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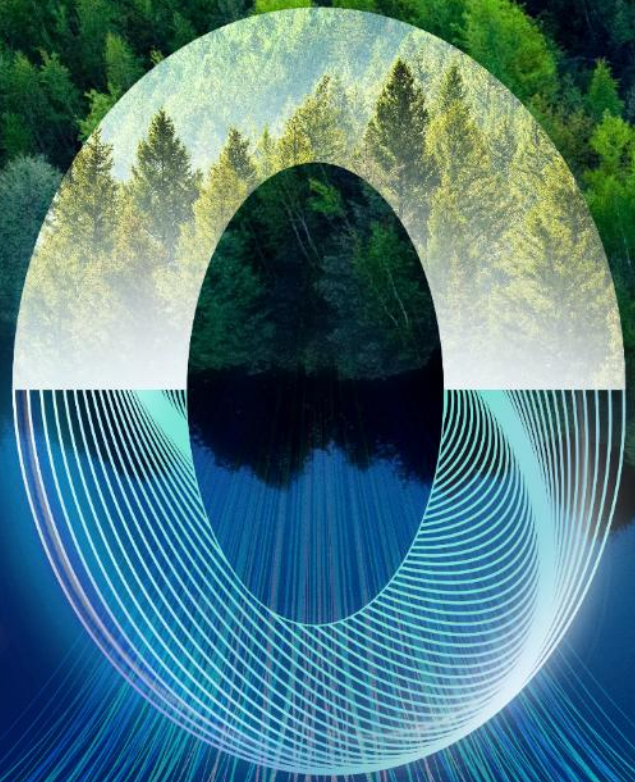
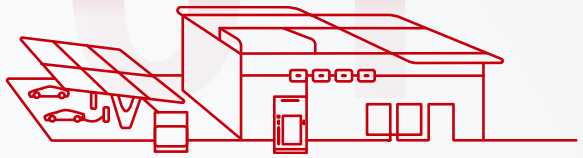
Building a fully connected, intelligent world



Huawei's C&I Solution 3.0 Helps Businesses Achieve Green and Low-Carbon Transformation

01



Trends and Challenges

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Carbon neutrality, business-driven, and energy access are the major force boosting enterprise green transformation

Carbon Neutrality

Emission reduction → new quality productivity

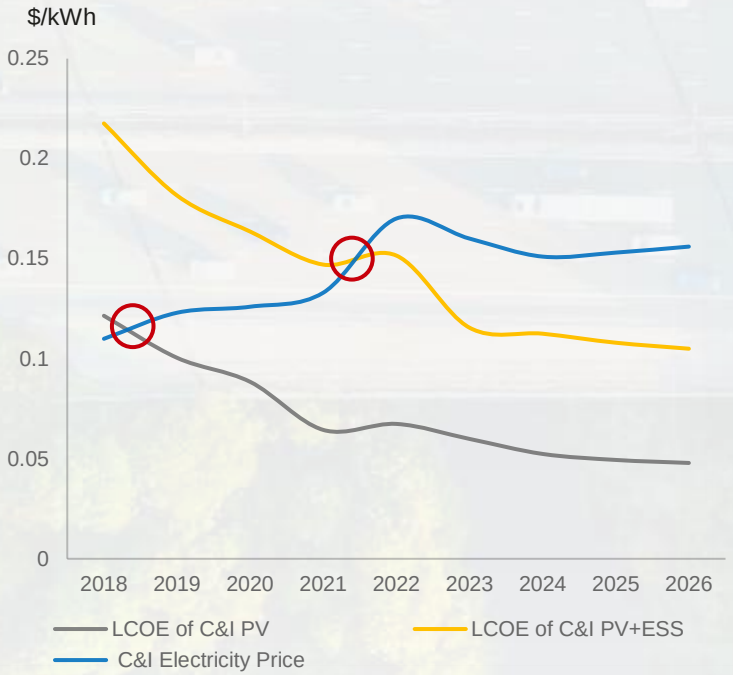
COP 28 agreement
10 Billion tons carbon emission reduction by 2030

EU: CBAM legislation
carbon tariff takes effect in 2026

Business Driven

PV-ESS parity → driving business investment

Continuous cost reduction of PV+ESS system makes C&I business more attractive



Energy Access

Dual-control of energy consumption,
grid aging → controllable energy supply

Global frequent grid outage and seasonal power cuts, i.e. Chile, Brazil, South Africa

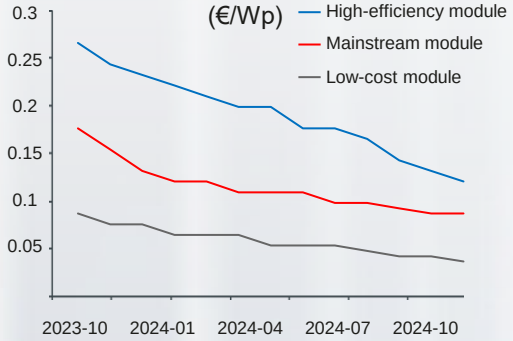
Enterprises such as Microsoft secure reliable power supply for computing center by self-owned power plant

The green transition is the only way for enterprises to secure energy access, achieve sustainability & independence

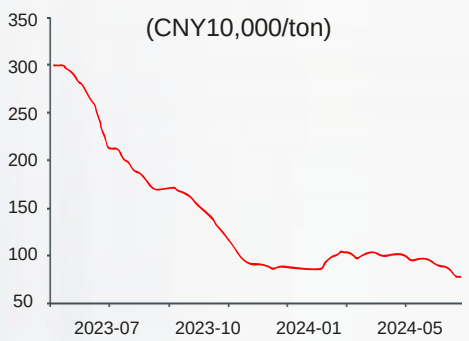
Supportive technologies and policies are driving C&I PV growth, accelerating green transitions across industries

Four factors favoring C&I PV+ESS deployment

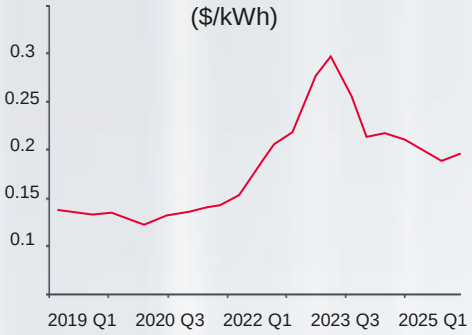
PV module prices down by 30% in 2024



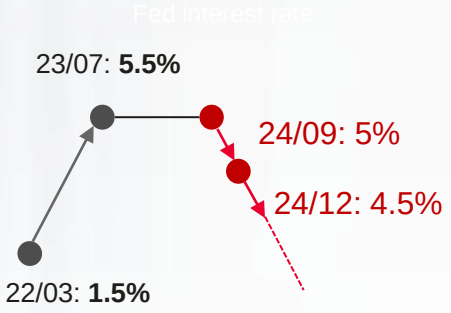
Lithium carbonate price down by 70%



Global C&I electricity prices steadily increasing



Worldwide interest rate reduction, stimulating investment



Anhui Conch Cement: PV installed capacity to reach 1 GW

- 19 PV projects with a total capacity of 200 MW were completed in 2021, with an annual energy yield of 164 million kWh.
- By the end of 2022, the PV installed capacity reached 1 GW, with an annual energy yield of 1 billion kWh.

Türkiye: 140 MW PV project for Tosyali Holding

- Leading green steel producer in Türkiye, committed to green transition and zero carbon goals of its steel plants
- PV systems generate 250 million kWh of electricity each year, reducing carbon emissions by 116,000 tons per year.

