emaldo

DATA SHEET

Emaldo® Power Core AI

PRODUCT TYPE
Complete system

PRODUCT LINE
Core

PRODUCT NAME
Emaldo® Power Core AI

SKU
EM-SYS-WH-02

EAN
5711826605564

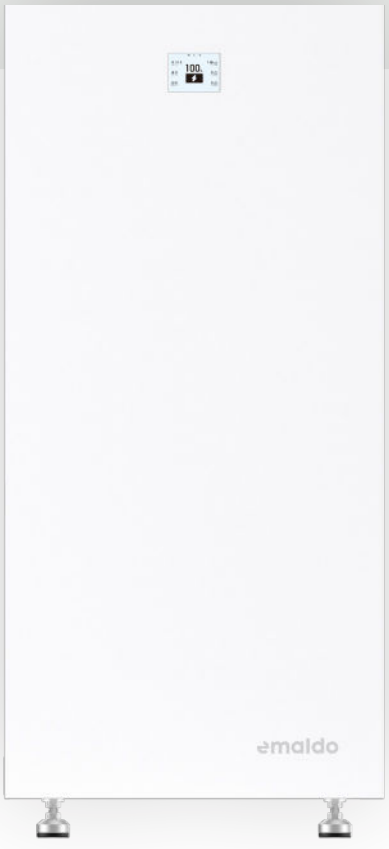
Energy storage
Enabling the capability of storing self-produced solar electricity for when you actually need it.

Option to add power backup
Add power backup of the things that matters the most. Sold separately.

Works with all inverters
Can be installed on a property even if this has a solar system installed already.

Electric car charger
Built-in type 2 electric vehicle charger.

The Emaldo Power Core is a true all-in-one home power management solution, bringing our custom high-performance 10.8 kWh inverter, our expandable battery power boxes, Bluetooth® and built-in 4G cellular connectivity, as well as a dedicated type 2 electric vehicle charger, into one stylish cabinet.



General	
Dimensions(W/H/D)	700x1520x328mm
Weight	Cabinet: 71,0 kg Inverter: 52,5 kg Battery: 58,5 kg
Battery slots	3
Topology	Transformerless
Cooling	Forced air
Noise	<50dB
Self-consumption	<150W
Heating film energy consumption	200W (Single Battery)
Altitude	2000m (degraded 1% per 100m above 2000m)
Relative humidity	0~95%
Inverter operation temperature	-20°C~60°C
Charging operation temperature	-20~55°C
Discharging operation temperature	-20~60°C
Storage temperature	0~35°C
Display	E-INK+LED+APP
Communication	RS485 (Electrical Meter)
4G/WiFi/Bluetooth/LoRa	Yes / Yes / Yes / Yes
AI optimized	Yes, Energenie® AI inside

Included

1 x Emaldo® Core Cabinet with slideON™ connectors and built-in cable management
1 x Emaldo® 10.8 kWh Hybrid Inverter
1 x Emaldo® 5.12 kWh Power Boxes
1 x Built-in Type 2 Car Charger
1 x Starter Kit (Installation)

AC input

Rated power	10800VA
Rated voltage	400Vac(3W+N+PE)
Rated current	15.6A*3
Max input current	16A*3
AC voltage range	184-264Vac
Frequency range	50/60Hz

AC output (off-grid)

Rated power	10800VA(PF=1)
Rated output voltage	400Vac(3W+N+PE)
Rated output frequency	50/60Hz±0.5
Rated current	15.6A*3
Max output current	15.8A*3
Max power output (startup)	21600VA
Switch time	10ms
Wave form	Pure sine wave

AC output (on-grid)

Rated power	10800VA
Rated voltage	400Vac(3W+N+PE)
Rated current	15.6A*3
Max output current	15.8A*3
Max power factor	>0.99
Frequency range	50/60Hz
Max efficiency	97 %
Europe efficiency	96 %

