

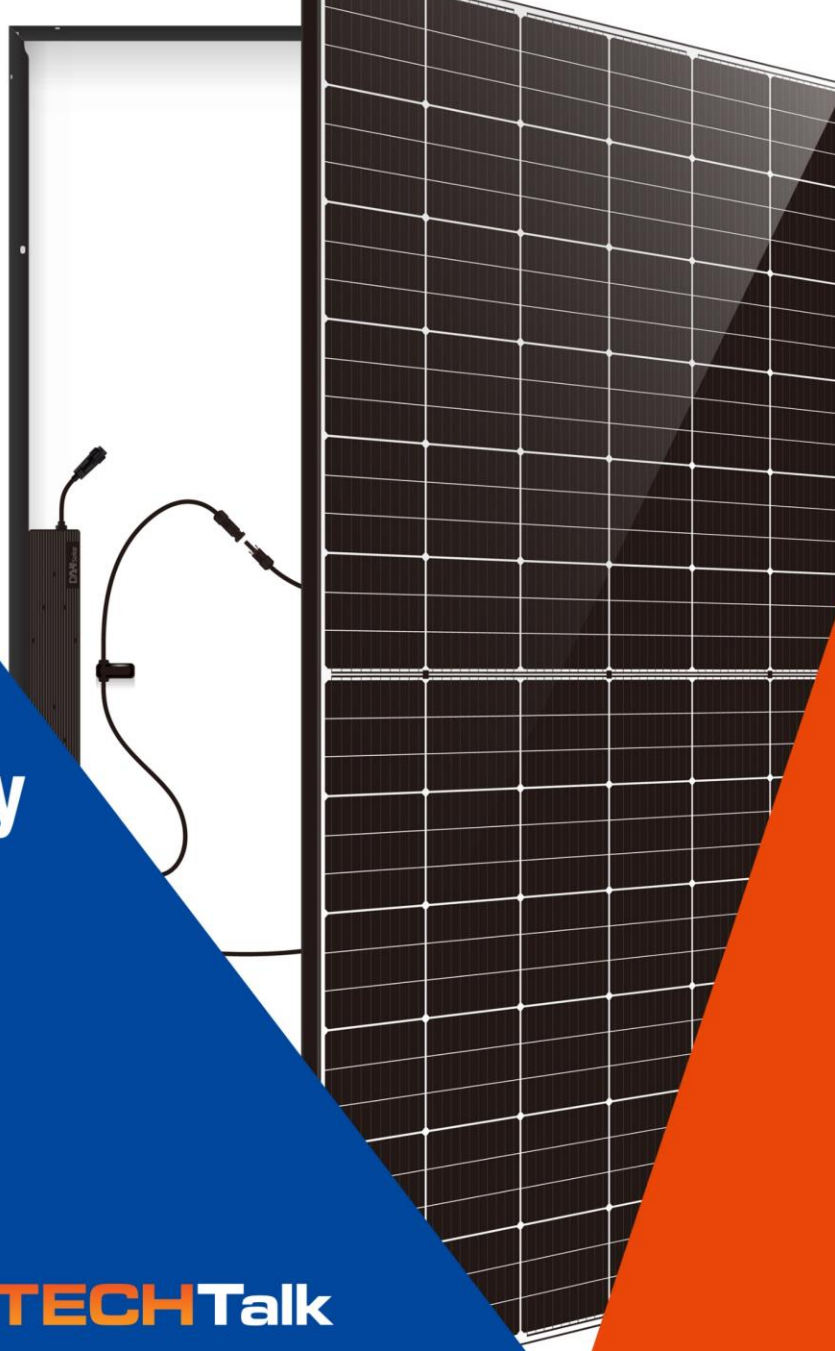


DAH solar

For better rooftop & balcony solar: DAH Solar introduces SolarUnit, the world's first integrated PV system

10th May 2023

 **PVTECH** **TECHTalk**



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DAH Solar | Change to DAH Solar
Change Your World



DAH Solar is Headquartered in Hefei, Anhui, China

*Established here
Global Management Center, R&D Team, Technical Team, Production
Base, Sales Team, operation team*

Global Markets

US Branch Off.

Rotterdam
Warehouse

German Branch Off.

Japan Branch Off.

HQ · CHINA

Nigeria

Brazil Branch Off.

