

HYBIRD INVERTER ALL-IN-ONE ESS

Single Phase

→ iPower HES1-3K/3K6/4K6/5K/5K5/6K S2



01 All-in-one, Plug-and-Play Design



Modular Design

Modular Stack Design for Flexible Pairing

Scale your storage as your needs grow

Interface Design

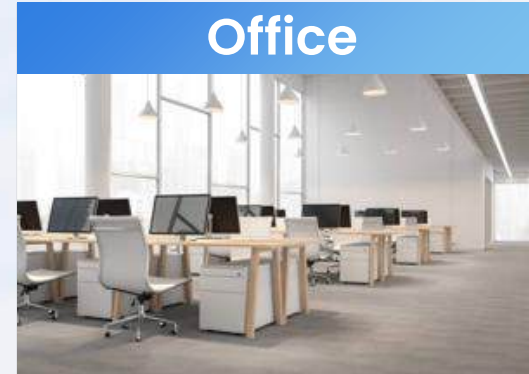
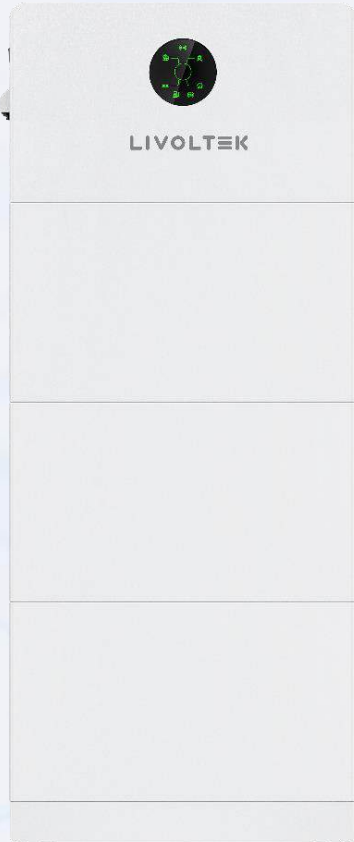
Grid, battery, generator, and multi-protocol communication interfaces.

Lower Operational Complexity, Higher Efficiency

Display Design

Real-Time Visual Status Display

Monitor with clarity. Control with confidence



Application Scenario

- Cafe / Coffee Shop
- Clinic
- Studio

- Hair Salon
- Restaurant
- Hotel

- Villa
- Training Center

High Performance

01

- 200% PV oversizing with 210mm modules maximizes yield
- 70V low start voltage for earlier power generation
- Up to 12 kW PV input, supporting 200% of rated capacity.
- Ultra-quiet <35 dB for a seamless, silent home experience.

Intelligent Control

03

- Seamless switching <10 ms for uninterrupted backup.
- 6-period, 24/7 scheduling maximizes savings.
- Integrated PV & storage with ECO mode.
- Smart heat pump control uses surplus PV energy.
- Smart CT metering for cost-efficient, fast installation.

High Reliability

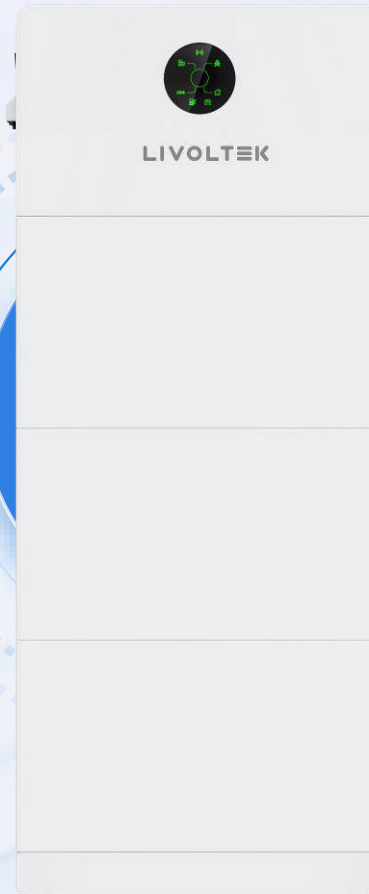
02

- Supports 200% overload for 10s under peak demand.
- IP66 protection ensures reliable operation in humid conditions.
- Built-in battery heating maintains performance in extreme cold.
- No Power Derating at 45°C

Flexible Expansion

04

- Plug-and-play design enables fast installation.
- Expandable battery capacity up to 35 kWh per unit.
- Up to 2 units in parallel, delivering 12 kW output and 70 kWh storage.



01

High Performance

02

High Reliability

03

Intelligent Control

04

Flexible Expansion

01 Maximize Your Power Generation Revenue

LIVOLTEK



PV Oversizing
200%



Start-up Voltage
70V



Max. PV Current per MPPT
18A / 18A Up to 12kW (6kW x 2)



