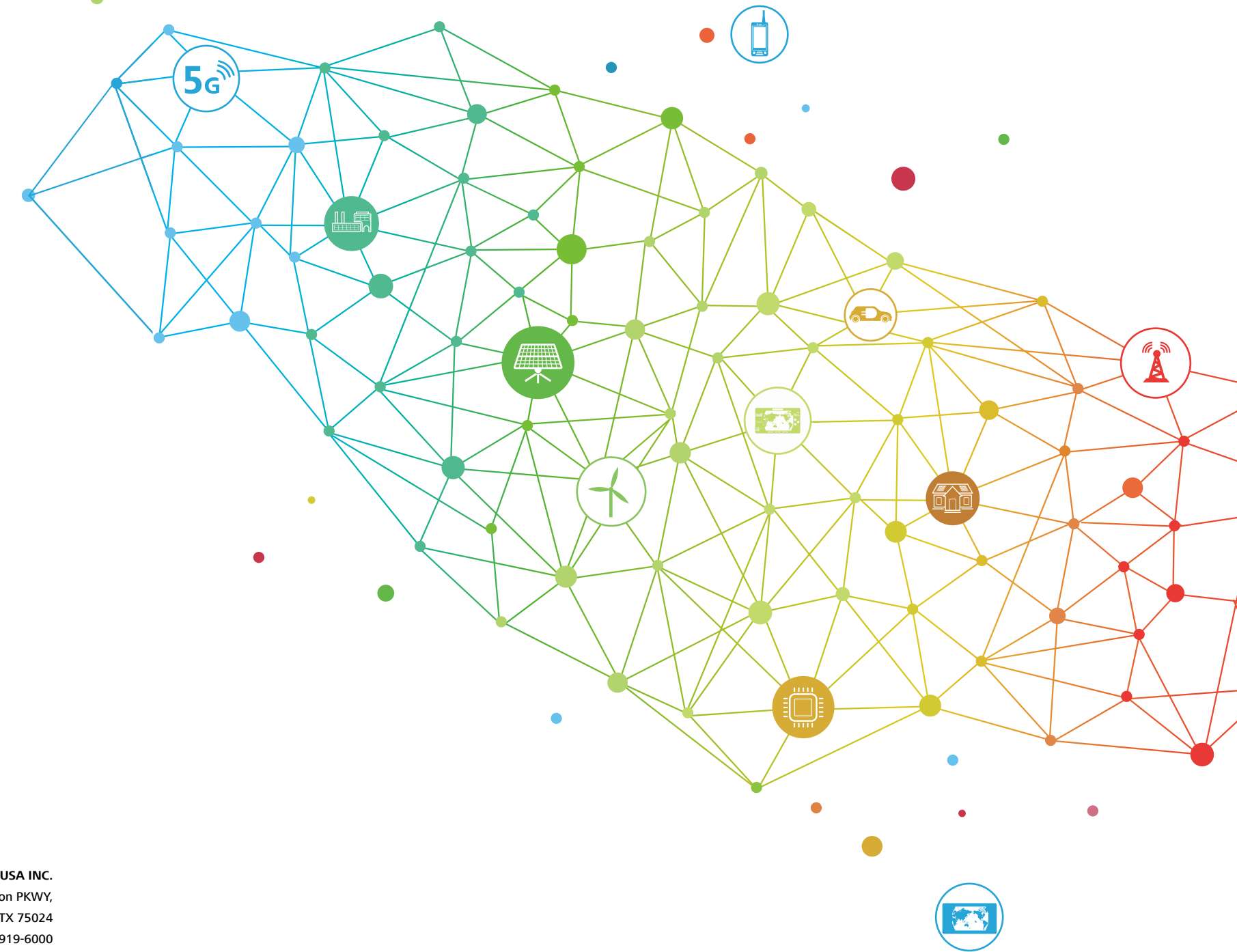






# Smarter Energy for a Better Life



HUAWEI

Copyright © Huawei Technologies Co., Ltd.2018. All rights reserved.  
No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

**Trademark Notice**  
 , HUAWEI and  are trademarks or registered remarks of Huawei Technologies Co., Ltd.  
Other trademarks, product service and company names mentioned are the property of their respective owners.

**General Disclaimer**  
The information in this document may contain predictive statements including, without limitation, statements regarding the future financial and operating results, future product portfolio, new technology, etc. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore, such information is provided for reference purpose only and constitutes neither an offer nor an acceptance. Huawei may change the information at any time without notice.