South Africa

Indonesia

Australia

The headquarters in China is the operations centre and the German, Japanese, Brazilian and US branch offices act as regional sales centres

Exporting Countries

100 +

Ranking on E-commerce

TOP 3

Brand Influence in Brazil

TOP 4

Compound Growth of Export in Years

90%

DAH Solar Production Capacity Scale



PV Module Capacity

5_{GW}

(3GW Topcon module)

Solar Cell Capacity

3.5_{GW}

(3GW Topcon cell)

Silicon Wafer Capacity

2_{GW}

SolarUnit Capacity

200,000 Sets

*The above is
Projected capacity in 2023*

Number of Employees

2,000

Number of R&D Employees

15%



DAH Solar

Product Technology Innovations

Integrated PV System

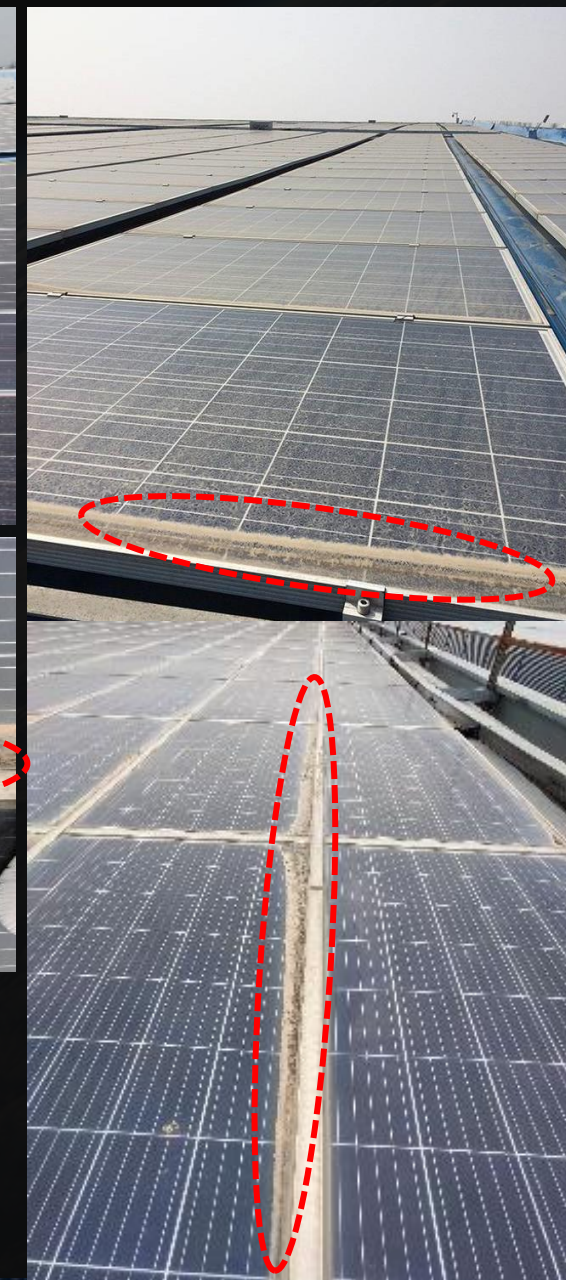
SolarUnit

High Efficiency PV Module

Full-Screen PV Module

N-TOPCon Solar Cell Technology

N-TOPCon PV Module

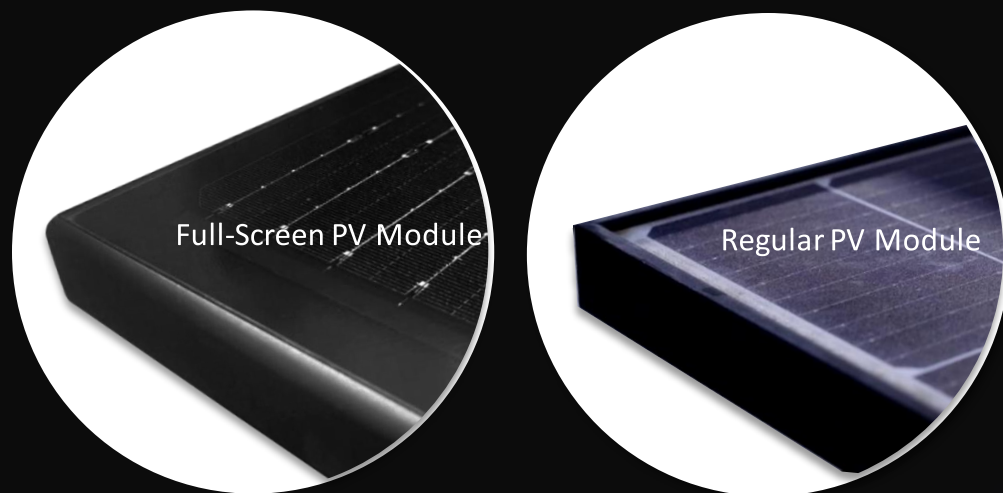


The idea behind the design of the Full-Screen module

What is

Full-Screen PV Module

PV MODULE
「Full Screen」



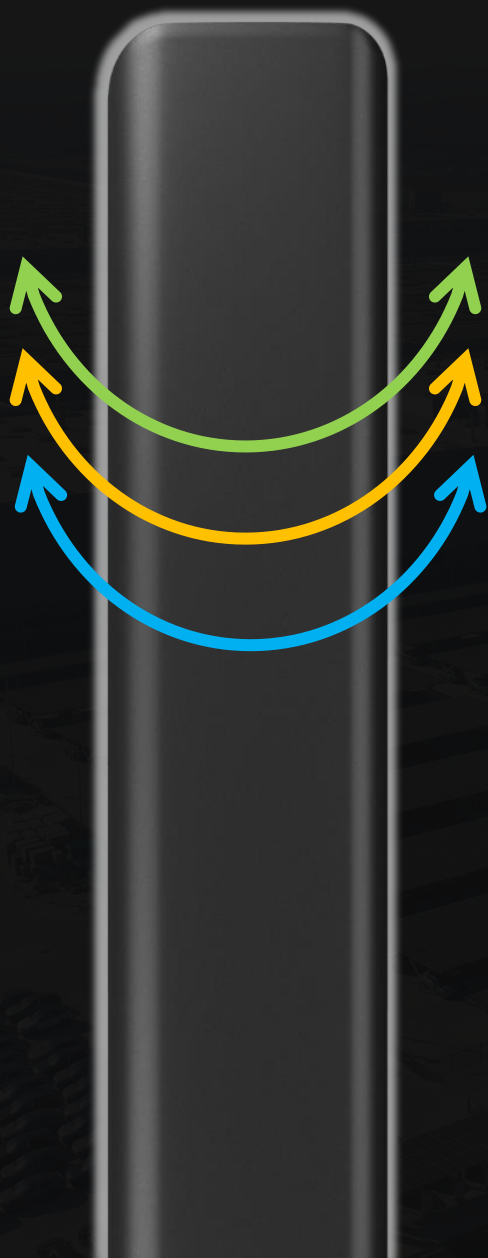
- Regular PV Module: 5mm gap between glass surface and frame
- Full-Screen PV Module frameless design on front side

Case Comparison:

Regular PV Module (left)

Full-Screen PV Module (right)





128°
Surface Angle

*With the surface angle design,
the installation and transportation is more
comfortable and convenient.*

