

Smarter Energy for a Better Life



Huawei FusionHome Smart Energy Solution



For Installers

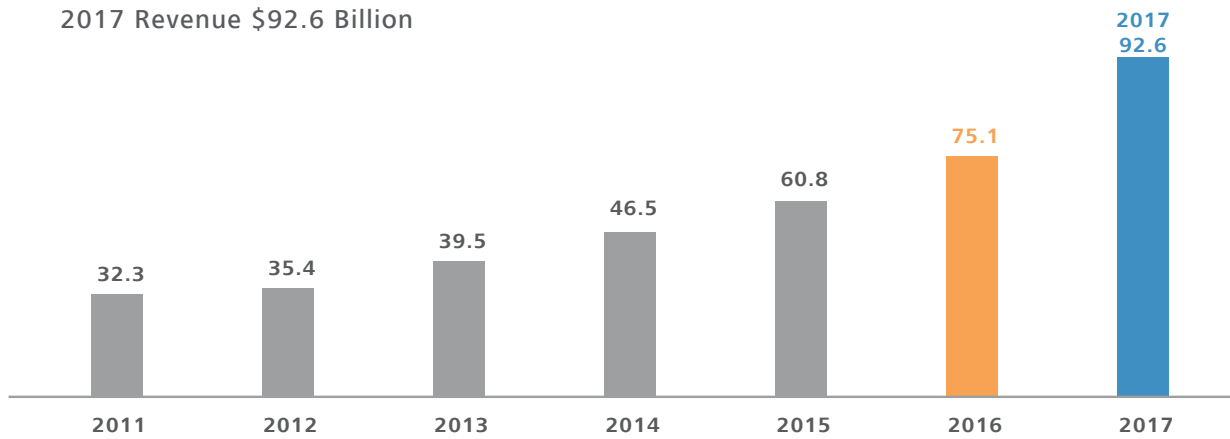
Company Introduction

No.70
Interbrand's Top 100
Best Global Brands

No.83
Fortune Global 500

Sustainable, Robust Growth

2017 Revenue \$92.6 Billion



Continuous Strong Investment in Innovation

>\$61
Billion

Accumulated R&D
investment in 2017

\$13.8
Billion

Total R&D
investment in 2017

74.307
Patents

Total patents granted
as of 31st Dec, 2017

Winning Consumer Loyalty and Building Brand Influence



Serving Over 1/3 of the
World's Population

No.3

Global Smartphone Retail
Market Share

81%

Increasing Global
Brand Awareness



Smart PV Solution Achievements

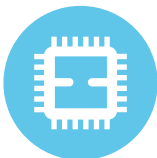
NO.1

Global inverter shipment in 2015 & 2016 & 2017

65+ GW

Accumulated global deployment as of Dec, 2017

Innovative Technologies



Hisilicon chipset



Power line communication



Big data analytics



Cloud computing

Full Lifecycle Service Guarantee

- ★ TAC (Technical Assistance Centers)
- ◆ Logistic Center
- Training Center
- Local Spare Parts Center
- Central Spare Parts Center



FusionHome Smart Energy Solution Overview

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



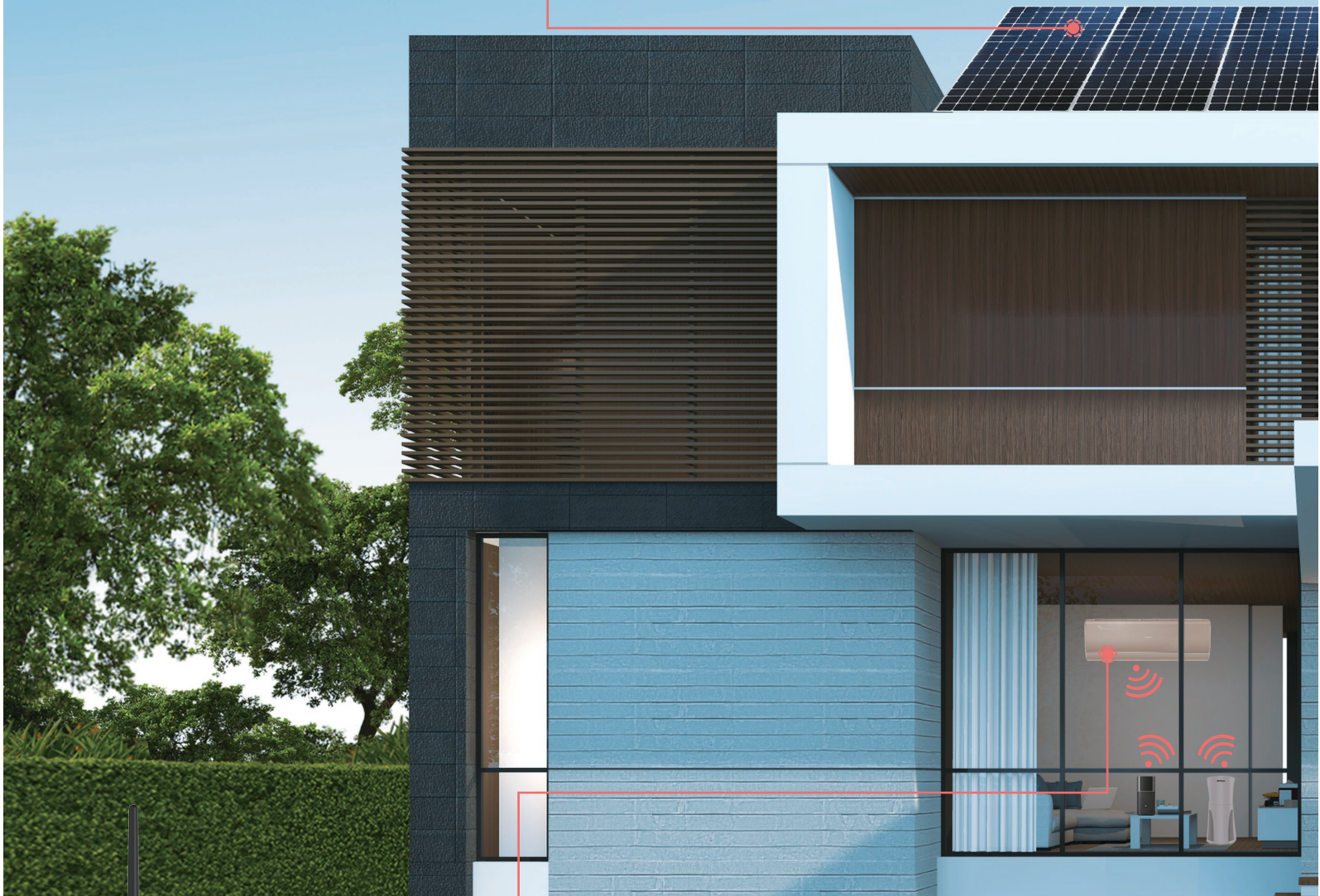
Smart PV Optimizer

- Max. efficiency 99.5%
- Maximize energy yields of each module
- Module-level monitoring & management



Smart Energy Meter

- Max. efficiency 99.5%
- 2 MPPTs, one string
- Ultra compact, easy to install
- Built-in DC coupling



*Smart Home Hub

- FusionHome combines smart PV solution with smart home management
- Achieves a smart remote control of household appliance

