

# IT6500 Wide-range High-power DC Power Supply



IT6500 series power supply is single output high-powered and programmable DC power supply which supports CC mode and CV mode. The 800W model has 1U ultrathin body with 1mV/1mA resolution. IT6500 provide you with multiple proposals to meet your test demands.

## Applications

Automotive Electronics、Aerospace and Aviation、DC Motor Test、Battery R&D Test、High Power Application、Lithium Battery Module Test、Electronic Components Production

## Feature

- VFD display
- Achieve max. voltage/current within rated power
- High resolution of 1mV, 1mA
- Low noise and ripple
- Compact, high density, rack mount size
- Built-in USB/ RS232/ RS485/ GPIB communication interface
- Master-Slave mode for parallel and series operation
- With standard SCPI communication protocol
- Remote sensing function
- Intelligent cooling fan to save energy and reduce noise

Model	Voltage	Current	Power
IT6502D	80V	60A	800W

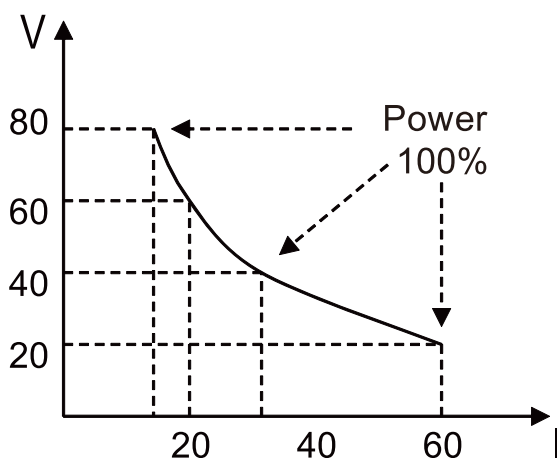
## Adjustable Rising and Falling Time Setting

The rising and falling time of IT6500 series power supplies is adjustable. Users can set the transient time of which from one voltage to another voltage. The fastest adjustable time for IT6500 series power supplies can up to 1ms, which can meet most testing requirements.

Models	List Function	Automotive electronics waveform simulation	Master-Slave	External Analog Interfaces	Communication Interfaces
IT6502D	X	X	✓	✓	RS232/RS485/USB/GPIB
IT6512	✓	✓	✓	✓	RS232/RS485/USB/GPIB
IT6512A	X	X	✓	✓	RS232/RS485/USB/GPIB
IT6513	X	X	✓	✓	RS232/RS485/USB/GPIB
IT6513A	✓	✓	✓	✓	RS232/RS485/USB/GPIB

## Auto Range Function

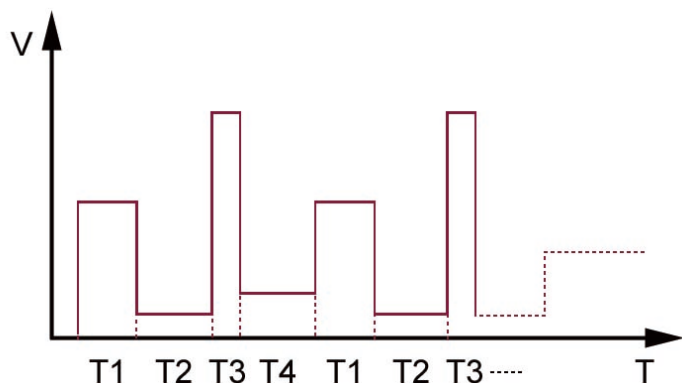
IT6500 series power supply has applied Auto-range technology. It allows any combination of the rated voltage and current up to the maximum output power of 1200W. For example, the max current output at 20V is 60A.



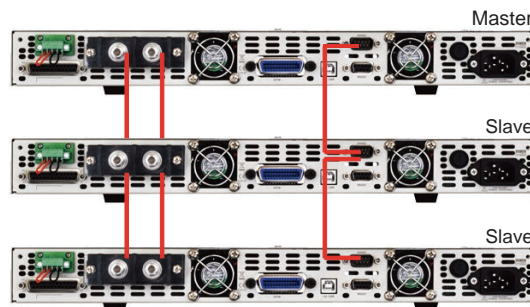
IT6512 I-V curve graph

## List Mode

Part of IT6500 series models support list function. In list mode, users can program and modify any testing procedure with multiple steps and different duration according to their different testing requirements. After the operation list programming, the power supply will start to work and operate in order once it receives trigger signal until it finished the entire list or receiving trigger signal again.



## Master-Slave Operation



Above is the graph for Master-Slave operation

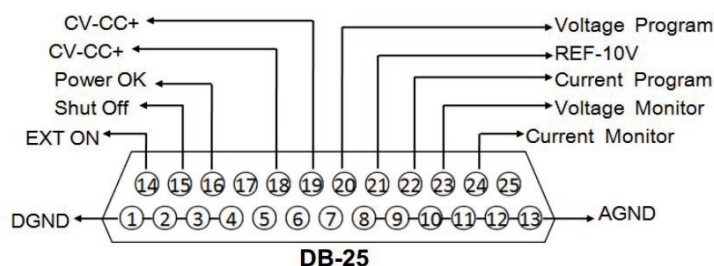
IT6500 series power supplies support Master-Slave parallel connection to enlarge the current and power range. Here is a schematic illustration of Master-Slave connection mode. Output terminals connect in parallel, the RS485 interfaces of master and slave connect through directly line. When connecting several units in parallel, user could specify one unit as a Master and the others as slaves. Also they can connect with a computer through any built-in interface, such as GPIB, USB, RS232 or RS485. All setting operations can be directly finished through Master. And master can distribute the current and voltage automatically. Master and Slave connection simplifies the connection and easier to use.