Full-Screen PV Module

PV MODULE
Full Screen

Power Generation Increase 6-15%

Monthly
Power Generation : kW·h

— Full-Screen module Power Station
— Regular module Power Station

Summer : Rainy Season

Power Generation Deviation: 6.2-8.3%

Winter: Freezing Weather and Snow

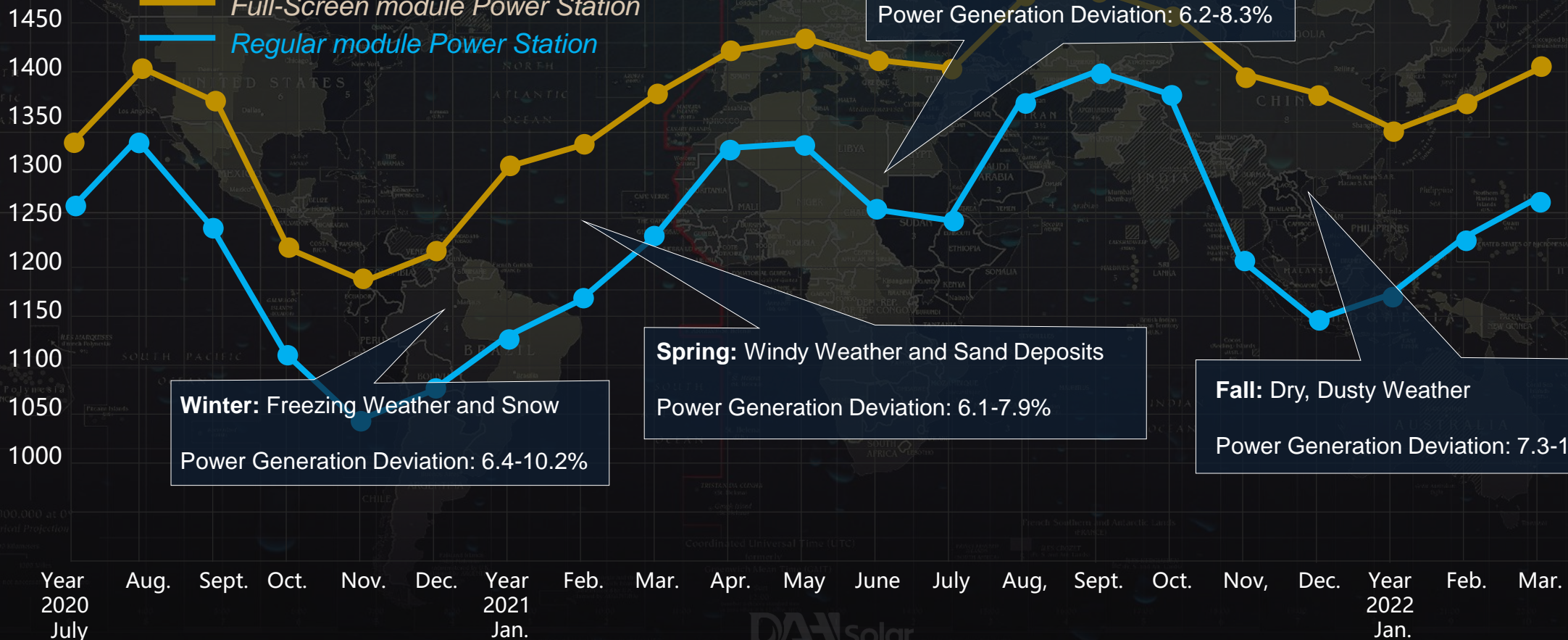
Power Generation Deviation: 6.4-10.2%

Spring: Windy Weather and Sand Deposits

Power Generation Deviation: 6.1-7.9%

Fall: Dry, Dusty Weather

Power Generation Deviation: 7.3-15.2%



Field test report from TÜV Nord

PV MODULE
Full Screen

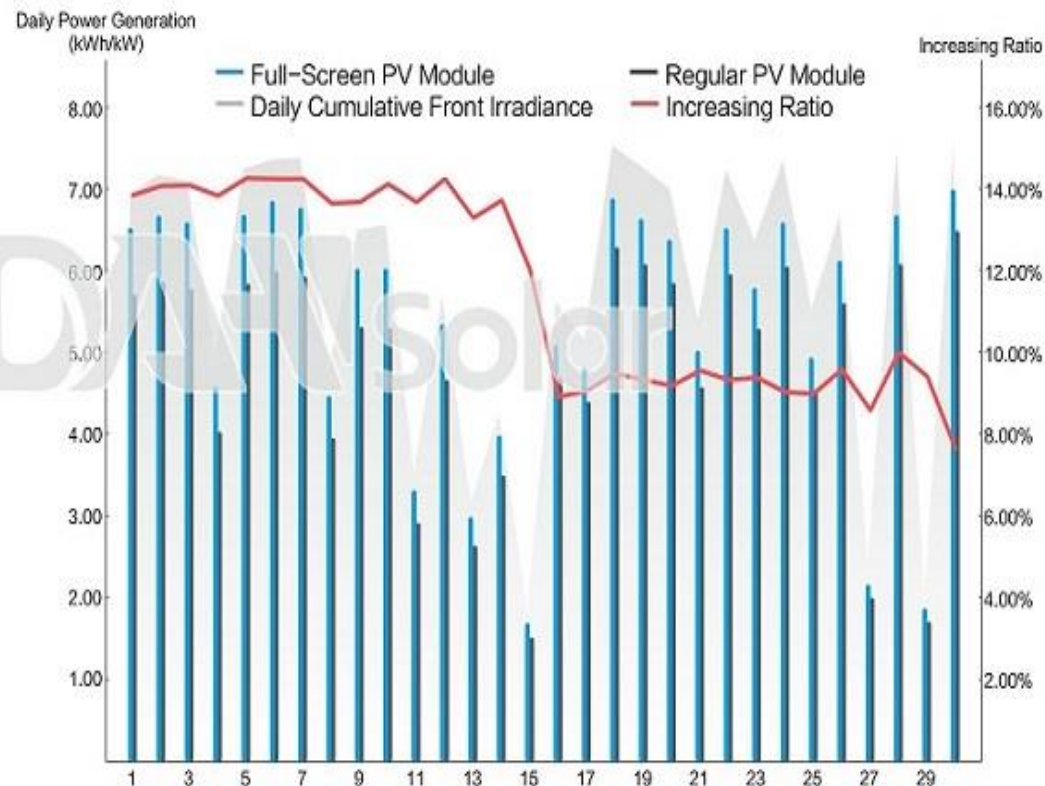


11.5%
The Full-Screen PV Module
Power Generation



Power Generation Results

The Full-Screen PV Modules VS The Regular Modules



Field Test Monthly Report



File No.: PVP02038/22P

Report No.: TRPVP02038/22P/01

4 Overall Evaluation

In April, the TÜV Experimental Base in Ningxia finished the field test on the Full-Screen PV Module, which was innovated by DAH Solar. The test result demonstrated the Full-Screen PV Module, DHT-M60X10/FS-460W, generated 73.21kWh, and the cumulative power generation per watt is 161.17 Kwh/kW. The solar system efficiency is 94.64%. In the contrast, the regular PV module, DHT-M60X10-460W, generated 65.06kWh, and the cumulative power generation per watt is 144.54kWh/kW. The solar system efficiency is 84.88%. At present, there is no low efficient PV module is found. All the operational standards have met the demands.

