

Residential Smart PV Warranty Agreement (Global)

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About This Document

Applicability

This document is applicable to the warranty description of Huawei residential Smart PV solutions sold in product markets.

Terminology

Site or local in this document refers to the country or region to which residential solutions are delivered, that is, where the residential solutions are located or used.

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1 Application of Residential Solution

1.1 Networking of Residential Solution

1.1.1 Networking Scenario of Residential Solution

Figure 1-1 Residential solution scenario (Dongle networking)

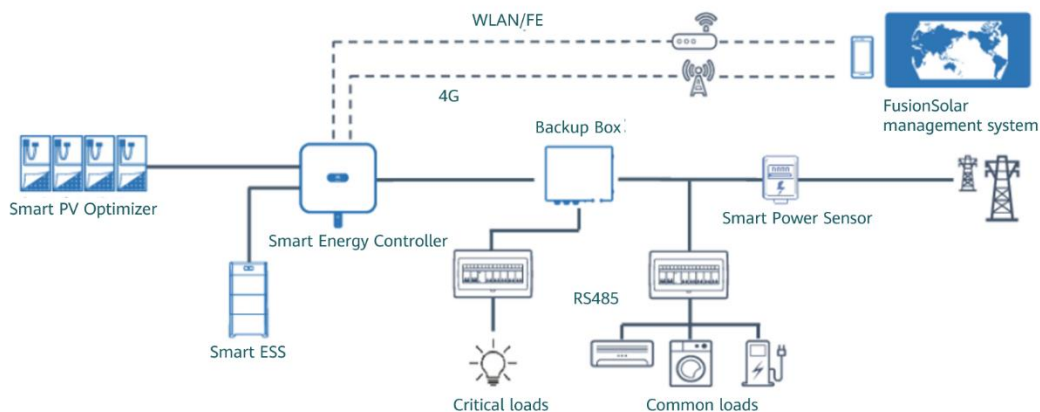


Figure 1-2 Residential solution scenario (EMMA networking)

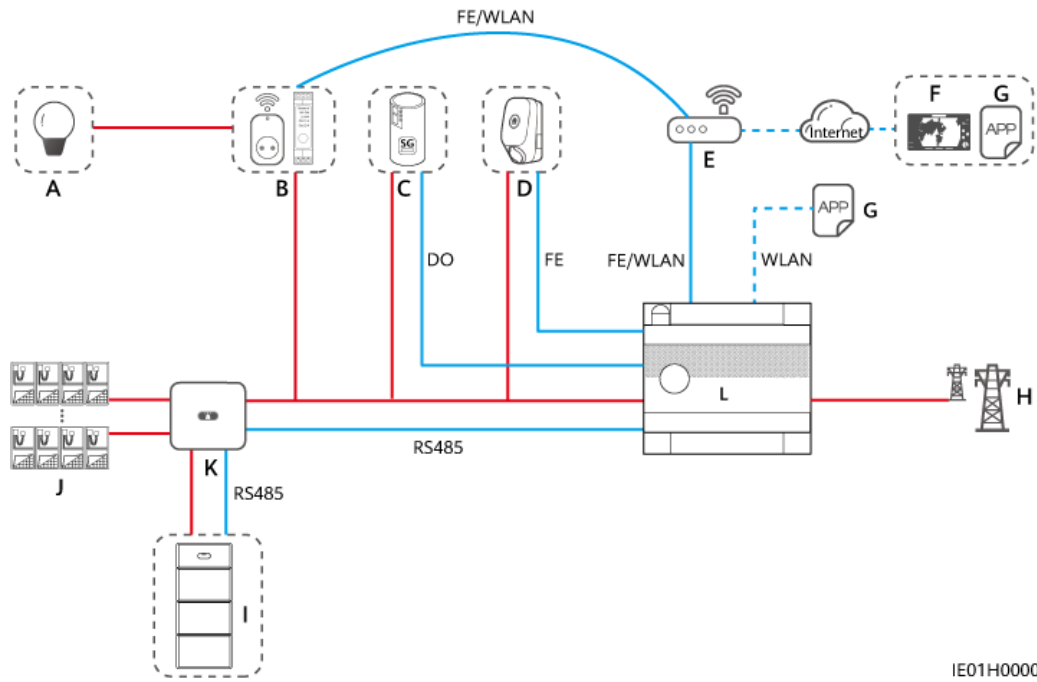
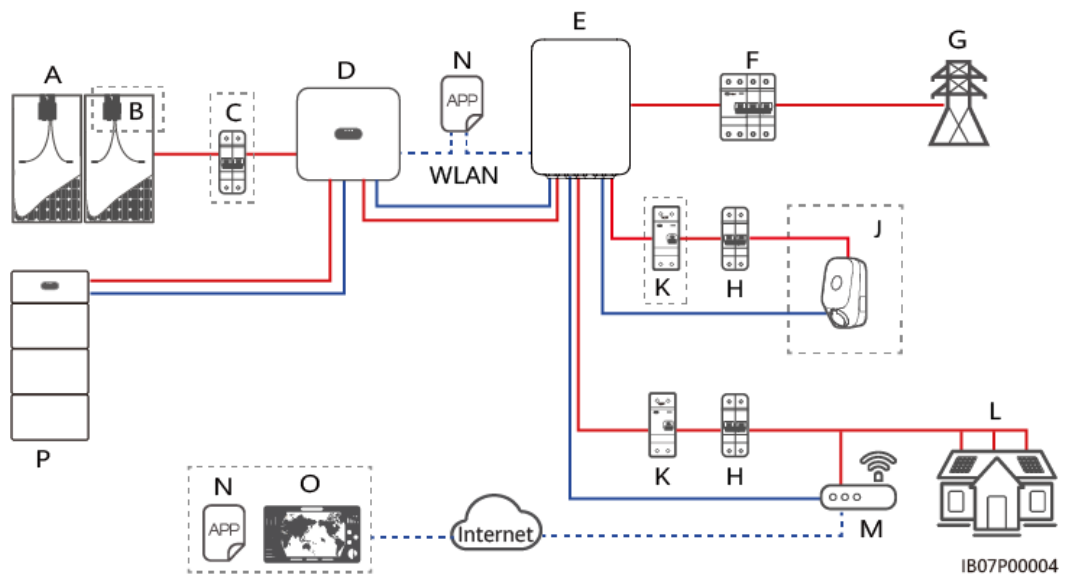