* Provided by 3rd party partners



Smart PV Disconnect

- Enables power disconnect
- DC disconnection shutdown



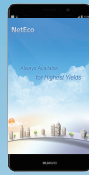
power
ner

Energy Center

98.6%
string per MPPT
10.6KG
controlling battery interface



reddot award 2016
winner



FusionHome-NetEco1000s Management System

- Querying PV system information anytime, anywhere over the APP
- Visualized remote real-time management, improving O&M efficiency



Safety Box

line communication with optimizers
on & module-level voltage rapid

Energy Storage Interface

- Integrates energy storage interface for easier future expansion and higher self-consumption rate

Values for End Users



A Trustworthy Brand



Higher Revenue



Safe & Reliable



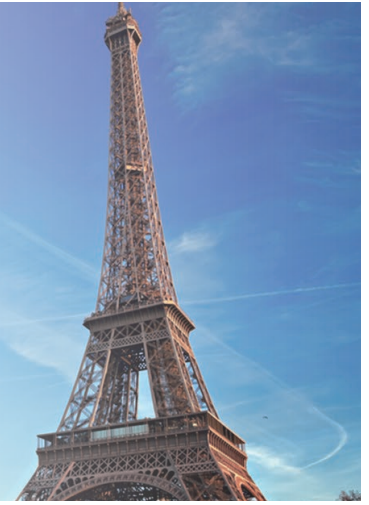
Simple & Easy



Smart Management



A Trustworthy Brand



No.1

Global PV Inverter Shipment

No.83

Fortune Global 500



No.70, 2017 Top 100 Best Global Brands (by Interbrand)



No.49, 2017 BrandZ Top 100 Most Valuable Global Brands



No.10 on the 50 Smartest Companies 2016 ranking of MIT Technology Review

Higher Revenue



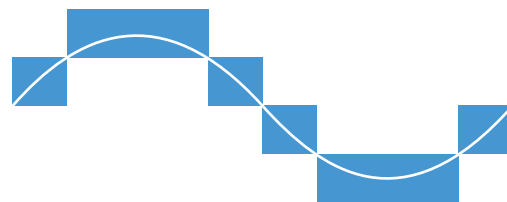
Smart Energy Center, ultimate efficiency for higher yields

- Huawei 5-level inverter topology leads to outstanding efficiency & power quality.



Max. efficiency 98.6%

Euro. Efficiency 98.0%



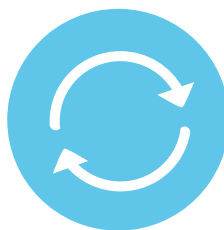


Higher revenue in 25 years



Higher Yields

Higher efficiency, increasing power generation by over 1%.



25 Years' Reliability

High product reliability, less maintenance cost



Higher Revenue

Higher power generation leads to higher revenue in 25 years.

Higher Revenue

Conventional Solution



Conventional solutions are unable to fully utilize the rooftops to maximize yields

FusionHome Solution



A flexible system design with optimizers, allowing more panels to be installed



Achieve higher yields by installing more panels in the shadow

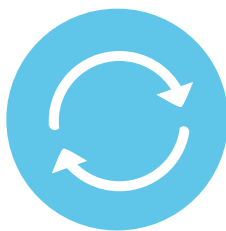


Install More, Achieve More

Generating 22,400~33,600 kWh additional yields in 25 years.

$280/1000 \text{ kWp} * 4 \text{ modules} * (1000 \sim 1500) \text{ h} * 25 \text{ years} * 0.8$

* 0.8 is the shadow factor



25 Years' Reliability

High product reliability, less maintenance cost



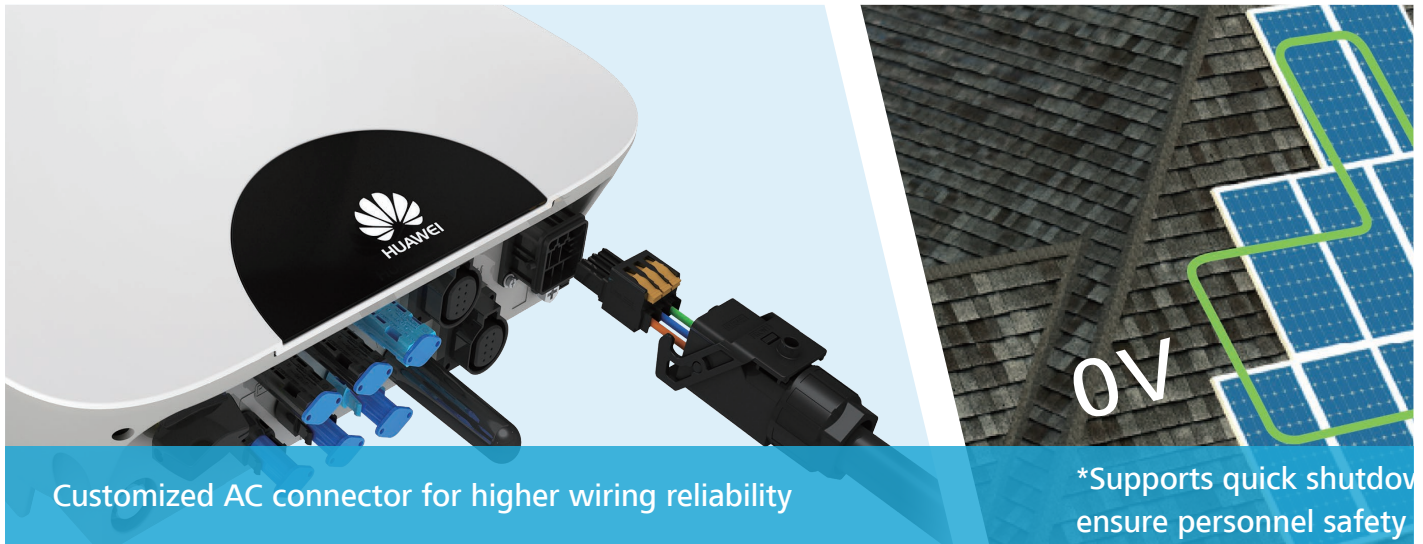
1,480~6,224 Euros Net Income

Achieving additional revenue 1,480~6,224 Euros. $(22,400 \sim 33,600) \text{ kWh} * (0.1 \sim 0.2) \text{ Euros/kWh} - 4 \text{ modules} * 280 \text{ Wp} * (0.3 \sim 0.5) \text{ Euros/Wp} - 4 \text{ optimizers} * (40 \sim 50) \text{ Euros}$

* For reference only, the calculation is based on specific model, electricity price and incentive policy.