HUAWEI TECHNOLOGIES USA INC.  
5700 Tennyson PKWY,  
Plano,TX 75024  
Tel: 214-919-6000  
TAC Line: 877-948-2934

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

## Huawei FusionHome Smart Energy Solution



### For Installers

# Company Introduction

No.68  
Interbrand's Top 100  
Best Global Brands

No.72  
Fortune Global 500

180,000  
Employees

14  
R&D institute and  
centers

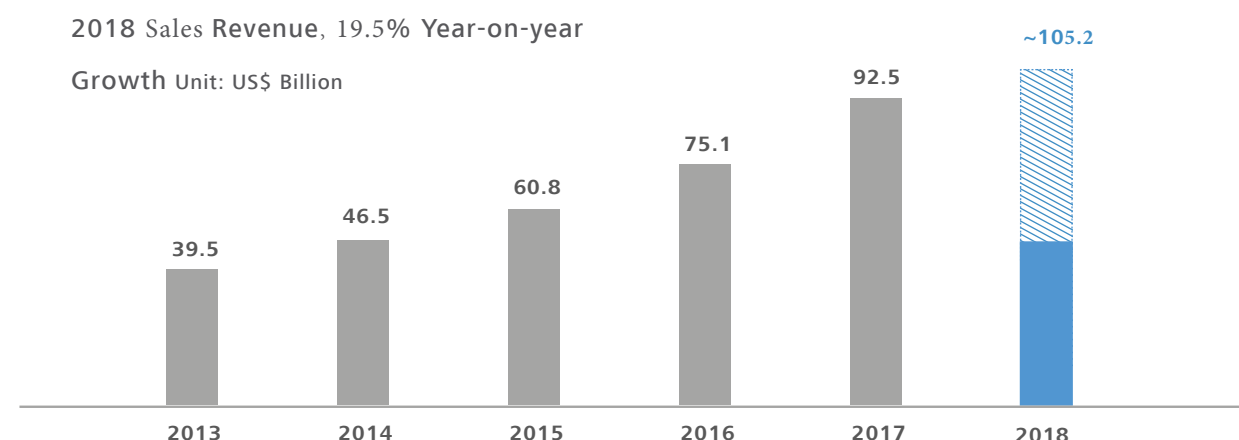
170+  
Countries

80,000  
R&D employees

## Continuously Creating Values for Customers Achieving Sustainable Business Growth

2018 Sales Revenue, 19.5% Year-on-year

Growth Unit: US\$ Billion



## Continuous Strong Investment in Innovation

>\$70  
Billion

Accumulated R&D  
Investment in 2008-2018

\$15  
Billion

Total R&D  
Investment in 2018

87,805  
Patents

Total patents granted  
as of 31st Dec. 2018

## Winning Consumer Loyalty and Building Brand Influence



Serving Over 1/3 of the  
World's Population

No.3

Global Smartphone Retail  
Market Share

88%

Increasing Global  
Brand Awareness

## Smart PV Solution Achievements

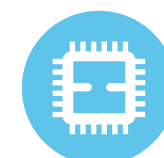
NO.1

Global inverter shipment  
in 2015, 2016 & 2017

90+  
GW

Accumulated global  
deployment as of Dec., 2018

## Innovative Technologies



Hisilicon chipset



Power line communication

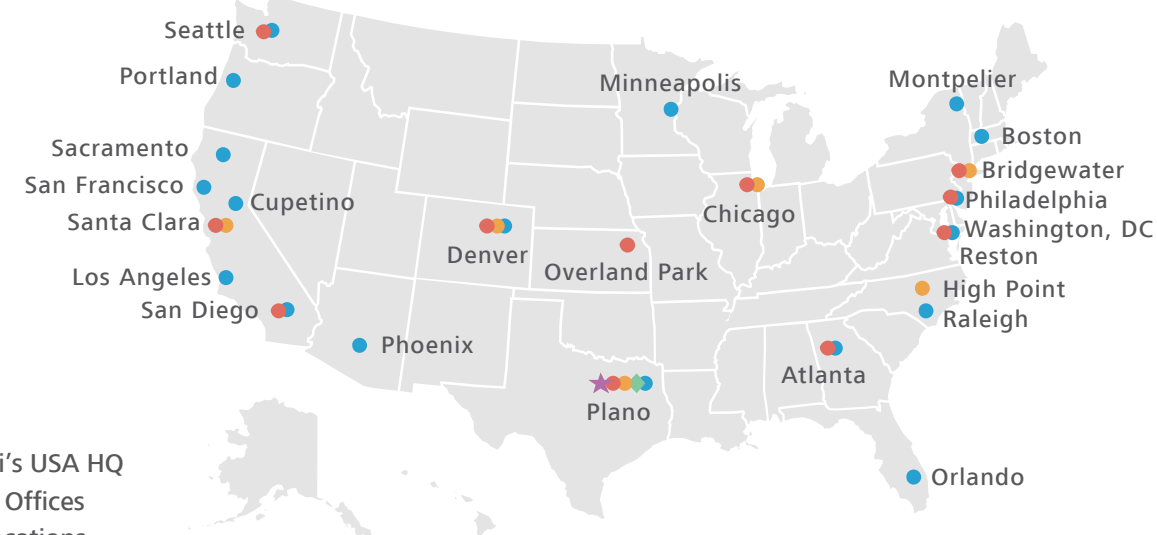


Big data analytics



Cloud computing

## Full Lifecycle Service Guarantee



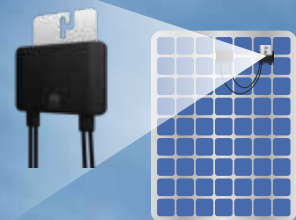
- ★ Huawei's USA HQ
- Branch Offices
- R&D Locations
- Service Network
- ◆ Technical Assistance Center