Figure 1-3 Residential solution scenario (SmartGuard networking)



Huawei's residential solution consists of the following parts:

- Generator: Smart PV Optimizer and Smart Energy Controller
- Smart energy storage system (ESS)
- Monitoring system: residential PV management system

Table 1-1 Residential solution

| Smart Power Generation | Smart Energy Storage | Smart Power Consumption | System Safety |
|--|---|--|---|
| The Smart PV Optimizer implements module-level optimization and adapts to complex rooftop conditions, maximizing capacity and increasing energy yields by up to 30%. | Adopts modular energy storage design, flexible configuration, and built-in energy optimizer, supports mixed use of old and new batteries, and achieves higher available capacity. | Visualizes energy yields and consumption, optimizes household electricity use, and provides backup power during power outages. | Provides protection against rooftop PV voltage and arcs and ensures home safety through multi-level protection. |

1.2 Main Devices in Huawei's Residential Solution

Table 1-2 Main devices in Huawei's residential solution

| Main Device (Including But Not Limited to) |
|--|
| Smart Energy Controller |
| Smart String ESS |
| iSitePower-M |
| Smart PV Optimizer |
| Backup Box |
| Smart Power Sensor |
| EMMA |
| Smart Module |
| Smart Charger |
| * Note: The main devices of Huawei's residential solution will be updated from time to time. Please refer to the latest version. |

2 Service Policy

2.1 Basic Service

2.1.1 Overall Policy

Table 2-1 Standard warranty period for each product series (year)

| Service Category | Sales Policy |
|--------------------------|--|
| Warranty | <ul style="list-style-type: none"> A warranty is provided with the products by default and not sold independently. Cables, accessories, and antennas are excluded from the warranty by default. For warranty strategy details, please refer to the table below. The following table provides the basic warranty periods for each product. The actual warranty period is subject to the contract. |
| Extended warranty | <ul style="list-style-type: none"> The customer purchases the extended warranty service with the product, or the warranty of the device purchased by the customer is about to expire or has expired (the device has passed the health check) and the customer still wants to enjoy Huawei's maintenance assurance service. A separate service sales contract can be signed for a basic extended warranty. Warranty extension services are not provided for Huawei-developed auxiliary products, such as the Smart Power Sensor and Smart Dongle. Warranty extension services are not provided for the Smart Dongle delivered with the inverter. |

Table 2-2 Basic warranty periods for main devices in the residential Smart PV solution

| Product Series | Basic Warranty Period (Year) |
|---|------------------------------|
| Smart Energy Controller (single-phase inverter) | 5 |

| Product Series | Basic Warranty Period (Year) |
|--|------------------------------|
| Smart Energy Controller (three-phase inverter) | 5 |
| Optimizer | 10 |
| Smart Dongle | 1 |
| EMMA | 2 |
| Backup Box | 2 |
| SmartGuard | 10 |
| Smart Power Sensor | 2 |
| Smart Charger | 3 |

