

[www.trinasolar.com](http://www.trinasolar.com)

# 2020 POWER BEYOND SOLAR

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The World Leading PV  
and Smart Energy Total Solution Provider

First Printing in 2020

**Trina**solar



Mission

Solar energy for all

Vision

Leading global energy transformation with standardized and high-value PV smart energy solutions



## About Trina Solar

Founded in 1997, Trina Solar is the world leading PV and smart energy total solution provider. The company engages in PV products R&D, manufacture and sales; PV projects development, EPC, O&M; smart micro-grid and multi-energy complementary systems development and sales, as well as energy cloud-platform operation. In 2018, Trina Solar launched Energy IoT brand, established the Trina Energy IoT Industrial Development Alliance together with leading enterprises and research institutes in China and around the world, and founded the New Energy IoT Industrial Innovation Center. With these actions, Trina Solar is committed to working with its partners to build the energy IoT ecosystem and develop an innovation platform to explore New Energy IoT, as it strives to be a leader in global smart energy. In June 2020, Trina Solar listed on the STAR Market of Shanghai Stock Exchange.



**60GW+**

Modules



**3GW+**

Grid-connected



**100+**

Countries



**15000+**

Employees



**6** Production bases

# Milestone

1997

1999

2003

2006

2010

2016

2012

2018

2015

2017

2020

2019

2014

2008

1997

Trina Solar is founded.

1999

Completes China's first solar PV building, the "Sun Hut", featured in promotional video for Beijing Olympics bid.

2003

Trina Solar participates in the Light Project, builds 40 PV plants in western China.

2006

Lists on NYSE.

2008

Builds Trina PV industrial park.

2010

Becomes first "solar industry shaper" at Davos World Economic Forum.

2012

State Key Laboratory of PV Science & Technology establishes in Changzhou headquarters.

2014

Gao Jifan becomes first President of Chairman of China PV Industry Association.

2015

Gao Jifan serves as Co-Chairman of GSC.

2016

Cumulative module shipment volume exceeds 30GW, ranking first in the world.

2017

Launches the Millions of PV Roofs Plan and unveils China's first residential PV brand-Trina Home.

Gao Jifan is elected Vice-President of the National Energy Internet Industry and Technology Innovation Alliance.

2018

Wins the China Industry Awards, the first PV company to receive the honor.

Launches Energy IoT brand- TrinaloT.

