ITECH

YOUR POWER TESTING SOLUTION

IT6600D

High Power Programmable DC Power Supply

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Data center | Power supply | UPS(high voltage) | ESS | ATE | Electroplating, sputtering, surface treatment

IT6600D series DC power supply is a new generation DC power supply. Its touch screen and intuitive GUI not only simplify parameter setting and waveform editing, but also improve convenience. It adopts advanced third-generation SiC technology. A 3U height single unit can output 21kW each in dual channels. If the two independent channels are connected in series/parallel, it can reach maximum power 42kW. Since 1 unit IT6600 can cover the output range of 3-5 normal power supplies, it can be applied to various applications requiring high voltage or high current. IT6600D's CC/CV priority allows the output mode to be selected based on the specific needs of the DUT, which is especially important during precision measurements. High-precision, high-speed features and a variety of standard communication interfaces enable IT6600D to be widely used in laboratories, production lines and automatic test systems.

Product model	Max. Output Voltage	Max. Output Current	Max. Output Power	Specification			Height
IT6642D-1200-200	1200	200	42	600V/100A/21kW*2ch	600V/200A/42kW*1ch	1200V/100A/42kW*1ch	3U
IT6684D-1200-400	1200	400	84	600V/200A/42kW*2ch	600V/400A/84kW*1ch	1200V/200A/84kW*1ch	15U
IT66126D-1200-600	1200	600	126	600V/300A/63kW*2ch	600V/600A/126kW*1ch	1200V/300A/126kW*1ch	15U
IT66168D-1200-800	1200	800	168	600V/400A/84kW*2ch	600V/800A/168kW*1ch	1200V/400A/168kW*1ch	27U
IT66210D-1200-1000	1200	1000	210	600V/500A/105kW*2ch	600V/1000A/210kW*1ch	1200V/500A/210kW*1ch	27U
IT66252D-1200-1200	1200	1200	252	600V/600A/126kW*2ch	600V/1200A/252kW*1ch	1200V/600A/252kW*1ch	27U
IT66294D-1200-1400	1200	1400	294	600V/700A/147kW*2ch	600V/1400A/294kW*1ch	1200V/700A/294kW*1ch	27U
IT66336D-1200-1600	1200	1600	336	600V/800A/168kW*2ch	600V/1600A/336kW*1ch	1200V/800A/336kW*1ch	37U
IT66378D-1200-1800	1200	1800	378	600V/900A/189kW*2ch	600V/1800A/378kW*1ch	1200V/900A/378kW*1ch	37U
IT66420D-1200-2000	1200	2000	420	600V/1000A/210kW*2ch	600V/2000A/420kW*1ch	1200V/1000A/420kW*1ch	37U

Product model New!	Max. Output Voltage	Max. Output Current	Max. Output Power	Specification			Height
IT6642D-1600-140	1600	140	42	800V/70A/21kW*2ch	800V/140A/42kW*1ch	1600V/70A/42kW*1ch	3U
IT6684D-1600-280	1600	280	84	800V/140A/42kW*2ch	800V/280A/84kW*1ch	1600V/140A/84kW*1ch	15U
IT66126D-1600-420	1600	420	126	800V/210A/63kW*2ch	800V/420A/126kW*1ch	1600V/210A/126kW*1ch	15U
IT66168D-1600-560	1600	560	168	800V/280A/84kW*2ch	800V/560A/168kW*1ch	1600V/280A/168kW*1ch	27U
IT66210D-1600-700	1600	700	210	800V/350A/105kW*2ch	800V/700A/210kW*1ch	1600V/350A/210kW*1ch	27U
IT66252D-1600-840	1600	840	252	800V/420A/126kW*2ch	800V/840A/252kW*1ch	1600V/420A/252kW*1ch	27U
IT66294D-1600-980	1600	980	294	800V/490A/147kW*2ch	800V/980A/294kW*1ch	1600V/490A/294kW*1ch	27U
IT66336D-1600-1120	1600	1120	336	800V/560A/168kW*2ch	800V/1120A/336kW*1ch	1600V/560A/336kW*1ch	37U
IT66378D-1600-1260	1600	1260	378	800V/630A/189kW*2ch	800V/1260A/378kW*1ch	1600V/630A/378kW*1ch	37U
IT66420D-1600-1400	1600	1400	420	800V/700A/210kW*2ch	800V/1400A/420kW*1ch	1600V/700A/420kW*1ch	37U