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



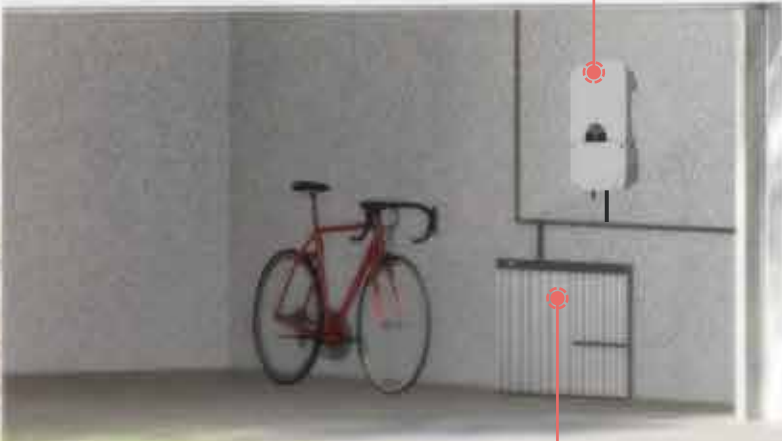
## Locus Energy Management System & APP

- 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



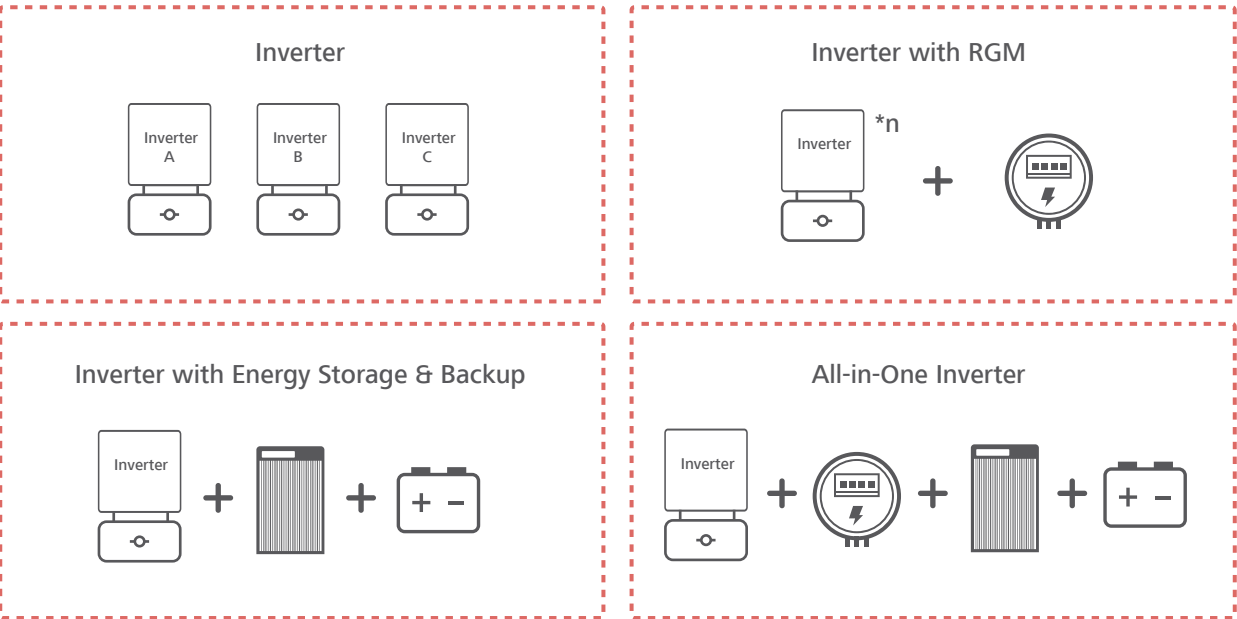
Full Lifecycle Service Guarantee



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



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



# Simple & Easy



## More flexible system design with huawei optimizers



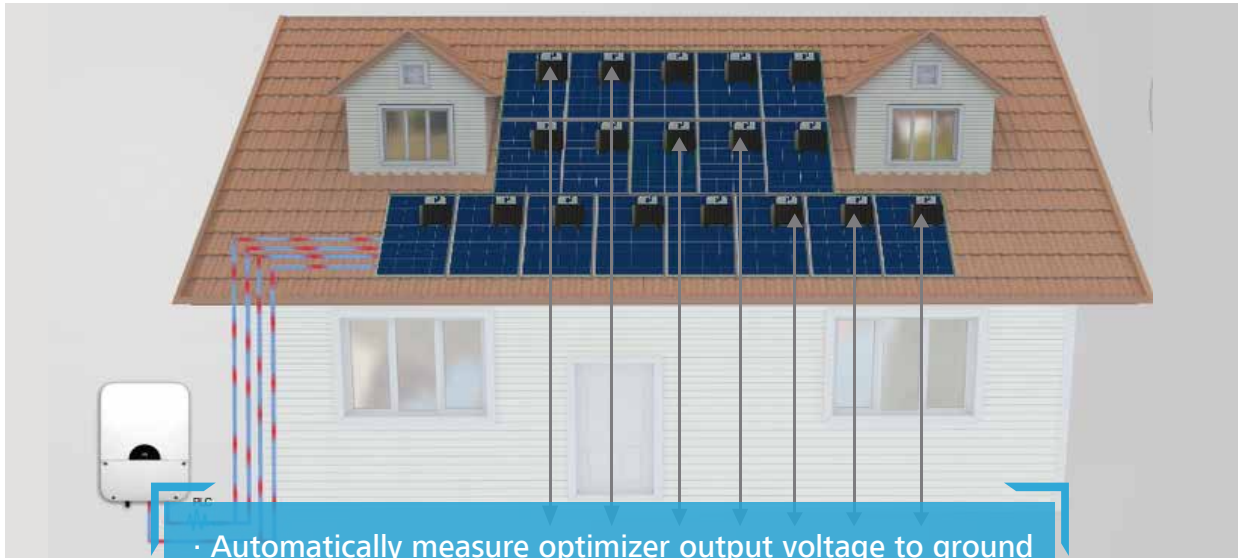
- String length varies from 6 to 25 modules
- More flexible and simpler installation on rooftop

