Smarter Energy for a Better Life

Huawei FusionHome
Smart Energy Solution
For Installers
Company Introduction

Continuous Strong Investment in Innovation

Accumulated R&D Investment in 2008-2018

Total R&D Investment in 2018

Total patents granted as of 31st Dec. 2018

$70+ Billion

$15+ Billion

87,005 Patents

Winning Consumer Loyalty and Building Brand Influence

Serving Over 1/3 of the World’s Population

Global Smartphone Retail Market Share

Increasing Global Brand Awareness

Continuous Creating Values for Customers Achieving Sustainable Business Growth

2018 Sales Revenue, 19.5% Year-on-year Growth

Unit: US$ Billion

2013 2014 2015 2016 2017 2018

39.5 46.5 60.8 75.1 92.5 109.2

Global Smartphone Retail Market Share

No.3

Serving Over 1/3 of the World’s Population

Increasing Global Brand Awareness

Smart PV Solution Achievements

NO.1 Global inverter shipment in 2015, 2016 & 2017

90+ GW Accumulated global deployment as of Dec., 2018

Innovative Technologies

Hisilicon chipset

Power line communication

Big data analytics

Cloud computing

Full Lifecycle Service Guarantee

r

Huawei’s USA HQ

Branch Offices

R&D Locations

Service Network

Technical Assistance Center

Service hotline: 1-877-948-2934

Email: na_inverter_support@huawei.com
FusionHome Smart Energy Solution Overview

Huawei integrates the latest digital and internet technology with residential solar technology, bringing you optimized PV power generation, built-in battery interface and smart home energy management, achieving customer value of "higher revenue", "simple & easy", "safe & reliable" and "smart management" delivering a better life experience.

Smart PV Optimizer
- Weighted efficiency 99%
- Maximize energy yields of each module
- Module-level shutdown, in compliance with NEC 2014 & 2017

Locus Energy Management System & APP
- Querying PV system information anytime, anywhere over the APP
- Module-level monitoring to guarantee system performance and improve O&M Efficiency

Smart Energy Center
- CEC. efficiency 99%
- All-in-One inverter
- Supports one-click commissioning through APP

Energy Storage Interface & Backup
- Built-in energy storage interface for easy future expansion and make best use of PV power production
- Built-in backup power through any outage, day or night
Values for Installers

- All-in-One Solution
- Simple & Easy
- Smart Management
- Full Lifecycle Service Guarantee
To meet various customer’s demands, installers need to purchase multiple solutions from distributor, which will quickly drive up their operation costs.

With Huawei All-in-One solution, installers now only need to contact one supplier with one product, which leading to much reduced operation costs.

All-in-One Solution, Brings Maximized Simplicity and Easier Business for Installers

Inverter

Inverter with RGM

Inverter with Energy Storage & Backup

All-in-One Inverter

Higher Operation Cost

Saving Operation Cost
Simple & Easy

More flexible system design with huawei optimizers

- String length varies from 6 to 25 modules
- More flexible and simpler installation on rooftop

One-click commissioning with smoother user experience

- Use saved files to configure a new inverter by one-click
- Automatic inverter startup & management system IP setup

Optimizer auto positioning saving monitoring setup time

- Automatically measure optimizer output voltage to ground $(u_1, u_2, ..., u_N)$ to determine optimizer logical location

Modularized design for easy Power Unit replacement

- No need rewiring and conduit rework
- Reduced efforts to save O&M costs
One-click remote software mass upgrade

Module-level smart management to guarantee system performance

Detail troubleshooting guide to reduce engineer onsite times

**Alarm Information**
- **Alarm ID**: 2032
- **Alarm name**: Grid Loss
- **Alarm serial No**: 469
- **Alarm source**: 5K-H5000019
- **Generated on**: 2017-12-28 13:40:11
- **Cleared on**: 
- **Location information**: Reason ID=1
- **Trigger cause**: 1. The power grid experiences an outage.
  2. The AC power cable is disconnected or the AC circuit breaker is OFF.
- **Troubleshooting advice**: 1. Check that the AC voltage is normal.
  2. Check that the AC power cable is connected and that the AC switch is ON.