AC Grid Input Current
60A

LIVOLTEK

200% PV Oversizing

Extends daily operation by 2-3 hrs

70V Low-Voltage Startup

Boosts output on cloudy days by 30-50%

18A Max. per MPPT

Increases yield by up to 15% with high-power panels

60A AC Grid Input Current

High-power input for demanding loads



VS

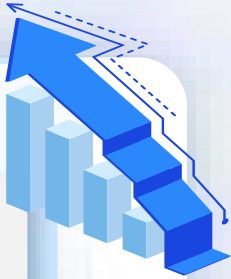
Others

150% PV Oversizing

150V Low-Voltage Startup

16A Max. per MPPT

27.3A AC Input Current



Compatible with All Mainstream Modules



156 Module



182 Module



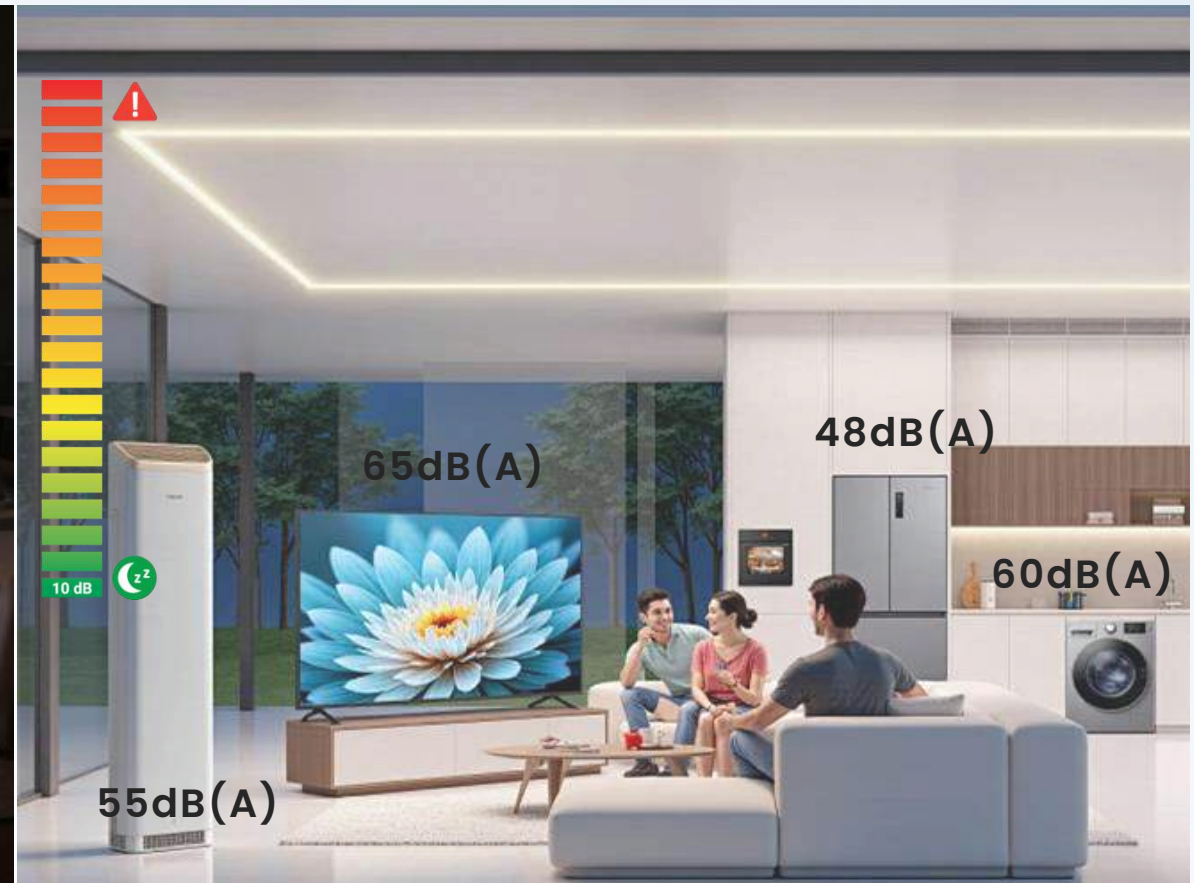
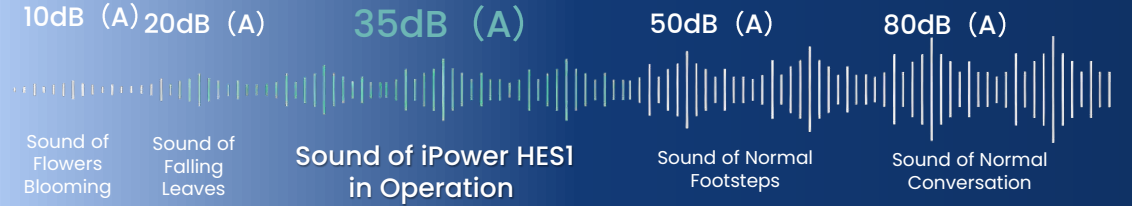
210 Module



210R Module

02 Silent Power for Quality Living

True silence lets you sleep undisturbed



01

High Performance

02

High Reliability

03

Intelligent Control

04

Flexible Expansion

01 Ready for Any Weather

LIVOLTEK



200% Overload Capacity

- ◆ 200% instant surge power for 10 seconds — turning blackouts into seamless transitions
- ◆ No Power Derating at 45°C.



IP66 Protection Rating

- ◆ Dust-tight & water-resistant—ensures stable operation in harsh conditions.



Low-Temp Heating

- ◆ Equipped with a low-temperature heating function, enabling charging in cold environments.

*Note: The battery can charge and discharge normally after self-heating to 15°C.