Safe & Reliable

Outstanding safety features & rigorous industry standard testing to secure

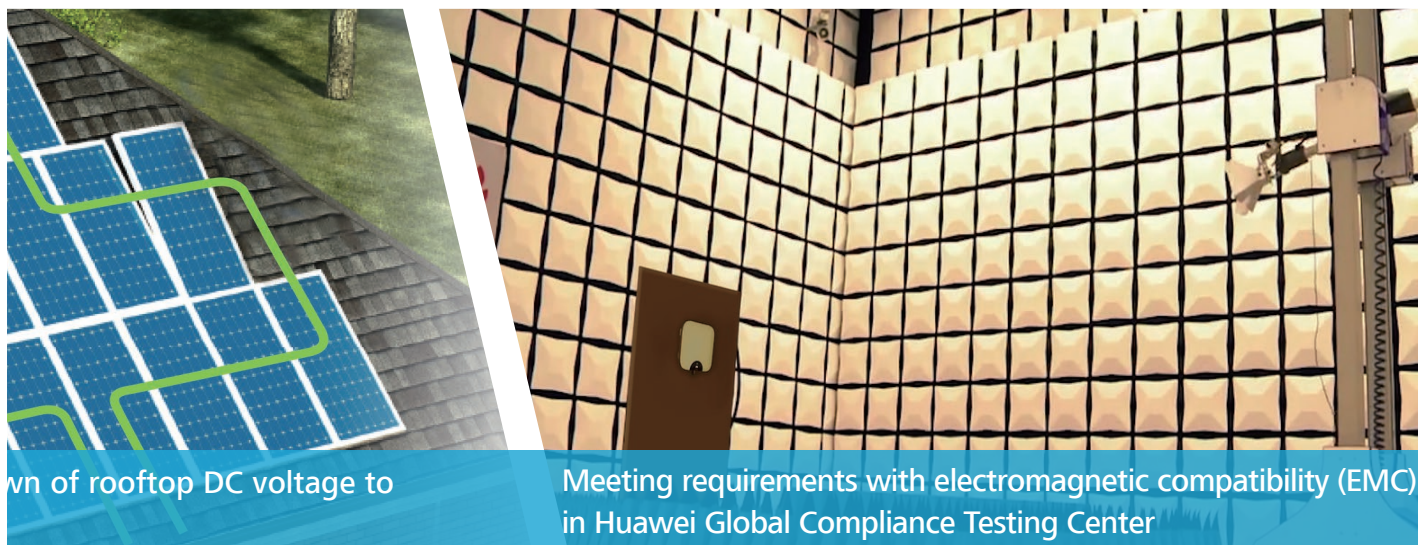


* This function requires full optimizer solution & Smart PV Safety Box

Global Compliance & Testing Center

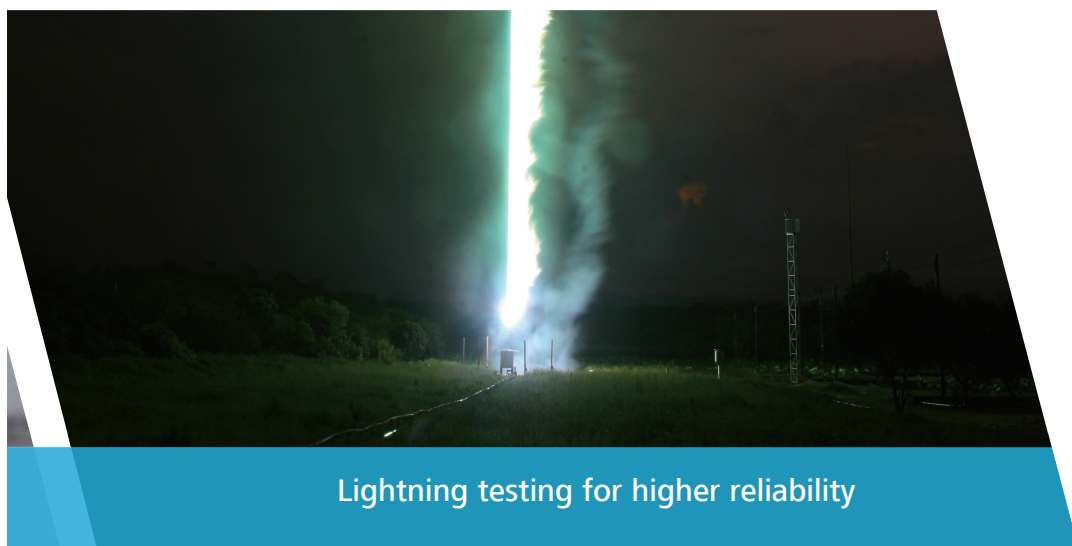


human & assets safety



Plan of rooftop DC voltage to

Meeting requirements with electromagnetic compatibility (EMC) in Huawei Global Compliance Testing Center



Lightning testing for higher reliability

Simple & Easy



Querying PV system information anytime, anywhere over the APP



Visualize the management of each PV module. Precise faults locating and easy one-click feedback

* This function requires full optimizer solution & Smart PV Safety Box

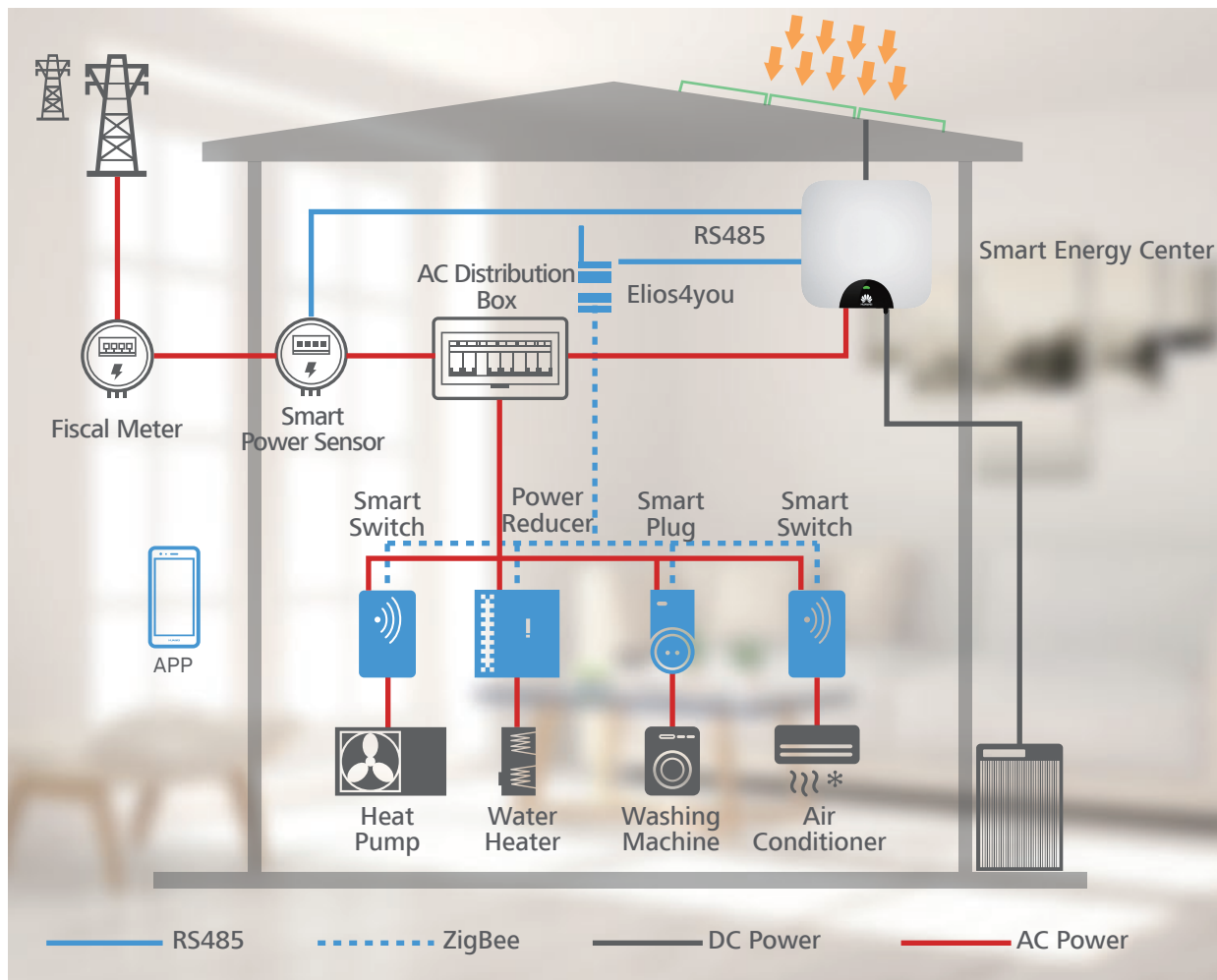
Smart Management

Built-in simple “Plug & Play” energy storage interface, higher solar energy self-consumption rate and battery charging efficiency





