lunar energy

Lunar System

Specifications

Beauty. And Beast.

Powerful performance that’s wall-worthy.

2025-04-25

Meet the Lunar System

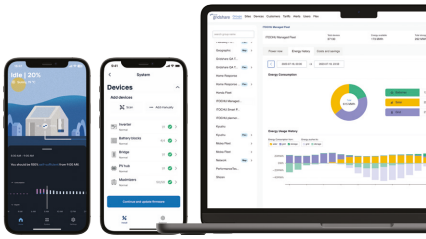
Brilliantly-Designed
End-to-End Battery System

As a fully-integrated solar battery system, the Lunar Battery contains a powerful hybrid inverter that efficiently converts both solar and battery energy to power homes, and modular, compact battery blocks that bring 24/7 reliable clean energy to homes of all sizes. Powered by Lunar AI, Lunar's long-lasting batteries work in harmony with your solar system to generate and consume more solar, reduce utility bills, and deliver a seamless whole-home backup experience.

Maximizer

Battery

Bridge



Software

Generate — Store — Consume — Experience

Lunar Battery

System

	15 kWh	20 kWh
Model Number	LE-ESS-15KWH	LE-ESS-20KWH
Rated Energy	15 kWh	20 kWh
Max Load Start Capability	124 LRA[1]	
Warranty	12.5 Years 56 MWh AC throughput	12.5 Years 75 MWh AC throughput
Customer Interface	Customer App, Installer App, Fleet Web Portal, APIs, LED	
Operating Modes	Lunar AI, Solar Self-Consumption, Time-of-use, Backup	
Advanced Software Features	Weather Watch, VPP enabled	
Communication	Wi-Fi, 4G/LTE (CAT M1), Ethernet	

Inverter Block

	15 kWh	20 kWh
Part Number	90-003540[2]	
Nominal Voltage	120/240 Vac Split Phase	
Output Voltage Range	210 Vac - 264 Vac	
Grid Frequency	60 Hz	
Max Continuous AC Power	9.6 kW full sun 7.2 kW no sun	9.6 kW full sun and no sun
Peak AC Power, off-grid	15 kW for 5s	
Max Continuous AC Current	40 A	
Overcurrent Protection Device	50 A Breaker	
Operating Input Voltage	380 - 450 Vdc	
Max DC Input Current	37.5 A (PV), 30 A (battery)	
Max PV Input Power	15 kWdc	
Total Harmonic Distortion	<5%	
Power Factor	0.85 lagging to 0.85 leading	
PV Rapid Shutdown Switch and System Disconnect	Yes, lockable	
CEC Solar to Home/Grid Efficiency	95.5%	

Battery Block

Part Number	90-002802, 90-06533A
Rated Energy	5 kWh
Operating Voltage Range	190 Vdc - 225 Vdc
Max Continuous Charge Power	1.67 kW
Max Continuous Discharge Power	2.5kW (on grid and off-grid)
Peak Discharge Power, off-grid	3.75 kW (5s)
Chemistry	Lithium-ion (NMC)

[1] Subject to base load and SOC at time of motor start.

[2] Please refer to Model Number 10-005025 for inverter certifications

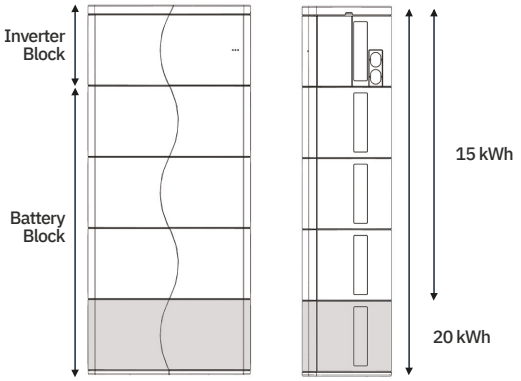
[3] Performance may be de-rated at operating temperatures below 0°C (32°F) or greater than 45°C (113°F).

Environmental

Ingress Rating	**ESS:** NEMA 3R **Inverter Block:** NEMA 3R **Battery Block:** NEMA 3R, IP68
Operating Temperature	-4°F to 122°F (-20°C to 50°C)[3]
Storage Conditions	**Absolute Limits:** –4°F to 140°F (-20°C to 60°C) < 95% RH **1 month:** –4°F to 113°F (-20°C to 45°C) <60%RH **2 months:** 32°F to 95°F (0°C to 35°C) <60%RH **Up to 24 months:** 65°F to 82°F (18°C to 28°C) <60%RH
Altitude	Up to 9843 ft (3000 m)

