

EP CUBE

More Flexible, More Intelligent Residential Energy Storage System



Cost-saving

With all-in-one design, EP Cube makes big savings in terms of the time and cost of installation. The device stores and uses clean PV electric energy which reduces reliance on the grid, saving utility costs and abating carbon emissions.

Power guarantee

EP Cube detects grid outages and always stays prepared, providing your home with power backup. High-power electrical appliances will function normally even if the grid goes down.



Flexible and convenient

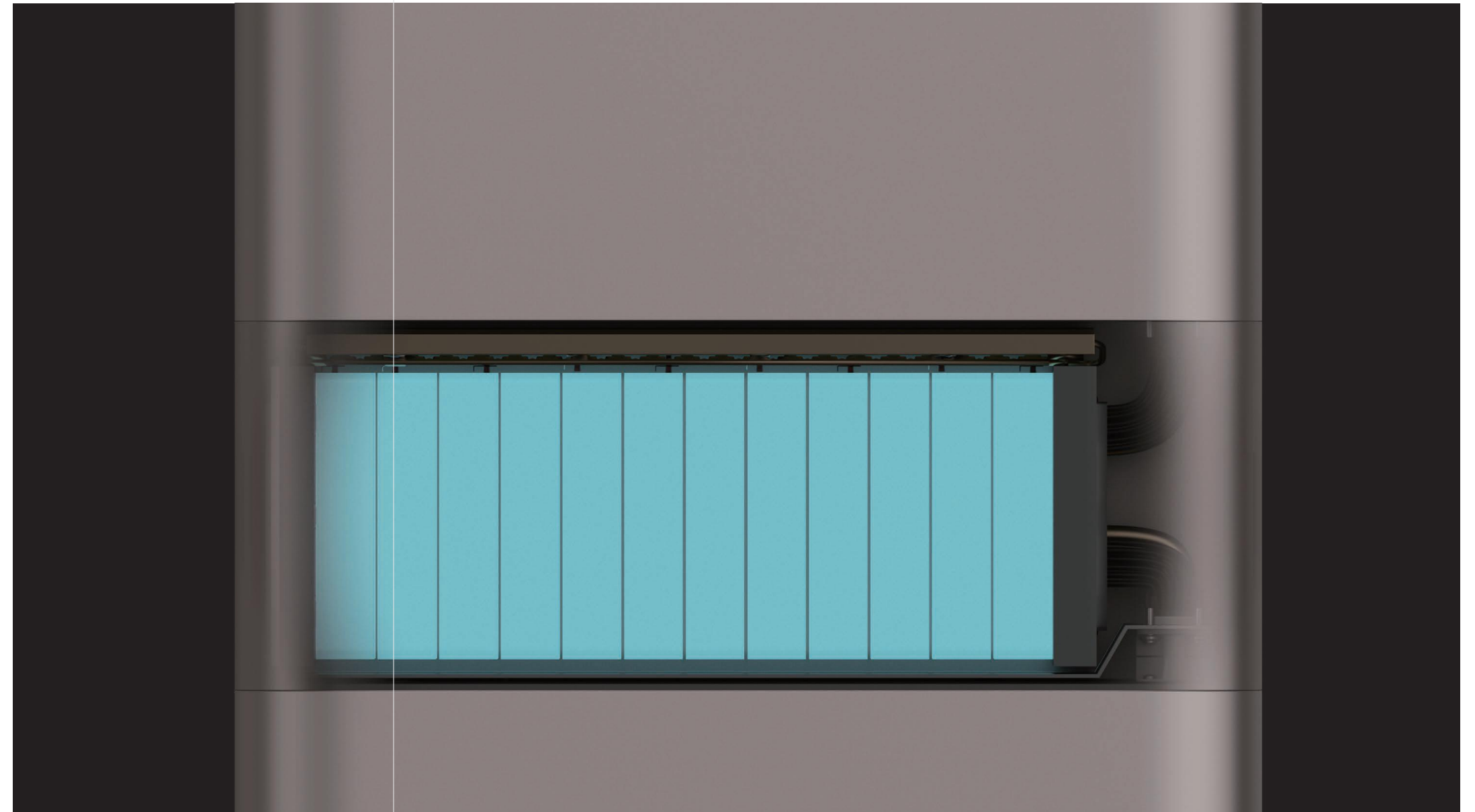
EP Cube batteries adopt modularized design. Each battery module can store 3.33 kWh energy and weighs roughly 35 kg, meaning easier transportation and installation. With the stackable modular design, energy capacity goes from 6.6 kWh to 19.9 kWh, making it versatile for a wide range of residential electricity demands.