The rooftops with small-angle installation conditions would form the bottom soiling due to the nature rain wash and the altitude intercept between the regular PV module frame and glass. This problem is the primary reason that causes the shade and hotspots on commercial and household PV stations. This bottom soiling could form a “shading belt” with different widths. At some extreme conditions, the “shading belt” could completely cover the PV module, which will decrease the power generation, harm the PV module generation capacity, and shorten the life span of the PV module. Compared with the regular module, the Full-Screen PV module could increase power generation by **11.50%** in the equivalent period. This experiment illustrates the Full-Screen PV Module with the front A-side frameless design, which could avoid the bottom soiling and decrease the shadow shading caused power generation loss.



Global patent for Full Screen module
in 18 countries and regions

N-TOPCon PV Module

N-TOPCon Solar Cell Technology

N-type TOPCon Solar Cell
Higher Technical Efficiency



Higher Efficiency
Higher Bifacial Rate
Better Low Light Performance
Lower Temperature Coefficient
Lower Degradation Rate

The World's First Integrated PV System

SolarUnit

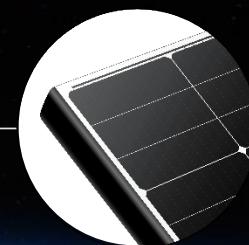
SolarUnit System
Maximum Conversion Efficiency

97.55%

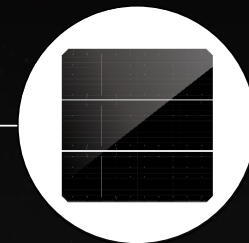
*Special Designed Module and Microinverter
Significantly Increase Power Generation*



