

Guide to test PSUs with multiple CPUs/GPUs

If you have a machine with multiple CPUs or GPUs, then they cannot all be tested at the same time with single Power Supply Tester. The solution is to test one video card at a time or use multiple testers at the same time. This document explains how to test using multiple testers.

One master PSU tester will be used with all cables connected and a secondary (and optionally a 3rd) device connected to just the additional PCIe or CPU rails from the PSU.

This applied only to inline testing and not standalone testing.

How many testers are required?

Two PSU Testers, if you have a motherboard with two CPU connectors.

Two PSU Testers, if you have a motherboard with one or two CPU connectors and up to two graphic cards.

Three PSU Testers, if you have a motherboard with one or two CPU and three graphic cards.

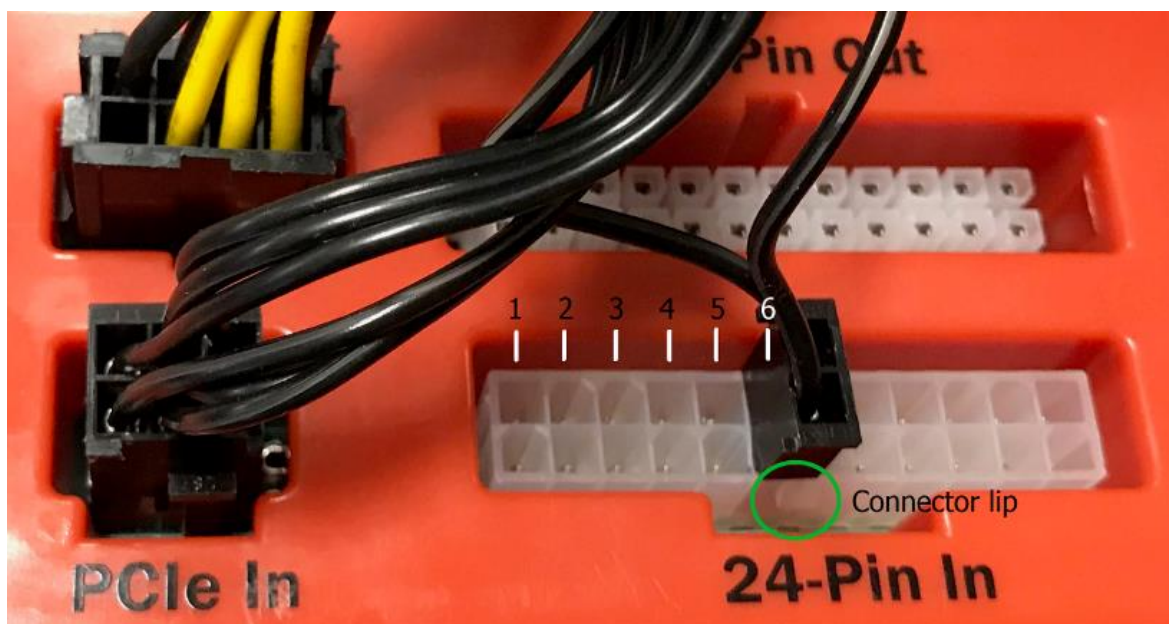
This is not to be confused with the situation where you have a single high power GPU with two 6 pin connectors. (you need a Y cable for this situation).



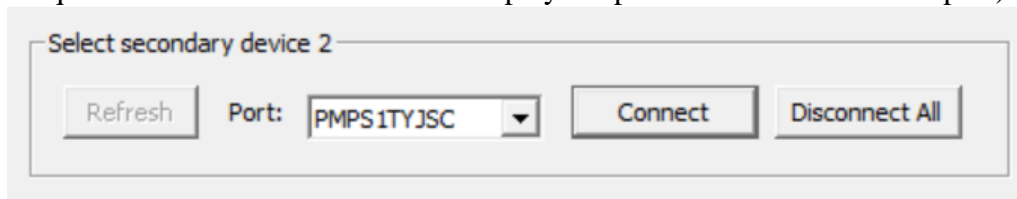
How to test machines with multiple CPUs/GPUs

1. Make sure the firmware on all testers are up-to-date (firmware version should be 1.2 or higher).
<https://www.passmark.com/products/inline-psu-tester/download.php>
2. Download the latest PSUTest software from here (software version should be 1.0.1003 or higher),
<https://www.passmark.com/products/inline-psu-tester/download.php>
3. Connect the 24-pin, 8-pin CPU, 6-pin PCIe, and SATA cables of the PSU to the corresponding 'In' terminals of the first PSU Tester (Master device).
4. Use the PSU Tester cables to connect "Out" terminals to the motherboard and PC peripherals (e.g. hard drive and graphic card).

5. If the motherboard has two CPU power connectors, connect a spare 8-pin CPU cable of the PSU to corresponding 'In' terminals of the second PSU Tester (Secondary device #1).
6. If the PC has a second GPU, connect a spare 6-pin PCIe cable of the PSU to corresponding 'In' terminals of the second PSU Tester (Secondary device #1).
7. The motherboard connector provides a reference ground for voltage readings. When the motherboard connector is connected to the master tester, the +2 part of a spare 6+2pin PCIe cable should be used as ground (see below picture). Note that the +2 pin should be connected even if there is no additional GPUs.
As you can see in the below picture, the 6 and 2 are split apart and the 2-pin side is connected to the column number 6 (close to the connector lip at the center) from the left.



8. If the PC has a third GPUs, connect a spare 6-pin PCIe cable of the PSU to corresponding 'In' terminals of the third PSU Tester (Secondary device #2). Again, the +2 part of the 6+2pin PCIe cable should be used as ground.
9. Connect all the PSU testers to a PC using the USB cables.
10. Run the monitoring software (PSUTest).
11. Select the master device from the device list and click "Connect" (each tester has a unique serial number which will be displayed upon connection to a USB port).



12. Select the secondary device #1 and click "Connect".

