FusionSolar
Smart String ESS Solution

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105,000+

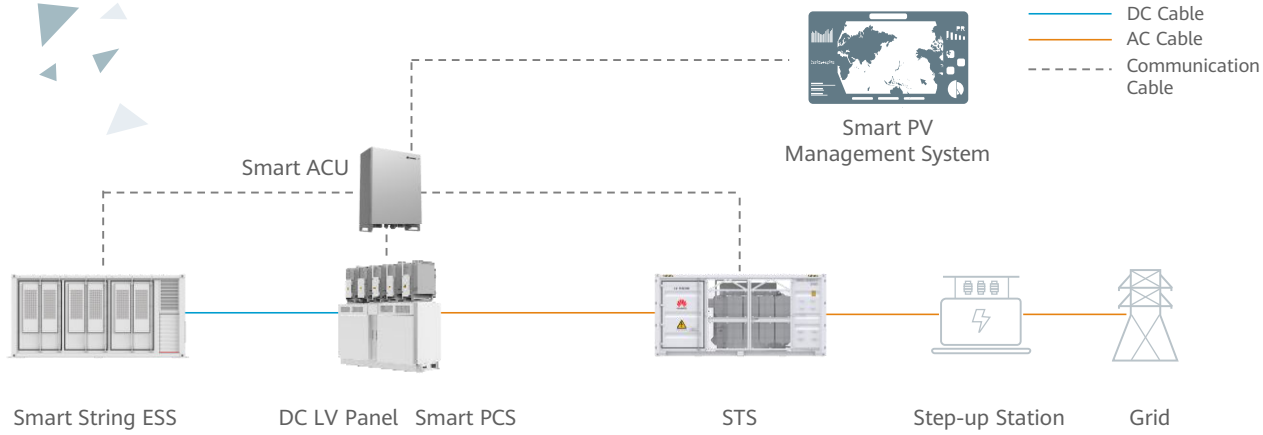
Countries
170+

Interbrand's Top 100 Best Global Brands
80

Fortune Global 500
44

Research institutes /labs/centers
14

FusionSolar Smart String ESS Solution



More Energy	Optimal Design	Simple O&M	Safe & Reliable
Pack-level Optimization	Support battery augmentation	No periodic balancing	Modular Design
Rack-level Optimization	Reducing Initial configuration	No experts site visit	High Availability

LUNA2000-2.0MWH-1H0/2H0

Smart String ESS

More Energy | **Optimal Design** | **Simple O&M** | **Safe & Reliable**

Battery Container	
DC Rated Voltage	1,200 V
DC Max. Voltage	1,500 V
Nominal Energy Capacity	2,064 kWh
Rated Power (0.5C)	344 kW * 3
Rated Power (1C)	344 kW * 6
Container Configuration (W x H x D)	6,058 x 2,896 x 2,438 mm
Container Weight	≤ 30 t
Operation Temperature Range	-30°C ~ 55°C
Storage Temperature Range	-40°C ~ 60°C
Operation Humidity Range	0 ~ 100% (Without Condensation)
Max. Operating Altitude	4,000 m
Cooling Method	Smart Air Cooling
Fire Extinguishing	FM-200 / Novec 1230
Communication Interface	Ethernet / SFP
Communication Protocol	Modbus TCP
Protection Degree	IP55
Certificates (more available upon request)	
Environment	RoHS6
Safety & Electrical	IEC62477-1, IEC62040-1, IEC61000-6-2, EN55011, UL9540A, UN3536, etc.

Smart String ESS

Battery Pack & Smart Rack Controller

Battery Pack	
General	
Cell Material	LFP
Pack Configuration	16S 1P
Rated Voltage	51.2 V
Nominal Capacity	320 Ah / 16.38 kWh
Supported Charge & Discharge Rate	≤ 1 C
Weight	≤ 140 kg
Dimensions (W x H x D)	442 x 307 x 660 mm

Smart Rack Controller	
Efficiency	
Max. Efficiency	99.0%
Battery Side	
Rated Voltage	1,075.2 V
Operating Voltage Range	40 V ~ 1,400 V
Rated Power Voltage Range	1,075 V ~ 1,320 V
Min. Start Voltage	350 V
Bus Side	
Max. DC Voltage	1,500 V
Rated Voltage	1,200 V
Rated Current	286.7 A
Rated Power	344,000 W
General	
Dimensions (W x H x D)	600 x 270 x 820 mm
Weight	≤ 90 kg
Cooling Method	Smart Air Cooling
Protection Degree	IP66