Mechanical

	15 kWh	20 kWh
Dimensions (L x W x D)	**Inverter Block:** 12" x 24.4" x 13.5" (305 mm x 619 mm x 344 mm)	
	Battery Block: 44.1" x 24.4" x 13.5" (1120 mm x 619 mm x 344 mm)	
	System 45.5"x 24.4" x 13.5" (1156 x 619 x 344 mm)	**System** 56.1"x 24.4" x 13.5" (1425 x 619 x 344 mm)
Mass	**Inverter Block:** 42 lb (19 kg)	
	Battery Block: 95 lb (43 kg)	
	System 391 lb (177 kg) total assembly + brackets	**System** 499 lb (226 kg) total assembly + brackets
Mounting	Wall or floor mount	



Compliance

Certifications	**Inverter Block:** UL 1741, UL 1741 SB, UL 1699B, CSA C22.2. No. 107.1 **Battery Block:** CAN/UL 1973, UN 38.3 **System:** CAN/UL 9540, UL 9450A (indoor and outdoor), UL 1741 CRD PCS, UL 3141 (Issue 1)
Grid Connection	IEEE 1547.1-2020, IEEE 1547.1-2018 SunSpec IEEE 2030.5 / CSIP CA Rule 21
Emissions	FCC Part 15 Class B
Seismic	IEEE 693 (High)

Lunar Bridge

Lunar Bridge is a Microgrid Interconnection Device that automatically detects outages and seamlessly transitions between grid and island. It supports all home circuits with a service entrance rated load center.

System

Part Number	90-001221, 90-06801A*
Current Rating	200 A
Busbar Rating	200 A
Off-Grid Switchover Time	< 0.03s
Overcurrent Protection Device	Up to 200 A
Number of Panelboard Spaces	20 Spaces / 40 Circuits
AC Meter	**Integral:** +/- 0.2% **External (Rogowski Coil):** +/- 5%
Warranty	12.5 Years

Environmental

Operating Temperature	-40°F to 140°F (-40°C to 60°C)
Ingress Rating	NEMA 3R

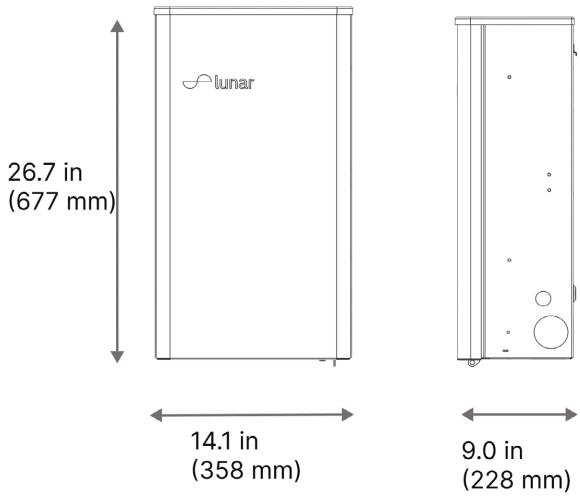
Compliance

Certifications	UL 1741, UL 67, UL 869A
Emissions	FCC Part 15 Class B

* 90-06801A is compatible with Eaton AbleEdge smart breakers.

Mechanical

Dimension (L x W x D)	26.7" x 14.1" x 9" (677 mm x 358 mm x 228 mm)
Mass	44 lbs (20 kg)
Mounting	Wall or semi-flush mount



Lunar Maximizer

The Lunar Maximizer is a DC-to-DC charge controller that connects to individual solar panel. It optimizes solar output via tracking the maximum power point, with real-time monitoring and rapid shutdown capability.

System

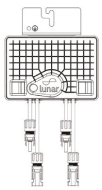
Part Number	90-002878
Rated Input DC Power	420 W
Maximum Input Open Circuit Voltage (Voc)	60 Vdc at cold temperature
MPPT Operating Voltage	20 Vdc - 60 Vdc
Maximum Input Short Circuit Current (Isc)	15 A
Maximum Output Current	16 A
PV String Length	9 - 20 Modules
Parallel Strings of Different Lengths or Orientations	3 Strings
Warranty	12.5 Years

Environmental

Operating Temperature	-40°F to 185 °F (-40°C to 85°C)
Ingress Rating	NEMA 4X, IP68

Mechanical

Dimension (L x W x D)	6.9" x 6.7" x 1.7" (176 mm x 169 mm x 43 mm)
Mass	2 lb (936 g)
Mounting	Rack or panel mount
PV Connector	MC4



Compliance

Certifications	UL 1741, CSA C22.2.107
Emissions	FCC Part 15 Class B

Lunar Maximizer Hub

The Lunar Maximizer Hub is a junction box that combines PV strings and ensure reliable, instantaneous coordination between Lunar Maximizers and the inverter.