*These data are rounded. Please refer to the technical specifications.

Safe and reliable

EP Cube batteries adopts reliable lithium iron phosphate chemistry, all-in-one design with IP 65 protection, IEC certification*, along with ten year warranty. Making it safer and more reliable with multiple quality guarantees.



* Certification still in progress.

Compatibility

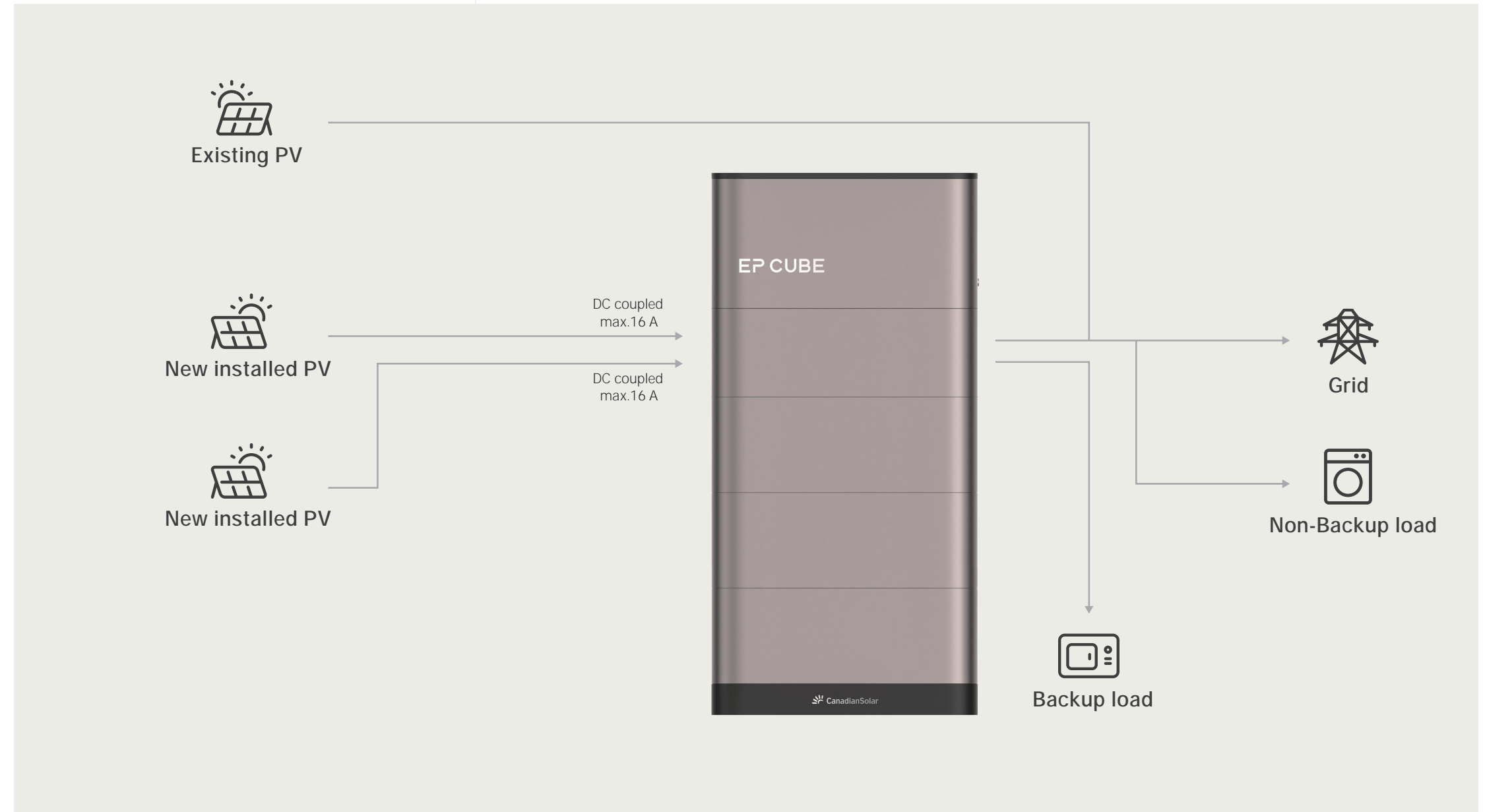
The EP Cube hybrid inverter has 2 MPPT inputs that can take in up to 16 A DC-coupled PV each. Besides the AC input from the existing PV system and the grid; it also supports the functionality of maximum 7.4 kW EV chargers*.



