

How to test the MPPT function of inverter

—ITECH high speed high performance photovoltaic / solar array simulator power supply

ITECH newly-launched high speed high performance photovoltaic / solar simulator power supply is another key product in the new energy testing field, which can perform high-performance solar panel output simulation and provide testing for solar inverters, photovoltaic controllers and micro-grid equipment.

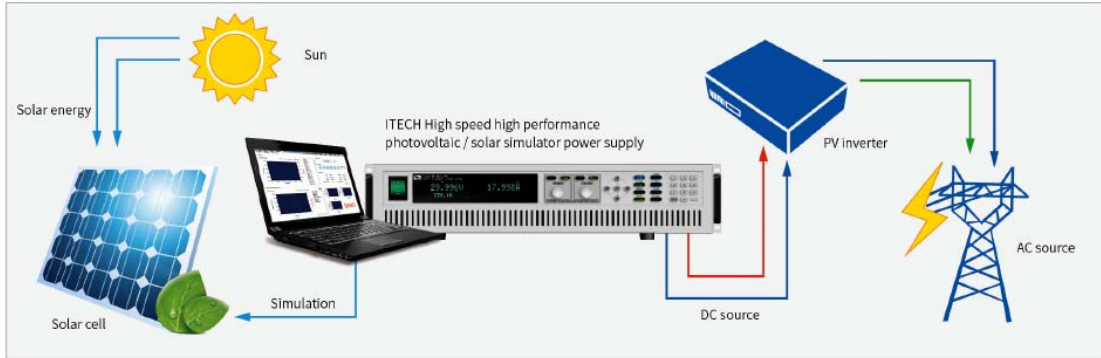
Whether the depletion of oil resources is a pseudo-proposition, the development of renewable energy and clean energy is a global consensus. China's PV industry has been hit by the EU anti-dumping, but with the substantial growth of domestic PV installed capacity, China's PV industry is becoming blooming. By the end of 2016, the global PV installed capacity has reached up to 305GW.

According to commitment at the Paris Climate Summit, by 2030, carbon dioxide emissions of unit GDP decreased by 60% -65% than 2005 and non-fossil energy account for up to 20% of the primary energy consumption. PV as an important non-fossil energy, during the path to achieve the overall goal, there are several key words, such as: distribution, leader, non-subsidies.

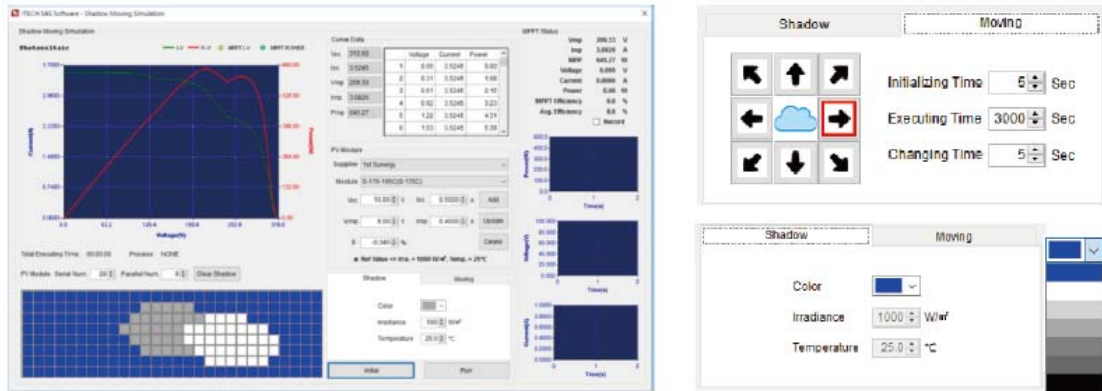
Distributed: The scale of the PV system depends on the load demand and available installation space. Household systems need several kilowatts, whereas commercial and industrial load systems often need Tens of kilowatts to several megawatts. At the same time, the distributed system is often built on the roof and so on, the PV module orientation and shadowed area are complex. Therefore, the string inverter devices are often used to maximize power generation efficiency.

