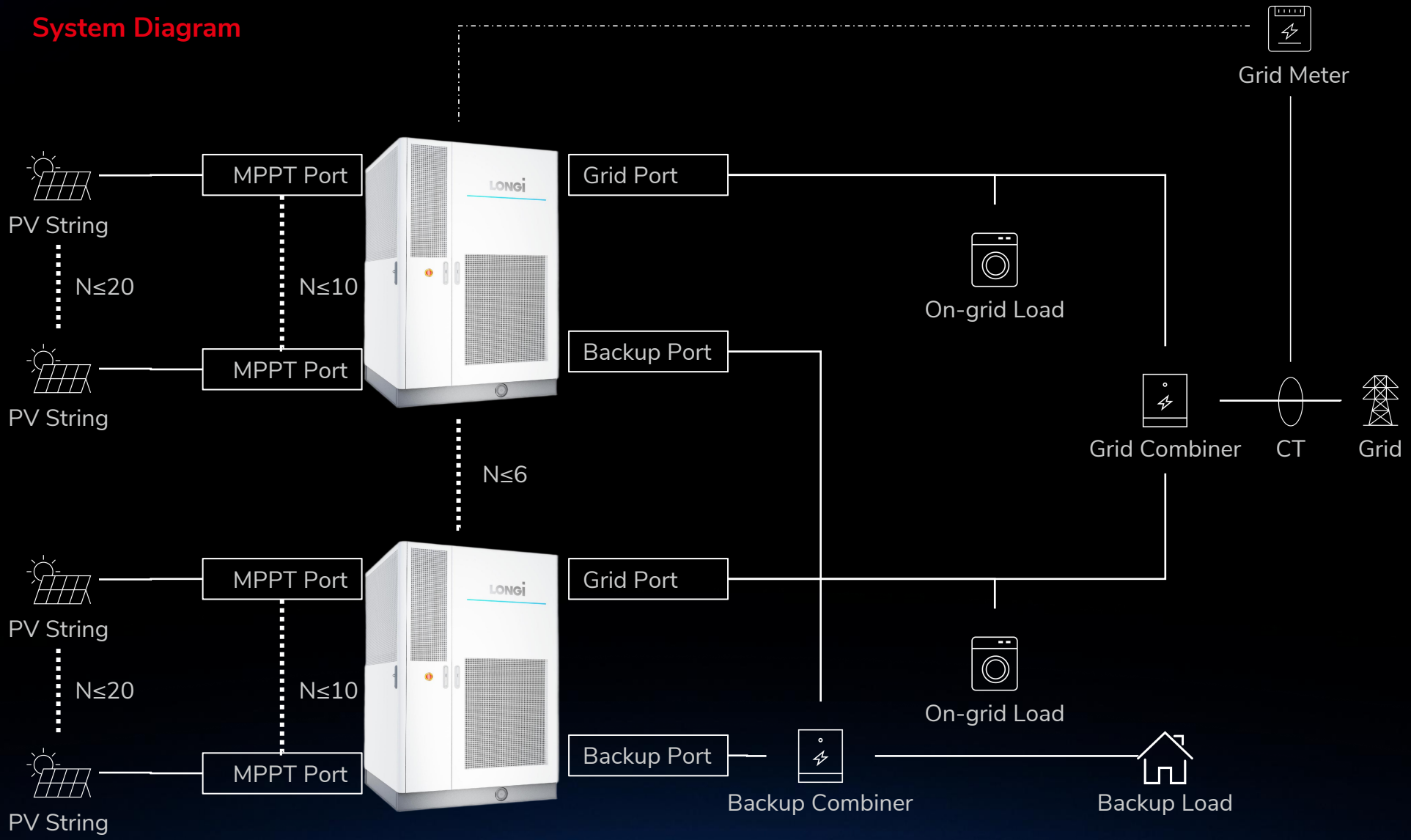
Smart Generator Coordination

Automatically start and stop the generator based on battery SOC, load demand and available PV power to ensure reliable long-duration operation.

H2 Reference Design 6 | Scalable Parallel System

Multiple H2 units, one flexible system — configure the right power and capacity for every project.