LUNA2000-200KTL-H0
Smart PCS

Max. Efficiency 99%

Modular Design

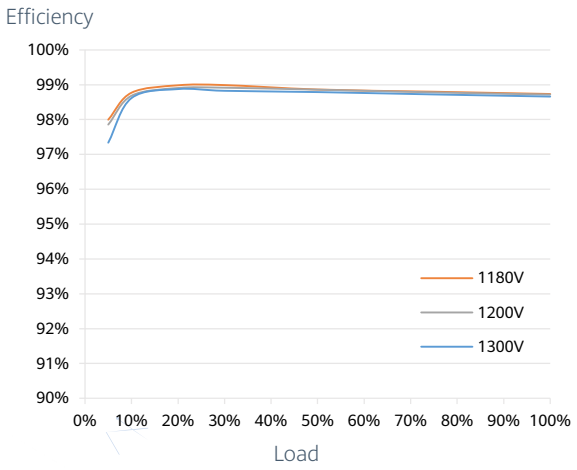
IP66 Protection

Surge Arresters for DC & AC

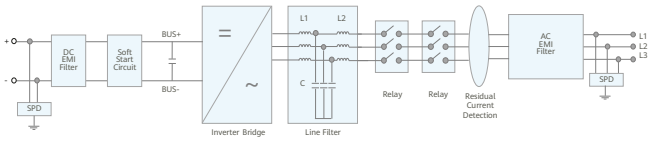
Ethernet Communication

Smart Grid Algorithm

Efficiency Curve



Circuit Diagram



LUNA2000-200KTL-H0

LUNA2000-200KTL-H0
Technical Specifications

Efficiency	
Max. Efficiency	99.0%
European Efficiency	98.8%
DC Side	
Rated DC Voltage	1,180 V
Max. DC Voltage	1,500 V
Operating DC Voltage Range	1,180 V ~ 1,500 V
Max. DC Current	207.6 A
Max. Number of Inputs	1
AC Side	
Rated AC Active Power	200,000 W @40°C
Rated AC Voltage	800 V
Rated AC Grid Frequency	50 Hz / 60 Hz
Max. AC Current	173.2 A
Adjustable Power Factor Range	-1 ... +1
Max. Total Harmonic Distortion	<3%
Protection	
Anti-islanding Protection	Yes
AC Overcurrent Protection	Yes
DC Reverse-polarity Protection	Yes
Insulation Resistance Detection	Yes
Earth Fault Protection	Yes
Residual Current Protection	Yes
DC Surge Protection[1]	Type II
AC Surge Protection[1]	Type II
Communication	
Display	LED Indicators, WLAN + APP
USB	Yes
Ethernet	Yes
General	
Dimensions (W x H x D)	875 x 820 x 365 mm
Weight	< 95 kg
Operating Temperature Range	-25°C ~ 60°C
Cooling Method	Smart Air Cooling
Max. Operating Altitude without Derating	4,000 m
Relative Humidity	0 ~ 100%
DC Connector	OT/DT Terminal
AC Connector	OT/DT Terminal
Protection Degree	IP66
Topology	Transformerless

1: Compatible Type II protection class according to IEC / EN 61643-11

DCBOX-9/5-H0

DC LV Panel

Electrical	
Max. Input Voltage	1,500 V
Nominal Input Voltage	1,200 V
Max. Branch Current for Battery Rack Side	321 A
Max. Branch Current for PCS Side	193 A
Number of DC Circuit Breaker	14
Max. Input Number of Battery Rack	9
Max. Input Number of PCS	5
Max. Convergence Capacity	5 x 193 A
Protection	
DC Surge Protection	Optional
DC Overcurrent Protection	Yes
Environment	
Operating Temperature Range	-30°C ~ 60°C
Relative Humidity	0 ~ 100%
Max. Operating Altitude	4,000 m
General	
Cable Entries	Top in for PCS & Bottom in for Battery Rack
Dimensions (W x H x D)	2,040 x 1,415 x 975 mm
Weight (Without Smart PCS)	≤ 750 kg
DC Connector / AC Connector	OT Terminal
Protection Degree	IP55
Installation Options	Grounding

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Huawei Technologies de México S.A. de C.V.
Av Santa Fe 440,
Lomas de Santa Fe, Contadero,
05348 Ciudad de Mexico

Huawei (Chile) S.A.
Rosario Norte 532, Of.1701-1704, Las Condes
Santiago, 8320000, Chile

Huawei do Brasil Telecomunicações Ltda.
Rua Arquiteto Olavo Redig de Campos
105-24º andar, São Paulo-CEP 04718-000

Huawei (Argentina) S.A.
Alem 815, 7th Floor
Buenos Aires, Argentina

HUAWEI TECHNOLOGIES CO., LTD.
Huawei Industrial Base, Bantian Longgang
Shenzhen 518129, P.R. China
Tel.: 400-822-9999
solar.huawei.com