## JinkoSolar Holding Co., Ltd.

#### Headquarters

#### Europe

#### North America

#### Africa

#### Middle East

#### Latin America

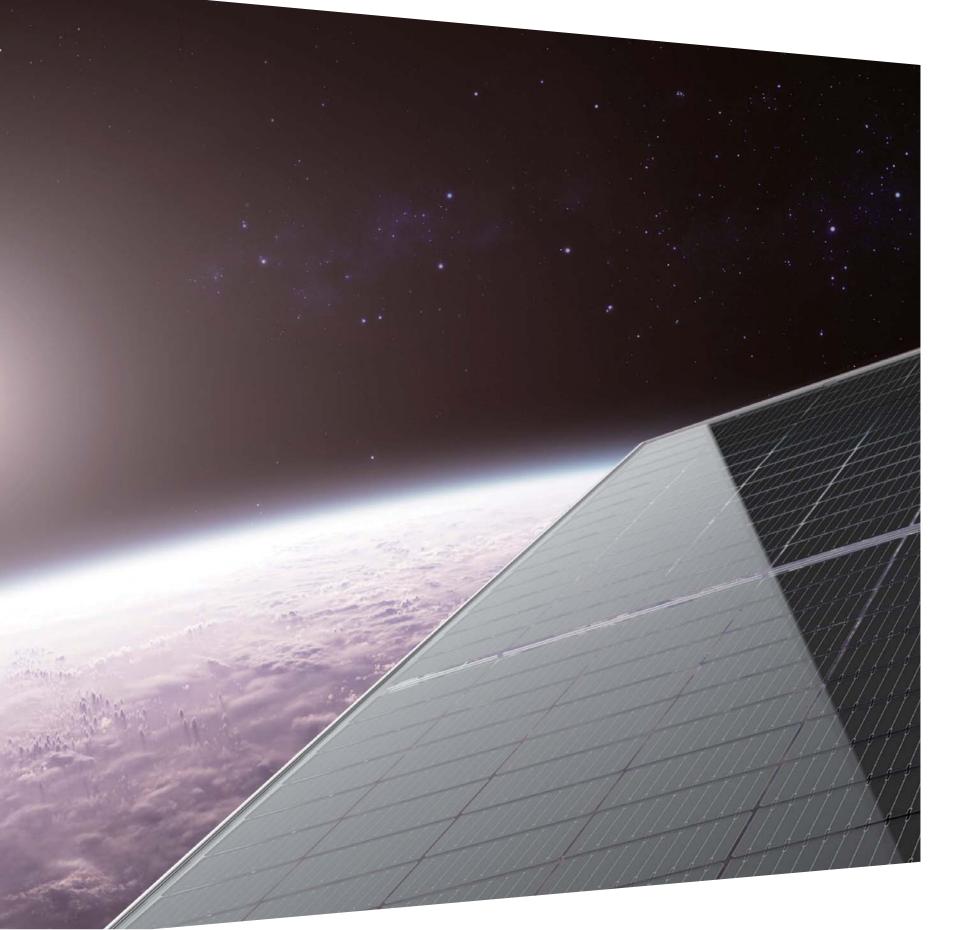
## Asia & Pacific

## Manufacturing Base

JinkoSolar Vietnam Base

www.jinkosolar.com | sales@jinkosolar.com





# **Amazing Decade**

2021	Listed on the Science and Technology Innovation Board of the Shanghai Stock The first company to deliver 100GW PV Modules
2020	#1 in Global Cumulative Module Shipment with 70GW+
2019	#1 in Global Module Shipment Fourth Year in a Row
2018	1 <sup>st</sup> "All Quality Matters" Energy Yield Simulation Winner – Mono Group
2017	2017 Top Solar Brand Used in Debt-Financed Projects and Most " Bankable" PV Manufacturer by Bloomberg New Energy Finance
2016	Becomes World's Largest Solar Module Manufacturer
2015	Opens Factory in Malaysia
2014	World's 1 <sup>st</sup> 1000-hour PID Free Test Under 85°C/85% RH
2013	1 <sup>st</sup> PV Company to Restore Profitability in Q2
2012	World's 1 <sup>st</sup> Company to Pass PID Free Test Under 85°C/85% RH
2011	The Only Profitable PV Manufacturer Worldwide
2010	Successful IPO and listed on the NYSE. Shortest PV manufacturer from production to IPO
2009	Operates the 1st fully automated PV module NPC production line in China
2008	Launches Wafer Manufacturing
2007	Launches Ingot Manufacturing
2006	JinkoSolar Co.,Ltd. was Established

## Vision:

Revolutionize Our Energy Mix & Take Responsibility to Ensure A Sustainable Future.