Jiangsu, China: 1.6 MW PV + 8 MWh ESS for Centuray

- PV+ESS ensures stable power supply, avoiding economic loss of CNY192,000 per interruption
- Green and low-carbon production, saving electricity fees of CNY3.15 million per year, and reducing carbon emissions by 620 tons per year

Japan: 0.7 MW PV + 1 MWh ESS in Imuraya ice cream factory

- A century-old pastry enterprise, aiming to build an eco-friendly and sustainable food factory
- Fast PV+ESS on/off-grid switching, providing stable backup power supply for disaster recovery and ensuring service continuity

Solution with Safety, Reliability, Revenue Consistency is Urgently Needed

Small Manufacturing Factory

- Complex environment and shading
- High population density and goods concentration
- High requirements for long-term plant revenue

Small Commercial Campus

- East-west direction, high DC/AC ratio requirement
- High population density and asset concentration
- High requirements for long-term plant revenue

Small Agriculture and Forestry

- PV modules contaminated by dust and dirt
- Close proximity of cattle, sheep, and people to the plant
- Remote location

Rooftop and Carport Of The Service Area

- Shading from trees, heavy dust
- Close proximity of people and vehicles to the plant
- Remote location

Safety challenges

System safety becomes a major concern due to high population density and asset concentration. Hazards such as DC arcs and DC high voltage cannot be effectively resolved.

Revenue challenges

Shading from billboards and other objects limits the utilization of rooftop resources. Dust and dirt cause PV module power mismatch, affecting the entire PV string.

Quality challenges

Poor inverter quality, frequent breakdown, and high failure rate; complex external environment, lacking PV module health management

O&M challenges

Relying on manual inspections and paper records for data collection is inefficient and inaccurate, and leads to significant energy waste.

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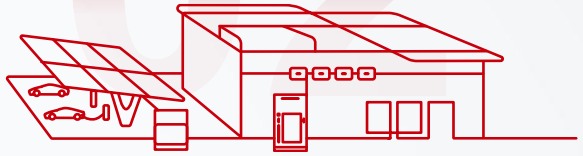

Solution Overview

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"One-Fits-All" Solution Empower Industrial Green Transition

Self-consumption
Time of Use
Peak shaving
Grid reinforce
Frequency regulation
Off-grid application

Partner ecology

Smart PVMS

Solution ecology

PV

NEW

World’ s Largest Power C&I Inverter

30~150 kW

ESS

NEW

World’s 1st C&I Smart Hybrid Cooling ESS

107/161/215 kWh

Charger

- Liquid-cooled charger

High Quality Green Transition

Proactive Safety

Premium Quality

Higher Profitability

One-Fits-All

Easy Design

Easy Purchase

Easy Installation

Easy Commission

Easy O&M

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Fusionsolar

New-Generation SUN2000-30/40/50K-MC0

Huawei Smart PV Controller

Higher Energy Yield

- MPPT high-current design, New compatible with high-current modules*
- Built-in PID recovery at night, 3% higher system energy yield
- PV module-level optimization, 5%–30% higher yield**

Proactive Safety

- DC Type I+II lightning protection New
- Unique DC-to-ground protection, cutting off short-circuit faults within 15 ms
- Industry-leading AFCI solution, with a detection distance of 450 m New

Long-term Reliability

- 10-year product evolution, 99.999% reliability
- Optimizers 3x more reliable than the industry average

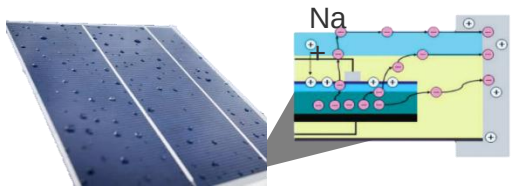
Simplified O&M

- Device-level -> Module-level insulation detection, 6x higher precision
- Plant-level -> Module-level power generation monitoring, high-precision module fault diagnosis and locating** New

*SUN2000-50K-MC0 model support

**Needs to be implemented with MERC optimizer.

PID reduces the energy yield by 3%+ throughout the lifecycle



The direct harm of PID is that a large number of electric charges accumulate on the surface of the cell, which downgrades the passivation effect on the surface, causing power attenuation.

High temperature

High humidity

Damaged module

The average power degradation of PV modules reaches over **30%** in a solar-fishery plant that has been operating for two years.

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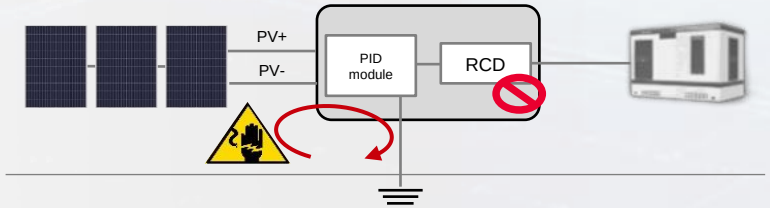
Industry-leading PID repair improves the energy yield by 3%

Traditional solution exist risk of electric shock and questionable actual repair effectiveness

Traditional solution: Built-in PID repair/inhibition module, with potential leakage risk



During PID inhibition/nighttime repair, a continuous **15mA** current is injected between PV and ground

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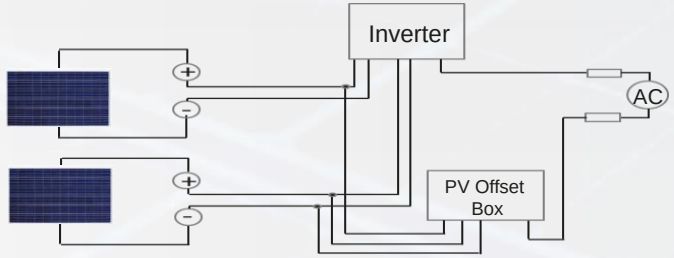
IEC 62109 requires the protection current to be less than **10mA**

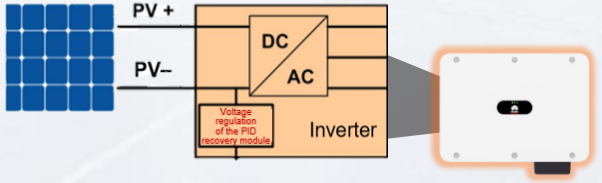
Traditional solution: External PID repair box, high power consumption at night, high investment cost



Purchased separately, one box is configured for **1-2 strings**.

Low repair effectiveness, practically unusable

Huawei's PID repair solution effectively avoids the PID effect and ensures energy yield.



- Compensation current during PID repair **<10mA**
- Meets IEC 62109 protection current requirements

Standard configuration with PID repair
No later modifications required

No need to install PID Box
Lower initial investment

Internal power supply
Lower self-consumption at night

TÜV's empirical tests prove that Huawei's PID repair function can improve energy yield by 3%.

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Complex environments of C&I cause PV module mismatch throughout the lifecycle

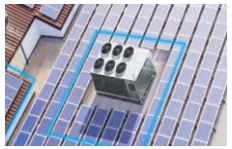
Design phase: Failure to fully use rooftop resources

Shading from tall buildings

Parapet wall/Staircase enclosure/Billboard

Row-to-row shading

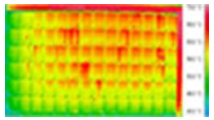
Base station



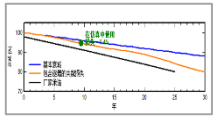
Air conditioner outdoor unit

Operation phase: Energy yield loss caused by PV module degradation and environmental factors

Shading from trees



Uneven heating



Module degradation in the lifecycle

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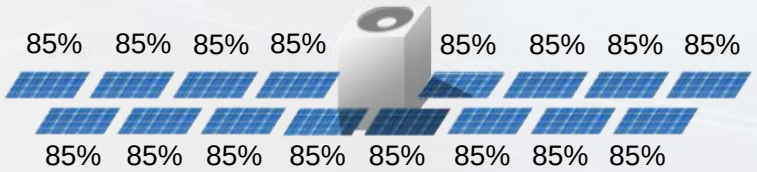
Module-level Optimization, 50% Higher Space Utilization Rate & 30% More Energy Generation

String-level MPPT, single module affects overall power generation

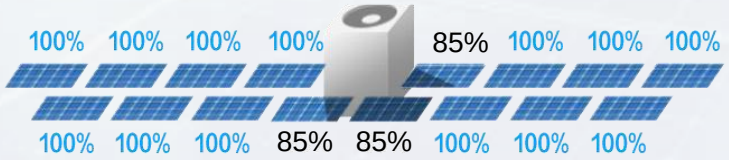


- Modules in the same string operate at the same current.
- Modules affected by mismatch experience a shift in operating point as current decreases, leading to reduced output power for the entire string.

