/ SI27-US208-20 / SI60-US480-20



powered by ennexOS

Sunny Island X-US

27 (208V) / 60 (480V)

Next generation battery inverter – more powerful than ever

/ Compatible with the SMA approved battery

Benefits at a glance

- Maximum yields and lifetime performance
- Engineered and manufactured in Germany to meet 100% of SMA's quality standards
- Delivers nominal power output even at high ambient temperatures up to 45°C (113°F)
- Backed by a 10-year warranty

Flexible system design and compatibility

- Modular scalability of AC power and battery capacity for energy management, microgrid, and off-grid applications
- Compatible with the SMA approved battery
- Compatible with 3rd party Modbus-based system controllers for energy management, microgrid, and off-grid applications
- Simplified system design with the Sunny Design tool

Smart monitoring, control, and service

- Integrated energy management features for on-grid systems without backup and microgrid capabilities
- Offers comprehensive system monitoring via Sunny Portal powered by ennexOS

The highly versatile Sunny Island X-US battery inverter supports a wide range of on-grid installations.

As the central component of your energy system, the Sunny Island X-US ensures that self-generated solar power is stored and available whenever it's needed. Engineered for maximum flexibility and reliability, it performs consistently across extreme environments, including desert heat, tropical humidity, and snowy conditions, due to its broad operating temperature range.

With integrated energy management, the Sunny Island X-US keeps your system running, even in critical situations. Built as a highly robust battery inverter, it's designed for long-term performance and is backed by a standard factory warranty of 10 years[1].

1) Device registration via the SMA product-registration homepage (my.sma-service.com)