2019

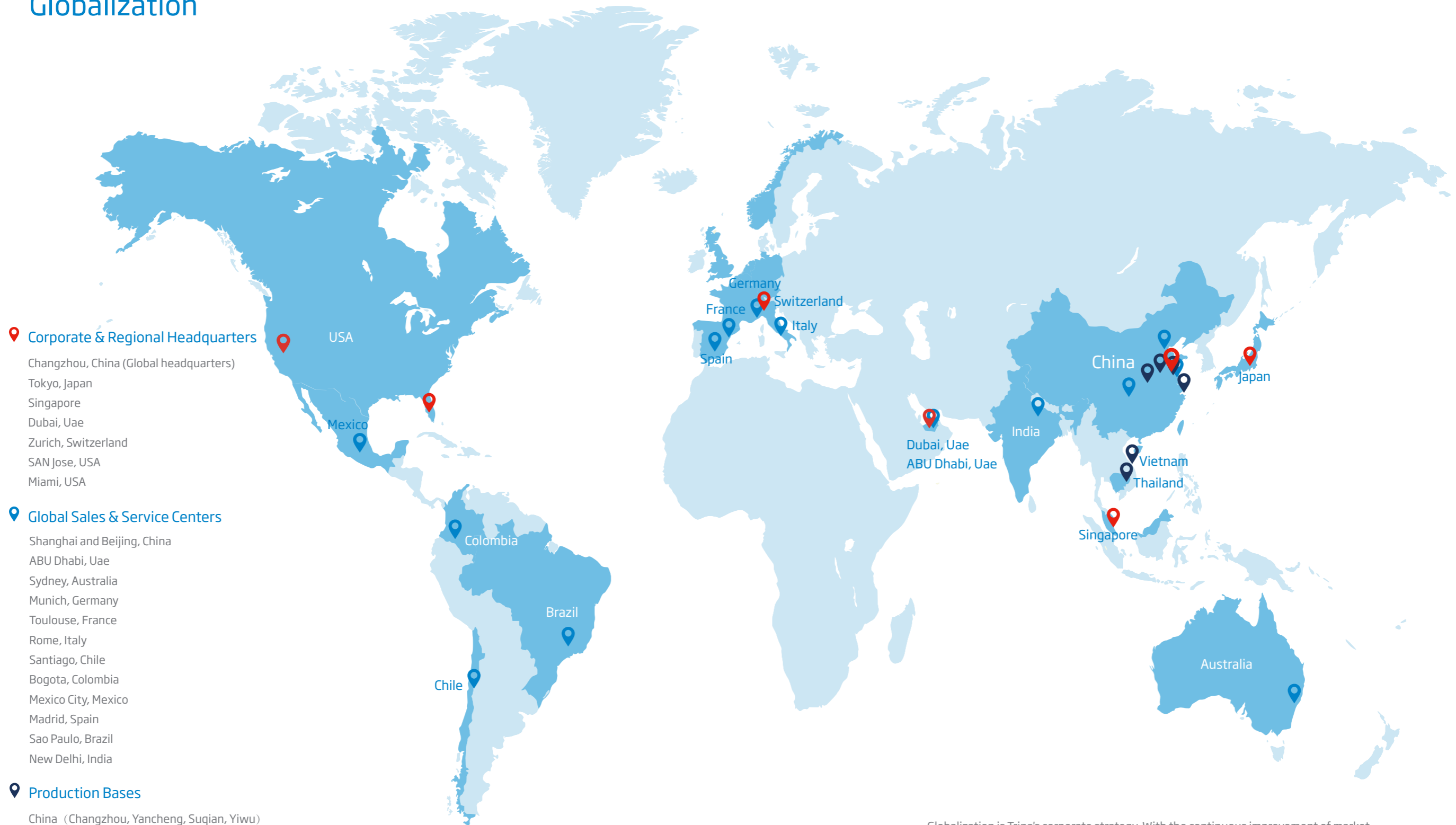
Recognized as National Center for Enterprise Technology by the five ministries and commissions.

2020

Trades on the SSE STAR market.

Launches 600W+ ultra-high power new modules, setting benchmark for PV 6.0 era.

# Globalization



- 📍 **Corporate & Regional Headquarters**
  - Changzhou, China (Global headquarters)
  - Tokyo, Japan
  - Singapore
  - Dubai, Uae
  - Zurich, Switzerland
  - SAN Jose, USA
  - Miami, USA

- 📍 **Global Sales & Service Centers**
  - Shanghai and Beijing, China
  - ABU Dhabi, Uae
  - Sydney, Australia
  - Munich, Germany
  - Toulouse, France
  - Rome, Italy
  - Santiago, Chile
  - Bogota, Colombia
  - Mexico City, Mexico
  - Madrid, Spain
  - Sao Paulo, Brazil
  - New Delhi, India

- 📍 **Production Bases**
  - China (Changzhou, Yancheng, Suqian, Yiwu)
  - Thailand
  - Vietnam

Globalization is Trina's corporate strategy. With the continuous improvement of market share, the company has accelerated its global layout and realizes the globalization of market, manufacturing, R&D and talents, and capital.

