

### Features

- Excellent dust-proof performance with separate compartment design
- Built-in LiFePO4 lithium battery
- Intuitive display of battery SOC via 5-bar indicator lights
- Multiple DC output ports (5VDC/3A ports, 12VDC/2A ports, Type C ports)
- Build-in bluetooth module
- Large-sized LCD screen to monitor and modify system parameters
- Optional 4G or WiFi module to remote control the inverter/charger by the RS485 com. port
- AC input overload relay for disconnecting from the grid when the fault occurs
- Circuit breaker on PV input for equipment safety
- Circuit breaker on battery output for battery safety
- AC charging with PFC technology, high power factor for efficient energy consumption
- Bidirectional high-frequency transformer isolation topology
- Advanced MPPT technology: maximum tracking efficiency  $\geq 99.5\%$
- EMC design on AC output to avoid interference with AC load
- Long-term continuous operation at full power
- Pure sine wave output
- Comprehensive electronic protection

### Home Battery Backup



MacBook  
7105mAh $\approx$ 42+times



Rice Cooker  
600W $\approx$ 1.6+hours



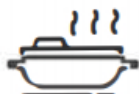
iPhone  
2942mAh $\approx$ 105+times



Television Set  
100W $\approx$ 10+hours



Coffee Maker  
900W $\approx$ 1.1+hours



Electric Oven / Toaster Oven  
800W $\approx$ 1.3hours



Impact Drill  
1100w $\approx$ 0.9+hours



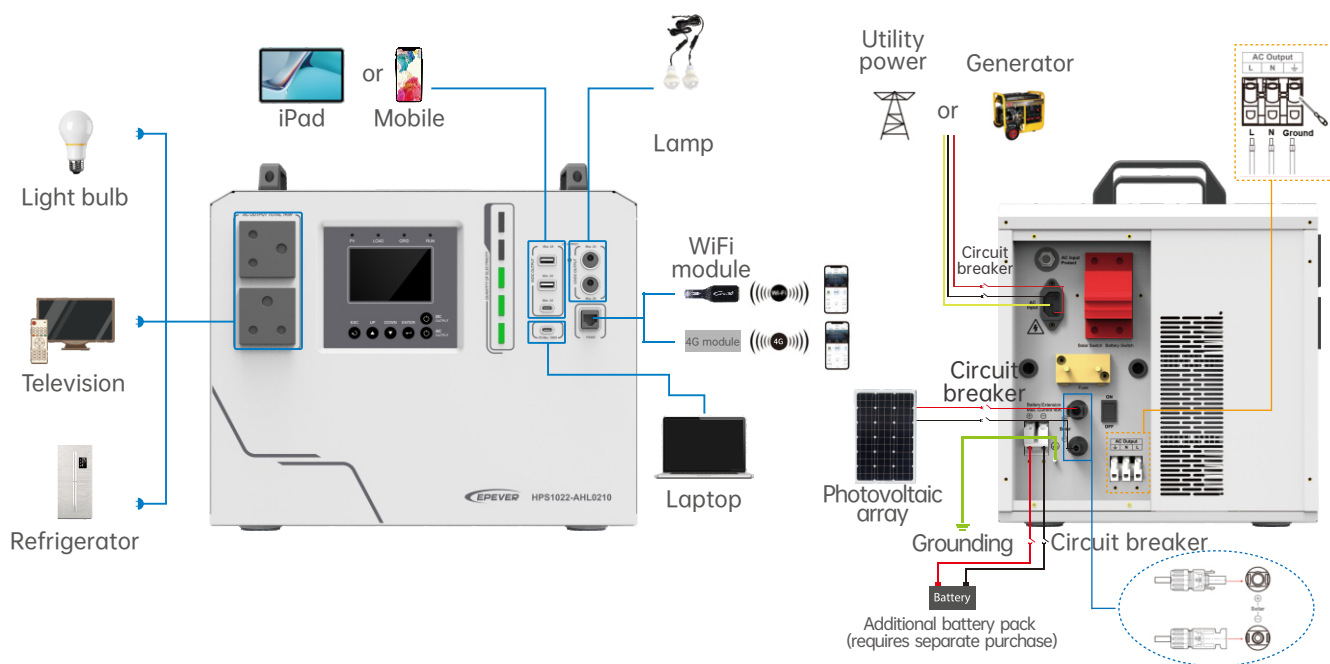
Car Refrigerator  
62W $\approx$ 16+hours