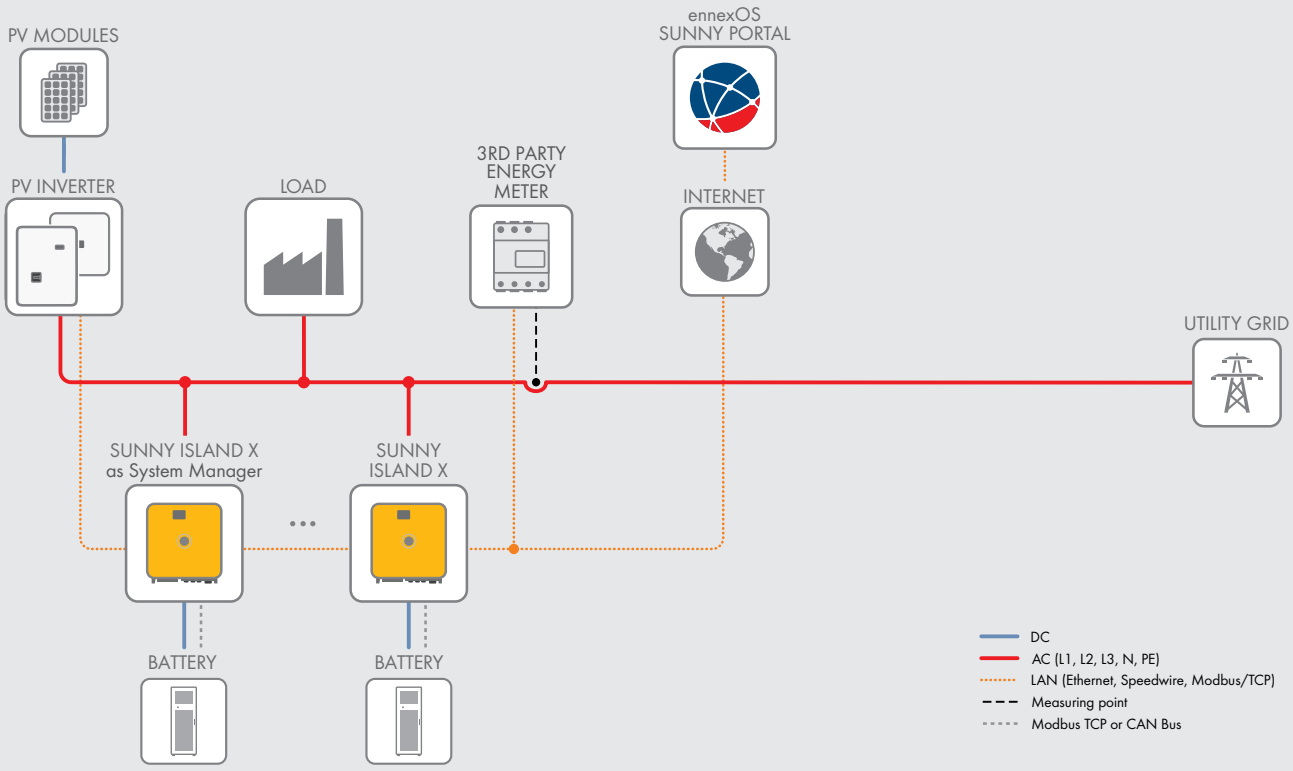
Technical data	Sunny Island X 27-US	Sunny Island X 60-US
Battery connection (DC)		
Maximum DC power	27600 W	61200 W
DC voltage range	200 V – 980 V	
Maximum usable input current	150 A	
Battery type	Li-ion (Modbus TCP or CAN bus)	
Grid connection (AC)		
Nominal output power	27000 W	60000 W
Maximum apparent power	27000 VA	60000 VA
Maximum reactive power	27000 Var	60000 Var
Nominal output current	74.9 A	72.2 A
Overload capability for 30 min / 3 sec[1]	28 kW / 32 kW	62 kW / 72 kW
Nominal AC voltage	208 V / 120 V WYE	480 V / 277 V WYE
AC voltage range	108 V ... 132 V	244 V ... 305 V
Rated grid frequency	60 Hz	
Frequency range	54 Hz ... 66 Hz	
Harmonics (THD)	<3%	
Power factor at rated power / adjustable displacement	1 / 0.0 leading...0.0 lagging	
Unbalanced load capability	100%	
Connection line conductors	5 (L1, L2, L3, N, PE)	
Efficiency		
Max efficiency / CEC efficiency	98.0% / 95.5%	98.0% / 98.0%
Protective Devices		
Grid monitoring	●	
Overtemperature / battery deep discharge	● / ●	
AC short-circuit current capability / galvanically isolated	● / -	
All-pole-sensitive residual-current monitoring unit	●	
Protection class	I	
Surge category	AC: II	
General data		
Dimensions (W/H/D)	772 / 837.3 / 443.8 mm (30.4 / 33 / 17.5 inch)	
Weight	104 kg (229 lb)	
Operating temperature range	–25°C to +60°C (–13°F to +140°F) with derating from 45°C	
Audible noise emission @ 1m	69 dB(A)	
Standby consumption	25 W	
Topology / Cooling concept / Transformer	Three-phase / Active / Transformerless	
Enclosure protection rating (according to UL 50E)	NEMA 4X	
Climatic classes operation	4K4 / 4Z4 /4S2 / 4M3 / 4C2 / 4B2	
EMC Class	B	
Maximum permissible relative humidity (non-condensing)	95%	
Additional information		
Communication / Data protocols	SMA Speedwire, Webconnect, Ethernet / Modbus (SMA, Sunspec)	
LED indicators (status / fault / communication)	● / ● / ●	
Energy management functions	Self-consumption optimization, Time of Use Optimization, Peak load shaving, Multi-use	
Web User Interface / WiFi[2]	● / ●	
Compatible with third-party PV inverters	●	
System monitoring	via Sunny Portal powered by ennexOS	
Warranty	10 years	
System manager function		
Maximum supported devices (inverters / energy meter) when using Sunny Island X-US as the System Manager	10 / 1	
Maximum supported devices when using Data Manager M as the System Manager	50	
Centralized commissioning of all devices in the system	●	
Remote parameterization of SMA devices	via Sunny Portal powered by ennexOS	
Type designation	SI27-US208-20	SI60-US480-20

● Standard equipment ○ Optional – Not available Data at nominal conditions Last revised: 05/2026