NOTE

- The built-in SIM IoT card of the Smart Dongle sold in the China Region is provided by a carrier, and the network communication service is provided by the carrier. Huawei shall not be liable for any consequences in the following circumstances:
- Network services may be unavailable in areas with weak signals, such as tunnels, underground, buildings, and mountain forests.
- Communication may be interrupted when the traffic is congested due to a large number of users or complex communication environments. In this case, customers need to prepare SIM cards from other carriers.
- The Smart PV Optimizer warranty service is available only when a correct physical layout is provided.
- Warranty is not provided for consumables or accessories.

Table 2-3 Basic warranty period of Smart String ESS LUNA2000-(5/10/15)-S0

| Product Series | Power Control Module | Battery Expansion Module (5 kWh Battery Pack) | | Extended Warranty Scope |
|---|------------------------------|---|-----------------------|-------------------------|
| | Basic Warranty Period (Year) | Basic Warranty Period (Year) | Lifecycle Electricity | |
| Basic warranty period/Lifecycle electricity | 5 | 5 | 13.17 MWh@60% EOL | Not supported |

Table 2-4 Basic warranty period of Smart String ESS LUNA2000-(7/14/21)-S1

| Product Series | Energy Storage Control Unit | | | Battery Expansion Module (6.9 kWh Battery Pack) | | | | Extended Warranty Scope |
|---|------------------------------|---------------------------------|---|---|---------------------------------|---|-----------------------|-------------------------|
| | Basic Warranty Period (Year) | Advanced Warranty Period (Year) | Total Warranty Period (Year) (Advanced Warranty + Basic Warranty) | Basic Warranty Period (Year) | Advanced Warranty Period (Year) | Total Warranty Period (Year) (Advanced Warranty + Basic Warranty) | Lifecycle Electricity | |
| Basic warranty period/Lifecycle electricity | 5 | 5 | 10 | 5 | 5 | 10 | 19.23 MWh@60% EOL | Not supported |

NOTE

- The warranty of a battery pack expires when the specified warranty period or the battery lifecycle (if the EOL capacity meets the specification requirements) ends, whichever is earlier. The warranty of a DCDC power module or energy storage control unit expires when the specified warranty period ends, irrespective of the battery performance. An independent warranty is provided for battery packs and power modules or energy storage control units.
- Capacity test conditions: Charge the battery pack to 100% SOC at the ambient temperature of 25°C±3°C and wait for 10 minutes. Then, discharge it at the 0.2C current to the end-of-discharge (EOD) voltage, and record the discharged electricity.
- To remotely upgrade the firmware to ensure the service life of battery cells, the ESS must be connected to the Huawei FusionSolar SmartPVMS. For ESS products that are not connected, the warranty does not cover the battery cell damage caused by failure to upgrade the products in time.
- To remotely upgrade the firmware to ensure the service life of battery cells, the LUNA2000-(7/14)-S1 must be connected to the Huawei FusionSolar SmartPVMS. For products that have been disconnected from the network for more than six months or have not been connected to the Huawei FusionSolar SmartPVMS, the advanced warranty is void, and only the basic warranty applies.
- The owner should install the ESS within one month after purchase. If the ESS is faulty, the owner must report the fault within one month. The warranty does not cover damage to the battery cell caused by failure to regularly recharge the battery.
- The operating temperature and service life of the ESS depend on the operating temperature. The ESS should be installed at room temperature. The optimal operating temperature for the ESS is 15°C to 30°C.
- The preceding table lists the basic warranty period and lifecycle electricity of residential ESS products. The actual warranty period and lifecycle electricity are subject to the contract.

Table 2-5 Basic warranty period of iSitePower-M

| Product Series | Power Control Module | Battery Expansion Module (5 kWh Battery Pack) | | Extended Warranty Scope |
|---------------------------------|------------------------|---|-----------------------|-------------------------|
| | Warranty Period (Year) | Warranty Period (Year) | Lifecycle Electricity | |
| Basic warranty period/Lifecycle | 5 | 5 | 13.17 MWh@60% | Not supported |

| Product Series | Power Control Module | Battery Expansion Module (5 kWh Battery Pack) | | Extended Warranty Scope |
|----------------|------------------------|---|-----------------------|-------------------------|
| | Warranty Period (Year) | Warranty Period (Year) | Lifecycle Electricity | |
| electricity | | | EOL | |

NOTE

The warranty restrictions of the iSitePower-M are the same as those of the LUNA2000.