# Leading Through Innovation

## Patented Technologies

852 patents  
310 invention patents

## Industry Standards

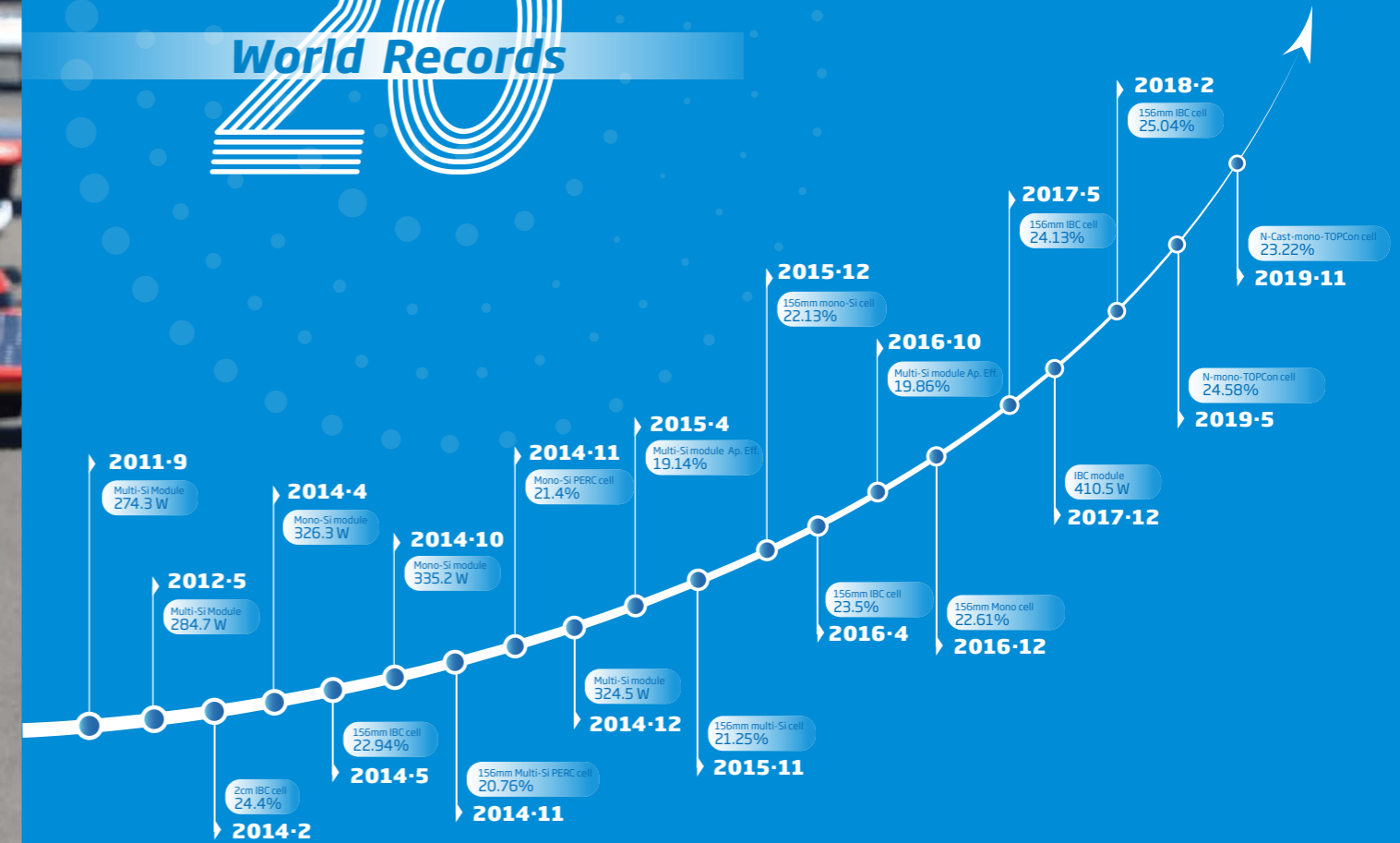
1 international IEC standard released  
6 international SEMI standards  
4 national standards  
2 industry standards  
4 cross-strait standards  
10 association standards

## Research Assets

CNAS-accredited laboratory (China National Accreditation Service for Conformity Assessment)  
World's first UL 61730 witness testing laboratory  
PV industry's first TÜV Rheinland TMP witness testing laboratory  
TÜV Rheinland CTF laboratory  
TÜV NORD CTF laboratory  
TÜV SÜD CTF laboratory  
CGC-accredited factory witness testing laboratory (China General Certification)  
First CQC-accredited WMT witness testing laboratory in the PV sector (China Quality Certification)

Note: As of June 30, 2020.

# 20 World Records



1.0

Product Innovation  
State Key Laboratory of PV Science & Technology establishes



2.0

Smart Energy Systems Innovation  
State Enterprise Technology Centre



3.0

Energy IoT Innovation  
New Energy IoT Industry Innovation Centre



## Trailblazing Manufacturing

As the industry is upgraded, automated, smart and flexible PV manufacturing, together with virtual factories, are the key upcoming trends. Trina Solar has both ERP and intelligently interconnected big data systems, and is currently actively exploring and implementing smart manufacturing process workflows, stepping up the pace as it leads the industry into the Smart Manufacturing age.