Innovative design of microinverter



Full-Screen PV Module



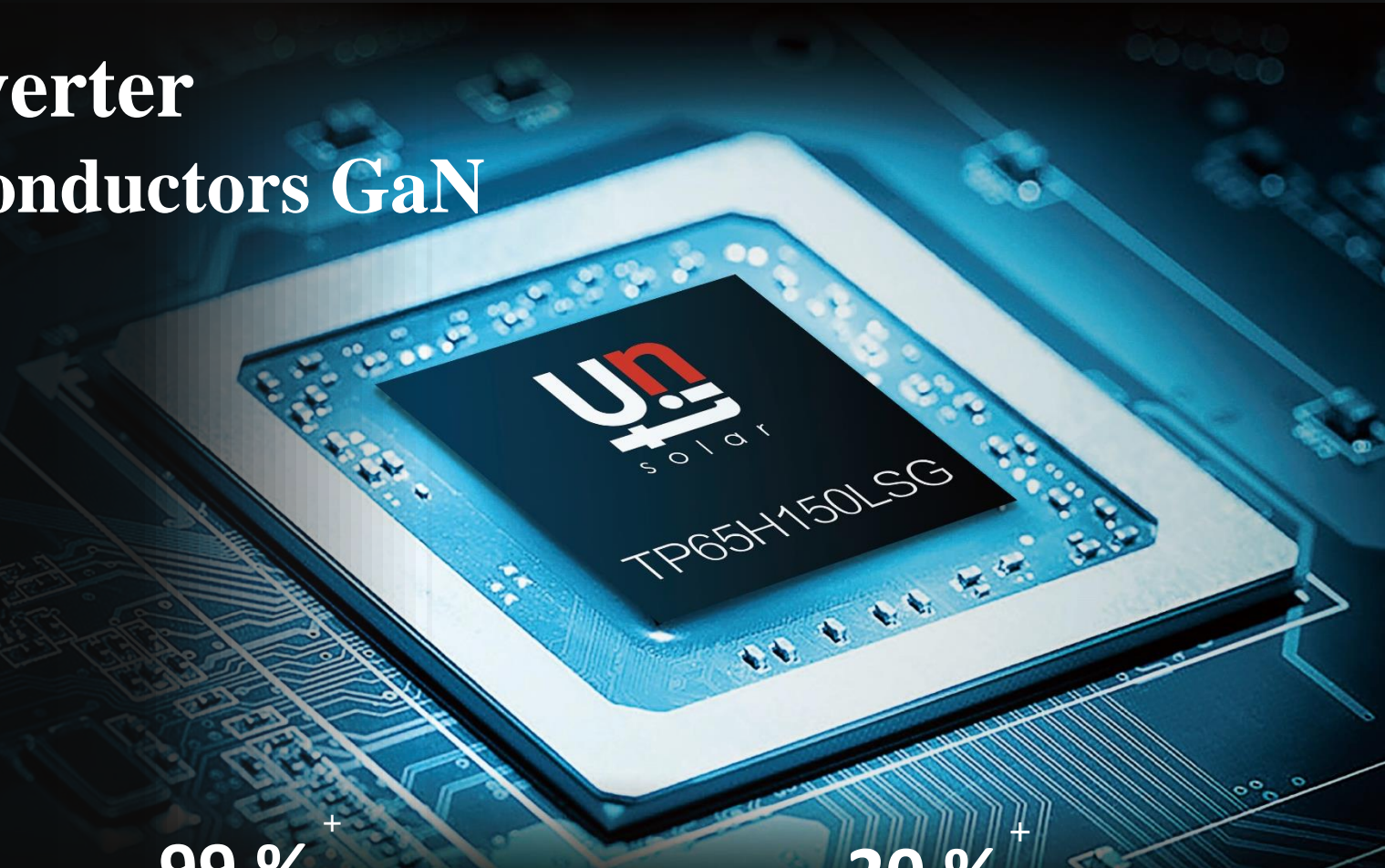
1/3 cut solar cells

Module and microinverter integrated at factory

SolarUnit Microinverter

3rd Generation Semiconductors GaN

High frequency response
High energy density
Small size



40 %⁺

Energy density increase - same power, smaller size