Product model	Max. Output Voltage	Max. Output Current	Max. Output Power	Specification			Height
IT6642D-2250-100	2250	100	42	1200V/50A/21kW*2ch	1200V/100A/42kW*1ch	2250V/50A/42kW*1ch	3U
IT6684D-2250-200	2250	200	84	1200V/100A/42kW*2ch	1200V/200A/84kW*1ch	2250V/100A/84kW*1ch	15U
IT66126D-2250-300	2250	300	126	1200V/150A/63kW*2ch	1200V/300A/126kW*1ch	2250V/150A/126kW*1ch	15U
IT66168D-2250-400	2250	400	168	1200V/200A/84kW*2ch	1200V/400A/168kW*1ch	2250V/200A/168kW*1ch	27U
IT66210D-2250-500	2250	500	210	1200V/250A/105kW*2ch	1200V/500A/210kW*1ch	2250V/250A/210kW*1ch	27U
IT66252D-2250-600	2250	600	252	1200V/300A/126kW*2ch	1200V/600A/252kW*1ch	2250V/300A/252kW*1ch	27U
IT66294D-2250-700	2250	700	294	1200V/350A/147kW*2ch	1200V/700A/294kW*1ch	2250V/350A/294kW*1ch	27U
IT66336D-2250-800	2250	800	336	1200V/400A/168kW*2ch	1200V/800A/336kW*1ch	2250V/400A/336kW*1ch	37U
IT66378D-2250-900	2250	900	378	1200V/450A/189kW*2ch	1200V/900A/378kW*1ch	2250V/450A/378kW*1ch	37U
IT66420D-2250-1000	2250	1000	420	1200V/500A/210kW*2ch	1200V/1000A/420kW*1ch	2250V/500A/420kW*1ch	37U