## 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 (u1、u2...uN) to determine optimizer logical location

## Modularized design for easy Power Unit replacement



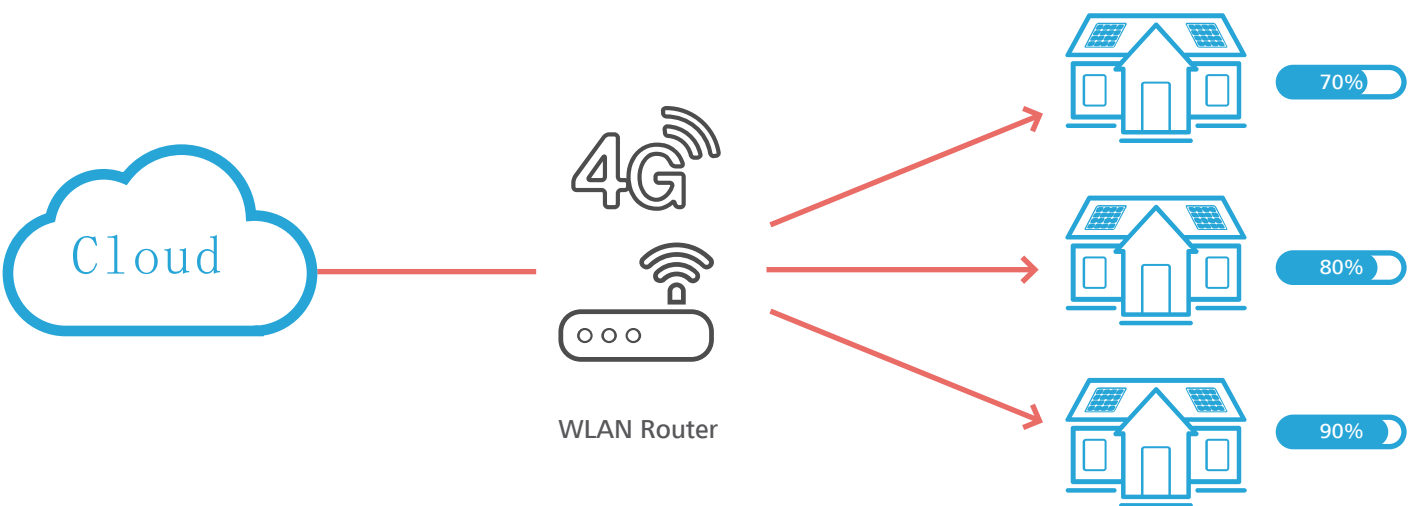
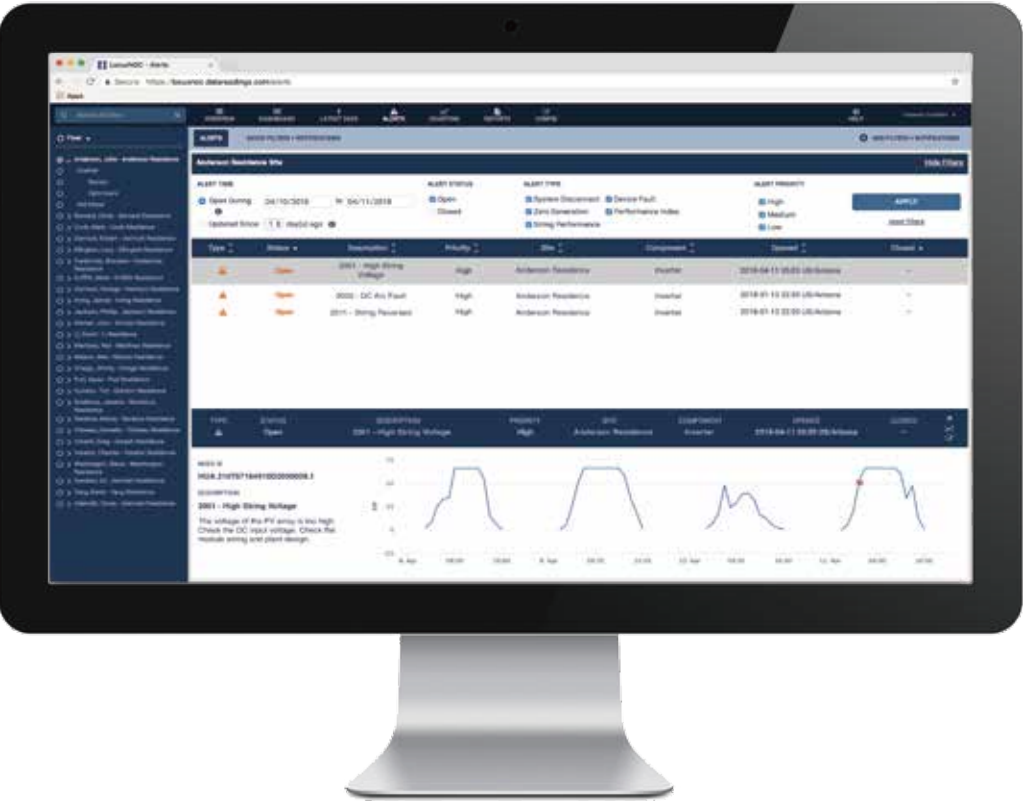
- No need rewiring and conduit rework
- Reduced efforts to save O&M costs