Integrate Smart PV and Smart Home to realize the integrated management of energy generation, storage and consumption, increasing solar self-consumption to 80~85%



* Devices marked in blue are provided by 3rd party partners

Values for Installers



One-fits-all Solution



**Flexible Design &
Easy Installation**



**One Click Startup &
Better WLAN Connection**



Smart Management



**Full Lifecycle Service
Guarantee**



One-fits-all Solution

Flat rooftop that only requires a basic system



Complex rooftop with p



Basic Solution



Partial Optir

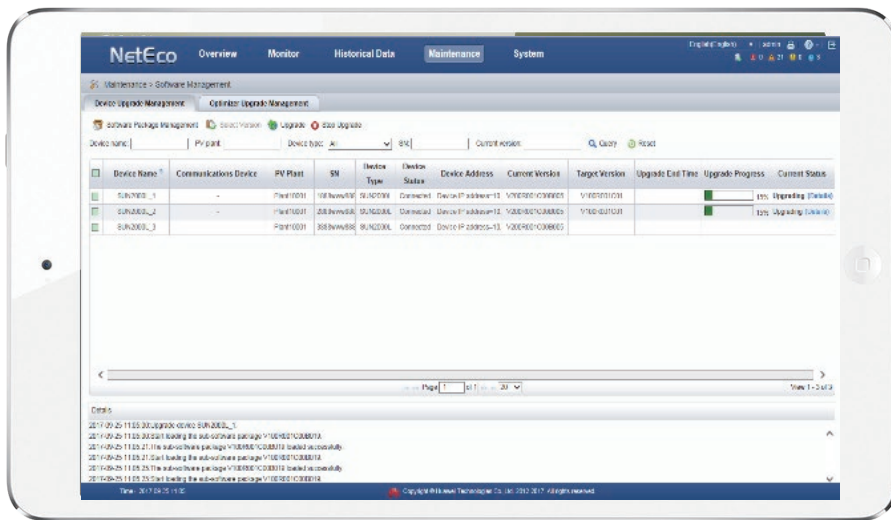




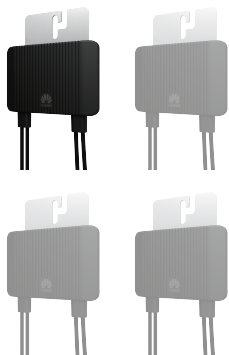
Partial shading



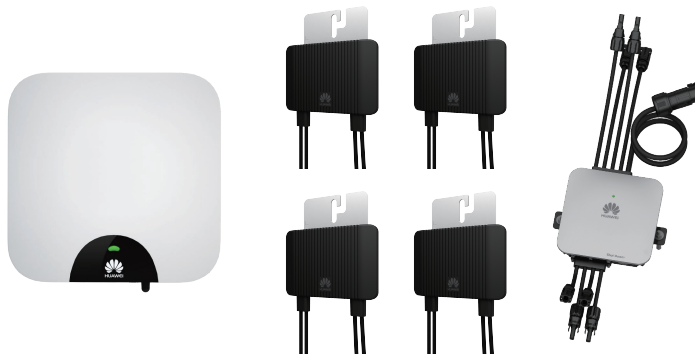
Require higher safety & module management