01

High Performance

02

High Reliability

03

Intelligent Control

04

Flexible Expansion

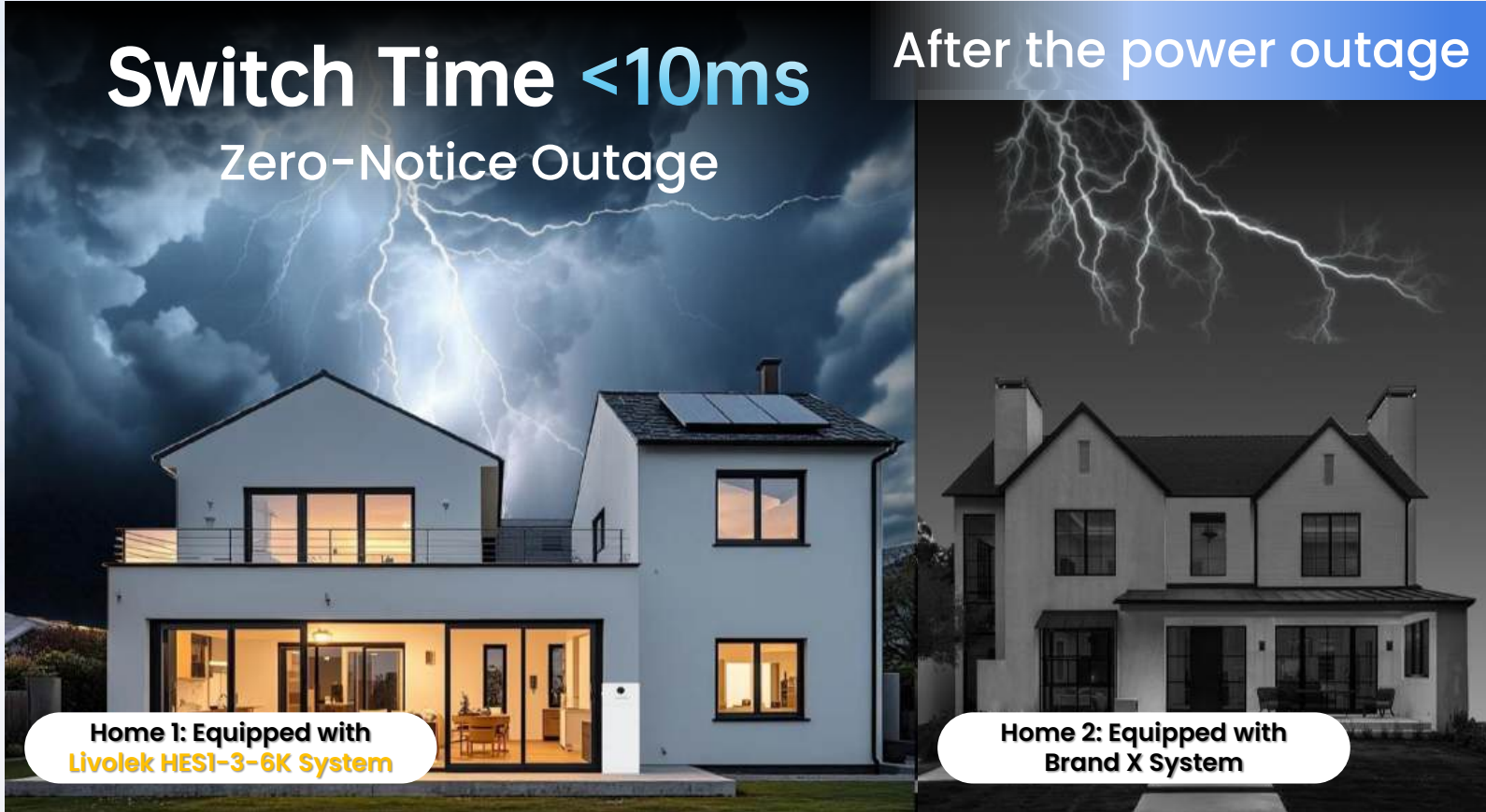
01 Reliable backup for power outages

LIVOLTEK

Switch Time <math>< 10\text{ms}</math>

Zero-Notice Outage

After the power outage



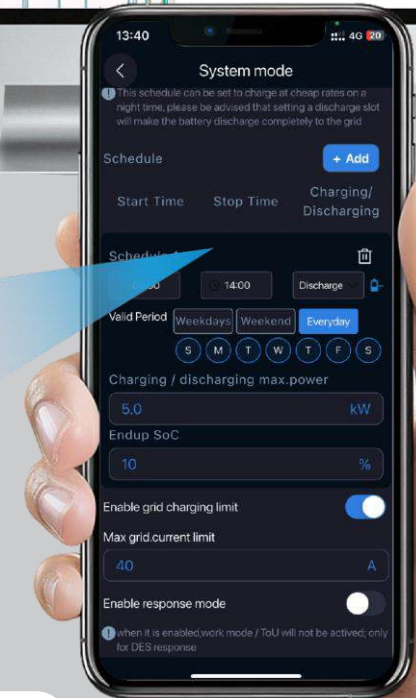
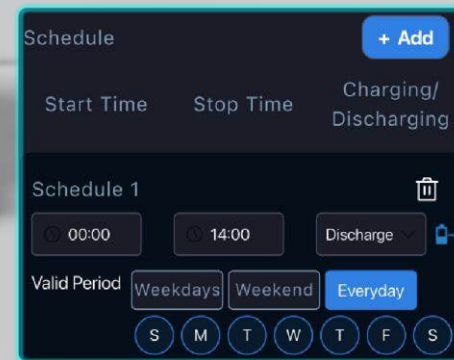
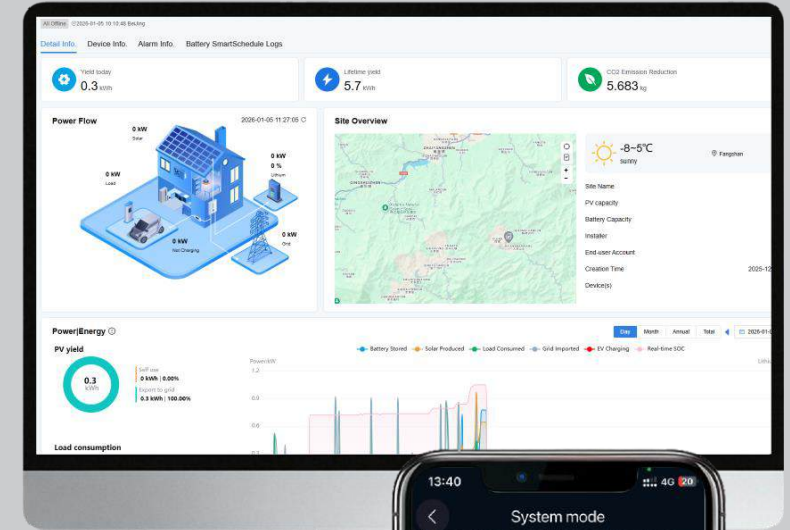
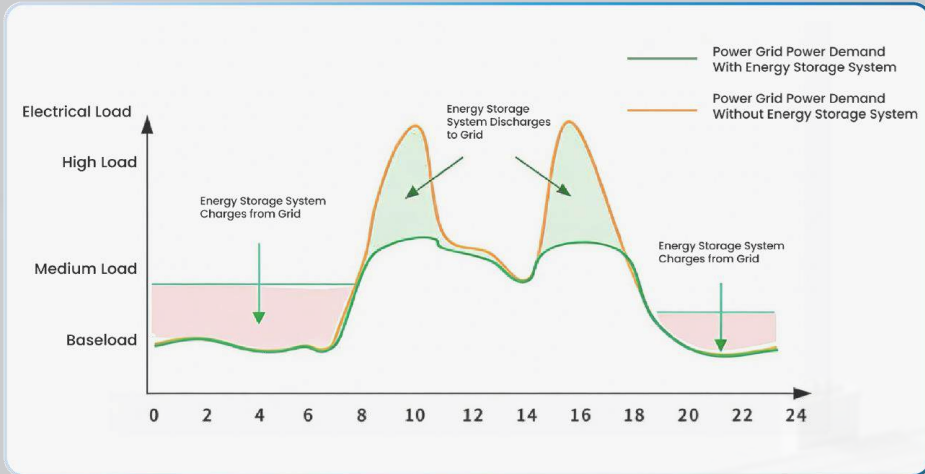
Before the power outage



