

Comments from FUJITSU Technology Solutions

ENERGY STAR specification for Computer Servers Version 3.0 Draft 2

Fujitsu Technology Solutions appreciates the opportunity to comment the ENERGY STAR® Specification for Computer Servers Version 3.0 Draft 2.

1. Definition I/O Device (1.C.2 Line 131 ff)

SAS/RAID controller exists with internal & external ports. The same hardware is used with the only difference of the location of the SAS connectors meaning whether it can be connected to an internal HDD backplane or to an external storage device like a JBOD. The internal backplane often contains a SAS repeater chip which fulfills the function of an active switch.

Therefore please clarify whether an internal SAS/RAID controller can be seen as an I/O device and accounts for I/O device allowances.

2. Power Supply Requirements (3.2. Line 298 ff)

According to 3.2.1 test data and test reports from 80 Plus (EPA recognized testing entity) are accepted.

When platinum certified power supply is used for Energy Star products, is the 80Plus standard test report (test voltage 115V for non-redundant and 230V for redundant PSU) sufficient for a worldwide valid server certificate (100V, 115V, 230V)?

In general, at what voltage has the power supply to be tested for a global valid server certificate? Are the defined efficiency requirements (Table 1) independent from the test voltage? Efficiency requirements are easier to maintain at 230V than for 115V.

In Table 1 an efficiency of 83% at 10% load is required for a single-output PSU. This does not match with the current 80Plus platinum requirement. Where does this requirement come from?

In Table 2 the power factor requirements do not match with the current 80Plus platinum requirements, with exception of 50% load power factor of single-output PSU. Where do these requirements come from?

The reference in line 303 to *Generalized Internal Power Supply Efficiency Test Protocol* refers to Rev 6.7. The same reference in line 316 refers to Rev. 6.6. This should be aligned to the same Rev.

3. Power Management Reporting (3.3.3 Line 351 ff)

The published Power and Performance Sheet on the Energy Star Website is outdated.

https://www.energystar.gov/products/office_equipment/enterprise_servers/partners

It relates to minimum, typical and maximum configuration for qualifying a product family, which was defined in the Server Spec V1.x. This supporting document needs to be updated.

4. Additional Idle Power Allowances for Extra Components (Table 5 Line 492)

The footnote numbering in Table 5 does not match with the referring explanation in lines 450 ff.

5. Adder for additional I/O Devices greater than 10 Gbit per active port (Table 5 Line 492)

Fujitsu supports the view that 8W per active port adder for Additional I/O devices greater 10Gbit is not sufficient for newer network port technologies. Initial internal measurements confirm this view. Therefore it is requested to increase the active port adder for 40Gbit+ network cards.

6. Test Methods (6.1.2 Line 673 ff)

In 6.1.2 is required that UUTs must have all Processor Sockets populated during testing. This means, that tests of a low-end performance configuration with one CPU are not allowed by servers with more than one processor socket. Is the product family certificate of such a more processor socket server still valid for configurations with one CPU?

When the requirement in 6.1.2 will be maintained it should be clarified, if a family certificate is also valid for more socket server populated with only one CPU.