## Mission:

Provide a Comprehensive, One Stop Clean Energy Solution & Become and Industry Benchmark.

## **Innovation Pioneer**

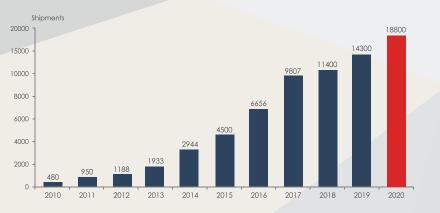
Leading the N-Type transformation

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Jinko Solar has more than 1,000 R&D and technical employees and has won many honors such as "National Enterprise Technology Center", "National Technology Innovation Demonstration Enterprise", "Champion of Manufacturing ", and has formulated many international and domestic industry standards such as IEC.In 2022, as the first year of N-type technology development, JinkoSolar will continue to lead the vigorous development of N-type technology in the industry and promote the innovation process of N-type upgrade.

## **Continued Growth**

In 2021, JinkoSolar's total shipments was 25.24 GW, representing a year-on-year increase of 19.6%. Through continuous research and development, innovation and product upgrades, we have achieved a higher market share. As of the first quarter of 2022, the company's global cumulative shipments exceeded 100GW, becoming the first photovoltaic company in history to achieve the milestone of 100GW module shipments.



## **Brand Positioning**

A strong brand, a positive corporate image and the composition of customers are all essential factors for being a leading company in the PV industry. JinkoSolar continues to work hard in these directions, and constantly improve the corporate image and customer composition. At the same time, JinkoSolar will focus on product quality and innovative R&D efforts to provide customers with more efficient modules and a wider range of choices. A series of domestic and foreign awards won by JinkoSolar are the best endorsements of our brand. In 2022, JinkoSolar was awarded "UGGC Best Practices Sustainability Awards 2021" by the United Nations Global Compact China Network. In 2021, the company has been listed on the Fortune China 500 for 7 consecutive years and the "China Top 500 Private Enterprises" for 8 consecutive years. JinkoSolar has also been awarded the title of "Most Bankable" PV Top Brand by Bloomberg New Energy for 7 consecutive years. Beyond that, since the 2016 Hangzhou B20 Summit, the company has been invited to attend the B20 summit for 6 consecutive years and has become an industry opinion leader advocating global low carbon and emission reduction. In 2019, the company was the first solar company in the world joining the RE100 green initiative.

## Financial Resiliency

JinkoSolar's stable long-term profitability reflects the financial strength of the company. Our growth reflects the premium standing of the JinkoSolar brand. According to our responsible and value-orientated management approach, qualitative growth is a priority strategic goal. We strive to achieve the goal through effective structures, efficient processes, systematic management of investments, and continuous optimization of costs. As such, JinkoSolar is one of the industry's most profitable manufacturers.

## **About US**

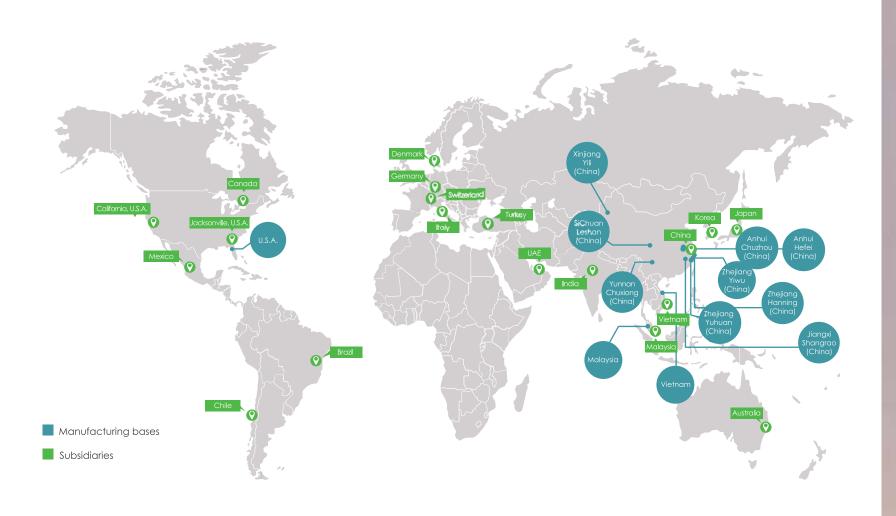
JinkoSolar is one of the most famous and innovative solar technology companies in the world. At present, JinkoSolar's products serve more than 3,000 customers in more than 160 countries around the world, and the company has ranked No.1 in global module shipments from 2016 to 2019. By the end of March 2022, the cumulative module shipments of Jinko Solar have exceeded 100GW.