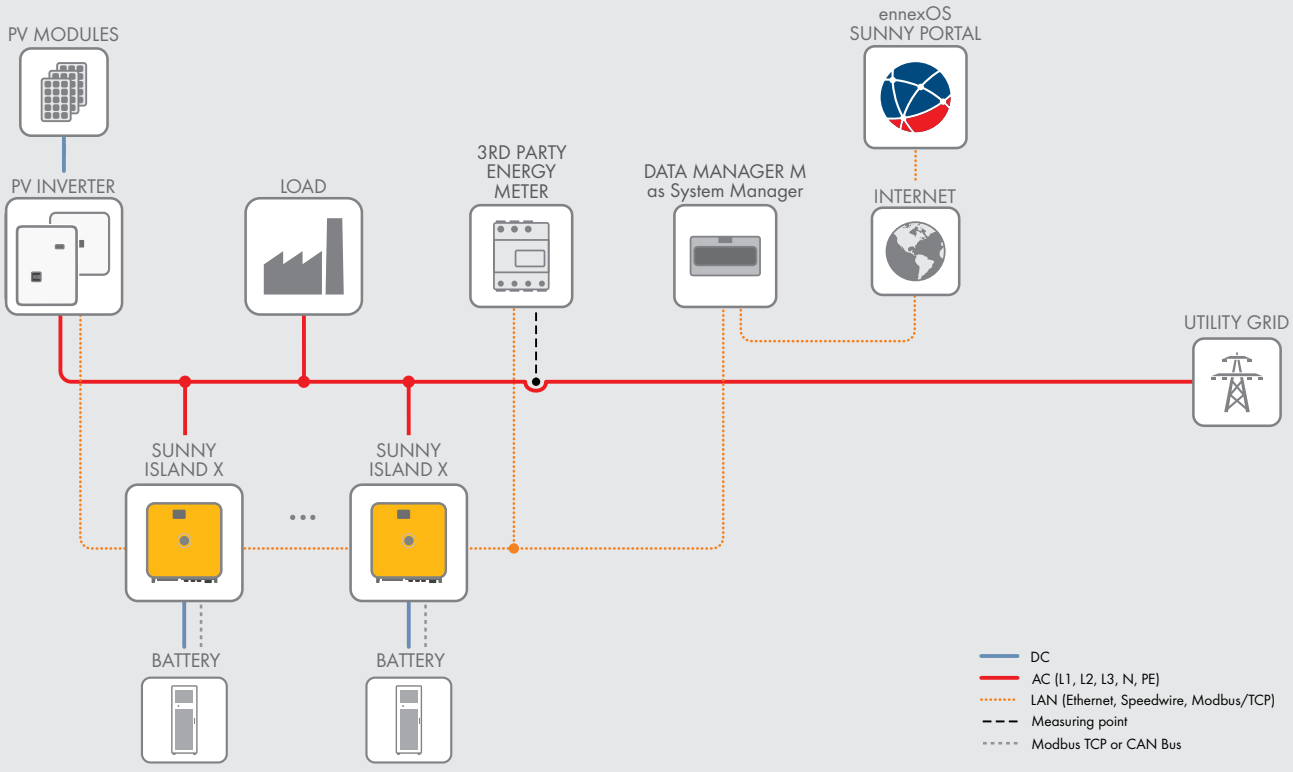
1) Only possible during backup operation 2) For commissioning only

Sunny Island X Systems

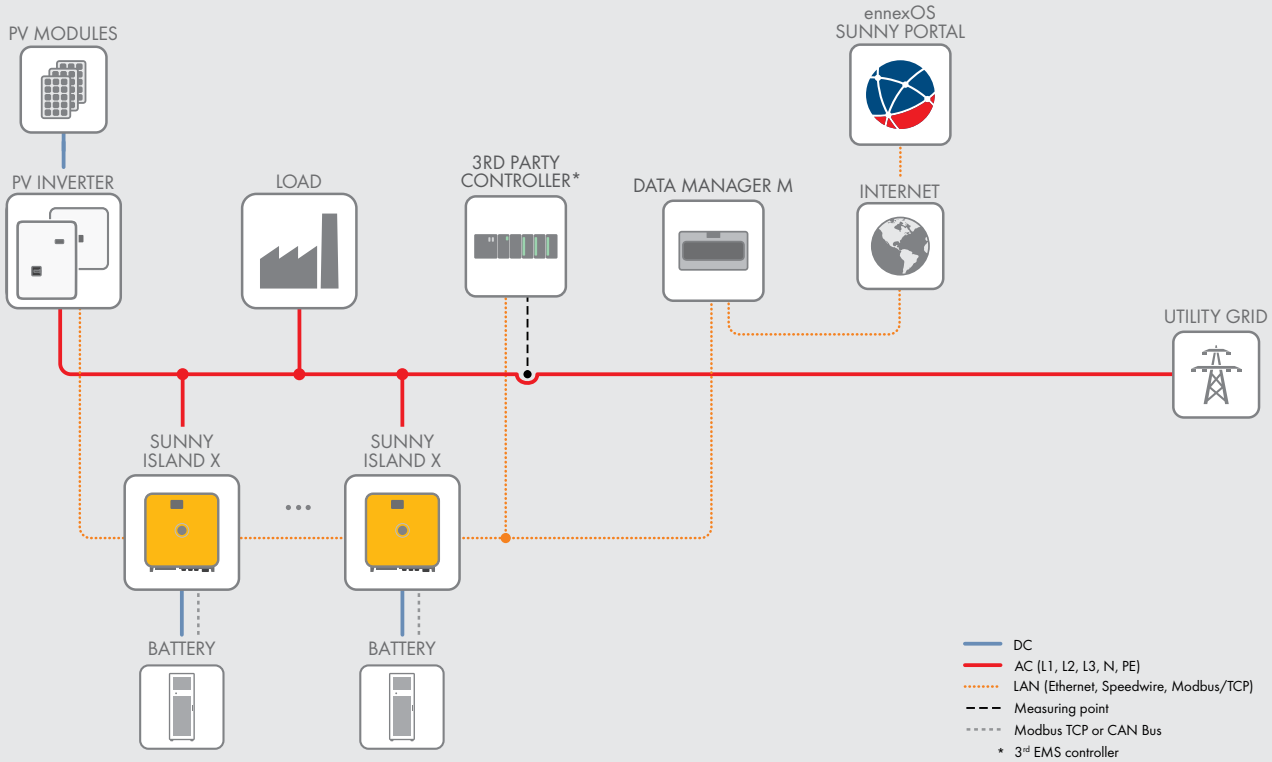
Sunny Island X-US serves as the SMA System Manager in on-grid application for energy management