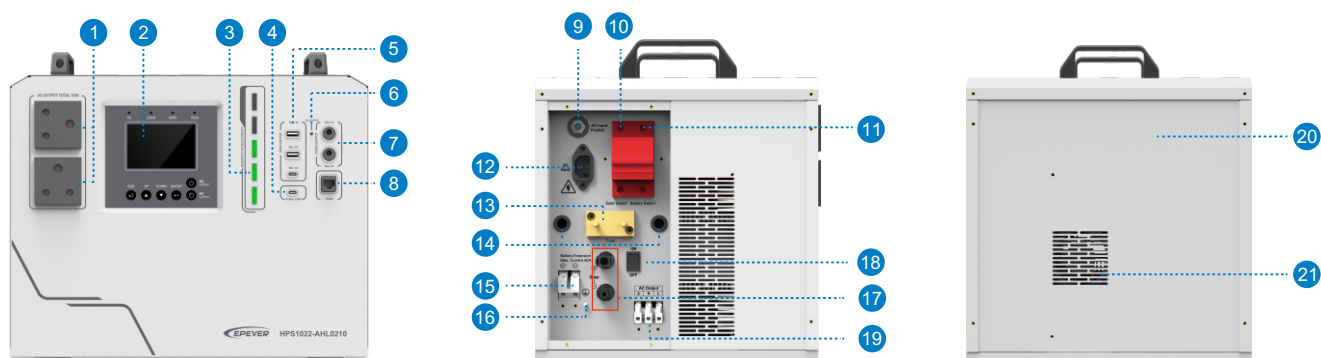
Model	HPS1022-AHL0210
Utility Input	
Utility Rated Voltage	220VAC
Utility Voltage	200~240VAC
Failure Voltage	290VAC
Utility Frequency	50Hz/60Hz
Utility Maximum Work Current (Charging + Bypass)	7A@220VAC
Switch Response Time	Switch Response Time-Utility to Inverter: $\leq 20\text{ms}$ Switch Response Time-Inverter to Utility: $\leq 20\text{ms}$
AC Input Overload Relay	HAVE
Inverter Output	
Inverter Rated Power (@25°C)	1000W
4-second Transient Surge Output Power	1800W
Inverter Output Voltage	220VAC $\pm 3\%$
Inverter Frequency	50Hz/60Hz $\pm 0.2\%$
Output Voltage Waveform	Pure sine wave
Output Voltage Harmonic Distortion Rate	$\leq 3\%$ (Resistive load)
Output Gradual Start	HAVE
Solar Controller	
PV Maximum Input Withstand Voltage	95VDC (at minimum operating environment temperature)
Solar Controller Type	MPPT
MPPT Maximum Efficiency	$\geq 99.5\%$
MPPT Voltage Range	24~76VDC
MPPT Input Channels	One way
PV Maximum Charging Current	20A
Battery	
Battery Type	LFP8S2P
Battery Rated Capacity	40Ah
Cell Dimension	Diameter: 40.0 $\pm 0.5$ -0mm Height: 136.25 $\pm 0.5$ mm
Battery Rated Voltage	25.6VDC
Maximum Continuous Charging Current	1C
Maximum Continuous Discharging Current	1.8C
Battery Work Voltage Range	21.0VDC~30.0VDC
Battery Work Temperature Range	Discharging Mode: -20°C~50°C    Charging Mode: 0°C~50°C
Cycle Times	2000 times
DC Output	
12V DC Output (x2)	12V=2A, Max. 24W/port, Total 48W
USB-A Output (x2)	5V=3A, Max. 15W/port, Total 30W
USB-C Output (x1)	5V=3A, Max. 15W
USB-C Output (x1)	5/9/12/15V=3A, 20V=5A, Max. 100W
DC Output Switch	HAVE
Others	
Work Temperature Range	-20°C~50°C (when the environment temperature exceeds 30°C, the charging power and load power will be reduced appropriately; working of full load is not supported.)
Enclosure	IP30
Communication Method	Bluetooth, RS485 (WiFi optional)
LCD	Monochrome LCD, English interface
Warranty	Two years
Dimension (Length x Width x Height)	385x307x345mm (with floor mats and handles)
Net Weight	20.0kg



## Solar System Connection



## Product Information



- |                           |                                   |                               |
|---------------------------|-----------------------------------|-------------------------------|
| 1 AC outlet               | 8 RS485 com. port                 | 15 Extension battery terminal |
| 2 LCD                     | 9 Utility bypass overload relay   | 16 Grounding terminal         |
| 3 Battery SOC indicator   | 10 PV input circuit breaker       | 17 PV input terminals         |
| 4 USB-C port (100W PD)    | 11 Battery output circuit breaker | 18 Power switch               |
| 5 5VDC/3A output port *3  | 12 AC input port                  | 19 AC output terminal         |
| 6 DC output indicator     | 13 Extension battery fuse         | 20 Battery container          |
| 7 12VDC/2A output port *2 | 14 Outlet holes                   | 21 Cooling fan                |

## Recommended Component Configuration Table

Specification	Size	Power	Recommended PV module	PV voltage range	Recommended PV connection
Polycrystalline	1470x670x28mm	165~170W		30VDC~95VDC	Two in series 45VDC
					Three in series 68VDC
Monocrystalline	1580x710x28mm	220~235W		30VDC~95VDC	Two in series 53VDC
					Three in series 80VDC
Monocrystalline	1570x765x28mm	250~260W		30VDC~95VDC	Two in series 53VDC
					Three in series 80VDC
Polycrystalline	1640x992x30mm	270~280W		30VDC~95VDC	One in series 38VDC
					Two in series 76VDC
Polycrystalline	1956x992x30mm	330~350W		30VDC~95VDC	One in series 45VDC
					Two in series 90VDC
Monocrystalline	1755x1038x30mm	370~380W		30VDC~95VDC	One in series 45VDC
					Two in series 90VDC
Monocrystalline	2094x1038x30mm	450~470W		30VDC~95VDC	One in series 53VDC
Monocrystalline	1722x1134x28mm	400~415W		30VDC~95VDC	One in series 40VDC
					Two in series 80VDC
Monocrystalline	2279x1134x30mm	540~555W		30VDC~95VDC	One in series 53VDC
Monocrystalline	2204x1303x35mm	590~600W		30VDC~95VDC	One in series 53VDC
Monocrystalline	2384x1303x35mm	650~670W		30VDC~95VDC	One in series 53VDC

\*This table should be validated based on the limit open-circuit voltage at the lowest temperature , and it is not allowed to exceed 95V under any conditions.