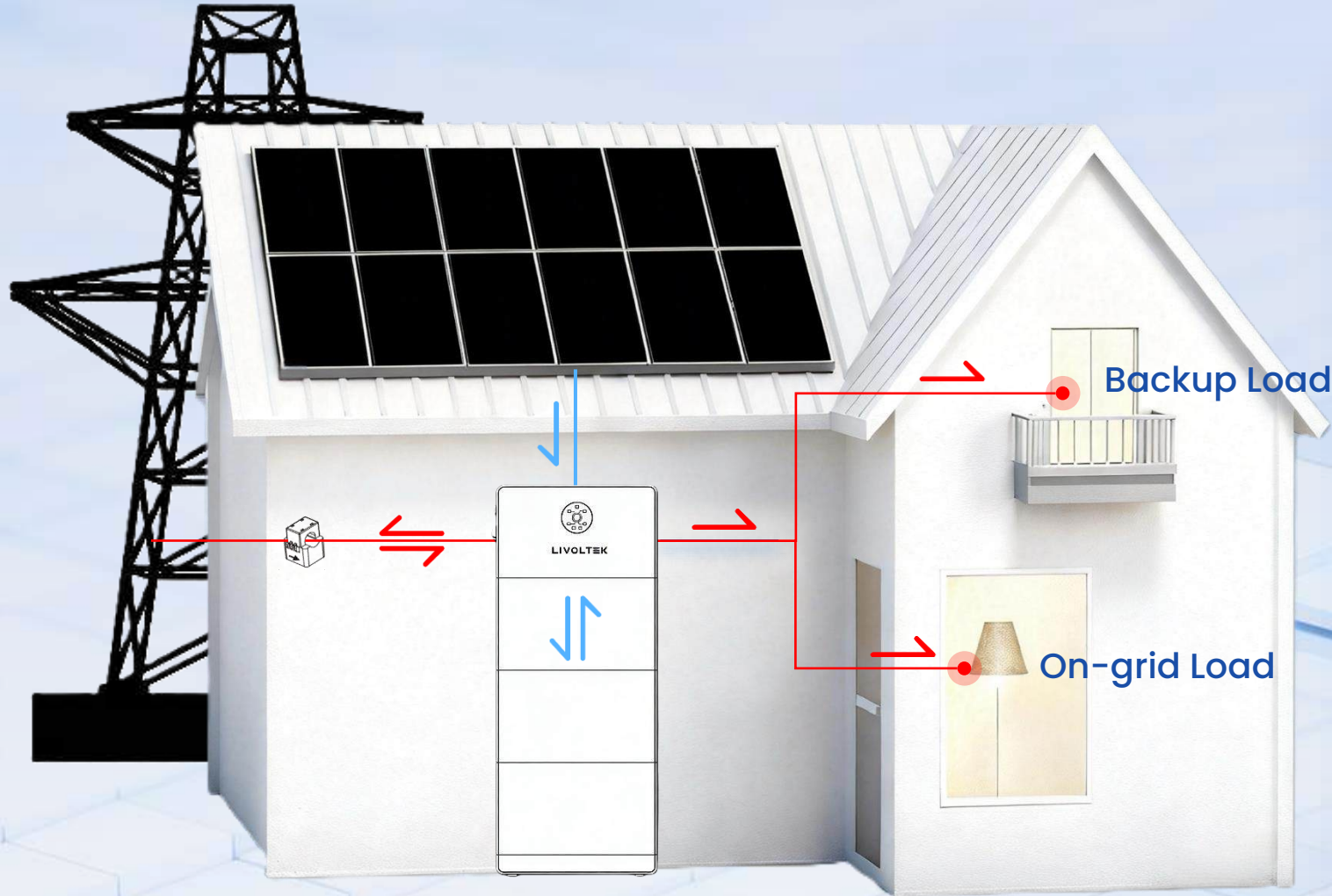
Home 1: Equipped with
Livolek HES1-3-6K System

Home 2: Equipped with
Brand X System

02 Energy at Your Fingertips



03 Residential Storage System



Greater Power, Better Return



Power Through Anything

13.8kW max grid support keeps your home running smoothly, no matter the load.