* Currently under development.

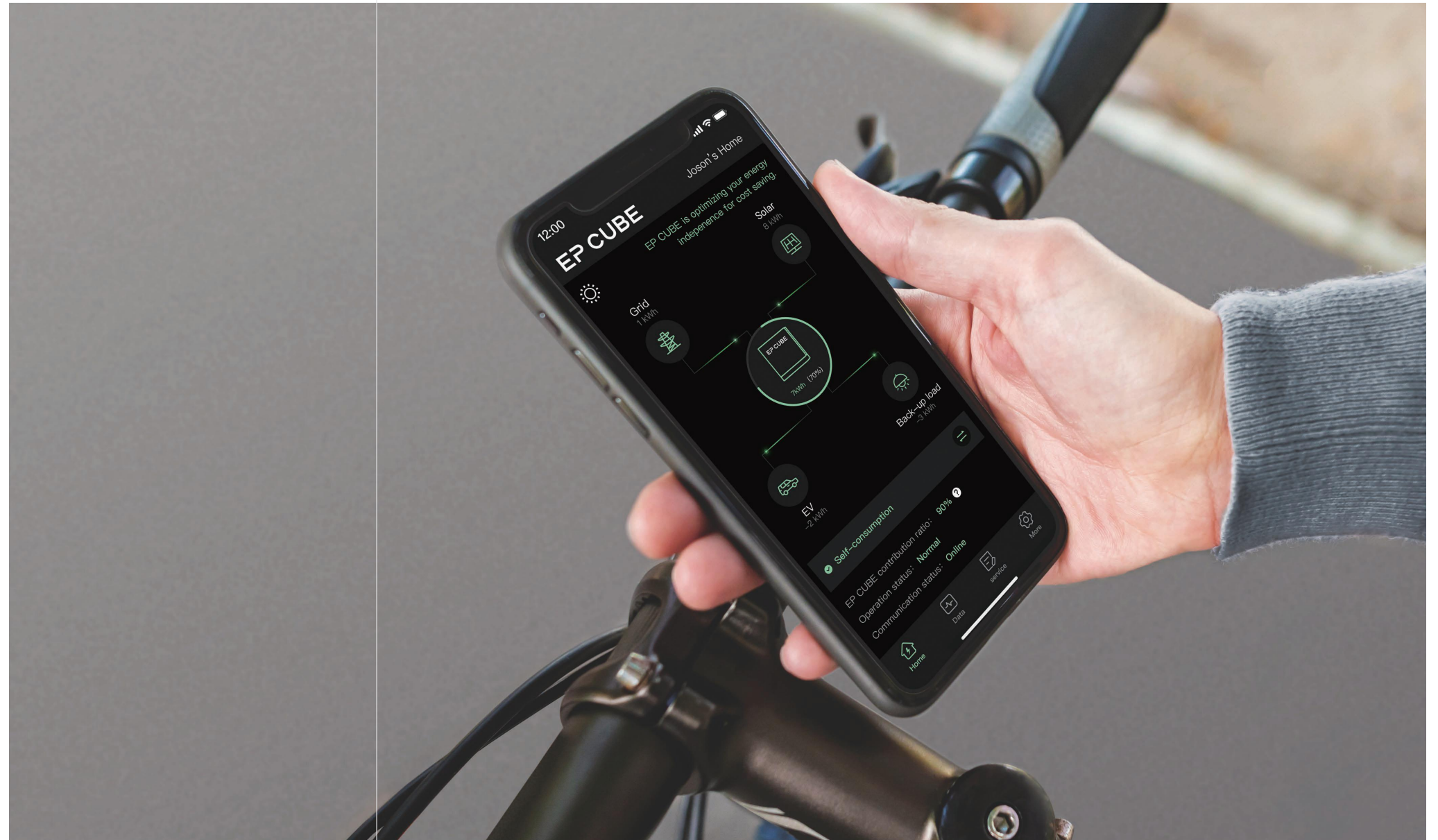
Complete Residential energy solutions

EP Cube considers your needs from various dimensions such as power generation, power storage and power consumption. It aims to help you store and use clean energy efficiently, reduce dependence on the grid, save money and reduce carbon emissions.