Table 2-6 Basic warranty period of residential Smart PV products in China

| Region | Product Series (Residential Smart PV) | Warranty Period (Year) | Extended Warranty Scope |
|--------|--|------------------------|-------------------------|
| China | Smart Module Controller, Smart Energy Controller, Smart String ESS LUNA2000-(5/10/15)-S0, Smart Power Sensor, Backup Box, and Smart Dongle | 5 | 5 |
| | SmartGuard | 5 | 1 |

Table 2-7 Warranty period start date

| Sales Mode | Warranty Start Date |
|--------------|---|
| Direct sales | The warranty period starts from the 90th day after Huawei products are shipped, or from the day when Huawei receives the request for product service (whichever is earlier). |
| Distribution | The warranty period starts from the 180th day after Huawei products are shipped, or from the day when Huawei receives the request for product service (whichever is earlier). |

Table 2-8 lists the contents of the basic warranty service.

Table 2-8 Basic warranty service

| Service Category | Service | Description |
|--------------------------|--------------------------|---|
| Remote technical support | Hotline service | 24x7 real-time response |
| | Remote troubleshooting | China and Japan: 12x7 Other countries: 9x5 |
| | Online technical support | Technical information sharing and patch downloading |
| | Multi-channel support | For example, service support via WeChat |

| Service Category | Service | Description |
|------------------|-------------------------------|--|
| Software support | Software update authorization | Device firmware maintenance version (patch and beta versions) |
| Hardware support | Spare parts replacement | After approving the customer's spare parts service application, Huawei will send the replacement parts within the mutually agreed time frame. The customer only needs to return the faulty parts to the place designated by Huawei within the mutually agreed time frame after receiving the replacement parts from Huawei. If the faulty parts are not returned within the specified period, it is deemed that the customer purchases the parts at list price. If any damage or loss occurs during the return via a courier, the customer shall be liable for the consequences. |

NOTE

- 24x7: 00:00–24:00, Monday to Sunday
- 12x7: 8:00–20:00, Monday to Sunday (including holidays)
- 9x5: 9:00–18:00, business days (excluding public holidays)
- The basic warranty does not include onsite services. If onsite troubleshooting is required, customers need to purchase onsite services separately.
- Spare parts replacement (spare parts pre-replacement): The service level agreement (SLA) is subject to the actual capability and contract of each region.

2.1.2 Engineering Implementation

Huawei does not provide onsite professional engineering implementation services or technical guidance services for the residential inverter solution. Customers shall install and commission the products by themselves according to the guides. If onsite engineering services are needed, Huawei or its partners can provide paid onsite services.

2.1.3 Customer Support (CS)

2.1.3.1 Extended Warranty Service Overview

- Warranty service
Huawei provides customers with a warranty service, which is a maintenance guarantee or quality assurance (QA) service, to ensure product quality within a specified period. If product quality defects occur during the warranty period, Huawei will provide free remote technical support and spare parts services. If onsite services are needed, Huawei or its partners can provide paid onsite services. The warranty service can only be provided when the product is sold.
- Extended warranty service
In addition to the free warranty service provided for the device, the warranty extension service package is provided for the inverter. If onsite services are needed, Huawei or its partners can provide paid onsite services.

In principle, the extended warranty period must be consecutive from the date of purchase. Otherwise, the extended warranty is not supported.

Table 2-9 Basic extended warranty period of each product series

| Product Series | Standard Extended Warranty Period (Year) |
|-------------------------|--|
| Smart Energy Controller | 5 |

 **NOTE**

The preceding table lists the standard extended warranty period. The actual extended warranty period is subject to the contract.

2.1.3.2 Extended Warranty SLA

Table 2-10 describes basic extended warranty services for inverters.

Table 2-10 Basic extended warranty services

| Service Category | Service | Description |
|--------------------------|-------------------------------|---|
| Remote technical support | Hotline service | 24x7 real-time response |
| | Remote troubleshooting | China and Japan: 12x7 Other countries: 9x5 |
| | Online Technical Support | Technical information sharing and patch downloading |
| Software support | Software update authorization | Device firmware maintenance version (patch and beta versions) |
| Hardware support | Spare parts pre-replacement | After approving the customer's spare parts service application, Huawei will send the replacement parts within the mutually agreed time frame. The customer only needs to return the faulty parts to the place designated by Huawei within the mutually agreed time frame after receiving the replacement parts from Huawei. If the faulty parts are not returned within the specified period, it is deemed that the customer purchases the parts at list price. If any damage or loss occurs during the return via a courier, the customer shall be liable for the consequences. (The actual spare parts replacement SLA is subject to the contract.) |

 NOTE

- 24x7: 00:00–24:00, Monday to Sunday
- 12x7: 8:00–20:00, Monday to Sunday (including holidays)
- 9x5: 9:00–18:00, business days (excluding public holidays)
- BD: business day
- BD-S: Huawei sends spare parts within *N* BDs after confirming that hardware replacement is necessary and receiving the return material authorization (RMA) number.
- The basic extended warranty does not include onsite services. If onsite troubleshooting is required, customers need to purchase onsite services separately.