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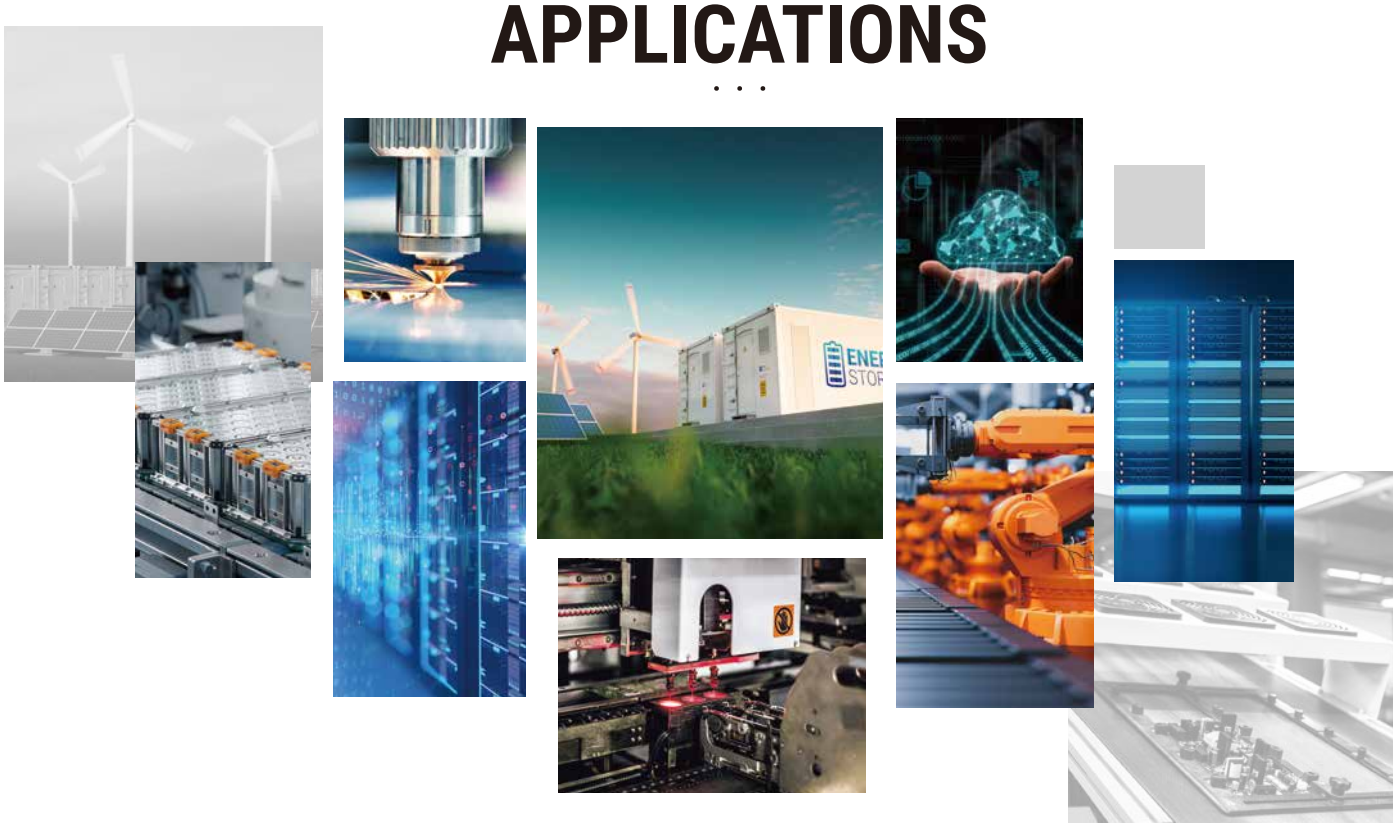
Features

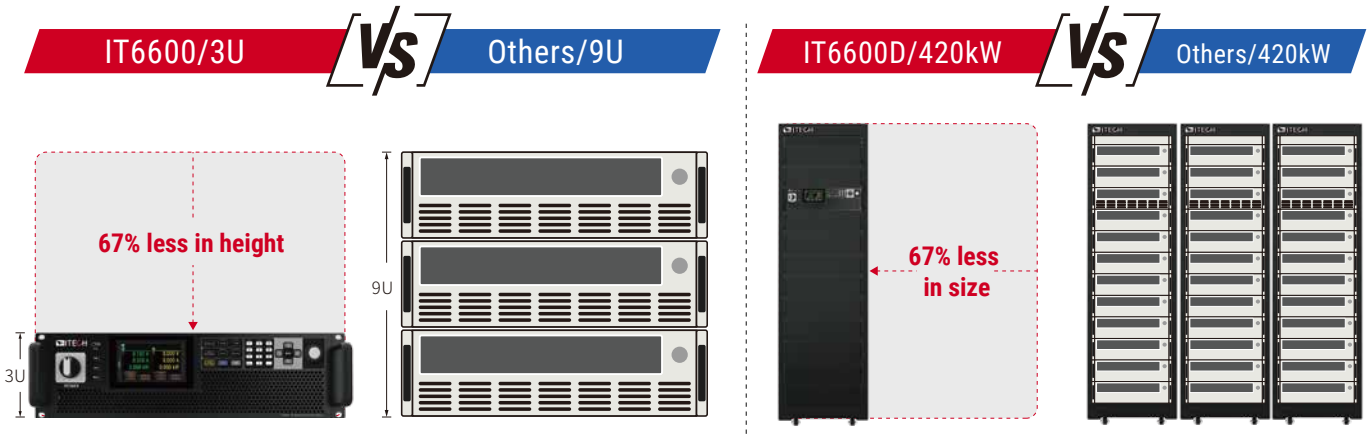
- High power density, up to 42kW in 3U
- Independent dual-channel design in 3U unit, and channels can be connected in series or parallel
- Master-slave current sharing, output max. 10MW in parallel
- 5-inch touch screen with intuitive GUI
- Data recorder function
- Oscilloscope function, instant data analysis and saving
- CC/CV priority
- List function, dynamic working condition simulation with tens of millions of points
- Redundancy function, helps to check the status of each single unit or cabinet and ensure the overall output
- Built-in communication interface
  - USB(USB-TMC/USB-VCP)
  - LAN(Rawsocket/Modbus-TCP/Profinet/VNC/VXI-11/Web/Telnet)
  - CAN 2.0B(CANopen/CAN2.0)
  - digital IO
- Optional communication interface: GPIB/EtherCAT/Analog&RS232
- Free PC software