Smarter Metering, Simpler Savings

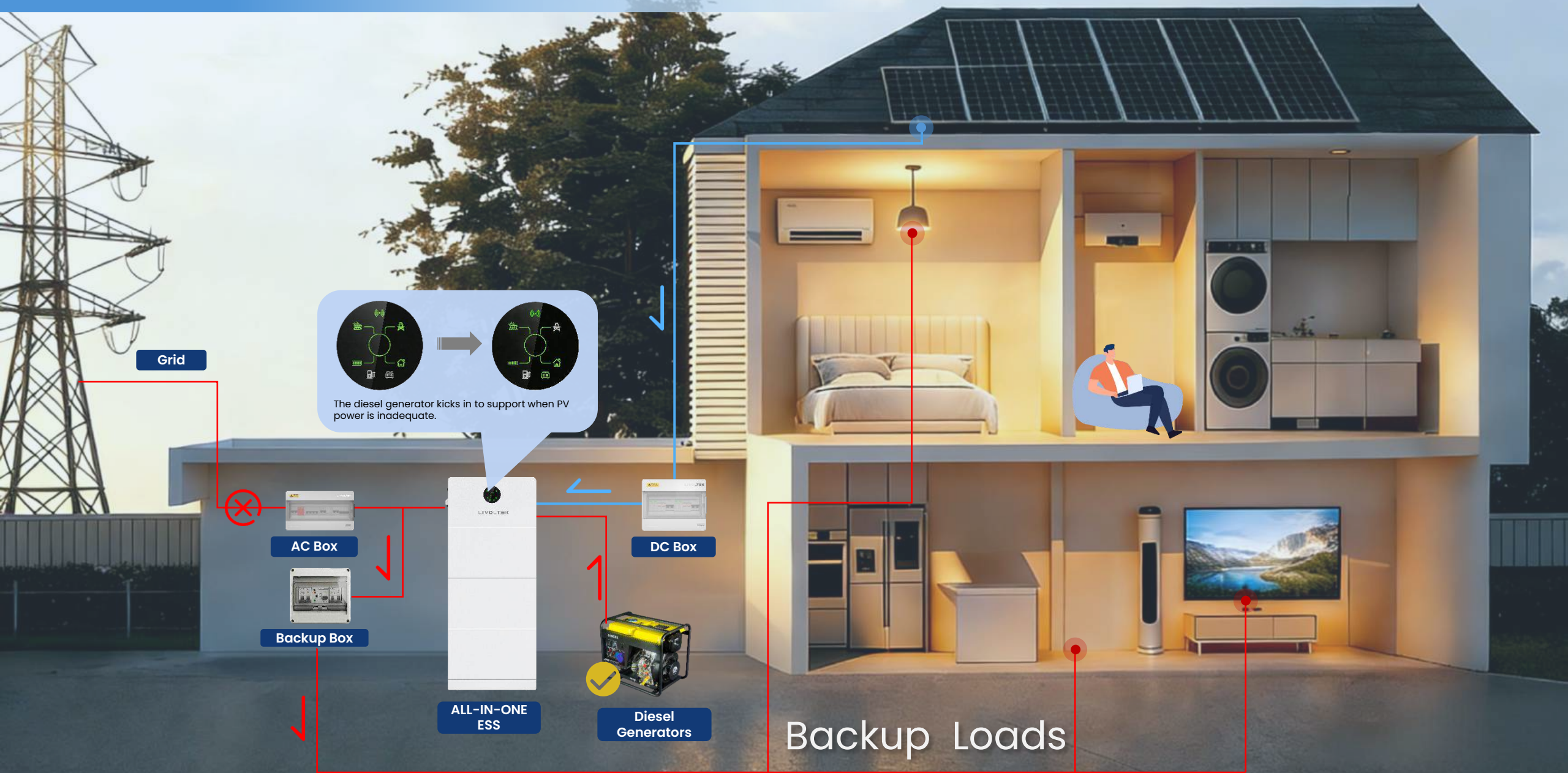
CT-based smart monitoring enables peak shaving & zero feed-in—easier install, better value.



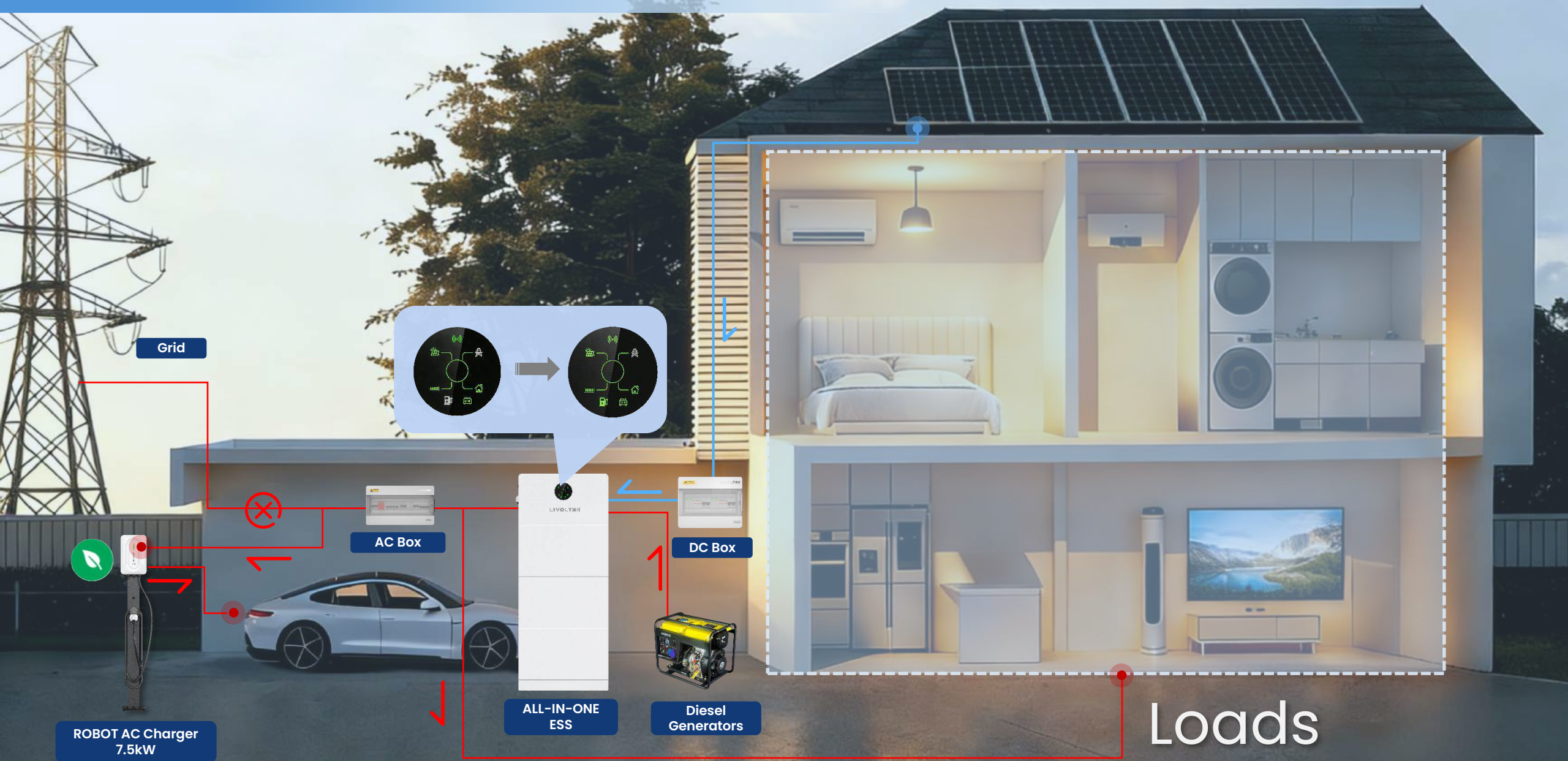
Double Solar, Double Value

200% PV oversizing lets you store energy for home and sell the rest.