Avoid installation in shaded areas, low utilization of rooftop space.

Shade from trees in carport environments, long-term impact on string power.

Module-level MPPT, fully utilizing rooftop resources to maximize green power generation



- Independently tracks the maximum power point of each module.
- Modules with poor power generation performance are isolated, ensuring that other modules in the string continue to operate normally.

Factory Rooftop Plant @Beijing
26% more modules installed in shaded areas.

Rooftop Plant @Zhejiang
5.5% increase in lifecycle energy yield due to no shading.

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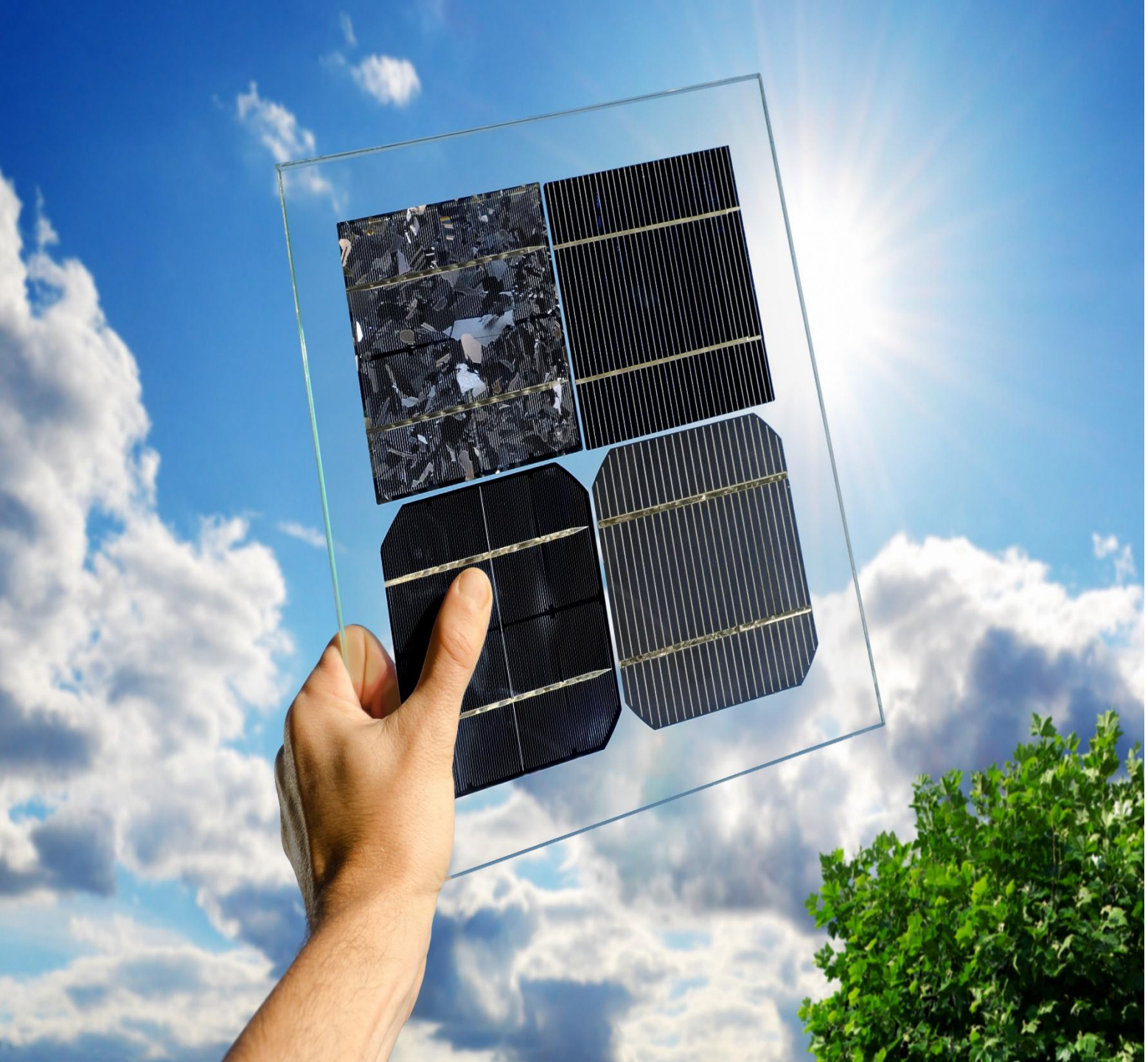
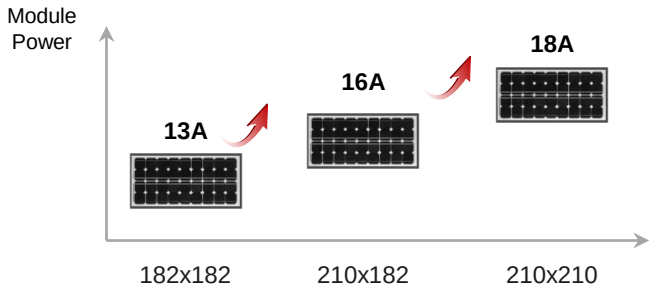


High-power PV modules become the mainstream, posing higher requirements on inverter current

PV modules are evolving toward larger formats.

- 210R and 210 PV modules become the mainstream.
- It is estimated that **the market share** of 210 and 210R PV modules will **exceed 50%**@2026.

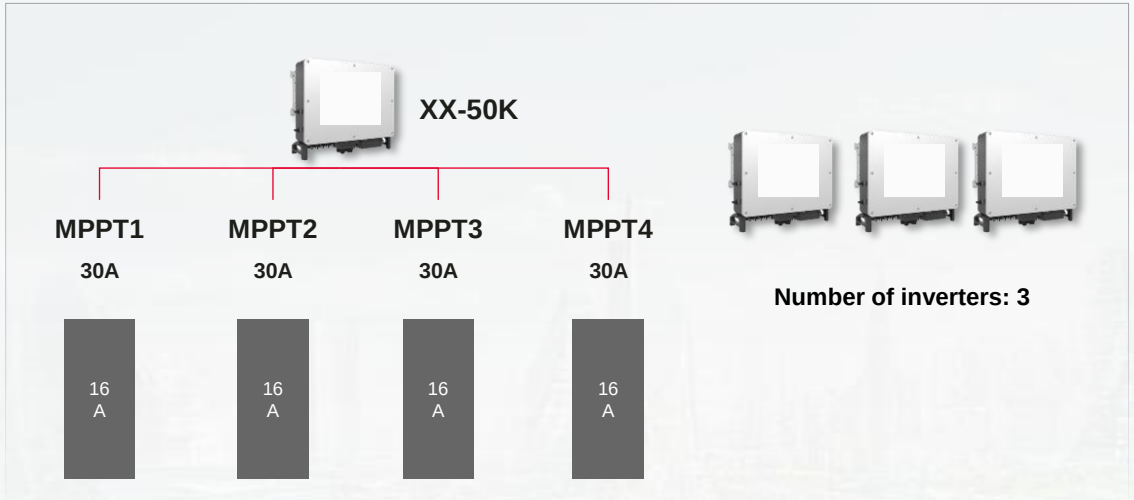


Inverters and PV modules must be well matched to generate more electricity.