99 %⁺

System conversion efficiency improvement

20 %⁺

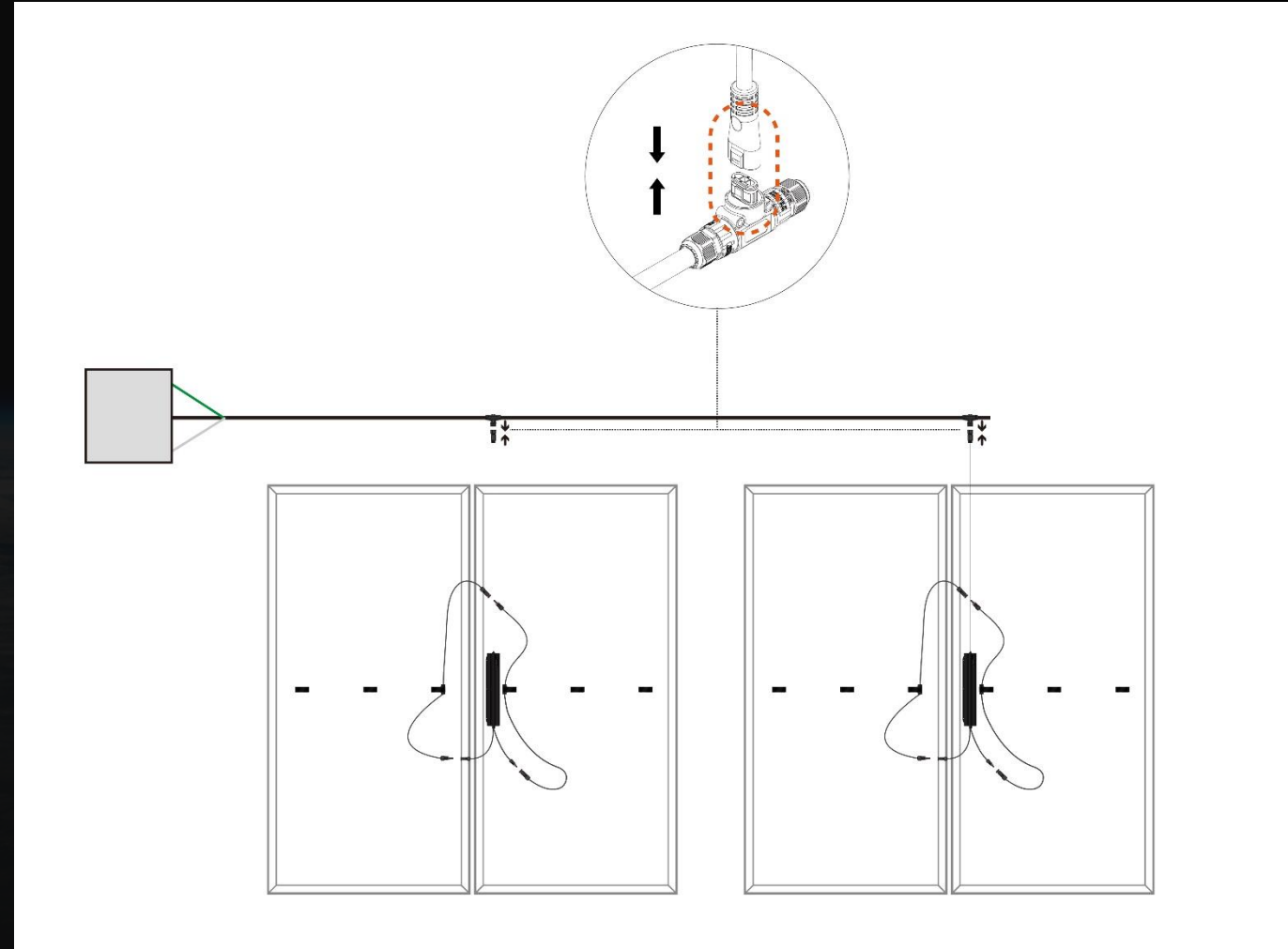
Lower Cost Under the same efficiency or volume

Easy Installation

Plug-in Connection

Module and microinverter integrated at factory

- *Microinverter and module are assembled at the factory, which shortens installation process*