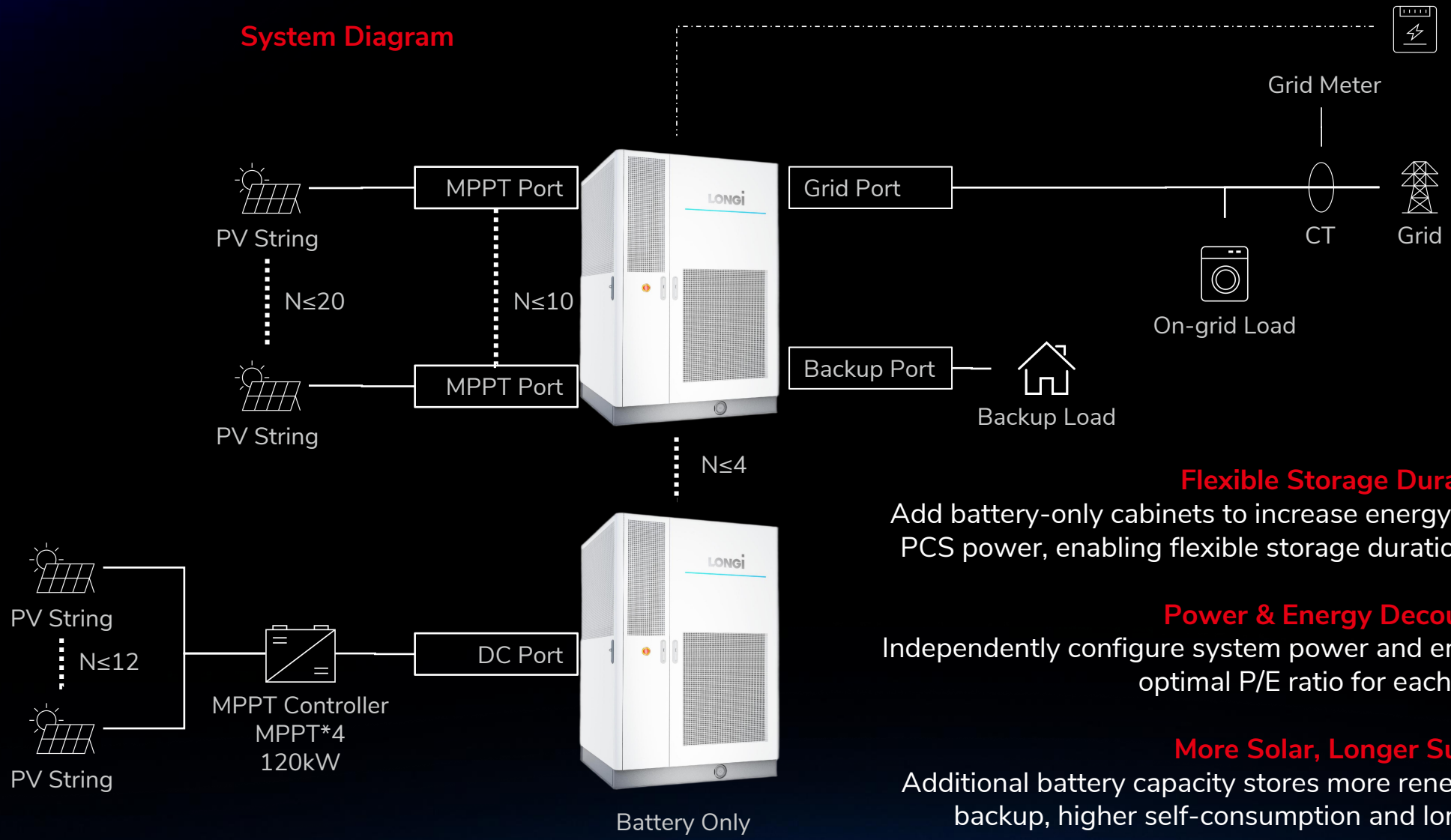
System Diagram



H2 Reference Design 7 | Flexible-Duration Energy Storage

Same power. More energy. Longer duration.