## User-friendly Operation Panel Design

IT6500 series power supplies provide multiple programming and controlling methods, users can adjust the specifications by the knob or numeric keys easily. The setting parameters will be displayed on the VFD screen simultaneously.

## Analog Interfaces

On the rear panel of some IT6500 series models, there is a DB25 analog interface. Users can control 0~100% of full scale output voltage and current on the front panel through 0~10V or 0~5V analog, 0~10K  $\Omega$  or 0~5K $\Omega$  is also OK. Analog interface meets the control requirement in industry production. If it is no need to control through PC, then you can control the analog output voltage by PLC.



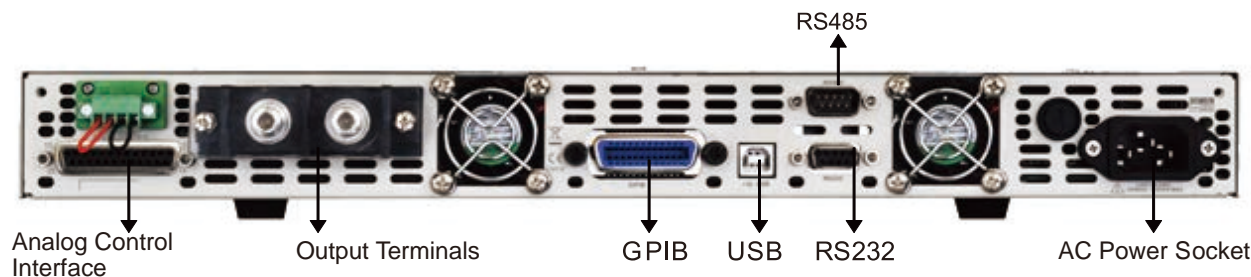
## Remote Sense Function

IT6500 series power supplies have remote sense function. The function can compensate the loss of large voltage-drop on connection lines due to long connection wires.

## Protection Functions

IT6500 series power supplies provide OVP, OCP, OPP, OTP protection functions. Once the circuit value (current, voltage, power or temperature) above the setting value (current, voltage, power or temperature), the protection function will start. For instance, in OCP mode, the power supply will stop to output and display "OCP". OVP is the same theory. Over temperature protection (OTP) starts to work when the internal temperature of the instrument is over 75  $^{\circ}\text{C}$ . Once the OTP starts, the power supply will stop to output and display "OTP".

## IT6502D Rear Panel



## IT6500 Specifications

		Basic Products		High Performance Products	
Parameters		IT6502D	IT6512A	IT6513	IT6513A
Output Rating	voltage	0-80V	0-80V	0-150V	0-150V
	current	0-60A	0-60A	0-30A	0-30A
	power	0-800W	0-1200W	0-1200W	0-1200W
Load Regulation	voltage	$\leq 0.01\% + 8\text{mV}$		$\leq 0.05\% + 30\text{mV}$	
	current	$\leq 0.1\% + 10\text{mA}$		$\leq 0.1\% + 30\text{mA}$	
Line Regulation	voltage	$\leq 0.02\% + 2\text{mV}$		$\leq 0.02\% + 20\text{mV}$	
	current	$\leq 0.02\% + 2\text{mA}$		$\leq 0.02\% + 10\text{mA}$	
Setup Resolution	voltage	1mV		3mV	
	current	1mA		1mA	
Readback Resolution	voltage	1mV		3mV	
	current	1mA		1mA	
Setup Accuracy	voltage	$\leq 0.02\% + 30\text{mV}$		$\leq 0.05\% + 30\text{mV}$	
	current	$\leq 0.1\% + 0.1\% \text{FS}$		$\leq 0.2\% + 0.1\% \text{FS}$	
Readback Accuracy	voltage	$\leq 0.02\% + 30\text{mV}$		$\leq 0.05\% + 30\text{mV}$	
	current	$\leq 0.1\% + 0.1\% \text{FS}$		$\leq 0.2\% + 0.1\% \text{FS}$	
Ripple	Vpp	$\leq 30\text{mVp-p}$		$\leq 60\text{mVp-p}$	
	Irms	$\leq 20\text{mA}_{\text{rms}}$		$\leq 40\text{mA}_{\text{rms}}$	
Temp.coefficient	voltage	$\leq 0.02\% + 30\text{mV}$		$< 0.02\% + 30\text{mV}$	
	current	$\leq 0.05\% + 10\text{mA}$		$\leq 0.05\% + 10\text{mA}$	
Dimension	W*H*D	415mmW*44mmH*500mmD		415mmW*44mmH*500mmD	
Weight	Kg	8.5Kg		8.5Kg	

For higher power test, please contact ITECH.