Intelligent management

EP Cube can be connected to WiFi and Ethernet. With EP Cube App, you can easily monitor generation, storage and consumption of residential electricity in real time; it gives a heads-up before extreme weather sets in; in addition, it also allows OTA(Over-the-Air)firmware upgrade.

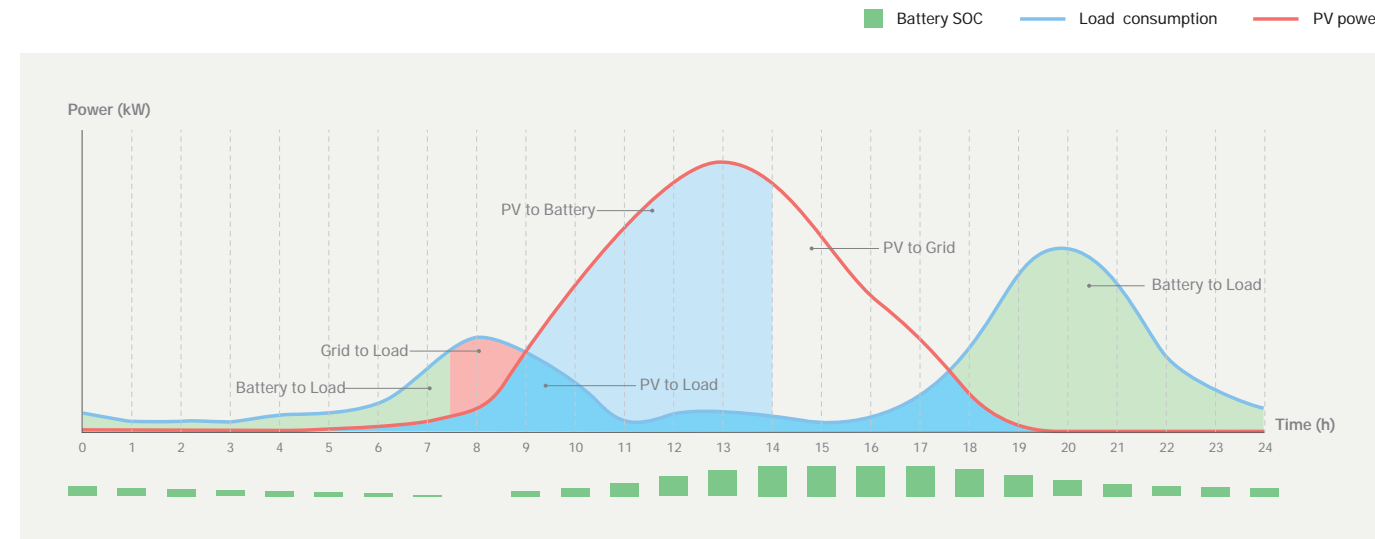


Meet your specific energy needs

EP Cube has 3 operation modes that are designed to cover a wide range of usage scenarios. Self-consumption mode maximizes the utilization of green energy; TOU mode is best for users with TOU utility rates; backup mode allows the EP Cube to be used as emergency backup power. Detailed settings under each mode can be adjusted via the mobile APP.