Off-Grid Solution — Whole-House Backup Power

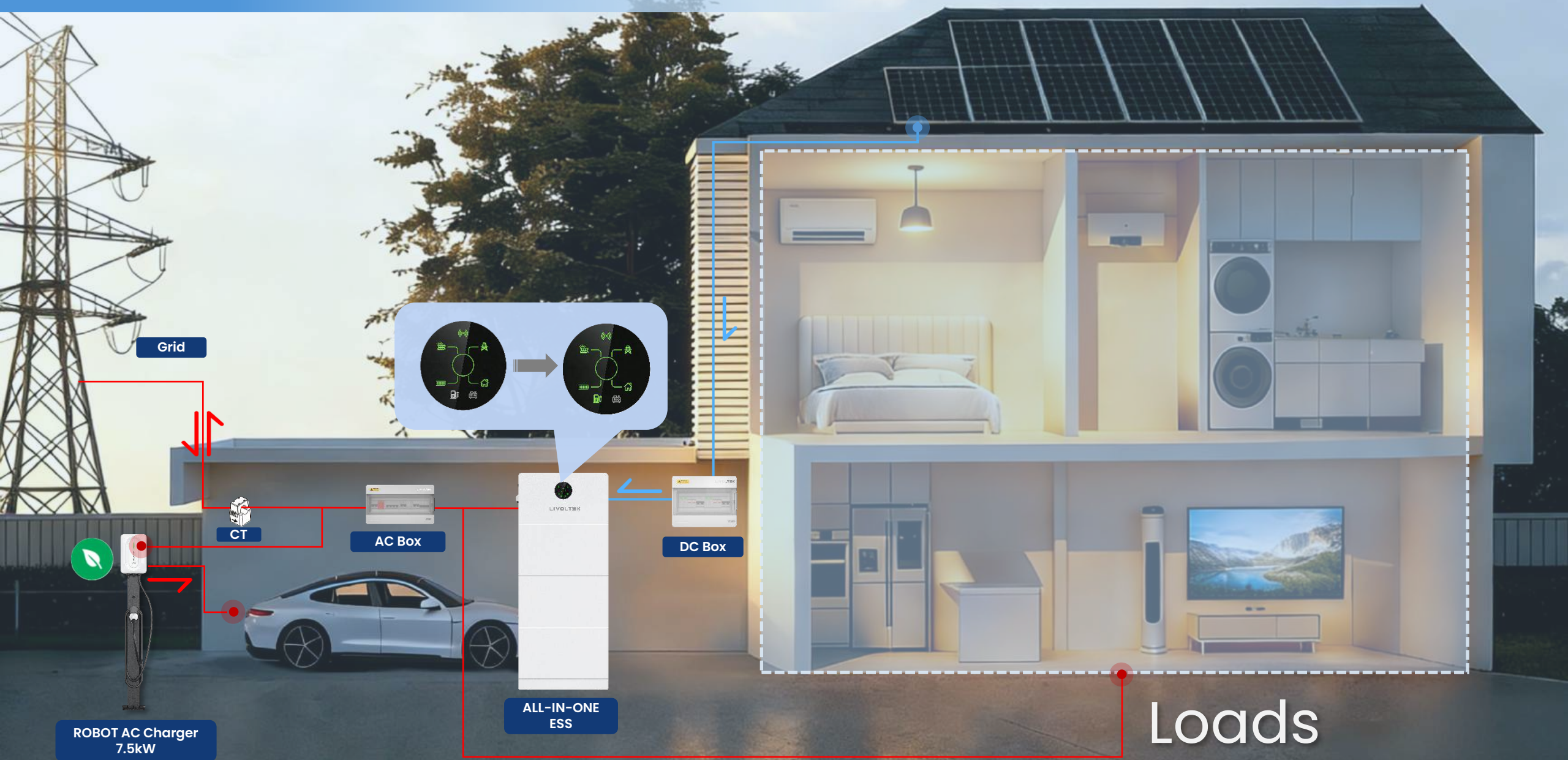


Off-Grid Solution — Diesel Generator Power



Loads

On-Grid Solution — Intelligent Load Synergy (EV Charger)





On-Grid Solution – Intelligent Load Synergy (Heat Pump)



01

High Performance

02

High Reliability

03

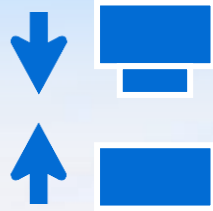
Intelligent Control

04

Flexible Expansion

01 Quick-Connect for Easier Stacking and Installation

LIVOLTEK



Spirit Level



Built-in Spirit Level & Adjustable Feet:
For quick, level installation on any surface.

◆ Plug & Play, Cable-Free

No communication or power cables between modules—simply plug in for easier operation.

◆ Eliminates Wiring Errors

Modular plug-in design eliminates human error for precise, stable connections.

◆ 50% Faster Installation

Drastically cuts installation time vs. traditional wiring.

Installation Done in

15
Minutes

02 Supports Individual Pack Operation & Maintenance

Drastically Reduce Maintenance & Upgrade Expenses

Compatible with Same-Version, Different-Lot Battery Packs



Industrial-Grade LFP Battery

Safer, More Stable

- Built-in Active Fire Prevention Module
- Independent BMS per Battery Pack
- IP65 Rated for Dust & Water Resistance
- Low-Temperature Auto-Heating Function

*Note: Ensure all battery packs reach 100% State of Charge (SOC) before mixing.