# Smart Management



## 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:

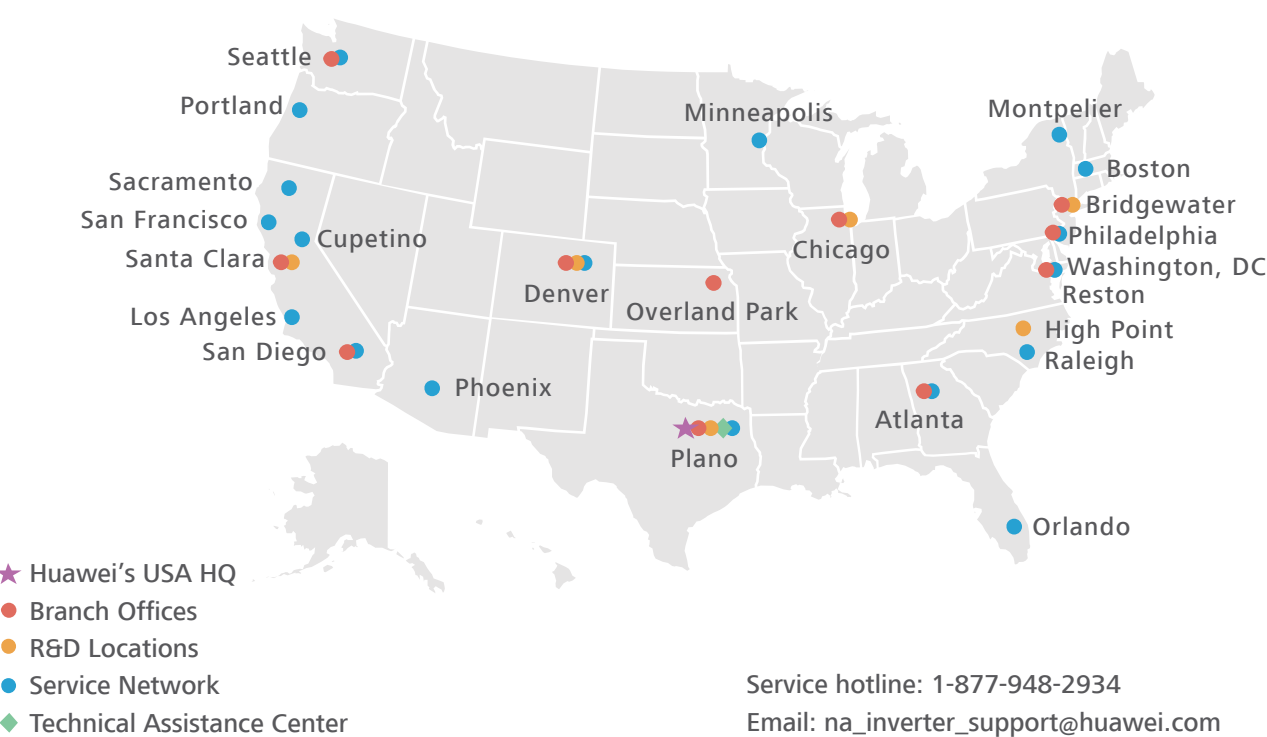
1. Check that the AC voltage is normal.  
2. Check that the AC power cable is connected and that the AC switch is ON.