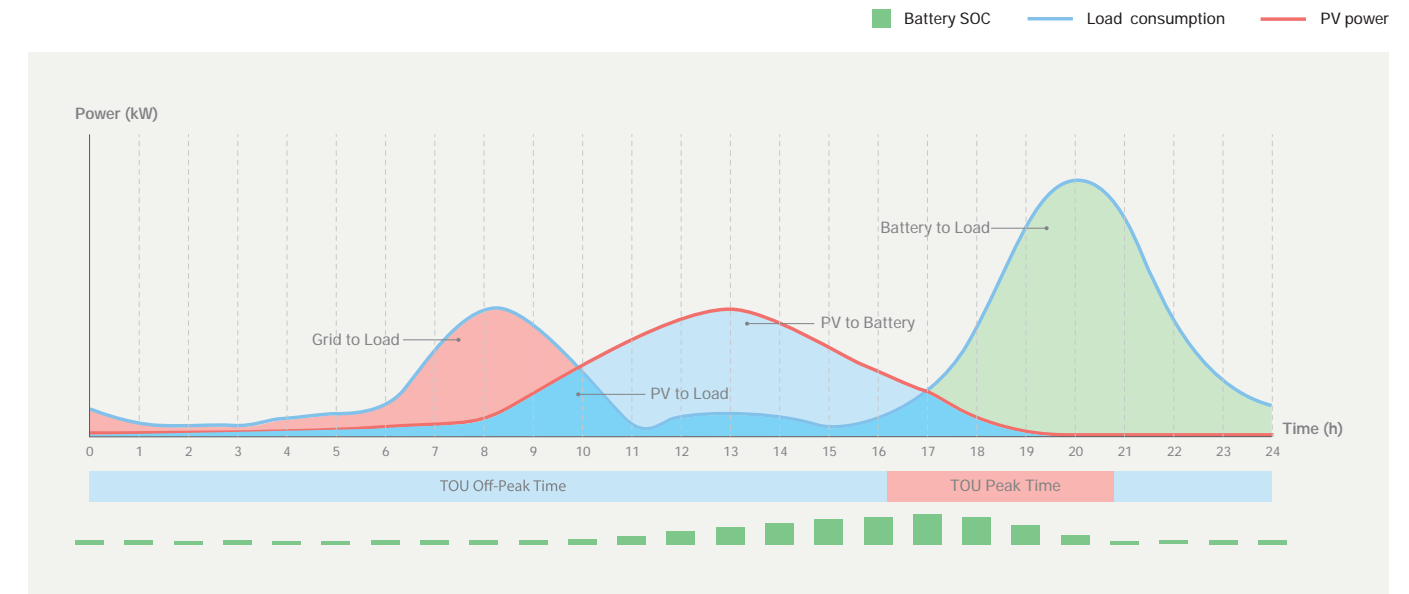
Self-Consumption Mode

Store surplus solar power in battery during daytime, and manage battery to discharge to home when solar power is not enough.



Time Of Use (TOU) Mode

User can set peak time and off-peak time on APP based on local utility TOU mechanism, to reduce energy purchase from grid during peak time.



Backup Mode (proactive)

Reserve a portion of battery energy for backup at all times.

Weather watch option available for automatic backup in case of extreme weathers that may potentially cause grid outage.

Product Features



Battery modules easy for transport and installation.
Capacity options range from 6.6 kWh to 19.9 kWh.



Lithium iron phosphate batteries.
IEC certified(in progress)
IP 65 enclosure.



Automated power supply during grid outage.
High-power electrical appliances will function normally
when the grid goes down.



All-in-one design saving time and cost of installation.
Automates generation and consumption, saving costs.



Compatible with existing and new installed PV systems.
Allows up to 16 A DC PV input per MPPT.
Compatible to maximum 7.4 kW EV Chargers.



Monitors generation, storage and consumption of electricity in real time.
Gives a heads-up before extreme weather sets it.
OTA(Over-The-Air)firmware upgrade.



EP Cube Technical Specification



EP Cube HES-EU1-706G EP Cube HES-EU1-710G EP Cube HES-EU1-713G EP Cube HES-EU1-716G EP Cube HES-EU1-720G

SYSTEM SPECIFICATION

System components					
Type of Inverter	Hybrid Bidirectional				
Number of Inverter	1				
Number of Battery Module	2	3	4	5	6
Base	1				

HYBRID INVERTER

DC Input (PV)	
Max PV input power	10 kWp
MPPTs	2
Number of inputs per MPPT	1
Max input power per MPPT	5 kWp
Max PV input voltage	600 V _{DC}
MPPT voltage range	90 V _{DC} - 550 V _{DC}
Max MPPT input current	16 A
Max MPPT short current	20 A
MPPT start-up voltage	120 V _{DC}