JinkoSolar is the first company to establish a "vertically integrated" production capacity from silicon material processing to wafer, cell and module production in the industry. It has a total of 12 global production bases in China, the United States, Malaysia and Vietnam. As of Q1 2022, the company's effective production capacity of monocrystalline silicon wafers, cells and modules reach 40GW, 40GW and 50GW respectively. JinkoSolar continuously expands the diversified application scenarios of photovoltaic technology, including building-integrated photovoltaic, photovoltaic hydrogen production, energy storage and other fields, and strives to create a new energy ecosystem.

JinkoSolar was listed on the STAR Board of the Shanghai Stock Exchange in 2022, and JinkoSolar Holding Co., Ltd., its indirect controlling shareholder, was listed on the New York Stock Exchange in 2010.

and industry small promable manufactories.

## GLOBAL IMPACT AT A GLANCE



Global factories

20+

**Logistics centers** 

35+

Service centres

160+

countries covered

## Key figures for 2021

90GW+

Global cumulative shipments

728.71 million yuan

Total assets (100 million yuan)

11.41 million yuan Net profit (100 million yuan) 25.24GW

Shipments in 2021

405.70 million yuan 20.53%

Revenue (100 million yuan)

9.59%

Growth rate of net profit attributable to the parent company

**45GW** 

**Annualized effective capacity** of modules at the end of 2021

Revenue growth rate

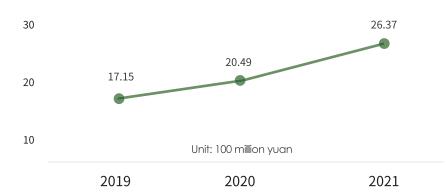
It has been listed on the Fortune China Top 500 list for 7 consecutive years

JinkoSolar was listed on the STAR Board of the Shanghai Stock Exchange in January 2022, and JinkoSolar Holding Co., Ltd., its indirect controlling shareholder, was listed on the New York Stock Exchange in 2010.

JinkoSolar always upholds the mission of "Optimize the energy portfolio and take responsibility for enabling a sustainable future", develops with the vision of "Provide a one-stop solution for clean energy and become an industry leader", practices the core values of "customer-centered, contributor-oriented, continuous innovation against benchmarks, adherence to practicability", and continues to deliver clean energy products and services worldwide, formulates a strategic plan of "carbon neutrality and peak carbon dioxide emissions", and strives to promote the widespread application of photovoltaic power generation worldwide, promotes the comprehensive replacement of traditional energy by photovoltaic new energy, assists global energy green transformation, and builds a sustainable green Earth.



From 2019 to 2021, the Company's R&D investment was approximately 1.715 billion yuan, 2.049 billion yuan and 2.637 billion yuan respectively, which continued to increase in recent three years.



325

325 new patent applications in 2021

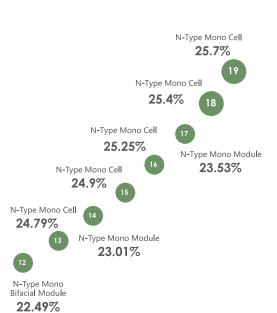
234

234 new authorized patents in 2021

## **Technology**

JinkoSolar Co., Ltd. has the largest R&D center in the industry. Dr. CTO Jin Hao, head of the R&D center, graduated with a Ph.D. from Australian National University. Dr. Jin Hao is also the convener of WG8 photovoltaic cell work of the International Electrotechnical Organization (IEC/TC82), a member of the International Solar Energy Society (ISES), and an expert in compiling national key R&D plan guidelines in 2018 and 2021. The project R&D team has a total of 1395 R&D technicians, including 20 doctors from well-known universities at home and abroad, and 105 masters and experienced core engineers. In addition, taking the project as the carrier, the Company has flexibly introduced more than 10 experts at home and abroad to provide technical guidance for the project, including Professor Daniel MacDonald of Australian National University, Professor A. Albert of the National University of Singapore, Academician Yang

Deren of State Key Laboratory of Silicon Materials, Zhejiang University (senior), Professor Shen Hui of Sun Yat-sen University (senior), Professor Zhou Lang of Nanchang University (senior), etc.



JinkoSolar has always paid attention to independent innovation and research and development, and continuously improved its technology research and development capabilities, and is equipped with efficient scientific research platforms. Since 2013, it has set 18 world records and 2 record-holders (N-type monocrystalline cell efficiency, N-type Module power), has successfully declared, and established 5 national key R&D plan projects, and more than 100 other provincial and ministerial scientific research projects. At the same time, it has obtained several authoritative performance and efficiency certifications and technological innovation breakthrough awards.