System Diagram



Flexible Storage Duration

Add battery-only cabinets to increase energy capacity without increasing PCS power, enabling flexible storage duration for different applications.

Power & Energy Decoupling

Independently configure system power and energy capacity to achieve the optimal P/E ratio for each project.

More Solar, Longer Supply

Additional battery capacity stores more renewable energy for extended backup, higher self-consumption and longer off-grid operation.

H2 Specification

Model	H2A	H2B	H2C	H2D
DC Input (PV)				
Max. PV Array Power [kWp]@STC	100		200	250
Max. DC Voltage [V]	1000			
MPPT Voltage Range [V]	150 ~ 850		150 ~ 950	
Rated DC Voltage [V]	600			
Start Voltage [V]	180			
Max. DC Input Current [A]	4*40		10*42	
Max. DC Short Circuit Current [A]	4*60		10*60	
MPPT Number/Max. Input PV Strings	4 / 8		10 / 20	
Battery Parameters				
Battery Type	$LiFePO_4$			
Rated Energy [kWh]	**104**	**156**	**208**	**261**
Max. Charging/Discharging Current [A]	157			
AC				
Rated Power [kW]	50	60	100	125
Rated Current [A]	72.2	86.6	144.3	180.4
Rated Voltage [V]	3+N+PE,380/400			
Rated Frequency [Hz]	50, 60			
On-off-grid Switch Time [ms]	10			
Total Harmonic Distortion [THDi]	<3%			
Connection	3+N+PE			

Model	H2A	H2B	H2C	H2D
Generator Input				
Rated Power [kW]	50	60	100	125
Rated Current [A]	76/72.2	157.5/150.6	151.9/144.3	189.9/180.4
Rated Voltage [V]	3+N+PE,380/400			
Rated Frequency [Hz]	50, 60			
Efficiency				
Battery Round-Trip Efficiency	≥93.5%			
Battery to AC Efficiency[@Rated Power]	≥98.0%			
General Parameters				
Communication	Wi-Fi/Ethernet/CAN/RS485			
Topology	Transformerless			
Operating Temperature Range	-25℃ ~ +60℃			
Cooling Method	Battery(Liquid Cooling), Inverter(Air Cooling)			
Ambient Humidity [%]	0 - 100(No Condensing)			
Altitude [m]	≤3000			
Corrosion Protection	≥C4			
Ingress Protection	IP55(System), IP66(Inverter)			
Dimensions [HxWxD] [mm]	2140 x 1312 x 1550		2140 x 1447 x 1550	
Weight [kg]	1,766	2,099	2,432	2,765
Certification	CE, UN38.3, IEC, UL9540A			
Packaging	7pcs per 40'HC / 3pcs per 20'GP			

ESS Product Line History

Investing in technology



2013

One of the earliest integrators to introduce BMS solutions in Canada



2015

One of the earliest integrators to introduce battery pack solution and advanced TMS



2016

The first ESS integration to introduce iCCS solution



2017

One of the earliest integrators to release EMS solution



2018

Introduced string PCS for C&I and all-in-one solution for C&I



2020

Introduced string PCS for utility scale

One of the earliest integrators released all-in-one solution for utility scale

Canada RD Center expansion



2021

To build the joint LAB for industry's highest-quality solar-storage solutions



2022

BC Solar Technology and BESS high efficiency coupling

2013 2015 2016 2017 2018 2020 2021 2022 2023 2024 2025 2026 2027

Early Tech Accumulation

Tech Revolution on Self-developed 5S

Upgrade on Full-scenario Solutions

Solar-storage Integration

Investing in capabilities

2015

PotisEdge founded, started BMS mass production



2017

65% of battery system market for GSE in airport



2018

Established first intelligent factory in China



2022

Over 1GWh/yr ESS products shipped



2023

Over 5GWh/yr ESS products shipped,

Top3 distributed BESS provider by shipment



2024

Recognized as a BNEF Global Tier 1 ESS Manufacturer

TOP 3 Global ESS Integrator (DC Side) by InfoLink

31GWh factory in Zhangjiagang, China



2025

Acquiring PotisEdge

30GWh factory to be SOP in Suzhou, China,

5GWh factory in Atlanta, US



2026

All-in-One CoE Network

A global full service platform, trusted partner for full-lifecycle project success



End-to-End Turnkey BESS Solutions Provider

LONGi is a globally recognized leader in energy storage system (ESS) integration, specializing in making solar energy dispatchable and grid-friendly. With over 10 years expertise in the BESS industry, LONGi combines patented 5S technologies (BMS, ICCS, EMS, TMS, PCS) and automotive-grade manufacturing standards to deliver high-performance, sustainable energy solutions worldwide.