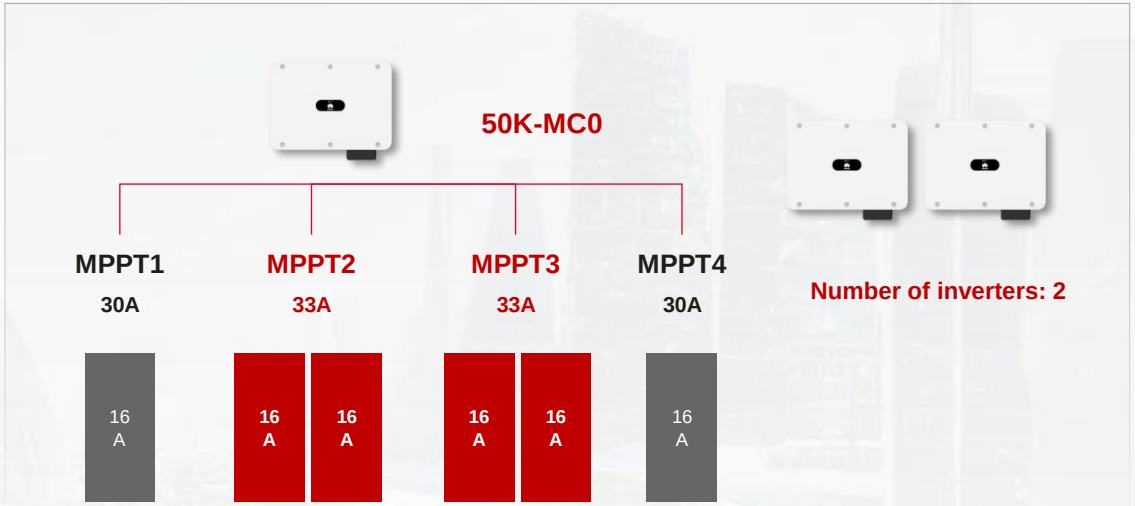
- If the PV module current is greater than the inverter input current limit, the inverter will limit the PV module input current to avoid overheating at noon, causing curtailment.
- If PV modules and inverters are closely coupled, procurement, design, and O&M will be difficult.

50K-MC0 with higher MPPT current, adapting to 210R modules, avoiding DC power limiting

Industry: For 210R modules, only single string per MPPT



New Irregular Design Enables 2 Extra String Connections



Assume that a plant has 216 PV modules (630 W, 210R). The plant capacity is 136 kWp.

Project	XX-50K	50K-MC0
Module Power	630W	
Number of Modules	216 pcs	
Plant Capacity	136kW	
Arrangement for a single inverter	4 strings x 18 boards x 630 W = 45.36 kW	Six strings x 18 boards x 630 W = 68.04 kW
Capacity Ratio	0.90	1.36
Number of Inverters	**3 set**	**2 set**

Number of PV strings supported

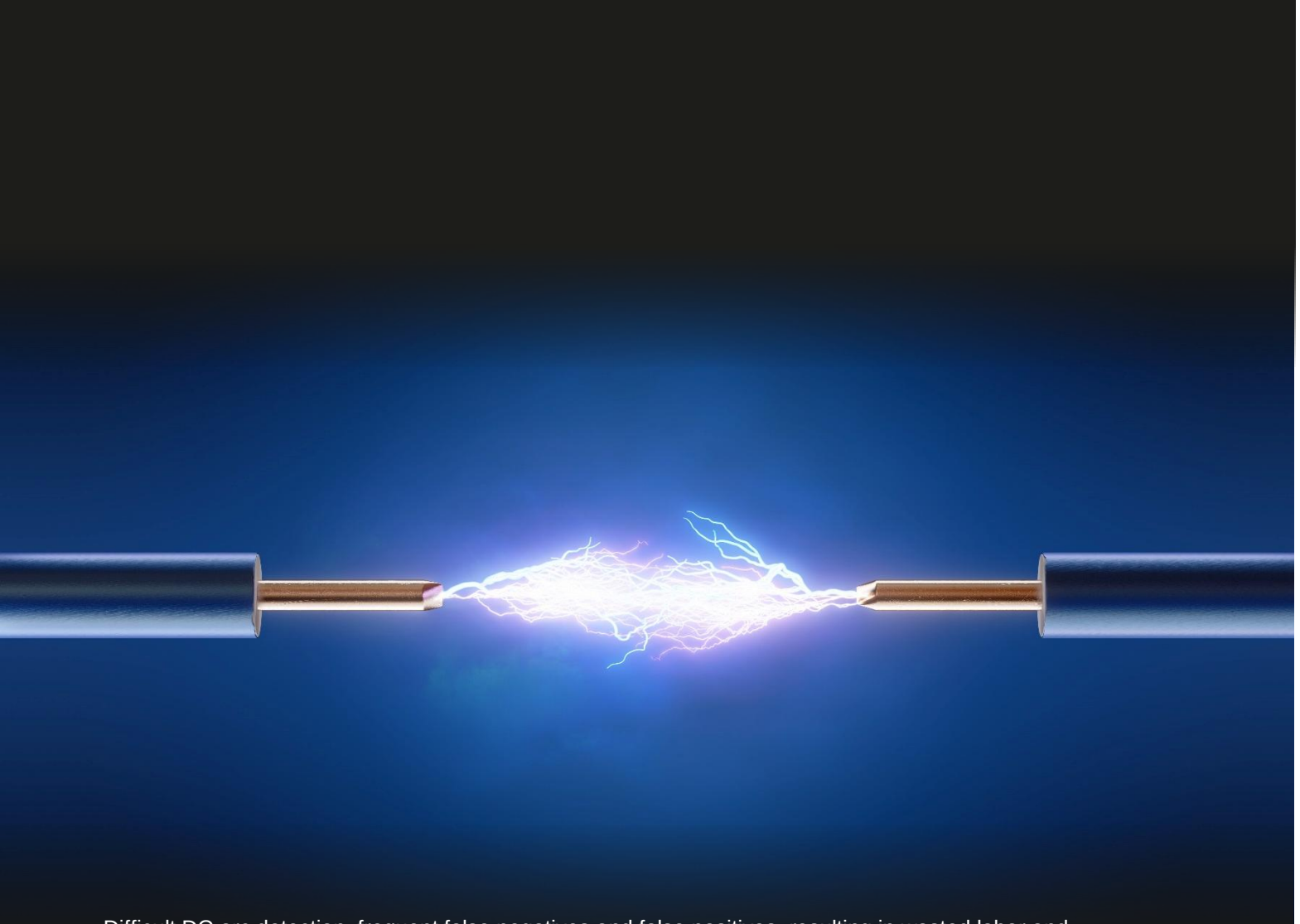
+2/inverter

Saving inverter costs

–1 inverter

(In the 50–200 kW scenario, the PV modules are not derated. In 70% scenarios, the cost of one or more inverters can be saved.)

Frequent fires in PV plants are mainly caused by DC arcs



Difficult DC arc detection, frequent false negatives and false positives, resulting in wasted labor and energy yield losses

Arc noises are weak and account for only 0.1% of the normal current signal, which is difficult to detect. As a result, false negatives often occur.