APPLICATIONS



Industry-leading high power density

IT6600D provides up to 42kW power supply and loading power in a 3U chassis, making it possible of a bench top solution for a high-performance and high-power test. It is also very suitable for integrated systems with strict space requirements.



Independent dual-channel

A 3U height single unit of IT6600D can output 21kW each in dual channels. Each channel has a completely independent isolation design and can be controlled and measured separately. The two channels can also be connected in series or parallel to increase the output range and cope with various test requirements.

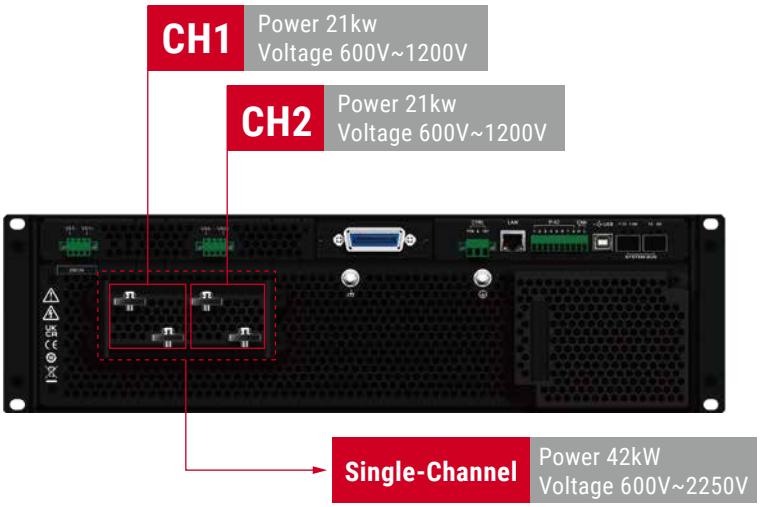
Channel configuration

Dual-channel

- Voltage range：600V~1200V
- Channels can be connected in parallel or series
- 3U/15U/27U/37U.. all can be set as dual channels

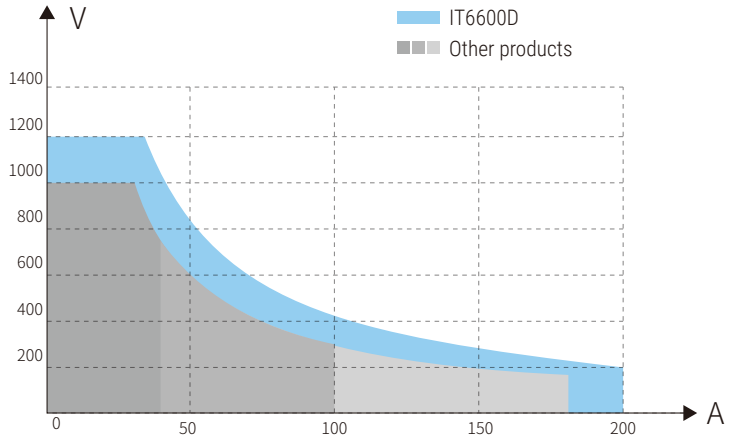
Single-Channel

- Voltage range：600V~22500V
- 3U can output up to 42kW
- 3U/15U/27U/37U.. all can be set as single channel