Looking to the future, Trina Solar aims to use its automated equipment and informatized systems to realize an integrated smart manufacturing system that incorporates smart production, coordinated decision-making, intelligent interconnection of things, synergized planning, quality control and smart warehousing in a single entity. Product channels and fields of operation will be defined by the use of smart techniques, which will help identify opportunities to optimize and prioritize particular areas of the business, to assess the company's current operational capacity, and to constantly add value for customers, all while ensuring Trina's own sustainable development.



# Our Business



PV Products



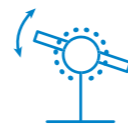
High-efficiency module



System Solutions



Utility project



TrinaPro



Distributed PV system



Smart Energy



Energy storage system



Energy cloud-platform



Distribution networks



## Module Products

### Duomax V , Tallmax V

- 21% high efficiency
- 210mm large-size silicon wafer and 1/3-cut design
- MBB and high-density encapsulation technologies
- Lower LCOE and BOS cost



### Duomax Twin

- High-efficiency PERC mono bifacial power generation
- Double glass technology
- Effectively improves system power generation
- Backside power generation increases by up to 30%



### Duomax, Duomax M

- Variable PV application scenarios:
- Ground mount
- Floating system
- Fisheries and agriculture
- Carport
- Rooftop



### Honey Black M

- Designed for high-end residential market
- Half-cut and MBB technology



### Tallmax, Tallmax M

- Designed for utility and commercial market
- Mono half-cut module
- Specific BOM is adopted in different climate zones to ensure power generation in the whole life cycle



- ▶ From 2016 to 2020, Trina Solar has been recognized as a top bankable module supplier by Bloomberg New Energy Finance (BNEF), five times in a row. Relying on its two state-level innovation platforms, the State Key Laboratory of PV Science and Technology and the New Energy IoT Research & Development Centre, and quality equipment, mature processing experience, and integrated innovation advantages, Trina Solar has integrated advanced technologies for large silicon wafers, half-cut cells, N-type cells, bifacial cells, double glass and MBB into its newly launched new generation of modules tailored to meet various market demands. In July 2020, the company presented the first modules to ever have an output of over 600W, pioneering the 6.0 era of PV energy with the Vertex module.



France's first floating solar power station in Piolenc , south-eastern area of Vaucluse



## System Solutions - TrinaPro

- TrinaPro is the intelligent photovoltaic one-stop solution for large-scale power station.
- For a variety of application scenarios defined by complicated geography, uneven terrain and wind speeds, TrinaPro provides clients with customized solutions to ensure system reliability and efficiency.
- In June 2020, Trina Solar launched TrinaPro Mega, an ultra-high power smart PV solution featuring modules with power output exceeding 500W. TrinaPro Mega upgrades the long-string trackers for 500W-plus power modules. Furthermore it integrates Vertex modules, Trina Solar's independently developed TCU, smart tracking algorithms and SCADA monitoring systems.