There are many interference signals on the inverter, load, and grid sides. These signals superimpose with the normal current signal spectrum, causing false positives.

DC arcs can easily lead to a fire, posing huge risks to personnel and assets.

2025@Shanghai
Elevated fire accident

2025@Henan
Warehouse fire accident

2025@Germany
Warehouse fire accident

Three Causes of DC Arcs

Unreliably-welded PV junction boxes

Incompatible connectors or unreliable connections

Damaged DC cables due to aging

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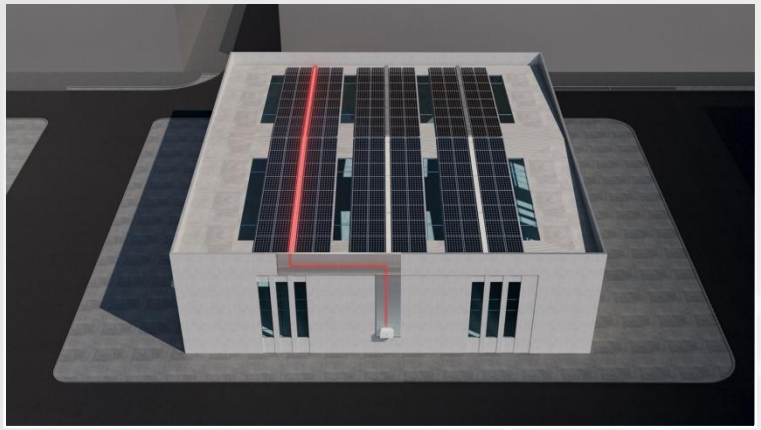
Leading AFCI Solution, Larger Detection Range, Ensuring Asset Safety

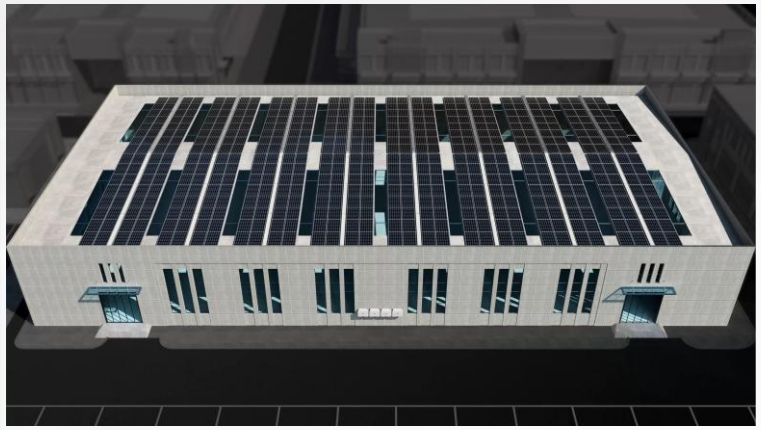
Industry: No arc protection and pose a fire hazard



- Under the house, DC cables pass through the wall, and arc protection is more important.
- Frequent system tripping reduces system availability, energy yield and revenue. Arc fault missing detection cannot guarantee system safety.

vs.

Huawei: Leading AFCI Solution, Automatic Cut-off Arc within 0.5s

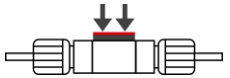


- The detection distance is up to **450 m**, covering 99% of the rooftops.
- The maximum detection range is **33 A**, and 100% PV modules are tested.
- Fastest shutdown speed **< 0.5s**, minimum AFCI energy release

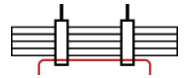
Over 30%* of inverter faults caused by DC short circuit to ground

*Based on the running data of Huawei

During the lifecycle of a PV plant, insulation resistance may decrease due to various factors.



Cables under stress for a long time due to improper cabling



Tying cables to the support

Loose connection of the male and female parts of the connector

Abrasion of the cable sheath caused by sand and dust

Before Grid Connection

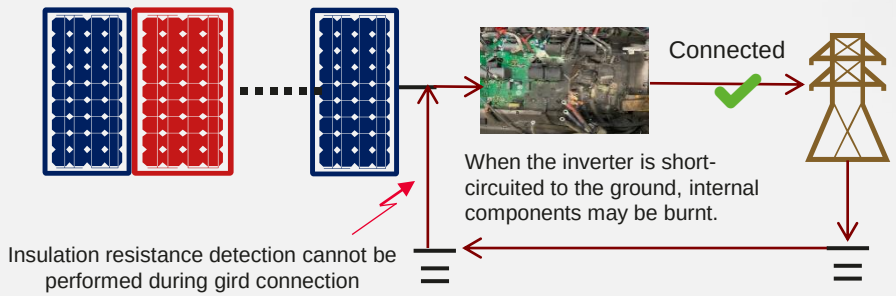
The insulation resistance can be detected to identify cable problems.

After Grid Connection

Without DC-to-ground short circuits detection, inverter damaged due to the fault.

Industry's first DC-to-ground protection technology, shutdown faults to ground, ensuring the safety of the inverter

Tradition solution: PV- to ground short-circuit faults during operation cannot be protected



During the grid-connected operation of the inverter, a sudden ground short-circuit fault occurs. The inverter cannot disconnect it immediately, leading to equipment damage.

Traditional solution

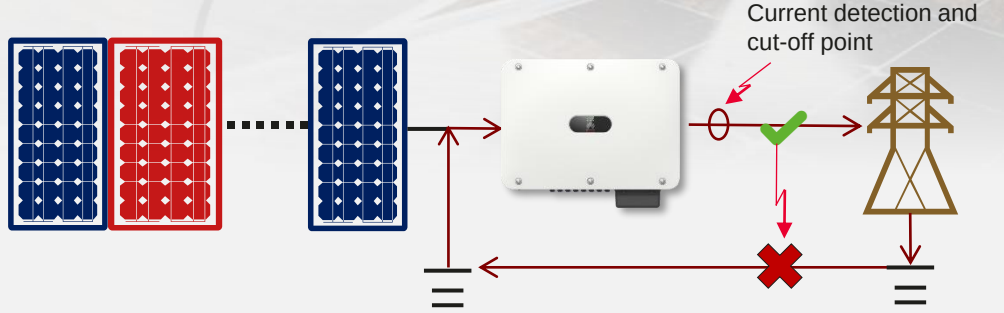
No protection function

Instantaneous current > Inverter bearing capability

Causes damage and fire hazards

VS

DC-to-ground protection: Software upgrade, inverter does not fail



Software algorithm: The short-circuit current detection algorithm is upgraded to cut off such faults in time.

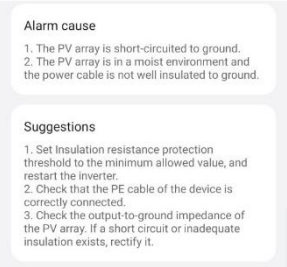
Huawei solution

ms-level cut-off

Inverter bearing capacity > Instantaneous current

Protect and cut off, reducing failure

The inverter shuts down and issues an alarm, along with repair recommendations.



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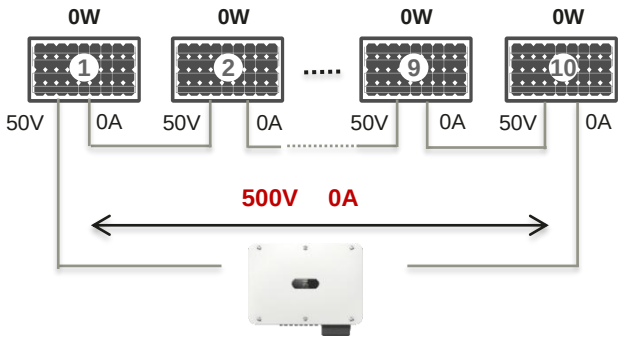
The high DC voltage of traditional PV systems cannot be disconnected, posing safety risks to firefighting.