Close

# Full Lifecycle Service Guarantee



## Huawei's service infrastructure in US



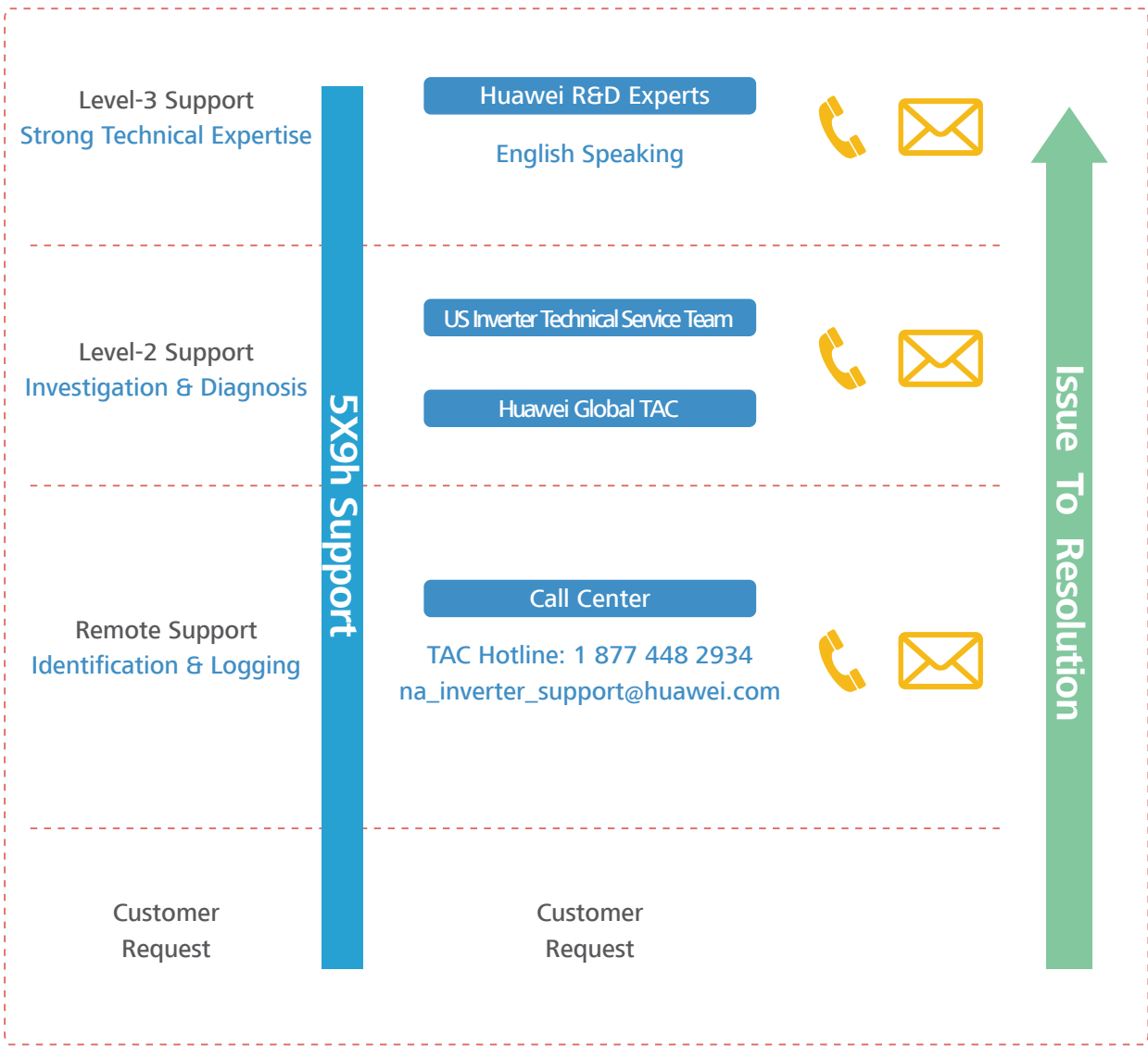
**18**  
Service Sites

**11**  
Branch Offices

**1**  
Country Logistics Center

**1**  
Technical Assistance Center

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



Remote Technical Support: 5X9h  
Hardware Dispatch Days: 2BD



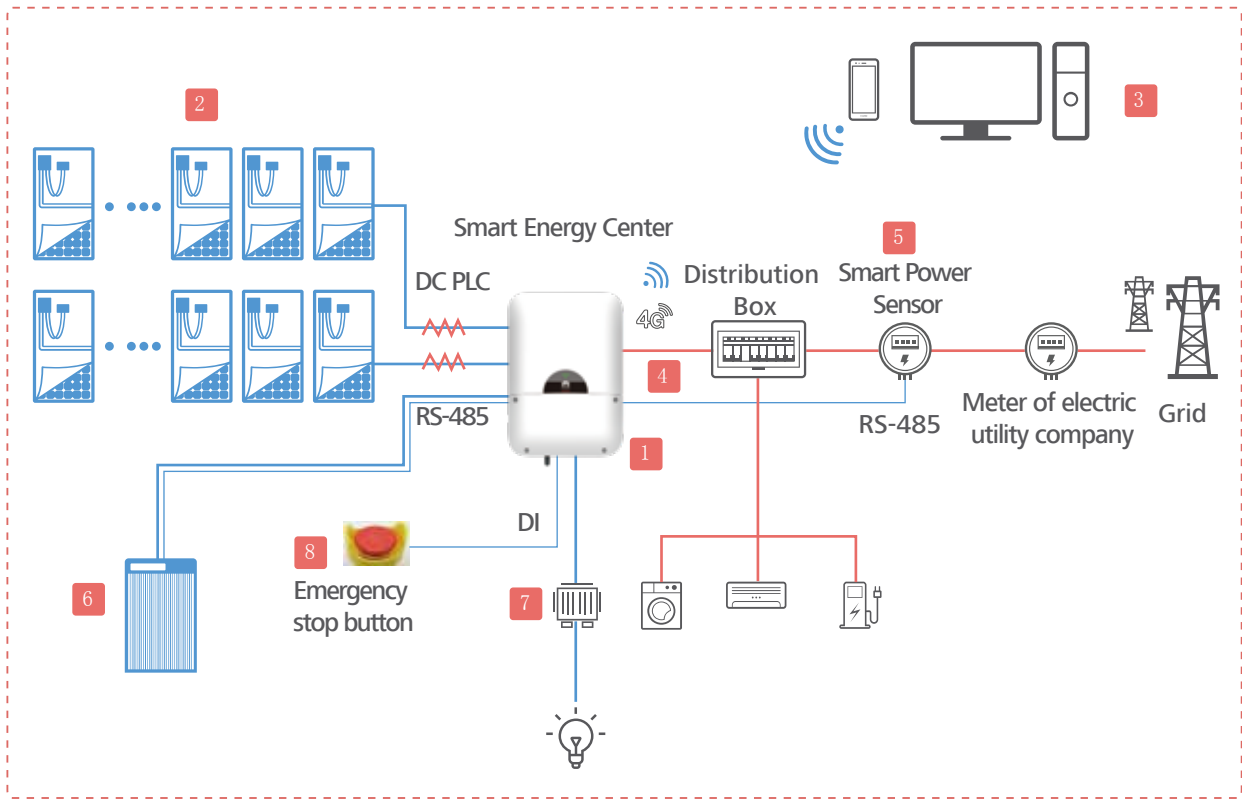
# Full Optimizer Solution



## Applicable Scenario



## Full Optimizer Solution Overview



## Recommended System Configuration







	Device	Model	Num.	Remarks
1	Smart Energy Center	SUN2000-3.8/5/7.6/9/10/11.4KTL-USL0	1	Offer by Huawei
2	Smart PV Optimizer	SUN2000-375W-USP0	n	Offer by Huawei
3	Locus Energy	LocusNOC	1	Offer by Huawei
4	Cable	DC input power cable: 14–8 AWG	n	Customer purchasing
		Battery cable: 14-8 AWG	n	Customer purchasing
		AC output power cable: 16–6 AWG	n	Customer purchasing
		Signal cable: 22-16 AWG	n	Customer purchasing
		PE cable: 16–6 AWG	n	Customer purchasing
5	Energy meter (Recommend)	CCS: WNC-3Y-240-MB	1	Customer purchasing
6	Energy storage system (Recommend)	LG Chem - RESU7H_R/10H_R	1	Customer purchasing
