

About Huawei

Huawei is a leading global information and communications technology (ICT) solutions provider. We provide telecom carriers, enterprises, and consumers with competitive ICT solutions, products, and services. We work in more than 170 countries and regions, serving over one-third of the world's population. Among our 180,000 employees, there are more than 160 different nationalities with a localization rate of almost 70%. Huawei's vision and mission is to bring digital to every person, home and organization for a fully connected, intelligent world. We maintained our strategic focus, intensified efforts in improving operations quality, and created value for our customers. Our 2017 annual revenue was 92.549 billion USD.



Smart Energy Center



reddot award 2016
winner

Higher Revenue

- High efficiency inverter topology
- Max. efficiency 98.6%
- European weighted efficiency 98.0%

Simple & Easy

- 10.6kg, allows one person simple installation
- Optimized AC connector for quick wiring
- Supports one-click inverter configuration

Battery Ready

- Integrated Plug & Play energy storage interface

Safe & Reliable

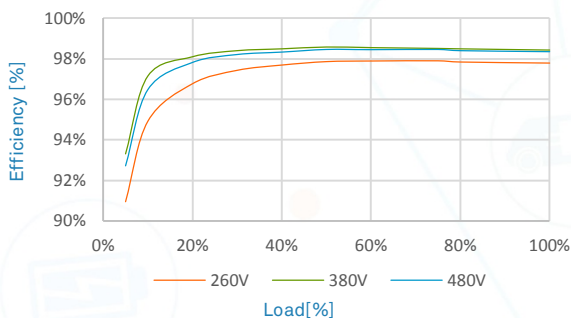
- IP65, natural convection
- Integrated lightning protection for both DC and AC
- Zero export function with smart power sensor