- *All DC and AC side are designed with plug-in connection and it is easy to extend another set or few sets with T core AC Bus*




Residential Rooftop Installation Scenario

Design-Free

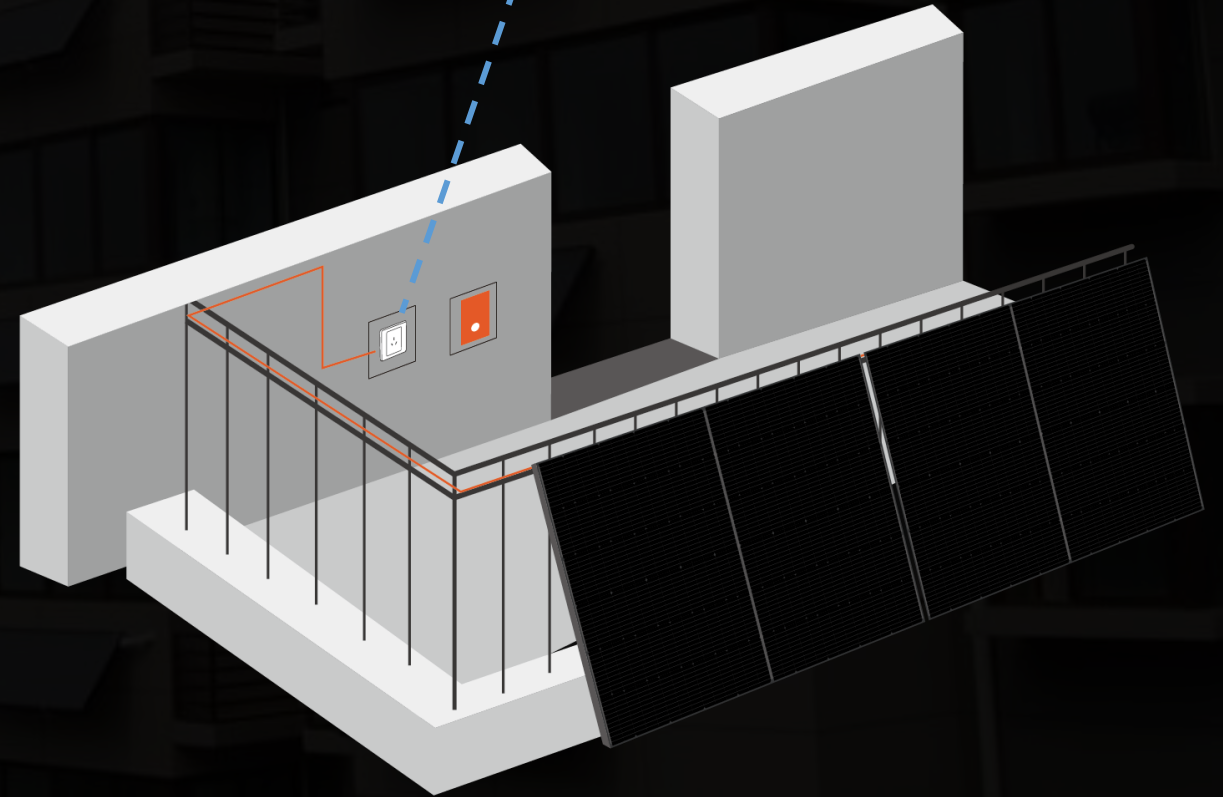
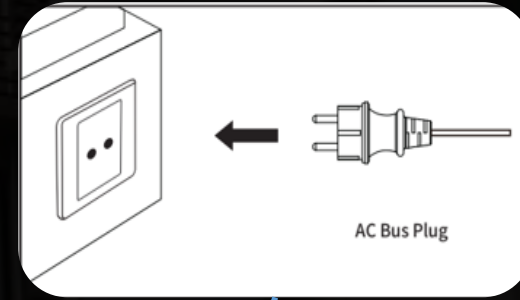
Independent Unitized Modules