Non-subsidies: The cost of photovoltaic power generation is higher than that of traditional energy sources, PV encouragement policy significantly stimulate the development of this industry. While the large amount of subsidies is also a problem that should not to be neglected. In recent years, with the PV module and inverter efficiency improvement and cost reduction, the profitability of PV systems continue to increase, PV generation grid parity online is on the agenda, which further stimulate the upgrade and update of the PV system technology. When the photovoltaic power generation system itself achieve reliable profit, from the pursuit of scale expansion into the pursuit of quality and efficiency, which can truly get the recognition of the market and ushered the second spring for photovoltaic industry.

"After the subsidy era", enterprises must rely on technological progress to reduce cost and improve efficiency, expand the fields of photovoltaic power applications. ITECH newly-launched high speed high performance photovoltaic / solar simulator power supply with the IT6500C high-speed, high-performance, high-power DC power supply is equipped with SAS1000 Solar Array Simulation software to accurately simulate the IV curve of the solar cell, with voltages up to 1000V, power from 1.8kW to 100kW, especially suitable for group string inverters and micro-grid system testing needs.

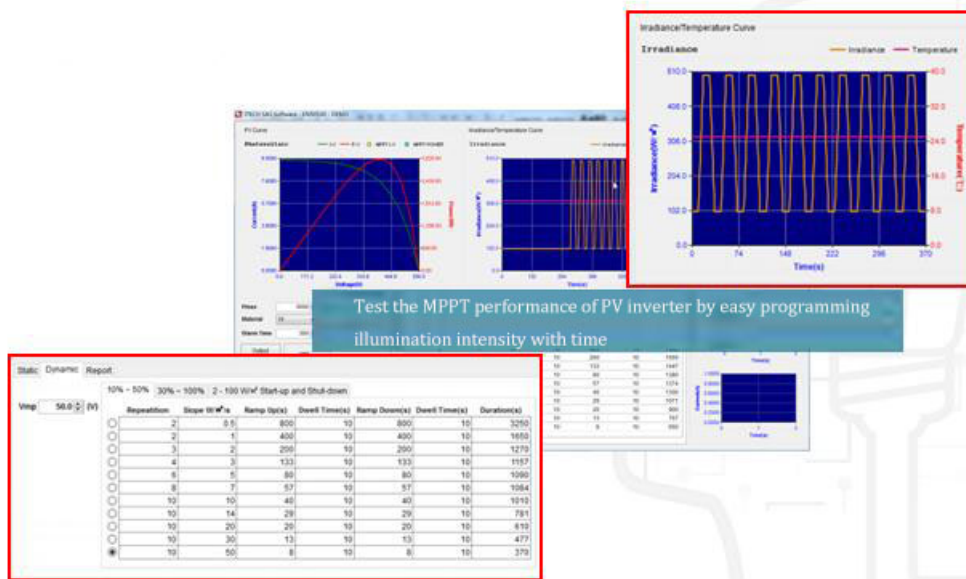


SAS1000 software can simulate the solar panel I-V output under 24-hours different temperature and irradiation and the PV array output under shadow. It can not only be used to test the MPPT efficiency for PV inverter in the real environment, but can also construct PV system together with PV inverter, which supplies supports for research and development and testing of smart electric meters, photovoltaic controllers, micro-grid control center and other equipment, SAS1000 is the key test equipment for new energy power generation systems.



In the test of the MPPT test, you can easily set the solar panel material, open circuit voltage, short circuit current, maximum power point and other solar panel parameters. A large quantity of built-in solar panel data from mainstream solar panel manufacturers provide convenience for solar panel characteristics simulation. Users can also directly import I-V curves up to 4096 points, complete other complex tests and expand the system functions.

Built-in EN50530 / Sandia / NB/T32004 / CGC/GF004 / CGC/ GF035's SAS model, users can simulate I-V curve output for testing static & dynamic MPPT performance of PV inverter, generate reports and supply data for European efficiency, California efficiency, Chinese efficiency and other tests. Inverter manufacturers can easily complete the standardized test by using this function.



IT6500C has wide voltage and current range, supporting edge time independent setting in various modes. With CC / CV priority selection mode, fast and no overshoot curve can be realized, which also supports OVP, OCP, OPP, reverse protection, etc. Besides solar panel emulation and MPPT, IT6500C can also test the inverter MPP voltage range, starting voltage, maximum input voltage, maximum input current, DC overvoltage overload protection. The end users can also get the total efficiency and conversion efficiency of the inverter with the help of IT9100 power meter.