Optimizer Solution



Full Optimizer Solution

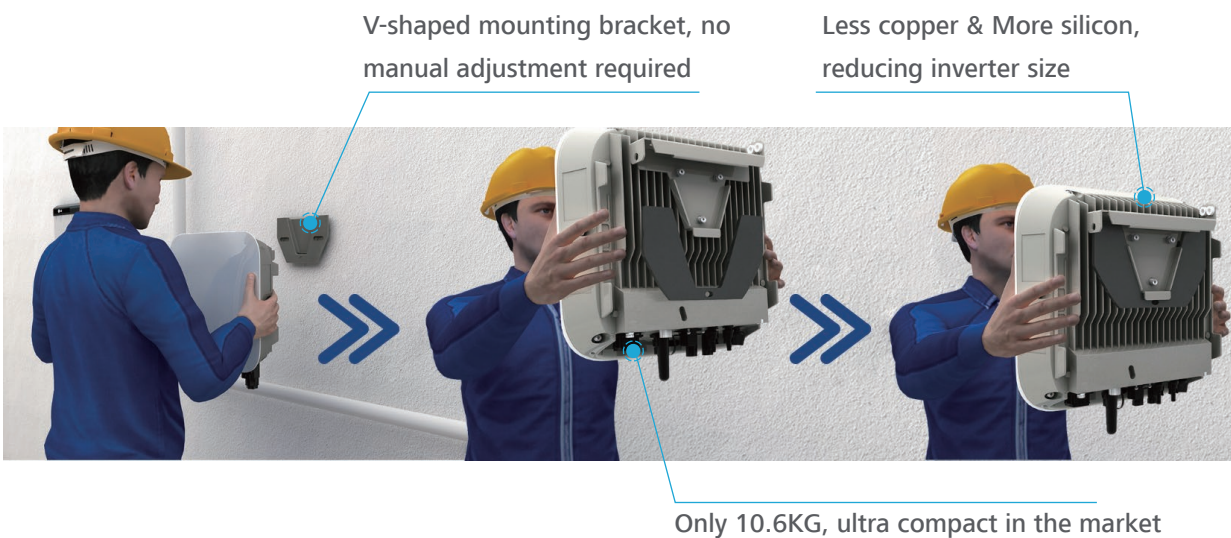


Flexible Design & Easy Installation

Flexible design allowing larger systems to be installed

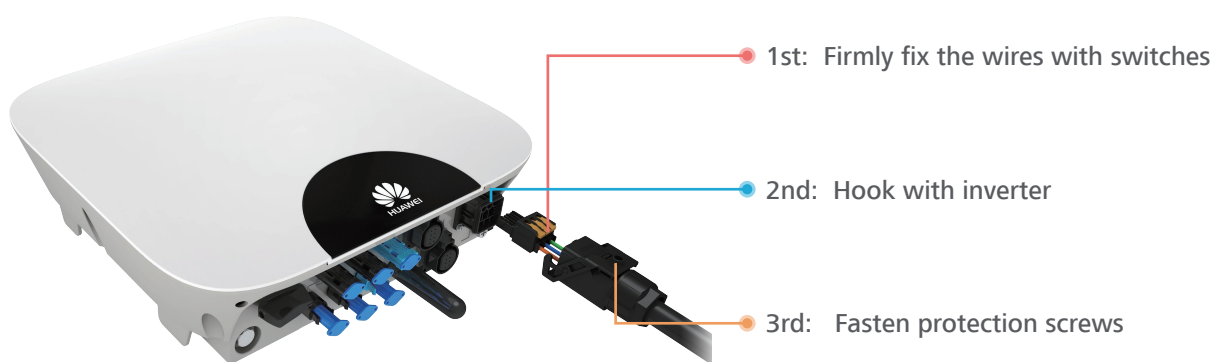


Smaller size enables one person easy installation





30 seconds quick wiring with customized AC connector



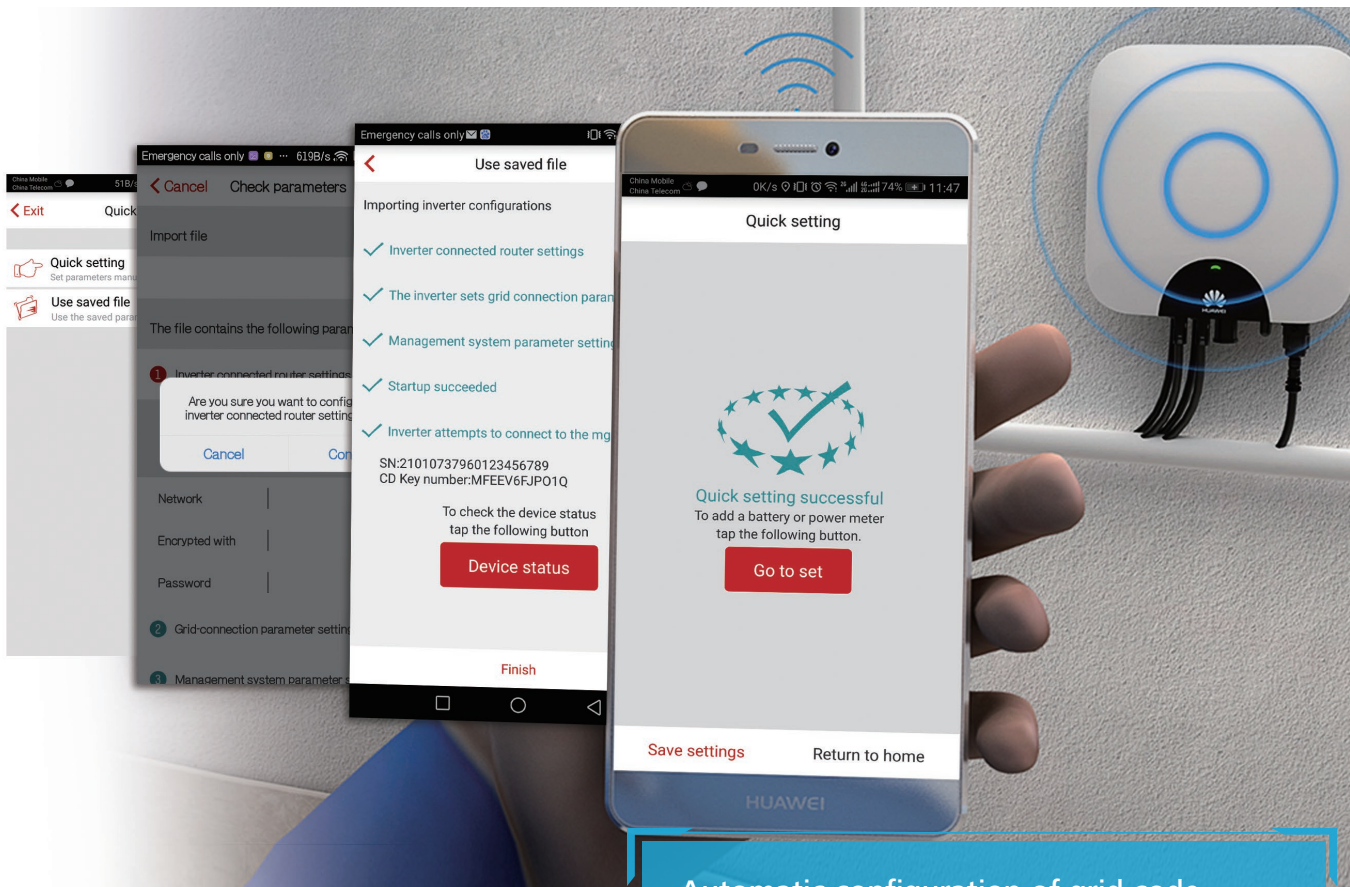
- Standardized connector installation, to ensure long-term reliability

20 seconds optimizer module frame mounting



One Click Startup & Better WLAN Conn

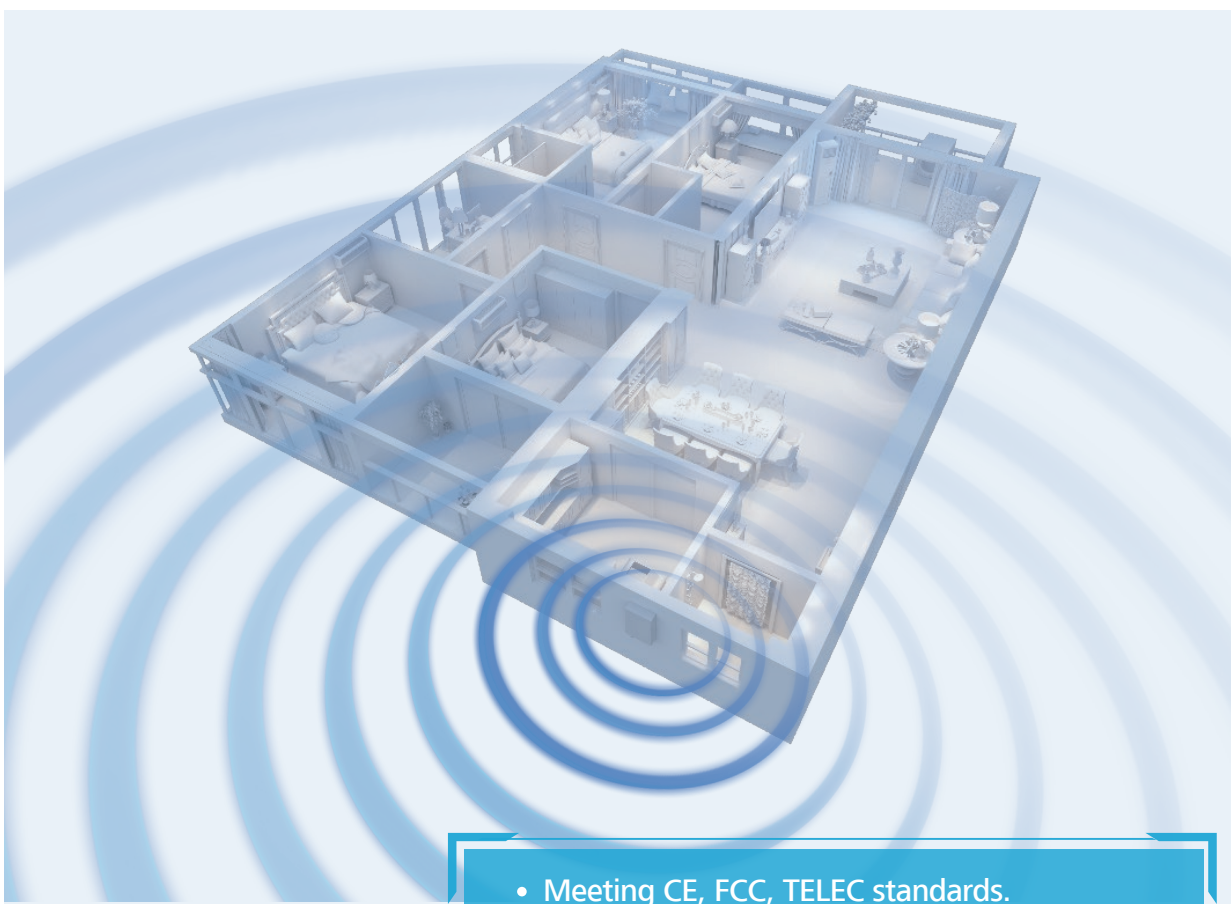
One click startup with no complications



Automatic configuration of grid code, time & date, IP address with just one click.

nection

Dual antenna design for a quick, simple and better WLAN connection



- Meeting CE, FCC, TELEC standards.
- Transmission distance up to 200m(in open area), meeting the requirement of home usage.