13+ GWh

Global Products Delivered

100+ GWh

Planned Capacity by 2028

31 GWh

Existing Production Capacity



Utility-scale Solutions

C&I Solutions

Microgrid Solutions

Power Battery Solutions

Global Recognition by Authorized Institutions

Tier 1 BLOOMBERGNEF

Recognized by BloombergNEF as a Tier 1 ESS Supplier for 2024Q3 - 2026Q1

InfoLink CONSULTING | TOPS



1H25 Global shipment ranking by BESS integrators (DC side)

Rank	BESS integrator
1	CATL
2	BYD
3	Hithium
4	RelyEZ
5	LONGi PotisEdge

*Source: InfoLink's Global Energy Storage Supply Chain Database
*InfoLink strives for information comprehensiveness, but manufacturers' official data shall prevail in case of any discrepancies. InfoLink reserves the right of final interpretation and explanation of the data sources and research results.

LONGi ONE - a Full-stack Independent R&D Native Integration

LONGi ONE

One System

Full-stack in-house R&D PV & BESS Products redefine the core logic of PV-ESS systems.

One Platform

The Intelligent Collaborative Software Platform revolutionizes the value growth path of green energy assets.

One Responsibility

The turnkey solution and integrated O&M services reframe the trust boundary for energy cooperation.

Global Footprint



- 2 Paris, France
- 5 Frankfurt, Germany
- 6 Madrid, Spain
- 10 Dubai, UAE
- 14 Jönköping, Sweden
- 15 Warsaw, Poland
- 16 Brescia, Italy
- 18 Johannesburg, South Africa

- (1) London, Uk
- (2) Paris, France
- (3) Rotterdam, Netherlands
- (4) Mouscron, Belgium
- (5) Frankfurt, Germany
- (6) Madrid, Spain
- (7) Brescia, Italy
- (8) Jönköping, Sweden
- (9) Warsaw, Poland
- (10) Shalanky, Ukraine
- (11) Kaposvár, Hungary
- (12) Bucureşti, Romania
- (13) Athens, Greece
- (14) Mogilev, Belarus
- (15) Istanbul, Turkey

- 1 Xi'an, China
- 2 Shanghai, China
- 3 Tokyo, Japan
- 4 NC Delhi, India
- 7 Sydney, Australia
- 11 Suzhou, China
- 17 Melbourne, Australia

- (16) Sydney, Australia
- (17) Melbourne, Australia

- 1 Xi'an / Xianyang · Shaanxi
- 2 Ordos, Inner Mongolia
- 3 Yinchuan and Zhongning, Ningxia
- 4 Datong, Shanxi
- 5 Hainan Prefecture , Qinghai
- 6 Taizhou and Wuxi, Jiangsu
- 13 Suzhou, China(ESS)
- 7 Chuzhou and Wuhu , Anhui
- 8 Quzhou and Jiaxing , Zhejiang
- 9 Baoshan, Lijiang, Chuxiong, Tengchong, and Qujing , Yunnan
- 10 Bắc Giang, Vietnam
- 11 Kuching and Selangor, Malaysia

- 1 Xi'an, China
- 2 Suzhou, China

- 8 San Ramon, USA
- 9 São Paulo, Brazil
- 12 Vancouver, Canada
- 13 L.A., USA

- (18) Atlanta, USA
- (19) L.A., USA
- (20) Houston, USA

- 12 Ohio, the United States
- 14 Atlanta, the United States(ESS)

- 3 Vancouver, Canada

Sales & marketing centers

CoE service hubs
- X In operation
- (X) Planned

Production bases

R&D Center