From 2018 to 2021, 60 national standards and technical specifications edited or co-edited by our Company have been declared and 46 have been published.

#### Patents of Jinko from 2019 to 202

Years	Number of filings	Number of grants
2019	219	219
2020	289	136
2021	325	234
Total	833	589

N-Type Mono Cell 24.58% P-Type Mono Cell

24.38% N-Type Mono Cell 24.2% 158 Size Mono 469.3W

P-Type Mono Bifacial Module 21.82%

22.12% 22.78%

N-Type Poly Cell Mono PERC Cell

Module-60 Cell 378.6W Module-60 Cell 373.8W

P-Type Mono Cell

23.95%



## Manufacturing |

JinkoSolar operates 12 manufacturing facilities worldwide with cutting edge cell and module technology. JinkoSolar's integrated manufacturing management system not only ensures a high level of product quality and reliability, but also enables greater flexibility to meet demand fluctuations, accelerated growth on the experience curve, and shortened lead time in new technology commercialization. It is with such advanced manufacturing capability that JinkoSolar can rapidly build capacity when needed to fulfill customer needs.



## **Precision Manufacturing**

JinkoSolar manufacturing systems are tailored to the company's comprehensive and complex product mix. JinkoSolar manufacturing systems are equipped with sophisticated scheduling and dispatching capabilities, automated material handling functionality, automated manufacturing systems, and smart devices utilization. Through continued

improvement and simplification of manufacturing processes, JinkoSolar is able to shorten lead times and optimize production planning. With real time system monitoring, analysis, and diagnosis of manufacturing equipment, JinkoSolar can limited the amount of production interference, enabling lower costs.





## Manufacturing Excellence

JinkoSolar combines statistics-based controls, advanced equipment monitoring system, and comprehensive process controls to develop a manufacturing big data system.

The collection of large amounts of manufacturing data and utilization of big data analysis enhances

JinkoSolar's equipment, process, and

quality optimization abilities. The data-driven intelligent manufacturing system assures equipment efficiency and stability. The system also evaluates other production-related parameters to identify critical variables that influence product quality and yield.

Accurate modeling and control mechanisms at each stage of

production further drives JinkoSolar module loop control system. Using computer integrated manufacturing and dispatching systems, JinkoSolar enables optimization from equipment to production, achieving precision and lean manufacturing.

# BUILDING YOUR TRUST IN SOLAR

## High Level of Automation

Utilization of digital and automated production process eliminates need for manual labor and processes.

## Optimized Processes

Effective production processes with ongoing optimization.

### Intelligent Production

Intelligent systems can analyze data, identify previously undetected errors, and reveal areas for further improvement.

## O2 State-of-the-Art Equipment

Integration of latest upstream technology and state-of-the-art manufacturing equipment.

## Qualified Staff

Well-trained and experienced production staff ensuring product quality at every stage.

## Automated Production

## Quality

JinkoSolar's philosophy is that "Quality is the Most Important Competitive Advantage". As such, JinkoSolar has realized a total quality management system throughout its R&D, production, and customer service processes to make product reliability and quality customer service our key advantage.

## Total Quality Information Technology Management System

Manufacturing excellence requires a data-driven and robust quality control system to realize comprehensive statistical and predictive analysis. JinkoSolar has developed a sophisticated IT-based manufacturing execution system (MES) with statistical process control (SPC) functionalities. Combining the data from our MES with our quality improvement system (QIS), JinkoSolar can eliminate information silos and create a virtual panoramic view of our production capabilities. Utilizing our SPC functionalities with real time management and alert capabilities, we can eliminate disruptions in production.

#### **Advanced UL-Certified Laboratories**

To enhance JinkoSolar's incident resolution and production quality capabilities, JinkoSolar's quality control spans across materials handling, cell production, and module manufacturing. Thus, once an issue is detected, it can be immediately resolved. Analysis of product defects, material, conductivity, and material chemistry deviations are critical to JinkoSolar's quality control infrastructure. As such, JinkoSolar has invested in a world class UL certified testing lab with the latest testing and analysis equipment.

## **Supply Chain Quality Control**

JinkoSolar conducts periodic deep dive due diligence on our materials and materials suppliers to ensure that JinkoSolar is receiving the latest and highest quality products. JinkoSolar, utilizing innovative statistical modeling techniques, was further enlarge the manufacturing window while improving product quality. The scope of the techniques used includes raw material, facility management, equipment monitoring, visual inspections, conductivity analysis, and reliability tests.