System

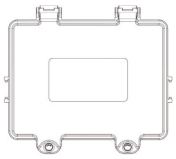
Part Number	90-004034
Operating Voltage	25 - 450 Vdc
DC Inputs	3 DC PV strings (3+ & 3- wire terminals + 1 ground terminal)
Maximum Current Per Terminal	50 A
Terminal Wire Size Range	8 AWG - 20 AWG (Red / Black) 6 AWG - 16 AWG (Ground)
Internal Communications	Mesh Wi-Fi to Maximizers, PLC to Inverter
Warranty	25 Years

Environmental

Operating Temperature	-40°F to 185 °F (-40°C to 85°C)
Ingress Rating	NEMA 3R

Mechanical

Dimension (L x W x D)	11”x 12” x 4” (280 mm x 305 mm x 102 mm)
Mass	2.3 lbs (1050 g)
Mounting	Rail mounting or comp shingle flashing



Compliance

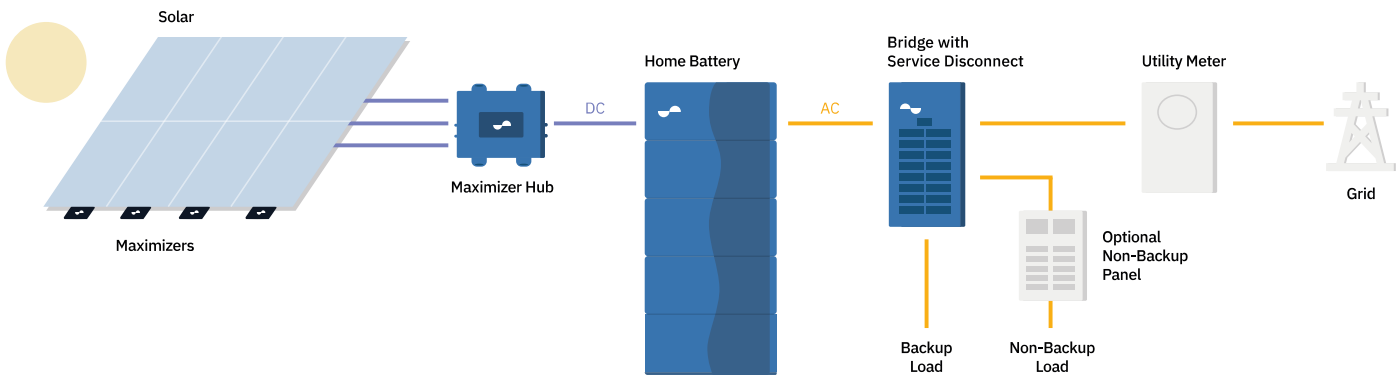
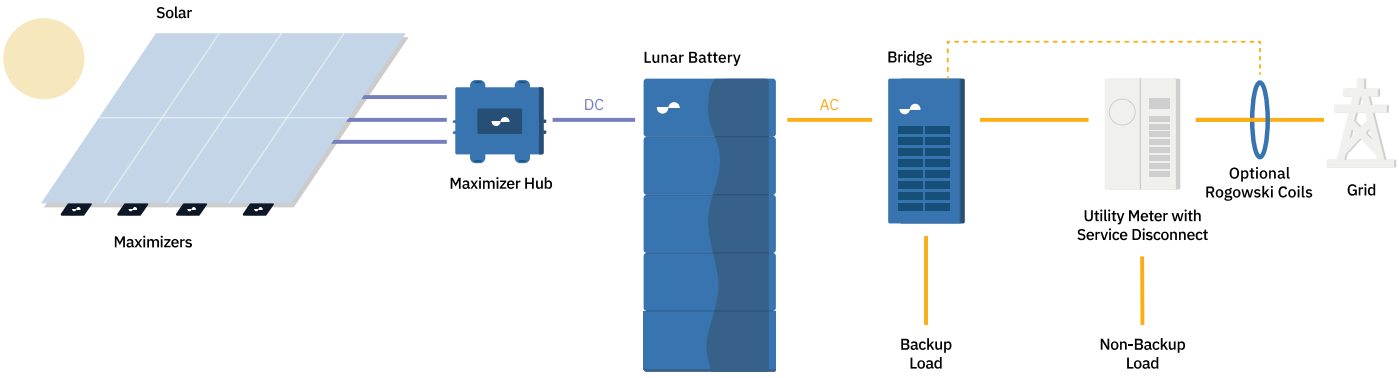
Certifications	UL 1741 CAN/CSA C22.2 No. 107.1. CSA C22.2 No. 290.

Accessories

Accessory Item	Part Number	Description
20 kWh Hardware Kit (4 Battery Blocks)	90-001223	Includes trunk harness, foot bracket and accessories for the 20 kWh configuration
15 kWh Hardware Kit (3 Battery Blocks)	90-06823A	Includes trunk harness, foot bracket and accessories for the 15kWh configuration
Battery Lifting Tool	90-005336	Reusable lifting handle for Lunar Battery Blocks
Rogowski Coils	90-06789A	Flexible field-installed CTs for metering non-backup loads

System Layout

Lunar System with Service Disconnect at Lunar Bridge



Lunar System with Service Disconnect at Utility Meter