Even if the inverter is shut down, PV modules continue to output power under sunlight, generating **500–1000 V** DC voltage.



DC high voltage remains energized, threatening the safety of rooftop operators.

During installation and O&M, personnel are prone to contact with high voltage.

Firefighters cannot go to the site for rescue in a timely manner.

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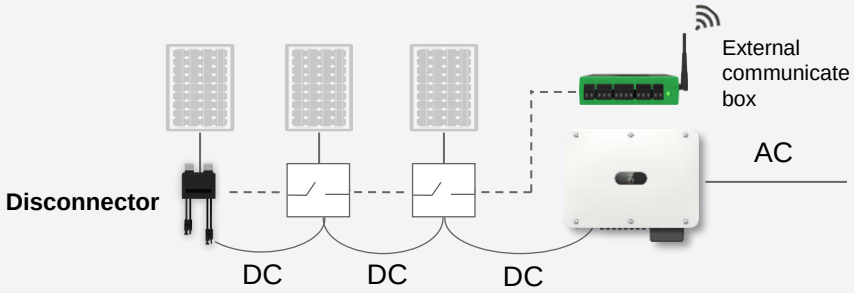
Industry-leading rapid shutdown solution (RSD) designed for high-safety scenarios, ensuring personal safety

Disconnectors have a simple structure and cannot communicate with the inverter

A disconnector that quickly disconnects the connections between PV modules.
Reduces the voltage from 1100V to **80V** within 30 seconds.

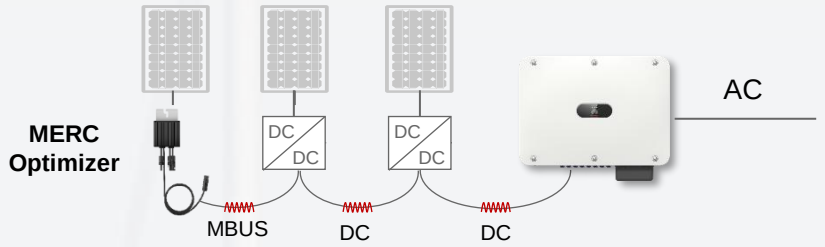


High Failure Rate	Hardware failure rate exceeds 2%, requiring frequent rooftop replacements.
Low Integration	Third-party integration and on-site assembly, lead to multiple potential failure points and poor system reliability.
O&M Black Box	Single-phase communication without monitoring, cannot detect whether RSD has been triggered.
Limited Scenarios	Reliance on heartbeat signals for judgment results in a single triggering method.

VS

Huawei optimizer highly integrated RSD solution, system simpler and more reliable

A DC/DC circuit, alters the power curve of PV modules
Reduces the voltage from 1100V to **30V** within 30 seconds,
meeting the most stringent **NEC 2017 & 2020 standards.**



High Availability	Failure rate below 0.3%, ensuring reliability throughout the entire R&D, production, and testing process.
Integrated Design	Integrated communication and power supply, simplified system, higher installation efficiency.
General Visible	One-stop unified management of optimizers and inverters, roof monitorable.
Diverse Applications	Heartbeat signal detection, supports active triggering, AFCI + RSD Safelink

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Lightning strikes may pose multiple threats to PV plants

In areas with frequent lighting strikes, PV system without protection may suffer severe damage.

- Inverter breakdown
- Personal injury
- Surrounding property loss

Multiple lightning protection regulations and standards have been released worldwide.

IEC 61643-11:2011
Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods

IEC 61643-32:2017
Low-voltage surge protective devices - Part 32: Surge protective devices connected to the d.c. side of photovoltaic installations - Selection and application principles

IEC 61643-31:2018
Low-voltage surge protective devices - Part 31: Requirements and test methods for SPDs for photovoltaic installations

IEC 62305-1~4
Protection against lightning

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Upgraded DC Type I + II lightning protection solution, enhanced lightning strike protection capability.

Industry: Type II lightning protection solution on the DC side, cannot protect against direct lightning strikes.

- Electrostatic reactions may occur on the factory's metal roof, and inverters may suffer **indirect lightning strikes**.
- The Type II solution protects against indirect lightning strikes.
- **The Type II protection level is insufficient against the massive surge current from direct or nearby lightning strikes.**

To upgrade the inverter to the Type I solution, need to open the cover for component replacement, which is prone to safety and fault risks.

Residual electric energy may exist on the AC side and capacitors. Accidental contact may cause **electric shocks.**

Opening the cover again may compromise the airtightness of the inverter, leading to **moisture ingress and internal rusting.**

Huawei upgrade DC Type I + II lightning protection solution for better direct & indirect lightning strike protection

- In open-area PV plants, lightning may hit PV arrays directly. Inverters at risk of direct lightning strikes.
- The Type I solution is used to protect against direct lightning strikes with higher energy.
- Huawei's upgraded DC **Type I + II solution**: Stronger protection against direct & indirect lightning strikes.

Based on a twelve-layer device management protection network, selecting high-standard surge protection devices, eliminating the need for later modifications.

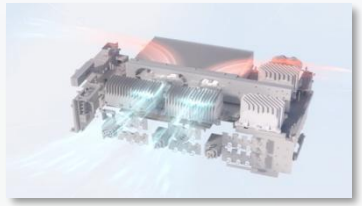
Initial joint design of components → **Component development and test** → **Manufacturing Test** → **Long-term maintenance and network evaluation**

The SPD devices comply with IEC/EN 61643-31 and IEC/EN 61643-11 standards.

HUAWEI

High quality management throughout the entire lifecycle, 99.999% product availability.

High Quality Design

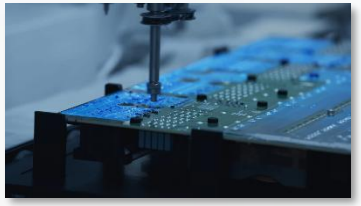


Patented heat dissipation design, improving heat dissipation capability by over **30%**.

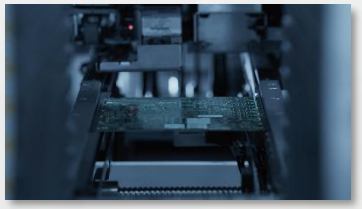
Integrated forming process with **IP66** protection rating.

High-power inverter simulation design. Gel shockproof structure simulation design and vibration simulation design.

High Quality Manufacturing



AI-assisted judgment for precise production. **Full-process AOI** machine vision automatic quality inspection.



Industry-first edge height AXI automatic detection, with over 100 key equipment parameters detected.

100% aging test before delivery. Huawei-unique ongoing reliability testing (ORT).

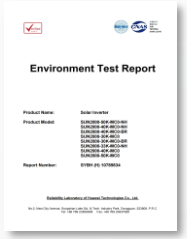
High Quality Testing

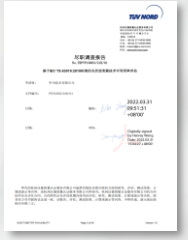
GCTC Global Testing Center + 6 major testing sites

Industry-first open-type "wind and frost" test chamber for temperature cycling testing.

Industry's first high-altitude lightning attraction test. High-reliability lightning protection.