## **Product Traceability Management**

The data of all materials used and products delivered are stored at JinkoSolar and are archived for a period of 10 years. The utilization of product barcodes ensure traceability should product issues arise.

## **Quality Certification**

The goal of JinkoSolar's quality control infrastructure is to achieve the zero-product defects. As such, JinkoSolar strives to not just met industry certification standards, but go far above that. Our quality controls efforts are reflected in the high customer satisfaction rate.









# BUILDING YOUR TRUST IN SOLAR

## Intensive Quality Tests

All cells and modules must past through a list of 48 different tests to ensure that the visual, optical, electrical, physical, and mechanical properties of the products meet JinkoSolar's high standards before reaching customers

#### Intelligent Quality Monitoring

Computer-based quality control closely monitor all equipment and processes for deviational from programmed parameters.

## Digitalization of Quality Control

All quality control related data are collected, connected, and stored in JinkoSolar intranet to enable analysis and traceability.

## O3 Certified Quality Processes

Certified quality processes combining cutting edge quality control equipment, quality control certification process, diagnostic standards, and professional staff.

## >>> Testing

Comprehensive Quality Control

JinkoSolar's quality infrastructure spreads across the entire value chain. All sub-steps subjected to constant monitorina.



## **Customer Service**

JinkoSolar believes that quality service is essential to raising customer satisfaction and loyalty, helping us retain existing partners and gain new customers. With dedicated and professional customer service teams in pre-sales, post-sales, technical services, and warranty claims, JinkoSolar is committed to providing top-notch service to our customers.

## Global Network, Local Support

As the world's largest solar module manufacturer, we remain committed to expanding our global worldwide production, logistics, sales, and service network as to serve customers in every corner of the world. Throughout our 31 global locations, JinkoSolar has built expert teams with solar industry veterans to provide knowledgeable and responsive customer service in the local language and time zone.

## **Customer Satisfaction Survey and Claim Management**

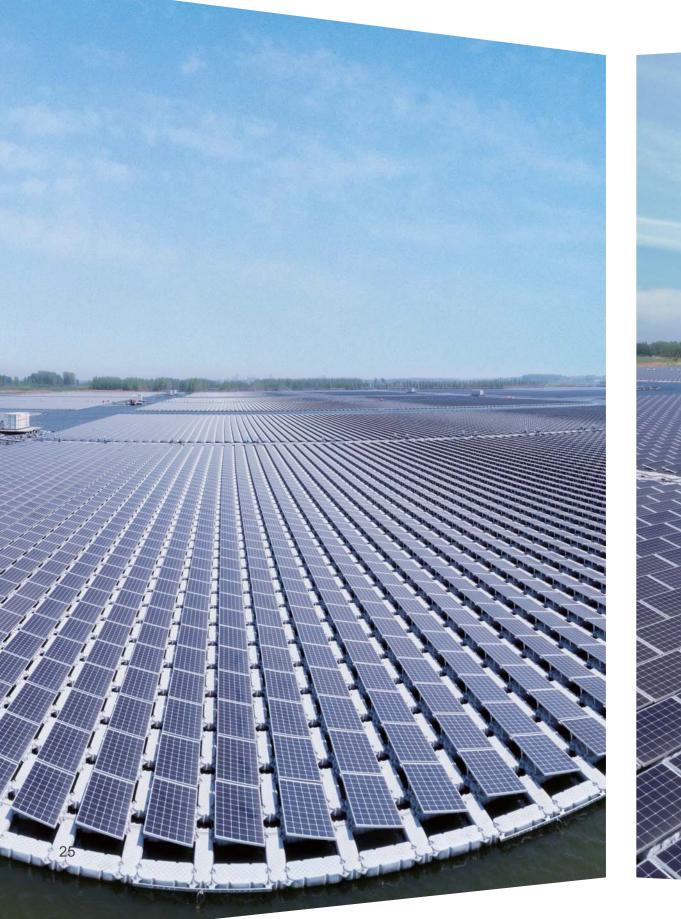
JinkoSolar greatly values the opinions and feedback from our customers. As such, JinkoSolar conducts random and periodic customer satisfaction to ensure that the needs of our customers are understood, address, and even anticipated. Customers can participate in the survey through an online portal or one-on-one interviews. Furthermore, JinkoSolar's Customer Claim Management (CCM) system provides timely resolution of all customer claims and product issues.







The world's largest PV plant, Abu Dhabi, UAE 1177 MW April 2019 Ground-mounted 110 THE STREET STREET







Lancaster, CA, U.S.A. 106 MW August 2017 Ground-mounted