*Preeminent Solar Solution
for Residential Usage*

- 
- Can be installed at different orientations since each unit operates independently
 - Ideal for complex rooftop installations, improving utilization of space and power generation efficiency

Balcony PV Application Scenarios

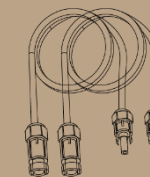
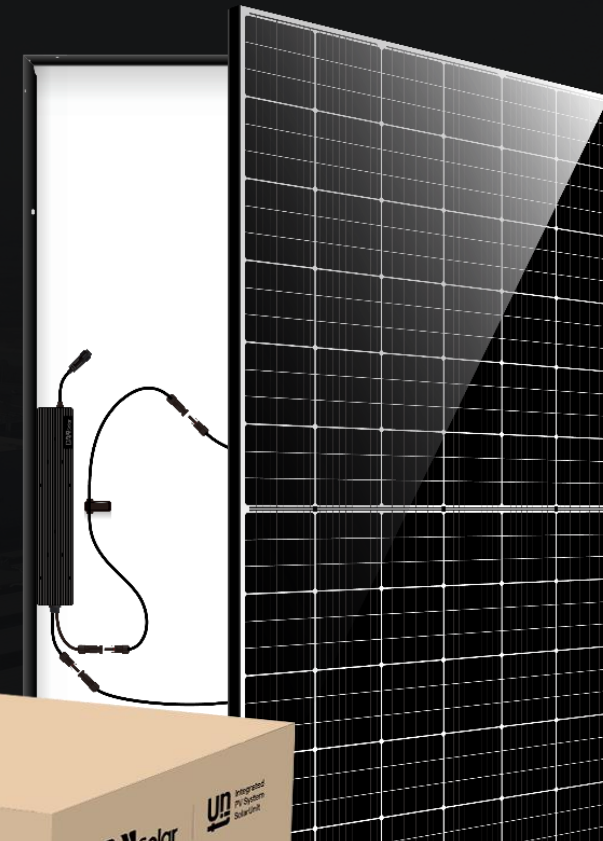
- Micro inverter 600W/800W
- Separate package for every single set
- Add plug at the end of AC cable for direct plug in socket



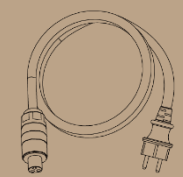
Make PV power more convenient for end users

SolarUnit Configuration List

Equipment	SolarUnit	Traditional AC Module
Module	Module and microinverter integrated, factory assembled 1KW/2KW/3KW...Sold as a set Easy to expand	Purchase
Microinverter		Purchase
ECU Unit	Contained	Purchase
T-type AC Busbar	Contained	Purchase
Bracket	Optional	Purchase
Combiner Box	Optional	Purchase
Ammeter	Optional	Purchase



DC Cable



AC Bus



ECU



Thank You for Your Attention

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