7	Auto-Transformer	OutBack Power System: FW-X240/PSX-240	1	Customer purchasing
8	Emergency stop button	Mushroom Push Button Switch	1	Customer purchasing

# Huawei Product List



Contact your local distributor for more information

Smart Energy Center SUN2000L				
No	Product Code	Model	Product Description	
1	01073831	SUN2000-3.8KTL-USL0	Inverter, SUN2000-3.8KTL-USL0, Solar Inverter, WLAN, US	
2	01073828	SUN2000-5KTL-USL0	Inverter, SUN2000-5KTL-USL0, Solar Inverter, WLAN, US	
3	01073825	SUN2000-7.6KTL-USL0	Inverter, SUN2000-7.6KTL-USL0, Solar Inverter, WLAN, US	
4	01073786	SUN2000-9KTL-USL0	Inverter, SUN2000-9KTL-USL0, Solar Inverter, WLAN, US	
5	01074019	SUN2000-10KTL-USL0	Inverter, SUN2000-10KTL-USL0 ,Solar Inverter, WLAN, US	
6	01073711	SUN2000-11.4KTL-USL0	Inverter, SUN2000-11.4KTL-USL0, Solar Inverter, WLAN, US	
7	01073832	SUN2000-3.8KTL-USL0	Inverter, SUN2000-3.8KTL-USL0, Solar Inverter, 4G, US	
8	01073829	SUN2000-5KTL-USL0	Inverter, SUN2000-5KTL-USL0, Solar Inverter, 4G, US	
9	01073826	SUN2000-7.6KTL-USL0	Inverter, SUN2000-7.6KTL-USL0, Solar Inverter, 4G, US	