Hardware-software integration

Reduce BOS cost  
8-15%



Intelligent tracking

Increase power generation  
3-8%



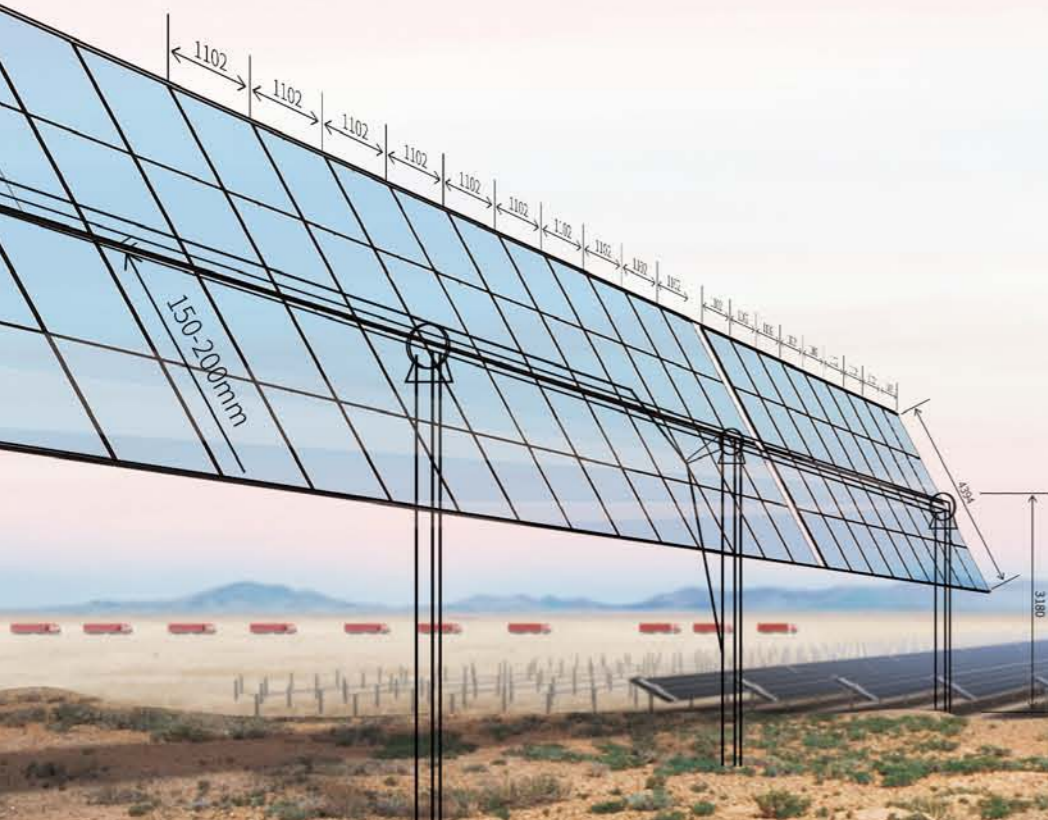
Customized design

System availability  
99.9%



One stop solution

Reduce design process  
15%



# Utility Project

Connected projects worldwide **3GW+**

Global pipeline **7GW+**

Experienced project development and management teams



Outstanding project design capability



Rigorous purchasing procedures



Years of experience in project construction



## Smart Distributed PV System

Since 2018, Trina Solar has become the first company in the industry to provide clients with not only quality PV product sets but also one-stop services including quality guarantee, training for authorized retailers, before, during and after-sales services, as well as energy management platforms.

As a trailblazer among original domestic PV brands in overseas markets, Trina Solar has obvious strengths in its brand reputation, long-term compliance ability, and solid market foundation, a combination which makes it a frontrunner in the overseas residential PV field.

Trina Solar's industrial and commercial total solutions business is now gradually gaining a leading role given its international brand, deep experience in global EPC and management expertise for PV assets. Trina Solar is striving to further expand its channels, optimize its regional and platform-wide organizational capabilities, and create an ecosystem for mainstream distributed PV asset investment.

# Energy Storage System



## Maldives hybrid micro grids project

- Customized micro grid solutions are provided for 27 islands of Maldives
- Optimized performance of the island micro grids through the digital control of SCADA



**4.6 MW**  
Solar PV



**6 MW**  
Diesel



**4.97 MWh**  
Storage

Solves the problem of living electricity consumption of about 11000 residents and reduced the impact of diesel power generation instability on residents.

The annual reduction of CO<sub>2</sub> emissions is about 8000 tons , which helps Maldives become a "carbon neutral" country in 2020.

# Cloud Platform



Share the new energy IoT  
on a smart IoT cloud platform

TrinaloT is Trina Solar's intelligent IoT cloud platform brand. Drawing on Trina Solar's wealth of experience in the new energy industry, combined with IoT sensor technology and internet big data technology, it uses Trina's independently developed PAAS platform and versatile SAAS application to create a flexible modular composite, providing energy internet solutions and industrial and commercial IoT solutions for customers in various fields.

The company has created its own integrated energy IoT solution, combining Generation, Storage, Distribution, Use and the Cloud, which is based on the energy IoT platform and incorporates applications including MOTA comprehensive energy management, distribution plant surveillance, a PV cloud and an electricity sales cloud. This unique take on a smart energy IoT system affords complete access to power generation, energy storage, distribution grid and energy use terminals, connecting energy flows, information flows and value flows, to create a brand-new "three-in-one" energy IoT system.