03 Flexible Installation Options for More Choices

LIVOLTEK

Wall-Mounted



Floor-Mounted



System Scalable

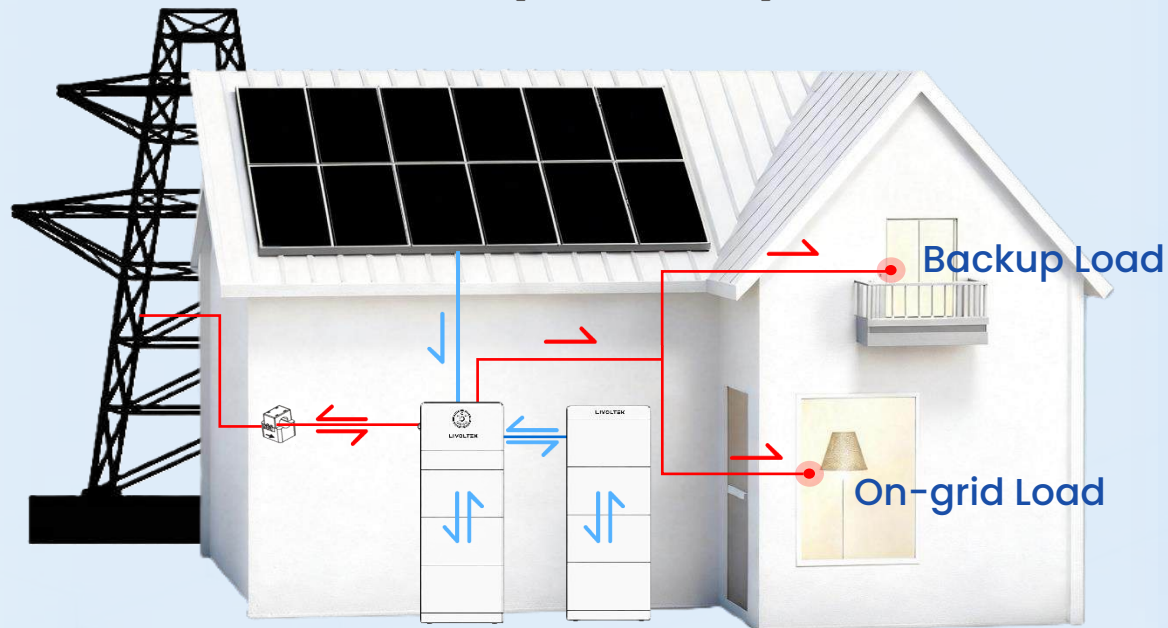


Supports parallel connection, flexible storage capacity

1 HES1-3-6K can support 7 BLF-PR battery packs in parallel

Supports battery expansion to power more loads

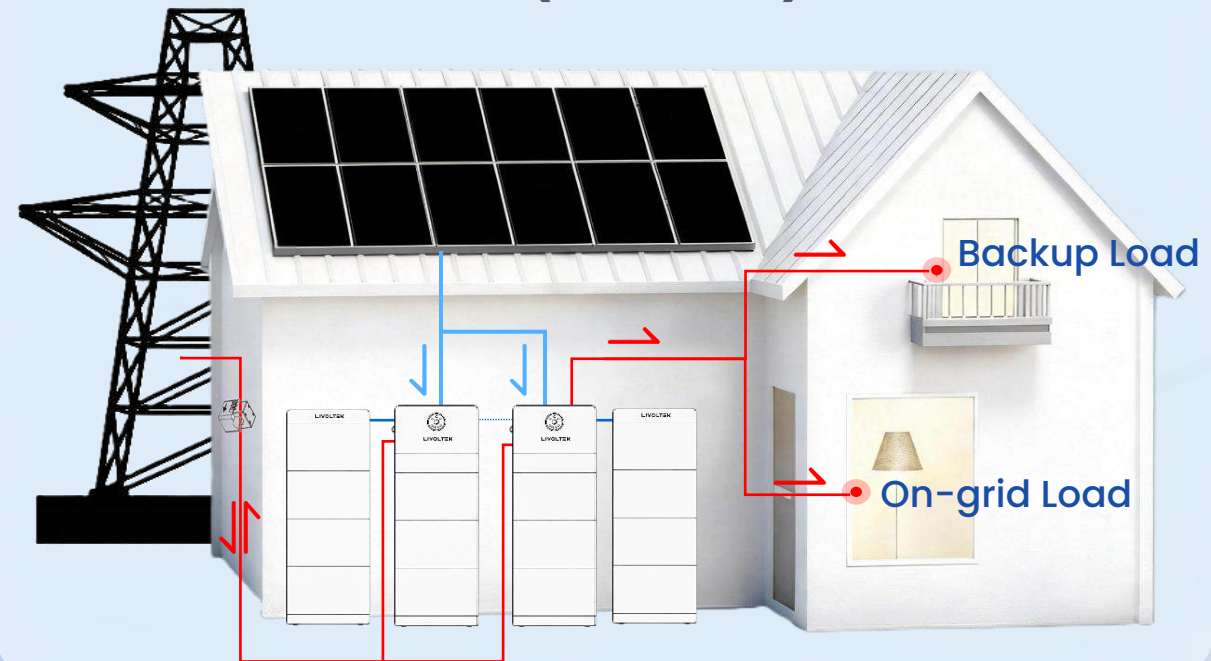
6kW+(5~35kWh)



Supports 2 HES1-3-6K can connected in parallel

Supports parallel connection, flexible storage capacity

12kW+(5~70kWh)



*Note: Parallel Operation (Coming Soon): This feature is currently in development and will be released soon.

Technical Specification

ALL-IN-ONE ESS

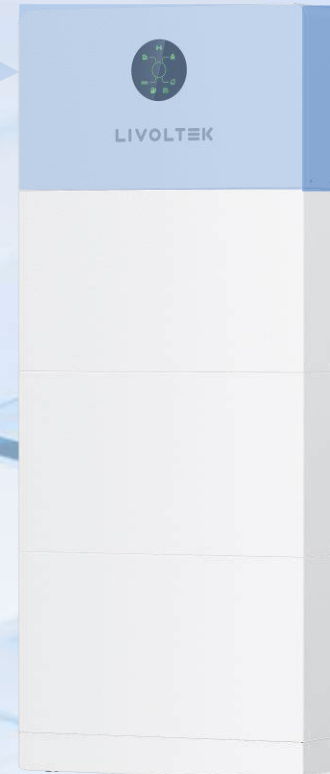
iPower HES1-3K/3K6/4K6/5K/5K5/6K S2 HES1-1K5/3KL2