10	01073787	SUN2000-9KTL-USL0	Inverter, SUN2000-9KTL-USL0, Solar Inverter, 4G, US	
11	01074020	SUN2000-10KTL-USL0	Inverter, SUN2000-10KTL-USL0, Solar Inverter, 4G, US	
12	01073784	SUN2000-11.4KTL-USL0	Inverter, SUN2000-11.4KTL-USL0, Solar Inverter, 4G, US	
Smart Energy Center SUN2000L with Built-in RGM				
13	License	3.8-11.4KTL Solar Inverter, WLAN	To active 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 active 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	02232REH	SUN2000, WLAN antenna	SUN2000, SUN2000 WLAN antenna SP	  
21	02232REG	SUN2000, 4G antenna	SUN2000,SUN2000 4G antenna SP-US	
22	02312BCL=	SUN2000, Smart Module-4G-US	Function Module,SUN2000,Smart Module-4G-US America 4G Wireless Module	
Accessories from the third party				
23	Management system	LocusNOC	Remote monitoring platform & mobile APP	
24	Battery	LG Chem 7H_R/10H_R	Current supported battery brands and models: LG Chem RESU 7H/10H (Type-R) Specification and user manual: <a href="http://www.lgesspartner.com/front/normal/en/product/productInfo.dev">http://www.lgesspartner.com/front/normal/en/product/productInfo.dev</a>	
25	Smart meter	CCS	WNC-3D-240-MB	