Wide range output for various applications

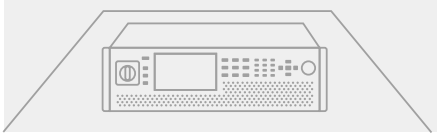
Compared with other DC power supplies, IT6600D's wide-range output is more flexible and provides more voltage and current combinations. IT6600D supports multiple output combinations such as dual channels, channel series connection, and channel parallel connection. You can flexibly configure it according to your testing needs. It is like integrating multiple ordinary DC power supplies, making it an ideal choice to meet diverse experimental needs.



As shown above, one unit IT6642D-1200-200 can cover the output range of several competing products. This means that whether the DUT is low voltage and high current or high voltage and low current, IT6600D can flexibly meet various testing needs. One unit can replace multiple traditional DC power supplies. It is not only suitable for ATE systems and production lines, but also for laboratory use. While meeting the test requirements, it saves cost and space, simplifies wiring, and is more convenient and efficient.

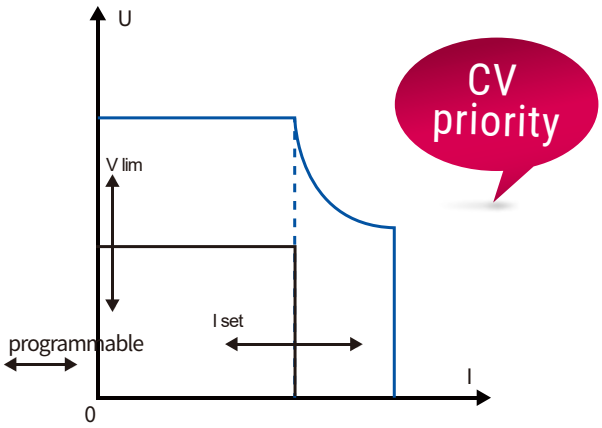
Application-Production line in factory

Factories often need to produce products of different specifications, and testing equipment must match it accordingly. This requires frequent wiring connection, which not only reduces work efficiency but also increases the risk of operational errors. The wide output range of IT6600D is equivalent to 3 to 5 traditional instruments. One IT6600D can meet all production and testing needs, improve efficiency and increase production capacity.

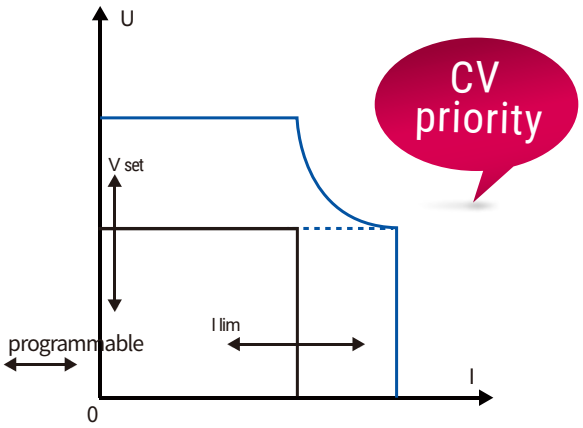


CC &CV Priority

The CC/CV priority of IT6600D enhances flexibility in applications requiring fast response or no overshoot output. It allows selection of the response speed and working mode of CC or CV mode according to specific test requirements, which is particularly important in applications that require fast response or avoid output overshoot. It is particularly suitable for applications that have strict requirements on power supply stability and responsiveness, such as testing of high-power integrated circuits, battery charging and discharging, automotive electronic power supply transient simulation and its characterization, etc. IT6600D can ensure that the power output adapts to load changes quickly and accurately, providing a more reliable solution for long-term rigorous testing.