SUN2000L-2/3/4/5KTL

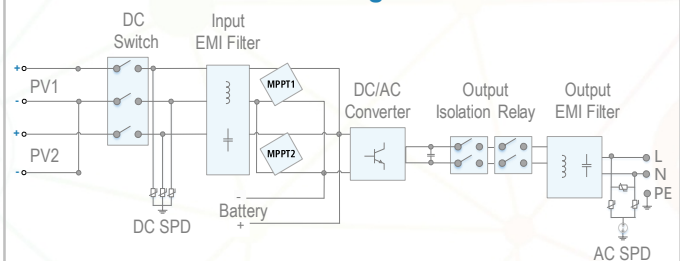


| Technical Specification | SUN2000L-2KTL | SUN2000L-3KTL | SUN2000L-4KTL | SUN2000L-5KTL |
|--|--|---------------|--|---------------|
| Efficiency | | | | |
| Max. efficiency | 98.4 % | 98.5 % | 98.6 % | 98.6 % |
| European weighted efficiency | 97.0 % | 97.6 % | 97.9 % | 98.0 % |
| Input | | | | |
| Recommended max. PV power | 3,000 Wp | 4,500 Wp | 6,000 Wp | 7,500 Wp |
| Max. input voltage | 500 / 495 V ¹ | | 600 / 495 V ¹ | |
| Operating voltage range ¹ | 90 V ~ 500 V / 90 V ~ 495 V ¹ | | 90 V ~ 600 V / 90 V ~ 495 V ¹ | |
| Start-up voltage | 120 V | | | |
| Full power MPPT voltage range | 120 V ~ 480 V | 160 V ~ 480 V | 210 V ~ 480 V | 260 V ~ 480 V |
| Rated input voltage | 380 V | | | |
| Max. input current per MPPT | 11 A | | | |
| Max. short-circuit current | 15 A | | | |
| Number of MPP trackers | 2 | | | |
| Max. number of inputs per MPPT | 1 | | | |
| Output | | | | |
| Grid connection | Single phase | | | |
| Rated output power | 2,000 W | 3,000 W | 4,000 W | 5,000 W |
| Maximum apparent power | 2,200 VA | 3,300 VA | 4,400 VA | 5,500 VA |
| Rated output voltage | 220 V / 230 V / 240 V | | | |
| Rated AC grid frequency | 50 Hz / 60 Hz | | | |
| Maximum output current | 10 A | 15 A | 20 A | 25 A |
| Adjustable power factor | 0.8 leading ... 0.8 lagging | | | |
| Max. total harmonic distortion | ≤ 3 % | | | |
| Protection | | | | |
| Anti-islanding protection | Yes | | | |
| DC reverse polarity protection | Yes | | | |
| Insulation monitoring | Yes | | | |
| DC lightning protection | Yes | | | |
| AC lightning protection | Yes | | | |
| Residual current monitoring | Yes | | | |
| AC overcurrent protection | Yes | | | |
| AC short-circuit protection | Yes | | | |
| AC over-voltage protection | Yes | | | |
| Over-heat protection | Yes | | | |
| General Data | | | | |
| Operating temperature range | -30 ~ +60 °C (Derating above 45°C @ Rated output power) | | | |
| Relative operating humidity | 0 %RH ~ 100 %RH | | | |
| Operating altitude | 0-4000 m (Derating above 4000 m) | | | |
| Cooling | Natural convection | | | |
| Display | LED indicators | | | |
| Communication | RS485, WLAN | | | |
| Weight (incl. mounting bracket) | 10.6 kg (23.4 lb) | | | |
| Dimension (incl. mounting bracket) | 375 * 375 * 161.5 mm (14.8 * 14.8 * 6.4 inch) | | | |
| Degree of protection | IP65 | | | |
| Battery Compatibility | | | | |
| Battery | LG Chem RESU 7H_R / 10H_R | | | |
| Voltage range | 350 ~ 450 Vdc | | | |
| Max. current | 10 A | | | |
| Communication | RS485 | | | |
| Standard Compliance (more available upon request) | | | | |
| Safety | EN/IEC 62109-1, EN/IEC 62109-2 | | | |
| Grid connection standards | G83/2, G59/3, EN 50438, CEI 0-21, VDE-AR-N-4105, UTE C 15-712-1, AS 4777, C10/11, ABNT, UTE C15-712, RD 1699, NRS 097-2-1, DEWA 2016 | | | |

Efficiency Curve



Circuit Diagram



SUN2000L-2/3/4/5KTL

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*1. Only applicable for PV string. The maximum input voltage and operating voltage upper limit will be reduced to 495 V when inverter connects and works with LG battery.

Smart PV Optimizer



Higher Revenue

- Max. efficiency 99.5%, weighted efficiency 99.0%
- Allows more panels on each roof to achieve higher system yields

Simple & Easy

- Supports installation in shade prone areas and in different directions
- Quick frame mount at warehouse, less rooftop installation time
- Supports remote module-level monitoring with Smart PV Safety Box
- Communication through DC power line

Safe & Reliable

- IP68, support outdoor application
- Module-level shutdown capability to secure people and assets safety

| Technical Specification | SUN2000P-375W |
|--|---|
| | Input |
| Rated input power | 375 W |
| Absolute maximum input voltage | 80 V |
| MPPT operating voltage range | 10 - 80 V |
| Max. input current | 12 A |
| Max. efficiency | 99.5 % |
| Weighted efficiency | 99 % |
| Overvoltage category | II |
| | Output |
| Max. output voltage | 80 V |
| Max. output current | 10 A |
| Output bypass | Yes |
| | Standard Compliance |
| Safety | IEC62109-1 (class II safety) |
| RoHS | Yes |
| | General Specification |
| Maximum allowed system voltage | 1,000 V |
| Communication | PLC |
| Dimensions (W * H * D) | 125 * 85 * 25.5 mm (4.9 * 3.3 * 1.0 inch) |
| Weight (including cables) | 0.7 kg (1.5 lb.) |
| Installation part | PV module frame / Aluminum extrusion profile (optional) |
| Input connector | MC4 |
| Output connector | MC4 |
| Output wire length | 1.2 m (3.9 ft.) |
| Operating temperature / humidity range | -40 to 85 °C / 0-100 % |
| Protection rating | IP68 |

Smart PV Safety Box



Simple & Easy

- Communicate with optimizers through DC power line
- Support module-level real time monitoring & management