TrinaloT provides users with one-stop industrial and commercial IoT solutions, enabling them to implement device management, efficiency management, energy resource management and platform management. It makes use of big data and AI to constantly seek out new customer value and added-value services, which helps industrial and commercial customers to digitize their operations, assists companies in the process of transformation and upgrading, and boosts their competitiveness.

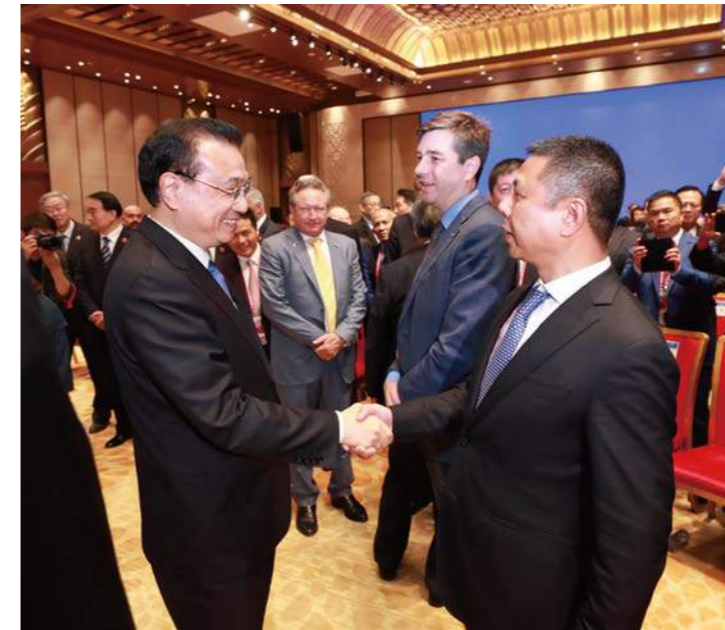
A 2x4 grid of application icons on a blue background. Each icon is accompanied by a text label describing the application area.

- Smart surveillance for distribution plants (Icon: Battery with plus sign)
- Smart retail and supermarket solutions (Icon: Shopping cart)
- Comprehensive efficiency management solutions (Icon: Lightning bolt in a hexagon)
- Smart microgrid solutions for industrial parks (Icon: Factory building)
- Visualized solutions for industrial park IoT (Icon: Atom symbol)
- Smart building solutions (Icon: Building with windows)

# Recognitions



Trina Solar Chairman and CEO Gaojifan with President Xi Jinping at the Boao Forum for Asia in April, 2013



Trina Solar Chairman and CEO Gaojifan with Premier Li Keqiang at the Boao Forum for Asia in March, 2016.



Trina Solar Chairman and CEO Gaojifan meets Wang Yang, member of the Standing Committee of the Political Bureau of the Central Committee and Chairman of the CPPCC National Committee (then Vice Premier of the State Council), during his study tour to Jiangsu in July, 2013.



Trina Solar Chairman and CEO Gaojifan talks with Chen Min'er, Member of the Political Bureau of the CPC Central Committee (then Party Secretary of Guizhou Province), at the Eco Forum Global Guiyang in June, 2017.



Vice President Wang Qishan (then Vice Premier of the State Council) visits Trina Solar in July, 2012.



Hu Chunhua, member of the Political Bureau of the CPC Central Committee and Vice Premier of the State Council, visits Trina Solar in May, 2018.



Member of the Political Bureau of the CPC Central Committee Li Qiang (then Secretary of Jiangsu Provincial Party Committee) visits Trina Solar in July, 2016.

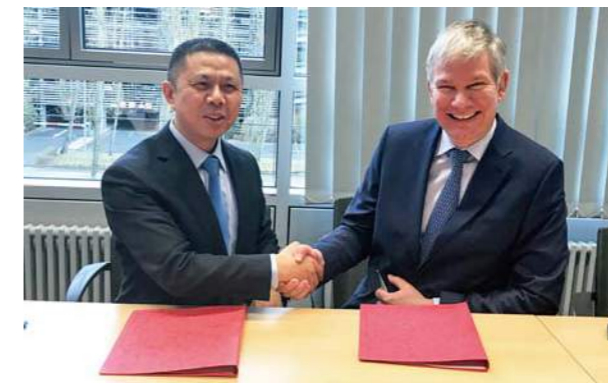


Trina Solar Chairman and CEO Gaojifan with German Chancellor Angela Merkel at the Sino-German Business Leaders' Forum in August, 2012.