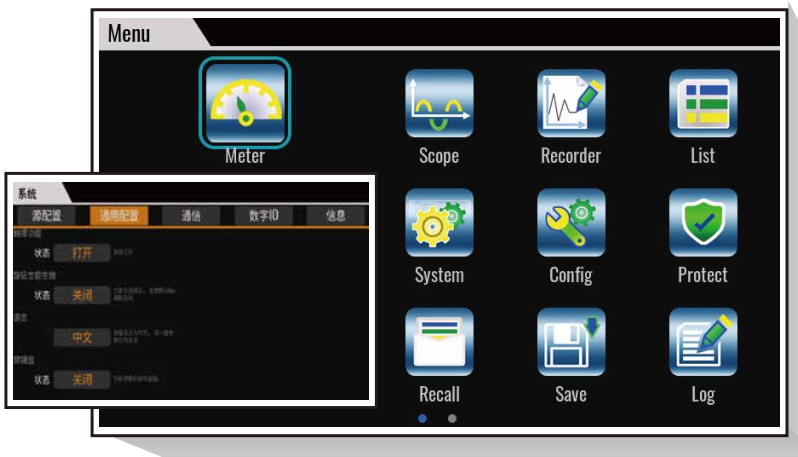
Starting surge current exceeds current range, high speed voltage
(CV-High,CC-Low,CVpriority)



High-speed and seamless battery charging and discharging without overshoot
(CV-High,CC-High,CCpriority)

Graphic touch screen design

IT6600D provides a variety of operation modes and functions. The 5-inch touch screen, keyboard and knobs can be used for convenient and quick operations. The simple and intuitive UI can directly display the settings and measurements of various parameters, and supports waveform preview. The user-friendly menu can meet a variety of your testing needs.



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Oscilloscope function

IT6600D can display waveforms. You can instantly analyze and save data without an oscilloscope. The screen displays up to 4 real-time voltage and current curves. You can choose to hide other curves and only show the ones you want. Moreover, the colorful GUI gives you an oscilloscope-like experience.

Data recorder

The data recorder function of IT6600D helps to observe trends over a period of time. You can select 1~6 curves to view the average, minimum and maximum values of voltage, current and power in different channels. You can also observe the data and waveforms at a certain moment in time through vertical, horizontal and zoom.

Power output up to max. 10MW

In case higher power requirement, multiple units of IT6600D with the same specification can be connected in parallel to reach a maximum output of 10MW, which is fast and scalable.

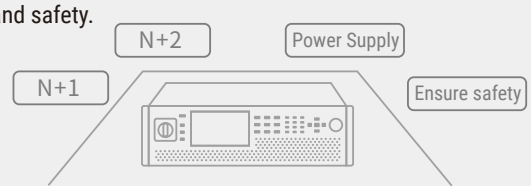
- Master-slave parallel connection, active current sharing
- Easy to operate, no need to disassemble the cabinet
- Full isolation by optical fiber to effectively protect the DUT and itself
- No calibration required after parallel connection

Redundant functions

The redundancy function of IT6600D allows observing the status of each cabinet and single unit in parallel mode. When a unit fails, the IT6600D power supply system will automatically identify it, allow the redundant unit to quit the test, and deploy it within the total capacity range to ensure the external output of the entire system.
This means that even if one of the units fails, the IT6600D power system will continue to provide full power to the bus as long as the remaining power can meet the test needs. We call it 100% power availability and it's especially suitable for applications with high reliability requirements of power supply .

Application

Applications that require long-term power supply or continuous testing have high requirements on the stability of the power supply system. It often requires it can operate without failure for a long time. Once the power supply is interrupted, the test results will be invalid and may even cause safety hazards. When building a power supply system with IT6600D, you can use N+1, N+2 or other combinations. Even some modules in the power system fail, IT6600D can continue to provide full power for the test, ensuring test stability and safety.



Full protection

For expensive DUTs, IT6600D is equipped with a variety of protection functions to ensure test safety, including OVP, OCP, OPP, UVP, UCP, etc., and with new protection functions such as maximum voltage limit, maximum current limit, and maximum power limit to ensure long-term testing for R&D and production lines. For rack mounted power systems, an emergency stop is available to deal with unexpected test conditions.