Safe & Reliable

- Module-level shutdown capability to secure people and assets safety
- IP65, support outdoor application

| Technical Specification | SmartPSB2000L |
|-----------------------------------|--|
| DC Input | |
| Maximum input voltage | 600 V |
| Number of inputs | 2 |
| Maximum input current per input | 15 A |
| DC Output | |
| Maximum output voltage | 600 V |
| Number of outputs | 2 |
| Maximum output current per output | 15 A |
| Features | |
| Module-level remote management | Yes |
| Onsite master module shutdown | Yes |
| Remote auto module shutdown | Yes |
| General Specification | |
| Dimensions (H * W * D) | 149 * 149 * 49 mm (5.9 * 5.9 * 1.9 inch) |
| Weight | 0.8 kg (1.8 lb) |
| Display | LED |
| Communication | PLC, RS485 |
| Input type | HH4 |
| Operating temperature range | -30 to 55 °C |
| Protection rating | IP65 |

Smart Power Sensor



🎯 Accurate



- Measurement accuracy > class 1 within full temperature range

📄 Simple & Easy

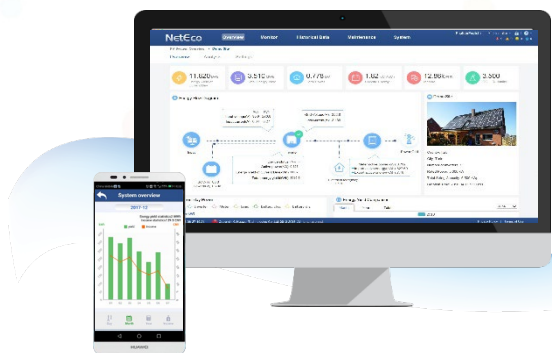
- Standard din-rail mounting of DIN 35 mm
- Small volume, 1P2W 36 mm, 3P4W 72 mm
- LCD display, convenient for users to set and check
- Coupling connection for installation
- CT and RS485 cables included in accessories

✅ Energy-efficient

- Overall power consumption ≤ 1 W

| Technical Specification | DDSU666-H | DTSU666-H |
|------------------------------|---|---|
| General Specification | | |
| Dimension (H * W * D) | 36 * 100 * 65.5mm (1.4 * 3.9 * 2.6 inch) | 72 * 100 * 65.5 mm (2.8 * 3.9 * 2.6 inch) |
| Mounting type | DIN35 Rail | |
| Weight (including cables) | 1.2 kg (2.6 lb) | 1.5 kg (3.3 lb) |
| Power Supply | | |
| Power grid type | 1P2W | 3P4W |
| Input power (phase voltage) | 176 Vac ~ 288 Vac | |
| Power consumption | ≤ 0.8W | ≤ 1W |
| Measurement Range | | |
| Line voltage | / | 304 Vac ~ 499 Vac |
| Phase voltage | 176 Vac ~ 288 Vac | |
| Current | 0 ~ 100A | |
| Measurement Accuracy | | |
| Voltage | ± 0.5% | |
| Current / Power / Energy | ± 1% | |
| Frequency | ± 0.01Hz | |
| Communication | | |
| Interface | RS485 | |
| Baud rate | 9,600 bps | |
| Communication protocol | Modbus-RTU | |
| Environment | | |
| Operating temperature range | -25 °C ~ 60 °C | |
| Storage temperature range | -40 °C ~ 70 °C | |
| Operating humidity | 5% ~ 95% (non-condensing) | |
| Others | | |
| Accessories | RS485 Cable (10m / 33 ft.) | |
| | 1 CT 100A / 40mA (6m / 19 ft.)  | 3 CT 100A / 40mA (6m / 19 ft.)  |