# Cooperations



On 10 June 2020, Trina Solar issues first A-Shares on Shanghai Sci-Tech Innovation Board, becomes the first PV product, PV system and smart energy company listed on the Shanghai Stock Exchange Science and Technology Innovation Board, also known as the STAR MARKET.



Trina Solar starts cooperation with Siemens to co-develop the energy IoT globally.



A third-market project co-developed by Trina Solar and Mitsui is recognized by the heads of both countries.



Trina Solar announces the successful acquisition of Nclave, a Spanish PV tracking systems provider.



Trina Solar signs a strategic cooperation agreement with the British company Sunamp.



Trina Solar presents the first modules to ever have an output of over 600W, pioneering the 6.0 era of PV energy with the Vertex module





## Brand Reputation

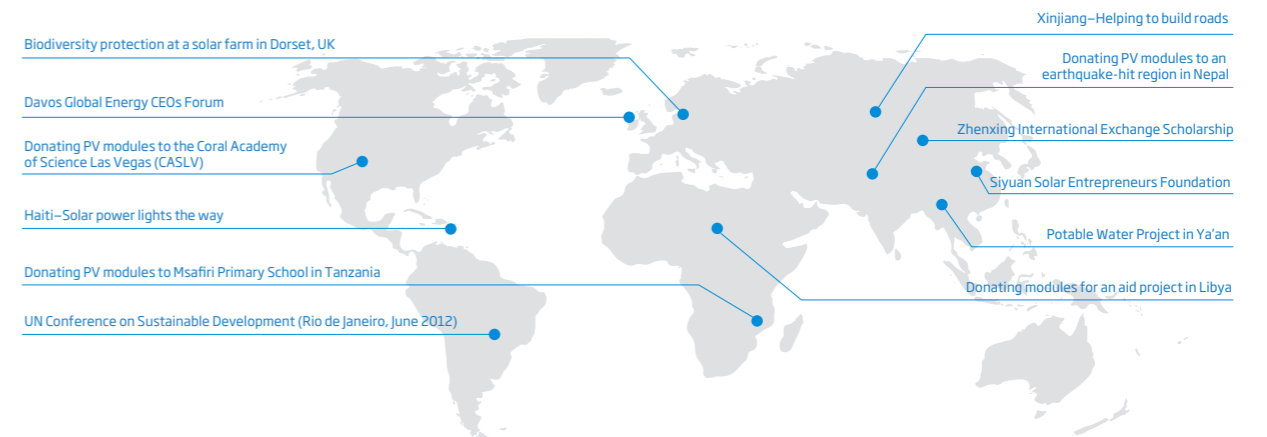
Trina Solar consistently adheres to six key strategies: innovation, branding, globalization, platform development, smart technologies, and synergy between the financial and industrial sectors. The company is driving industry growth in terms of standards of innovation, economic returns, product quality and environmental safety. Thanks to its outstanding technical innovation capabilities, the unparalleled extent of its global expansion, and its contribution to the healthy development of the industry, Trina has built a peerless brand reputation and collected numerous domestic and international awards.

- TOP 500 Chinese enterprises
- TOP 500 Fortune China
- Most bankable module brand
- Iconic brand in China
- BlueSky award for leading technology United Nations
- 100 Global challengers

## Social Responsibility

Awarded the EcoVadis Gold CSR award for 2 years running

Giving back to society is an unerring theme of Trina Solar's own development and wherever it is in the world, the company fulfill its responsibilities and duties as a corporate citizen. The company was recognized for two years running with the EcoVadis Gold CSR award.



## Core Values

**C** Focus on the **C**ustomer

**O** Persist in **O**pen Innovation

**D** Persevere through **D**edication and Hard work

**E** Strive for **E**xcellence

**S** Share the responsibility, Create and Share value together