Smart Management

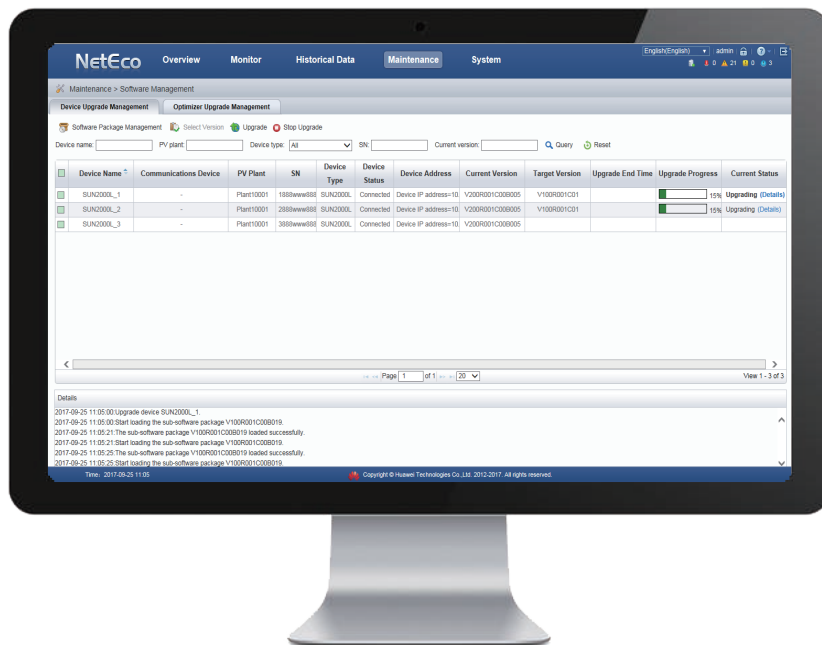
Conventional Upgrade Solution



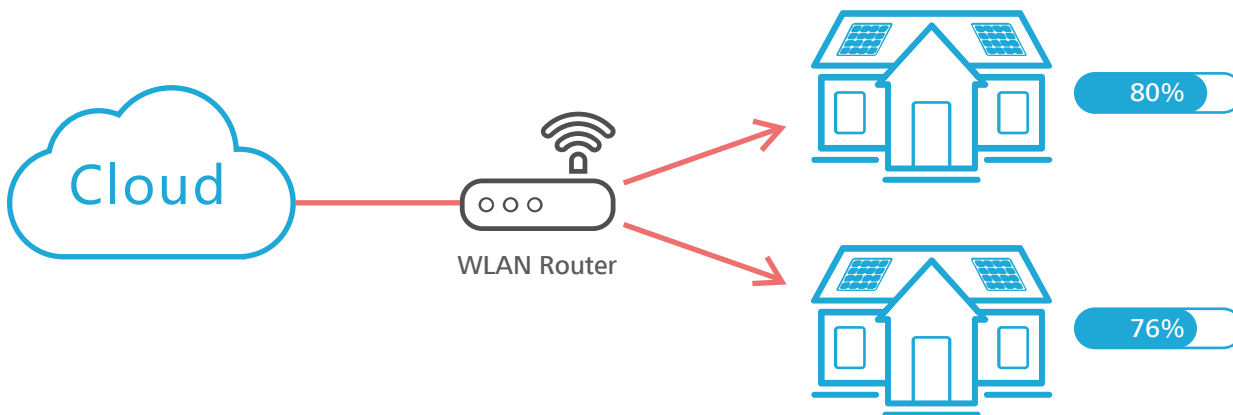
- Distributed residential PV system cause high cost for manual upgrade onsite.



Huawei one-click mass upgrade solution



FusionHome-NetEco1000s
Remote One-click mass upgrade



Full Lifecycle Service Guarantee

Huawei's service infrastructure in Europe

- ★ TAC (Technical Assistance Centers)
- ◆ Logistic Center
- Training Center
- Local Spare Parts Center
- Central Spare Parts Center