FusionHome-NetEco1000S



Smart

- Easy data access on mobile devices
- Proactive reports of yields and alarms

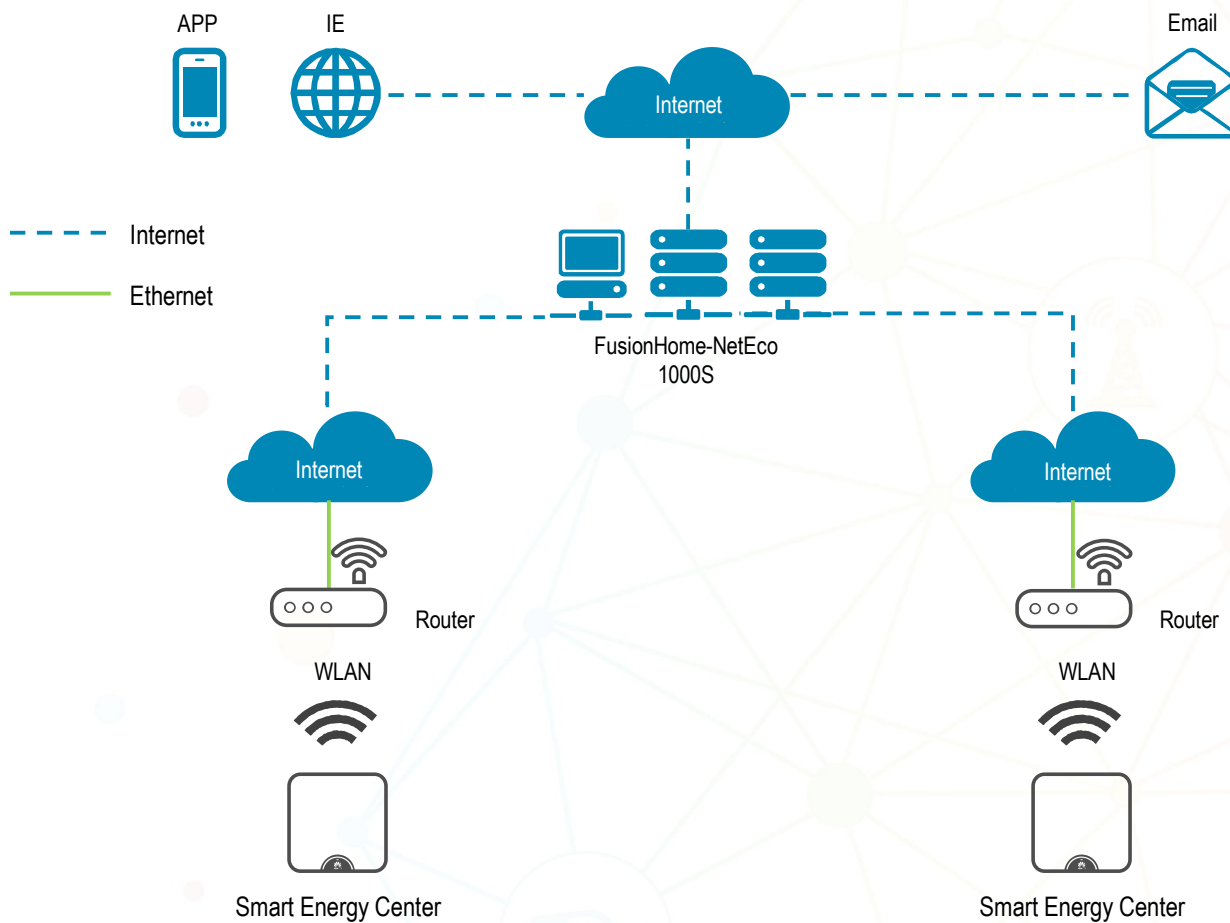
Simple

- Easy & simple to get started
- Fault alarms via E-mail

Stable

- Centralized management on all PV systems
- Up to 20 years data storage

Network Structure



| Function | Submenu | Description |
|-----------------|--|--|
| Monitor | Details | <ul style="list-style-type: none"> Browse detailed and real-time device information, including alarms, key performance indicators and device status. Support remote inverter on & off control. |
| | Alarm | <ul style="list-style-type: none"> Collect, store, browse current alarms. |
| | Device List / Plant List | <ul style="list-style-type: none"> Show device / plant information and real-time status. |
| | Setting | <ul style="list-style-type: none"> Set device parameters, like device information, time zone, communication parameter, etc. |
| Historical Data | Alarm Log | <ul style="list-style-type: none"> Historical alarms can be inquired according to the time and severity. |
| | Performance Data | <ul style="list-style-type: none"> Query plant and device daily / monthly / yearly power. |
| Maintenance | Device Maintenance | <ul style="list-style-type: none"> Browse the device operation log. Support device inspection & management. Support batch modification on device name. |
| System | User Management | <ul style="list-style-type: none"> According to different users, FusionHome-NetEco provides different log on authorities. Create users. |
| | Remote Notifications of Alarms and Reports | <ul style="list-style-type: none"> Through settings on the server and sending rules, the alarms and yield reports can be sent to user's email automatically. |