INVERTER

Model	HES1-3KS2	HES1-3K6S2	HES1-4K6S2	HES1-5KS2	HES1-5KS2C	HES1-5K5S2	HES1-6KS2
PV Parameters							
Max. PV Input Power(kW)	6	7.2	9.2	10	10	11	12
Max. PV Input Voltage(V)	500						
Nominal Input Voltage(V)	370						
MPPT Voltage Range(V)	60-500						
Start-up Voltage (V)	70						
No. of MPPTs/Strings per MPPT	2/1	2/1	2/1	2/1	2/1	2/1	2/1
Max.PV Current (A) per MPPT	18/18	18/18	18/18	18/18	18/18	18/18	18/18
Max. Short Circuit Current (A) per MPPT	22/22	22/22	22/22	22/22	22/22	22/22	22/22
AC Parameters @ Grid							
Nominal AC Output Power (kW)	3	3.68	4.6	5	5	5.5	6
Max.apparent output power (kVA)	3.3	4	5	5.5	5	6	6.6
Max. AC Input Power (kW)	13.8	13.8	13.8	13.8	13.8	13.8	13.8
Nominal AC Voltage (V)	L/N/PE, 220/230/240						
AC Frequency (Hz)	50/60, 45-55 / 55-65						
Rated Output Current (A)	13.6@220V 13@230V	16.7@220V 16@230V	20.9@220V 20@230V	22.7@220V 21.7@230V	22.7@220V 21.7@230V	25@220V 23.9@230V	27.3@220V 26.1@230V
Max. Output Current (A)	15@220V 14.4@230V	18.4@220V 17.6@230V	23@220V 22@230V	25@220V 23.9@230V	22.7@220V 21.7@230V	27.5@220V 26.3@230V	30@220V 28.7@230V
Max.Input Current (A)	60						
THDI,Rated Power(%)	<3						
Power Factor	~1 (0.8 lagging to 0.8 leading)						
AC Parameters @ Generator							
Max. AC Input Power (kW)	9.2	9.2	9.2	9.2	9.2	9.2	9.2
Nominal AC Voltage (V)	L/N/PE, 220/230/240						
AC Frequency (Hz)	50/60, 45-55 / 55-65						
Backup Parameters @ Off Grid							
Nominal Backup Power (kW)	3	3.68	4.6	5	5	5.5	6
Backup Peak Power @10s (kW)	2 times of rated power, 10s						
Nominal Output Voltage (V)	L/N/PE, 220/230/240						
Nominal Frequency (Hz)	50/60, 45-55 / 55-65						
Nominal Output Current(A)	13.6@220V 13@230V	16.7@220V 16@230V	20.9@220V 20@230V	22.7@220V 21.7@230V	22.7@220V 21.7@230V	25@220V 23.9@230V	27.3@220V 26.1@230V
THDv,Rated Power(%)	<3						
Switch time	<10ms						

INVERTER

Model	HES1-3KS2	HES1-3K6S2	HES1-4K6S2	HES1-5KS2	HES1-5KS2C	HES1-5K5S2	HES1-6KS2
Battery Parameters							
Battery Type	Lithium-ion						
Battery Voltage Range (V)	40-60						
Max. Charge/Discharge Current (A)	125						
Efficiency							
Max. Efficiency(%)	97.6						
Euro Efficiency(%)	96.8						
Min. Efficiency @30% Rate Power(%)	93						
General Data							
Topology	Transformerless						
Dimension W*H*D(mm)	680*1388.4*200@6kW+10kWh (inverter: 680*405*200; battery: 680*431.2*198)						
Weight (kg)	28						
Warranty	5 Years/10 Years the Warranty Period Depends the Final Installation Site of inverter,more info Please Refer to Warranty Policy						
Noise(Typical)	<35dB						
Altitude	2000m						
Cooling	Natural cooling						
Protection Rating	IP66						
Mounting Method	wall or floor mounting						
Operating Temperature Range(°C)	-25 --+60(>45 Derating)						
Ambient Humidity(%)	0-100(Non-condensing)						
Display	LED &APP&Web						
Scalability	2						
Surge Protection Level	TYPE II(DC), TYPE II(AC)						
Over Voltage Category	OVC II(DC), OVC III(AC)						
AFCI	Optional						
Protection	PV Reverse Polarity Protection/Battery Reverse Polarity Protection/Anti-islanding Protection/AC Overcurrent Protection/AC Overvoltage Protection						



Technical Specification

LOW-VOLTAGE RESIDENTIAL BATTERY BLF-SR05-35

BATTERY

Model	BLF-SR05	BLF-SR10	BLF-SR15	BLF-SR20	BLF-SR25	BLF-SR30	BLF-SR35
Component	1*Base+1*Module	1*Base+2*Modules	1*Base+3*Modules	2*Bases+4*Module s+1*Junction Box+1*Combiner Box	2*Bases+5*Module s+1*Junction Box+1*Combiner Box	2*Bases+6*Module s+1*Junction Box+1*Combiner Box	2*Bases+7*Module s+1*Junction Box+1*Combiner Box
Cell Type	LFP						
Nominal Voltage	51.2V						
Operating Voltage Range	43.2V-57.6V						
Battery Pack Module	51.2V 100Ah 5.12 kWh						
Pack Number	1	2	3	4	5	6	7
Total Energy	5.12kWh	10.24kWh	15.36kWh	20.48kWh	25.6kWh	30.72kWh	35.84kWh
Rated Capacity	100Ah	200Ah	300Ah	400Ah	500Ah	600Ah	700Ah
Max. Power	5.8KW	7.68KW	7.68KW	7.68KW	7.68KW	7.68KW	7.68KW
Depth of Discharge	0.9						
Max. Charge/Discharge Current	85A/100A	150A/150A	150A/150A	150A/150A	150A/150A	150A/150A	150A/150A
Operating Temperature	Charge: 0°C - 60°C; Discharge: -10°C - 60°C						
Operating Humidity	5% - 95%						
Storage Temperature	-20°C to +60°C						
Operating Attitude	< 4000m						
Communication	RS485 / CAN						
Cooling Type	Natural Cooling						
Ingress Protection	IP65						
Installation Location	Wall-mounted / Ground-mounted						
Cycle Life	6000 Cycles[2]						
Dimension(W*D*H)	680*198*552.2 mm	680*198*983.4mm	680*198*1414.6mm	680*198*1183.4mm + 680*198*1091.9mm	680*198*1614.6mm + 680*198*1091.9mm	680*198*1614.6mm + 680*198*1523.1mm	680*198*1614.6mm + 680*198*1954.3mm
Weight	58.5 kg	109 kg	159.5 kg	227.4 kg	277.9 kg	328.4 kg	378.9 kg

[1]. Systems with 1 inverter and >3 battery packs require a parallel box and dedicated parallel terminals.
[2]. Test conditions: 0.5C Charge/0.5C Discharge, @25°C, 90% DOD, 70% EOL.