Accessories

IT6600D is built in standard interfaces USB/CAN/LAN/digital IO, optional interfaces GPIB/EtherCAT/analog & RS232. IT6600D can also be equipped with a variety of software to complete more professional tests.

Category	Model	Specification	Description
Accessories for parallel connection	IT-E4029-15U *1	15U unit，black	800mm×550mm X907.6mm
	IT-E4029-27U *1	27U unit，black	800mm×600mm×1362.75mm
	IT-E4029-37U *1	37U unit，black	800mm×600mm×1764.35mm
	IT-E168	Optical fiber kit for parallel connection	for parallel communication between single units
	IT-E169	Optical fiber kit for parallel connection	for parallel communication between cabinets
Other accessories	IT-E260E	5m power cord for 3U unit, EU standard	AC input
	IT-E258E-15U	5m power cord for 15U unit, EU standard	AC input
	IT-E258E-27U*2	5m power cord for 27U unit, EU standard	AC input
	IT-E258E-37U*2	5m power cord for 37U unit, EU standard	AC input
	IT-E1601-black	support EtherCAT	
	IT-E176	GPIB	
	IT-E177	RS232&analog	
	IT-E179	Relay board	
	IT-E183	Series and parallel boxes	Cabinet configuration, direct switching between series and parallel

*1 The 84kW model is equipped with a cabinet as standard.

Communication interfaces

- USB (USB-TMC/USB-VCP)
- LAN (Rawsocket/Modbus-TCP /Profinet/VNC/VXI-11/Web/Telnet)
- CAN 2.0B (CANopen/CAN2.0)
- Digital IO
- GPIB
- EtherCAT
- Analog&RS232

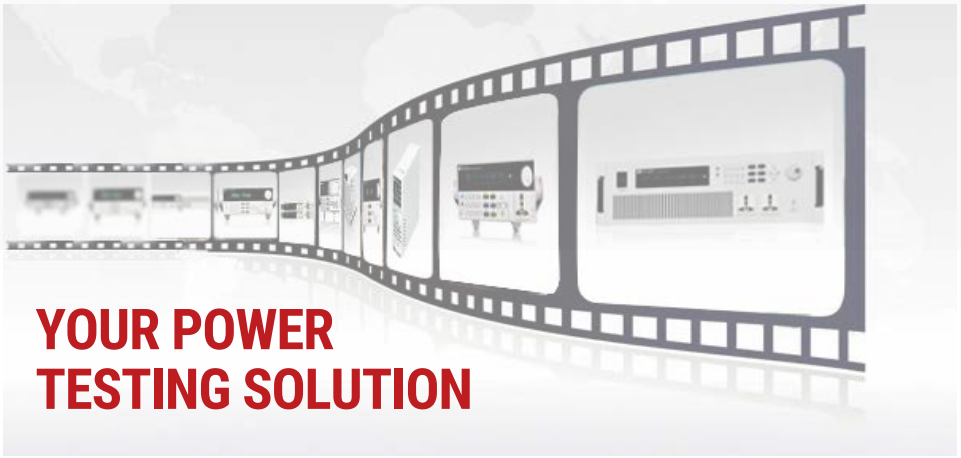
Intuitive PC software, embedded web server, supports VNC screen transfer

IT6600D provides a variety of remote control methods through PC or mobile port.

Free PC software PV6600

Web server

Virtual Network Computing (VNC)



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Taipei

Add: No.918, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan
Web: www.itechate.com
TEL: +886-3-6684333
E-mail: info@itechate.com

Factory I

Add: No.108, XiShanqiao Nanlu, Nanjing city, 210039, China
TEL: +86-25-52415098
Web: www.itechate.com

Factory II

Add: No.150, Yaonanlu, Meishan Cun, Nanjing city, 210039, China
TEL: +86-25-52415099
Web: www.itechate.com

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