SYSTEM SPECIFICATION

AC On-grid	
Rated AC output voltage	Single Phase / L+N+PE / 230 V _{AC}
Rated grid frequency	50 Hz
Max continuous power (Battery + PV)	7.6 kW*
Max continuous current (Battery + PV)	33.0 A
Output power factor	~ 1 (Adjustable from 0.8 leading to 0.8 lagging)
Output THDi	< 5% (rated power)
AC-Boost (Backup)	
Rated AC output voltage	Single Phase / L+N+PE / 230 V _{AC}
Rated output frequency	50 Hz
Max continuous power (Battery + PV)	7.6 kVA
Max continuous current (Battery + PV)	33.0 A
Switching-time	< 30ms**

LITHIUM-ION BATTERY MODULE

General					
Cell technology	LiFePO4				
Number of Battery Module	2	3	4	5	6
Nominal capacity ***	6.6 kWh	9.9 kWh	13.3 kWh	16.6 kWh	19.9 kWh
Max continuous power (Battery only)	3 kVA	5 kVA	6.5 kVA	7.6 kVA	7.6 kVA
DOD	100%				
Voltage range	30 V ~ 43.8 V _{DC}				
Nominal voltage	38.4 V _{DC}				
Dimension (WxHxD)	600 x 215 x 165 mm				
Weight	< 35 kg				

GENERAL PARAMETER

System	
Applications	Self consumption / TOU / Backup
Type of Inverter	Hybrid Bidirectional
Inverter Dimension (WxHxD)	600 x 505 x 243 mm
Inverter Weight	< 38 kg
Inverter Topology	Transformerless

GENERAL PARAMETER

System					
DC battery protection	Fuse holder incl. fuses (+/-)				
Dimension (WxHxD)	600 x 1006 x 243 mm	600 x 1221 x 243 mm	600 x 1436 x 243 mm	600 x 1651 x 243 mm	600 x 1866 x 243 mm
System weight	111.5 kg	146.5 kg	181.5 kg	216.5 kg	251.5 kg
Noise	< 30dB				
Enclosure type	IP65				
Cooling type	Natural cooling				
Operating altitude	3,000 m				
Operating relative humidity	95% without condensing				
Operating temperature range	- 20°C to 50°C				
Recommended operating temperature	0°C to 30°C				
Storage temperature	-20°C ~ 50°C less than 1 month / 0°C ~ 35°C up to 1 year*****				
Display	LED & APP				
Installation method	Floor mounted (optional: Wall mounted)				
Communication interface	WiFi, Ethernet, RS485, CAN, I/O, API				
Warranty					
Inverter	10 Years				
Battery *****	> 80 % capacity, up to 10 years or 6,000 cycles				
Accessories	2 Years				
Certification (in progress)					
Safety	IEC / EN 62109-1, IEC / EN 62109-2, IEC / EN 62477-1, IEC / EN 62619-1, IEC 60730 Annex H, IEC 60529, VDE 2510-50, UN 38.3				
EMC	IEC 61000-6-3, IEC / EN 61000-6-1				
Energy Efficiency	IEC 61683				
Grid Standards	NTS 2.1 Type (A), UNE 217001, UNE 217002, RD 244, CEI 0-21, VDE-AR-N 4105, DIN VDE V 0124-100, G99 type A, UKCA				

ACCESSORIES

Items	Model
EP Cube AC Switch Box	EP CUBE ASB1-40
EP Cube Meter	EP Cube 1PHM1
EP Cube Wall-mount Kit	EP Cube Wall-mount Kit1

Notes

- * Rated AC output power is adjustable according to the grid code of each country. (6kW for CEI 0-21; 4.6kW for VDE-AR-N 4105)
- ** For reactive loads, for active loads is lower.
- *** Test conditions: 100% depth of discharge (DOD), 0.2 C rate charge&discharge at 25°C , at the beginning of life.
- **** Please refer to the installation manual and follow the storage requirements and guidelines.
- ***** Battery capacity warranty up to 10 years or 6000 cycles. (which occurs first)

Specifications are subject to change without prior notice. Unauthorized copying or reprinting of this datasheet is prohibited.



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