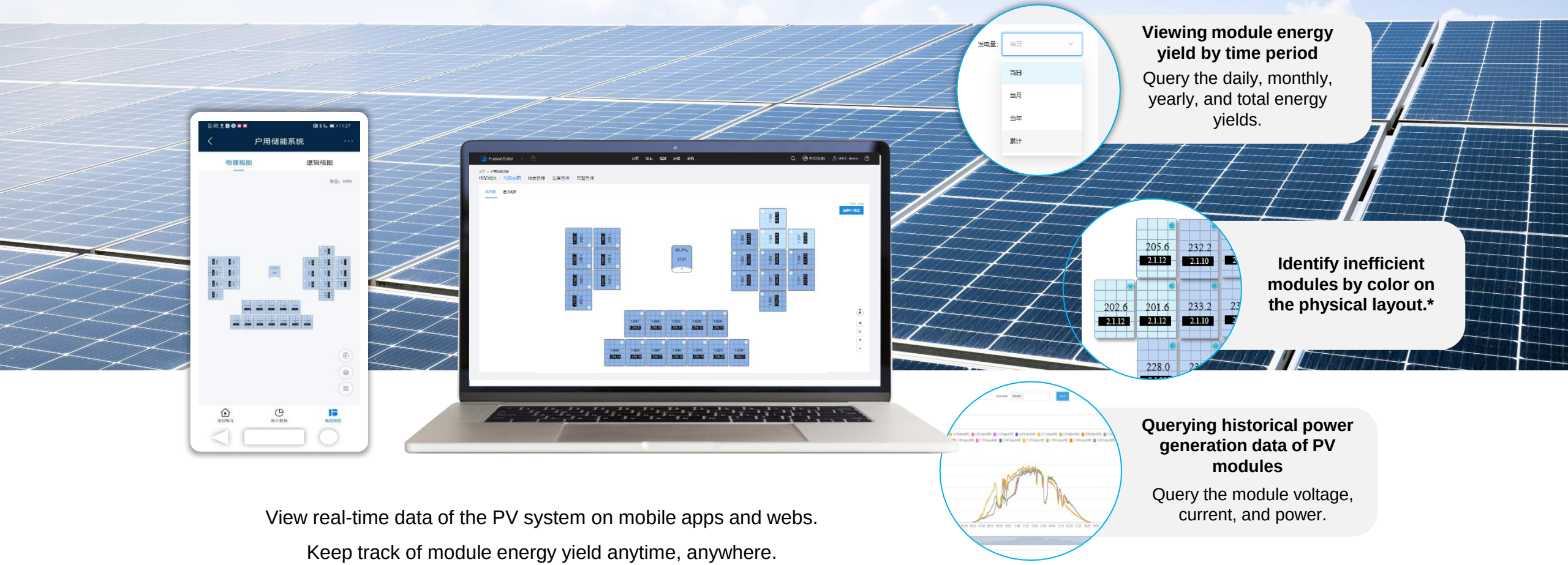
High Quality Certification





HUAWEI

Unique module-level monitoring, with all plant information displayed on one screen and accessible anytime, anywhere



Viewing module energy yield by time period

Query the daily, monthly, yearly, and total energy yields.

Identify inefficient modules by color on the physical layout.*

Querying historical power generation data of PV modules

Query the module voltage, current, and power.

View real-time data of the PV system on mobile apps and webs.

Keep track of module energy yield anytime, anywhere.

HUAWEI

Leading module-level refined management and intelligent module health diagnosis

Manual on-site inspection of module operation status, low efficiency and generates higher operational costs.

Manual Site Inspection

- Manual on-site inspection of each module.
- Inspection frequency: 2–3 times /season.
- Higher labor expenses.

Traditional Fault Location

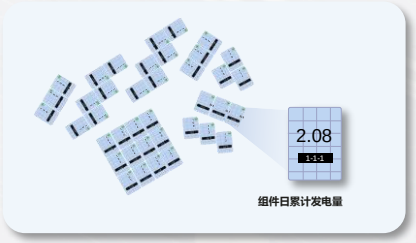
- Using handheld thermal infrared cameras to inspect each string.
- Equipment shutdown required to check each string for potential faults.
- Faults remain unresolved for a long time, affecting power generation.

Manual Fault Diagnosis

- Manual determination based on voltage and current curves, requiring highly skilled personnel.
- Manual identification takes **25 minutes**.

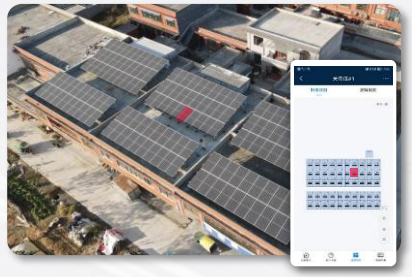
VS

Real-time monitoring of power generation from each module, timely rectification of inefficient modules



Efficient Automatic Inspection

- Component-level physical layout, asset visualization
- Real-time monitoring of power generation for each component and historical power generation data
- Reduced frequency of on-site inspections



Module-level Location Granularity

- Physical layout maps distinguish inefficient components by color.
- Accurately locate abnormal components.
- Eliminates the need for manual on-site visits.
- Shortens fault downtime.

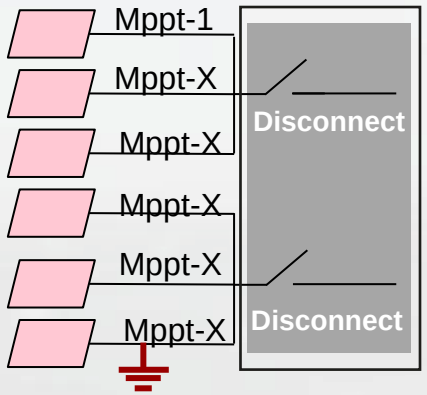
Intelligent Module Fault Diagnosis

- Supports four common faults: **Abnormal degradation of module**, **PID degradation**, **Diode short circuit**, and **Open circuit**.
- Fault detection rate **> 90%,** accuracy rate **> 90%**.
- Intelligent diagnosis completed in **2 minutes**.
- No need to shut down the system, zero power loss.

HUAWEI

The First High-Precision Module-Level Insulation Detection Ensures Safety in Industry, and Fast Fault Locating Reduces O&M Costs

Conventional solution: high proportion of low impedance faults and inaccurate fault locating



Conventional inverter-level locating

DC power cables are not properly routed.

Damages caused by human errors

Connectors are not properly waterproofed.

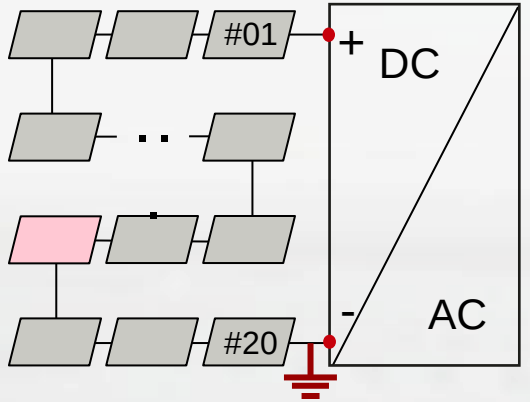
Low impedance Grounding fault

Conventional solution

A clamp meter is used to measure the current of each PV string to locate the corresponding module array, and check the cables connected to the modules one by one.

VS

Module-level insulation detection: high precision avoids false positives and quickly narrow down the fault location



Locating an insulation fault to the corresponding module (±1)

Fault locating status: succeeded. Current insulation resistance: 0.017 MΩ. Possible faulty PV string: MPPT3. Possible short-circuit position: 92.8%. Connect all the PV strings to the inverter one by one for troubleshooting. For details, see the user manual.

Module-level insulation detection

Outstanding safety performance

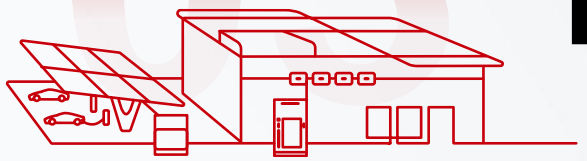
High positioning accuracy

Avoid multi-point grounding faults.