FusionHome Smart Energy Solution Reference



FusionHome Smart Energy Solution Reference

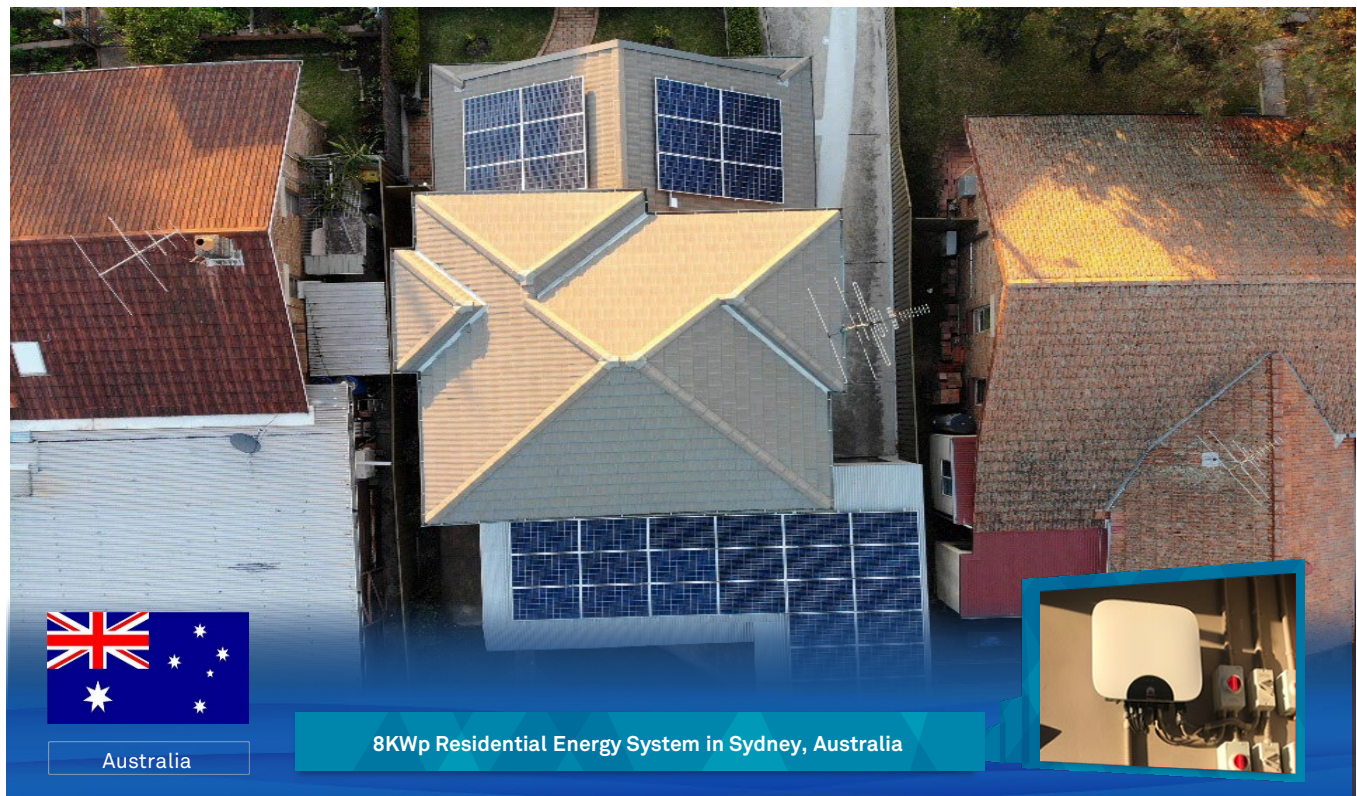


FusionHome Smart Energy Solution Reference



Italy

10KWp Residential PV System in Cisternino, Italy



Australia



8KWp Residential Energy System in Sydney, Australia





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