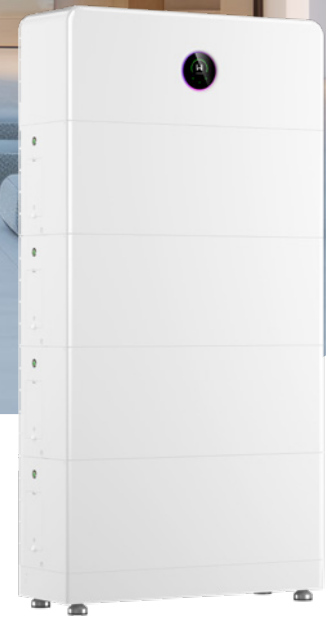


ESA Series

3-10kW/5-48kWh | Single Phase Home Storage Solution (HV)

The GoodWe ESA Series is a fully integrated all-in-one solar and storage solution that combines inverter and battery in a pre-wired, modular design-making installation significantly faster and easier. Engineered for flexibility, the ESA system allows seamless expansion to meet evolving energy needs, with scalable battery capacity for future upgrades. With its streamlined setup, the ESA Series can reduce installation time by up to 50%, making it an ideal choice for efficient and adaptable residential energy systems. It also supports dynamic tariff optimization with AI-driven EMS.



Flexible & Adaptable Applications

- Scalable with new&old batteries
- Support full back-up load with 63A
- Stackable and modular design for easy system expansion



Friendly & Thoughtful Design

- All-in-one modularized design
- Pre-wired components
- One-click upgrade & one-click configuration



Smart Control & Monitoring

- Ready for AI EMS
- Seamless switching to back-up <4ms



Superb Safety & Reliability

- Advanced 6-layer safety protection
- AI-driven AFCI 3.0¹

Technical Data	GW3 /	GW3.6 /	GW5 /	GW6 /	GW8 /	GW10 /
	(5.12-49.92) -ESA-PS-G20	(5.12-49.92) -ESA-PS-G20	(5.12-49.92) -ESA-PS-G20	(5.12-49.92) -ESA-PS-G20	(5.12-49.92) -ESA-PS-G20	(5.12-49.92) -ESA-PS-G20
Battery System Data						
Cell Type	LFP (LiFePO4)					
Module Nominal Energy (kWh)	5.12 / 8.32					
Number of Modules	1 ~ 6					
System Usable Energy (kWh)	5 ~ 48					
Nominal Voltage (V)	380					
Operating Voltage Range (V)	350 ~ 550					
Cycle Life	>6000 (25 ± 2°C 0.5C 90%DOD 70%EOL)					
PV String Input Data						
Max. Input Power (kW)	6.0	7.2	10.0	12.0	16.0	20.0
Max. Input Voltage (V)	600					
MPPT Operating Voltage Range (V)	40 ~ 560					
Start-up Voltage (V)	50					
Nominal Input Voltage (V)	400					
Max. Input Current per MPPT (A)	20					
Max. Short Circuit Current per MPPT (A)	26					
Number of MPP Trackers	2	2	2	2	4	4
Number of Strings per MPPT	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1 / 1 / 1	1 / 1 / 1 / 1
AC Output Data (On-grid)						
Nominal Output Power (kW)	3.0	3.6	5.0	6.0	8.0	10.0
Nominal Apparent Power Output to Utility Grid (kVA)	3.0	3.6	5.0	6.0	8.0	10.0
Max. Apparent Power Output to Utility Grid (kVA)	3.0	3.6	5.0	6.0	8.0	10.0
Max. Apparent Power from Utility Grid (kVA)	6.0	7.2	10.0	12.0	14.5	14.5
Nominal Output Voltage (V)	220 / 230 / 240, L / N / PE					
Output Voltage Range (V)	170 ~ 280					
Nominal AC Grid Frequency (Hz)	50 / 60					
AC Grid Frequency Range (Hz)	45 ~ 55 / 55 ~ 65					
Max. AC Current Output to Utility Grid (A)	13.1	15.7	21.8	26.1	34.8	43.5
Max. AC Current from Utility Grid (A)	13.7@220V 13.1@230V 12.5@240V	16.4@220V 15.7@230V 15.0@240V	22.8@220V 21.8@230V 20.9@240V	27.3@220V 26.1@230V 25.0@240V	36.4@220V 34.8@230V 33.4@240V	45.5@220V 43.5@230V 41.7@240V
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)					
Max. Total Harmonic Distortion	<3%					
AC Output Data (Back-up)						
Back-up Nominal Apparent Power (kVA)	3.0	3.6	5.0	6.0	8.0	10.0
Max. Output Apparent Power Without Grid (kVA)	3.0 (6.0, 10s)	3.6 (7.2, 10s)	5.0 (10.0, 10s)	6.0 (12.0, 10s)	8.0 (16.0, 10s)	10.0 (20.0, 10s)
Max. Output Current (A)	13.7	16.4	22.8	27.3	36.4	43.5
Nominal Output Voltage (V)	220 / 230 / 240, L / N / PE					
Nominal Output Frequency (Hz)	50 / 60					
Output THDv (@Linear Load)	<3%					
Protection						
PV Reverse Polarity Protection	Integrated					
Battery Reverse Polarity Protection	Integrated					
Anti-islanding Protection	Integrated					
DC Surge Protection	Type II					
AC Surge Protection	Type II					
AFCI	Optional					
General Data						
Operating Temperature Range (°C)	-20 ~ +50					
Relative Humidity	0 ~ 95%					
Max. Operating Altitude (m)	4000 (>2000 Derating)					
Cooling Method	Inverter: Natural Convection; Battery: Natural Convection					
User Interface	LED, WLAN + APP					
Communication	RS485					
Communication Protocol	Modbus TCP, Modbus RTU					
Weight (kg)	Inverter: 24; Battery: 79					
Dimension (W x H x D mm)	Inverter: 800 x 300 x 270; Battery: 800 x 295 x 270					
Noise Emission (dB)	Inverter: ≤30; Battery: ≤35					
Ingress Protection Rating	IP66					
Anti-Corrosion Class	C4					
Fire Safety Equipment	Aerosol (Pack Level)					
On / Off-grid Transfer Time (ms)	<4					
Number of Battery Modules (pcs)	1	2	3	4	5	6
Total Energy Capacity (kWh)	5.12	10.24	15.36	20.48	25.60	30.72
Total Energy Capacity (kWh)	8.32	16.64	24.96	33.28	41.60	49.92

*: Please visit GoodWe website for the latest certificates.

*: All pictures shown are for reference only. Actual appearance may vary.

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