The fault locating precision is improved by **6** times, and the troubleshooting time is reduced by **30 minutes** each time.

HUAWEI

03



Reference Cases

Massive Applications of Huawei PV-ESS Around the World

130 GW+
Cumulative shipment, No.1 global market share for 10 consecutive years

100,000+
Serving enterprises @ 2024

55 million tons
Reducing carbon emissions @ 2024

HUAWEI

Thailand's Mahidol University, " Optimizer + PV + ESS“, Helps Top University Build "Zero Carbon Campus"

Project Information

- **Customer Introduction**: Mahidol University, the first institute of higher education in Thailand
- **Project Location**: Nakron Pathom, Thailand
- **Grid connection date**: May 2023
- **Project scale**: 15 MW PV + **fully-configured optimizer** + 600 kWh ESS
- **Application scenario**: C&I PV and ESS
- **Project Significance**: **The world's first green and low-carbon university,** which is a benchmark for carbon neutral education in industry and academia.

Customer pain points

- Unified service delivery interface
- Safe and reliable products
- Localized and sustainable services
- Simplified O&M system

HUAWEI "Optimizer-PV-ESS" Solution

LUNA2000-200kWh-2H1

PVMS

SUN2000-600W-P

SUN2000-40kTL-M3

Customer Benefits

- Build an image of innovative university leader and help become the first "**Carbon Neutrality university**" in the Asia-Pacific region
- Annual savings of $2.7M in electricity costs; 11,000 tons of carbon reduction, equivalent to planting 15,000 trees.
- AFCI+RSD **ensures personal safety**
- Fully-configured optimizer solution, **improving energy yield by 10%**
- PVMS improves O&M Efficiency by 50%

Guangdong Yinghua Electronic Materials Co., Ltd., “Optimizer + PV" assists low-carbon transformation

Project Information

- **Customer Introduction:** Guangdong Yinghua Electronic Materials Co., Ltd.
- **Grid connection time:** September 2023
- **Project location:** Guangdong, China
- **Project scale: 4.65 MW PV + optimizer**
- **Application scenario: Self-consumption**
- **Project significance:**

(1) The optimizer significantly improves the roof utilization rate and helps enterprises achieve low-carbon transformation

(2) Assisting energy-consuming enterprises to build green transformation demonstration projects

Solution

Customer pain points

- Using green power to ensure product competitiveness
- Low roof utilization rate
- Higher electricity costs due to high energy consumption
- Inconsistent product quality

Self-consumption

4.65 MW PV | SUN2000-1300W-P | SUN2000-50KTL-ZHM3

Solution Value

5.13 million kwh
Annual energy yield

25%
Increase Rooftop Utilization

25,000 tons
25 years standard coal saving

62,000 tons
25 years CO2 Reduction

- **More installation and more energy yield**

Increases roof utilization by **25%** and energy yield

- **Reliable product**

99.999% availability, TUV Rheinland certified

- **Smart O&M**

PVMS improves O&M Efficiency by **50%**

Shanghai Shenxiang Stainless Steel Co., Ltd., “PV + Stainless Steel" build a green transformation demonstration

Project Information

- **Customer Introduction:** Shanghai Shenxiang Stainless Steel Co., Ltd.
- **Project location:** Pudong, Shanghai
- **Grid connection date:** September 2023
- **Project scale:** 792 kW PV capacity, fully-configured optimizers
- **Application scenario:** : self-consumption
- **Project significance:**

(1) Successfully built a green transformation demonstration project of “PV + stainless steel"

(2) Self-consumption reduces the operating electricity bills and energy consumption.

Solution

Customer pain points

- Costly electricity bills
- Inconsistent product quality
- Localized and sustainable services
- Green transformation demand

Self-consumption

792 Wp installed capacity

SUN2000-1100W-P

SUN2000-50KTL-ZHM3
SUN2000-40/30KTL-M3

Solution Value

Saving Energy，Reducing carbon

900,000 KWh

Annual power generation

651 tons

Annual CO2 emission reduction

- **Reliable product**

The inverter availability reaches 99.999%，passes the TUV Rheinland certification.

- **Proactive security**

Rapidly reduce module voltage to 1 V, ensuring device, asset, and personal safety.

- **More installation and more energy yield**

The modules installing in shaded rooftop improves energy yield in the lifecycle.

- **Efficient O&M:**

Smart PV App, Quickly View PV Module Power Generation and Accurately Locate Faulty PV Modules

Roma Logistics Park: Fewer carbon emissions and higher energy yield in the medium- and large-scale C&I scenario

2.4 MW PV plant deployed on rooftops and open areas

Customer requirements

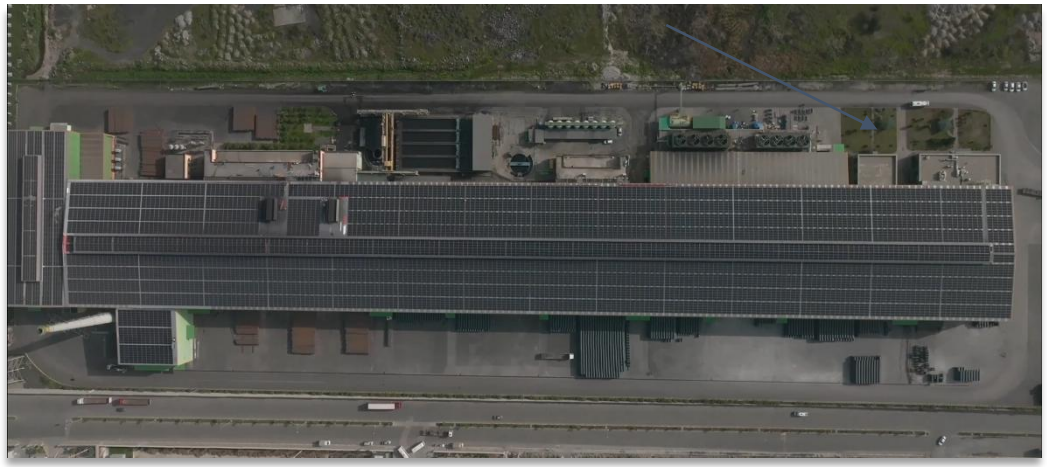
- Customer: Roma Logistics Park. The products should be highly reliable, generate more electricity, reduce costs, and simplify O&M throughout the lifecycle. The PV plant can run safely in the site, and the factory can use green electricity stably and at a lower cost, facilitating green energy transition.
- Logistics enterprise, high requirements for stable power supply
- The following problems need to be solved: low manual O&M efficiency, energy yield loss caused by frequent startup and shutdown of devices, and inverter breakdown.

Customer benefits

SUN2000-150K-MG0
C&I highest-power low-voltage inverter

- Annual energy yield: 2.88 million kWh
- BOS cost reduced by 20%, helping the logistics park build a green benchmark in the industry and improve the brand image
- Simplified O&M, wider AFCI protection range of 450 m

World's largest C&I PV project, 140 MW steel plant project in Türkiye, carbon reduction and intelligent O&M



Customer requirements

- Customer: Tosyali Holding, a leading steel producer in Türkiye and is committed to green energy transition
- Energy-intensive enterprise, with high energy consumption and urgent demand for improving the energy self-consumption rate
- Intelligent O&M to simplify PV O&M

Customer benefits

World's largest C&I PV project: **140 MW**

- The PV systems generate 250 million kWh of electricity each year, reducing carbon emissions by 116 million kg each year.
- Highest L4 Smart I-V Curve Diagnosis for remote fault locating, no need for onsite O&M
- Highly reliable inverters, with a failure rate of less than 0.5%

Thank you.