14
Service Branch Offices



5
Technical Assistance Centers



2
Logistics Centers



27
Country level Warehouses



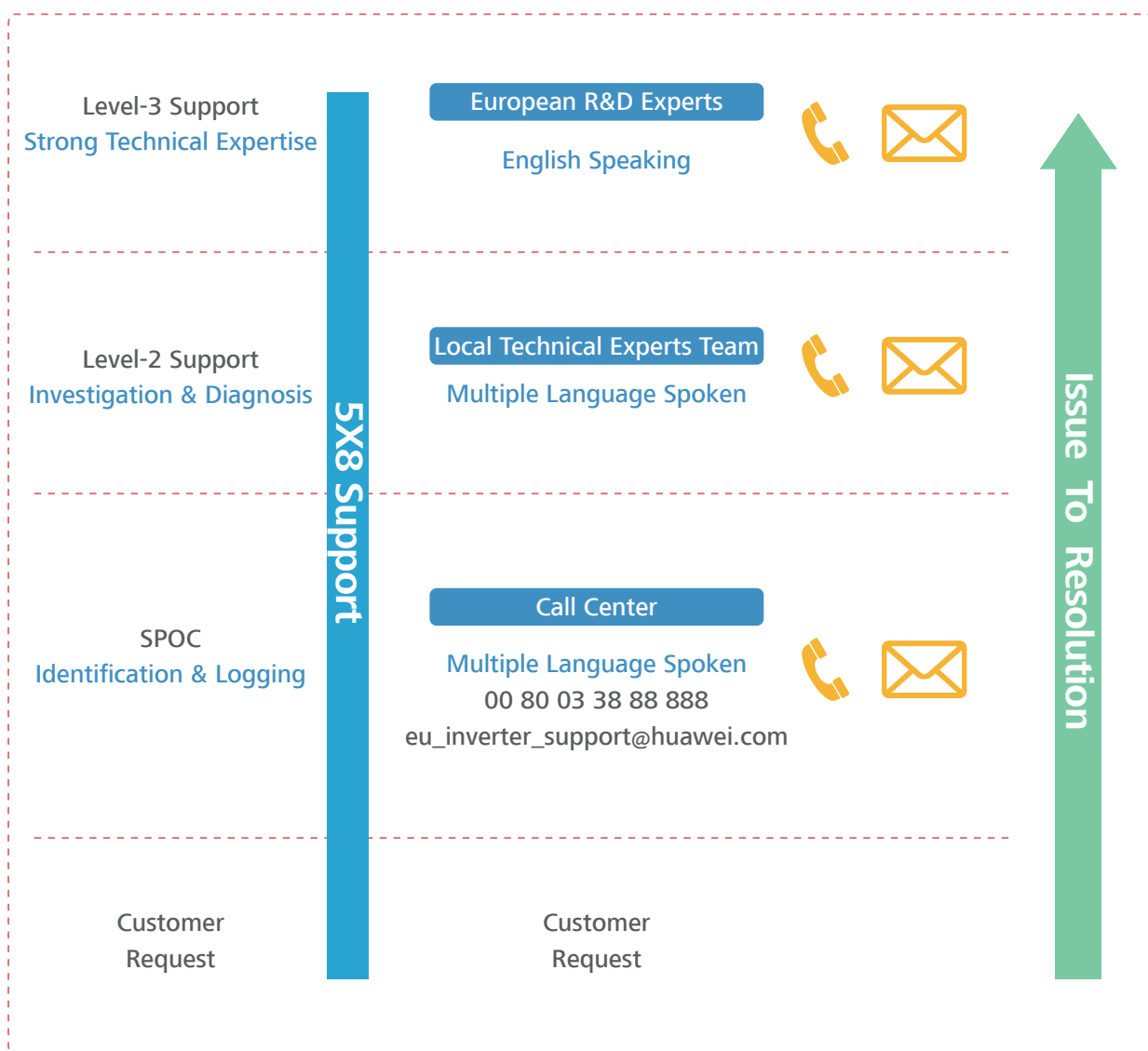
46
Country level Spare Parts Centers



7
Training Centers



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

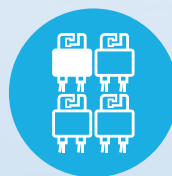


Remote Technical Support: 5X8h
Hardware Replacement Onsite: 2BD

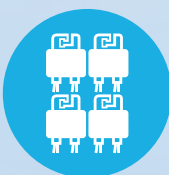
Recommended Solution



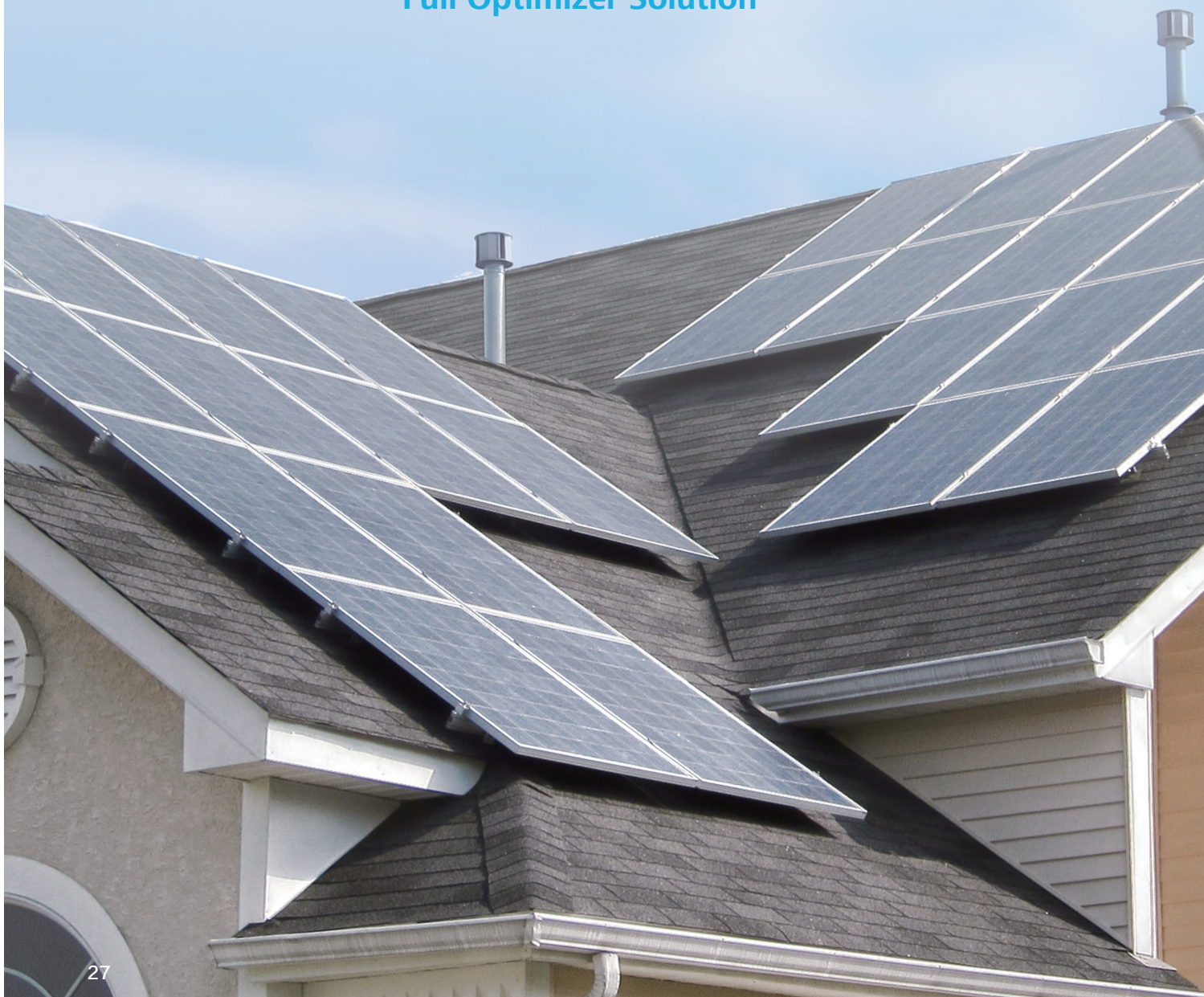
Basic Solution



Partial Optimizer Solution



Full Optimizer Solution

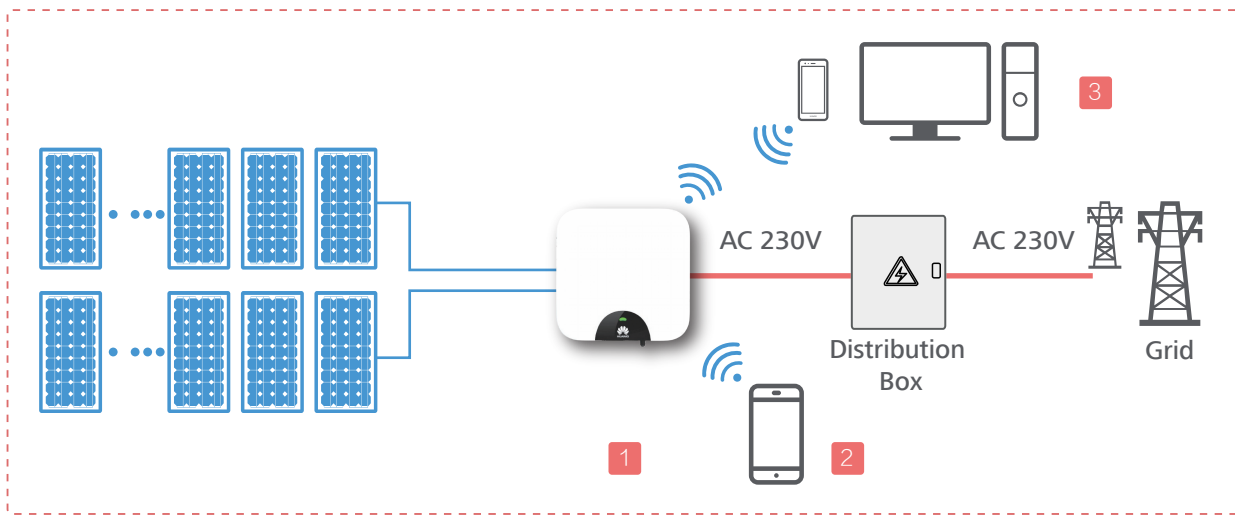


Basic Solution

Applicable Scenario



Basic Solution Overview



Recommended System Configuration

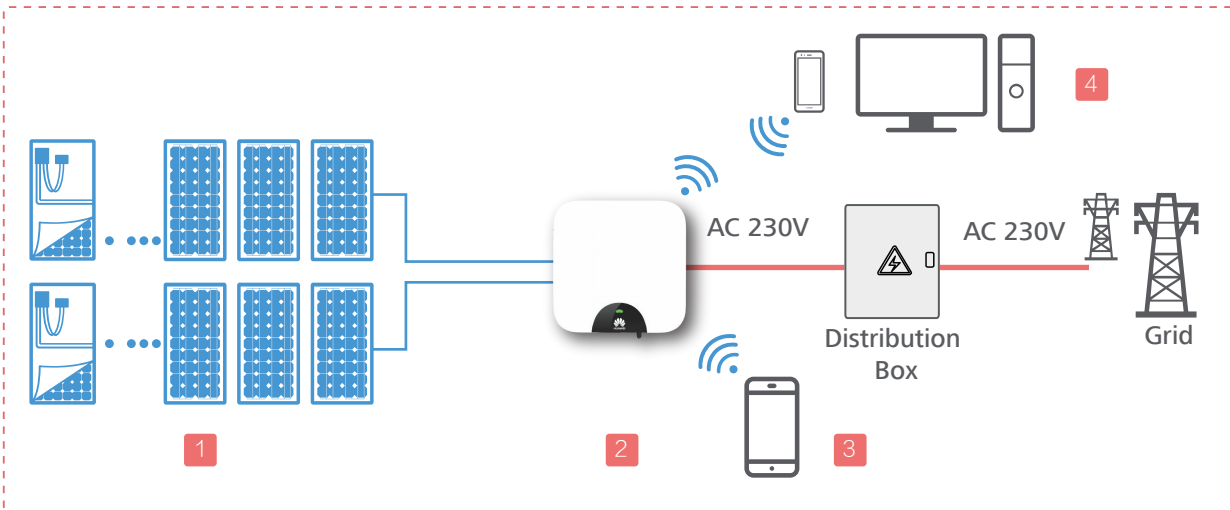
	Device	Model	Qty	Remarks
1	Smart Energy Center	SUN2000L-2/3/3.68/4/4.6/5KTL	1	Offered by Huawei
2	FusionHome APP	Android/iOS	1	Offered by Huawei
3	FusionHome-NetEco1000s Management System & APP	APP: Android/iOS	1	Offered by Huawei
4	Cable	DC Cable: PV1- F 1*4mm ²	/	Purchased by Customer
		AC Cable: ZR- YJV 3*6mm ²	/	Purchased by Customer
		Grounding Cable: 1*10mm ²	/	Purchased by Customer
		Communication Cable: 2*0.5mm ²	/	Purchased by Customer
5	Energy meter	DDSU666-H	1	Offered by Huawei
6	Energy storage system	LG Chem - RESU7H_R/10H_R	1	Purchased by Customer

Partial Optimizer Solution

Applicable Scenario



Partial Optimizer Solution Overview



Recommended System Configuration

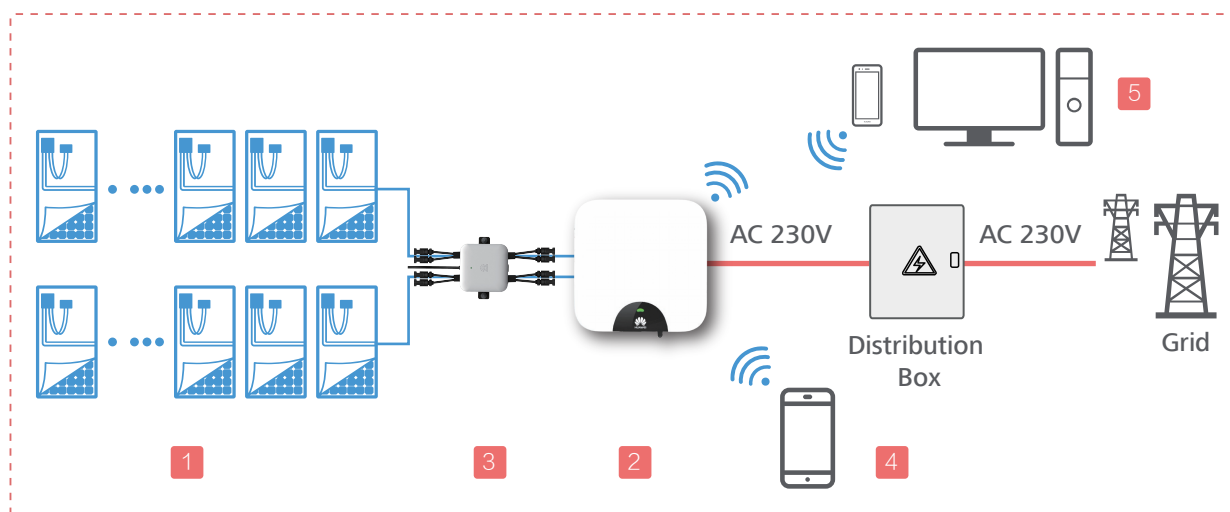