Battery

Battery type	LFP (LiFePO4)
Battery capacity	5120-15360Wh (1-3 batteries)
Battery capacity expansion	143kWh
Rated battery voltage	51.2V
Working voltage range	43.2V~57.6V
Max charging current	100-200A (1-3 batteries)
Max discharging current	100-200A (1-3 batteries)
Charging temperature	-20~55°C
Discharging temperature	-20~60°C

PV Input

Max input power	10800W(3600W*3)
Max input open-circuit voltage	550Vdc
MPPT Input string number	3
MPPT voltage range	90-500Vdc
Start-up voltage	100Vdc
Max input current	14.5A*3
Max short-circuit input current	18A*3
Max MPPT efficiency	>99%
Dynamic MPPT efficiency	>97%

EV Output

Rated charge power	10800W
Rated voltage	400Vac(3W+N+PE)
Interface type	IEC type2
Frequency range	50/60

Protection

Battery under-voltage protection(settable)	Yes
Battery over-voltage protection(settable)	Yes
PV under-voltage protection(80Vdc)	Yes
PV over-voltage protection(530Vdc)	Yes
AC output under-voltage protection(184Vac)	Yes
AC output over-voltage protection(282Vac)	Yes
AC output over-temperature protection	Yes
AC output overload protection	Yes
Solar input reverse connection protection	Yes
Insulation impedance detection	Yes
Residual current detection	Yes
AC surge protection(three grade)	Yes
DC surge protection(three grade)	Yes
EV over-voltage protection	Yes
EV over-temperature protection	Yes
EV leakage protection (IEC 62955:2018)	Yes

Standard

Safety	IEC62109-1:2010, IEC62109-2:2011
EMC	IEC61851-21-2:20218, IEC61000-6-1, IEC61000-6-3
Battery	IEC62619:2022, UN38.3, MSDS
Grid	TRLV/G98:2022/VDE 4105:2018/EIFS:2018/ EN50549.....
System	IEC61851-1:2017, IEC62955, IEC60529:2013, EN61984
Emissions	RED 2014/53/EU

Efficiency

Max efficiency	97.00%
European efficiency	96.00%
MPPT efficiency	99.90%

Warranty

Battery

Operation of the product	Charging temperature -20°C ~ 50°C Discharge temperature -20°C ~ 60°C
Storage	Storage temperature: -10°C ~ 40°C (within one month) or 0°C ~ 35°C (within one year). Recommended storage humidity: 0%~95%RH (non-condensing)
Product Warranty	Emaldo guarantees that the battery system will retain 70% of the usable energy for 10 years or 6000 cycles if installed and handled correctly as described in the user manual.

Inverter

Operation of the product	Operation of the product -20°C ~ 60°C
Storage	Storage temperature: -10°C ~ 40°C (within one month) or 0°C ~ 35°C (within one year). Recommended storage humidity: 0%~95%RH (non-condensing)
Product Warranty	10-year Inverter Performance Guarantee: Emaldo guarantees that the inverter will work according to specification if handled according to user guidelines and standards

Cabinet

Operation of the product	Operation of the product -20°C ~ 60°C
Storage	Storage temperature: -10°C ~ 40°C (within one month) or 0°C ~ 35°C (within one year). Recommended storage humidity: 0%~95%RH (non-condensing)
Product Warranty	10-year Hardware Guarantee: Emaldo guarantees that the hardware will work according to specification if handled according to user guidelines and standards

Terms

The product specifications provided herein are subject to change without notice, and while we endeavor to maintain accuracy, Emaldo cannot guarantee completeness, accuracy, or reliability. Performance metrics are based on typical scenarios and actual performance may vary. Compatibility with third-party products is not guaranteed. The limited warranty terms, proper installation by a qualified electrician, and adherence to safety practices are essential. Energy data accuracy is aimed for but not guaranteed. Technical support availability varies. Emaldo is not liable for any damages from product use. Specifications and features are subject to change. Usage implies agreement to these terms. For legal compliance, consult professionals.