Cloud

WLAN Router

4G

70% 80% 90%
Full Lifecycle Service Guarantee

Huawei's service infrastructure in US

- Seattle
- Portland
- Sacramento
- San Francisco
- Santa Clara
- Los Angeles
- San Diego
- Phoenix
- Minneapolis
- Montpelier
- Boston
- Bridgewater
- Philadelphia
- Washington, DC
- Reston
- High Point
- Raleigh
- Chicago
- Denver
- Overland Park
- Plano
- Atlanta
- Orlando
- Seattle
- Portland
- Sacramento
- San Francisco
- Santa Clara
- Los Angeles
- San Diego
- Phoenix
- Minneapolis
- Montpelier
- Boston
- Bridgewater
- Philadelphia
- Washington, DC
- Reston
- High Point
- Raleigh
- Chicago
- Denver
- Overland Park
- Plano
- Atlanta
- Orlando

Service hotline: 1-877-948-2934
Email: na_inverter_support@huawei.com

18 Service Sites
11 Branch Offices
1 Country Logistics Center
1 Technical Assistance Center

Local Service Support with a Robust Issue-to-Resolution Process

- 5X9h Support
- Issue To Resolution
- Customer Request
- Customer Request

- Level-3 Support
  - Strong Technical Expertise
  - Huawei R&D Experts
  - English Speaking

- Level-2 Support
  - Investigation & Diagnosis
  - US Inverter Technical Service Team
  - Huawei Global TAC

- Remote Support
  - Identification & Logging
  - Call Center
  - TAC Hotline: 1 877 448 2934
  - na_inverter_support@huawei.com

Remote Technical Support: 5X9h
Hardware Dispatch Days: 2BD
Full Optimizer Solution

Applicable Scenario

Module-level shutdown of DC voltage for higher safety
Module-level monitoring for quick troubleshooting

Full Optimizer Solution Overview

Recommended System Configuration

<table>
<thead>
<tr>
<th>Device</th>
<th>Model</th>
<th>Num.</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Smart Energy Center</td>
<td>SUN2000-3.85kW/6.9kW/10.4kW-USL0</td>
<td>1</td>
<td>Offer by Huawei</td>
</tr>
<tr>
<td>2 Smart PV Optimizer</td>
<td>SUN2000-375W-USP0</td>
<td>n</td>
<td>Offer by Huawei</td>
</tr>
<tr>
<td>3 Locus Energy</td>
<td>LocusNOC</td>
<td>1</td>
<td>Offer by Huawei</td>
</tr>
<tr>
<td>4 Cable</td>
<td>DC input power cable: 14–8 AWG</td>
<td>n</td>
<td>Customer purchasing</td>
</tr>
<tr>
<td></td>
<td>Battery cable: 14–8 AWG</td>
<td>n</td>
<td>Customer purchasing</td>
</tr>
<tr>
<td></td>
<td>AC output power cable: 16–6 AWG</td>
<td>n</td>
<td>Customer purchasing</td>
</tr>
<tr>
<td></td>
<td>Signal cable: 22-16 AWG</td>
<td>n</td>
<td>Customer purchasing</td>
</tr>
<tr>
<td></td>
<td>PE cable: 16–6 AWG</td>
<td>n</td>
<td>Customer purchasing</td>
</tr>
<tr>
<td>5 Energy meter (Recommend)</td>
<td>CCS: WNC-3Y-240-MB</td>
<td>1</td>
<td>Customer purchasing</td>
</tr>
<tr>
<td>6 Energy storage system (Recommend)</td>
<td>LG Chem - RESU7H_R/10H_R</td>
<td>1</td>
<td>Customer purchasing</td>
</tr>
<tr>
<td>7 Auto-Transformer</td>
<td>OutBack Power System: FW-X240/PSX-240</td>
<td>1</td>
<td>Customer purchasing</td>
</tr>
<tr>
<td>8 Emergency stop button</td>
<td>Mushroom Push Button Switch</td>
<td>1</td>
<td>Customer purchasing</td>
</tr>
</tbody>
</table>
Contact your local distributor for more information