2.1.3.3 Spare Parts Policy

In principle, an entire device shall be replaced on site. The replacement device provided by Huawei can be a brand-new or refurbished device, but Huawei does not **replace spare parts free of charge**. In non-US regions, an entire device can be replaced. In US regions, an inverter power compartment can be replaced. If the Smart Dongle delivered with the inverter is faulty, replace only the Smart Dongle. The residential ESS consists of the DCDC power module and battery pack. The two types of modules are provided with separate warranties and should be replaced separately. The fuse in the DCDC power module can be replaced at the component level. The fan module of an air-cooled inverter can be replaced separately.

3

Warranty Clauses

3.1 Basic Clauses

During the warranty period, Huawei commits to:

1. Provide replacement services when normal functionality is compromised due to defects in materials, manufacturing, or techniques.
2. Provide replacement services when normal functionality is compromised due to discrepancies with the published product specifications.
3. Send Huawei spare parts (excluding batteries) within the negotiated time frame after the service request is confirmed. Upon receipt of the spare parts, the ownership of the corresponding faulty parts transfers to Huawei. The customer shall return the faulty parts to Huawei within the negotiated time frame. If the faulty parts are not returned, the customer shall compensate Huawei for the loss.
4. If Huawei provides spare parts when the original order was delivered, these parts cannot be sold to third parties or used for other purposes by the customer.
5. Onsite engineering work shall be completed by the customer; Huawei is not responsible for onsite replacement.
6. Huawei is responsible for the transportation of spare parts within the warranty period after the spare parts request is confirmed.
7. For product faults within the warranty scope, the customer shall dial the Huawei hotline to report the issue and provide the following information:
 - a. A brief description of the fault, including but not limited to input and output parameters, alarm ID, cause ID, and run logs;
 - b. Product serial number;
 - c. Purchase receipt;The above information is required for reporting a fault.
8. The customer shall bear the transportation costs if the customer does not provide sufficient information, or if spare parts are replaced without Huawei's confirmation and the device is running properly.

3.2 Exemption Clauses

1. Vulnerable parts and consumables that are widely used are not covered by Huawei's services.

2. If Huawei is unable to complete its service within the promised time frame due to reasons not attributable to Huawei, Huawei shall be exempt from liability and related compensation. The travel time required to provide onsite service to the site is not included in the SLA time.
3. Huawei does not provide any explicit or implicit commercial and technical promise that is irrelevant to this document.
4. Following products/Faults caused by the following reasons are not covered by Huawei's services:
 - Defective devices whose product identification information (such as bar code and model number) is manually altered;
 - Accessories, consumables, and mechanical parts are not covered under warranty.
 - Damage to Huawei-manufactured devices caused by force majeure, such as natural disasters, fires, and wars
 - Damage to Huawei-manufactured devices caused by natural wear and tear
 - Direct damage caused by failure to comply with the written requirements on the operating environment or external electrical specifications
 - AC or DC connectors broken, damaged, or burnt due to the poor engineering quality of the connectors
 - Damage caused by lightning due to improper system design
 - Large-scale damage to Huawei-manufactured hardware or data due to the customer's negligence, improper operation, or intentional sabotage
 - Damage caused by the customer's violation of the transportation, storage, installation, and operation regulations specified in the device user manual
 - Damage caused by improper operation or failure to comply with the temperature requirements during transportation or operation
 - Damage caused by maintenance or other services performed by personnel not authorized by Huawei
 - System damage caused by improper operations of a third party or the customer, including system migration and installation performed in violation of Huawei's requirements, and adjustment, alteration, and removal of identification signs performed in violation of Huawei's requirements
 - System damage caused by the customer's infrastructure problems
 - Battery cell damage caused by outdated firmware due to failure to connect the ESS to the Huawei FusionSolar SmartPVMS which will not be covered by the warranty
 - Faults arising from the installation, use, or other operations that do not comply with the conditions, requirements, or limitations specified in Huawei's solution-related documentation regarding Huawei devices, project scenarios, and third-party devices.