	Device	Model	Qty	Remarks
1	Smart PV Optimizer	SUN2000P-375W	n	Offered by Huawei
2	Smart Energy Center	SUN2000L-2/3/3.68/4/4.6/5KTL	1	Offered by Huawei
3	FusionHome APP	Android/iOS	1	Offered by Huawei
4	FusionHome-NetEco1000s Management System & APP	APP: Android/iOS	1	Offered by Huawei
5	Cable	DC Cable: PV1- F 1*4mm ²	/	Purchased by Customer
		AC Cable: ZR- YJV 3*6mm ²	/	Purchased by Customer
		Grounding Cable: 1*10mm ²	/	Purchased by Customer
		Communication Cable: 2*0.5mm ²	/	Purchased by Customer
6	Energy meter	DDSU666-H	1	Offered by Huawei
7	Energy storage system	LG Chem - RESU7H_R/10H_R	1	Purchased by Customer

Full Optimizer Solution

Applicable Scenario



Full Optimizer Solution Overview



Recommended System Configuration

	Device	Model	Qty	Remarks
1	Smart PV Optimizer	SUN2000P-375W	n	Offered by Huawei
2	Smart Energy Center	SUN2000L-2/3/3.68/4/4.6/5KTL	1	Offered by Huawei
3	Smart PV Safety Box*	SmartPSB2000L	1	Offered by Huawei
4	FusionHome APP	Android/iOS	1	Offered by Huawei
5	FusionHome-NetEco1000s Management System & APP	APP: Android/iOS	1	Offered by Huawei
6	Cable	DC Cable: PV1- F 1*4mm ²	/	Purchased by Customer
		AC Cable: ZR- YJV 3*6mm ²	/	Purchased by Customer
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		Communication Cable: 2*0.5mm ²	/	Purchased by Customer
7	Energy meter	DDSU666-H	1	Offered by Huawei
8	Energy storage system	LG Chem - RESU7H_R/10H_R	1	Purchased by Customer





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