**Huawei Product List**

### Smart Energy Center SUN2000L

<table>
<thead>
<tr>
<th>No</th>
<th>Product Code</th>
<th>Model</th>
<th>Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>01078381</td>
<td>SUN2000-3.8KTL-USL0</td>
<td>Inverter, SUN2000-3.8KTL-USL0, Solar Inverter, WLAN, US</td>
</tr>
<tr>
<td>2</td>
<td>01078328</td>
<td>SUN2000-5KTL-USL0</td>
<td>Inverter, SUN2000-5KTL-USL0, Solar Inverter, WLAN, US</td>
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<td>3</td>
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<tr>
<td>4</td>
<td>01078286</td>
<td>SUN2000-9KTL-USL0</td>
<td>Inverter, SUN2000-9KTL-USL0, Solar Inverter, WLAN, US</td>
</tr>
<tr>
<td>5</td>
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<td>Inverter, SUN2000-10KTL-USL0, Solar Inverter, WLAN, US</td>
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<tr>
<td>6</td>
<td>01078711</td>
<td>SUN2000-11.4KTL-USL0</td>
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<td>7</td>
<td>01078382</td>
<td>SUN2000-3.8KTL-USL0</td>
<td>Inverter, SUN2000-3.8KTL-USL0, Solar Inverter, 4G, US</td>
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<tr>
<td>8</td>
<td>01078289</td>
<td>SUN2000-5KTL-USL0</td>
<td>Inverter, SUN2000-5KTL-USL0, Solar Inverter, 4G, US</td>
</tr>
<tr>
<td>9</td>
<td>01078286</td>
<td>SUN2000-7.6KTL-USL0</td>
<td>Inverter, SUN2000-7.6KTL-USL0, Solar Inverter, 4G, US</td>
</tr>
<tr>
<td>10</td>
<td>01078287</td>
<td>SUN2000-9KTL-USL0</td>
<td>Inverter, SUN2000-9KTL-USL0, Solar Inverter, 4G, US</td>
</tr>
<tr>
<td>11</td>
<td>01078020</td>
<td>SUN2000-10KTL-USL0</td>
<td>Inverter, SUN2000-10KTL-USL0, Solar Inverter, 4G, US</td>
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<tr>
<td>12</td>
<td>01078784</td>
<td>SUN2000-11.4KTL-USL0</td>
<td>Inverter, SUN2000-11.4KTL-USL0, Solar Inverter, 4G, US</td>
</tr>
</tbody>
</table>

#### Smart Energy Center SUN2000L with Built-in RGM

| 13  | License        | 3.8-11.4KTL Solar Inverter, WLAN | To activate built-in RGM, need to purchase license, contact local distributor for details |
| 14  | License        | 3.8-11.4KTL Solar Inverter, 4G  | |

#### Smart Energy Center SUN2000L with Built-in Energy Storage

| 15  | License        | 3.8-11.4KTL Solar Inverter, WLAN | To activate built-in Energy Storage Interface with backup, need to purchase license, contact local distributor for details |
| 16  | License        | 3.8-11.4KTL Solar Inverter, 4G  | |

### Smart Energy Center SUN2000P

| 17  | 02311XYP       | SUN2000-375W-USP0     | Smart PV Optimizer (US), SUN2000-375W-USP0, Extruded Aluminum |
| 18  | 02311XYQ       | SUN2000-375W-USP0     | Smart PV Optimizer (US), SUN2000-375W-USP0, Photovoltaic Panel Frame |

### Commissioning APP

| 19  | NA             | FusionHome APP       | Local monitoring & commissioning |

### Communication Products

| 20  | 02323REH       | SUN2000, WLAN antenna | SUN2000, SUN2000 WLAN antenna SP |

### Accessories from the third party

| 23  | Management system | LocusNOC | Remote monitoring platform & mobile APP |
| 25  | Smart meter      | CCS                 | WRC-3D-240-MB |

Contact your local distributor for more information.