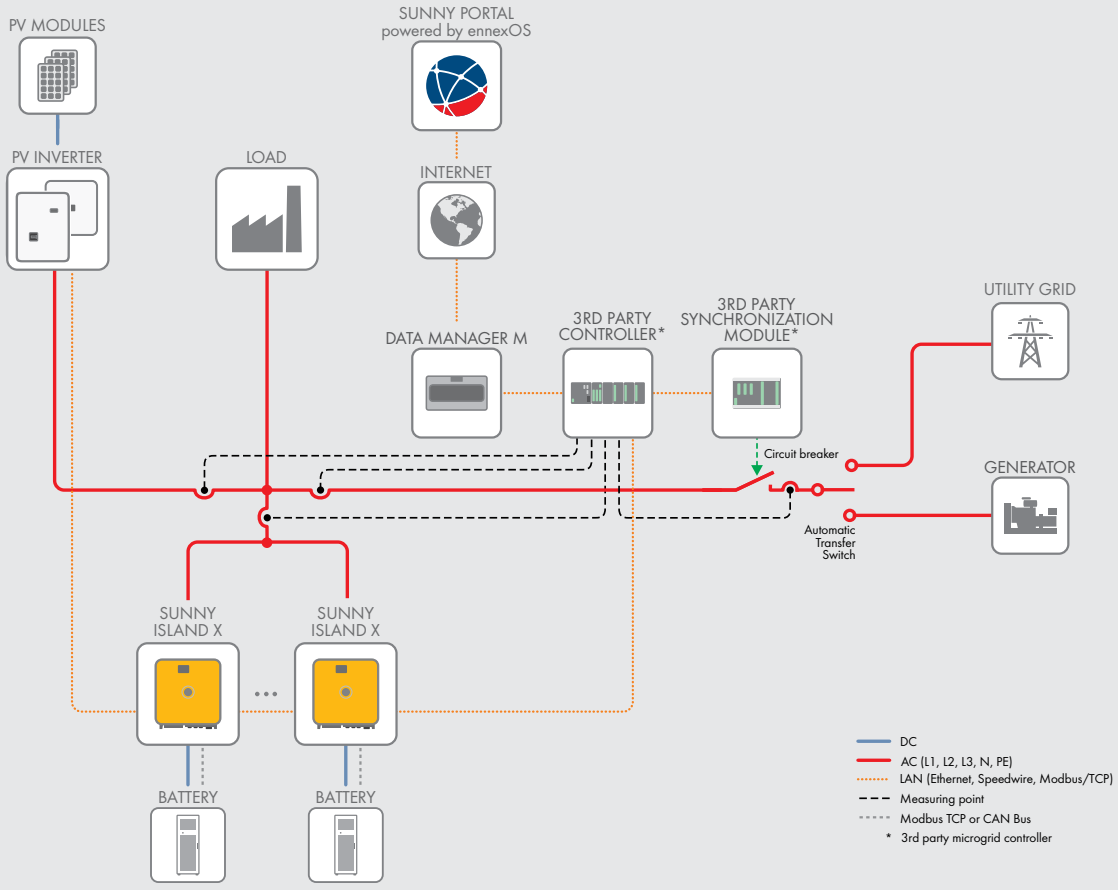
Sunny Island X-US with the Data Manager M as the SMA System Manager in on-grid application designed for energy management



Sunny Island X-US with the Data Manager M as the SMA System Manager in on-grid applications with 3rd party energy management



Sunny Island X-US microgrid system with utility grid and generator connection



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